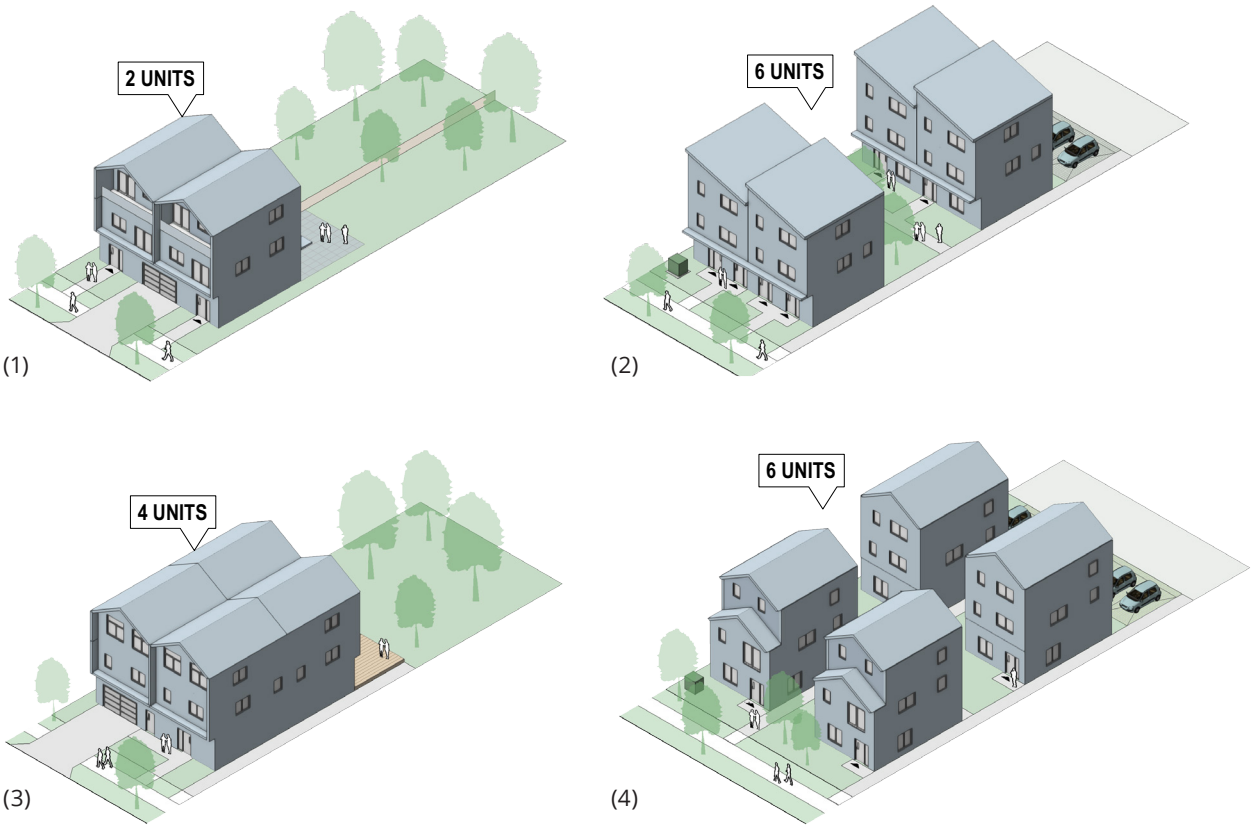
1.2 GROUND ORIENTED INFILL HOUSING

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES



Above: Examples of a range of infill housing forms: 1) Side-by-Side Duplex, 2) Double Duplex, 3) Multiplex, 4) Cluster Homes.

INTRODUCTION

The Infill Housing residential area, identified as Development Permit Area 1.2 [See Map 1.2] of New Westminster's Official Community Plan, establishes guidelines to encourage Infill Housing projects that support housing choice, community connectivity, and sustainable development goals by allowing for ground oriented, attached or detached, primarily family friendly housing forms. Ground oriented housing has a separate exterior entrance from a street or open space. These guidelines apply to sites with two to six dwellings, excluding sites with one single detached dwelling which includes a maximum of one laneway/ carriage house and one suite.

The intent of the Development Permit Guidelines is to:

- establish objectives for the form and character of intensive residential development;
- protect the natural environment, its ecosystems and biological diversity (as outlined in the justification section of this schedule); and
- promote energy conservation, water conservation and greenhouse gas reduction (as outlined in the justification section of this schedule).

Applications to develop properties located within this Development Permit Area for laneway houses and carriage houses, must instead comply with the Laneway and Carriage Houses Development Permit Area.

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

Applications to develop properties located within this Development Permit Area for commercial uses, in accordance with existing commercial zoning, must instead comply with the Upper Twelfth Street Commercial Corridors or Uptown Mixed Use Nodes Development Permit Areas.

When appropriate, this area will also include small scale commercial, such as a corner store. Applications to develop properties located within this Development Permit Area that will include small scale commercial, should consider the relevant guidelines included in the Commercial Corridor or Mixed Use Nodes Development Permit Areas.

GUIDING PRINCIPLES

By offering a greater variety of housing types within a neighbourhood, infill housing provides an opportunity for vibrant streetscapes, greater connectivity and sociability, and more sustainable and resilient communities.

1. CREATE ACTIVE, VIBRANT, AND HUMAN-SCALE STREETSCAPES

A well-designed neighbourhood streetscape enhances the overall feel and walkability of a community. To achieve this, infill housing developments should be mindful of transitions from public to private space. Transitions should be gentle and can include fencing, landscaping, and thoughtful grade and material changes. These strategies can also be used to mitigate the visibility of carports and waste storage. Human-scaled streetscapes are enhanced by framing the street with trees, well-proportioned architectural design, and making pedestrian pathways accessible for all residents.

2. ENHANCE NEIGHBOURHOOD CONNECTIVITY

Infill housing should support safe, intuitive movement for all mobility users. Accessibility is enhanced by the site layouts of infill housing, which should provide internal pedestrian pathways that form a barrier-free network and allow residents to access building entries, shared amenities, and parking areas without relying on public sidewalks. Landscaping and surface materials should ensure these pathways feel safe and comfortable, and lighting should improve overall visibility and lane safety. Throughout each site, infill development should respond thoughtfully to local conditions—corner lots, prominent intersections, unique block patterns, active transportation routes, natural features, and view-lines—to strengthen connectivity within the property and the surrounding neighbourhood.

3. CREATE SOCIABLE AND LIVABLE NEIGHBOURHOODS

Creating sociable and livable neighbourhoods requires balancing privacy, comfort, and opportunities for everyday interaction. Privacy is supported by strategies (offsetting windows, screening, and thoughtfully locating balconies or rooftop decks) to limit overlook between units and onto adjacent properties. Open space is both sociable and private, with central courtyards supporting casual social connection, and each unit having direct access to private open space. Private and shared spaces are accessible and comfortable for all residents with varying mobility needs. Livability is further supported through passive heating and cooling measures, such as by strategically orienting buildings, windows, and trees to balance both sunlight and shade.

4. SUPPORT A SUSTAINABLE, LOW-CARBON, RESILIENT, THRIVING NATURAL CITY

Infill housing developments are built and designed in ways that contribute to creating more sustainable and resilient communities. Biodiversity is strengthened through landscaping for infill housing which emphasizes native and pollinator-friendly species, avoids invasive plants and artificial turf, protects healthy trees, and provides space for new plantings. Climate resilience is strengthened by using drought-tolerant, low-maintenance vegetation that helps reduce heat impacts and building with durable materials suited to a changing climate. Sustainable modes of transportation, such as walking and cycling, are encouraged by keeping pedestrian routes safe, distinct, and welcoming, and by locating bicycle parking along stair-free routes.

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

ARCHITECTURAL AND SITE DESIGN

1.2.1 BUILDING SITING AND MASSING

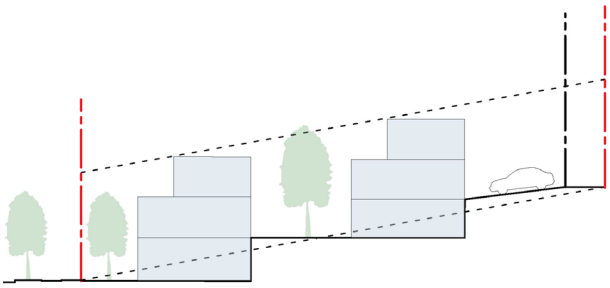
Intent: Infill housing developments respond to site and neighbourhood context, support a pedestrian scale environment, support energy efficiency, and prioritize livability.

Infill housing developments must:

a. Employ a building siting strategy that:
   i. Protects healthy existing trees, where present, through sound arboricultural practices.
   ii. Provides optimal space and conditions for new tree plantings.
   iii. Optimizes usable at-grade open space and on-site circulation.
   iv. Frames the edges of streets, parks, walkways and open spaces, while balancing privacy considerations.
b. Design buildings to:
   i. Fit within the natural topography and minimize use of retaining walls by stepping down sloping terrain.
   ii. Provide sensitive transitions in scale to public space, open space, heritage buildings, and the overall neighbourhood context.
   iii. Respond to specific site conditions and opportunities, including: prominent intersections, corner lots, unique block structures, natural features and views.
   iv. Front all streets and greenways immediately adjacent to or within the development.
   v. Incorporate simple building forms with a dominant roof shape that reinforces the identity of individual units.

Infill housing developments are encouraged to:

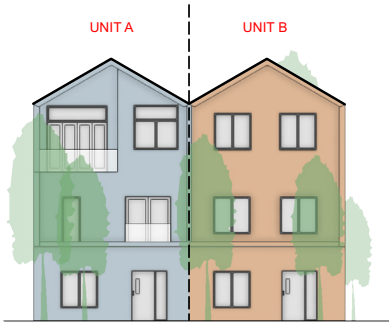
c. Choose locations for windows, trees, and buildings in a way that supports passive heating and cooling, and natural lighting and ventilation.
d. Orient buildings to support solar thermal or photovoltaic panels.
e. Site mechanical equipment such as heat pumps, away from windows, and narrow spaces between buildings, to reduce noise impacts.
f. Incorporate secondary roof forms that are complementary to the development, provided that roof forms are not overly complex.
g. Consider prefabricated or modular designs, which can reduce waste and embodied carbon.



Buildings step down the slope to respond to terrain and minimize retaining walls. (Image: Haeccity)



Example of an articulated form that supports a pedestrian-scale environment. (Photo: Modus Planning, Design and Engagement)



Example of simple building forms with a dominant roof shape reinforce the identity of individual units (Image: Haeccity)

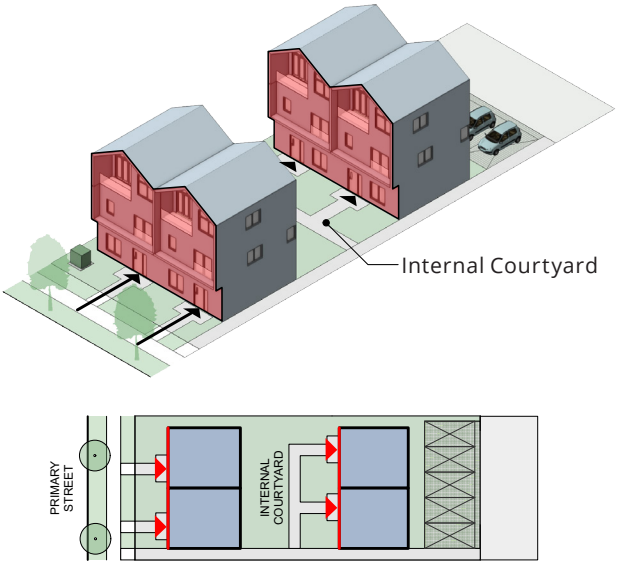
1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

1.2.2 STREETSCAPE EXPRESSION

Intent: Infill housing developments create active, walkable and human-scale streetscapes.

Infill Housing developments must:

a. Create transitions between public, semi-private and private spaces, using design strategies such as plantings, low fencing or decorative railings, material changes, and modest grade changes while maintaining visual connection to the public realm.
b. Orient and design primary entrances to be:
    i. Clearly visible and identifiable from the street and sidewalk or internal courtyard by articulating the building massing and framing entrances with secondary roof elements.
    ii. Weather protected and well-lit.
    iii. Directly accessible from the sidewalk and provided an adequately sized landing or "stoop."
    iv. Where the primary entrance is not easily identifiable from the street, provide an address plaque that allows for ease of wayfinding for first responders.
c. Orient and design secondary entrances to be clearly visible and identifiable from a courtyard, secondary street frontage, or rear lane where present.
d. Ensure that, for buildings with exterior staircases, the design of the staircase is high quality, makes a positive contribution to the streetscape, integrates with the architectural expression of the building, and is human scale. Strategies to achieve this include:
    i. Ensuring that staircases do not obstruct or shade ground floor entrances.
    ii. Not including staircases any higher than one storey in height and which do not access a level above the first level above grade.
    iii. Not including long exterior corridors which increase the perceived mass of the building.
    iv. Using the site topography to help reduce the height of the staircase.
    v. Considering a split-stair design with landing(s) to mitigate the perceived height of the staircase and provide areas of respite.



Example of clearly identifiable and visible primary entrances. (Image: Haeccity)



Example of weather protected primary entrances with adequately sized landings. (Photo: Modus Planning, Design and Engagement)



Example of addresses providing ease of wayfinding. (Photo: Modus Planning, Design and Engagement)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

vi. Incorporating landscaping, trellis or plantings.

vii. Connecting the staircase base with other site circulation via pathways.

Infill Housing developments are encouraged to:

e. Consider providing lighting and "eyes on the lane" to increase lane safety.

1.2.3 BUILDING DESIGN

Intent: Infill Housing achieves a high quality of design, architectural expression, and material finish, such that neighbourhoods are activated and made vibrant by a range of architectural styles, from contemporary to traditional expressions.

Infill Housing buildings must:

a. Provide high quality design detailing and materiality on all street facing elevations, with careful attention to creating a well-proportioned and cohesive building design.
b. Incorporate a range of architectural features and design details that create visual interest. These may include:
    i. Roof forms.
    ii. Vertical and horizontal articulation.
    iii. Balconies integrated into the building form.
    iv. Fenestration pattern (proportions and placement of windows).
    v. Differentiation of units and primary entrances.
c. Use durable and high-quality materials that are well suited to the region's current and future climate.
d. Not use vinyl cladding or cultured stone products.
e. Minimize or avoid use of other plastic, vinyl, or synthetic materials intended to mimic natural materials.
f. Ensure exterior lighting that prevents light-spill onto adjacent properties, and light pollution, in compliance with the Light Intrusion bylaw, such as through Dark Sky approved luminaires.



Example of durable and high-quality materials, and exterior lighting that prevents light-spill. (Photo: Lanefab)

ENERGY CONSERVATION

The City of New Westminster is committed to energy conservation in building design with a number of policies, plans, and programs aimed at energy use and greenhouse gas emissions reduction. One of these programs is ENERGY SAVE NEW WEST, a community energy program designed to improve energy efficiency and reduce greenhouse gas emissions from homes and businesses in New Westminster.

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

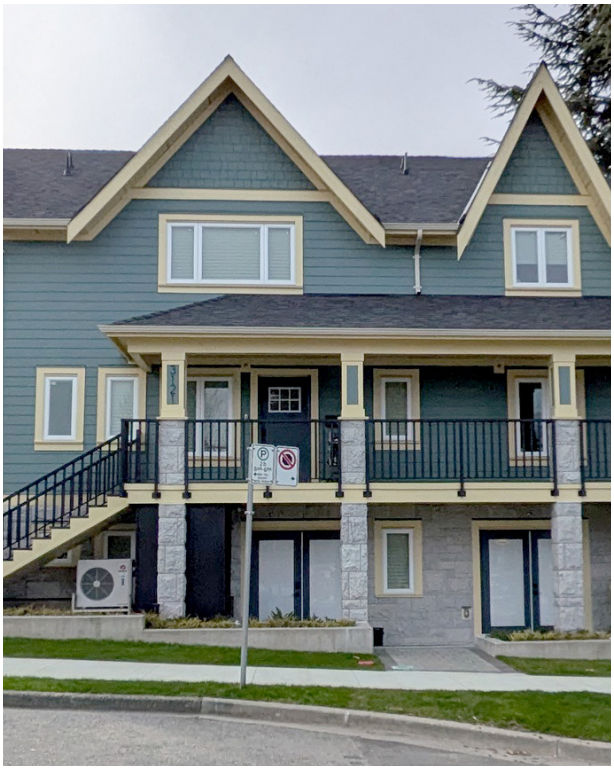
Infill Housing buildings are encouraged to:

g. Include accessible units where possible or ensure the first floor of multi-storey units are barrier-free to support visitors with mobility challenges.
h. Target an overall window-to-wall ratio of 40% or lower to heat gain and loss.
i. Prioritize use of locally-sourced and/or recycled materials wherever possible.
j. Integrate "cool" or green roofs that reduce solar absorption and urban heat island effects.
k. Design bird friendly buildings that use strategies such as increased visibility of glass and window covers or markers that seek to reduce bird collisions.
l. Incorporate fire smart, non-combustible materials.
m. Retain buildings with heritage value and integrate them into new developments.
n. Where adjacent to a heritage asset:
    i. Design new buildings to respect the urban grain, scale, proportions, and materials of the historic context.
    ii. Design buildings to reflect, but not replicate, adjacent heritage styles and finishes through the use of high-quality and contemporary design cues.

HERITAGE REVITALIZATION AGREEMENT
A project including a heritage asset may be able to take advantage of tools such as a Heritage Revitalization Agreement (HRA). An HRA is a site-specific agreement that provides long-term legal protection of a site in exchange for agreed-upon variations to the Zoning Bylaw. This could include incentives which would make it viable to conserve assets with heritage merit. The terms of an HRA strive to balance private with public interests, heritage conservation with livability, and housing choice.



Example of infill build around existing heritage building with a range of architectural features and design details that create visual interest. (Photo: Lanefab)



Example of infill housing with step-free ground-level entry. (Photo: Modus Planning, Design and Engagement)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

LIVABILITY

1.2.4 PRIVACY

Intent: Infill Housing developments balance the desire for privacy within the development and between adjacent properties with creating livable units and opportunities for socializing.

Infill Housing developments must:

a. Design buildings, including balconies or upper-level or rooftop decks, to balance minimizing overlook between units within the development, and onto adjacent properties, with creating livable units. Strategies to do so could include offsetting windows and/or screening.
b. Balance the need for privacy with providing opportunities for social interaction where buildings are oriented around a central courtyard.



Examples of private open-space at ground level. (Photo: Lanefab)



Example of private outdoor amenity space balanced with a central courtyard. (Photo: Lanefab)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

1.2.5 OPEN SPACE

Intent: Infill Housing developments provide quality private and shared outdoor amenity spaces that contribute to livability, sustainability, and social connectedness.

Infill Housing developments must:

a. Provide private outdoor amenity spaces sized to be a minimum of 14.8 square metres (160 square feet), with a minimum dimension of 1.83 metres (6 feet) per unit and are contiguous.
    i. Open space may be provided either at-grade, on raised terraces, on upper level balconies, and/or on rooftops. Enclosed upper level decks and balconies are not permitted.
    ii. Where it is more appropriate to the site, a modest reduction to size requirements could be considered, provided one or multiple shared, well-programmed (e.g. garden beds, playground, seating), and sufficiently sized shared outdoor space(s) are provided.
b. Provide direct access from the dwelling unit to private outdoor amenity spaces.

Infill Housing developments are encouraged to:

c. Balance direct access to sunlight with opportunities for shade.
d. Design outdoor spaces so that they are accessible for people of varying levels of ability and mobility.



Example of compact and accessible outdoor amenity space. (Photo: Haeccity)



Example of open space on an upper level balcony. (Photo: Lanefab)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

LANDSCAPE DESIGN

1.2.6 TREES, TREE CANOPY, AND SOFT LANDSCAPING

Intent: Infill Housing developments prioritize, accommodate, and support the long-term preservation of existing high-value trees and the growth and establishment of new tree canopy, and the establishment of high quality landscaping and biodiversity.

Infill Housing developments must:

a. Provide one new tree on the lot.
b. Preserve protected mature and healthy existing trees.
c. Select tree species that prioritize diversity, climate adaptation, and drought tolerance, to provide shading and cooling, and contribute to a reduction in the urban heat island effect.
d. Use a "right tree, right place" approach to tree plantings that ensure larger-growing trees are located in sufficiently large spaces, and smaller trees in small private yards and planters.
e. Locate any new trees no closer than 1 metre from property lines.
f. Provide a minimum of 15 cubic metres of continuous soil for all new tree plantings; 10 cubic metres per tree if sharing soil.



Example of an infill development protecting mature and healthy existing trees. (Photo: Haeccity).



Example of the use of diverse plant species that support biodiversity. (Photo: Modus Planning, Design and Engagement)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

Infill Housing developments are encouraged to:

g. Use structural soils or soil cells to increase soil volume availability where tree planting is occurring adjacent to hard landscaping features.
h. Select plant species that contribute to local biodiversity, with an emphasis on pollinator and native species. Selected plant species should also be suitable for the local climate, resilient to climate change, durable, low maintenance, and drought-tolerant.
i. Not include invasive species and artificial turf.
j. Prioritize the planting of trees in groups or groves where soil, water and nutrients can be shared, and the identified species is suited to groupings.
k. Balance species selection to provide large canopy, shade trees for relief in warm months, and evergreen trees that can provide rainwater management benefits throughout the year.
l. Prioritize larger-canopied trees, and those reaching a greater mature height, over smaller, ornamental trees.
m. Consider planting trees between groups of parking spaces and/or between garage doors.

URBAN FOREST MANAGEMENT STRATEGY

In recognition of the urban forest as a valued public resource at risk of decline, the City developed a city-wide Urban Forest Strategy that aims to protect and enhance the urban forest system. This Strategy identifies 40 actions to increase tree canopy cover from 18% to a target of 27% by 2055. To achieve this, new development proposals must consider the Urban Forest Management Strategy and comply with the Tree Protection and Regulation Bylaw.

BIODIVERSITY STRATEGY

The City of New Westminster Biodiversity and Natural Areas Strategy outlines best practices for planting plans that prioritize biodiversity by promoting climate-adapt, low maintenance and pollinator species.



Example of prioritizing a larger-canopied tree. (Photo: Modus Planning, Design and Engagement)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

1.2.7 STORMWATER MANAGEMENT

Intent: Infill Housing developments support the City's Integrated Stormwater Management objectives.

Infill Housing developments must:

a. Maximize site permeability, through an emphasis on live landscaping, while accommodating other functional and programmatic site needs.
b. Incorporate a grading strategy that seeks to reduce rainwater runoff by slowing, infiltrating, storing rainwater on-site, so that it is not directed to or affecting neighbouring properties.
c. Install permeable surfaces on surface parking areas and driveways, such as grass block pavers, driveway wheel strips, or permeable pavers installed over a bed of sand and gravel, dust-free stone/gravel.
d. Minimize paving in front yards and publicly-facing areas by combining pathways where possible. Use high quality, low-maintenance hardscape materials such as pavers, brick, and concrete.

INTEGRATED STORMWATER MANAGEMENT PLAN

The City's Integrated Stormwater Management Plan (ISMP) outlines & guides the planning of stormwater management initiatives for the City. The long term initiative of the Plan is to minimize runoff volume and to reduce the risks and consequences of pollutants in stormwater runoff entering the Fraser and Brunette rivers. The ISMP includes a set of runoff reduction and water quality targets. The ISMP also includes a Best Management Practice Toolkit that provides guidelines for a range of common tools that infiltrate, treat or detain stormwater. New development will be required to use one or more of these tools in order to meet the ISMP targets.

Infill Housing developments are encouraged to:

e. Consider incorporating rain gardens and swales and other rainwater management best practices in landscaping design to achieve stormwater management targets.
f. Integrate rainwater techniques for retention, infiltration, and harvesting into building architecture, such as green roofs with sedums and native grasses to provide insect and bird habitat and connected downspouts to cisterns or rain barrels.



Example of surface parking area with permeable grass block pavers. (Photo: Modus Planning, Design and Engagement)



Example of integrated rainwater techniques, including native grasses and a downspout. (Photo: Modus Planning, Design and Engagement)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

1.2.8 SCREENS, FENCES AND RETAINING WALLS

Intent: Infill Housing developments thoughtfully transition to the public realm and adjacent properties and incorporate landscape elements to mitigate views of service and parking areas.

Infill Housing developments must:

a. Where fences are provided, use high-quality, durable materials, such as wood, composite, or metal. Chain link is not permitted.
b. Incorporate, where fences are provided, design that balances privacy needs while contributing positively to the streetscape, and comply with the Fences section of the Zoning Bylaw.
c. Minimize the need for retaining walls along public rights-of-way through site design and grading. Where retaining walls are unavoidable, they must be stepped to reduce their apparent height and include planted terraces, overhanging vegetation, climbing plants, or living green walls between levels to soften their appearance and scale. No individual retaining wall face should exceed 0.61 metres (2 feet) in height.





Examples of a fences made from high-quality materials to screen private yards. (Photos: Modus Planning, Design and Engagement)



Example of a retaining wall that is stepped to reduce the overall height, and includes a planted terrace to soften the appearance. (Photo: Modus Planning, Design and Engagement)



Example of a fence made from high-quality materials to screen the side lane and parking area. (Photo: Small Housing BC)

1.2 INFILL HOUSING
DEVELOPMENT PERMIT GUIDELINES

CIRCULATION, ACCESS, PARKING AND SITE SERVICING

1.2.9 CIRCULATION, ACCESS AND PARKING

Intent: Infill Housing developments prioritize walking and cycling circulation, use, and access above vehicle circulation.

Infill Housing developments must:

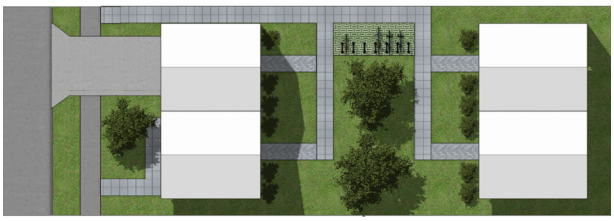
a. Ensure all pedestrian circulation is accommodated on-site via internal pedestrian pathways located within the property, such that residents do not have to exit the property and use public sidewalk in order to reach essential on-site facilities.
b. Ensure walking pathways, including paths between solid waste storage and staging areas, are sized to a minimum of 1.2 metres (4 feet) in width, with a width of 1.5 metres (5 feet) preferred for higher volume areas, such as central courtyards, and 1.5 metres (5 feet) required if adaptable or accessible units are provided. To support emergency responders, these pathways should be:
    i. Connected from the street to at least one building entry per unit via the shortest feasible route.
    ii. Well lit.
    iii. A smooth, continuous hard surface with no steps or abrupt grade changes.
    iv. Free of any obstructions such as landscaping or bollards and with clear site lines.
c. Distinguish walking paths from vehicle circulation routes, either through physical separation or subtle cues such as a change in material.
d. Incorporate surface materials, landscaping and lighting that support safe, welcoming, and comfortable pedestrian pathways.

Infill Housing developments are encouraged to:

e. Prioritize residential parking in the form of surface level parking pads and/or carports over enclosed parking.
f. Locate bicycle parking along routes that are free of stairs, and where stairs are unavoidable, consider providing a ramp.
g. Where possible and to support accessibility, ensure pathways to building entrances and solid waste staging do not exceed a 1 in 12 slope.
h. Provide ramps rather than stairs where possible.



Example of a walkway with generous width and smooth, continuous hard surface free of obstructions. (Photo: Modus Planning, Design and Engagement)



Example of pedestrian walking paths that are distinct from parking pads, and bicycle parking. (Image: Haeccity)

COMMUNITY ENERGY AND EMISSIONS PLAN 2050

The City endorsed an updated Community Energy and Emissions Plan in 2022, which provides a roadmap to approaching net zero greenhouse gas emissions by 2050, to reduce impact on climate change. One of the five key action areas is Buildings, which includes actions requiring new buildings to be built to high energy efficiency standards that help reduce emissions.

1.2.10 SOLID WASTE, RECYCLING AND UTILITY SERVICING

Intent: Infill Housing developments conveniently accommodate functional site servicing needs, in balance with other site uses.

Infill Housing developments must:

a. Include appropriately sized waste staging areas and clear access routes to enable safe and efficient solid waste collection. Routes should be free of physical impediments, such as parked vehicles, and have vertical clearance to avoid building overhangs and trees.
b. Ensure that utility infrastructure, such as electrical transformers are located and screened, or visually treated, such as through a graphic wrap, in a way that mitigates negative public realm impacts, and other site functions such as noise impacts, especially adjacent to windows.
c. Avoids siting mechanical equipment, such as heat pumps and pad mounted transformers, in front yards.

Infill Housing developments are encouraged to:

d. Ensure that, where waste storage areas are located inside of an accessory building or screened from public view, materials consistent with the overall design are used.

NOISE BYLAW

Did you know that all mechanical equipment must meet the requirements of the City's Noise Bylaw? Visit the Noise Bylaw webpage for more information.

SOLID WASTE FACILITY GUIDELINES FOR DEVELOPMENT PERMIT APPLICATIONS

The City's Solid Waste Facility Guidelines for Development Permit Applications were created to assist development applications with understanding the solid waste service requirements for new multiple residential developments and residential uses within mixed use developments.







Examples of mechanical equipment screened from the street (top and middle), and located off of the lane and away from public view (bottom). (Photos: Modus Planning, Design and Engagement)

DPA MAP 1.2 GROUND ORIENTED INFILL HOUSING

DEVELOPMENT PERMIT AREAS

