



## **REPORT**

### *Development Services*

**To:** Mayor Côté and Members of Council      **Date:** 9/19/2016  
**From:** Beverly Grieve      **File:** 13.2525.20  
Director of Development Services      **Item #:** 302/2016  
**Subject:** **OUR CITY 2041 - Draft Infill Housing Design Guidelines**

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#### **RECOMMENDATION**

***THAT** Council Provide feedback on the draft Infill Housing Design Guidelines.*

***THAT** Council direct staff to research and then present recommendations to Council for laneway and carriage houses, and for townhouse and rowhouses, regarding: 1) delegating the authority to issue Development Permits, 2) taking a pre-zoning approach, and 3) starting with a trial period.*

***THAT** Council direct staff to proceed with the proposed community consultation program outlined in this report.*

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#### **PURPOSE**

This report presents Council with the first draft of the Infill Housing Design Guidelines for Laneway and Carriage Houses, and for Townhouses and Rowhouses, for their review and comment. This report requests Council direct staff to proceed with the consultation program once Council's feedback is incorporated.

#### **BACKGROUND**

In January 2014, Council endorsed a general scope, work plan and budget for the Official Community Plan (OCP) review process. The purpose of the revised OCP is to provide a renewed vision for New Westminster to the year 2041 and a regulatory framework to guide future growth of the city.

The OUR CITY 2041 review process has had a large focus on increasing housing choice. Currently single detached dwellings and apartment/condo buildings make up more than 95% of the city's housing stock. Increasing housing choice in New Westminster would be achieved by encouraging more ground oriented housing forms. Typically a ground oriented unit has a separate, exterior entrance directly accessible (without passing through a common lobby or corridor) from a street or open space.

Increasing housing choice was the main theme of the Community Conversation on Housing. During this round of consultation the community was presented with a range of ground oriented infill housing options (e.g. duplexes, triplex, single detached dwellings on a compact lot) that were being considered. The purpose of the consultation was to understand:

- The level of support for each of the different housing forms.
- What people like and not like about each form.
- Which are the forms that the City should focus on as the process moves forward.

The results of these public consultation events, held over the winter of 2015-2016, were presented to Council on April 25, 2016, at which time two workshops were held with Council. The report recommended that staff begin an implementation strategy for the housing forms that received the highest level of support during consultation: laneway and carriage houses (66% of participants in support), townhouses (57% support), and rowhouses (56% support). An excerpt from the April 2016 Council Report which summarizes the feedback received on each of these forms is included at **Attachment A**.

Following this meeting work has begun on the implementation strategy which has included exploring three key questions:

- What regulations are needed? (e.g. minimum lot size, parking, building size)
- What design guidelines are needed? (e.g. related to privacy and overlook, landscaping, building design)
- What does the approval process look like?

This report outlines the work done to date on the implementation strategy.

## **DISCUSSION**

Staff retained Ramsay Worden Architects to assist with the implementation strategy for laneway and carriage houses, and for rowhouses and townhouses. They have created a draft set of design guidelines, which is included in **Attachment B**.

The feedback received during the Community Conversation on Housing consultation events was considered during the creation of these guidelines. Staff from various departments (e.g.

Fire Services, Building Division, Engineering Department) were also consulted during the creation of the draft guidelines.

The Design Guidelines include a set of general principles which apply to all infill housing forms. Topics in this section relate to streetscape design, Crime Prevention Through Environmental Design (CPTED), sustainability and livability.

These design guidelines are still draft and the next round of consultation will solicit feedback from various stakeholders which will be reviewed and incorporated before returning to Council for consideration.

### **Laneway and Carriage Houses**

A laneway house is a detached rental unit at the rear of an existing single detached lot with a lane. A carriage house is a detached rental unit at the rear of a single detached dwelling, but is on a lot which does not have a lane. The guidelines are intended to ensure that laneway and carriage houses are designed to fit within existing neighbourhoods, and have minimal impact on streetscapes and neighbours. The draft design guidelines cover each of the topics outlined below:

*Building Size:* The size of the laneway/carriage house would be controlled in three ways:

- **Minimum and maximum size:** The new unit would be between 350 and 950 square feet (32.5 to 88.3 square metres). This would allow for a range of unit sizes while still ensuring that the new unit is secondary to the main house.
- **Floor Space Ratio for the Property:** It is also proposed that the floor space ratio for single detached dwelling properties remain the same as today (0.5 FSR). This means that where a home is already built to the maximum, a laneway/carriage house would not be permitted.
- **Floor Space Ratio for the Laneway/Carriage House:** There would also be a floor space ratio for the laneway/carriage house (0.15 FSR) which would also limit building size, especially on small lots.

These calculations for building size will allow increased housing choice in the city while maintaining the existing neighbourhood character by not allowing more density than currently permitted, except through Heritage Revitalization Agreements.

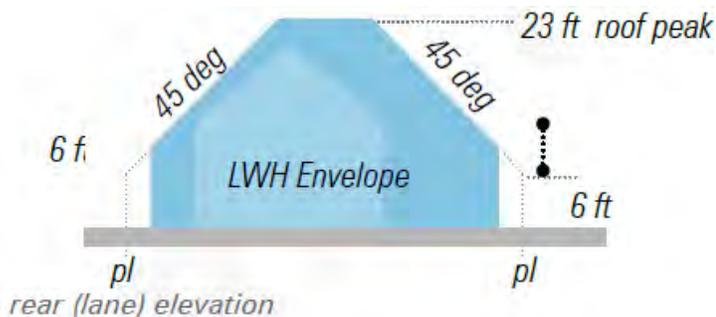
*Setbacks:* Required setbacks from the side and rear property lines have been drafted. These are intended to optimize privacy between new units, access to sunlight and opportunities for

open space. Extra consideration was given to rear yard setbacks for carriage houses since there is no lane providing separation between the new unit and the neighbouring property at the rear.

*Building Separation:* There would be a minimum distance required between the main house and the laneway/carriage house (16 feet/4.8 metres) to help ensure adequate open space, light and privacy for the new unit and the main house.

*Parking Type:* Parking pads (neither covered nor enclosed) would be encouraged since they do not add building bulk, and cannot be converted to living or storage space. Pads can be used for other purposes (e.g. play space) but are readily converted back when needed for parking. A maximum of one of the parking spaces could be a carport (covered parking). A maximum of one of the parking spaces could be a garage (enclosed parking) but would count towards the total permitted size of the unit. The total number of parking spaces required is discussed later in this report.

*Building Envelope and Massing:* The building envelope is the three dimensional space the laneway/carriage house must be located within. The building envelope is generally defined by side and rear setbacks, separation from the main house, and height. The building envelope tends to be larger than the maximum unit size would permit. This means that it is possible to configure a laneway/carriage house in different ways, while still fitting within the envelope. The purpose of the building envelope is to ensure that whatever the configuration of the new unit, it will have minimal impact on shade, shadow, and overlook of neighbouring properties. The design guidelines for the building envelope also include a provision for the second floor of the laneway/carriage house that includes inclines that will ensure that unit is pulled back from neighbouring property lines and minimizes shade and shadows.



**Image 1: Building Envelope Example.** This image shows a section through the building envelope illustrating how the building envelope will be calculated for side elevations. The darker blue shape indicates the building envelope. The light blue shape indicates a possible building configuration that fits within the envelope.

*Roof Forms:* Laneway/carriage houses would be permitted to have a second floor but it would be smaller than the first (a maximum of 60% of the size of the first floor). This would make the building look shorter and less bulky. It would also allow more light into

surrounding yards. The second floor would also have to be built into the roof line (see Image 2). This would allow a more useful second floor while keeping the building height lower. It would make the building less bulky and allow more light into yards.



**Image 2: Building Into Roofline.**

*Privacy and Overlook:* Second floor windows have the potential to impact privacy and overlook. As a result, upper level windows would have to be designed to minimize overlook into neighbours' yards. Windows could be oriented to the lane or side street (on a corner lot). Other windows that are oriented to a neighbour's yard would not be at eye level. Instead skylights, clerestory windows (windows located above eye level) and floor level windows would be encouraged. These window types will protect privacy of adjacent houses while still allowing natural light into the unit.

Fences and landscape screening would be used to increase privacy, especially on the sides and back of the property. This would provide privacy for the new unit as well as for adjacent houses.

*Open Space:* The laneway/carriage house would be provided with a private outdoor space that is clearly delineated. The space would be at least 160 square feet (14.9 square metres), which would provide room for patio furniture and a barbeque. This would make the unit a more livable and functional place to live for the occupant. The laneway/carriage house could also have additional open space on a second floor balcony but this space has to be oriented and screened to reduce overlook. This would provide additional outdoor space while maintaining privacy between homes.

*Landscape Design:* Landscape design would be encouraged to incorporate stormwater management and must consider tree protection in accordance with the Tree Protection Bylaw. Planted areas would be required between the laneway house and the lane. This would help achieve other City objectives and would create an attractive interface between the lane and the new unit.

*Pedestrian Access:* A three foot (one metre) wide path that connects the new unit to the front street would be required. This access route is meant to make it easy for emergency services, pizza delivery and visitors to find the new unit. It also means that the residents of the unit have easy access to the main street. Laneway houses would also have well-designed access from the lane.

*Lighting:* Carefully considered exterior lighting creates safe, welcoming and clearly identified building entrances, lanes, and access pathways. Laneway/carriage house lighting would be expected to be neighbour friendly, avoiding glare into neighbouring and principal dwellings' outdoor or indoor spaces.

*Architectural Expression:* These guidelines anticipate buildings that enhance existing neighbourhoods. A specific architectural approach would not be identified, but design excellence and innovation would be expected, including: weather protection and passive energy performance design, long lasting materials with low maintenance costs, clearly residential architectural character.

### **Townhouses and Rowhouses**

Both townhouses and rowhouses are ground oriented units which share a wall with a unit on at least one side. Townhouses are stratified to allow multiple owners. Rowhouses are developed as freehold lots, meaning that each unit is on its own lot.

The design guidelines would allow projects in the following forms:

- *Street Fronting (Townhouse and Rowhouse):* All units on shallow mid-block lots would face the street. This is a traditional form that creates an attractive streetscape with front doors and yards. Units also have back yards. This format also has the flexibility of being either a townhouse (strata) or a rowhouse (fee simple).
- *Courtyard (Townhouse):* A project on deep lots could be a courtyard style development, where units face an internal courtyard. The two end units would be required to face the street. Due to the layout this format could only be a townhouse (strata), not a rowhouse (fee simple).



**Image 3: Street Fronting  
Townhouse/Rowhouse**



**Image 4: Courtyard Townhouse**

The design guidelines for townhouses and rowhouses are targeted at small projects that would be designed to fit next to and across from single detached dwellings. The draft design guidelines cover each of the topics outlines below.

*Density:* The maximum frontage (property width) of a project would be 150 feet (45.7 metres) and the maximum building width would be 125 feet (38.1 metres). This would limit the scale and number of properties that can be consolidated into one project. This also limits the number of units possible. The maximum number would be in the order of eight units for a street fronting project and ten units for a courtyard project. The intent of these guidelines is to make sure that these are small projects that work as neighbours to single detached dwellings.

The permitted base density would be a floor space ratio of 0.75. On deeper lots (120 feet/36.57 metres or greater), where courtyard style development is possible, the density may increase to a floor space ratio of 0.85. Units would be permitted to have basements, which would not count towards total floor space ratio.

*Setbacks:* Setbacks provide adequate separation between neighbours, support a streetscape with transitions between varying front yard depths and optimize functional front and back yards. Generally setbacks for side yards are more than what would be required for a single detached dwelling to increase the separation from neighbouring houses. The side setback will be greater for courtyard style (14 feet/4.26 metres) than for street fronting (6 feet/1.8 metres) and would act as backyards. Requiring a side yard that is substantially larger than what is normally required in a single detached dwelling neighbourhood helps ensure a new courtyard development would have minimal impact on neighbouring homes and their backyards.

The minimum front yard for projects would be 14 feet for both project types. However, the end units of street fronting townhouse projects would be greater (19feet/5.8 metres) to improve the transition to neighbouring houses.

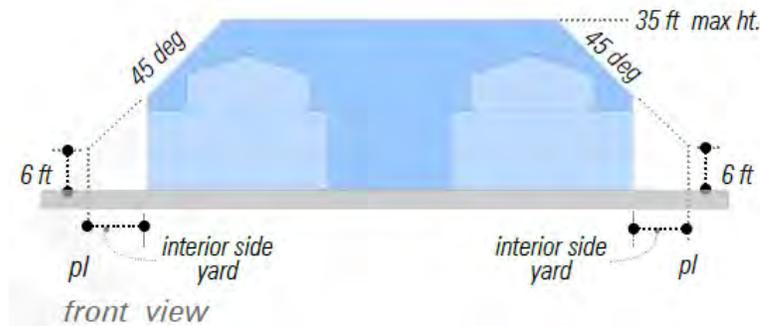
*Vehicle Parking Design:* Parking pads (neither covered nor enclosed) are encouraged. Parking pads are preferred they do not add building bulk and cannot be converted to storage space. It is also use for other uses (e.g. play space) but can be readily converted back when needed for parking. A detached carport would be permitted but the size (number of stalls) per carport would be limited.

*Parking Number:* One parking stall would be required for each unit. Townhouse projects would also be required to provide one visitor parking space. Parking for a townhouse is in a common area which is shared by all the owners, and can therefore include an additional space. Each rowhouse would be on its own property. One parking space would be provided on the individual property for each rowhouse and no visitor parking would be included as there would be no common (shared) space to locate it.

*Bicycle Parking:* Secured and weather protected bike parking would be required.

*Building Height:* Units can be up to two and a half floors. For street fronting projects, the end units could only be two floors due to their closer proximity to neighbouring houses. This will make livable units while also ensuring that these new townhouses work well as neighbours to single detached dwellings.

*Building Envelope and Massing:* The building envelope is the three dimensional space the townhouse/rowhouse building must be located within. The building envelope is generally defined by front, side and rear setbacks, and height. The building envelope tends to be larger than the maximum building size permitted. This means that it is possible to configure a building in different ways, while still fitting within the envelope. The purpose of the building envelope is to ensure that whatever the configuration of the new units they will have minimal impact on shade, shadow, and overlook of neighbouring properties. The design guidelines for the building envelope focus on the second floor and third floor by including inclines that will ensure that unit is pulled back from neighbouring property lines and minimizes shade and shadows.



**Image 5: Building Envelope Example.** This image shows a section through the building envelope illustrating how the building envelope will be calculated for side elevations. The darker blue shape indicates the building envelope. The light blue shape indicates a possible building configuration that fits within the envelope.

*Open Space:* Private outdoor space will be located in the backyard of each unit. The space would be a minimum of 160 square feet (14.9 square metres). This would ensure the units are livable and functional.

*Landscape Design:* Landscape design would be encouraged to incorporate stormwater management and must consider tree protection in accordance with the Tree Protection Bylaw. Planted areas would be encouraged within the parking area to break up the size of continuous parking. This will help achieve other City objectives such as tree protection and stormwater management.

*Privacy and Overlook:* Fences and landscape screening would be required between back yards to increase privacy of the private outdoor space. This would provide privacy for the each of the units as well as for adjacent homes.

*Architectural Expression:* These guidelines would encourage new development that emphasizes livability and responds to the West Coast climate through the use of durable, long lasting materials, passive design elements including solar shading on the west and south elevations, outdoor spaces located to optimize sun and surveillance and generous areas of glazing to optimize daylighting.

## **FURTHER ANALYSIS**

### **Laneway and Carriage House Parking**

The number of parking stalls required for properties with a laneway/carriage house is still under exploration. Staff have identified three main options:

- **Three Units and Three Parking Spaces:** This scenario would allow three units: the main house, a secondary suite (in the main house) and a laneway/carriage house. One

parking spot would be required for each unit. This scenario is consistent with the current Zoning Bylaw requirements for a single detached dwelling. A benefit of this scenario is that it is likely to meet parking demand on-site and result in less demand for on-street parking. However, properties would need to be larger to accommodate all the parking spots, meaning fewer properties will be eligible and the potential uptake of this program will be lower. It can also mean a reduction in the area of open space for all units.

- **Two Units and Two Parking Spaces:** This scenario would only allow two units: the main house and either a secondary suite (in the main house) OR a laneway/carriage house. One parking spot would be required per unit. This scenario is consistent with the current Zoning Bylaw requirements for a single detached dwelling. A benefit of this scenario is that it could meet parking demand on-site and result in less demand for on-street parking. However, it is possible that an illegal secondary suite would be added after the laneway/carriage house is approved. This would mean the parking demand would end up not being met and the suite might not be constructed to safety and livability standards.
- **Three Units and Two Parking Spaces:** This scenario would allow three units: the main house, a secondary suite (in the main house) and a laneway/carriage house. Only two parking stalls would be required. This scenario is not consistent with current Zoning Bylaw requirements for a single detached dwelling. The benefit of this option is that more properties would be eligible due to the reduced standard. It also means that it is more likely for a greater area of open space to be provided for all units. However, since the parking demand is likely not met on-site, there might be an impact on on-street parking.

During the Community Conversation on Housing participants were asked to consider whether they would rather see a reduction in quantity of open space, the depth of the front yard, or the number of parking stalls. Of the options presented, the most popular (with 47% of respondents) was for a combination of improved open space, reduced parking and reduced front yard. The least popular options were those that saw a reduction in the quantity of open space. People were most supportive of a reduction in the front yard. While some people wanted to see parking standards remain, more people supported a reduction.

More discussion is required before a direction can be set. The new options related to number of parking spaces and units would be included in the consultation related to these guidelines as discussed in the Consultation section below.

### **Tree Retention**

The Tree Protection and Regulation Bylaw was adopted to preserve trees on private and public property and to assist in growing the city's urban forest. The Bylaw permits trees that

are within the building envelope to be removed at the time of Building Permit if each is replaced by two trees. It is intended that allowing laneway/carriage houses would not have an impact on trees by not allowing a greater building entitlement than what is currently permitted. The laneway/carriage house would replace what can currently be built as a detached accessory structure. Staff would continue to explore this as the work on the implementation strategy advances.

### **Implementation**

If the City moves forward with allowing laneway/carriage houses, townhouses and rowhouses the guidelines would be implemented through the creation of a new Development Permit Area which would be included in the Official Community Plan. All applications for one of these housing forms would be required to apply for a Development Permit prior to a Building Permit. The Development Permit application would be reviewed for its compliance with the intent of the design guidelines.

Some of the draft design guidelines would need to be implemented as amendments to the Zoning Bylaw (e.g. setbacks, height). These items would be incorporated into the Zoning Bylaw concurrently with the Official Community Plan adoption.

An option available to Council would be to delegate the issuance of these Development Permits to the Director of Development Services, rather than requiring that they be presented to an approval by Council.

#### *Rezoning or Pre-Zoning*

The City has two options for implementation: 1) require all new projects to apply for a rezoning, or 2) the zoning could be changed to make these new housing forms permitted uses. There would be more oversight of the process if all applications required a rezoning. However, the uptake would be expected to be considerably less if rezoning is required due to the extra risk, cost and time of the process. Financial analysis indicated that these forms are likely not to be economically viable if a rezoning is required. This is especially true for townhouses and rowhouses. Staff would continue to explore and evaluate these options.

#### *Trial Period*

Regardless of the approach taken the City should start with a trial period. After a set number of permits are issued the process could be put on hold while the success of the first projects is reviewed. The purpose of the review would be to identify needed revisions to the design guidelines, regulations, and/or approval process. The hold on permits would be lifted once the required revisions had been made. This process would be explored in more detail as the work on the infill strategy continues.

## **CONSULTATION**

### *Public Consultation*

Consultation on the draft design guidelines would be incorporated into the upcoming OUR CITY 2041 consultation on the draft Land Use Designation Map. Participants at any of the six upcoming workshops would have the opportunity to review the information, ask questions and give input.

An online image-based survey would also be launched that will allow people to review the material and provide feedback.

### *City Committee Consultation*

Staff would present the draft Infill Housing Design Guidelines for Laneway and Carriage Houses, and for Townhouses and Rowhouses to the New Westminster Design Panel and the Advisory Planning Commission.

### *Stakeholder Consultation*

A consultation event would be held for builders, designers, developers and representatives of the Urban Development Institute. This would help provide meaningful input from a different perspective. Feedback from these stakeholders would help ensure that what is being proposed would allow for viable projects.

## **FEEDBACK FROM COUNCIL**

Work would continue on the items outlined in the Further Exploration section of this report. At this time staff is requesting preliminary feedback from Council on whether staff should continue to explore the following:

- Delegating the authority to issue Development Permits to the Director of Development Services.
- Making laneway/carriage houses, townhouses and rowhouses permitted uses (a pre-zoning approach).
- Starting with a trial period.

## **NEXT STEPS**

After the public consultation is complete staff would compile and analyse the results and make refinements to the draft design guidelines. The findings from the consultation and the revised design guidelines would be presented to Council prior to the end of the year. The Council report would also outline findings from the further analysis which is still being conducted.

**INTERDEPARTMENTAL LIAISON**

Staff from the Planning Division, Building Division, Fire Services and Engineering Department (Infrastructure Planning and Transportation) has been included at key intervals in the process.

**OPTIONS**

The following options are presented for Council’s consideration:

1. That Council Provide feedback on the draft Infill Housing Design Guidelines.
2. That Council direct staff to research and then present recommendations to Council for laneway and carriage houses, and for townhouse and rowhouses, regarding: 1) delegating the authority to issue Development Permits, 2) taking a pre-zoning approach, and 3) starting with a trial period.
3. That Council direct staff to proceed with the proposed community consultation program outlined in this report.
4. That Council provide staff with alternative direction.

Staff recommends Option 1, 2 and 3.

**ATTACHMENTS**

Attachment A: Excerpt from April 25, 2016 Council Report OUR CITY Community Conversation on Housing Process

Attachment B: Draft Infill Housing Design Guidelines

This report has been prepared by:  
Lynn Roxburgh, Planner

This report was reviewed by:  
Jackie Teed, Manager of Planning

Approved for Presentation to Council



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For:  
Beverly Grieve  
Director of Development Services



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Lisa Spitale  
Chief Administrative Officer

## Attachment A

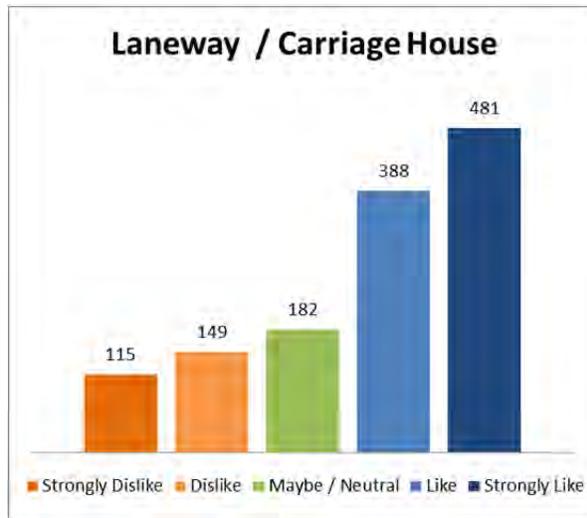
*Excerpt from April 25, 2016 Council Report:  
OUR CITY Community Conversation on  
Housing Process*

## *Summary of Laneway and Carriage House Feedback*

A laneway house is a detached rental unit at the rear of an existing single detached lot with a lane. A carriage house is a detached rental unit at the rear of a single detached dwelling, but is on a lot which does not have a lane.

There was strong support for laneway houses. A total of 66.1% of participants that provided feedback on this housing form either liked or strongly liked it. Another 27% of event participants said “Maybe, in the right context”. More comments were received about laneway and carriage houses than any other form.

**Image 7: Level of Support (Consultation Events and Online Survey)**



In addition to the general comments summarized above, the most frequent comments regarding laneway and carriage housing were:

- Explore how to implement this housing form in a way that allows, or incentivises, the existing home to be kept, especially if the home has heritage merit.
- Design needs to be right. The dwelling should fit within the context of the neighbourhood (building size and design) and not adversely impact the neighbouring back yard (e.g. privacy, shading).
- The design, quality and width of the lane are important (e.g. some lanes may be too narrow to be appropriate for laneway houses). Many felt this would be an opportunity to improve the design of lanes. Some felt it would improve safety to have more people using the lane others felt this would decrease safety. Concerns about user conflict (cars and pedestrians).
- Allowing this form would increase the flexibility for how people use their property and ensure there is more opportunity for them to use the property in a way that works for them and their family (in some case, as an alternative to moving).
- There was a mix of opinions about whether secondary suites in addition to a laneway/carriage house should be permitted. While most people did not comment on this element, some people expressed support and others felt it should be one or the other laneway/carriage house OR suite).
- A number of people felt that there should be more flexibility regarding tenure (e.g. people should be able to sell the unit).
- Better alternative than other housing forms, including high rises.
- Concern about the total number of units that could be built. A few on a block may work, but redeveloping the whole block would be too much of a change.

- The reasons for not supporting these forms were: too much density, higher demand on parks due to a lack of backyard, parking needs would be higher than can be accommodated, site coverage would be too high (buildings and paving for driveway etc.), inefficient way of accommodating density.

Staff Comments: Allowing both a laneway/carriage house and secondary suite is a pragmatic approach that acknowledges the high number of secondary suites that already exist and the challenges with enforcing the removal of suites. Appropriate design guidelines and regulations (e.g. useable open space, parking) would be created with the assumption that both units exist before this new form is permitted.

### *Summary of Rowhouse Feedback*

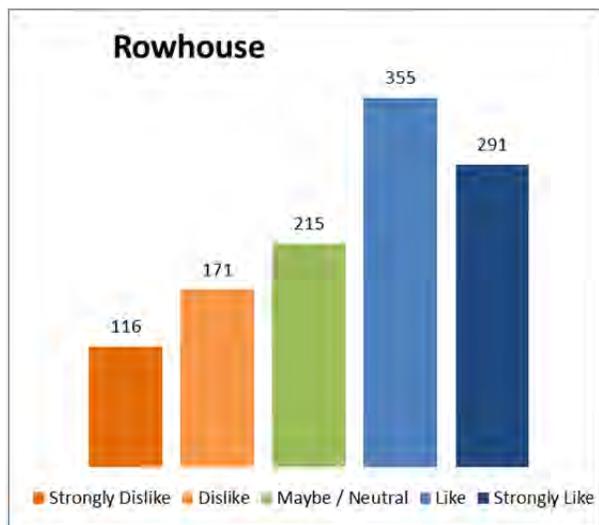
Rowhouses are residential units without side yard setbacks and which share a common wall with a unit on a least one side. They can be developed as freehold lots, meaning that each unit is on its own lot.

There was strong support for rowhouses. A total of 56.3% of all participants were in favour of this housing form. Another 25% of event participants said “Maybe, in the right context”.

In addition to the general comments summarized above, the most frequent comments regarding rowhouses were:

- Like fee-simple ownership.
- Great option for families.
- Units are too narrow and have too many stairs which is bad for seniors and families.
- Could be a way to add density that is in keeping with neighbourhood character.
- Small projects, with a small number of units, would be preferable.
- Design guidelines should explore garage and storage space, front yard setback, privacy, open space and light.
- Units in the centre would not be livable.
- Like that no one is living above you.
- Too much density and too much crowding for single detached dwelling neighbourhoods. There may be some context specific areas where this works, such as on vacant sites, on edges of neighbourhoods, near amenities, or when replacing low rise apartments.

**Image 14: Level of Support (Consultation Events and Online Survey)**



## Summary of Townhouse Feedback

Ground oriented dwelling units which include individual exterior entrances, a private outdoor space, usually consist units which are multiple levels and are typically larger than the average apartment unit. The development is likely to be stratified to allow multiple owners.

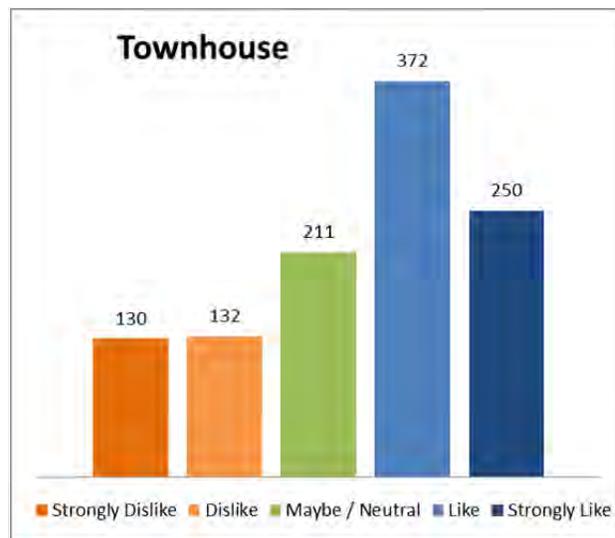
There was strong support for townhouses. A total of 56.3% of all participants were in favour of this housing form. Another 36% of event participants said “Maybe, in the right context”.

In addition to the general comments

summarized above, the most frequent comments regarding townhouses were:

- This housing form is sorely lacking in Metro Vancouver. Consider incentives to make sure this form gets built.
- Common space can encourage community building.
- Good option for people that do not want fee-simple ownership.
- Units are too narrow and have too many stairs which is bad for seniors and families.
- Design guidelines should explore how to match neighbourhood context, usable open space,
- Units in the centre would not be livable.
- Too much density and too much crowding for single detached dwelling neighbourhoods. There may be some context specific areas where this works, such as on vacant sites, on edges of neighbourhoods, near amenities, or when replacing low rise apartments.
- Small projects, with a small number of units, would be preferable.
- Great option for families, if the costs of units are reasonably affordable.
- Underground parking would look nicer and be more secure.
- Need this form without age restrictions.
- Stratas are not an attractive option. The units may be rented and these developments may not be well maintained.

Image 15: Level of Support (Consultation Events and Online Survey)





## Attachment *B*

### *Draft Infill Housing Design Guidelines*



# Infill Housing Design Guidelines

## The City of New Westminster

Ramsay Worden Architects  
*DRAFT August 31 2016*

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## 1.0 INTRODUCTION

### 1.1 Background and Purpose

[City Text]

### 1.2 Guiding Principles

These Design Guidelines will shape the development of Laneway Houses (LWH) Carriage Houses (CH), Rowhouses (RH) and Townhouses (TH).

Guiding Principles for these forms of infill are:

1. Design infill buildings to be good neighbours by minimizing shade, shadow and overlook onto adjacent properties.
2. Design buildings for durability and sustainability.
3. Provide livable spaces with optimum daylight and ventilation, access to ground level private open space, and functional, efficient interiors.
4. Design outdoor spaces as a valued year round asset.

TH and RH are opportunities to provide attached, ground oriented units close to transit and other community amenities. These higher density, affordable family housing forms will impact the neighbourhood fabric and streetscapes. Guiding Principles specific to these higher density typologies are:

5. Create streetscapes that are pedestrian and cyclist friendly, contributing to well connected neighbourhoods.
6. Maintain a scale of development that is compatible with single family neighbours.

## 2.0 GENERAL INFILL GUIDELINES

### 2.1 Neighbourhood Design and Streetscapes

Laneway Houses (LWH) and Carriage Houses (CH) increase the availability of ground oriented dwellings in existing residential neighbourhoods. LWHs and CHs are located in existing rear yards, with minimal impact on the existing streetscapes. Lanes will develop as the "front street" for LWHs, increasing their potential as pedestrian oriented spaces.

Townhouses (TH) and Rowhouses (RH) are opportunities to provide ground oriented, attached, affordable family housing forms in residential neighbourhoods, increasing housing choice. All new developments should contribute to vibrant, engaging streetscapes.

### 2.2 Crime Prevention Through Environmental Design (CPTED)

*All infill housing developments are expected to follow basic CPTED principles including:*

- clearly defined boundaries including private, semi-private and private space
- the ability to provide surveillance from indoor and outdoor spaces
- providing secure access points including gates, lighting and locks
- landscape design that does not interfere with sight lines, lighting or provide opportunities for concealment



*TH / RH streetscape precedent*

## 2.3 Sustainability

Regulations for sustainability are included in a variety of Municipal, Provincial and Federal standards.

These Guidelines encourage all forms of infill buildings to consider additional current and future opportunities for sustainable design where possible including:

- passive solar design integrated into the architecture and landscape design
- energy efficient design and internal infrastructure including structural supports for future solar panels
- opportunities for natural ventilation to optimize air quality and reduce mechanical cooling
- healthy, durable building materials
- drought resistant, low maintenance plants
- architecture and landscape design that integrates water conservation and rainwater management including the use of rain barrels and rain gardens; harvesting rainwater for toilet flushing and maximizing permeable surfaces
- secure storage for bicycles
- safe, pleasant pedestrian connections to the street and the lane

## 2.4 Livability

This term is used to measure the quality of our living spaces. Infill housing designers are challenged with balancing efficient space planning with comfort and flexibility. Compact, efficient spaces that are private (overlook from neighbours has minimum impact), flexible (spaces adaptable to a growing family or the ability to work from home, for example), with quality outdoor space (sunlight, space to garden, privacy), and optimum daylighting (size and placement of windows) allow infill housing to be a valued housing choice.



*example of rain garden and permeable surfaces*



*well designed compact spaces increase livability*

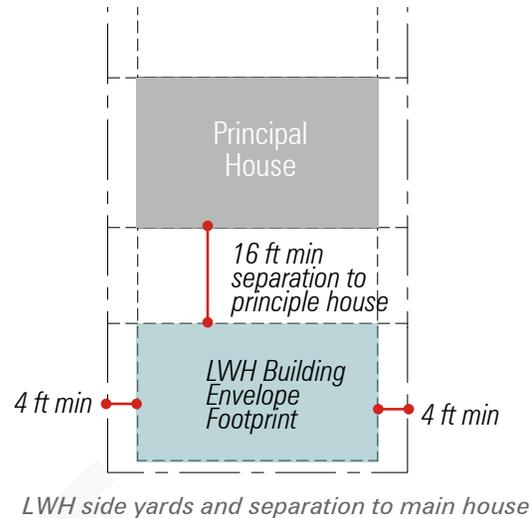
### 3.0 LANEWAY HOUSE (LWH) AND CARRIAGE HOUSE (CH)

#### 3.1 Definition and Description

LWHs and CHs are compact, detached, ground oriented dwellings located in existing back yards. LWHs are located on properties with a lane. CHs are located on properties without lanes.

LWHs and CHs are permitted to be rental units but not strata titled.

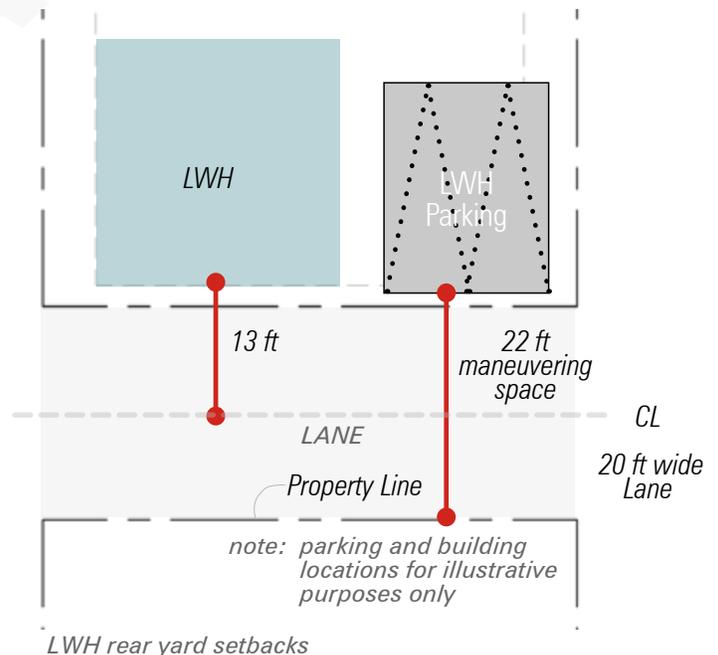
Adaptable units which include a bedroom at the ground level are encouraged to provide aging in place.



#### 3.2 Setbacks

*Setbacks optimize privacy between developments, access to sunlight and opportunities for open space.*

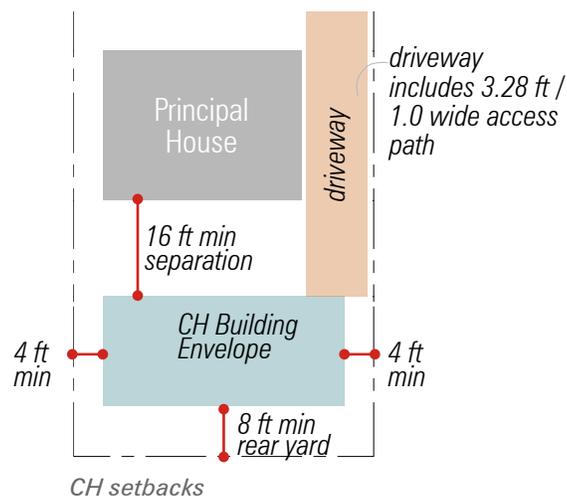
- a. Minimum 4 ft / 1.2 m side yards are required for LWHs and CHs including flanking street on corner lots - refer to illustration on following page. Where possible, increased setbacks from the flanking street are should exceed minimums to incorporate front entries, porches and gardens.
- b. Future lanes will be required to be 20 ft / 6 m wide.
- c. LWH buildings are required to be set back 13 ft from the centre line of the future 20 ft wide lane to allow a minimum 3 ft wide landscape zone.
- d. Many lanes in New Westminster are less than 20 ft wide, without sufficient maneuvering space. Where existing lanes are less than 20 ft / 6 m wide, a 22 ft / 6.7 m wide minimum maneuvering space, measured from the property line on the opposite side of the lane is required for parking access.



- e. A minimum 8 ft / 2.4 m rear yard is required for CHs. Rear yards greater than 8 ft are encouraged to accommodate private outdoor space - refer to Section 3.7.b. for detailed windows guidelines.
- f. Where possible, rear yards should exceed minimums to optimize planting including trees along the lane.

### 3.3 Separation to Main House

- a. A minimum distance of 16 ft / 4.8 m is required, measured from the closest building face of the Principal House and the LWH or CH.



### 3.4 Parking

- a. Parking Access and Location
  - i. Permeable surfaces including unit pavers, installed over a bed of sand and gravel, crushed stone/gravel and grass pavers are required for driveways and vehicle manoeuvring areas.
  - ii. Parking is required to be accessed from a lane where one exists.
  - iii. Corner lot parking access is required to be located 15 ft / 4.57 m from the intersection of the lane and the street.
  - iv. A driveway of not less than 9 ft / 2.74 m wide plus an additional 1 ft / 0.3 m where adjacent to a wall or fence and not greater than 18 ft / 5.5 m in width is required to access CH parking.
  - v. Street crossing widths are not to exceed 18 ft / 5.49 m.
  - vi. Where a lot is fronted by an access controlled street, backing onto the street is not permitted and therefore a turn around is required for CH parking.
  - vii. Driveways with central grass strips are recommended.
  - viii. Refer to Section 3.2.b for LWH rear yard guidelines.



example of grass pavers



example of concrete pavers over sand and gravel bed



example of driveway with central grass strip

- b. Required Vehicular Parking Spaces
  - i. 2 regular sized parking spaces per lot - **CITY TO CONFIRM**
- c. Bicycle Parking Spaces
  - i. All CHs and LWHs are all encouraged to provide bicycle parking.
  - ii. New developments including a principal house, secondary suite and LWH or CH are required to provide a minimum of 3 bicycle parking spaces.
  - iii. Bicycle parking should be secure and weather protected.
  - iv. Bicycle parking structures are not included in the overall FSR.

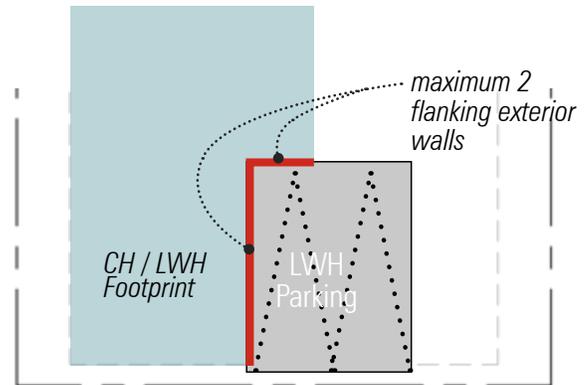
d. Parking Type

*Optimizing open space, reducing shade and shadowing on neighbouring properties, and minimizing building "bulk" along the lane are key to design considerations. Parking pads are preferred. If carports are provided, they are recommended to provide flexible outdoor space. Garages increase shade, shadow and "bulk" and are included in the total allowable FSR.*



photo credit: ramona torres architects  
example of carport used as flexible outdoor space

- i. Parking Pads
  - Permeable parking pad surfaces, including unit pavers, installed over a bed of sand and gravel, crushed stone/gravel and grass pavers are highly recommended.
  - Parking pads extending into the LWH or CH footprint shall not be flanked by more than two walls - refer to adjacent illustration.
  - One parking space is required to be a parking pad.
- ii. Carports
  - Carports are intended to provide weather protection for parked cars only and may not include storage or other uses.
  - Carport roofs may extend 1.5 ft / 0.45 m beyond the perimeter of the parking stall.



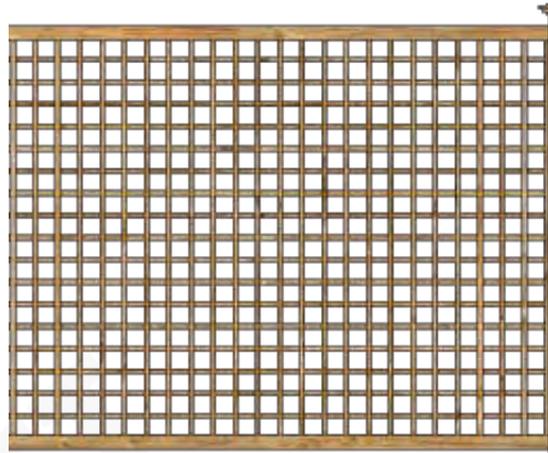
note: parking and building locations for illustrative purposes only

illustrating parking pads extending into the building footprint

- Flat roofs are required in order to minimize shade and shadowing.
- The carport enclosure should be limited to the structure required to support the roof. Any screening materials may not exceed 50% of the vertical "wall" area.
- Wood trellises or screens are encouraged.
- "Garage" doors are not permitted.
- Only one single car carport is allowed.

iii. Existing Parking

- Where parking is provided in an existing double garage, a wall to separate each unit's parking space or a separate garage door is encouraged.



*example of carport screen material*

### 3.5 Pedestrian/Service Access Path

*Pedestrian access from the street and the lane to LWHs and CHs for emergency responders, deliveries and visitors that includes signage and lighting is an important urban design consideration.*

- A minimum 4 ft / 1.2 m wide, clear access route with a hard surface is required within the sideyard from the street to the entrance of the LWH or CA for fire department access.
- The LWH/CH entry door should be visible from the access route.
- An address sign is required at the street entrance of the access route and on the lane to clearly identify the LWH or CH for visitors, mail and other deliveries, and emergency responders.



*example of address signs*

### 3.6 Building Size and Massing

*Careful attention to the size and mass of CHs and LWHs are key to successfully fitting these new housing forms into residential neighbourhoods. Efficient and compact building design is expected. These Guidelines aim to minimize the impact of shade, shadow and overlook on neighbouring properties, directing the highest portion of the building towards the centre of the lot and for LWHs, also to the lane. Integrating the upper level plan into the roof form, rather than increasing height by "adding" a roof form above the second level, is required to create a compact building form.*

#### 3.6.1 General Building Envelope Guidelines

- a. The roof peak shall not exceed 23 ft / 7.0 m in height measured from the existing average grade of the 4 corners of the LWH/CH building envelope.
- b. For sloping sites, vertical dimensions to be measured from the average existing grade of the building envelope to which they relate.
- c. All above grade decks, balconies and bay windows are required to be within the building envelope.
- d. Creative solutions for optimizing developments on sloping sites are strongly encouraged.
- e. The flanking street elevation is the "front" of the CH and design elements that reinforce this public side of the building are strongly encouraged including exterior side yard setbacks exceeding the minimum to accommodate porches and front gardens.



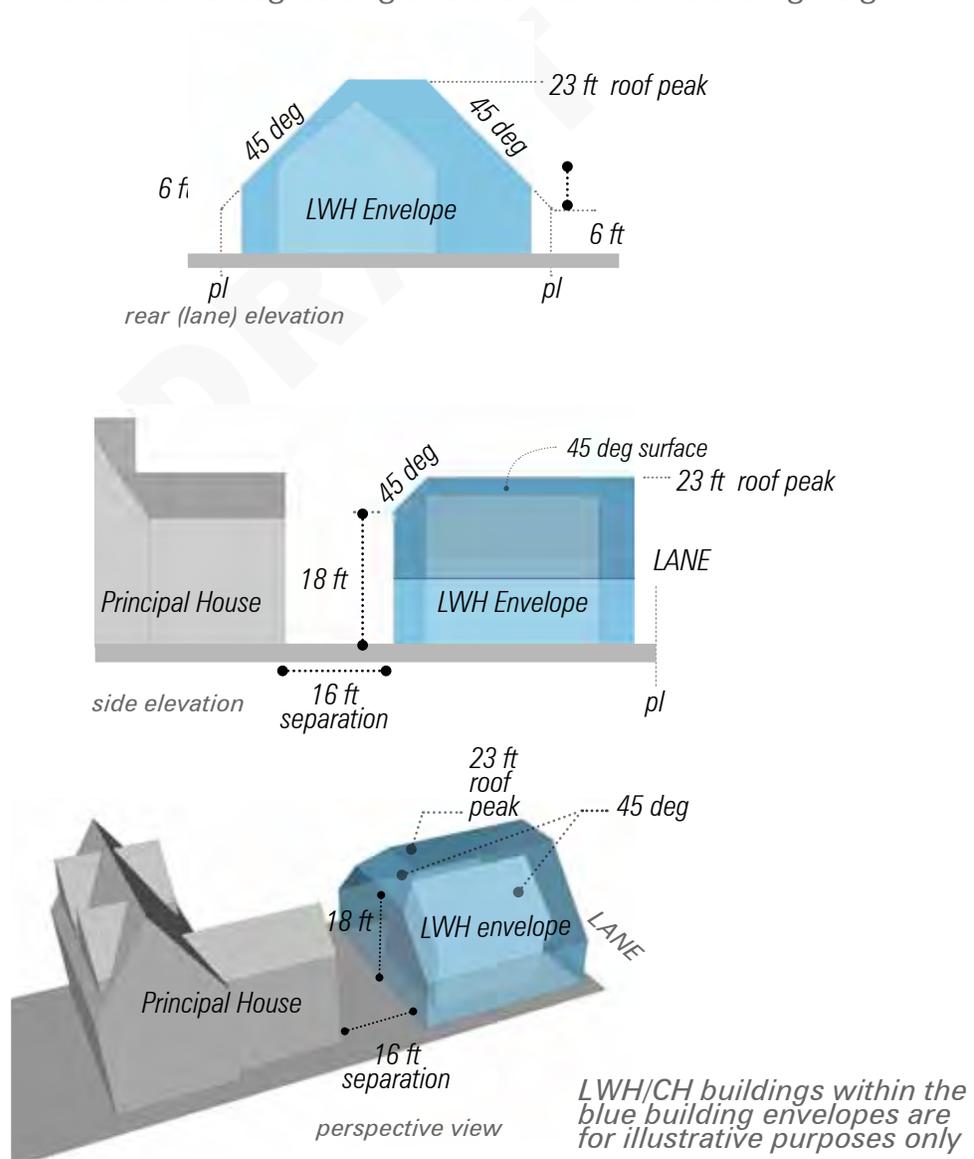
examples of second floor integrated into the roof form

### 3.6.2 Density

- a. 0.5 FSR is the maximum allowable floor area for the Principal House and LWH or CH combined.
- b. The minimum total area for a LWH or CH is 350 sf / 32.5 sm. The maximum total area is 968 sf / 90 sm.

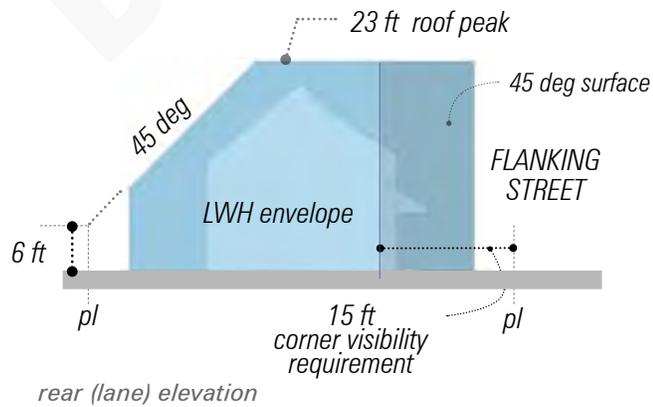
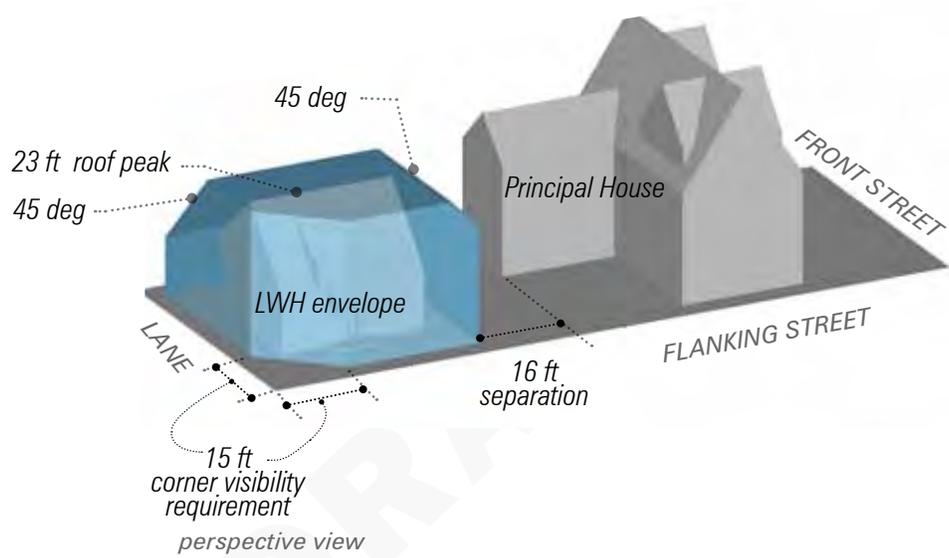
### 3.6.3 LWH Mid-Block Lot Building Envelope:

- a. To optimize daylight and minimize shade and shadowing of neighbours, the Principal House and open space, a LWH will be constructed within a maximum building envelope, constructed by projecting up 6 ft / 1.8 m from the interior side property lines and then inclining inward at a 45 degree angle to the maximum building height and
- b. a minimum distance of 16 ft / 4.8 m from the closest wall on the rear elevation of the Principal House projecting up 20 ft / 6.0 m and then inclining inward at a 45 degree angle to the maximum building height.



**3.6.4 LWH Corner Lot Building Envelope:**

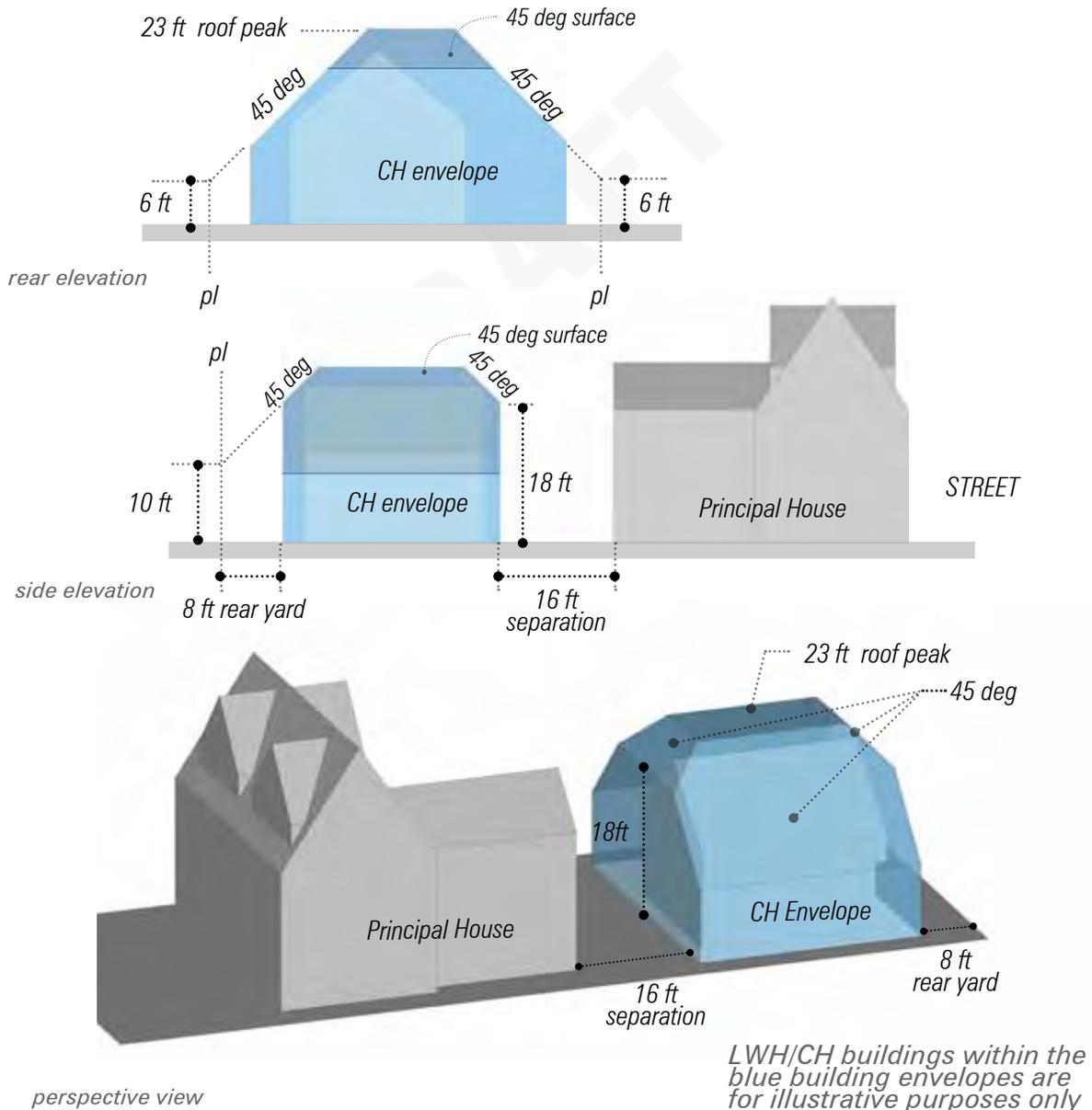
- a. the same guidelines as LWH mid-block development apply, but increased height at the exterior sideyard (facing the flanking street) by projecting up from the exterior side property line and the corner cut (refer to illustration below) to the maximum building height is allowed



*LWH/CH buildings within the blue building envelopes are for illustrative purposes only*

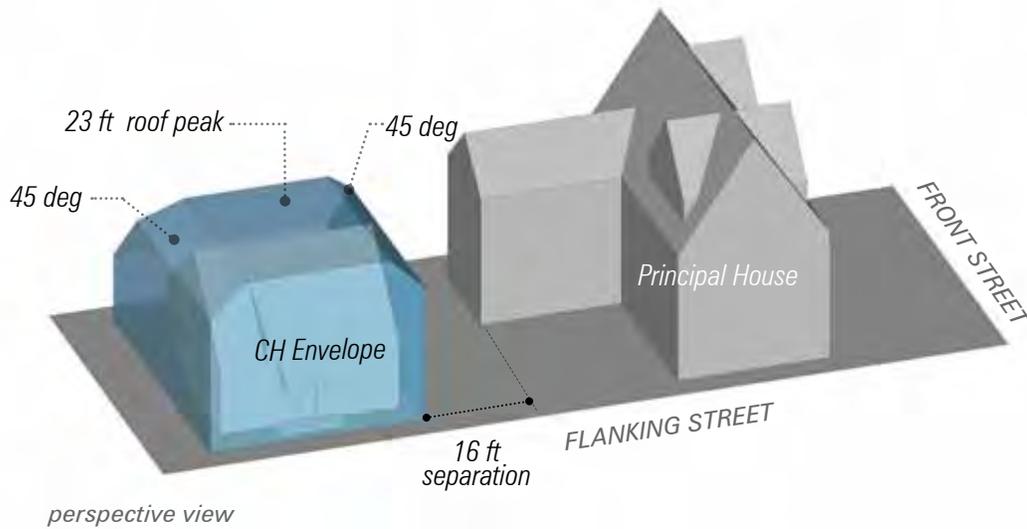
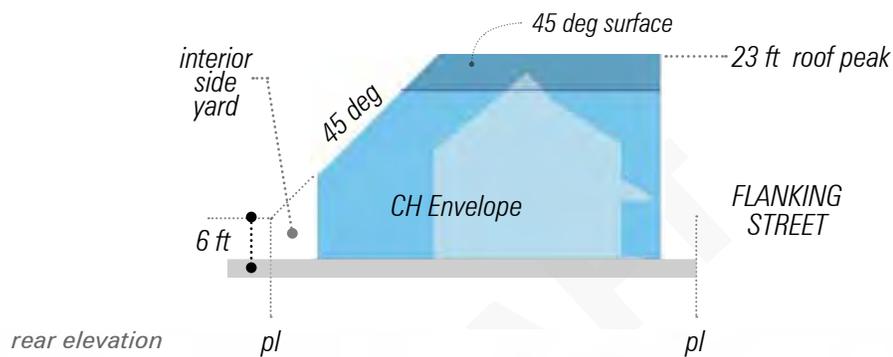
### 3.6.5 CH Mid-Block Lot Building Envelope:

- To optimize daylight and minimize shade and shadowing of neighbours, the Principal House and open space, a CH will be constructed within a maximum building envelope constructed by projecting up 6 ft / 1.8 m from the interior side property lines and then inclining inward at a 45 degree angle to the maximum building height and
- projecting up from the rear property line 10 ft / 3.65 m and then inclining inward at a 45 degree angle to the maximum building height and
- a minimum distance of 16 ft / 4.8 m from the back face of the Principal House projecting up 18 ft / 6.0 m and then inclining inward at a 45 degree angle to the maximum building height.



### 3.6.6 CH Corner Lot Building Envelope:

- a. the same guidelines as mid-block apply, but allow increased height at the exterior sideyard (flanking street elevation) by projecting up from the exterior side yard setback to the maximum building height
- b. minimizing the visual impact of parked cars on this streetscape is strongly encouraged - consider increasing the rear yard to accommodate parking
- c. parking between the CH and Principal House is strongly discouraged



*LWH/CH buildings within the blue building envelopes are for illustrative purposes only*

### 3.6.7. Roof Forms

*Roof forms are critical to the design of compact buildings. The height, shape and opportunities for windows impact shade, shadowing and overlook on neighbouring properties, the Principal House and open space.*

- a. Upper floor areas are required to be integrated into the roof form.
- b. One simple, primary roof form is encouraged with secondary roof forms, including dormers, integrated to increase head room and opportunities for glazing.
- c. The area of the second floor is recommended to be 60% of the area of the ground floor to ensure a compact overall building form.
- d. Total dormer width on each elevation should not exceed 40% of the width of the upper storey.
- e. Flat roofs or shallow pitched roofs, especially for 2 storey buildings, can contribute to the visual bulk and increase shade and shadowing. Strategies to moderate the bulk are recommended including minimizing the floor to floor height and stepping back the upper level to locate the tallest portion of the building adjacent to the lane and/or near the centre of the lot.



### 3.7 Privacy and Overlook

- a. General Guidelines
  - The location of upper level decks, balconies and stairs should be located and/or screened to minimize overlook into neighbours' yards and interior spaces.
- b. Windows
  - i. Upper level windows should be oriented to the lane for mid-block LWH developments and the flanking street for corner developments to clearly identify the public "front" of the infill units.



*example of dormer integrated into simple, overall roof form*



*example of recommended flat and low sloping roof form*

- ii. Windows, consistent with these Design Guidelines, are required on dormers, ie: dormers without windows are not allowed.
  - iii. Skylights, translucent eye level windows and clerestory windows (with sills above 5 ft 9 in / 1.75 m) are required on the upper level, except on the lane elevation, exterior side yard elevation or portions of the building that can be demonstrated not to impact privacy or create overlook.
- c. Fences/Screens/Landscape Design:
- i. 6 ft / 1.8 m high fences are required on all interior side property lines, and on rear property lines for CHs.
  - ii. Tall, compact plants such as non-invasive varieties of bamboo and evergreen vines including varieties of wisteria and clematis are encouraged as privacy screens.
  - iii. Tree planting is encouraged to increase privacy between infill houses, neighbouring and principal dwellings.



photo credits: lanefab.com

examples of skylights, clerestory and floor level windows

### 3.8 Open Space and Landscape Design

- a. A minimum of 160 sf / 14.86 sm clearly defined, at grade, private open space with direct access from the interior and a minimum dimension of 6 ft / 1.8 m is required.
- b. Balance requirements for privacy with the value of views "out" in the design of open space.
- c. Consider using plants, trees and changes in grade to define open space and optimize soft landscaping.
- d. The design and location of all outdoor spaces should focus on the retention of existing trees - refer to Tree Protection and Regulation Bylaw No. 7799



photo credit: smallworks.ca



photo credit: lanefab.com



photo credit: lanefab.com

examples of landscape design and private outdoor space

- e. Drought tolerant plants at grade and deciduous trees on the south and west elevations are encouraged.
- f. All screen and fence material should be attractive, durable, and contribute to the quality of the residential landscape design.
- g. Planting strips are required on the public side of screens or fences.
- h. Green walls and/or walls designed to support climbing plants are encouraged.
- i. Green or planted roofs are encouraged to optimize views from neighbour's upstairs windows and to manage rainwater.
- j. Areas of impermeable paving should be minimized.
- k. Permeable surfaces are required for driveways and vehicle maneuvering spaces including unit pavers, gravel, and wheel paths integrated into planted strips.
- l. Permeable surfaces are highly recommended on pathways and patios.
- m. Areas of soft landscaping are required between the lane and LWH.
- n. Trees are a key element in the landscape design and LWHs and CHs are highly encouraged to provide trees on properties without trees and provide additional trees on all other properties.
- o. Retaining existing trees within the building envelope is strongly encouraged.
- p. Landscape design that incorporates stormwater retention including rain gardens, permeable surfaces, rain barrels and swales are strongly encouraged.



*example of planting adjacent to screen/fence*



*examples of permeable parking surfaces*

### 3.9 Lighting

*Carefully considered exterior lighting creates safe, welcoming and clearly identified building entrances, lanes, and access pathways. LWH and CH lighting is expected to be neighbour friendly, avoiding glare into neighbouring and principal dwellings' outdoor or indoor spaces.*

- a. General Exterior Lighting Guidelines
  - i. Energy efficient LED, non-glare, down cast photocells in "warm colour temperatures" ranging from 2700 K to 3000K, are highly recommended.
  - ii. All light fixtures should complement the architecture and landscape design.
  - iii. Lighting should be at the control of the LWH / CH occupants.
  - iv. Motion sensor lights are discouraged.
- b. Laneway Lighting Guidelines
  - i. Pedestrian level lighting, not to exceed 12 ft / 3.6 m high, is required along the lane to increase safety and visibility.
- c. Pedestrian Path Lighting Guidelines
  - i. Lighting fixtures are required along pathways at a recommended maximum height of 15 in / 38 cm or flush with the paving surface.
  - ii. Mounting heights of light fixtures at the street entrance to the pedestrian service pathway are recommended at maximum 3 ft 4 in / 1.0 m high.
- d. LWH and CH Building Lighting Guidelines
  - i. Exterior lighting is required at CH and LWH entries, complementary to the overall design.



*photo credit: smallworks.ca*

*examples of entry lighting*



*examples of pathway lighting*



*photo credit: jvt architecture*

*example of simple building forms*

### 3.10 Architectural Expression including Lane Frontage

*These Guidelines anticipate buildings that enhance existing neighbourhoods. A specific architectural approach is not intended, but design excellence and innovation is expected. Weather protection and passive energy performance inherent in the design including long lasting materials with low maintenance costs support sustainability goals. The architecture should be clearly residential.*

- a. LWH and CH Entrance Guidelines
  - i. Entrances to LWHs and CHs on corner lots should be oriented to the flanking street.
  - ii. LWH and CH entrances should incorporate a landing or "stoop", connected to the access path leading to the street, and to the lane for LWH.
  - iii. LWH entries are encouraged to be visible from the lane but not directly on the lane, ie: recessed or set back into the building envelope.
  - iv. LWH entrances should incorporate a recessed space that is welcoming, weather protected, and is sufficiently large for a person in a wheelchair to exit the property and safely wait for passing motor vehicles.
  - v. All access pathways are recommended to be 4 ft / 1.2 m wide to accommodate wheelchairs.



*example precedents of lane elevations including entries and garage doors*

a. Lane Frontage Guidelines

- i. All lane elevations, especially those without doors facing the lane, should include design elements that are identified with traditional "front" street elevations including bay windows, planters and window boxes, large windows indicating main living spaces, street address, entry gates, lighting and cladding material that reinforce this as the public oriented building face.
- ii. Mid-block LWHs oriented to the lane will help develop lanes as an active, pedestrian oriented public space as the number of LWHs increase.
- iii. The residential address should be clearly visible to vehicles and pedestrian on the lane.
- iv. Garage doors are required to be partially glazed and complementary to the lane elevation.
- v. Space for garbage and recycling containers should be provided for all dwelling units on the property and screened from view, contributing to the lane as an active, pedestrian oriented public realm.



*precedent of LWH lane elevation*

## 4.0 TOWNHOUSES (TH) AND ROWHOUSES (RH)

### 4.1 Definition and Description

Townhouses (TH) and Rowhouses (RH) are attached, ground oriented, family oriented units.

RHs are fee simple developments with parking for each fee simple lot. THs are strata title developments with shared or designated parking typically at the rear of the property.

Double loaded and stacked TH are not permitted.

All TH and RH developments are intended to fit into the existing single family context through appropriate building form, scale and location.

### 4.2 Density and Lot Characteristics

- a. The maximum permitted base density is 0.75 FSR.
- b. In addition to the base density, basements not to exceed 50% of the unit footprint may be provided.
- c. The density may increase to 0.85 FSR for corner sites and sites with dimensions equal to or greater than 132 ft / 40.2 m wide and 120 ft / 36.57 m deep to increase opportunities for housing choice.
- d. Development sites are generally not permitted to have frontages greater than 150 ft / 45.7 m.

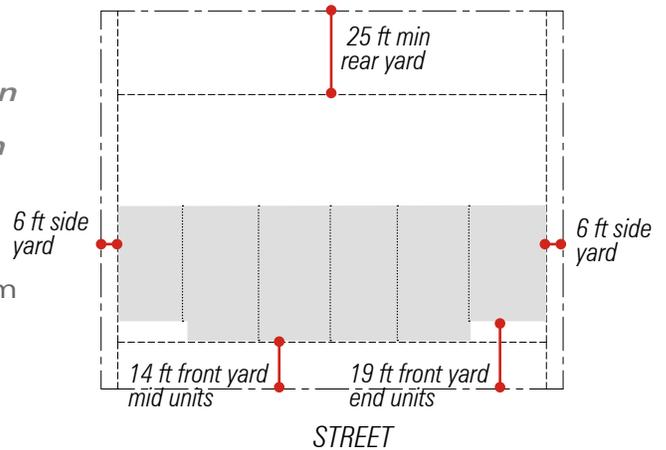


*precedent townhouse forms*

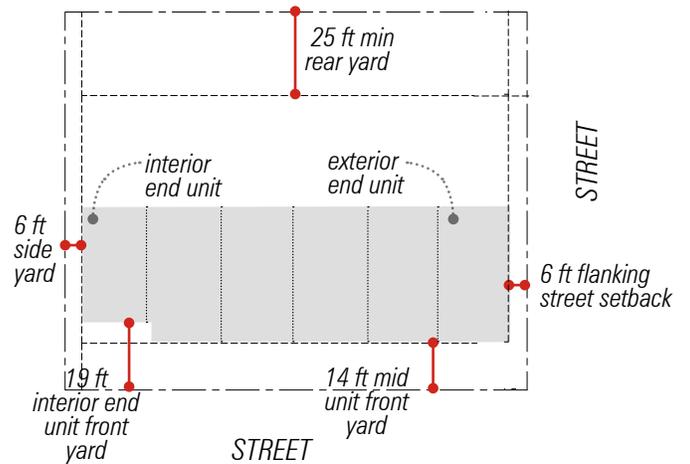
### 4.3 Setbacks

*Setbacks provide adequate separation between neighbours, support a streetscape with transitions between varying front yard depths and optimize functional front and back yards.*

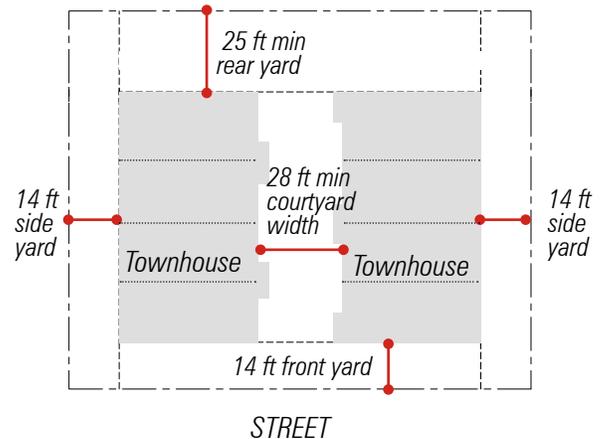
- Side yard requirements are minimum 6 ft / 1.82 m for street oriented developments and minimum 14 ft / 4.26 m for courtyard developments, for both interior and flanking street setbacks.
- Developments with a mix of street fronting and courtyard THs are required to provide side yard setbacks appropriate to each unit type.
- Front yard setbacks optimize valuable front yard and back yard outdoor spaces. Minimum TH and RH front yard setbacks are 14 ft / 4.26 m except street oriented interior end units where the setback is 19 ft / 5.8 m minimum to relate to single family neighbours and to encourage variety along the streetscape.
- Front porches are allowed to encroach 6 ft / 1.82 m into front setbacks to encourage livable porches, provide a buffer from traffic noise and contribute to a friendly, animated streetscape.
- Rear yards are required to be 25 ft / 7.6 m minimum from the rear property line.
- The minimum courtyard width is 28 ft / 8.53 m measured between the main building facades.



street oriented mid-block setbacks



street oriented corner setbacks



courtyard development setbacks

## 4.4 Vehicular and Bicycle Parking

### 4.4.1 General Parking Guidelines

- a. A driveway of not less than 9 ft / 2.74 m wide plus an additional 1 ft / 0.3 m where adjacent to a wall or fence and not greater than 18 ft / 5.49 m in width is required to access parking.
- b. Corner lot parking access should be located 15 ft / 4.57 m from the intersection of the lane and the street.
- c. A 2 ft / 0.6 m wide landscape strip is required adjacent to driveways.
- d. Driveway lengths should be minimized.
- e. The maximum street crossing width is 18 ft / 5.48 m.
- f. Permeable surfaces are required on driveways and vehicular manoeuvring areas.
- g. Driveways with central grass strips are recommended.
- h. Opportunities for hard surfaces or covered surfaces to be appropriate for all weather play and recreation are encouraged.



*example of driveway with central grass strip*



*examples of permeable parking surface materials*

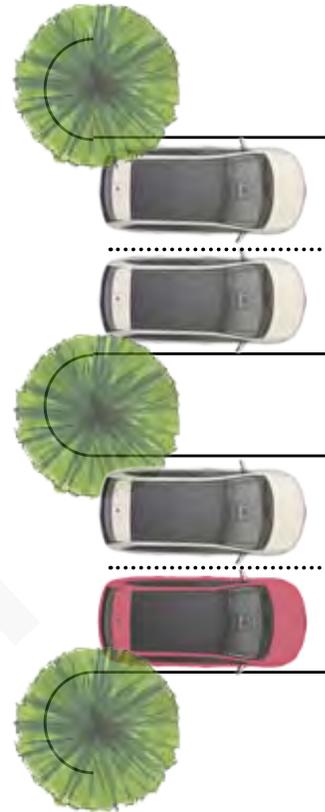
- i. Parking pads are preferred, to minimize shade and shadowing and reduce the visual impact of parked cars on residents and adjacent developments.
- j. Carports are intended to provide weather protection for parked cars only and may not include storage or other uses. Flat roofs are required to minimize shade and shadowing.
- k. Carports larger than 2 car spaces are not permitted.
- l. The carport "enclosure" should be limited to the structure required to support the roof. Any screening materials may not exceed 50% of the vertical "wall" area.
- m. Carport roofs may extend a maximum of 1.5 ft / 0.45 m beyond the perimeter of the parking stall.
- n. "Garage" doors are not permitted on carports.
- o. Carports may not be enclosed on more than 2 sides.
- p. Carports are not permitted to be attached to TH or RH buildings.
- q. Garages are not permitted in TH or RH developments.



*examples of carport designs*

#### 4.4.2. Townhouse Developments - Vehicular Parking

- i. One off-street parking space is required per unit.
- ii. One additional visitor off-street parking space is required per development.
- iii. Shared off-street parking areas are highly encouraged to maximize opportunities for green open space and minimize the visual impact of parked cars.
- iv. Tree planting is encouraged between clusters of parked cars to provide shade, optimize landscaping opportunities and reduce the visual impact of parked cars.



*example of shared parking areas and tree planting*

#### 4.4.3 Townhouse Developments - Bicycle Parking

- i. Requirements for bicycle parking are described in Section 155 in the New Westminster Zoning Bylaw.
- ii. All bicycle parking should be secured and weather protected.
- iii. Space for bicycle parking is recommended at each TH unit.



*example of secure bicycle storage*

#### 4.4.4 Rowhouse Developments

- i. One off-street parking space is required per rowhouse unit.
- ii. Off-street visitor parking is not required.

### 4.5 Building Size and Massing

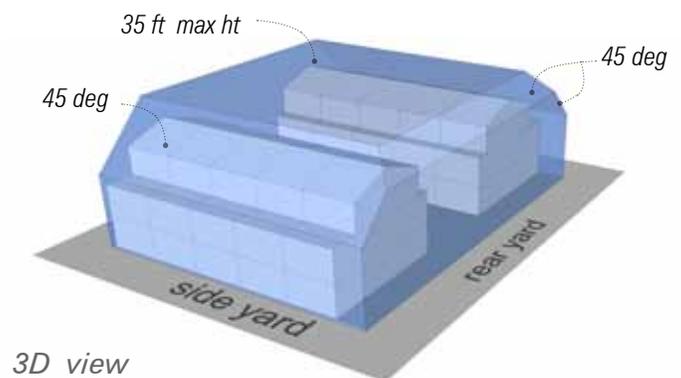
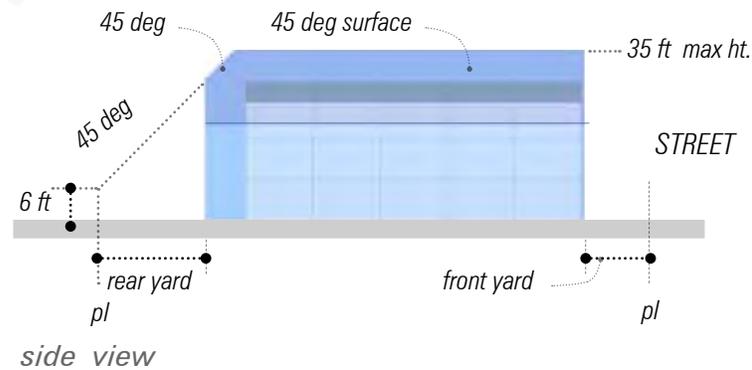
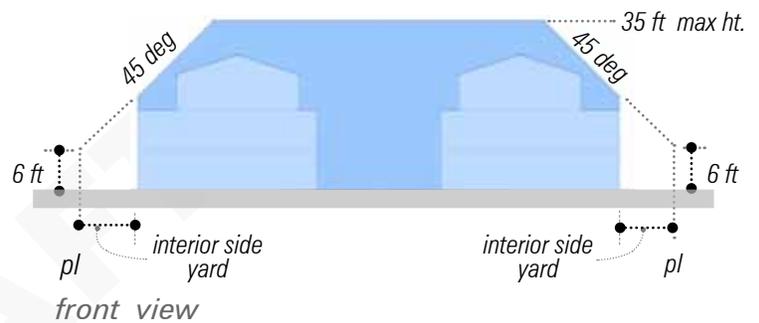
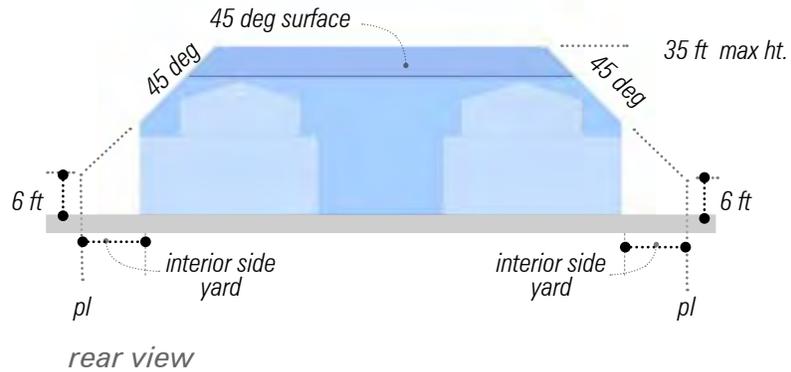
#### 4.5.1 General Guidelines

- a. The maximum building length is 125 ft / 38 m.
- b. The maximum height is 35 ft / 10.7 m measured from the average, existing grade at the 4 corners of the building envelope to the roof peak.
- c. Simple roof forms are preferred.
- d. Roof forms designed to reinforce the identity of individual units are preferred.
- e. Roof overhangs, bay windows, steps, decks and chimneys are allowed to extend beyond the building envelope.
- f. All developments should be located to minimize the impact of shade and shadowing on outdoor spaces.
- g. Top floors should step back to minimize shade and shadow on outdoor spaces and provide usable deck space where practical.
- h. Upper level balconies and decks including rooftop decks are encouraged where they do not overlook neighbouring properties.
- i. RH and street oriented TH unit entries should not be oriented to internal side yards.
- j. Courtyard TH entries are encouraged to face the courtyard, not an internal sideyard.



## 4.5.2 Courtyard Developments

- a. TH building envelopes for mid-block lots:
  - i. to optimize daylight and minimize shade and shadowing on neighbours, all developments will be constructed within a maximum building envelope projecting up 6 ft / 1.8 m from the interior property line and then inclining inward at a 45 degree angle to the maximum building height and
  - ii. projecting up 6 ft / 1.8 m from rear property line and then inclining inward at a 45 degree angle to the maximum building height



TH/RH within the blue building envelopes are for illustrative purposes only

## 4.6 Open Space and Landscape Design

- a. A minimum of 160 sf / 14.8 sm of private open space at grade with a minimum dimension of 6 ft / 1.8 m is required for all TH and RH units.
- b. Balance requirements for privacy with the value of views "out" in the design of open space. Consider using plants and trees and changes in level to define open space and optimize soft landscaping.
- c. The design and location of all outdoor spaces should focus on the retention of existing trees - refer to Tree Protection and Regulation Bylaw No. 7799.

- d. Trees are a key element in the landscape design and TH and RH units may be required to include trees in the landscape plan.
- e. Retaining existing trees within the building envelope is strongly encouraged.
- f. Drought tolerant plants at grade and deciduous trees on the south and west elevations are encouraged.
- g. All screen and fence material should be attractive, durable, and contribute to the quality of the residential landscape design.
- h. Screens or fences are required along the property line to reduce the visual impact of parked cars on neighbours.
- i. Recycling and garbage containers should be located adjacent to parking areas and screened from view using materials consistent with the overall design.
- j. Where possible, provide areas of shared open space in TH developments located to optimize sun and as places to play, garden and recreate. Consider incorporating areas of permeable, hard surface for all weather use.
- k. Planting strips are recommended on the public side of screens or fences facing streets or lanes.
- l. Areas of impermeable paving should be minimized.
- m. Permeable surfaces including unit pavers, gravel and wheel paths integrated into planted strips are highly recommended on parking areas.
- n. Permeable surfaces are highly recommended on pathways and patios.
- o. Areas of soft landscaping along the lane including trees are recommended to support the development of a pedestrian oriented public space.
- p. Landscape design that incorporates stormwater retention including rain gardens, permeable surfaces, rain barrels and swales are strongly encouraged.



*example of fence/ screen combined with planting*



*illustrates compact outdoor spaces with trees, planting and permeable surfaces*

## 4.7 Architectural Expression

*These Guidelines encourage new development that emphasizes livability and responds to the West Coast climate through the use of durable, long lasting materials, passive design elements including solar shading on the west and south elevations, outdoor spaces located to optimize sun and surveillance and generous areas of glazing to optimize daylighting.*

### 4.7.1 Overall Expression including Streetscape

- a. Simple, contemporary building forms combined with primary roof shapes with minimum 2 ft/ 0.6 m deep overhangs are strongly encouraged.
- b. Third floor areas are encouraged to be integrated into the roof form.
- c. Dormers are encouraged where they are clearly secondary to the primary form, where the highest point on the dormer is lower than the primary ridge height and the combined dormer width does not exceed 50% of the width of the upper storey.
- d. End units in street facing or courtyard developments or corner units adjacent to the street, should include design elements and materials that express the street elevation as the public face including bay windows, generous glazing and landscape design where orienting the front entrance to the street is not practical.
- e. RH and TH developments should contribute to walkable and appealing streetscapes.
- f. Neighbouring developments or large developments should provide architectural diversity to ensure a varied streetscape.
- g. Section 4.4 of these Guidelines encourages a varied streetscape with increased setbacks for end units. This form of development respects existing single family neighbours and creates a streetscape with inherent variety.



*photo credit: raymond lefkeman architects*  
examples of simple, contemporary building forms with front gardens and gates

#### 4.7.2 Entrance Guidelines:

- a. Entrances should be expressed in the overall form as a welcoming, sheltered design element. Consider incorporating wood into the entry design including doors and soffits. Wood timbers are strongly recommended.
- b. Entrances should provide a transition between private space and public or semi-public adjacent spaces, provide a welcoming space including a raised front stoop to enhance privacy and weather protection.
- c. Entrances should be oriented to the street.
- d. Entrances are expected to incorporate a garden or landscaped area, garden gate and 4 ft / 1.2 m wide pathway connecting to the public sidewalk or common walkway.



*examples of front entry sequence*

#### 4.7.3 Courtyard Guidelines:

- a. Courtyard entry elements are recommended at the transition to the public realm to provide security, a location for mailboxes and to reinforce placemaking.
- b. Courtyard spaces should optimize privacy between facing units and incorporate an entry sequence between the semi-public pathway and private unit entries including changes in level, layered landscaping, gates, garden walls and changes in materials.



*example of courtyard entrance elements*

#### 4.7.4 Cladding Materials:

- a. Masonry, lapped siding and/or other textured cladding materials are strongly encouraged, especially at the ground floor level.
- b. Front or flanking street cladding materials should wrap around the building sides a minimum of 4 ft / 12. m to avoid a "wallpaper" effect.
- c. Synthetic materials intended to mimic natural materials are not recommended. Cultured stone products are strongly discouraged.
- d. A maximum of two cladding materials are recommended.
- e. Changes in materials should incorporate appropriate trim and detailing and occur at significant changes in plane including floor level changes and step backs.



*example of simple, proportional details and material use at unit entry*

#### 4.7.5 Privacy and Overlook:

- a. Strategies to minimize overlook across the courtyard, including offsetting windows are encouraged.
- b. The location of upper level windows, decks, balconies and stairs to upper levels should be located and/or screened to minimize overlook.
- c. Decks and balconies should not be oriented to interior side yards.
- d. Skylights, translucent eye level windows and clerestory windows (with sills above 5 ft 9 in / 1.75 m) are recommended to reduce overlook at interior side yards.



*photo credit: stewart howard architects*

*example of courtyard development*