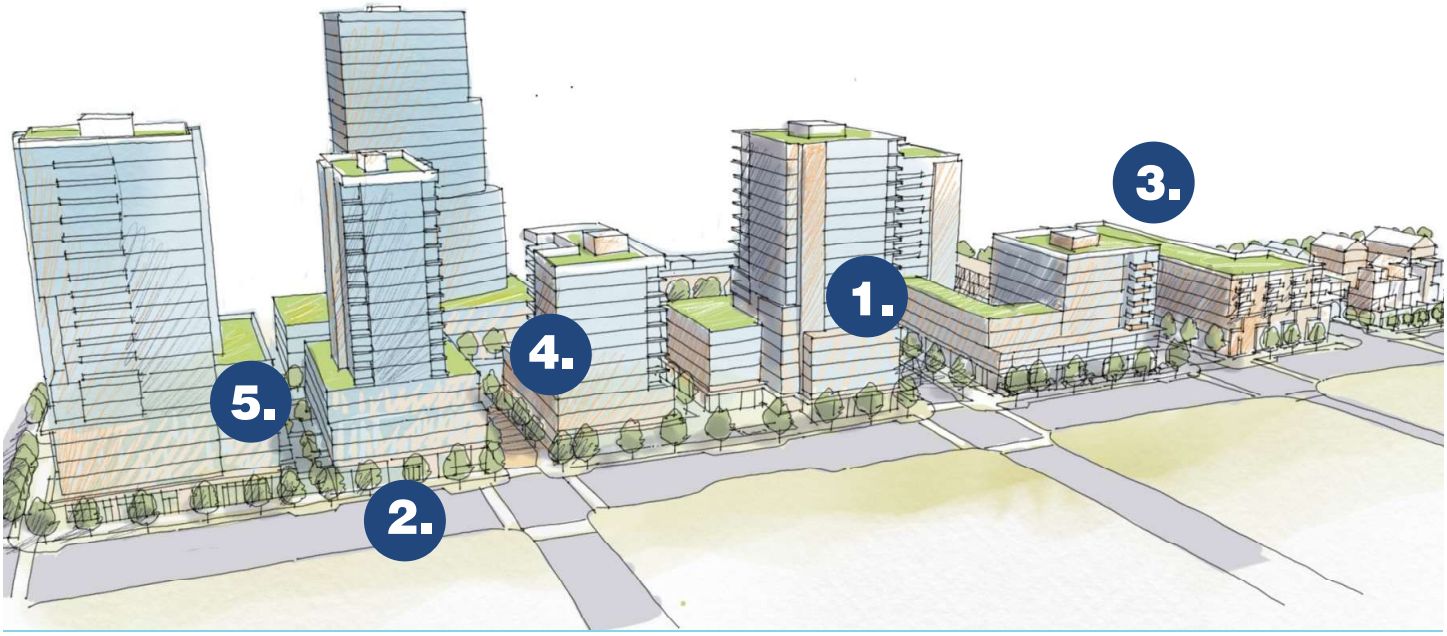
SECTION 05:

SITE & BUILDING DESIGN

5.1
General Building Design Guidelines

The following section outlines general building design guidelines, key design strategies and elements that should be addressed in all new residential, mixed use, retail, commerical, employment and community hub projects in the city. They are focused on achieving the design priorities and establish the basis for the more detailed building typology-specific project.

Both the general design guidelines and the following building-type specific guidelines apply to each project.



Credit: City of Kelowna

Objectives

To achieve the design goals of the City, all residential and mixed use projects should:

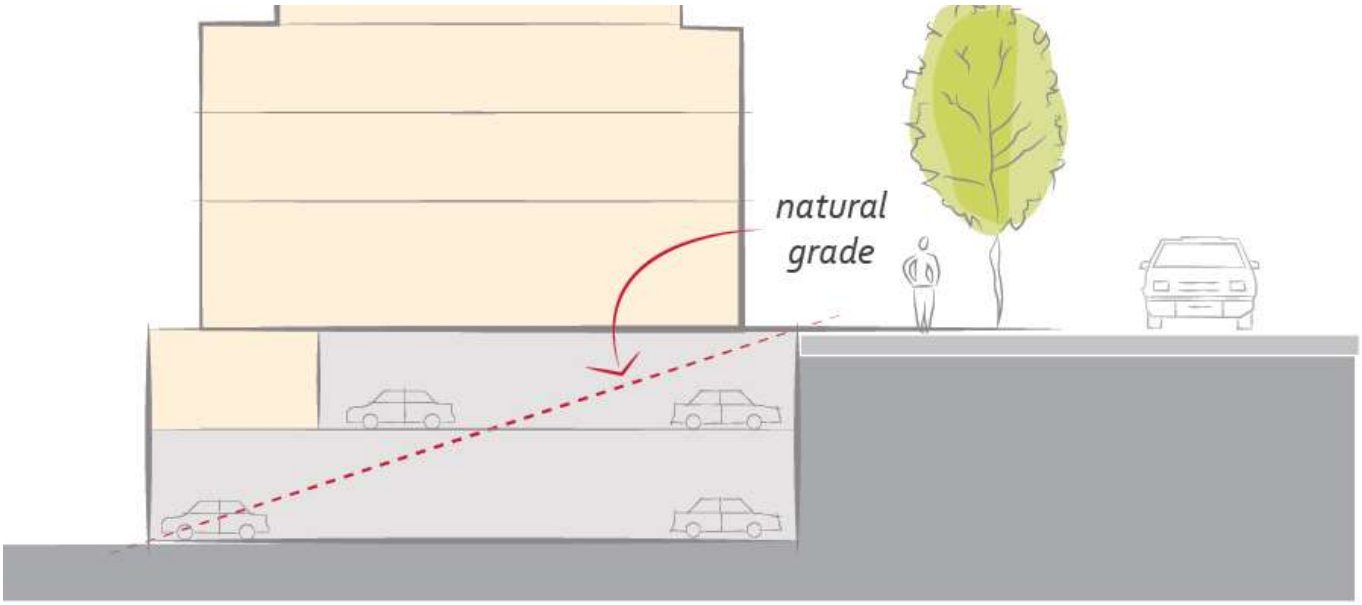
1. Design buildings to frame and activate streets and other open spaces to support walking and cycling, pedestrian comfort, and social interaction

2. Incorporate high quality building, landscape, and streetscape design to support liveability, sustainability, and sense of place.

3. Ensure new buildings contribute positively to the envisioned future built form, while creating good transitions to the existing built environments and sensitive to the natural environment.

4. Provide usable open spaces on site that balance privacy and access and that increase pedestrian connectivity throughout the city.

5. Ensure new development has adequate servicing, vehicle access, and parking while minimizing negative impacts on the safety and attractiveness of the public realm.



Credit: City of Kelowna

5.1.1 Site Planning

Design Intent: to site buildings to respond sensitively to topography and environmental features; to enhance privacy, liveability, safety and accessibility; and to increase connectivity to the surrounding open space network..

Guidelines:

1. Site and design buildings to respond to unique site conditions and opportunities, such as oddly shaped blocks and lots, prominent intersections, framing of important open spaces, corner lots, and views.

2. Ensure public safety through the use of appropriate lighting, visible entrances, opportunities for natural surveillance, and clear sight lines for pedestrians.

Relationship to Grade

3. Limit the maximum grade on development sites to 30% (3:1).

4. Design buildings for 'up-slope' and 'down-slope' conditions relative to the street by using strategies such as:
   - Stepping buildings along a slope, and locating building entrances at each step.
   - Incorporating terracing to create usable open spaces around the building;
   - Using the slope for underground parking and to screen service and utility areas;
   - Ensuring buildings capture views.
   - Minimizing large retaining walls (where retaining walls higher than 1m should be stepped and landscaped).

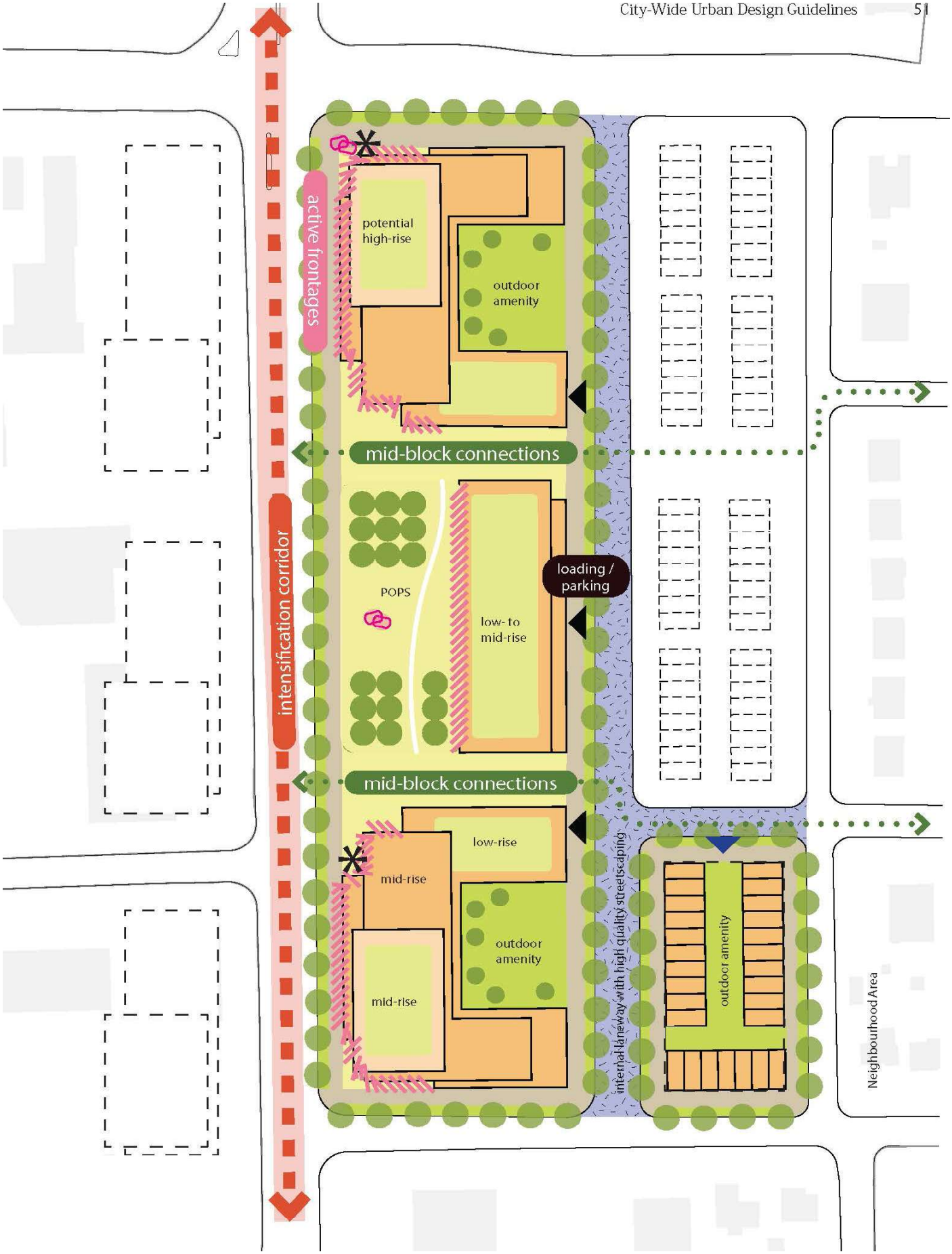
Connectivity

5. Design internal circulation patterns (streets, sidewalks, pathways) to be integrated with and connected to the existing and planned street, bicycle and/or pedestrian network.

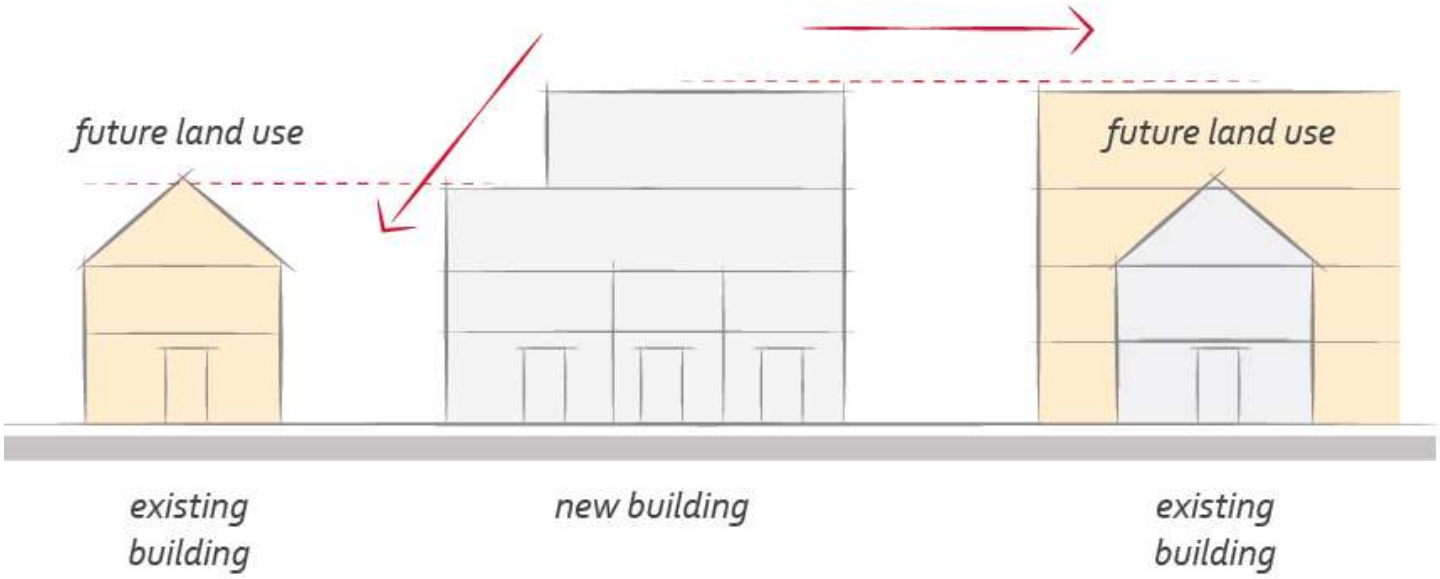
6. Incorporate easy-to-maintain traffic calming features, such as on-street parking bays and curb extensions, textured materials, and crosswalks.

7. Apply universal accessibility principles to primary building entries, sidewalks, plazas, mid-block connections, lanes, and courtyards through the appropriate selection of materials, stairs, and ramps as necessary, and the provision of wayfinding and lighting elements.

City-Wide Urban Design Guidelines 51



Demonstration Plan: Medium Density Development in a Strategic Growth Area. See section 4.0 Area Specific Guidelines above.



Credit: City of Kelowna

5.1.2 Scale and Massing

Design Intent: to ensure buildings contribute positively to the neighbourhood context and provide a sensitive transition in scale to existing and future buildings, parks, and open spaces..

Guidelines:

1. Provide a transition in building heights from taller to shorter buildings both within and adjacent to the site with consideration for future land use direction.

2. Break up the perceived mass of large buildings by incorporating visual breaks in facades.

3. Step back the upper storeys of buildings and arrange the massing and siting of buildings to:
   - Minimize shadowing on adjacent buildings as well as public and open spaces such as sidewalks, plazas, and courtyards; and;
   - Allow for sunlight onto the outdoor spaces of the majority of ground floor units during the winter solstice.



A central open space with a good sense of enclosure. Hammarby Sjostad. Credit: Image TBD

5.1.3 Relationship to the Street

Design Intent: to site and design buildings to frame and activate streets and public open spaces.

Guidelines:

1. Orient primary building facades and entries to the fronting street or open space to create street edge definition and activity.

2. On corner sites, orient building facades and entries to both fronting streets.

3. Minimize the distance between the building and the sidewalk to create street definition and a sense of enclosure within the streetscape.

4. Locate and design windows, balconies, and street-level uses to create active frontages and 'eyes on the street', with additional glazing and articulation on primary building facades.

5. Ensure main building entries are clearly visible with direct sight lines from the fronting street.

6. Avoid blank, windowless walls along streets or other public open spaces.

7. In general, establish a street wall along public street frontages that creates comfortable building height to street width ratios (generally between 1:1 and 1:3) and avoids creating an 'urban canyon' effect.
   - A street wall does not include upper storeys that are set back from the primary frontage.
   - Wider streets (e.g., transit corridors) can support greater streetwall heights compared to narrower streets (e.g., local streets);
   - A 1:1 building height to street width ratio is appropriate for a lane or mid-block connection condition provided the street wall height is no greater then 3 storeys.



Articulated buildings with a harmonious and cohesive architectural concept, and a high quality pedestrian scale.

5.1.4 Building Articulation and Materials

Design Intent: to enhance liveability, visual interest, identity, and sense of place through building form, architectural composition and materials

Guidelines:

1. Express a unified architectural concept that incorporates variation in facade treatments. Strategies for achieving this include:
   - Articulating facades by stepping back or extending forward a portion of the facade to create a series of intervals or breaks;
   - Repeating window patterns on each step-back and extension interval;
   - Providing a porch, patio, deck, covered entry, balcony and/or bay window for each interval; and
   - Changing the roof line by alternating dormers, stepped roofs, gables, or other roof elements to reinforce each interval.

2. Incorporate a range of architectural features and details into building facades to create visual interest, especially when approached by pedestrians. Include architectural features such as:
   - Bay windows and balconies;
   - Corner feature accents, such as turrets or cupolas;
   - Variations in roof height, shape and detailing;
   - Building entries; and
   - Canopies and overhangs.

3. Include architectural details such as:
   - Masonry such as tiles, brick, and stone;
   - Siding including score lines and varied materials to distinguish between floors;
   - Articulation of columns and pilasters;
   - Ornamental features and art work;
   - Architectural lighting;
   - Grills and railings;
   - Substantial trim details and moldings / cornices; and
   - Trellises, pergolas and arbors.

4. Design buildings to ensure that adjacent residential properties have sufficient visual privacy (e.g. by locating windows to minimize overlook and direct sight lines into adjacent units), as well as protection from light trespass and noise.

5. Design buildings such that their form and architectural character reflect the buildings internal function and use.

Materials

6. Colour schemes and material selections should be carefully coordinated for visual harmony and for consistency with the existing buiding and surrounding neighbourhood.

7. Incorporate substantial natural building materials such as masonry, stone, and wood into building facades.

8. Avoid the use of synthetic siding systems, mirror/heavily tinted glass panels, and unadorned concrete block - particularly for materials and finishes on building façades facing or visible from public streets and open spaces

9. Materials should be appropriate to their use and locational context, as well as be complementary with the expressions of the City as a whole.

10. With regard to new mid-rise or high-rise developments, particular detail and attention should be paid to the design and quality of the building podium, as it is the portion of the building most experienced by people.

11. The use of 'heavy' materials such as brick and stone should generally be used within a building's lower levels, base or podium to anchor it; limited use of metal may be used as a decorative feature. Other natural and sustainable materials are strongly encouraged.

12. Buildings should incorporate a modest change of material and colour that are compatible with adjacent buildings, or that establish and reinforce a theme for a neighbourhood.

13. Materials for side façades, rear façades, and building projections and mechanical penthouses should include materials of equal quality to the front façade.

14. Blank walls or unfinished materials along property lines where new developments are adjacent to existing parking areas or smaller-scaled buildings are not permitted.

15. With regard to building materials for storage, servicing, and loading areas:
    - Construct accessory recycling and garbage handling structures as an enclosed building including roof and door/gate and with materials consistent with the primary building. Wood structures are discouraged, and no enclosure should be made of any form of chain link or other non-opaque fencing; and,
    - Service openings visible from streets and open spaces should use high-quality materials and finishes.

16. With regard to siding materials for ground-oriented built form:
    - Siding materials should be chosen based on their functional and aesthetic qualities;
    - Siding materials may include brick, stone, low-maintenance wood siding, textured vinyl siding, cementitious board siding, and stucco;
    - Simulated materials should only be permitted where they are durable and look authentic (e.g., textured vinyl siding that closely resembles wood, cementitious board siding that closely resembles wood);
    - Pre-cast panels are strongly discouraged for ground-oriented built form; and, consideration should be given to other materials that promote energy efficiency and area easy to maintain.

Entrances and Thresholds

17. Access structures, such as ramps, should be designed to integrate seamlessly with buildings.

18. Main building entrances should be clearly visible and directly accessible from public pedestrian clearways.

19. Where a building entrance is located on a corner lot, the main entrance should animate both streets.

20. Where residential uses are included above retail uses, shared residential entrances should be made clearly distinguishable from entrances to retail.

21. Buildings should be articulated with numerous doors and windows, particularly along the ground level façade, to increase access and transparency.

22. Lobby entrances to multi-unit residential complexes should maximize the height of the ground floor to create visually appealing, well-illuminated, and welcoming entry points into waiting areas.

23. The use of glass in lobbies should be maximized to enhance visibility connection between interior and exterior spaces.

Weather protection

24. Provide weather protection such as awnings and canopies at primary entrances.

25. Design and place weather protection to reflect and complement the building's architecture.

26. Where possible, include weather protection measures along the building frontage, for the comfort of pedestrians. Such measures may include overhangs, canopies, awnings, and other building components.

27. Permanent pedestrian weather protection measures should be provided at building entrances and along commercial and mixed-use street frontages.

28. Ensure that weather protection measures do not physically obstruct pedestrian movement.

29. Weather protection measures should extend outward from the line that separates the ground floor and second floor, and they should have a minimum vertical clearance of 3.0 metres, where appropriate.

30. Pedestrian-scale lighting, signage, street numbering, and public art are encouraged to be integrated into the design of weather protection measures.

31. Canopies and overhangs should use light colours and transparent or semi-transparent materials.

32. For patios and other areas where setbacks are constrained, retractable awnings may be appropriate

Signage

33. Limit signage in number, location, and size to reduce visual clutter and make individual signs easier to see.

34. Provide visible signage identifying building addresses at all entrances.



Credit: MNLA

5.1.5 Landscapes and Open Spaces

Design Intent: To ensure site and building design responds appropriately to adjacent streets and open spaces, creates visual interest, pedestrian comfort and safety, and positively contributes to urban ecology and stormwater management.

Guidelines:

Landscape Planning

1. Site buildings to protect mature trees, significant vegetation, and ecological features.

2. Locate underground parkades, infrastructure, and other services to maximize soil volumes for in-ground plantings.

3. Site trees, shrubs, and other landscaping appropriately to maintain sight lines and circulation.

4. Design attractive, engaging, and functional on-site open spaces with high quality, durable materials, with contemporary colors, lighting, furniture, and signage.

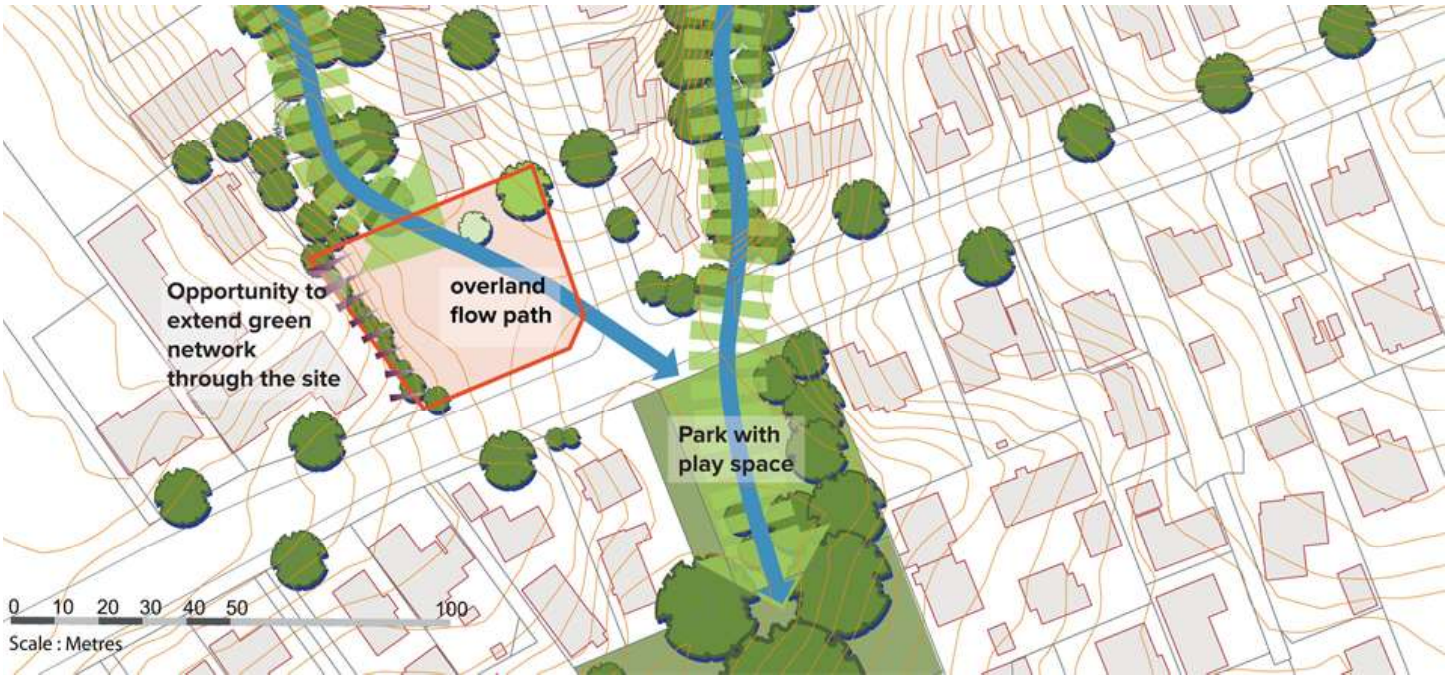
5. Ensure site planning and design achieves favourable microclimate outcomes through strategies such as:
   - Locating outdoor spaces where they will receive ample sunlight throughout the year;
   - Using materials and colors that minimize heat absorption;
   - Planting both evergreen and deciduous trees to provide a balance of shading in the summer and solar access in the winter; and
   - Using building mass, trees, and planting to buffer wind.

Landscape Materials

6. Use landscaping materials that soften development and enhance the public realm.

7. Plant native and/or drought tolerant trees and plants suitable for the local climate.

8. Select trees for long-term durability, climate and soil suitability, and compatibility with the site's specific urban conditions.



Credit: City of Auckland

Stormwater Management and Water Usage

9. Design sites and landscapes to maintain pre-development flows through capture, infiltration, and filtration strategies, such as the use of rain gardens and permeable surfacing.

10. Design sites to minimize water use for irrigation by using strategies such as:
    - Designing planting areas and tree pits to passively capture rainwater and stormwater run-off; and
    - Using recycled water irrigation systems.

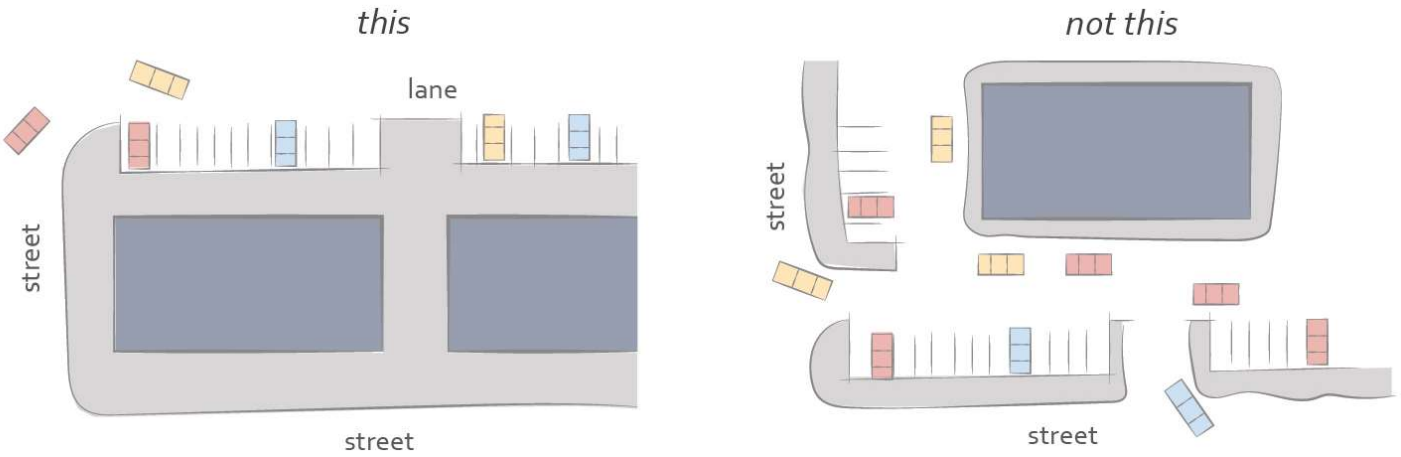
11. Create multi-functional landscape elements wherever possible, such as planting areas that also capture and filter stormwater or landscape features that users can interact with.

12. Select materials and furnishings that reduce maintenance requirements and use materials and site furnishings that are sustainably sourced, re-purposed, or 100% recycled.

Lighting and Wayfinding

13. Use exterior lighting to complement the building and landscape design, while;
    - Minimizing light trespass onto adjacent properties;
    - Using full cut-off lighting fixtures to minimize light pollution; and
    - Maintaining lighting levels necessary for safety and visibility.

14. Employ on-site wayfinding strategies that create attractive and appropriate signage for pedestrians, cyclists, and motorists using a 'family' of similar elements.



Locate off-street parking at the rear of the building. Credit: City of Kelowna

5.1.6 Access, Parking and Site Servicing

Design Intent: to ensure the provision of adequate servicing, vehicle access, and parking while minimizing adverse impacts on the comfort, safety and attractiveness of the public realm.

Guidelines:

Access

1. Provide clear lines of site at access points to parking, site servicing, and utility areas to enable casual surveillance and safety.

2. Consolidate driveway and laneway access points to minimize curb cuts and impacts on the pedestrian realm or common open spaces.

Minimize negative impacts of parking ramps and entrances through treatments such as enclosure, screening, high quality finishes, sensitive lighting, and landscaping.

Parking

3. Avoid locating off-street parking between the front facade of a building and the fronting public street.

4. In general, accommodate off-street parking in one of the following ways, in order of preference:
   - Underground (where water table allows);
   - Parking in half-storey (where it is able to be accommodated and not negatively impact streetscape);
   - Garages or at-grade parking integrated into the building (located at the rear of the building); and
   - Surface parking at in the rear, with access from the lane or secondary street wherever possible.

5. Design parking areas to maximize rainwater infiltration through the use of permeable materials such as paving blocks, permeable concrete, or driveway planting strips.

6. In cases where publicly visible parking is unavoidable, screen using strategies such as:
   - Landscaping;
   - Trellises;
   - Grillwork with climbing vines; or
   - Other attractive screening with some visual permeability.

7. Provide bicycle parking at accessible locations on site, including:

8. Covered short-term parking in highly visible locations, such as near primary building entrances; and

9. Secure long-term parking within the building or vehicular parking area.

Site Servicing

10. Locate off-street parking and other 'back-of-house' uses (such as loading, garbage collection, utilities, and parking access) away from public view.

11. Ensure utility areas are clearly identified at the development permit stage and are located to not unnecessarily impact public or common open spaces.

5.2
Building Performance Guidelines

Overview

Optimum building performance is important for the comfort and amenity of building occupants - but also to reduce costs and environmental impacts over the development's lifetime.

Given the built environment's significant impact on energy and water consumption and associated carbon footprints, this section aims to provide ideas and considerations, along with simple design guidance to improve building performance throughout Barrie.



A well designed building envelope with efficient window to wall ratios and activated ground floor.

5.2.1 Building Envelope

Design Intent: to design building envelopes to reduce energy demand and maximize occupant health and comfort, while maintaining visual appeal and interest.

Guidelines:

1. For an efficient building envelope, provide consideration and appropriate design and specification for the following:
   - Passive solar design techniques
   - Weathertight detailing
   - Thermal insulation
   - Natural daylighting and shading
   - Natural ventilation
   - External noise control

2. Design buildings with a simplified massing and fewer complex junctions to minimize building envelope heat loss.

3. Use simple shifts in massing and changes in exterior colors and textures to articulate facades. For larger buildings, target an overall window-to-wall ratio (WWR) of 40% to reduce heat gain and loss through the building envelope by increasing the area of insulated wall. Additional considerations include:
   - WWR ratios should be higher at grade to promote at-grade transparency while accommodating the 40% WWR in the building overall; and
   - WWR ratios should be lower on north facing facades than on south facing facades to account for lower solar gain potential.

4. Coordinate and integrate building service elements such as drainage pipes, grilles, screens, ventilation louvres and car park entry doors with overall facade and balcony design.

5. Use durable, low-maintenance materials that are compatible with each other and will weather well in order to minimize maintenance costs. Avoid unnecessary external painting that will require regular maintenance.

6. Ensure a weathertight envelope and consider cavity wall construction, to reduce risk of water damage over the longer term.

7. Design the building envelope to ensure a healthy and comfortable environment inside the building by:
   - Providing sufficient daylight access.
   - Allowing controllable natural ventilation through the use of adjustable vents or operable windows.
   - Insulating walls, floors and ceiling above minimum standards in order to reduce long-term heating and cooling costs.
   - Draught-proofing around external openings to reduce unnecessary heat loss.
   - Double-glazing external windows and doors to improve the acoustic and thermal performance of the envelope.
   - Providing an accessible connection for all occupants to their private outdoor space.

8. Increase the efficiency of the building and reduce lifecycle costs by considering methods such as:
   - Designing facades using environmental control elements such as sun shading, light shelves and bay windows that suit facade orientation.
   - Using high-mass elements to absorb solar gain during the day and release heat to internal spaces in the evening (elements must receive adequate direct sunlight).
   - Using green roofs to contribute positively to on-site stormwater management and to maximise the amenity value of horizontal surface such as rooftops and podiums.
   - Solar energy for water heating or electricity generation.
   - Choosing materials and colour that reflect or absorb radiant heat.

9. Ensure that the position and attachment details of building fixtures are considered in the early design stages.

10. Building fixtures can compromise the building envelope in terms of weatherproofing and aesthetics. Incorporating equipment that is shared by all occupants will avoid duplication of equipment by individual occupants.

11. Noise is one of the most common adverse effects within mixed use developments. Address noise control early in the design stages of a project to mitigate. Buildings should have shared entrances, exits and lifts as far away as possible from residential uses. The use of buffers and/or specialized technical solutions may solve noise issues that cannot be resolved by the layout of the development. Technical material solutions may include acoustic wall and floor systems, insulation, acoustic cladding panels, double-glazing and thicker window glass. High-mass construction (e.g. masonry and concrete), separated and/or staggered framing arrangements, multiple linings, and mechanical plant isolation can be highly effective at reducing noise transmission between different spaces within a building or development.



Integrated active solar building design to Passivhaus targets, Edmonton. Credit: Sonny Shelm / Manasc Isaac Architects

5.2.2 Solar Design

Design Intent: to design sites and buildings that utilize the sun and reduce energy demand.

Guidelines:

Passive solar design

1. Incorporate passive heating, cooling, and lighting design principles in landscape and building design, including:
   - Orienting for maximum solar-gain potential from the south to reduce heating demand in colder months; and
   - Using trees to provide natural shading to reduce overheating in warmer months.
   - Deciduous trees and outdoor shade structures will help to provide cool areas during the summer while maximizing sun exposure during the winter.

2. Use appropriately designed exterior shading devices to block unwanted solar gains in warmer months while welcoming solar gains from lower winter sunlight. Additional considerations include:
   - Prioritize their use on southern elevations;
   - Shading is not necessary on north-facing facades; and
   - Vertical fins are a good strategy to use for blocking incoming summer sun on western elevations.

3. Materials with a high thermal mass, that is, the ability to absorb and retain heat (e.g. brick, concrete, and stone), should be used in conjunction with solar penetration into a building during the winter and summer shading, to even out diurnal temperature swings.

Active solar technologies

4. Consider solar water heating systems, which can reduce the cost of supplying hot water.

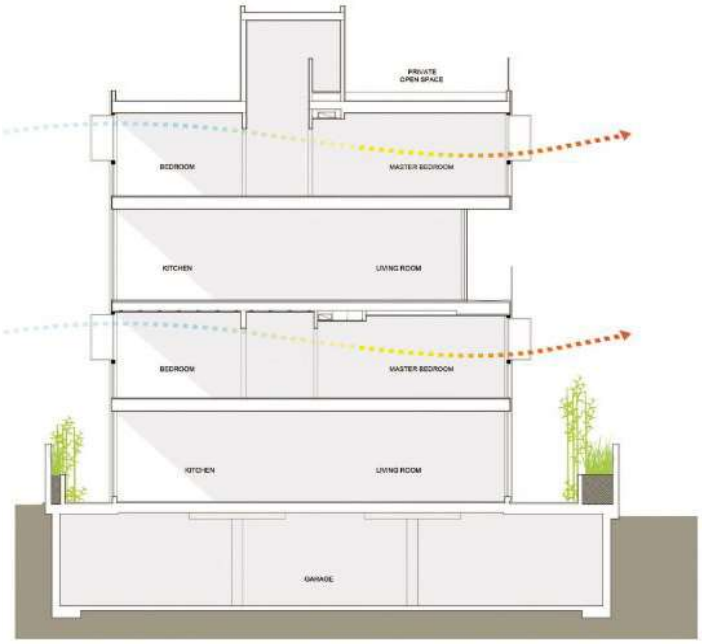
5. Consider photovoltaic (PV) technologies to convert solar energy directly to electricity. If considering these for the site:
   - Design large, unobstructed roofs or ground areas ideal for photovoltaic panel arrays.
   - Trees, mechanical units and other



Credit: Siemens

buildings should not shade the panels at any time.

- Determine optimal solar panel angle. Panels typically produce the most energy when tilted at an angle equal to the latitude of the sun at that specific location.
- Consider installing panels on parking structures or covered parking pavilions.



Credit: LOH Architects

5.2.3 Ventilation

Design Intent: to prioritize natural ventilation and ensure building inhabitants have direct access to fresh air.

Guidelines

1. Ensure all habitable rooms have direct access to fresh air and prioritize natural ventilation design to minimize mechanical ventilation's energy consumption and life cycle costs.

2. Site and design the building layout and cross-section to increase potential for natural ventilation. Design and place openings to maximize.

3. Create cross ventilation with narrow building depths, dual aspect units and corner aspect units.

4. Facilitate convective currents in two-storey or mezzanine-type spaces by including openings that allow warm air to escape at higher levels and cooler air to be drawn in at lower levels.

5. Design solutions include:
   - Placing vents or openable windows on opposing sides of a unit to allow for natural cross ventilation.
   - Using high casement or sash windows, clerestory windows or operable fanlight windows, including above internal doors (especially in single aspect units).
   - Incorporating openings that allow occupants to funnel breezes into the unit, such as louvered windows, casement windows and externally opening doors.
   - Using ventilation options that are secure and rainproof when left open.

6. Explore innovative technologies such as stack ventilation and solar chimneys to naturally ventilate internal spaces such as bathrooms, laundries and underground car parks.

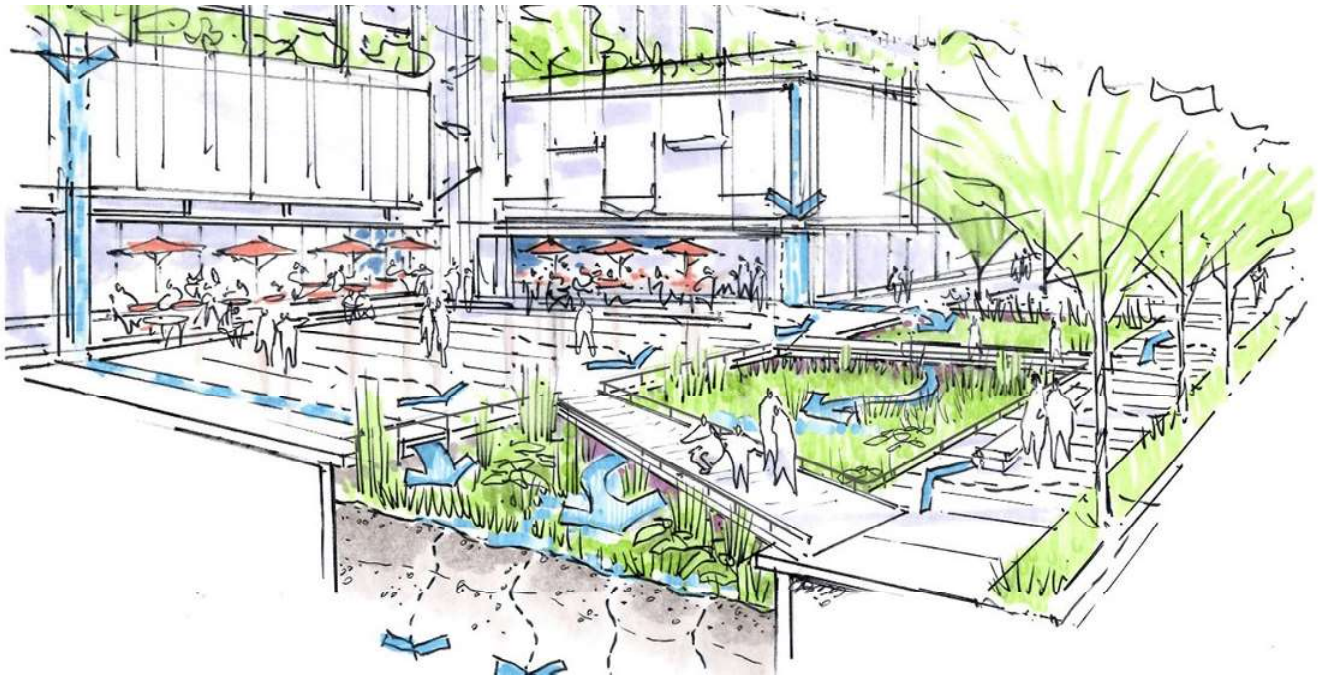


Illustration of a Blue Green System Effectively Utilizing Building and Site Water Systems. Credit: City of Vancouver

5.2.4 Water Sensitive Design

Design Intent: to ensure potable water is used in an efficient and cost-effective manner, reduce quantity and increase quality of storm water runoff, and reuse waste and storm, water where possible.

Guidelines

1. Design comprehensive water systems that integrate the building and wider site's water systems.

2. Reduce consumption of potable water by:
   - installing water-efficient appliances
   - installing water meters or check meters for individual units
   - Installing rainwater tanks for collecting non-potable stormwater for use in toilet flushing, laundry, and landscape irrigation.
   - integrating greywater recycling systems to process water from bathroom sinks, showers, tubs, and washing machines to be reused for irrigation and toilet flushing.



5.2.5 Construction Waste

Design Intent: to minimize construction resources and waste through appropriate design, material selection, and building practices.

Guidelines:

1. Minimize waste during all stages of the buildings lifecycle, from construction to demolition.

2. During construction, give consideration to:
   - Incorporating existing built elements into the development.
   - Recycling and reusing demolition materials
   - Specifying building materials that can be reused and recycled.

3. Mminimize construction waste through the design phase by:
   - Specifying project needs modestly, to avoid oversupply of materials.
   - utilizing standard product/component sizes
   - designing for durability, adaptability, and ease of future upgrades.

4. Through a Construction Management Plan, consider:
   - Sustainable removal practices and recycling.
   - Just-in-time production and delivery of materials.
   - Alternative construction methods, such as pre-fabricated or off-site construction.





Building built using engineered mass timber products. WIDC, Prince George. Credit: Ema Peter Photography, MGA Architecture

5.2.6 Material Selection

Design Intent: to select durable, sustainably sourced and manufactured materials with construction methods that have low lifecycle costs, minimize impact on the environment, and creates high-quality building appearance and performance.

Guidelines:

1. Specify materials with low embodied energy (energy used to create a material and includes extraction, manufacturing, transportation, installation, maintenance and disposal).
   - Specify durable, low-maintenance materials and consider future maintenance and repair costs.
   - Minimize consumption and waste e.g. specify standard sizes and use recycled elements or materials.
   - Specify materials that can be reused and recycled at the end of the building's life.
   - Favour locally sourced materials for their reduced transportation costs.
   - Refurbish, adapt and reuse existing buildings instead of demolishing them.
   - Consider energy consumption over the lifespan of the completed building.

2. Use durable, low-maintenance materials that are compatible with eachother and that will weather well in order to minimize maintenance costs and enhance the image of the development.
3. Avoid using materials that contaminate the environment (e.g. zinc and copper claddings increase contaminants in urban stormwater systems, and the installation of EIFS often creates non-biodegradable polystyrene debris which ends up in urban food and water systems).

4. Ensure raw materials come from renewable and sustainable sources and have zero to low toxicity and emissions ratings. (e.g. specifying timber that is FSC certified will ensure it comes from a managed and sustainable source)

5. Select durable materials that are graffiti-resistant and easily cleaned.

5.3 Neighbourhood Areas & Infill

Overview

Through the Official Plan, Neighbourhood Areas are not planned to significantly intensify, however, they may see some "gentle intensification" through infill developments.

Within this context, infill developments will generally consist of the redevelopment of a single lot, or a consolidation of lots, to facilitate the creation of 2 or more units, in building types ranging from detached houses, semi-detached, plex-housing, rowhouses, and low-rise buildings.

Design challenges include integrating development with existing and planned context, protecting mature trees, and positively contributing to the streetscape.

Projects should create a strong relationship to the street and should be designed to fit within the general character, scale and massing of the existing neighbourhood.

Building Type Characteristics

- 1 to 3 storeys
- Varied building forms (single detached, duplex housing, semi-detached housing, and plex housing) sometimes with two or more buildings on a single site
- May share 1 or 2 walls with neighbouring units
- Individual unit entrances with ground-oriented access
- May include tiny homes
- May include low-rise buildings



Credit: City of Kelowna

Objectives

To achieve the design goals of the City, all infill developments should:

1. Configure building massing to reflect the scale of buildings in the surrounding area.

2. Provide well-designed outdoor amenity spaces at grade for each unit that offers privacy and screening, and attractive interfaces with the street and open spaces.

3. Locate and design buildings to protect existing mature trees on-site.

4. Limit impermeable surfaces in landscaped areas and open spaces to maximize stormwater infiltration.

5. Use building articulation, scaling, and setbacks and landscape to define individual units in a way that is pedestrian-oriented and emphasizes pedestrian connection to the street and sidewalk.

6. Orient building entrances, windows, patios and balconies to face adjacent streets, with primary entrances clearly visible and directly accessible from the sidewalk.

7. Building design, details, and materials should create a well-proportioned and cohesive building design with a clear overall architectural concept.

8. Provide access to parking from a flanking street or lane, where available.



Credit: City of Toronto

5.3.1 Site Planning

Design Intent: to situate and design buildings to support a positve relationship to streets and public open spaces while providing a clearly defined public-private transition.

Guidelines:

1. Locate buildings on a site to:
   - Protect mature trees, where possible;
   - Maintain general consistency with established setbacks on primary and secondary streets, where possible;
   - Maximize sunlight access to interior spaces and to outdoor amenity areas; and
   - Avoid any required storm drainage infrastructure, such as rock pits.

2. Provide pedestrian pathways on site to connect:
   - Main unit entrances to public sidewalks and open spaces (minimum width of 1.2m, lit);
   - Parking areas to unit entrances;
   - From the site to adjacent pedestrian/ trail/cycling networks, where applicable; and
   - The common utility and water servicing location.

3. Where multiple buildings are located on a site, ensure that outdoor amenity space provided at grade between the buildings is generous and comfortable.

4. Maintain privacy of units on site and on adjacent properties by minimizing overlook and direct sight lines from the building using strategies such as:
   - Off-setting the location of windows in facing walls and locating doors and patios to minimize privacy concerns from direct sight lines;
   - Use of clerestory windows;
   - Use of landscaping or screening; and
   - Use of setbacks and articulation of the building.



Credit: Image City of Kelowna

5.3.2 Scale and Massing

Design Intent: to ensure buildings contribute positively to neighbourhoods while providing for greater choice in housing and form.

Guidelines:

1. Reflect the positive attributes of adjacent housing (e.g.: rooflines, front porches, entrance features) while integrating new, higher density housing forms.

2. Use building height, scale, and setbacks to reinforce a generally consistent street rhythm. Limit significant real or perceived height difference (i.e.: more that 1.5 storey difference) between new and existing development in the surrounding area.

3. Ensure that larger buildings break down their massing to reflect the scale of surrounding buildings by using sub-forms and façade articulation.

4. In buildings with more than one unit, articulate individual units through integration of recessed entries, balconies, materials and projection/recess in the façade. Avoid symmetrical units.

5. On sites with more than one building, ensure that buildings are distinct, but designed to achieve cohesive scale, massing and proportion



Neighbourhood fit with contrasting architectural styles. Credit: TACT Architecture Inc.

5.3.3 Relationship to the Street

Design Intent: to situate and design buildings to support a positve relationship to the street and public open spaces while providing a clearly defined public-private transition.

Guidelines:

1. Orient the primary façade of buildings to face the fronting street. In the case of lots with multiple frontages, buildings must also be oriented and designed to address flanking streets through architectural and landscape treatments including, but not limited to, front doors and windows.

2. Configure buildings so that a minimum of 50% of units facing streets. All units facing streets should have entries oriented towards, and be clearly accessible and visible from the street.

3. Design primary unit entrances to provide:
   - A clearly visible front door directly accessible from a public street or publicly accessible pathway via a walkway, porch and/or stoop;
   - Architectural entrance features such as stoops, porches, shared landings, patios, recessed entries, and canopies; and
   - Punctuation, articulation and rhythm along the street.

4. Use low fencing, landscaping and modest (max. of 0.6m) changes in grade to define a sense of transition from the public to the private realm.

5. Improve the “lanescape” by orienting units located towards the rear of the property to face laneways, and use building entrances, lighting, landscaping and materials to reinforce a safe and attractive public realm.





Articulation of Infill Low-Rise Residential Buildings. Credits: ADHOC Architectes / Maxime Brouillet

5.3.4 Building Articulation and Materials

Design Intent: to enhance liveability, neighbourhood character, visual interest and sense of place through building form, architectural composition, and materials.

Guidelines:

1. Design facades to articulate and differentiate the individual units. Strategies for achieving this include:
   - Recessing or projecting facades to highlight the identity of individual units; and
   - Using entrance features, roofline features, or other architectural elements.
   - Emphasize front doors and windows rather than garages.

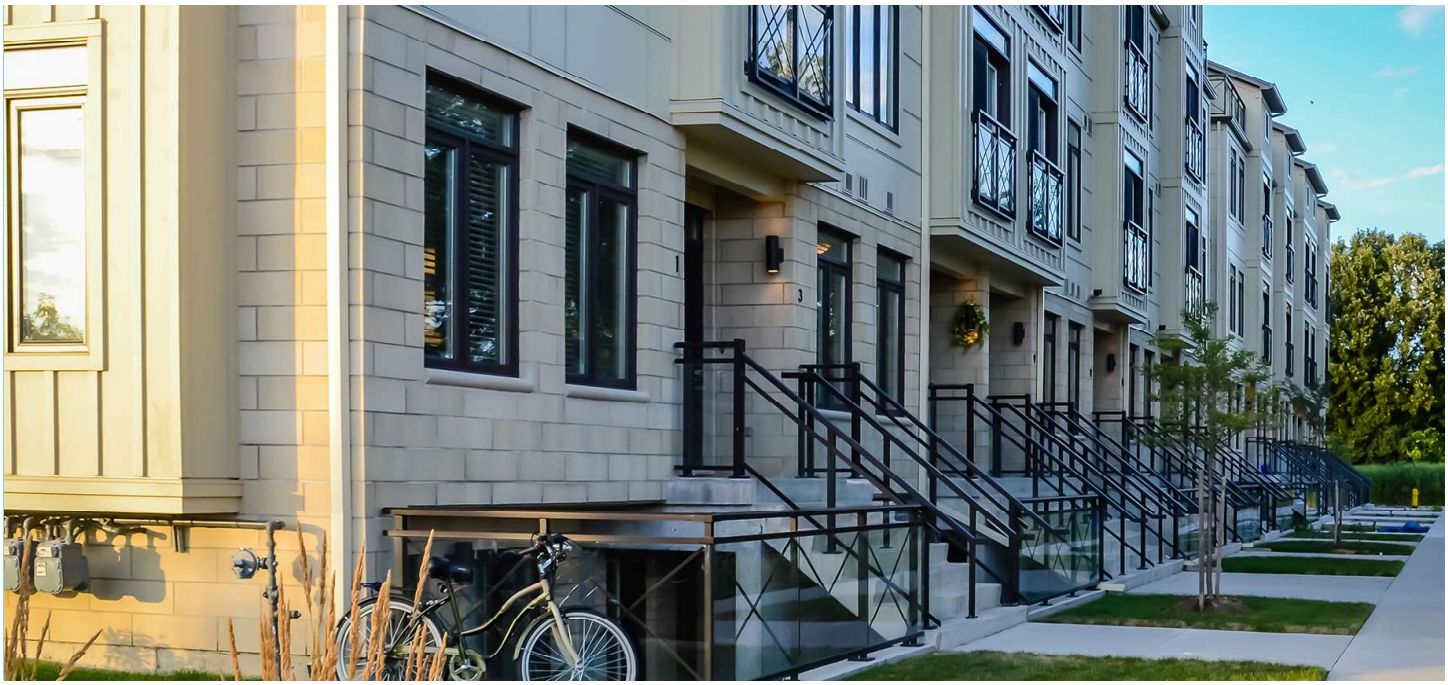
2. Maximize integration with the existing neighbourhood by designing infill buildings to:
   - Incorporate design elements, proportions, and other characteristics found within the neighbourhood; and
   - Use durable, quality materials similar or complementary to those found within the neighbourhood.

3. Avoid blank walls by incorporating windows, and articulating the façade with recesses or projections, reinforced by building material changes and landscaping.

4. Use increased ground floor height, entryway features, generous glazing, front porches and other architectural features to emphasize the ground floor as the highest design priority.

5. On sites with multiple buildings, ensure that each building is unique, but tied together with the same architectural style and material palette.

6. Use durable, low-maintenance materials that withstand the local climate (e.g.: wood, natural stone, masonry, metal panels, fibre cement siding, or approved alternatives). Vinyl siding, large areas of stucco, and imitation stone/rock are discouraged and should generally be avoided.



Simple, natural materials and well-defined entryways in a stacked townhouse development. Credit: Domus Developments.

7. Use warm, textured materials (e.g.: wood, masonry, stone) to provide contrast and to emphasize focal points (e.g.: entryways), particularly at grade.

8. Create a simplified materials palette. A maximum of two cladding materials is recommended.

9. Changes in materials should incorporate appropriate trim and detailing and occur at significant changes in plane, including floor level changes and step backs.

5.3.5 Landscape and Open Spaces

Design Intent: to design landscapes and open spaces that enhance neighbourhood character, that provide high-quality outdoor living spaces that are useable year-round, and that provide a clear transition between the private and public realm.

Guidelines:

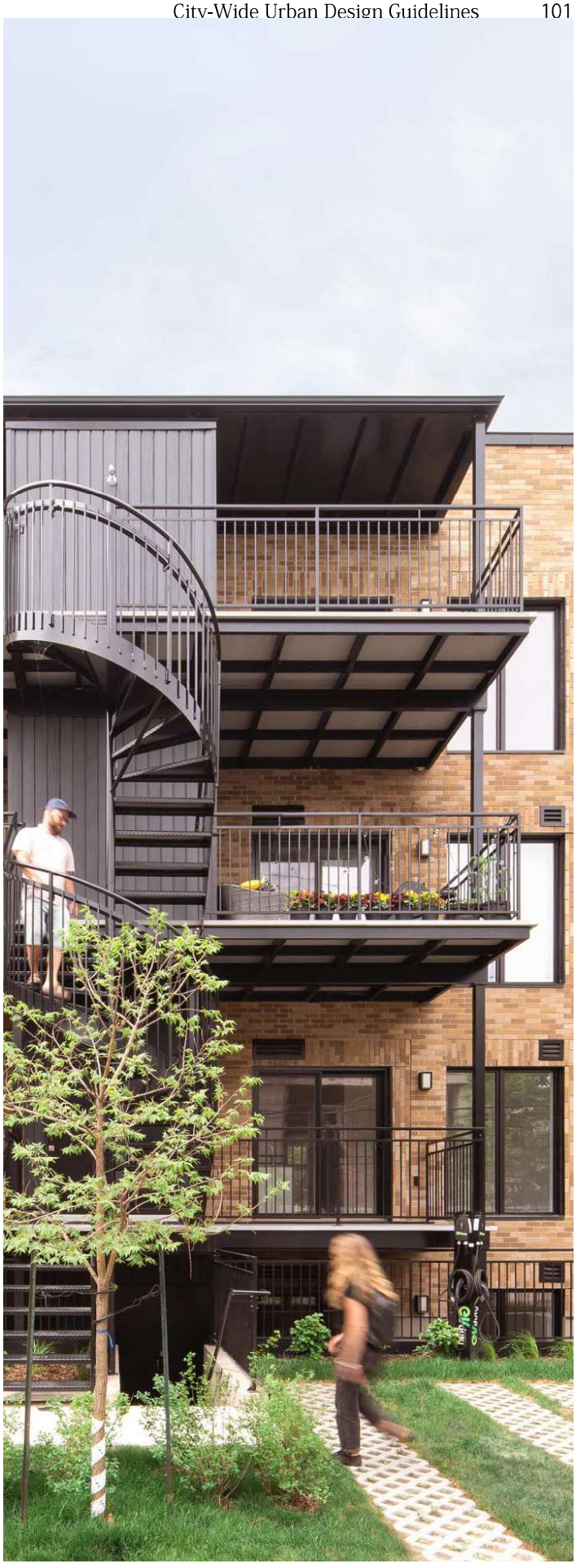
1. Design all units to have easy and direct access to high-quality, private outdoor amenity space located at grade that are useable year-round.

2. Provide landscaping in strategic locations throughout to frame building entrances, soften edges, screen parking garages/areas, and break up long facades.

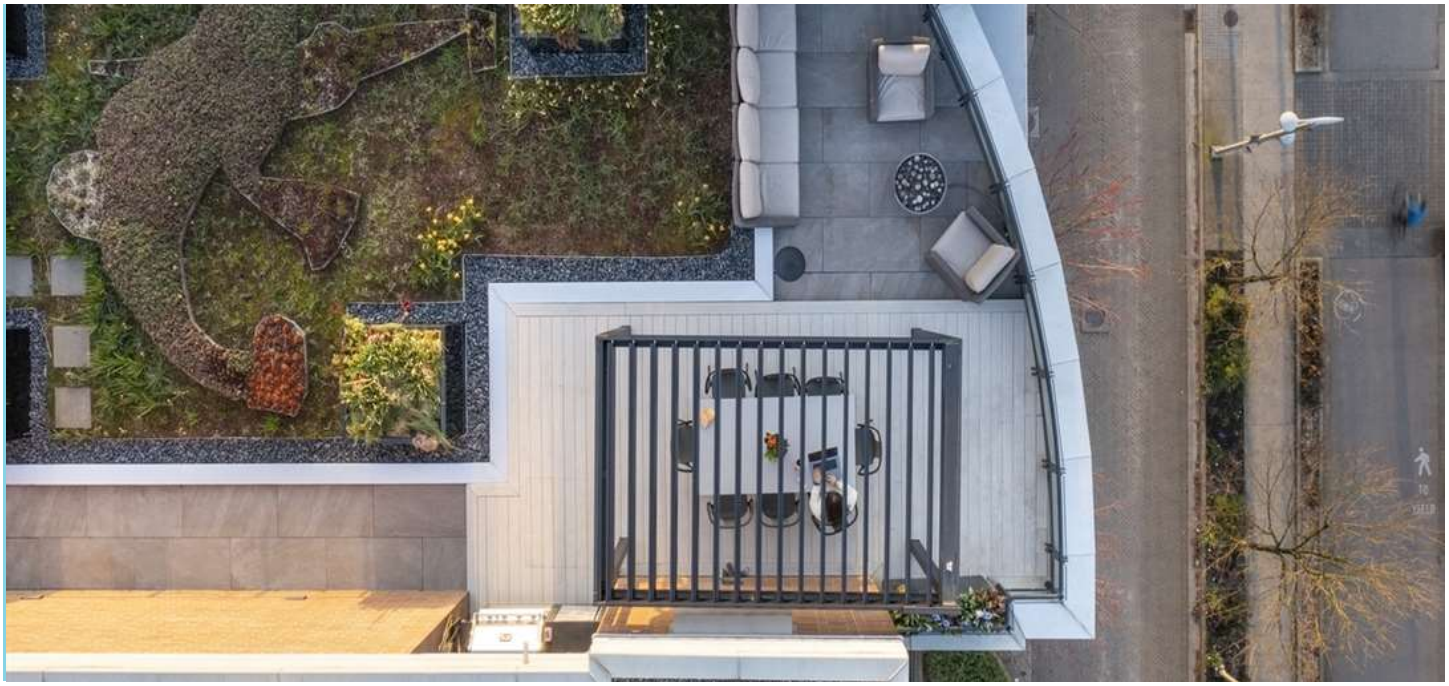
3. Design open spaces and landscaped areas to protect and to feature mature trees on site, where possible. Where mature trees cannot be protected or where there were no mature trees on site, ensure that adequate open spaces are provided that will allow shade trees to reach mature sizes.

4. Design private outdoor amenity spaces to:
   - Have access to sunlight;
   - Offer privacy; and
   - Have landscaped areas to soften the interface with the street or open spaces.

5. Design front patios to:
   - Provide an entrance to the unit; and
   - Create a semi-private transition zone using landscape plantings or material changes, or modest (max. 0.6m) grade changes.



Access to amenity areas. Credit: ADHOC Architectes



Rooftop amenity design. Credit: Atria Designs

6. Design rooftop patios to:
   - Minimize direct sight lines into nearby units;
   - Have access away from primary facades;
   - Have parapets with railings; and
   - Minimize the impact of rooftop accesses on the overall height and massing of a building.

7. Maximize the use of permeable surfaces in all landscaped and open spaces. Discourage the use of impermeable surfaces, such as poured-in-place concrete.
8. Design outdoor amenity areas so that they are not impacted by parking, mechanical equipment or servicing areas.

9. Design balconies to be inset or partially inset to offer privacy and shelter, reduce building bulk, and minimize shadowing.

10. Design internal driveways to serve as additional shared space using strategies such as:
    - High-quality, permeable pavement materials (e.g.: interlocking, permeable pavers);
    - Providing useable spaces for sitting, gathering and playing; and
    - Providing landscaping that frames and defines pedestrian entrances and soften edges between buildings and hardscapes.

11. Encourage low (1.06m maximum), semi-transparent fencing or railings in the front yard to define the transition between public and private realms. Discourage tall hedges, opaque or tall fencing in the front yard which would limit public interface.



Rear service lane and parking access in a low-rise residential building. Credit: Image Linden Homes

5.3.6 Access, Parking, and Site Servicing

Design Intent: to ensure the provision of adequate servicing, vehicle access, and parking while minimizing adverse impacts on the comfort, safety and attractiveness of streets, sidewalks, and open spaces.

Guidelines:

1. Ensure site layouts include provision for solid waste pick-up and bin storage that is enclosed or otherwise screened from view.

3. Locate mechanical equipment and site services, such as transformers and mailboxes, to minimize impacts on outdoor amenity areas through appropriate siting and screening.

5. Ensure that all vehicle parking access is taken from the lane or secondary street, where available.

6. Locate parking directly adjacent to street/lane access points to reduce or eliminate driveways, where possible.

7. Support common parking areas or garages that eliminate the need to integrate parking into individual units. Where parking is not contained within a garage, ensure it is appropriately screened.
8. Where vehicle access is only available via the primary street, ensure that vehicle parking is enclosed and integrated into one or more principal buildings on the site. Limit the visual impact of enclosed parking by using strategies such as recessing the garage from the rest of the façade.

9. Ensure that internal circulation for vehicles is designed to accommodate necessary turning radii and provides for logical and safe access and egress.

10. Locate access points and buildings/windows to minimize impact of headlights on building interiors.



Coach Houses located in rear yards of a single detached house, semi-detached house and a rowhouse or low-rise building. Credit City of Toronto

5.3.7 Coach Houses

Design Intent: to create more housing options with high quality design and neighbourhood fit.

Guidelines:

General Locational Criteria

1. Coach Houses should not significantly impact the existing tree canopy in the area.

2. Locate Coach Houses in neighbourhoods or areas of the city with sufficient grey infrastructure (water, sewer, roads, etc.) and with public facilities (schools, parks, hospitals, etc.) and public transit and active transportation facilities within walking distance (400m).

Site Integration and Neighbourhood Fit

3. Coach Houses must fit seamlessly into the surrounding neighbourhood, respecting the size and siting of other buildings.

4. As an "accessory" to the main building, the unit will not occupy a disproportionate part of the available site area. Coach Houses must be proportionately smaller than the principal dwelling.

5. Coach Houses should generally be architecturally and materially consistent with the design of the principal dwelling.

Access and Privacy

6. Coach Houses should be sited properly on a lot and provide sufficient setback and dedicated access.

7. Site, orient and design coach houses to respect the privacy of site occupants and neighbours.

8. The placement of openings (doors and windows) must consider the siting of neighbouring dwellings and yards. Skylights and dormers, for example, can provide good natural lighting without compromising privacy in the neighbourhood.

Sustainable Design and Development

9. Wherever possible, Coach Houses construction should not involve cutting down mature trees.



Coach House design minimizing overlook on adjacent property. Credit: TBD

10. In some cases, a site drainage plan may be required.

11. A vegetated setback should be provided between a Coach Houses and a public street.

12. Green roofs, green walls and landscaping are encouraged for their aesthetic quality and their role as thermal and stormwater regulators.

13. Passive heating and cooling are encouraged to reduce energy use and dependence on air conditioning etc.

14. If a parking space is required, it should be uncovered and permeable in order to mitigate runoff and heat island effects.

5.4
Rowhouses

Overview
Rowhouse developments in Barrie will occur in Neighbourhood Areas, either as infill developments in existing neighbourhoods, or as part of larger plans of subdivision.

Rowhouses may also be utilized within large, medium or high density sites proposing multiple buildings, and located adjacent to Neighbourhood Areas. Here they can be used to help create a transition of height and density.

Common design challenges include integrating with the existing and planned future context, and positively contributing to a streetscape.

To address the above challenges, projects should have a strong relationship to the street, use similar or compatible materials found in the surrounding neighbourhood, and extend or connect with the existing and planned street and open space networks.

Building Type Characteristics
- 2-3 storeys
- Shares side walls with neighbouring units
- Individual unit entrance with street-oriented pedestrian access.



Credit: Image TBD

Objectives

To achieve the design goals of the City, all rowhouse projects should:

1. Orient buildings, entrances, windows, patios, and balconies to face the fronting public street, with the primary entry clearly visible and directly accessible from the sidewalk.

2. Provide usable outdoor amenity spaces and generous and high-quality landscaped areas that offer privacy, screening, and attractive interfaces with streets and open spaces.

3. Use building articulation, scaling, and setbacks to define individual units or intervals and to contribute to a consistent frontage pattern, pedestrian scale and rhythm along the fronting street.

4. Locate and design buildings to maximize access to sunlight, increase privacy, and reinforce neighbourhood character through complementary architectural design and style, materiality, and colours.

5. Provide access to parking from a secondary street or lane, wherever possible.



Pedestrian mid-block connection in Townhouse Development. Credit: City of Kelowna

5.4.1 Site Planning

Design Intent: to site buildings to respond sensitively to topography and environmental features; to enhance privacy, liveability, safety and accessibility; and to increase connectivity to the surrounding open space network.

Guidelines:

1. Gated or walled communities are not supported.

2. For large rowhouse projects, consider including communal amenity buildings.

Connectivity

3. Provide pedestrian pathways on site to connect:

4. Main building entrances to public sidewalks and open spaces;

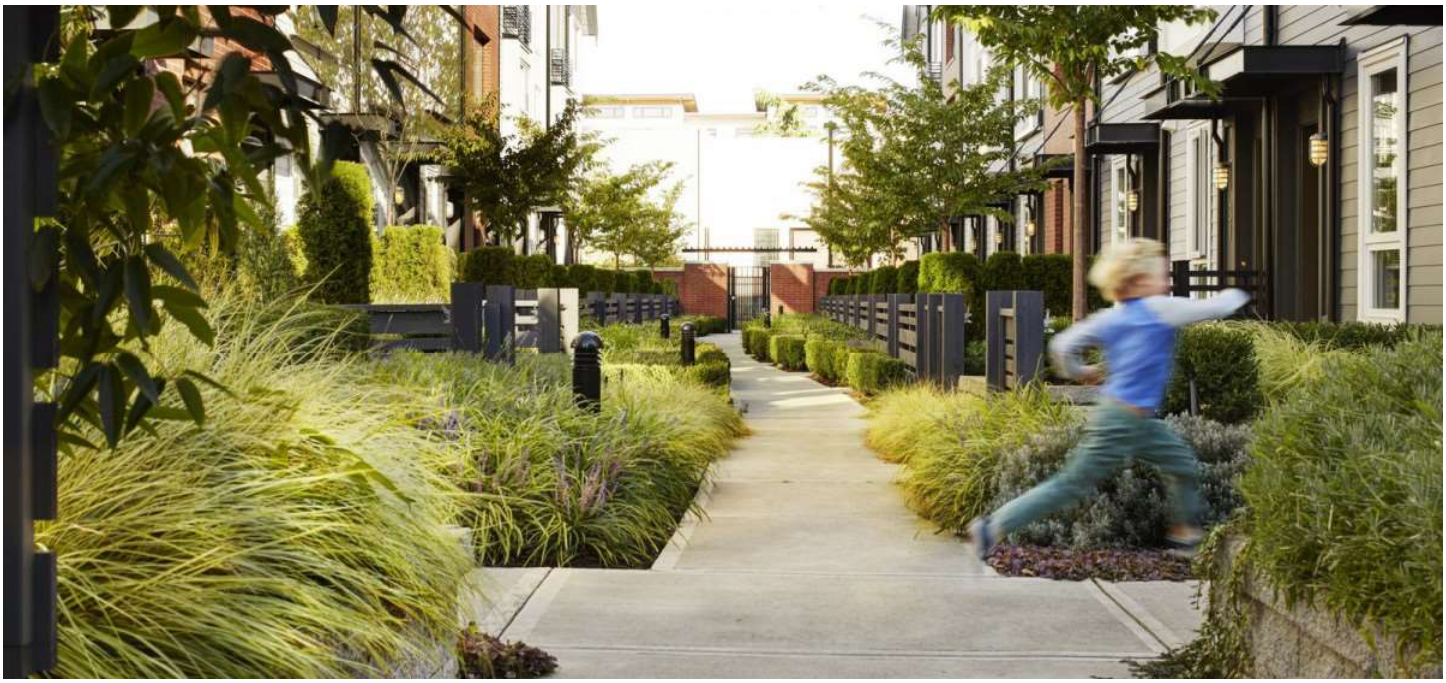
5. Visitor parking areas to building entrances; and

6. From the site to adjacent pedestrian/trail/cycling networks (where applicable).

7. When pedestrian connections are provided on site, frame them with an active edge – with entrances and windows facing the path or lane.

8. For large rowhouse projects (e.g., master planned communities with internal circulation pattern), design the internal circulation pattern to be integrated with and connected to the existing and planned public street network.

9. Where appropriate, design internal roadways to serve as additional shared space (e.g., vehicle access, pedestrian access, open space) using strategies such as:
   - High-quality pavement materials (e.g., permeable pavers); and
   - Providing useable spaces for sitting, gathering and playing.



Appropriate facing distances and visible entryways along a pedestrian mid-block connection. Credit: City of Kelowna

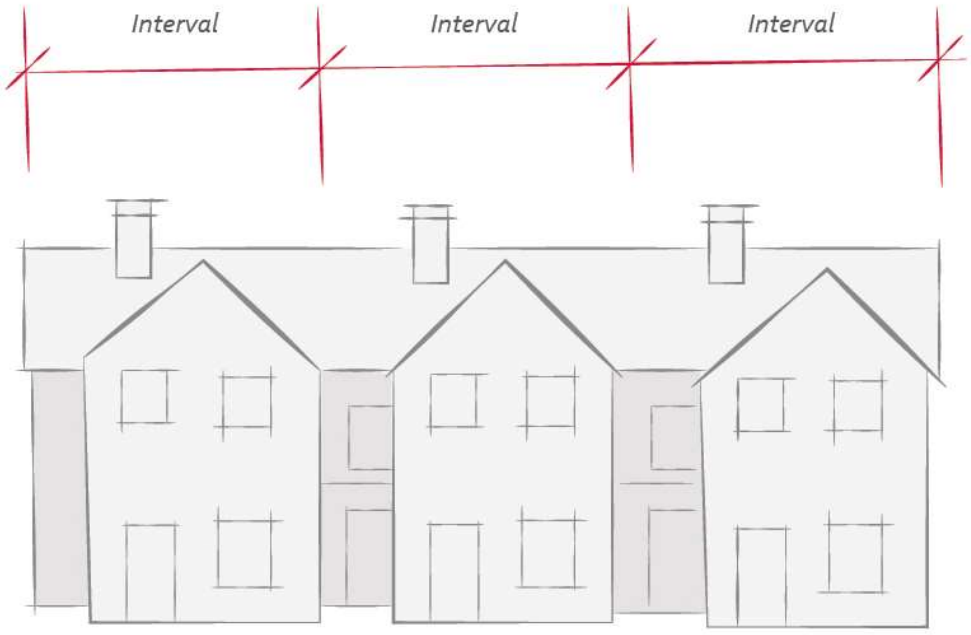
Facing Distances and Setbacks

10. Locate and design buildings to maintain access to sunlight, and reduce overlook between buildings and neighbouring properties.

11. Separate facing buildings on site a minimum of 10-12m to provide ample spatial separation and access to sunlight.

12. Limit building element projections, such as balconies, into setback areas, streets, and amenity areas to protect solar access.

13. Front yard setbacks on internal roads should respond to the height of rowhouses, with taller rowhouses (e.g., 3 storeys) having greater setbacks to improve liveability and solar access.



Credit: City of Kelowna

5.4.2 Scale and Massing

Design Intent: to ensure buildings contribute positively to the neighbourhood context and provide a sensitive transition in scale to existing and future buildings, parks, and open spaces

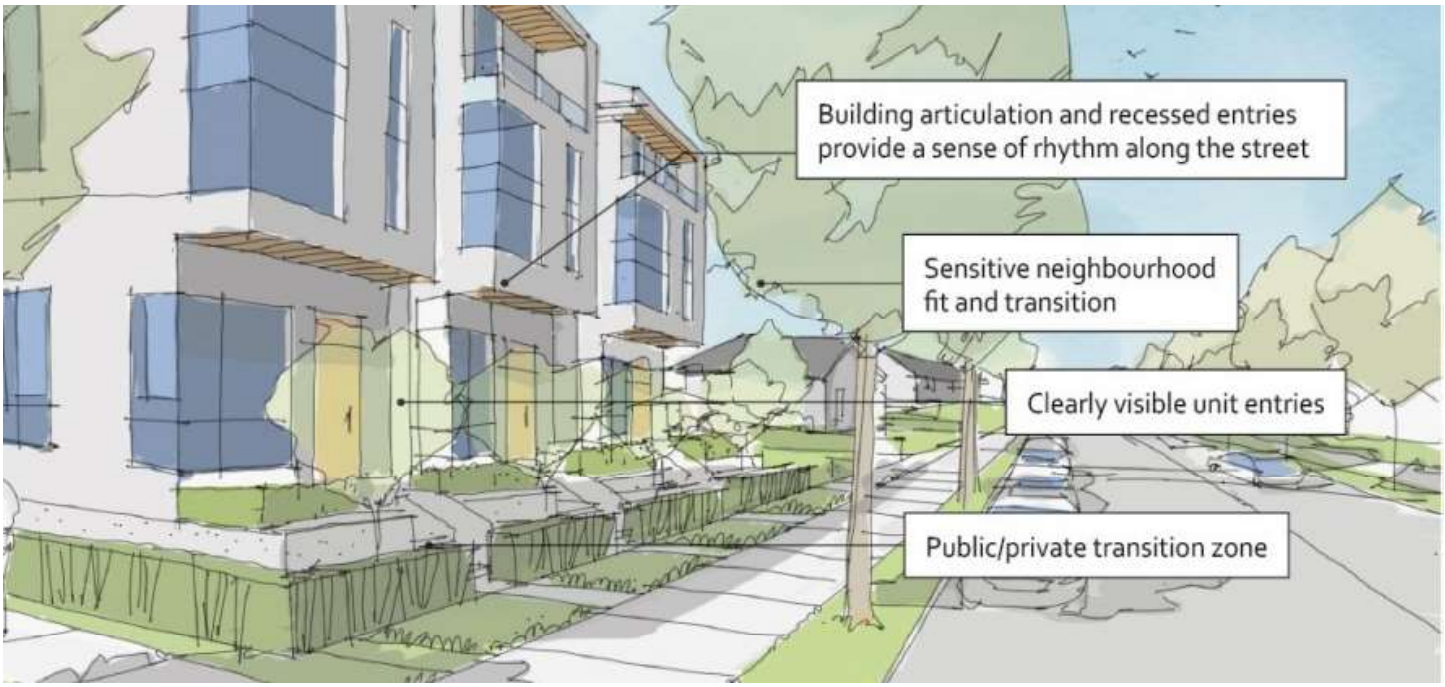
Guidelines:

1. Wherever possible, reflect the positive attributes of adjacent housing while integrating new higher density forms of housing as envisioned in the Official Plan.

2. Scale and site buildings to establish consistent rhythm along the street by, for example, articulating individual units through integration of recessed entries, balconies, a change in materials and slight projection/recess in the facade.

3. Limit the number of connected townhouse units to a maximum of 6-8 units before splitting into multiple buildings.

4. In larger townhouse developments (e.g., master planned communities with internal circulation pattern), integrate a large proportion of 4 unit townhouse buildings to create a finer grain of development and limit visual impacts of massing.



Credit: City of Kelowna

5.4.3 Relationship to the Street

Design Intent: to site and design ground-related buildings to positively frame and activate streets and open spaces, while providing a clearly-defined public-private transition zone.

Guidelines:

1. Design primary unit entrances to provide:
   - A clearly visible front door directly accessible from a public street or publicly accessible pathway via a walkway, porch and/or stoop;
   - Architectural entrance features such as stoops, porches, shared landings, patios, recessed entries, and canopies;
   - A sense of transition from the public to private realm by utilizing strategies such as changes in grade, decorative railings, and planters; and
   - Punctuation, articulation and rhythm along the street.

2. A maximum height of 1.2m is desired for front entryways or stoops. Exceptions can be made in cases where the water table requires this to be higher.

3. In the case of shared landings that provide access to multiple units, avoid having more than two doors in a row facing outward.

4. For buildings oriented perpendicularly to the street (e.g., 'shotgun' rowhouses), ensure that the end unit facing the street is a custom street-oriented unit with primary entry directly accessible from the fronting sidewalk.

5. For large townhouse projects (e.g., master planned communities with internal circulation pattern), The above guidelines apply for units facing private roads as well as those units fronting onto public streets.





5.4.4 Building Articulation and Materials

Design Intent: to enhance livability, visual interest, and sense of place through building form, architectural composition, and materials. .

Guidelines:

1. Design facades to articulate the individual units while reflecting positive attributes of neighbourhood character. Strategies for achieving this include:
   - Recessing or projecting facades to highlight the identity of individual units; and
   - Using entrance features, roofline features, or other architectural elements.

2. To maximize integration with the existing neighbourhood, design infill townhouses to:
   - Incorporate design elements, proportions, and other characteristics found within the neighbourhood; and
   - Use durable, quality materials similar or complementary to those found within the neighbourhood.

3. Maintain privacy of units on site and on adjacent properties by minimizing overlook and direct sight lines from the building using strategies such as:
   - Off-setting the location of windows in facing walls and locating doors and patios to minimize privacy concerns from direct sight lines;
   - Use of clerestory windows;
   - Use of landscaping or screening; and
   - Use of setbacks and articulation of the building.

4. In larger townhouse developments (e.g., master planned communities with internal circulation pattern), provide modest variation between different blocks of townhouse units, such as change in color, materiality, building and roof form.





Credit:City of Kelowna

5.4.5 Landscape and Open Spaces

Design Intent: to design landscapes and open spaces that are integrated, flexible, and accessible.

Guidelines:

1. Design all units to have easy access to useable private or semi-private outdoor amenity space.

2. Design front yards to include a path from the fronting street sidewalk to the primary entry, landscaping, and semi-private outdoor amenity space.

3. Avoid a 'rear yard' fronting condition with undeveloped frontages along streets and open spaces.

4. Design private outdoor amenity spaces to have:
   - Access to sunlight;
   - Railing and/or fencing to help increase privacy; and
   - Landscaped areas to soften the interface with the street or open spaces.

5. Design front patios to:
   - Provide an entrance to the unit; and
   - Be raised a minimum of 0.6m and a maximum of 1.2m to create a semi-private transition zone.

6. Design rooftop patios to:
   - Have parapets with railings;
   - Minimize direct sight lines into nearby units; and
   - Have access away from primary facades.

7. Design balconies to be inset or partially inset to offer privacy and shelter, reduce building bulk, and minimize shadowing.

8. Consider using balcony strategies to reduce the significant potential for heat loss through thermal bridge connections which could impact energy performance.

9. Provide a minimum of 10% of the total site area to common outdoor amenity spaces that:
   - Incorporate landscaping, seating, play space, and other elements that encourage gathering or recreation; and



ıme a courtyard with a children's play space and places for leisure.
Credit: City of Toronto

- Avoid isolated, irregularly shaped areas or areas impacted by parking, mechanical equipment, or servicing areas.
- Refer to Landscape section for further guidance.

10. For large townhouse projects, provide generous shared outdoor amenity spaces integrating play spaces, gardening, storm water and other ecological features, pedestrian circulation, communal amenity buildings, and other communal uses.

11. Design internal roadways to serve as additional shared space (e.g., vehicle access, pedestrian access, open space) using strategies such as:

12. High-quality pavement materials (e.g., permeable pavers); and

13. Providing useable spaces for sitting, gathering and playing.



Laneway Rowhouses. Credit: City of Kelowna

5.4.6 Access, Parking, and Site Servicing

Design Intent: to ensure the provision of adequate servicing, vehicle access, and parking while minimizing adverse impacts on the comfort, safety, and attractiveness of streets, sidewalks, and open spaces.

Guidelines:

Access

1. Ensure that internal circulation for vehicles is designed to accommodate necessary turning radii and provides for logical and safe access and egress.

2. For large townhouse projects (e.g., master planned communities with internal circulation pattern), a minimum of two access/egress points to the site is desired.

3. Locate access points to minimize impact of headlights on building interiors.

4. Design the internal circulation pattern and pedestrian and open space network to be integrated with and connected to the existing and planned public street and open space network.

Parking

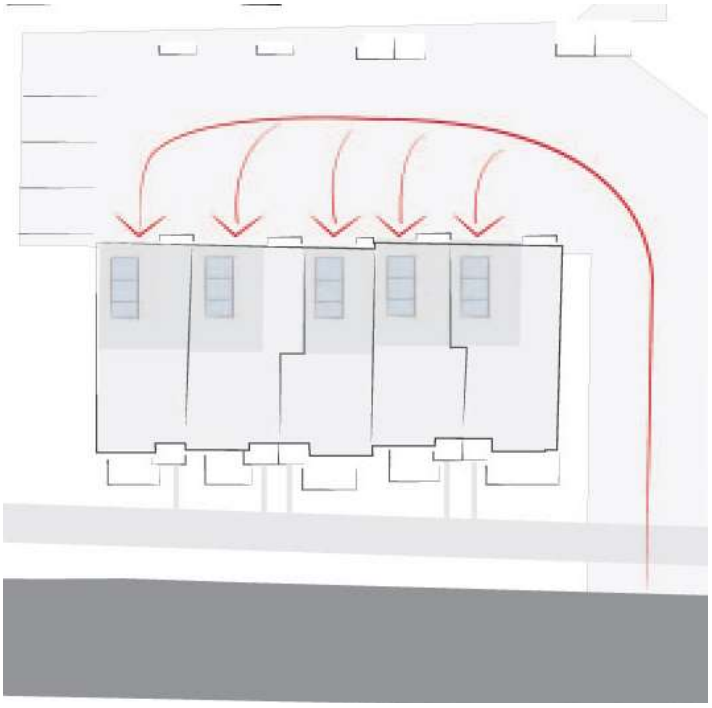
5. Rear-access garage or integrated tuck under parking is preferred in townhouses, in general, and is required for townhouses facing public streets.

6. Centralized parking areas that eliminate the need to integrate parking into individual units are supported.

7. Front garages and driveway parking are acceptable in townhouses facing internal strata roads, with the following considerations:

8. Architecturally integrate the parking into the building and provide weather protection to building entries; and

9. Design garage doors to limit visual impact, using strategies such as recessing the garage from the rest of the facade.



Credit: City of Kelowna

10. Provide visitor parking in accessible locations throughout the site and provide pedestrian connections from visitor parking to townhouse units. Acceptable locations include:

11. Distributed through the site adjacent to townhouse blocks; and

12. Centralized parking, including integration with shared outdoor amenity space.

Site Servicing

13. Exceptions for locating waste collection out of public view can be made for well-designed waste collection systems such as Molok bins.

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5.5
Low & Mid-Rise Buildings

Low- and mid-rise buildings are a common building typology in Barrie.

Low-rise residential buildings will be expected in Neighbourhood Areas at key intersections or adjacent to open spaces. They may also be utilized in larger multi-building developments in Strategic Growth Areas to create transition to surrounding adjacent Neighbourhood Areas.

Mid-rise buildings will be located in the Urban Growth Centre, Major Transit Station Areas, Strategic Growth Areas, Commercial Districts, and along Intensification Corridors.

Common design challenges include addressing the street with active uses and street-oriented units and reducing the bulk and massing of larger buildings.

These types of projects should have a strong relationship to the street with a clear front-to-back orientation and provide vertical and horizontal articulation.

Building Type Characteristics

- 3-4 storeys for low-rise buildings
- 5-12 storeys for mid-rise buildings
- A shared main entrance and secondary accesses to units within the building
- Street-oriented residential units and/or commercial retail at-grade



Credit: City of Kelowna

Objectives

To achieve the design goals of the City, all high-rise buildings should:

1. Provide attractive and active human-scale design and amenities, oriented towards publicly-accessible spaces at grade, such as frequent entries, weather protection, and outdoor seating areas.

2. Break up massing of a building by providing simple vertical and horizontal articulation of facades (e.g. step-backs, insets, projections, colour and texture).

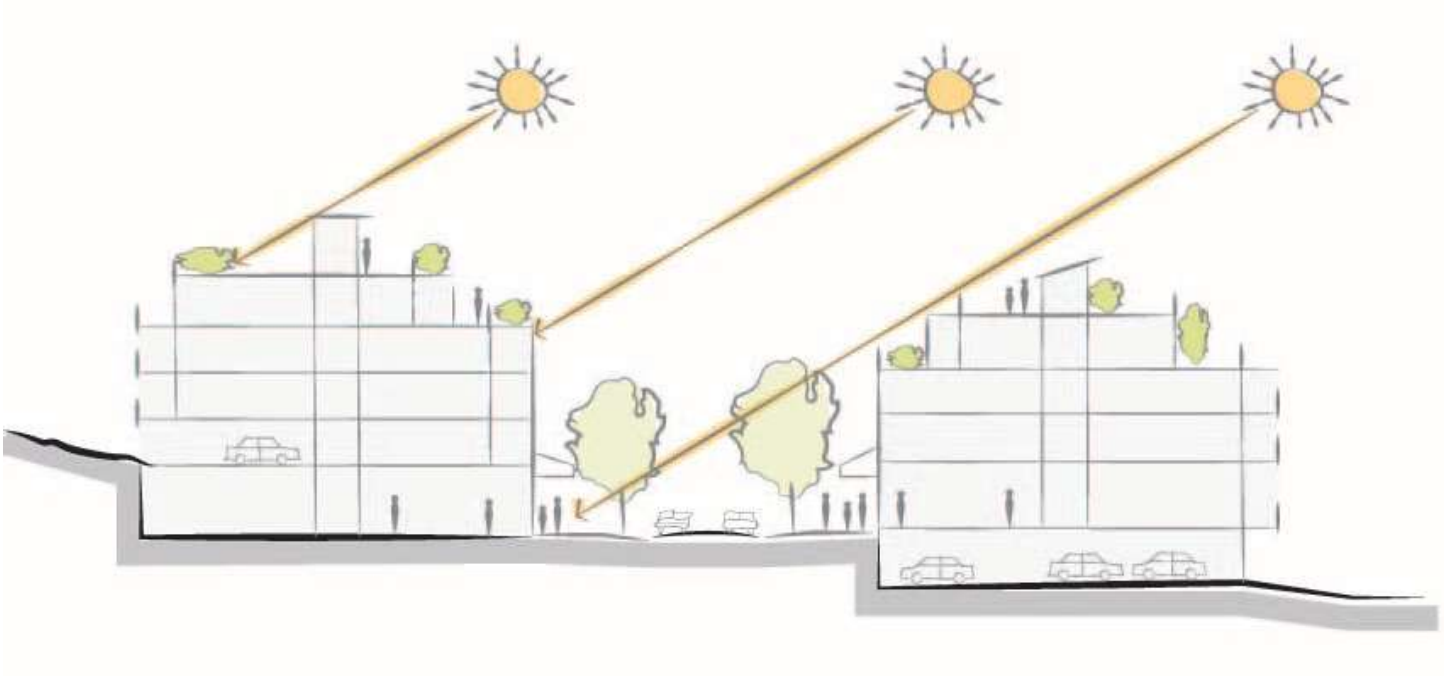
3. Ensure buildings have a front-to-back orientation to streets and open spaces with back-of-house uses located to the rear of buildings to minimize visual impacts on the public realm.

4. Orient entries, windows, patios, and balconies to face the fronting street. Ensure primary building entrances are architecturally emphasized and directly accessible from the fronting public sidewalk.

5. Maximize 'eyes on the street' by avoiding blank walls and providing lines of sight from windows and balconies to the sidewalk and adjacent public spaces.

6. Provide access to underground or above ground parking from secondary streets or laneways.

7. When structured above grade parking is required due to the high water table, use store fronts or screening to mitigate visual impacts.



Credit: City of Kelowna

5.5.1 Site Planning

Design Intent: to situate buildings on the site to respond sensitively to topography and environmental features; to enhance privacy, liveability, safety and accessibility; and to increase connectivity to the surrounding open space network.

Guidelines:

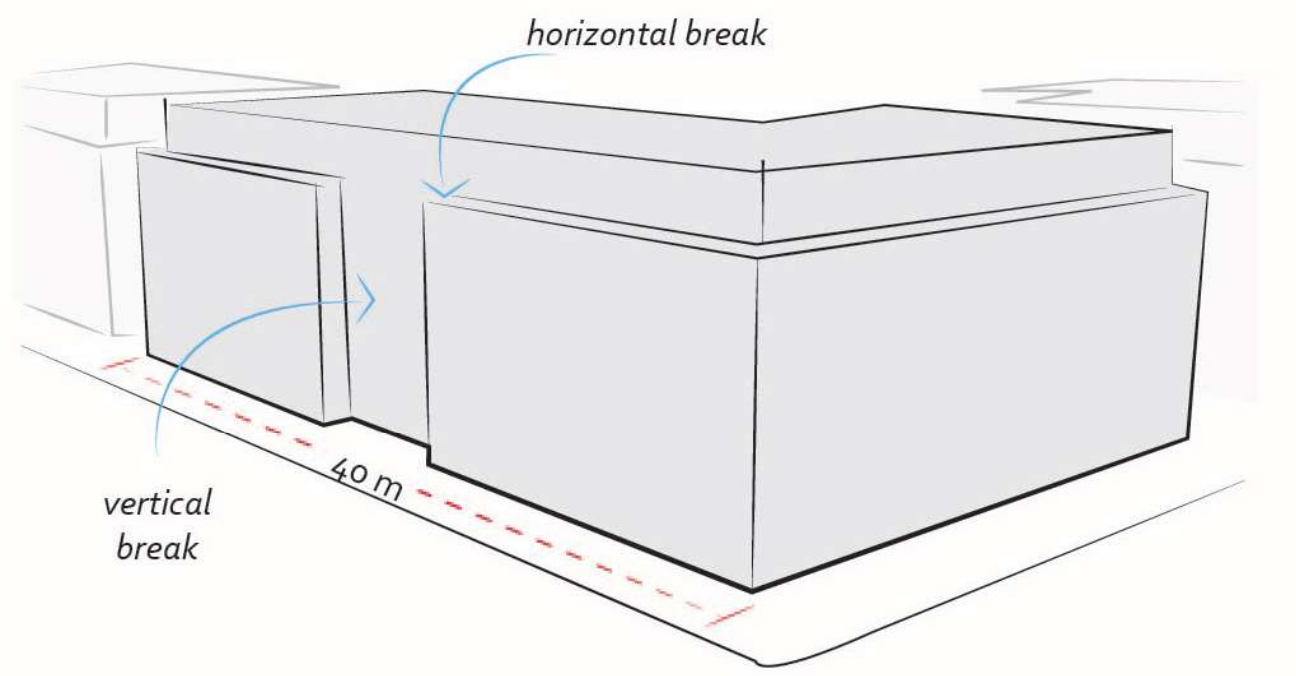
1. On sloping sites, floor levels should step to follow natural grade and avoid the creation of blank walls.

2. Site buildings to be parallel to the street and to have a distinct front-to-back orientation to public street and open spaces and to rear yards, parking, and/or interior court yards:
   - Building sides that interface with streets, mid-block connections, and other open spaces (building fronts) should positively frame and activate streets and open spaces and support pedestrian activity; and
   - Building sides that are located away from open spaces (building backs) should be designed for private/shared outdoor spaces and vehicle access.

Connectivity

3. Break up large buildings with mid-block connections which should be publicly-accessible, wherever possible.

4. Ground floors adjacent to mid-block connections should have entrances and windows facing the mid-block connection.



Credit: City of Kelowna

5.5.2 Scale and Massing

Design Intent: to ensure buildings contribute positively to the neighbourhood context and provide a sensitive transition in scale to existing and future buildings, parks, and open spaces.

Guidelines:

1. Building facades should generally have a maximum length of 70m. A length of 40-50m is preferred.

2. Residential buildings should have a maximum width of 24m.

3. Buildings over 40m in length should incorporate a significant horizontal and vertical break in their massing and facade.

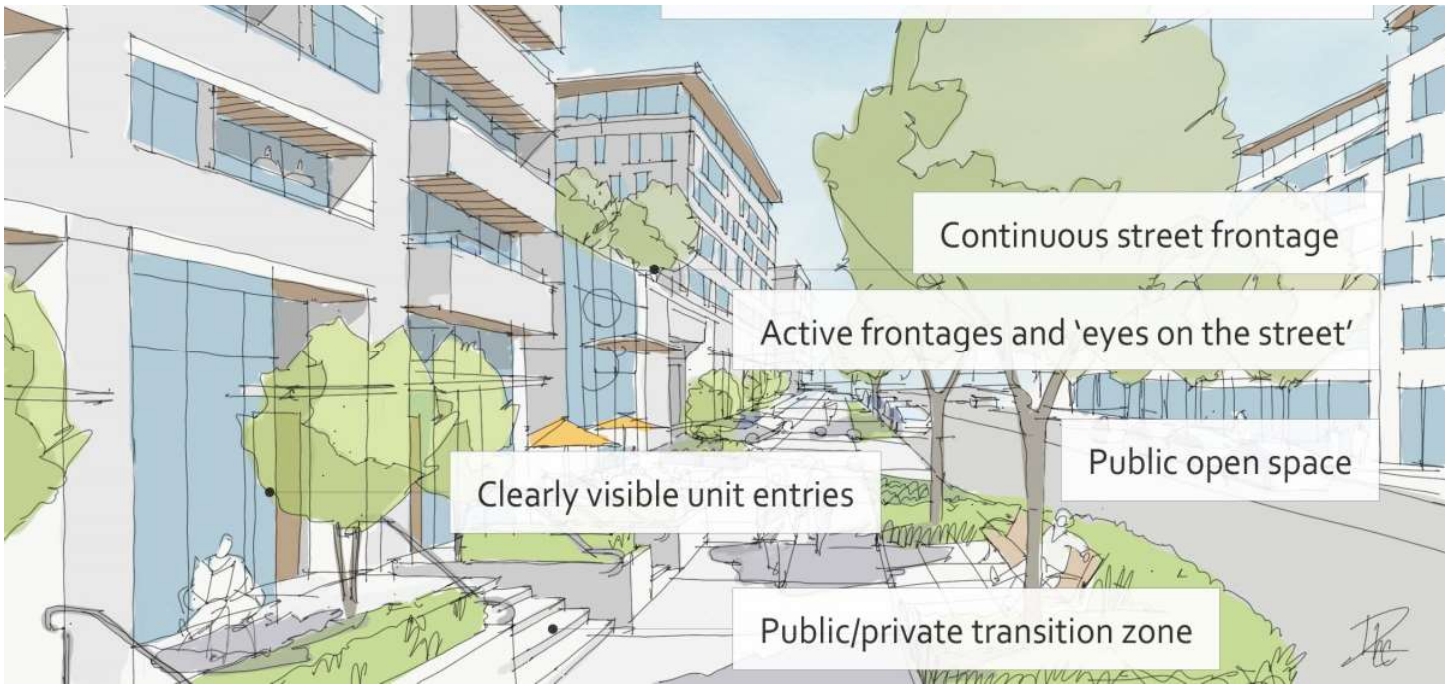
4. For commercial facades, incorporate a significant break at intervals of approximately 35m.

5. To support and promote the use of timber construction, exceptions to setbacks and podium design guidelines will be considered to accommodate unique design challenges and technical requirements.

6. Courtyards and mid-block connections within building sideyards should be a minimum of 6m wide.

7 - 12 Storey Buildings

7. Buildings between six and twelve storeys should provide a:
   - 2-3 storey podium at the base of the building;
   - 3m stepback or greater in upper storeys, and more generous upper storey terraces facing south and west; and,
   - 30m building separation between primary building facades.



Credit: City of Kelowna

5.5.3 Relationship to Street

Design Intent: to site and design buildings to positively frame and activate streets and public open spaces.

Guidelines:

1. Ensure lobbies and main building entries are clearly visible from the fronting street.

2. Avoid blank walls at grade wherever possible by:
   - Locating enclosed parking garages away from street frontages or public open spaces;
   - Using ground-oriented units and entries or glazing to avoid creating dead frontages; and
   - When unavoidable, screen blank walls with landscaping or incorporate a patio cafe or special materials to make them more visually interesting.

Commercial Retail & Institutional Ground Floors

3. Ensure buildings have a continuous active and transparent frontage at grade to provide a visual connection between the public and private realm.

4. Site buildings using a common 'build to' line at or near the front property line so that a continuous street frontage is maintained. Some variation (1-3m maximum) can be accommodated in ground level set backs to support pedestrian and retail activity by, for example, incorporating a recessed entryway, small entry plaza, or sidewalk patio.

5. Incorporate frequent entrances (every 15 m maximum) into commercial street frontages to create punctuation and rhythm along the street, visual interest, and support pedestrian activity.

6. Sites and buildings should be graded so that entryways are at street level and accessible.

Residential Ground Floors

7. Set back residential buildings on the ground floor between 3-5m from the property line to create a semi-private entry or transition zone to individual units and to allow for an elevated front entryway or raised patio.



Residential building with slightly raised entryways from street level for additional privacy. Credit: City of Kelowna

8. A maximum 1.2m height (e.g., 5-6 steps) above street level is desired for front entryways.

9. Exceptions can be made in cases where the water table requires this to be higher. In these cases, provide a larger patio and screen parking with ramps, stairs and landscaping.

10. Incorporate individual entrances to ground floor units accessible from the fronting street or public open spaces.

11. Site and orient buildings so that windows and balconies overlook public streets, parks, walkways, and shared amenity spaces while minimizing views into private residences.



Articulation through simple materials and architectural details. Credit: ADHOC Architects.

5.5.4 Building Articulation and Materials

Design Intent: to enhance liveability, visual interest, identity, and sense of place through building form, architectural composition, and materials.

Guidelines:

1. Articulate building facades into intervals that are a maximum of 15m wide for mixed-use buildings and 20m wide for residential buildings. Strategies for articulating buildings should consider the potential impacts on energy performance, and include :
   - Façade Modulation – stepping back or extending forward a portion of the façade to create a series of intervals in the facade;
   - Repeating window patterns at intervals that correspond to extensions and step backs (articulation) in the building facade;
   - Providing a porch, patio, deck, or covered entry for each interval;
   - Providing a bay window or balcony for each interval, while balancing the significant potential for heat loss through thermal bridge connections which could impact energy performance;
   - Changing the roof line by alternating dormers, stepped roofs, gables, or other roof elements to reinforce the modulation or articulation interval;
   - Changing the materials with the change in building plane; and
   - Provide a lighting fixture, trellis, tree, or other landscape feature within each interval.
2. Break up the building mass by incorporating elements that define a building's base, middle and top.
3. Use an integrated, consistent range of materials and colors and provide variety by, for example, using accent colors.
4. Articulate the facade using design elements that are inherent to the building as opposed to being decorative. For example, create depth in building facades by recessing window frames or partially recessing balconies to allow shadows to add detail and variety as a byproduct of massing.





Place awnings and canopies to balance weather protection with daylight penetration. Credit: NACTO & Hewitt Seattle

5. Incorporate distinct architectural treatments for corner sites and highly visible buildings such as varying the roofline, articulating the facade, adding pedestrian space, increasing the number and size of windows, and adding awnings and canopies.

Weather protection

6. Provide weather protection (e.g. awnings, canopies, overhangs, etc.) along all commercial streets and plazas, with particular attention to the following locations:
   - Primary building entrances,
   - Adjacent to bus zones and street corners where people wait for traffic lights;
   - Over store fronts and display windows; and
   - Any other areas where significant waiting or browsing by people occurs.

7. Architecturally-integrate awnings, canopies, and overhangs to the building and incorporate architectural design features of buildings from which they are supported.

8. Place and locate awnings and canopies to reflect the building's architecture and fenestration pattern.

9. Place awnings and canopies to balance weather protection with daylight penetration. Avoid continuous opaque canopies that run the full length of facades.

10. Design awnings and canopies to break up and mitigate down drafts and pedestrian-level wind impacts.

Signage

11. Provide attractive signage on commercial buildings that identifies uses and shops clearly but which is scaled to the pedestrian rather than the motorist. Some exceptions can be made for buildings located on highways and/or major arterials in alignment with the City's Sign Bylaw.

12. Avoid the following types of signage:
   - Internally lit plastic box signs;
   - Pylon (stand alone) signs; and
   - Rooftop signs.

13. Uniquely branded or colored signs are encouraged to help establish a special character to different neighbourhoods.



Illustration in development demonstrating principles and guidelines related to building design and materials.



Credit: Merrick Architecture

5.5.5 Landscape and Open Spaces

Design Intent: to design landscapes and open spaces to respond to an open space program that relates to its users and provides flexible, accessible open space.

Guidelines:

1. Integrate publicly accessible private spaces with public open areas to create seamless, contiguous spaces, where possible.

2. Locate open spaces to maximize sunlight, minimize noise disruptions, and minimize 'overlook' from adjacent units.

Outdoor Amenity Areas

3. Design plazas and amenity areas to:
   - Have 'three edges' (i.e., building frontage on three sides) where possible and be sized to accommodate a variety of activities;
   - Be animated with active building uses at the ground level; and,
   - Be located in sunny, south facing areas.

4. Design internal courtyards to:
   - Provide amenities such as play areas, barbecues, and outdoor seating.
   - Provide a balance of hardscape and softscape areas to meet the specific needs of surrounding residents and/or users.

5. Design mid-block connections to include active frontages, seating and landscaping where possible.

Rooftop Amenity Spaces

6. Design shared rooftop amenity spaces to be accessible and to ensure a balance of amenity and privacy by:
   - Limiting sight lines from overlooking residential units through the use of pergolas or covered areas where privacy is desired; and
   - Controlling sight lines from the outdoor amenity space into nearby residential units by using fencing, landscaping, or architectural screening.

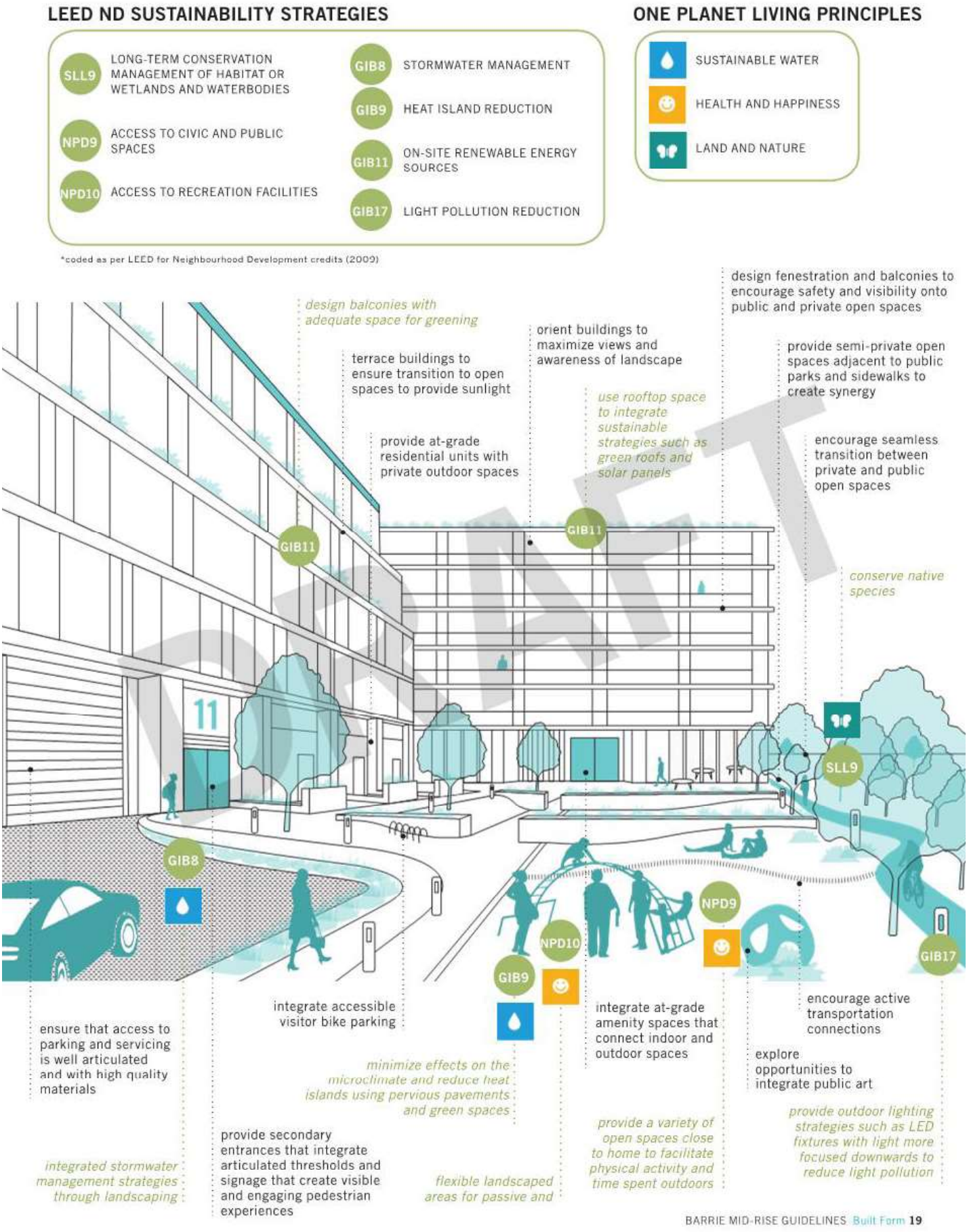
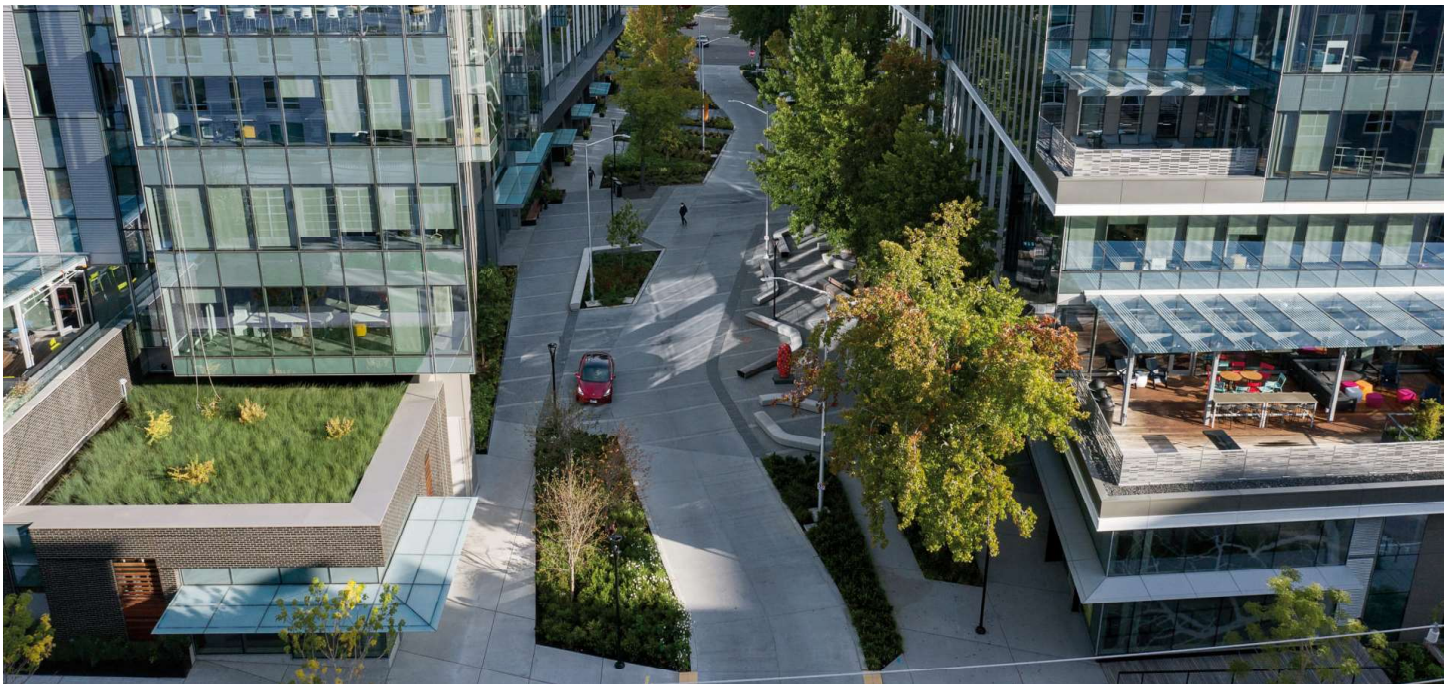


Illustration in development: Demonstrating principles and guidelines related amenity and open space.



Credit: Hewitt Architecture

7. Reduce the heat island effect by including plants or designing a green roof, with the following considerations:
    - Secure trees and tall shrubs to the roof deck; and
    - Ensure soil depths and types are appropriate for proposed plants and ensure drainage is accommodated.



Credit: TACT Architecture Inc.

5.5.6 Access, Parking, and Site Servicing

Design Intent: to ensure the provision of adequate servicing, vehicle access, and parking while minimizing adverse impacts on the comfort, safety and attractiveness of the public realm..

Guidelines:

1. Vehicular access should be from a lane. Where there is no lane, and where the (re) introduction of a lane is difficult or not possible, access may be provided from the street, provided:
   - Access is from a secondary street, where possible;
   - Impacts on pedestrians and the streetscape is minimized; and,
   - There is no more than one curb cut per property.

2. Above-grade structured parking should only be provided in instances where the site or high water table does not allow for other parking forms.

3. Buildings with ground floor residential may integrate half-storey underground parking to a maximum of 1.2m above grade, with the following considerations:
   - Semi-private spaces should be located above to soften the edge and be at a comfortable distance from street activity; and.
   - Where conditions such as a high water table do not allow for this condition, up to 2m may be permitted, provided that entryways, stairs, landscaped terraces, and patios are integrated and that blank walls and barriers to accessibility are minimized and treated with attractive landscape design.

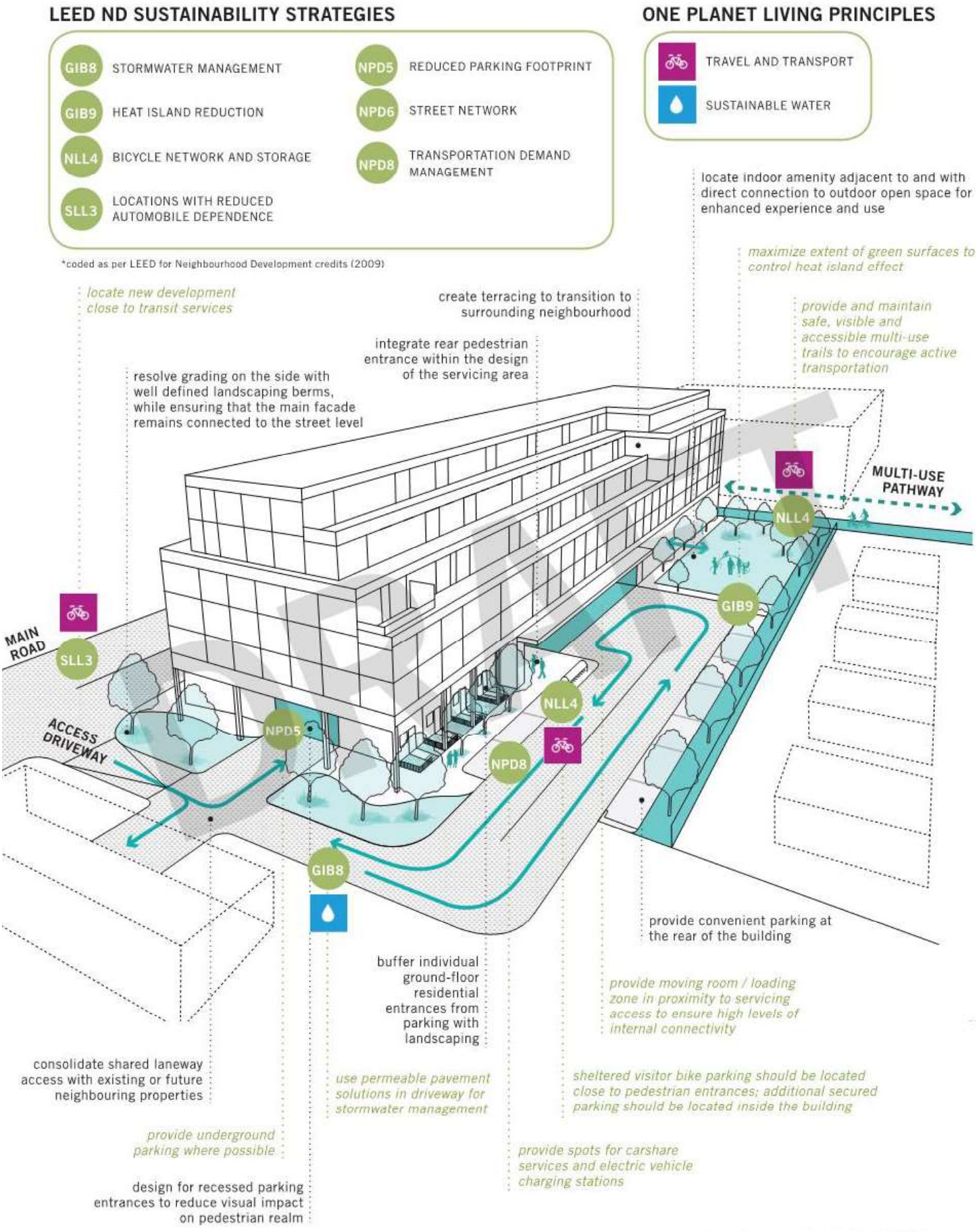


Illustration in development: Demonstrating principles and guidelines related to access, loading and parking.

5.6
High-Rise Buildings

High-rise buildings are expected within Barrie's Urban Growth Centre, Major Transit Station Areas, and may be considered in Strategic Growth Areas. They are mostly mixed use, but may also be wholly residential, and/or wholly commercial buildings.

Common design challenges include reducing the mass of podiums and bulk of towers, reducing the visual and use impacts of above-grade structured parking, and having active frontages on primary and secondary streets.

As a result, these projects should have a strong relationship to the street with active frontages, break up the mass of podiums by providing vertical and horizontal articulation, and have slender towers with reduced floor plates.

Building Type Characteristics

- 13 - 25 storeys
- A shared main entrance and secondary access to units within the building
- Street-oriented units (residential/commercial/retail/institutional) accessed at-grade



Credit: City of Kelowna

Objectives

To achieve the design goals of the City, all high-rise buildings should:

1. Provide a ground floor height of 4.5 m, and limit base building/podium height to 80% of adjacent Right-of-Ways.

2. Activate street frontages with transparent commercial, retail, and residential units accessible from the street.

3. Provide access to parking and loading areas via laneways or secondary streets. Where underground parking is not feasible, screen above grade parking using store fronts or architectural screening to mitigate any visual impacts.

4. Site podiums to frame and activate the street. Locate towers with appropriate separation distances and design them with slender and simple forms.

5. Design buildings to balance a cohesive architectural style with a distinct base/podium, tower, and top.

6. Break up base/podium massing by providing simple vertical and horizontal articulation of facades; e.g., stepping back or projecting forward a portion of the facade, using color and texture.

7. Provide opportunities for mid-block connections, plazas, and other semi-public open spaces.

5.6.1 Site Planning

Design Intent: to site podiums and towers to create a consistent streetwall and minimize visual and shadow impacts on the public realm.

Guidelines:

Building Placement

1. Site podiums parallel to the street and extend along the edges of streets, parks, and open spaces to establish a consistent street wall.

2. Additional considerations for building placement:
   - Site towers to be setback from the street wall and closer to interior lanes.
   - Greater setbacks may be provided at strategic points or along the entire frontage for increased architectural interest and improved pedestrian experience and public realm treatment; for example to provide space for tree planting, wider sidewalks, plazas, and other open spaces.
   - 3-4m setbacks can be provided along retail frontages to accommodate street cafes and patios.
   - Wherever possible, retain existing landscaped streetscapes by providing generous setbacks for trees and plantings.

Building Separation

3. Maintain a minimum spacing distance of 25m between towers, measured from the exterior wall of the buildings, excluding balconies.

4. Place towers away from streets, parks, open space, and neighbouring properties to reduce development impacts.

5. Provide minimum 15m separation of podium faces for pedestrian mid-block connections

Neighbourhood Fit and Transition

6. Create transition between tall buildings and lower-scaled buildings and open spaces by applying angular planes, minimum horizontal separation distances, and other strategies such as building setbacks and stepbacks to limit development impacts.

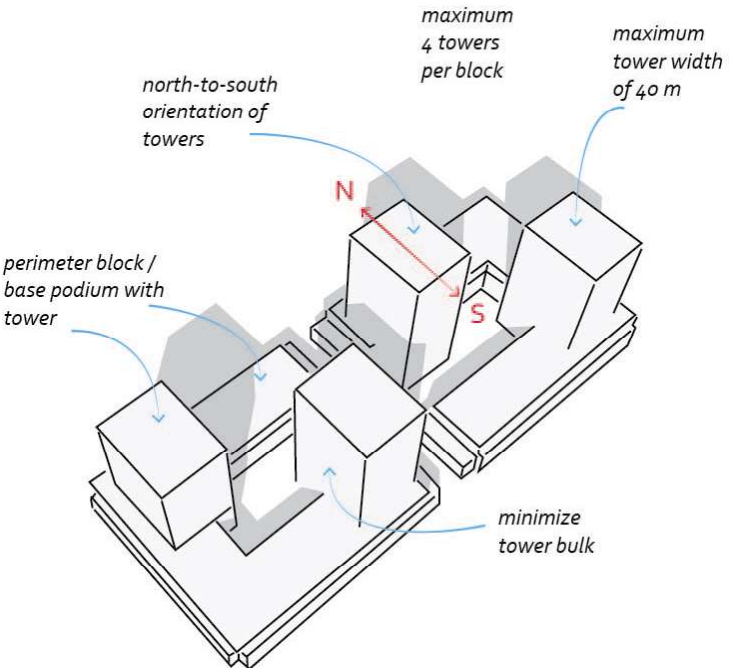
7. Where sites in Growth Areas are adjacent to Neighbourhood Areas, apply a 45-degree angular plane from the nearest Neighbourhood Area property line(s), to guide appropriate transitions in height from mid-and high-rise areas to the lower ground-related Neighbourhood Areas.

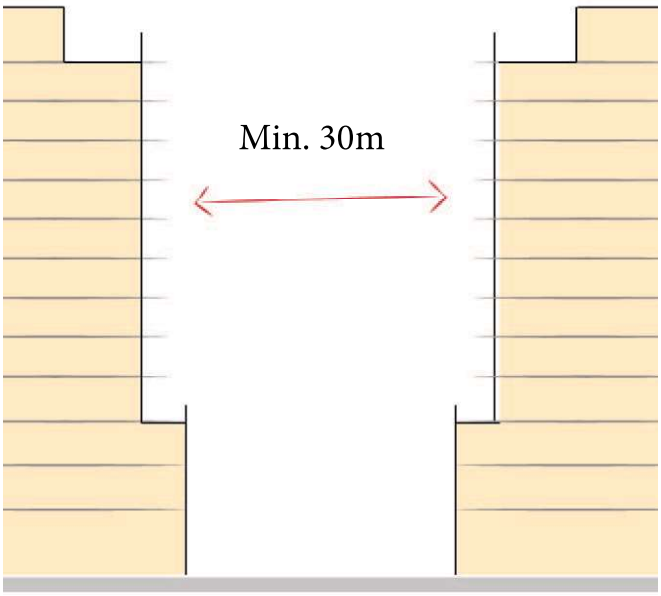
Solar Access

8. Orient buildings to maximize solar access to adjacent streets and public spaces, while also considering optimizing for solar orientation to improve energy performance and occupant comfort. Strategies for minimizing impact on solar access include:
   - Limiting the scale and height of the podium;
   - Designing slender towers with small footprints and generous separation distances;
   - Varying the heights of towers on sites with multiple towers; and
   - Locating towers on site to minimize shadowing adjacent buildings and open spaces.

Views

9. Site buildings and towers to protect, create, frame, or extend views from the public realm to important natural and human-made features and landmarks (e.g., to Lake Simcoe).





Credit: Image City of Kelowna

5.6.2 Scale and Massing

Design Intent: to ensure buildings contribute positively to the neighbourhood context and provide a sensitive transition in scale to existing and future buildings, parks, and open spaces.

Guidelines:

Podiums/Base Buildings

1. Provide a minimum first floor height of 4.5 metres, measured from average street grade.

2. Provide a minimum podium height of 2 storeys and a maximum podium height of 6 storeys, and ensure that the total podium height does not exceed 80% of the adjacent street right-of-way width (up to a maximum of 8 storeys).

3. On corner sites, vary the height and form of the podium to respect and respond to the height and scale of the existing context on adjacent streets.

4. When adjacent sites are lower in height and are not anticipated to change, provide a transition in the podium height down to the lower-scale neighbours.

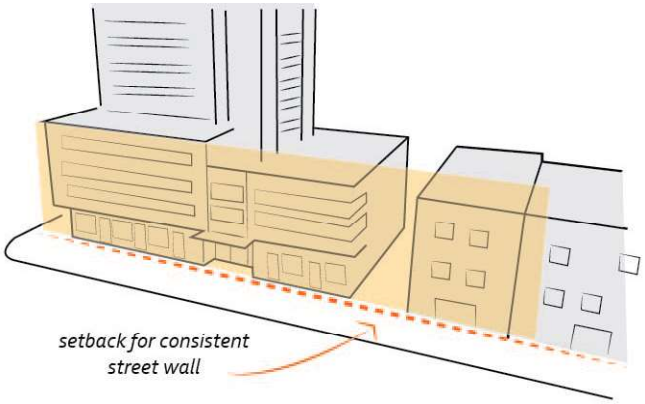
5. When adjacent sites include heritage buildings, design the scale and height of the podium to align with the heritage building height.

Towers

6. Orient towers in a north/south direction, wherever possible.

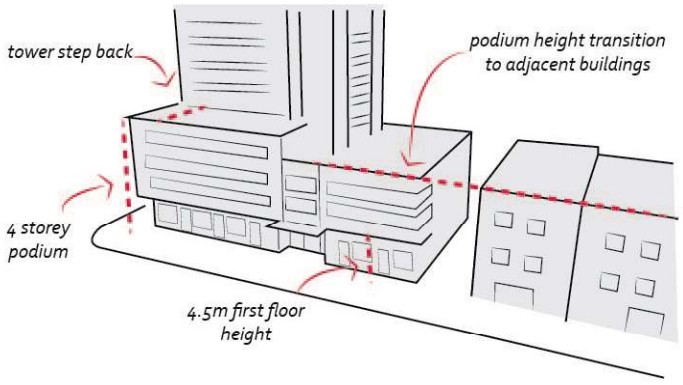
7. Generally, a maximum of four towers should be located within an individual block, with a staggered tower spacing.

8. Where multiple high-rise buildings are being considered, a master plan or wider block planning effort may be required.



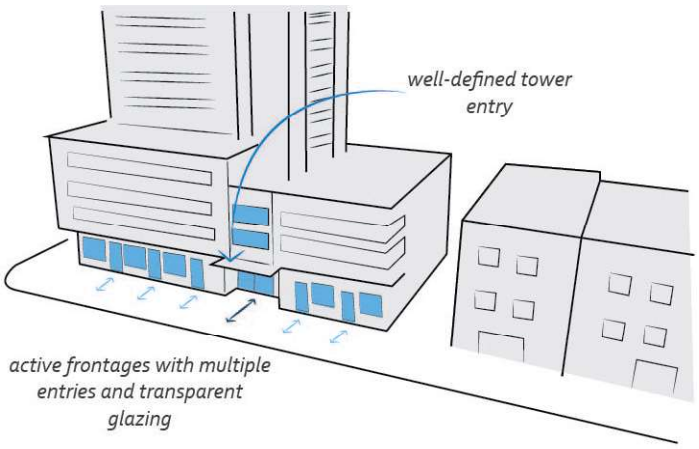
Siting and Orientation

Site podiums and building base's parallel to the street and create a consistent streetwall condition.



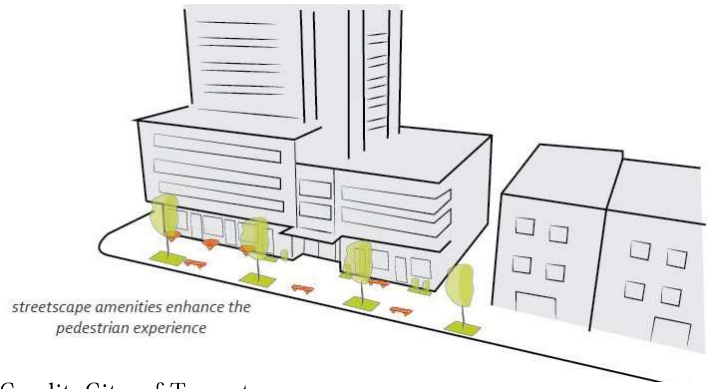
Contextual Considerations

Vary the height and form of the podium to respond to existing and envisioned future context on neighbouring sites, and adjacent street widths.



Access and Street Permeability

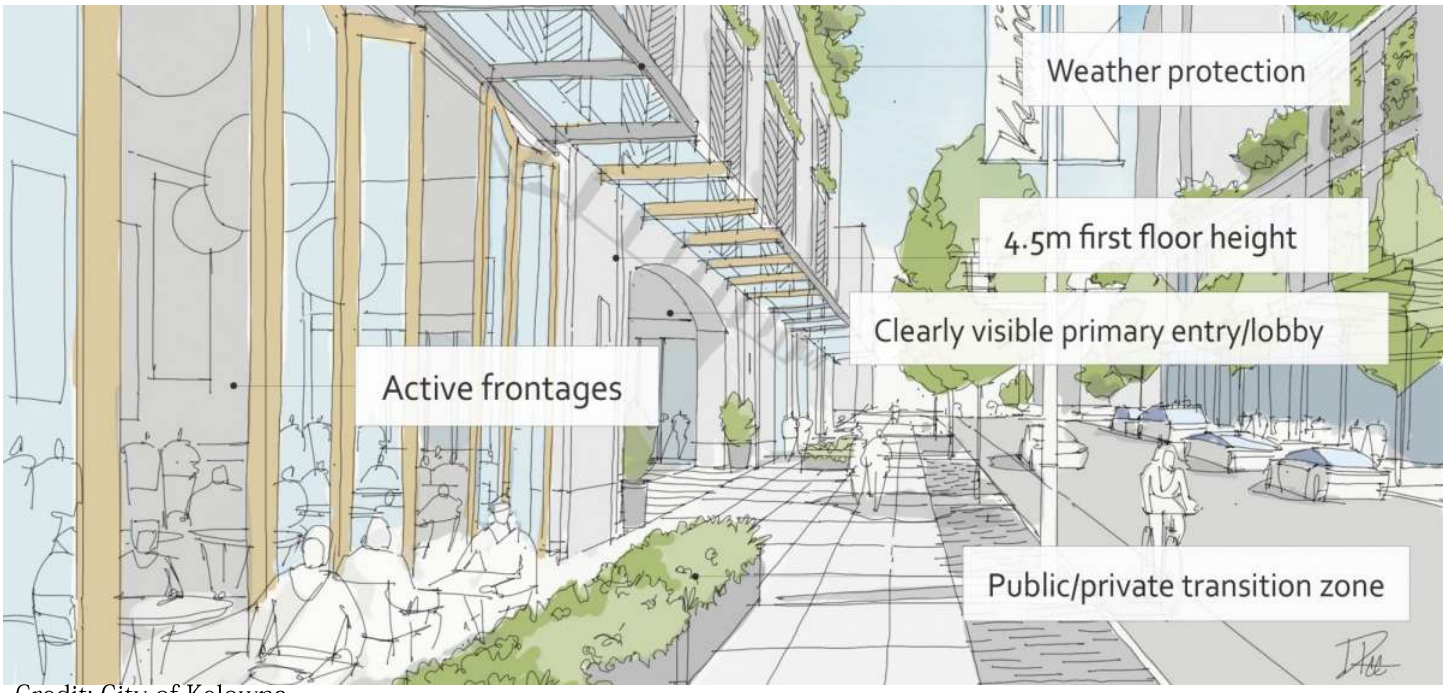
Create well defined, clearly visible and universally accessible primary building entrances.



Streetscape Integration

Provide streetscape amenities, such as street trees, landscaping, seating, and lighting to enhance the pedestrian experience.

Credit: City of Toronto



Credit: City of Kelowna

5.6.3 Relationship to Street

Design Intent: to site and design buildings to positively frame and activate streets and public open spaces.

Guidelines:

1. Design podiums to have frontages with high degrees of activity and transparency to promote 'eyes on the street' using strategies such as;
   - Having continuous commercial and retail uses with windows and primary entrances facing the street; and
   - Having ground-oriented residential units with windows and primary entrances facing the street.

2. For buildings on corner sites with retail frontages, ensure there are active frontages on both facades by wrapping the primary retail facade to the secondary frontage. The primary facade can be emphasized by using higher quality materials and detailing and creating a more prominent entrance.

3. For residential podiums with townhouse frontages, refer to the Townhouse Built Form Guidelines for that portion of the building.

4. Locate private, indoor amenity facilities such as bicycle storage along secondary street frontages as opposed to primary street frontages.

5. Blank walls over 5m are strongly discouraged and should be avoided.

Building Address and Access

6. Use architectural and landscape features to create well-defined, clearly visible, and universally accessible primary building entrances.
   Additionally:
   - Differentiate between residential and commercial entrances;
   - Design lobby entryways to ensure they are well-defined and visually emphasized in the facade;
   - For retail frontages, provide small format retail storefronts with frequent entrances and a minimum depth of 10 m; and



Credit: Image City of Kelowna

- Locate main building entries close to transit stops.

Sidewalk Interface

7. Design the streetscape fronting high-rise buildings to have defined zones as follows.
   - Frontage zone next to the building that may include patios, seating, or space for pedestrians to access building entrances;
   - Pedestrian zone that accommodates pedestrians walking along the sidewalk;
   - Furnishing / planting zone that provides space for street trees, landscaping, seating and lighting; and
   - Edge zone that provides a buffer from moving vehicles.

8. If the street is planned to accommodate cycling facilities, locate them between the edge zone and the furnishing / planting zone.

9. Provide a generous sidewalk width and space for streetscape amenities in the furnishing and planting zone, such as street trees, lighting, signage and public wayfinding elements, benches, trash receptacles & patios etc.



Credit: Hobin Architecture

5.6.4 Building Articulation, Features and Materials

Design Intent: to enhance liveability, visual interest, identity, and sense of place through building form, architectural composition and materials. .

Guidelines:

1. Design tall buildings to have a cohesive architectural look with a distinct podium, tower, and top. Strategies for achieving this include changes in articulation, materials, and the use of step backs.

2. Integrate service connections, vents, mechanical rooms and equipment with the architectural treatment of the building, and/or locate to minimize visual impact and screen from view with materials and finishes compatible with the building.

Podiums/Base Buildings

3. Provide architectural expression in a pattern, scale and proportion that is in relation to neighbouring buildings and that differentiates it from the tower. Examples of such design elements include the use of:
   - Cornice lines
   - Window bays;
   - Entrances;
   - Canopies;
   - Durable building materials; and
   - Energy efficient fenestration.

4. Highlight primary facades with high quality materials and detailing, with particular attention to building entrances.

5. Avoid blank walls, but if necessary, articulate them with the same materials and design as the other active frontages and consider these spaces for architectural features and public art, if appropriate.

6. Along intensification corridors, collectors, and arterial street frontages, avoid locating balconies (projecting or inset) within the first 2 storeys of the podium. Between 3 and 6 storeys, inset balconies behind the streetwall.

Towers

7. On sites with multiple towers, provide variation in the design and articulation of



Articulated masonry frames the ground podium while the glass tower rises above visually minimizing it's impact. Credit: Studio JCI

each tower facade to provide visual interest while maintaining a cohesive architecture overall.

8. Wrap-around balconies are strongly discouraged, but if proposed, may require smaller tower floor plate or greater separation distances to offset impacts.

9. Design balconies to meet sustainability objectives while reducing the visual mass of the building. Balconies should become an extension of interior living space, while balancing the significant potential for heat loss through thermal bridge connections which could impact energy performance.

10. Consider that inset or partially inset balcony arrangements may offer greater privacy and comfort, particularly on higher floors.

Tops

11. Design the top of tall buildings to be unique and distinguishable from the middle building and to make a positive contribution to the skyline.

12. The design of mechinical room screening, incorporation of roof top amenity spaces, and architectural lighting can be used to distinguish the tower top.

13. Where architectural lighting is considered, use energy efficient fixtures and avoid uplighting and overlighting.



Credit: Perkins+Will, photographers Andrew Latreille and Ed White

5.6.5 Landscape and Open Spaces

Design Intent: to design landscapes and open spaces to respond to an open space program that relates to its users and provides flexible, accessible open space.

Guidelines:

Publicly Accessible Open Spaces

1. Wherever possible, include publicly accessible open space on-site, such as hard or soft landscaped setbacks, plazas, courtyards, and mid-block pedestrian connections.

2. Define and animate the edges of open spaces with well-proportioned podiums and active uses at-grade.

3. Locate and design publicly accessible open space to:
   - Be directly accessible from the fronting public sidewalk;
   - Maximize access to sunlight and encourage year-round use through the use of landscaping, seating, and weather protection;
   - Where possible, complement and connect with publicly accessible open space on neighbouring properties; and
   - Maximize safety, comfort, amenity, and accessibility.

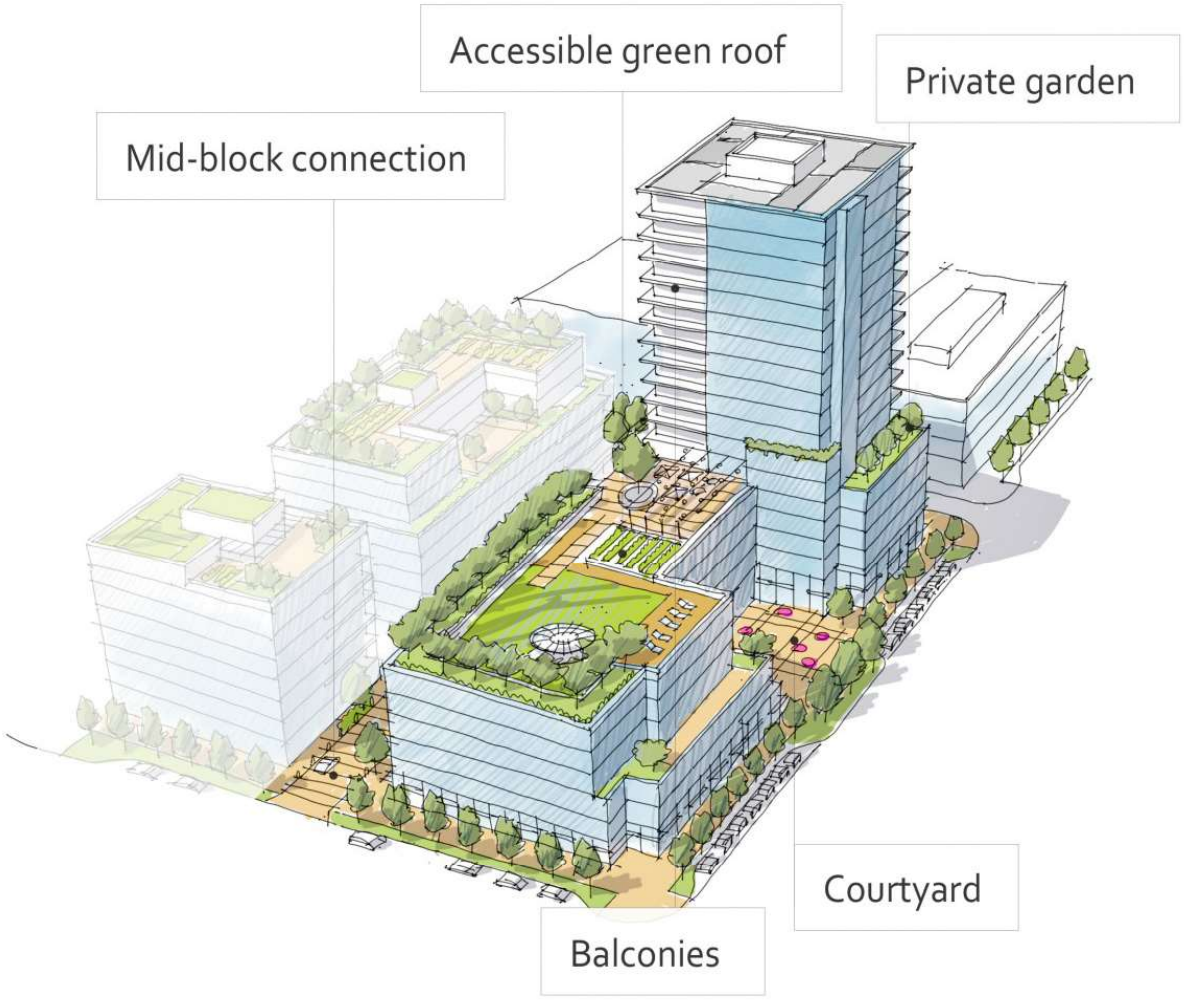
4. On larger sites, use publicly accessible open space to provide through-block pedestrian connections.

5. Where provided, tailor furniture elements as appropriate to encourage a range of seating and gathering opportunities, including both fixed and unfixed seating to allow for flexibility of use.

Private Open Spaces

6. Provide private outdoor amenity spaces on site, such as balconies, private courtyards, private gardens, and accessible green roofs.

7. Locate and design shared private outdoor amenity space to:
   - Maximize access to sunlight;
   - Minimize noise, smell and/or visual impacts from site servicing or mechanical equipment; and
   - Provide seating, lighting, trees, shade structures, and weather protection.



8. Locate private patios and gardens to minimize overlook from neighbours.

9. For shared rooftop amenity spaces (e.g., on the top of the podium parkade), ensure a balance of amenity and privacy by:

10. Limiting sight lines from overlooking residential units to outdoor amenity space areas through the use of pergolas or covered areas where privacy is desired; and

11. Controlling sight lines from the outdoor amenity space into adjacent or nearby residential units by using fencing, landscaping, or architectural screening.

12. Design private balconies to be large enough to provide usable outdoor space.

13. Locate indoor amenity areas adjacent to shared outdoor amenity areas and allow access between the two areas.

Public Art

14. Where applicable, integrate public art on-site to generate interest and activity and reflect the unique natural, Indigenous, or human history of Barrie.

15. Provide adequate building setbacks and space to accommodate the pedestrian view and experience of public art installations.

16. Site artwork at key pedestrian spaces such as courtyards, mid-block connections, lanes, and plazas.



Credit: City of Kelowna

5.6.6 Access, Parking and Site Servicing

Design Intent: to ensure the provision of adequate servicing, vehicle access, and parking while minimizing adverse impacts on the comfort, safety, and attractiveness of the public realm.

Guidelines:

1. Provide access to site servicing and parking at the rear of the building or along a secondary street. Utilize through laneways to minimize the need for vehicle turnarounds on site.

2. Where parking cannot be located underground due to high water table, and is to be provided above ground, screen the structure from public view as follows:
   - Where a building fronts an intensification corridor, collector, or arterial street, line the parking structure with active retail frontage;
   - Where a building fronts onto local or side streets, line the parking structure with an active residential frontage, such as ground oriented townhouse units;
   - Where active frontages cannot be accommodated, screen parking structures by using architectural or landscaped screening elements;
   - On corner sites, screen the parking structure from view on both fronting streets using the strategies above.
   - A setback between the ground floor and upper storeys of the podium that can accommodate significant soil volumes for planting trees and other landscaping to screen the parking structure may also be considered.

3. Public art can also be used to mitigate visual impacts from blanks walls on upper storey podium levels.

4. Minimize the visual impact of garage doors, parking entrances and service openings on the public realm by using strategies such as recessing, screening, and size minimization.

5. Avoid split level, raised or sunken parkade entrances.

6. Locate drop-off areas into the side or rear of the site and provide pedestrian access to the street frontage.

5.7
RETAIL, COMMERCIAL, INDUSTRIAL

Large format retail developments are a product of the automotive age, and are designed for convenient access by motorists with large areas of surface parking separating building entries from public sidewalks. As such, they present many opportunities for improving design and functionality, including enhancing the architectural design of box-style buildings; enhancing the pedestrian environment; improving landscaping in order to mitigate environmental and visual impact of parking areas; and designing to improve the character of the street and surrounding neighbourhoods. Underutilized mall sites present many opportunities for redeveloped, they are important to design with consideration for future adaptability and intensification of the site.

Industrial and service commercial buildings play an important role in the function and economy of Barrie and are oriented primarily towards providing convenient and safe access for commercial vehicles. They also present many opportunities to improve design and functionality, including enhancing the pedestrian environment once motorists get out of their vehicles, and are oriented primarily towards providing convenient and safe access for commercial vehicles; improving landscaping in order to mitigate environmental and visual impact of parking areas and buildings; and designing to mitigate negative impacts on neighbouring uses.

Building Type Characteristics

- Large building footprint
- Multiple loading bays
- Accommodates a variety of uses, but are frequently single use buildings (commercial, employment, intstitutional)



Key Guidelines

To achieve the design goals of the City, all retail, commercial and industrial buildings should:

1. Avoid blank walls facing the public street and design buildings such that their form and architectural character reflect the buildings internal function and use

2. Distribute trees and landscaping throughout the site to soften public/private boundaries, define internal circulation routes, create pleasant pedestrian conditions, and maximize shade and stormwater management

3. Provide direct, safe, continuous and clearly defined pedestrian access from public sidewalks, parking areas, and transit stops to building entrances

4. Provide separation between vehicular routes (especially truck access/loading) and pedestrian routes on-site to avoid conflict and distinguish pedestrian routes from driving surfaces

5. Utilize stormwater management best practices to and provide on-site bio-retention facilities (e.g., bioswales, rain gardens) to collect, store and filter stormwater from parking and vehicle circulation areas



Credit: City of Kelowna

5.7.1 Site Planning

Design Intent: To site buildings and utilize landscaping to respond sensitively to topography; to enhance environmental performance; to enhance safety and accessibility; and to increase connectivity to surrounding public sidewalks and paths.

Guidelines:

1. Locate buildings to ensure good sight lines for vehicular and pedestrian traffic.

2. Provide direct, safe, continuous, and clearly defined pedestrian access from public sidewalks, parking areas, and transit stops to building entrances.

3. Multi-level retail is strongly encouraged to reduce overall building footprints and increase retail density within the Urban Growth Centre, Strategic Growth Areas, and mixed use developments.

Connectivity

4. Break up large buildings with mid-block connections which should be publicly-accessible, wherever possible.

5. Ground floors adjacent to mid-block connections should have entrances and windows facing the mid-block connection.

6. Large format retail stores should be integrated into a consistent pattern of streets or private drives and blocks.

Parking

7. Break parking areas into smaller blocks defined by landscaped islands and pedestrian paths (min. 1.5m wide) in order to minimize the amount of paved areas.

8. Where underground parking is not feasible, surface parking for large format retail and shopping malls should be:
   - Arranged on the site so that the built form can maintain some relationship with the street, and,
   - Located at the side and/or rear of the building.



Credit: City of Kelowna

Circulation

9. Design the internal circulation pattern to have direct connections to surrounding streets.

10. Walkways and other pedestrian amenities should connect parking areas to building entries, seating, and pedestrian-scaled lighting.

11. Pedestrian pathways should provide clear sight lines and connect the building to outdoor amenity spaces.

12. Pedestrian pathways should provide clear sight lines and connect the following:

    - Parking areas to building entrances.
    - Main building entrances to public sidewalks;
    - Main building entrances to transit stops; and
    - Between buildings on adjacent lots.

13. Provide separation between vehicular routes (especially truck access/loading) and pedestrian routes on-site to avoid conflict and distinguish pedestrian routes from driving surfaces by using varied paving treatments and/or raising walkways to curb level.

14. Base new development on an internal circulation pattern that allows logical movement throughout the site and that will accommodate, and not preclude, intensification over time.

Landscape and Open Space Planning

15. Provide publicly-accessible open space on-site to provide places to linger.

16. Provide site furnishings, such as seating, bike racks, and shelters at building entrances and amenity areas.

17. Open spaces between buildings should be well landscaped at the street edge and throughout parking areas.

Stormwater management

18. Consider providing landscaped green roofs to manage runoff, add visual appeal, improve energy efficiency, reduce heat island effect, and provide amenity value.



5.7.2 Relationship to Street

Design Intent: To site and design buildings to positively frame and, where possible, activate streets and public open spaces.

Guidelines:

1. Orient the long side of each building to be parallel to the public street.

2. Building entrances should be clearly visible and accessible along the primary street frontage with a pedestrian route from the public pedestrian clearway to the entrance of the building.

3. Buildings should have a continuous pedestrian clearway on all sides of the building where public entrances and parking areas are located.

4. Access to interior spaces should be level with adjacent Sidewalk Zones and be fully accessible.

5. Standalone large format retail stores are discouraged; where possible, they should be located behind smaller footprint stores that maintain a relationship to the street.

6. Locate active uses at grade, such as restaurants, boutique shops, food concessions and waiting areas and use clear windows and doors to make the pedestrian level façade highly transparent.

7. Where possible, smaller retail units should line part of the principal building and have display windows and separate entrances.

8. Site the building's primary facade parallel to the street and close to the minimum setback to establish a defined street edge.

9. Include glazing as a major component of street facing facades.

10. Maintain and enhance street edge definition by preserving or incorporating street trees.

11. Buildings on a corner parcel should orient frontages towards both streets if possible and include distinct architectural features,



Credit: GDB Architects - Slabtown

such as:

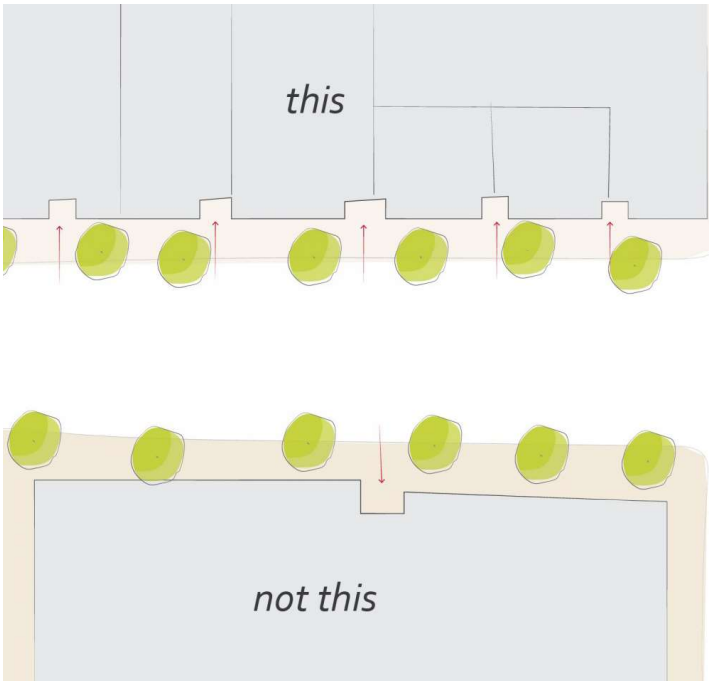
- Special or decorative canopies;
- Bay windows, balconies, turrets, or articulated roof line features; or
- A corner entrance.

12. For Industrial and service commercial locate the office, reception, or sales component of the building closer to the street than the plant or warehouse component.

13. Do not locate service doors (e.g., an overhead loading door) facing the street.

14. For buildings fronting highways, entries can be located away from the street, as long as there is a direct pedestrian connection to the site.

15. Avoid blank walls adjacent to the highway, streets, walkways, parks, or other amenity spaces.



Credit: City of Kelowna



Credit: Dunlop Street, Barrie

5.7.3 Building Articulation and Materials

Design Intent: To enhance visual interest, identity, and sense of place through building form, architectural composition, and materials.

Guidelines:

1. Design the façade of buildings with multiple storefronts so that each is defined through individual signage, entrances, canopies and/or materiality.

2. Design primary entrances to face the street, exhibit design emphasis, and provide weather protection by means of canopy or recessed entry.

3. The width of store frontages at grade should generally be limited to a maximum of 20.0 metres.

4. Integrated canopies that provide weather protection in support of retail uses are encouraged, particularly in entrances and waiting areas.

5. Setbacks should be used for minor retail spill-out uses such as benches, displays, menus and planters.

6. Avoid facing unarticulated facades to the street and use projections, recesses, arcades, awnings, color, and texture to improve the pedestrian experience.

7. Design buildings such that their form and architectural character reflect the building's internal function and use (e.g., an industrial building, a large format retail mall).

8. False upper floors are discouraged and all floors visible from the street should be functional.

9. Create transparent retail frontages with visual access to the interior of retail stores, and avoid the use of:

    - Materials such as black out advertising panels;
    - Dark and/or reflective glass

10. Wrap large format retail uses with smaller retail units around the periphery with individual entries accessed from the fronting sidewalk or open space.

11. Use different exterior materials to distinguish between the plant/warehouse component of a building from the office/ sales component.

12. For industrial and service commercial avoid facing unarticulated facades to the street and use projections, recesses, plantings, awnings, color and texture to reduce the visual size of any unglazed walls (See above)

13. Ground floor building heights should be sufficient to accommodate full retail uses, such as a minimum of 4.5 metres.

14. The ground floor of commercial buildings should contain active commercial or office space. Office or residential uses on the second floor are also encouraged in designated mixed use areas.

Signage

15. Design signage as an integral element of the building's facade, and to be compatible in scale and design with the design, color, and material of the building.

16. Allow for brand identification where there are multiple buildings and uses on a site, but avoid individual corporate image, color, and signage back-lit signs from dominating the site.

Lighting

17. Provide shielded, down lighting to provide security and ambient lighting while minimizing light pollution and spill over lighting into adjacent properties.

Weather Protection

18. Provide weather protection at building entrances, close to transit stops, and in areas with pedestrian amenities.

Materials

19. Incorporate substantial, natural building materials such as masonry, stone, and wood into building facades.

20. Use an integrated, consistent range of materials and colors and provide variety by, for example, using accent colors.



Urban bio-retention Credit: Dean Young, Sustainable Technologies Evaluation Program

5.7.4 Landscape and Open Spaces

Design Intent: to design landscapes and open spaces to respond to an open space program that relates to its users and provides flexible, accessible open space.

Guidelines:

1. Use large canopy trees to define the public realm (e.g., at the sidewalk and property edge facing the street).

2. Areas between buildings that are not required for servicing should be well landscaped.

3. Distribute trees and landscaping throughout the site in order to:

    - Soften property edges facing the street;
    - Define internal roads, pedestrian routes, and open spaces;
    - Create pleasant pedestrian conditions;
    - Screen parking, loading, service, and utility areas;
    - Maximize shade, especially in parking areas;
    - Manage stormwater on-site; and
    - Break up large rows of parking by substituting a parking stall with a canopy tree in planter every 8-10 parking stalls.

Stormwater Management

4. Provide on-site bio-retention facilities (e.g., bioswales, rain gardens) to collect, store and filter stormwater from parking areas.

5. Use permeable materials such as paving blocks or permeable concrete in parking areas to maximize rainwater infiltration.



Credit: Spur, Design for Walkability

5.7.5 Access, Parking, and Site Servicing

Design Intent: To ensure the provision of adequate servicing, vehicle access, and parking while minimizing adverse impacts on pedestrians and neighbouring properties.

Guidelines:

Access

1. Design site accesses to provide the potential for future shared access with neighbours and to minimize curb cuts.

2. Where practical, link access drives and parking lots of adjacent properties in order to allow for the circulation of vehicles between sites.

3. Provide sheltered bicycle parking in visible and well-lit locations near building entrances and pedestrian walkways.

Parking

4. The preferred location for main parking areas is at the rear and/or side of the building. Avoid locating large parking areas between the building and street.

5. Where parking areas are visible from the street, screen them using strategies such as tree planting, berming, low walls, decorative fencing and/or hedging.

6. Break parking areas into smaller blocks defined by landscaping in order to minimize the amount of paved areas.

Storage, Servicing, Utilities, Loading and Garbage

7. Locate loading, utilities, mechanical equipment, storage and garbage collection areas away from public view by:
   - integrating these facilities into the footprint of the building; or
   - locate within rear yards and/or interior side yards and screened from street view.
   - screening using fencing, walls and/or landscaping.

8. Provide areas for temporary snow storage that do not conflict with site circulation, landscaping and access to utility boxes. For example, by providing access via a lane away from public view.

5.8
Community Hubs

Wholly institutional developments are sometimes exempt from guidelines or not given specific guidelines. In some cases, the City may not have jurisdiction over Institutional developments, but desires to have an influence and provide direction to ensure these developments help the City to achieve its community design objectives.

A master planning process is encouraged for institutional development projects to ensure a comprehensive and cohesive design that contributes, connects well to, and expands on the existing and/or planned future context; responds sensitively to natural and ecological features; and supports liveability and sustainability, informed by the Design Vision and Principles, Context, and the General Building Design Guidelines of this document.

Building Type Characteristics

- 1-12 storeys
- A range of built forms depending on the site context; can include places of worship, flex buildings, low-rise buildings, and mid-rise buildings.
- The City encourages Community Hubs to provide a mix of uses.
- A shared main entrance



Credit: Tom Arban Photography Inc.

Key Guidelines

To achieve the design goals of the City, all retail, commercial and industrial buildings should:

1. Consider a mix of uses to efficiently utilize sites. Design Community Hub buildings to respond to the Design Principles and General Building Design Guidelines, while respecting the need for functional (e.g., access or parking) or site-specific design solutions.

2. Community Hubs should incorporate landmark or emblematic design features, such as prominent vertical elements, significant corner treatments, and entry plazas or large extensions of the public realm.

3. Large-scale projects should demonstrate variety in massing and materiality.

4. Avoid blank walls facing the public street and design buildings such that their form and architectural character reflect the buildings internal function and use

5. Distribute trees and landscaping throughout the site to soften public/private boundaries, define internal circulation routes, create pleasant pedestrian conditions, and maximize shade and stormwater management

6. Provide direct, safe, continuous and clearly defined pedestrian access from public sidewalks, parking areas, and transit stops to building entrances

7. Provide separation between vehicular routes (especially truck access/loading) and pedestrian routes on-site to avoid conflict and distinguish pedestrian routes from driving surfaces

8. Utilize stormwater management best practices to and provide on-site bio-retention facilities (e.g., bioswales, rain gardens) to collect, store and filter stormwater.

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