

TO: His Worship Mayor Michael Morden
and Members of Council
FROM: Chief Administrative Officer
SUBJECT: Draft Ground-Oriented Residential Infill Development Permit Guidelines

MEETING DATE: June 9, 2020
FILE NO: 2017-233-RZ
MEETING: Workshop

EXECUTIVE SUMMARY:

In early 2019, the RT-2 (Ground-Oriented Residential Infill) zone was adopted. It was intended that for the first year, applications received for triplex, fourplex and courtyard housing would require a Multi-Family Development Permit and review by the Advisory Design Panel. Specific and tailored guidelines were expected to be developed over the first year of adoption.

Over the last year, the City has been experiencing a growing interest in these housing forms and are looking to streamline the development application process through the use of tailored ground-oriented development permit guidelines.

In the fall of 2019, the City engaged EcoPlan International for consulting services to assist with the development and production of the Development Permit Guidelines for Ground-Oriented Residential Infill Housing. The draft Development Permit Guidelines (Appendix A) are included with this report for Council review and comment.

RECOMMENDATION:

1. That the Ground-Oriented Residential Infill Development Permit Guidelines be used to guide the preparation and evaluation of new and in-stream triplex, fourplex and courtyard housing applications;
2. That an Official Community Plan Amending Bylaw for the Ground-Oriented Residential Infill Development Permit Guidelines be prepared; and further
3. That In respect of Section 475 of the *Local Government Act*, requirement for consultation during the development or amendment of an Official Community Plan, Council must consider whether consultation is required with specifically:
 - i. The Board of the Regional District in which the area covered by the plan is located, in the case of a Municipal Official Community Plan;
 - ii. The Board of any Regional District that is adjacent to the area covered by the plan;
 - iii. The Council of any municipality that is adjacent to the area covered by the plan;
 - iv. First Nations;
 - v. Boards of Education, Greater Boards and Improvements District Boards; and
 - vi. The Provincial and Federal Governments and their agencies; and

In that regard it is recommended that no additional consultation be required in respect of this matter beyond the early posting of the proposed Official Community Plan amendments on the City's website, together with an invitation to the public to comment.

1.0 BACKGROUND:

1.1. Development of the RT-2 (Ground-Oriented Residential Infill) Zone

The Housing Action Plan (HAP), endorsed in 2014, and its Implementation Framework, endorsed in 2015, includes a number of goals and principles aimed at providing safe, affordable and appropriate housing for the community. Strategy #1 of the Housing Action Plan articulates the importance of a diverse housing mix, the importance of housing innovation and encourages the City to “support the development of a mix of housing forms”. The Housing Action Plan Implementation Framework reaffirmed the importance of these new housing forms to increase housing options in Maple Ridge by identifying the development of a triplex/fourplex zone as a short term action item.

In April 2016, Council received a report outlining possible policy and zoning next steps to help implement triplex, fourplex and courtyard residential forms of development. Development Permit options specifically tailored for these housing forms were also discussed. At this meeting, Council directed that staff prepare OCP and Zoning Bylaw amendments to create a zone for triplex, fourplex and courtyard residential.

In June 2017, Council received a staff report presenting policy and zoning amendments to the OCP, Zoning Bylaw, and Off-Street Parking and Loading Bylaw to create a new RT-2 (Ground-Oriented Residential Infill) zone for triplex, fourplex and courtyard residential forms. The proposed amendments provide for the infill of ground-oriented residential buildings within established residential neighbourhoods and along major corridors, in a form that will be incremental and sensitive to the existing and emerging context. Based on this information, Council gave first reading to OCP Amending Bylaw, Zone Amending Bylaw, and Off-Street Parking and Loading Amending Bylaw on June 13, 2017 to create the new RT-2 zone. The Bylaw was adopted in January 2019 and since that time Council has considered a number of triplex, fourplex and courtyard housing applications.

1.2. Development of the Ground-Oriented Residential Infill Development Permit

It was intended that for the first year, applications received for triplex, fourplex and courtyard housing (RT-2 Zone) would require a Multi-Family Development Permit including a review by the Advisory Design Panel. During this time, design guidelines specific to these new forms would be developed with the assistance and input of the Advisory Design Panel. In the fall of 2019, the City engaged EcoPlan International for consulting services to assist with the development and production of the Ground-Oriented Residential Infill Housing Development Permit.

Over the past year, staff have been refining the requirements of the Ground-Oriented Residential Development Permit with the developers and designers of the in-stream rezoning applications, as well as other developers interested in this new housing form. As a result of this work, a first draft of the Development Permit went to the Advisory Design Panel for review and comment in early 2020. The Advisory Design Panel members were pleased with the document and stated that it was descriptive and well-written. The following resolution was passed at the City of Maple Ridge Advisory Design Panel Meeting held March 18, 2020:

R/2020-010

That the Advisory Design Panel support that the Draft Ground-Oriented Infill Residential Housing Development Permit Guidelines be forwarded to Council for consideration.

2.0 DISCUSSION:

2.1 Ground-Oriented Residential Infill Development Permit Overview

The Ground-Oriented Residential Infill Development Permit would be designated under Section 488 of the *Local Government Act* which permits the establishment of guidelines for the form and character of intensive residential development. The Development Permit will help ensure that new residential infill development within established residential neighbourhoods will be incremental and sensitive to the existing and the emerging context. These new housing forms provide flexibility for ground-oriented residential infill, offering the City and its residents' a greater variety of housing options.

The complete draft Ground-Oriented Residential Infill Development Permit Guidelines are attached as Appendix A. The Development Permit is laid out for ease of use, including illustrative images and cross-sections and identifies the intent, guideline concepts, as well as the key design elements of the housing types, which include:

- **Single Family Character:**
 - Respect the neighbourhood context, in terms of size, scale and massing.
 - Transition to neighbouring properties by stepping massing down.
 - Resemble a 'single family' house with a clearly identifiable front entrance oriented to the street to fit seamlessly into the neighbourhood.
 - Encourage building articulation to create a comfortable scale and interesting streetscape.
 - Create unit and building diversity to ensure a varied streetscape.
- **Greenery & Landscaping:**
 - Provide usable private space for each unit through landscaping and screening.
 - Encourage permeable surfaces for pathways and driveways as well as other opportunities for infiltration and on-site rainwater retention.
 - Encourage pedestrian and neighbour-friendly lighting.
 - Utilize screen and fence material that is attractive, durable and contributes to the quality of the residential landscape design.
- **Courtyard Areas:**
 - Incorporate a flexible common area (not designed for parking) intended as a pedestrian-friendly space that invites quiet, non-motorized movement.
 - Be a focal and an organizing element of the development and not 'leftover' space.
 - Provide for a variety of gathering opportunities, including different gradations of privacy and multi-functional elements to provide seating / screening / recreational opportunities.
 - Envisioned as an extension of the living room with private patios and entries oriented around the common space to facilitate neighbourly interactions.
 - Defined through the use of plants, trees and minor changes in grade in addition to hard landscaping.
- **Access:**
 - Require a clear access route to the entrance of the units, with neighbour-friendly lighting.
 - Share site access between units, with appropriate signage.
 - Where lanes exist they can provide concealed access to parking and reduce the amount of paved area that detracts from the streetscape. Applying recesses to front

entrances and garage entrances combined with screening and landscaping can also provide each dwelling with a feeling of uniqueness.

2.2 Status and Impact on RT-2 Applications

The City has one completed RT-2 application (being the 2017-221-RZ application that was adopted along with the RT-2 zone) and there are currently 9 in-stream RT-2 applications. The City has also received a number of inquiries and staff have held many pre-application meetings with those interested in developing a triplex, fourplex or courtyard residential development in Maple Ridge.

Three of the applications have gone before the City's Advisory Design Panel. Feedback and general themes identified through the Design Panel process have related to strengthening landscaping and open space treatment as well as improving architectural treatments, the quality of materials, and improving entrance and parking layouts as well as general design elements. These themes have been reviewed and addressed in the draft Ground-Oriented Residential Infill Development Permit Guidelines.

By establishing Ground-Oriented Residential Infill Development Permit Guidelines, staff will be able to work closely with applicants and interested developers on the design details of their projects. Having clear form and character guidelines will streamline the process and help the applications move expeditiously through the development application process.

2.3 Next Steps

Prior to undertaking an OCP Amending Bylaw, staff are seeking Council comment on the Ground-Oriented Residential Infill Development Permit Guidelines.

Upon Council endorsement of the Ground-Oriented Residential Infill Development Permit Guidelines, all new and in-stream triplex, fourplex and courtyard applications that have not yet received third reading will use the guidelines to guide the preparation and evaluation of their development proposals. Staff will ensure that the guidelines are applied and referenced in upcoming Council reports for any applications that have not already completed third reading. In-stream applications that have received third reading would not be subject to the Ground-Oriented Residential Infill Development Permit and would continue to proceed through the Multi-Family Residential Development Permit process.

Upon Council direction, staff will draft an OCP Amending Bylaw to integrate the draft Ground-Oriented Residential Infill Development Permit into the City's Official Community Plan. The OCP Amending Bylaw would proceed through the regular OCP amendment process, including three readings of Council, a Public Hearing, followed by final reading for adoption.

3.0 Strategic Alignment:

As part of the City of Maple Ridge Strategic Plan 2019 – 2022, under its Growth theme, the implementation of strategic plans related to local infrastructure and the economy is identified as a key priority of Council.

4.0 Policy Implications:

The City's Official Community Plan and Housing Action Plan establishes as a key goal the creation of community capacity to innovate and improve access and opportunity for affordable housing and housing choice in Maple Ridge.

5.0 Interdepartmental Implications:

The Planning, Engineering and Building Departments continue to collaborate on research and policy matters to help foster greater affordable housing in Maple Ridge. Other interdepartmental efforts to create greater housing choice and offer more affordable, rental, and special needs housing options are ongoing.

6.0 Financial Implications:

The Ground-Oriented Residential Infill Development Permit Guidelines are currently part of the Planning Department's 2020 Workplan.

CONCLUSION:

The draft Ground-Oriented Residential Infill Development Permit Guidelines are intended to help ensure that new residential infill development within established residential neighbourhoods will be incremental and sensitive to the existing and the emerging context while streamlining the development application process. These new housing forms provide flexibility for ground-oriented residential infill, offering the City and its residents' a greater variety of housing options. Encouraging housing choice in Maple Ridge by implementing the RT-2 zone, through the use of supporting Development Permit guidelines, aligns with the goals, principles and strategies of the City's Official Community Plan and Housing Action Plan.

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Chief Administrative Officer

Appendix A: Ground-Oriented Residential Infill Development Permit Guidelines



Ground Oriented Residential Infill Guidelines

May 2020

DRAFT

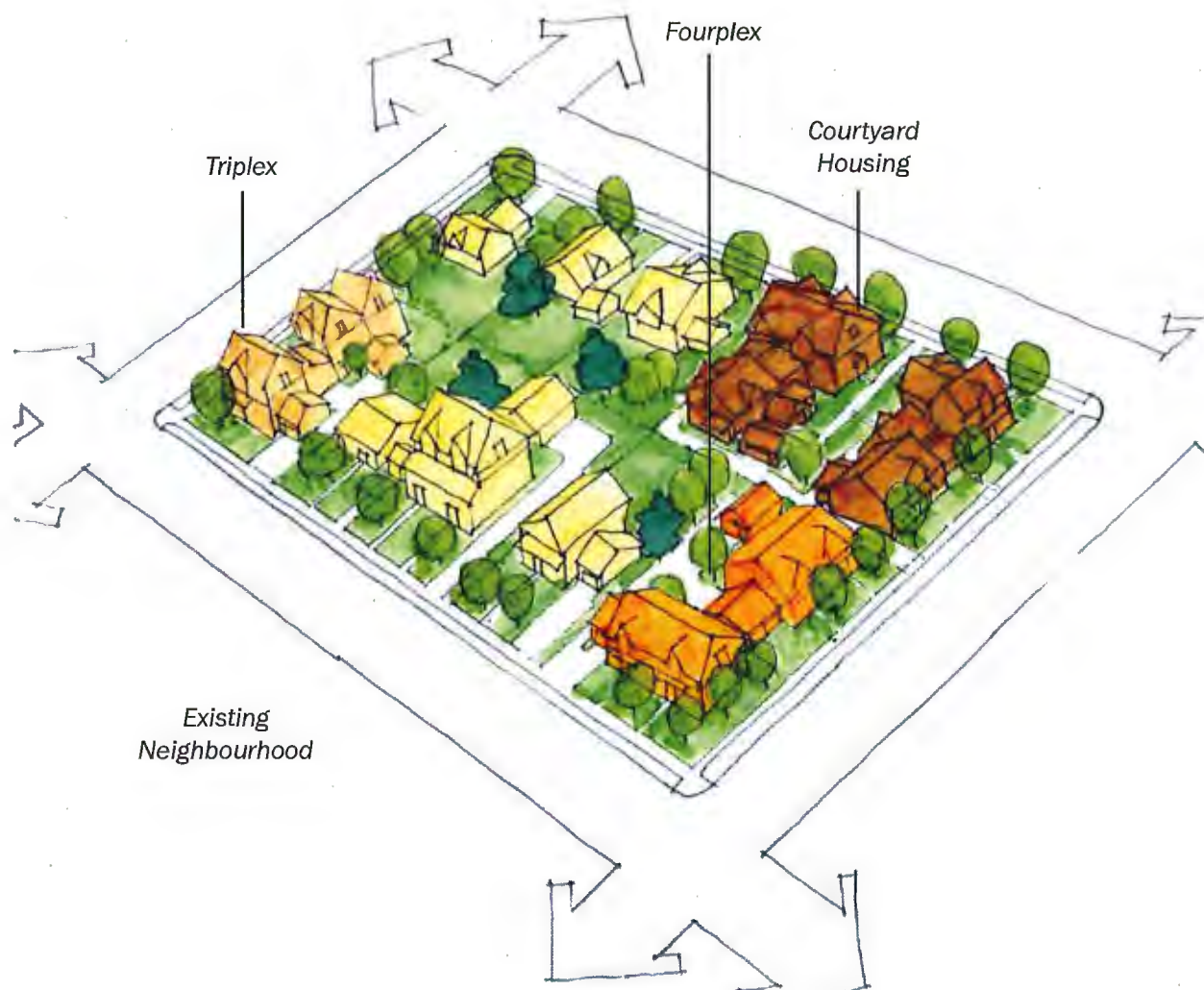


MAPLE RIDGE

British Columbia

Ground-Oriented Residential Infill - Development Permit Area Guidelines

Triplex, Fourplex, and Courtyard Housing



INTENT

*The Development Permit Area is designated under Section 488 of the **Local Government Act** to establish guidelines for the form and character of intensive residential development. The purpose of the Ground-Oriented Residential Infill Development Permit Area is to allow for the infill of ground-oriented residential buildings (triplex, fourplex and courtyard housing) within established residential neighbourhoods and along major corridors, in a form that is incremental and sensitive to the existing and emerging neighbourhood context.*

*A Ground-Oriented Residential Infill Development Permit is required for all new triplex, fourplex and courtyard development on land designated **Urban Residential** on Schedule B of the Official Community Plan other than those circumstances indicated in Section 8.4 Development Permit Exemptions. The following form and character guidelines apply to all triplex, fourplex and courtyard developments.*

These guidelines must support specific neighbourhood policies and context as outlined in Area Plans adopted by the City of Maple Ridge. In the event of a conflict between the Development Permit Guidelines and those contained in the Area Plans adopted by the City, the latter shall apply.

KEY GUIDELINE CONCEPTS

Applications for Development Permits will be assessed against the following Key Design concepts as follows:

- Incremental and sensitive integration of RT-2 Ground-Oriented Residential Infill Zone projects into existing neighbourhoods.
- Consider similarity of scale, massing and appearance to a detached single-family dwelling, and avoid replicating townhouse or rowhouse housing form.
- Ground-oriented infill developments are expected to relate to the height and location of existing single detached neighbours and sensitively transition to neighbouring properties by stepping massing down, where applicable.
- Dwelling units must be in one building with shared party walls or as a stacked unit to create triplexes or fourplexes.
- In the case of courtyard residential development, dwelling units may be arranged individually or attached in groups of buildings that still resemble single family dwellings. Dwelling units must be clustered around a shared courtyard in a village-style residential pattern. In addition, private greenspace requirements must be met for each unit as outlined in the *Maple Ridge Zoning Bylaw No. 3510 – 1985, as amended from time to time*.
- Access to public roads to be in accordance with the Maple Ridge Design Criteria Manual. A secondary driveway may be approved by the Engineering Department, where it supports key guideline concepts.
- Design and construction of new buildings located within designated floodplains to be in accordance with Provincial legislation and the Zoning Bylaw.
- Effectively utilize the site context to create uniqueness, orient entrances towards the street, and use landscaping and screening to create private or semi-private yard spaces.
- Encourage permeability and meet City of Maple Ridge stormwater management requirements and best management practices.
- Contribute to a more environmentally sustainable community and neighbourhood through the use of green infrastructure, adapting for climate change, and design for health and wellbeing.

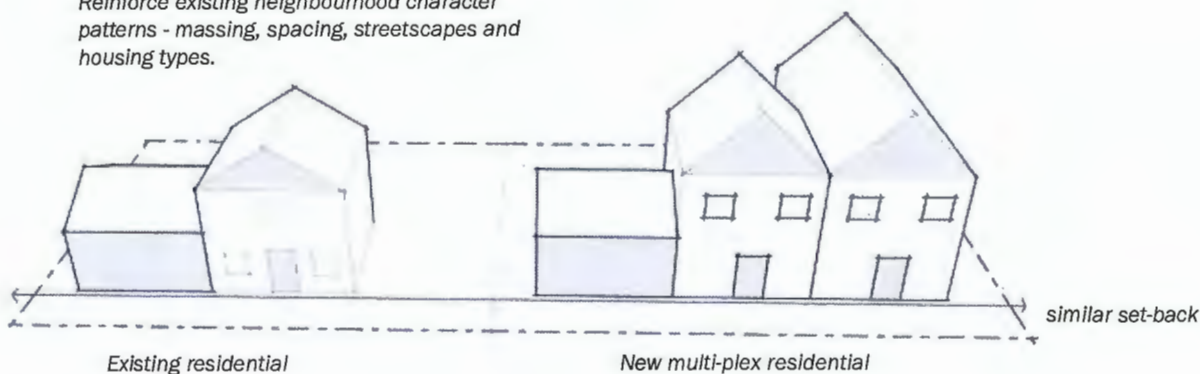


GUIDELINES

A. Neighbourhood Character - Massing, Siting, and Design

Siting and Building Design

Reinforce existing neighbourhood character patterns - massing, spacing, streetscapes and housing types.

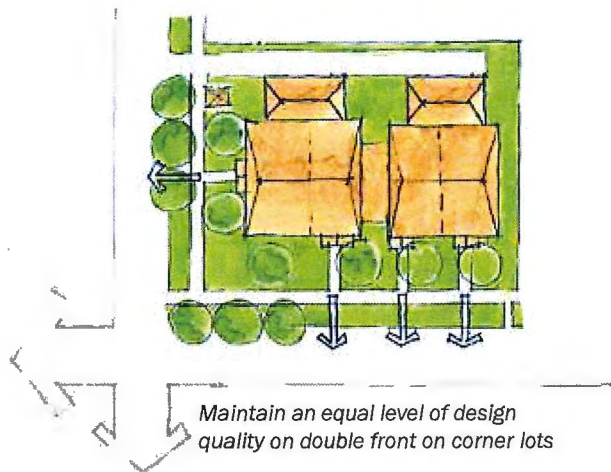


Maintain compatible roof forms.

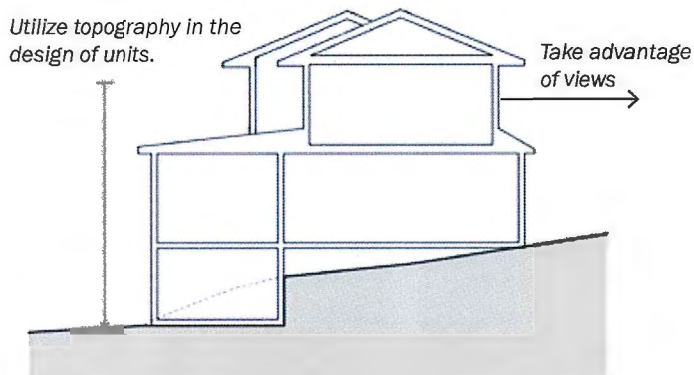


Front streets – face entrances to the street and provide direct pedestrian access.

- 1) Reinforce the existing neighbourhood character by incorporating common patterns and elements of the surrounding neighbourhood into the design themes of the new development, through:
 - i. Articulation of façade elements, such as porches, chimneys, projections, recesses, and balconies;
 - ii. Placement, size, shape and number of doors and windows;
 - iii. Setbacks of existing housing;
 - iv. Location and visual appearance of driveways, garages and/or parking facilities;
 - v. Selection of appropriate and compatible roof forms, and;
 - vi. Design of hard and soft landscaping.
- 2) Development should face the street, through:
 - i. Siting the main entrance to the street and direct pedestrian access to individual units, and;
 - ii. Use appropriate exterior treatments and differentiated facades.
- 3) Design pedestrian pathways, patios, retaining walls, lighting and fences to be detailed, functional, and where applicable, aligned with specific neighbourhood policies and context where outlined in Area Plans adopted by the City of Maple Ridge.

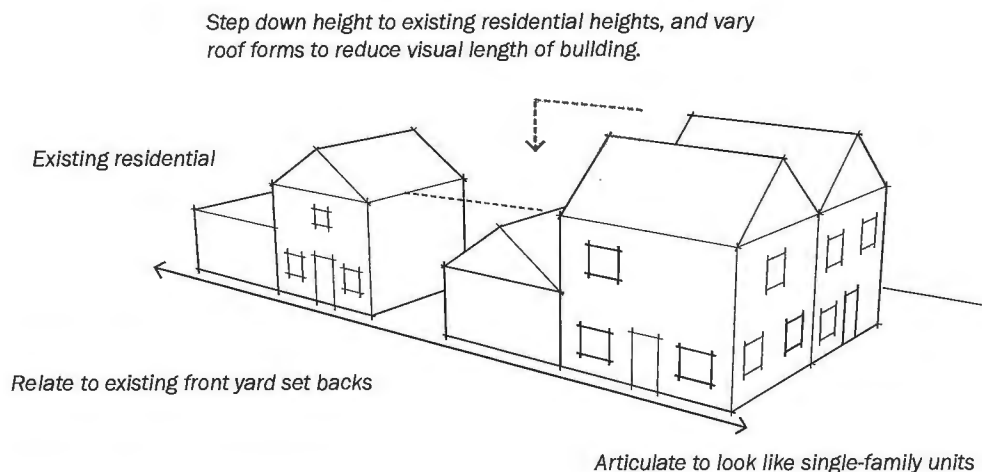


- 4) Design developments on corner lots or double-fronting lots with an equal level and quality of design in detailing on each street front.
- 5) Design and site buildings to respond to existing site characteristics and take advantage of natural features (i.e. topography) or views and view corridors.
- 6) Design to maximize privacy and minimize views onto adjoining sites, particularly for portions of the development abutting the side yards of adjacent single detached residential uses.



Design buildings that respond to existing site characteristics and take advantage of natural views or view corridors.

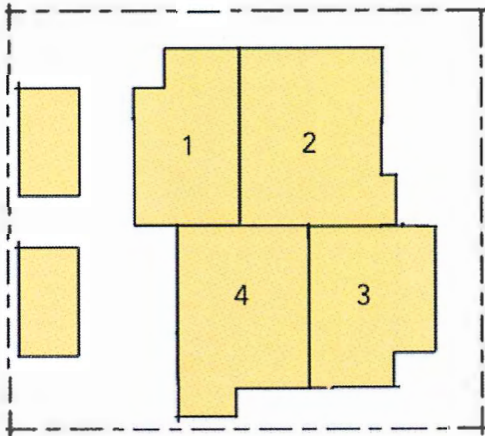
Massing



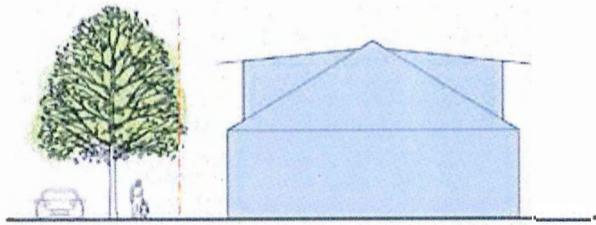
Variation in building façade reduces visual length and massing.

- 7) Design and orient residential units to appear as a 'single family house'.
 - i. New development should respect character elements of the existing residential inventory if identified in an Area Plan.
 - ii. Consider the form, massing and setbacks of the surrounding neighbourhood.
 - iii. Where there is a difference in height of greater than one storey between new and existing development, sensitively transition to directly adjacent properties by stepping down the massing of the building.
 - iv. Relate infill development to the front yard set-backs of the surrounding neighbourhood.
- 8) Provide a thoughtful interface with adjacent properties through sensitive side yard setbacks.
- 9) Provide variations in the roof forms and building facades to help reduce the visual length of individual buildings. For example, use of dormers, gables, and architectural detailing into the roof structure.
- 10) Site and building design should mitigate for potential shadow casts and blocking of daylight on nearby properties.

Unit Design



Provide a variety of unit sizes.



Maximize connections with the street, outdoor space and ensure casual overlook of courtyard spaces.

- 11) Adjust massing and building forms to ensure a variety of unit sizes which may accommodate different family sizes, age-related abilities and affordability.
- 12) Design residential units with enough width (minimum 7.5m) to include attractive entrances and windows between garage doors.
- 13) Organize interior living spaces to ensure casual overlook of common courtyard space.
- 14) Locate and size windows to maximize visual connections with the street, outdoor spaces and increase availability of natural light.
- 15) Provide adequate storage space in all residential units.

Entrances



Provide a clear entrance and directly connect to the street front.



Provide weather protection and encourage overlook of semi-private and public spaces.

16) Entrances should:

- i. Include clear pedestrian access routes to the entrance of each unit from the street that does not cut through the private space of another unit;
- ii. Each unit is addressed with large numbers visible from the street. Directional signage may be required, depending on number of units;
- iii. Provide weather protection and adequate exterior lighting, and;
- iv. Encourage overlook of semi-private and public spaces.

Decks / Porch / Balcony / Materials



Create a strong relationship to the fronting street.



Use high quality cladding materials and detailing in design.

- 17) Create a strong relationship between the private and public realm by facing development to the street and locating windows, balconies and patios on to semi-private or public outdoor spaces.
- 18) Where undersides of balconies and porches are visible from a street or public walkway, cover exposed areas with exterior finishes to provide a finished appearance to the public.
- 19) Use high-quality exterior cladding materials, such as wood, stone, brick, concrete composite or other acceptable alternatives. Vinyl is discouraged as an exterior cladding material, especially for front facing walls.
- 20) Where possible, continue detailing in design and materials on the principal façade(s) to the side and rear elevations. Use high-quality exterior cladding materials, such as wood, stone, brick, concrete composite or other acceptable alternatives.

Landscaping and Open Space



Provide definition and soften edges with landscaping.



Delineate private space with landscaping.

- 21) Landscaping both within private, semi-private or common areas should:
- Provide definition for pedestrian corridors;
 - Delineate private and semi-private space from public or common space;
 - Provide adequate screening between private outdoor spaces;
 - Present a pleasing street image;
 - Provide a suitable buffer between public road and privacy areas;
 - Soften the transition between adjacent land uses;
 - Create interesting views and focal points in and out of the site, and;
 - Reinforce design continuity with neighbouring properties, through use of plant materials and other landscaping elements, where appropriate.
- 22) Maximize the amount of landscaped areas and minimize the amount of impervious paved surfaces to meet Tier A requirements as outlined in the City's Design Criteria Manual for on-site absorption of rainwater.
- 23) Utilize permeable pavers and other green infrastructure.
- 24) Minimize erosion potential by discouraging excessive changes to existing slopes, maintaining existing vegetation on slopes, and planting new and existing slopes with stabilizing vegetation.
- 25) Retain existing mature trees through siting and design and ensure accordance with the *City of Maple Ridge Tree Protection and Management Bylaw No. 7133-2015*, as amended from time to time.



Enhance existing vegetation with new planting where construction has destroyed vegetation.

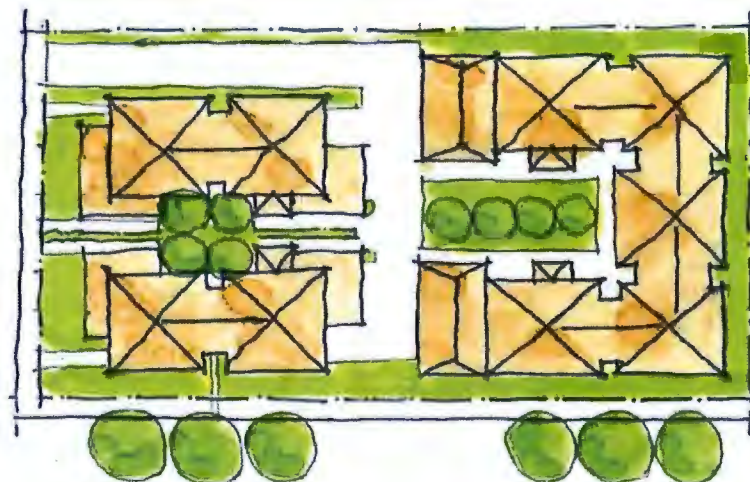


Use drought tolerant or native plant species for landscaping.

- 26) Incorporate deciduous tree species into street front landscaping to define site boundaries, enhance public space, and to permit light penetration in winter. Refer to recommended tree species within the *City of Maple Ridge Street Tree Species and Replacement* list.
- 27) Enhance existing vegetation with new planting whenever construction activity has destroyed vegetation.
- 28) Use drought tolerant and/or native plant species for replanting, where possible.
- 29) Incorporate rain gardens and vegetated swales into parking area landscaping to increase the natural absorption of rainwater runoff from paved areas into the ground, impervious liners and drainage will be required if located within an escarpment area.

Courtyards

The courtyard is intended as an outdoor common space for use by residents.



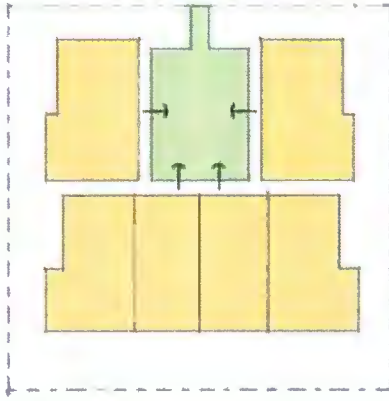
Activate courtyard spaces, provide for a variety of recreational opportunities and encourage neighbourly interaction.



Maximize solar gain for courtyard spaces.

- 30) A courtyard is intended to be a semi-private outdoor common space for use by all residents that:
 - i. Is a focal organizing element of the development;
 - ii. Is flexible space which integrates well between the site and building(s);
 - iii. Be of a shape and size that permits a range of activities;
 - iv. Provides for a variety of passive and active gathering opportunities, including programmable spaces;
 - v. Defined through the use of plants, trees, and landscaping;
 - vi. Have adequate natural light, and;
 - vii. Not designed for parking.
- 31) Where possible, design 'L' or 'U' shaped courtyards facing north-south to maximize solar gain.
- 32) Facilitate neighbourly interactions by orientating private patios and entries around the courtyard.

33) Activate the transition between private entrances, outdoor living spaces, and the courtyard with stoops, stairs, and porches where appropriate.



Internal entrances face and overlook the courtyard.

34) Where principal unit entrances are not fronting a street, design entrances with an address, to face the courtyard and not an internal side setback.

35) Use multi-functional elements to provide seating, screening and/or recreational opportunities in the courtyard such as:

- i. Communal gardens to provide residents with the opportunity to interact as well as grow food;
- ii. Amenities for pets, in particular for exercise and relief;
- iii. Opportunities for children to experience cognitive and imaginative play, as well as active play, and;
- iv. Seating for gathering and elderly residents.

36) Incorporate elements that are of high quality and made of durable material to minimize maintenance.

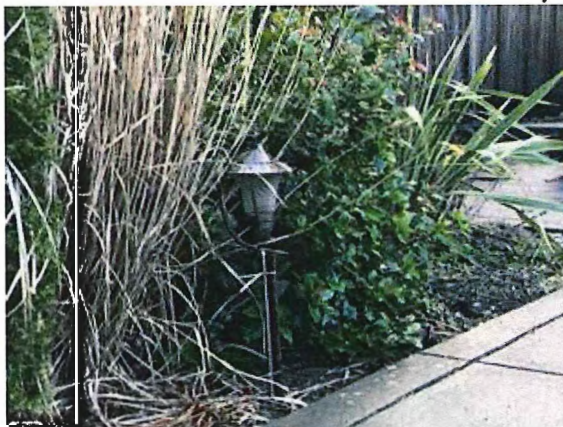


Activate the transition between private and outdoor living spaces with stoops, stairs and porches.

Fencing / Screening / Outdoor Lighting



Provide fencing with landscaping to delineate the private realm.



Incorporate pedestrian level lighting that does not pose a nuisance to adjacent residents.

- 37) Ensure that the height and location of a landscape screen:
 - i. Adequately protects privacy to adjacent properties;
 - ii. Maintains driving site lines from adjacent roads, maneuvering aisles, parking lots, and;
 - iii. Enhances the quality of the streetscape and outdoor living spaces.
- 38) All screen and fence material should be attractive, durable and contribute to the quality of the residential landscape design.
- 39) Define public and private space through the use of front and exterior side yard landscape screens or fences.
- 40) Provide fencing in combination with landscaping.
- 41) Avoid the use of chain link fences, in particular along street frontages.
- 42) Provide adequate lighting for all entrances and associated sheltering elements.
- 43) Provide pedestrian level lighting along all pedestrian routes and open spaces.
- 44) Design outdoor lighting to minimize light pollution and ensure lighting glare does not pose a nuisance to adjacent residences, pedestrians or motorists and/or visible from the public right-of-way or adjacent residential land.

Address and Signage



Ensure address and signage is visible.

- 45) Where signage is used to indicate a name of the complex, it must conform to the *Maple Ridge Sign Bylaw No. 4653-1992*, as amended from time to time. In the event of a conflict between the Maple Ridge Sign Bylaw and these guidelines, the Bylaw shall take precedent.
- 46) Integrate and complement signage design, materials, and message to the scale and architectural detail of the building and its surrounding context.
- 47) Ensure the address and signage is visible from the street without being visually obtrusive.

Vehicle Access, Parking and Circulation



Locate parking at the side or rear.



Recess parking from any front façade.



Utilize permeable paving materials.

- 48) Locate parking and servicing in the building, or to the rear of the site with access from a lane, or flanking street for corner lots. Where a parking garage fronts a street, recess the parking from the front façade of the building and not protrude beyond the front entrance of a unit.
- 49) Provide architecturally compatible and adequately screened attached and detached parking structures.
- 50) Reduce the visual impact of parking and parked cars.
 - i. Design parking areas to no greater than half the width of the front façade.
 - ii. Minimize the visual width of the driveway through the use of landscaping strips, trees, building edges, pedestrian pathways adjacent to the parking area, and use of pavement treatment.
 - iii. Enhance the appearance of garage doors by using quality materials and details that work with the rest of the development.
 - iv. Where cantilevered car ports are installed, ensure posts are set back and foundation reinforced.
 - v. pair one driveway for two units instead of one driveway each.
- 51) Minimize impervious materials for surface parking and design to provide additional outdoor flex space when not used by cars through permeable pavement or alternative surface treatments.
- 52) Conform road grades, streets, lanes and driveways to the existing grades as closely as possible to ensure minimal disruption of slopes and vegetation.



Minimize parking and incorporate into the building structure.

- 53) Parking plans must conform and align with the *Maple Ridge Off-Street Parking and Loading Bylaw No. 4350 - 1990, as amended from time to time*. In the event of a conflict between the Maple Ridge Off-Street Parking and Loading Bylaw and these guidelines, the bylaw shall take precedent.

Refuse, Recycling and Service Areas



Refuse, recycling and service areas should be easily accessible.



Provide a structure and/or screen service areas from view.

54) Locate refuse, recycling and service areas to be:

- i. Convenient;
- ii. Easily accessible to residents and service vehicles, and;
- iii. Incorporated into the overall design of the development.

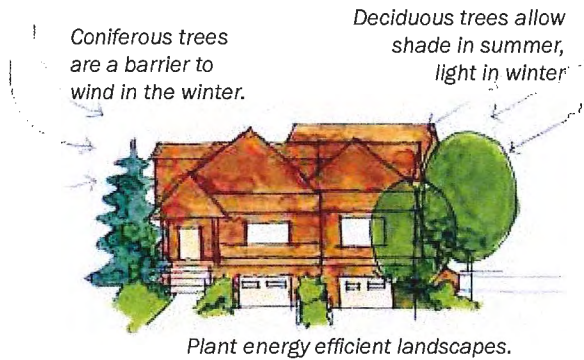
For convenience and efficient use of space, two residential units may have a shared or combined space. Recycling and solid waste must be in accordance with *Maple Ridge Solid Waste and Recycling Regulation Bylaw No. 6800-2011*, as amended from time to time.

55) Provide a structure designed to be compatible with the architecture of the building and screen from public view, all garbage, recycling or other waste containers when waiting for pick-up to avoid containers being left on the street and that allows for adequate maneuvering space for refuse removal vehicles.

56) Locate building ventilation systems to minimize noise, exhaust nuisances or setting off carbon dioxide detectors.

57) Install one set of service connections for multiple units (i.e. one water meter) to maximize efficiency and minimize visual impacts of services.

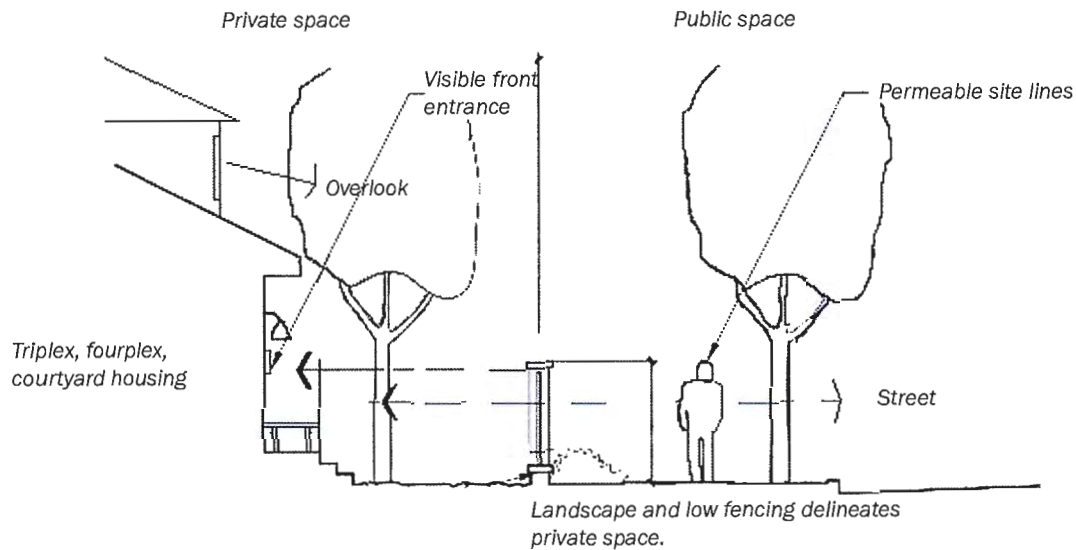
Energy Efficiency and Conservation



Use energy efficient lighting with motion sensors to avoid unnecessary use.

- 58) Design energy efficient landscapes. This can be accomplished through:
- Use of native and/or drought-resistant species;
 - Design the landscape to moderate the effect of wind;
 - Locate deciduous trees on the south side of buildings to provide shade and minimize unwanted heat gain during summer and to provide solar access and passive solar gain during winter;
 - Allow natural draining to occur throughout the site;
 - Allow daylight into the buildings, and;
 - Redirect water from rooftop runoff and downspouts into vegetated areas or rain barrels for later irrigation use.
- 59) Consider microclimate conditions created by surrounding existing and planned buildings for the selection and placement of trees and other plant material.
- 60) Use energy efficient heating, air conditioning and ventilation systems.
- 61) Utilize energy efficient light fixtures, such as LED or solar powered lights, and avoid unnecessary use by incorporating timers, photo sensors or motion detectors.
- 62) Reduce building energy consumption through the use of alternative energy sources and of high-quality durable materials with a long lifespan, where possible.
- 63) Solar energy devices are encouraged. In *Residential and Commercial* zones, solar energy devices shall be permitted provided that:
- the device shall be attached to either a principal or accessory building;
 - the device shall not extend above the ridgeline of the roof, and;
 - the device shall not extend beyond the outermost edge of the roof.

Safety & Hazards



Transition from public to private spaces and provide privacy while still creating opportunities for casual surveillance.



Provide good opportunities for natural surveillance (porches, balconies, etc.).

- 64) Design developments to maximize opportunities for natural surveillance, allowing people to easily view what is happening around them during the course of everyday activities.
- 65) Incorporate Crime Prevention through Environmental Design principles into the design with convenient, safe, identifiable and universally accessible access routes to building entrances.
- 66) Design buildings to minimize the visual impacts of elevation due to flood construction level (FCL) requirements within a floodplain, such as landscaping to transition grade changes, use of retaining walls, terracing and rockeries, raised courtyards, porches, etc.

Universally Accessible Design

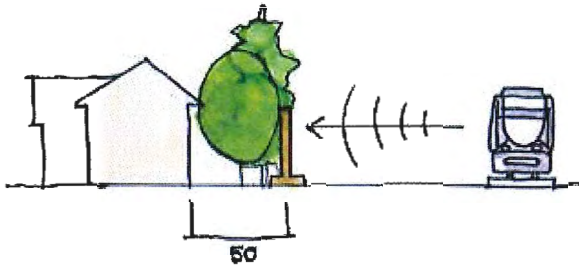


Ensure barrier free access.

- 67) Ensure barrier-free access to support universal accessibility¹ including the design of common open areas such as sidewalks and pathways, wide enough for wheelchairs and scooters and appropriately located curb cuts/curb let-downs.
- 68) Consider the design and layout so as to accomodate accessible units suitable for older adults and seniors (i.e. layouts with a Master Bedroom on the same floor as the Main Living area and/or one-level units in conjunction with split level units or zero step entry-ways).

¹ Universal accessibility - Zoning Bylaw Definition: means an accessible and unobstructed area or areas available for use by all the building's inhabitants; having no slope greater than 5%; providing for greenery, gardens, recreational space and other leisure activities normally carried on outdoors.

Noise and Vibration



Incorporate noise abatement and vibration mitigation measures for new development adjacent to rail lines

- 69) Design and construct buildings to maximize sound attenuation between units, between public roads and units, and between adjacent land uses and units.
- 70) Consider noise abatement and vibration mitigation measures for all new building construction within 50 meters of the railway corridor.
 - i. Assess the level and impact of noise and vibration on a development site by a qualified acoustics and vibration consultant through the preparation of a noise and vibration impact study, undertaken early in the process.
 - ii. Assess the impact of all noise and vibrational sources affecting the development site and provide recommendations for noise abatement and vibration mitigation for the site.

