



Innovations in Small-scale
Living from North America

It's not a movement about people claiming to be 'tinier than thou' but rather people making their own choices toward simpler and smaller living however they feel best fits their life.

~ Jay Shafer

This report was made possible by the generous support of:



Small Houses: Innovations in Small-scale living from North America

can be downloaded free of charge at: www.smallhousingbc.org/publications

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Printed in Canada

First Edition

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AUTHORS:

Akua Schatz, Program Director, Small Housing BC

Terry Sidhu, Research Assistant, Small Housing BC

EDITOR & ART DIRECTION:

Erick Villagomez

GRAPHIC DESIGN & PHOTOGRAPHY:

Alicia Medina Laddaga

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Acknowledgements

Small Housing BC would like to thank the Real Estate Foundation of British Columbia for their support and interest in advancing research on innovative small housing developments.

In particular, we would like to thank the many individuals that contributed their time and expertise to inform the examples in this toolkit. They include Derek Leavitt and Christian Navar of Modative; Ross Chapin of Ross Chapin Architects, Anne Easton from the Cranberry Commons, Avi Friedman a renowned affordable housing expert, Dale Mickelson from UniverCity, Kimia Hadan from the City of San Francisco. Michael Epp of the City of North Vancouver, and John McFarlane of Camera Buildings Ltd.

We would also like to acknowledge the support, guidance and interest of Sean Hodgins of Cenury Group, David Crenna from the Canadian Home Builders Association, Rebecca Siggner of BC Housing, Margaret Eberle of the Metro Vancouver Housing Committee and Duncan Hill from the National Housing Research Committee (part of the Canadian Housing and Mortgage Corporation).

Lastly, we would like to recognize the valuable guidance provided by Jake Fry and Bob Ransford founding directors of *Small Housing BC*.

Foreword

MANY FORCES ARE SHAPING CHANGE in our North American communities today.

The ageing of the baby-boom generation is shifting demographics. The combined forces of globalization, urbanization and the mass emergence of a consumer-driven culture in China is re-shaping economies globally and locally. A rising consciousness about mankind's impact on our planet's ecosystems is causing many to re-think their own impact, driving some to try to reduce their own ecological footprint. The structure of the traditional North American suburb has failed to live up to the expectations of many who settled in suburban neighbourhoods, and new ways are being sought to re-engineer suburban living and re-build those settlement patterns.

Meanwhile, others are fleeing suburban areas and returning to inner-city neighbourhoods. Social change is altering the concept of the family. The traditional family is no longer traditional. Singles, single-parent families, combined generations - all are searching for living arrangements that are no longer the alternative, but are becoming the norm.

Change in the way we plan, design and build human shelter, or housing, has been slow coming. While household numbers have been declining, we have seen only small changes in the last decade or two in the sizes of homes. Meanwhile, people have seen their lifestyles transform and are seeking alternatives to housing types, tenure and size. The demand for smaller forms of housing, or alternative housing design, isn't just driven just by the desire for more affordable housing, although that is one objective that can be achieved with housing forms we have yet to embrace. Some want to live in a different, smaller kind of house because they have different lifestyle priorities that have been shaped by the aforementioned change.

Many people have come to understand the simple reality that our houses have become too large, over the last few decades. Their best evidence are the memories they have of growing up in - and seeing their parents and grandparents live in - much smaller houses where they lived lives as meaningful, if not more meaningful, more convenient, more comfortable and more affordable than we all live today in much bigger houses.



The move toward embracing smaller forms of housing is a neo-traditional movement. We've built these smaller homes before. We can build them today - better designed, more durable and more ecologically responsible.

The above reality was the impetus for the formation of *Small Housing BC* - a British Columbia-based advocacy and educational non-profit organization. Our mandate is to support the development and promotion of small housing as a sustainable housing form, and act as a public voice for the small housing industry, consumers and citizens who wish to see the benefits of advanced urbanism with the development of small forms of housing.

We fulfill our mandate by contributing to research, knowledge transfer, education and the achievement of excellence associated with small forms of housing and related advanced urbanism. This *Small Houses* toolkit is one of our contributions to research, knowledge and education. We surveyed and documented recent innovations in North America, where the regulatory regime has been purposefully designed - or substantially reformed - to encourage the development of well-conceived small forms of housing.

We hope this resource document will not sit on the shelves of offices where house builders, planners, architects, municipal councillors and citizen-activists hang their hats. Instead, we hope the pages within people's respective copies become dog-eared and the hotlinks well used, as instigators of change embrace some of the ideas herein and begin building the kind of smaller housing for which people are searching.

Bob Ransford

Founding Director,
Small Housing BC

Introduction

A major change is underway that is defining where and how we are choosing to live. In 2011, for the first time in nearly a hundred years, the rate of urban population growth outpaced suburban growth, reversing a trend that held steady for every decade since the invention of the automobile. In urban centres across the country, building activity that until recently had been almost entirely focused on the suburban fringe, has moved back toward the metropolitan centres to meet the demands of the 21st century household.

Increasing environmental consciousness, financial pressures and demographic changes are shifting housing preferences. Large detached houses in car-centric communities that at one time typified the Canadian dream, are losing followers to households seeking smaller homes in 'location-efficient' neighbourhoods. These new consumers are looking for neighbourhoods that are walkable and well served by transit. They are seeking communities where amenities like groceries, parks, community centres and office space are accessible by buses and trains or human-powered travel (e.g. walking, cycling and running). Renters and owners are also looking for affordable housing in an increasingly expensive housing market and they are willing to sacrifice square footage to access more desirable communities. Additionally, households are getting smaller and traditional housing forms are not meeting the needs of empty nesters, one-parent families, singles and multi-generational families.

Municipalities and developers have begun to respond to these changes and are slowly introducing small housing options that reflect consumer preferences, as well as environmental and financial pressures. British Columbia has been a leader in many of these initiatives, championing laneway housing, lock-off suites and micro-suites, to name a few. However, market penetration of small housing forms is still relatively small, even as consumer demand grows.

This toolkit is intended to inspire greater uptake of small housing forms in British Columbian communities by showcasing 10 innovative examples of housing under 1500 square feet, from around North America. From cottage housing to small lot homes and house-plexes, the future is big for small housing.

What is a small house?

There are no industry standards to determine when a house is considered small. A space that might be considered 'small' for a family of four could be large, if it was for a single person household. That said, some forward-thinking leaders have emerged over the last few decades to contribute to the debate on the definition of small housing.

The *Small Housing Society*, which was founded as a result of the tiny house movement, carefully defines 9 forms of small housing. From an efficiency home of approximately 480 sq.ft. to a micro house which barely exceeds 160 sq.ft. the *Society* leans towards what most North Americans would consider tiny spaces.

A research study of small market units in British Columbia defined small housing as a dwelling of any form (apartment, detached dwelling, moveable unit, etc.) that is sized to meet its occupants' needs with little excess space - more specifically, approximately 500 sq.ft. for 1-2 people, or slightly larger at 750 sq.ft. for a household of 3 or more.

Sarah Suzanka, the author of *Not So Big House*, stays clear of defining small in terms of size and instead advocates for a new approach to housing, one that values quality, not quantity, and challenges the development community to build better, not bigger.

In determining their small housing definition, *Small Housing BC* (SHBC) considered a broad range of factors, including historical data on house size, consumer preferences and household size. SHBC defines small housing as homes between 100 and 1500 sq.ft. They can be detached, such as laneway houses, or attached homes, akin to townhomes or secondary-suites. They are often built in and around urban centers as new construction. However, small housing is increasingly showing up as medium density infill in established neighbourhoods, changing the housing patterns of existing communities.

In 1945, the average size of a Canadian home was 800 sq.ft. and typically housed a family of 4 or more. Today an average British Columbian home easily surpasses 2000 sq.ft. and is providing shelter to 2.5 individuals.

What are the benefits of a smaller home?

There are many individual and societal benefits to living in smaller spaces. People who live in small homes generally own fewer possessions, consume less, and have lower utility bills. Smaller homes require less building materials for construction and use less land, As such, they often cost much less to purchase, maintain, and live in. Construction of smaller homes can utilize more efficient, natural, healthy, high-quality materials that might not be affordable in larger dwellings. All of these benefits result in healthier, more cost-effective living, and a better environment.

According to Jay Shafer, who wrote the *Small House Book*, people who downsize from a larger home and into a small house tend to report the following benefits:

- Less time cleaning;
- Less time maintaining the house;
- Fewer personal possessions and baggage;
- More time with family and friends;
- Less expensive monthly costs for either utilities or mortgage; and
- Less debt and financial risk.

Why a series of case studies?

In British Columbia, as in other regions in North America, the tendency is to associate small housing with boxes stacked high in the sky, located in heavily urbanized environments. This is typically contrasted with the large suburban detached homes, located in car-reliant communities. The purpose of this toolkit is to demonstrate the variety of housing forms that exist in between these two extremes and encourage greater appreciation of small homes.

While reviewing a number of innovative small housing options from North America, *Small Housing BC* selected examples that:

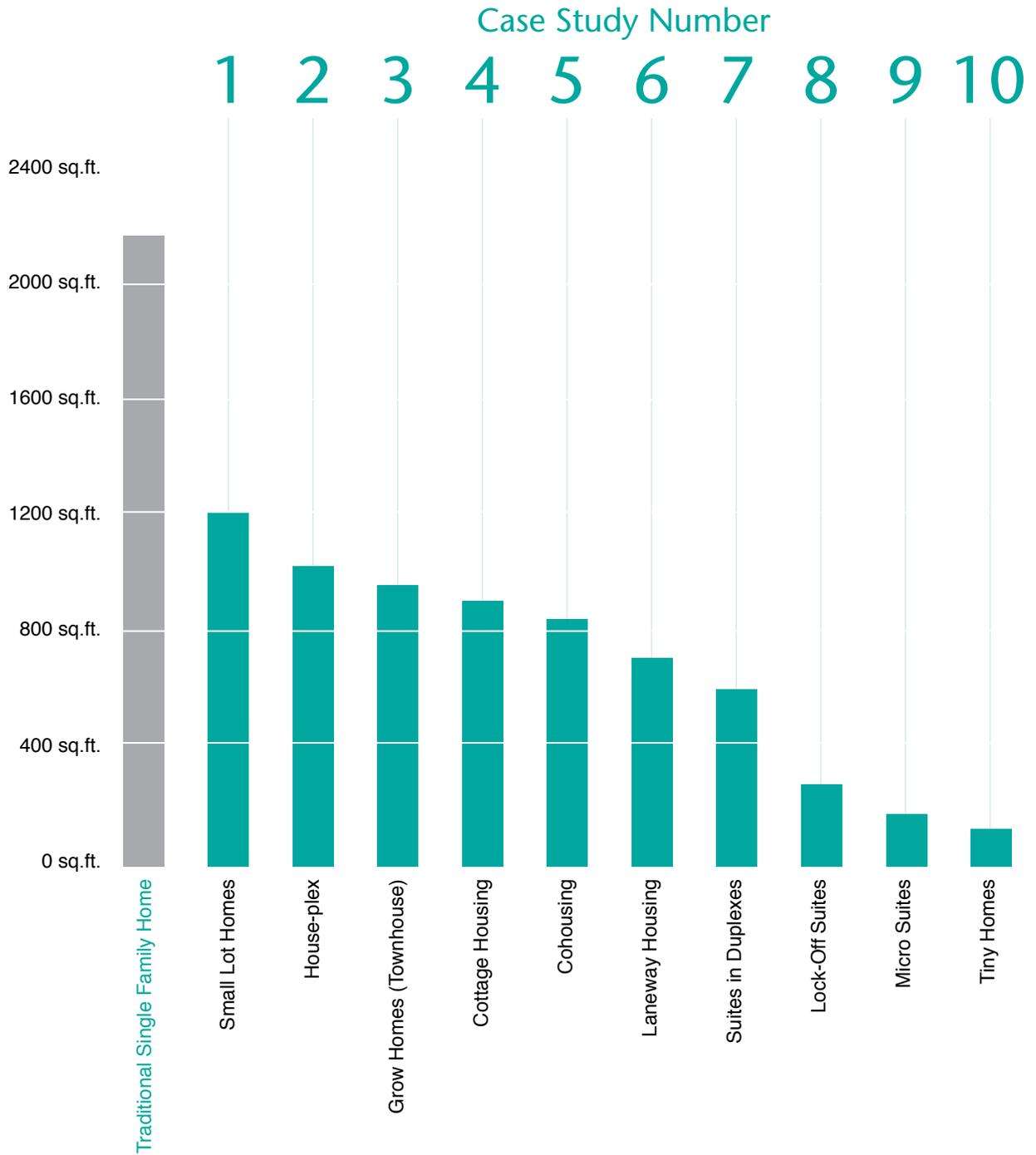
- Were supported by a municipal lever such as an ordinance or bylaw;
- Were not one-off cases, but rather wide-spread policies or approaches;
- Varied in terms of size from 100 sq.ft. to approaching 1500 sq.ft.;
- Demonstrated varied forms of tenure (ownership or rental);
- Targeted a diverse range of consumers;
- Tended toward low to mid-rise infill development; and
- Addressed issues of affordability, sustainability and/or neighbourhood 'fit'.

Each of the cases offer a description of the historical context that led to the new initiative, photographs and design drawings of projects in question, the technical levers (or '*Fact Sheet*') supporting the housing form, as well as the benefits and drawbacks experienced of each.

A *Glossary* and *Appendix*, located at the end of the report, supplement the information on each case study.

Case Studies

Average Size of Case Studies



1. Small Lot Homes

Los Angeles, California

THE BIG IDEA

Townhouse
density with
fee-simple
ownership



Front view photo of small lot development. Credit: Cullen Street Homes designed by Modative Inc. Architects.

Los Angeles is the second-largest city in the United States. It is a multi-cultural city known as the hub of the entertainment industry and a center of arts, culture, and fashion. Similar to other cosmopolitan cities like Vancouver and Sydney, housing affordability has been a challenge for Los Angeles for several decades. In 1999, the Los Angeles city council established the *Housing Crisis Task Force* in response to the city's severe affordable housing shortage. Thousands of affordable housing units were being demolished every year to make way for more luxurious homes, and the nearly built-out city did not have the land to accommodate new housing developments. In the months that followed, the task force released a report strongly recommending that Los Angeles increase the availability and production of affordable housing through innovative land use strategies.

In response to the call-to-action, the Los Angeles City Planning Department developed a proposal that would permit the subdivision of lots located within existing multifamily and commercial zones to develop fee-simple, detached townhomes exempt from typical homeowner's association

requirements. In 2005, the city passed the proposal into law and the *Small Lot Subdivision Ordinance* was born.

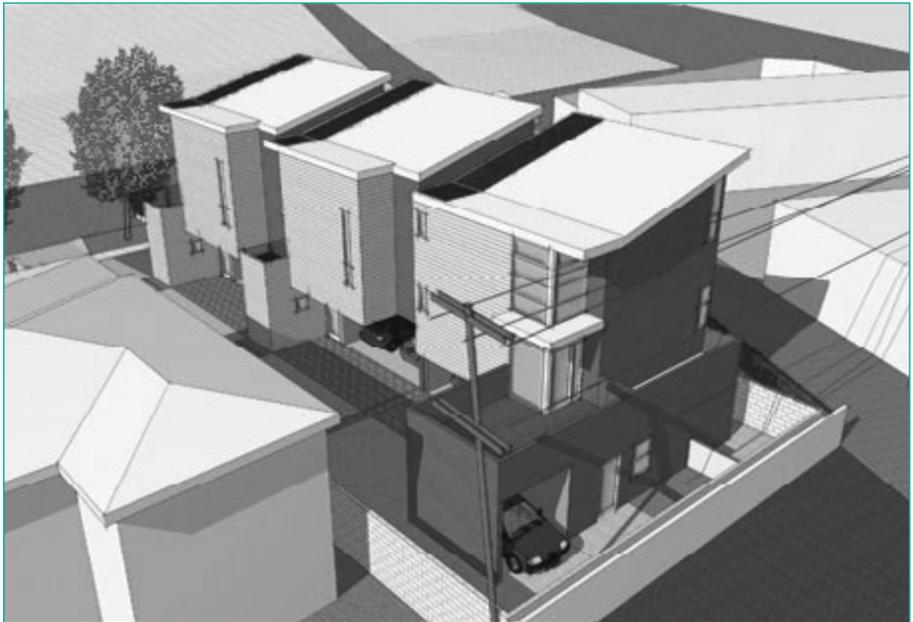
Since the City of Los Angeles passed the ordinance, small lot projects have been developed in neighborhoods across the city. As of November 2013, over 160 subdivision cases had been filed, resulting in the approval of over 1,500 individual lots. In 2014, as a result of public and private feedback, the City of Los Angeles released a modification of their design guidelines focused on improving the integration of new small lot developments within established neighbourhoods.

The Small Lot Subdivision (Townhome) Ordinance

The *Small Lot Subdivision (Townhome) Ordinance* is an amendment to the *Los Angeles Municipal Code*. It allows for the subdivision of multi-family and commercially zoned properties into small single-family or townhome style lots, that enable ownership of fee simple homes. Intended as infill development and an alternative to the traditional suburban single-family subdivisions, small lot homes have undersized lot areas with compact housing footprints, as well as reduced setbacks, frontages and open space.

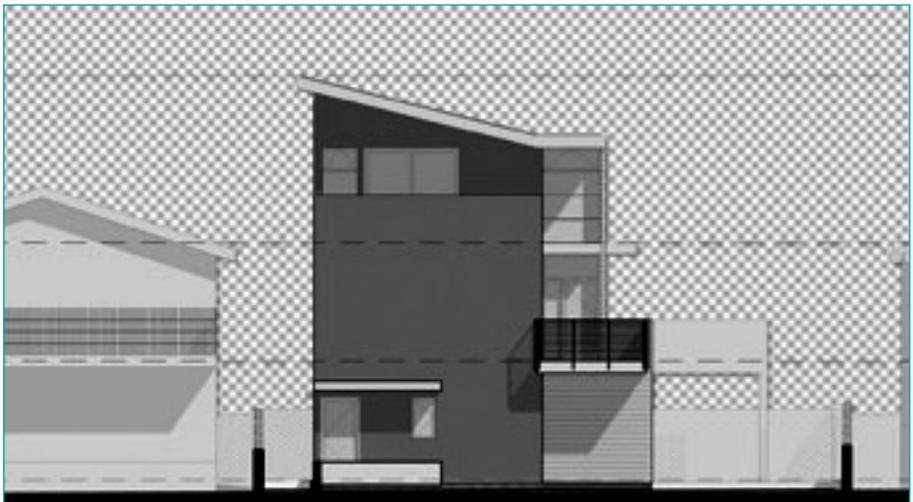


Structural Independence - Flashing detail over two separate walls (dashed line).
Credit: Cullen Street Homes designed by Modative Inc. Architects.



Cullen Street Homes small ot development aerial rendering. Credit: Modative Inc. Architects.

Detached townhomes have two or more floors and an exterior entrance. However, unlike traditional townhomes, they are structurally independent and do not share common walls. Instead, they have a 6 inch (or more) separation that may be covered by flashing.



Cullen Street Homes street elevation. Credit: Modative Inc. Architects.

FACT SHEET - Small Lot Subdivision (Townhome) Ordinance

Demographic	<ul style="list-style-type: none">• First-time homeowners, young professionals and retirees
Zones	<ul style="list-style-type: none">• R2, RD, R3, R4, R5, RAS, and C (Multifamily and Commercial).
Minimum lot size	<ul style="list-style-type: none">• 600 sq.ft. and 16 ft wide;• Small lots may be irregularly shaped.
Number of units	<ul style="list-style-type: none">• Dependant on the dwelling unit requirements established by the underlying zone;• Typically 3 to 6 homes are developed per lot.
Average unit size	<ul style="list-style-type: none">• 1000 – 1500 sq.ft.
Height	<ul style="list-style-type: none">• Building-to-height ratio of 1:4.• Buildings should have a height of at least $\frac{1}{4}$ of the width of the roadway. For example, on a 100-foot wide street, an appropriate building height would be 25 ft.
Open space requirements	<ul style="list-style-type: none">• All structures on a lot may not occupy more than 80 percent of the lot area;• Exceptions are allowed if the tract or parcel map provides common open space equivalent to 20 percent of the lot area of each lot not meeting the 80 percent requirement.
Setbacks	<ul style="list-style-type: none">• A 5-foot setback is required between the subdivision and adjoining properties;• There are no yard or setback requirements along alleys, streets, or between lots within the approved subdivision.
Parking	<ul style="list-style-type: none">• 2 garaged parking spaces are required per unit;• The spaces need not be located on the same lot.
Separation of units	<ul style="list-style-type: none">• Small lot homes must be structurally independent, with no shared foundations or common walls.
Tenure	<ul style="list-style-type: none">• Fee-simple ownership;• No homeownership association (HOA) required.
Approval process	<ul style="list-style-type: none">• 17 steps and a number of multi-departmental approvals in order to obtain a final building permit.

1. Fee-simple homeownership for condominium-style housing

The *Small Lot Ordinance* allows buyers to own the land and the structure, rather than just a percentage of shared space (as in a condominium project). The land is subdivided and each unit built on a separate lot. While easements for shared pathways and driveways may be necessary, there are no common walls or foundations and, therefore, the units are not subject to strata fees.

2. Making use of underutilized lots

Although small lot developments do not technically increase zoning density, they are usually built on underutilized lots, thereby increasing the number of units made available to the public.

3. Increase diversity of housing options for purchase

Home ownership options have traditionally been limited to single-family homes on 5,000 sq foot lots or condominiums. The *Small Lot Ordinance* extends this ownership option to include townhomes, row houses, and other types of infill housing typically only available for rent.

1. No demonstrated use in single-family neighbourhoods

The *Small Lot Ordinance* is restricted to use in commercial and multi-family zoned areas. While this form of infill development could be appropriate for some single-family neighbourhoods, it is unlikely that such a development would ever come to pass. Single-family neighbourhoods in Los Angeles are strongly defended and protected from densification.

2. Inadequate public consultation

The minimum consultation required was applied to the development of *The Small Lot Ordinance*. Despite having significant implications for communities in the City, public consultation was restricted to a few council meetings. The impact of this was that many homeowners were caught off guard by the policy and frustrated with its wide-reaching scope. For many, despite living in a home on a property zoned for commercial and multi-family units, the area shared the typology and residential character of a typical single-family neighbourhood.

3. Takes too long to implement

Implementing small lot developments can still be challenging for developers. First, subdividing land for small lot development can take up to a year (or longer), making the entitlement process complicated, time consuming and costly. A complicated permitting process can significantly delay projects. Developers applying for permits in the city of Los Angeles must go through approximately 17 steps and a number of multi-departmental approvals, in order to obtain a final building permit.

4. Parking requirements are too high

Despite locating developments on through-ways and in mixed-use areas, the parking requirements mimic those of single-family zones. A typical parking space requires up to 300 sq.ft.; the *Small Lot Ordinance* generally requires that each unit provide two garaged parking spaces, shrinking the availability of land for housing. Tailoring parking requirements to reflect the availability of transit options will promote compact and pedestrian-friendly communities.

2. House-plex

Portland, Oregon

THE BIG IDEA

The appearance of single-family housing and the cost savings of attached homes.



House-plex in Portland, Oregon. Credit: City of Portland Bureau of Planning.

With a population of roughly 600,000, the City of Portland, Oregon is a diverse and historic city on the west coast of the United States. After the passage of Oregon's land use planning system in 1973, Portland embarked on a grand experiment in city planning: an urban growth boundary containing development - within a 22-sq-mile area - that protects the surrounding farmland and open space, a regional governance system spanning 24 municipalities and three counties, and an ambitious system of light rail and streetcars to service more dense, compact, mixed-use urban form.

As a result, Portland has pioneered a variety of new housing types and residential patterns. One such example is their approach to existing residential neighbourhoods. In 2008, The City of Portland created an *Infill Design Toolkit*, targeted at adding new housing outside of central Portland in areas that were primarily low-to-medium density.

The *Toolkit* presented like a menu, providing housing configurations to developers that were economically viable and met city approval requirements. It focused primarily on larger and irregular lots.

Furthermore, it embraced a wide diversity of housing styles including craftsman, cottage, colonial, and modern. Although it permitted variety, it also emphasized the existing neighbourhood pattern through the use of trees, similar frontage requirements, and orientation of buildings. The maintenance of these patterns facilitated the seamless integration of a diversity of new homes such as cottage clusters, courtyard townhouses, or House-plexes.

The House-plex

A House-plex is 3- to 4-unit residence that mimics a large single-family house. They are also called tri-plexes and four-plexes. House-plexes were a popular multi-family housing type in Portland neighbourhoods, during the early 20th century. Often built on small lots, the house-like appearance allowed them to blend in with nearby single-family homes. The House-plex can have a townhouse style or a stacked form with units on top of each other. This housing form is permitted in all three standard residential zones. The size of a single unit within the House-plex can range from 1,000-1,400 sq.ft. They have been sold as condominiums and have also been developed as purpose-built rental.

The guiding principles for the development of house-plexes are similar to what you might find in a detached single-family home development:

- Windows, doors, and porches oriented towards the street;
- Matching the front setback with the adjacent houses and neighbourhood configurations;
- Avoiding large blank walls that face the street;
- Locating and designing windows and balconies to minimize overlook impacts on adjacent yards and residential interiors; and
- Making use of rear parking or tuck-under parking.

The approval process is relatively unique, and could be considered a best practice insofar that it was designed to remove uncertainty from the typical process. Thus, the *Infill Design Toolkit* provides designs for housing that are pre-approved by local government. The designs were developed by architects chosen by the city through a competitive process. The pre-set plans are particularly important since many of the infill sites are developed by contractors or smaller developers who may not have the resources to take on a complex infill project.



7 unit house-plex. Credit: City of Portland Bureau of Planning.



Four-plex. Credit: City of Portland Bureau of Planning.



House-plex development. Credit: Oris Developments.

FACT SHEET - House-plex

Demographic	<ul style="list-style-type: none">• Retirees, small families and young professionals.
Zones	<ul style="list-style-type: none">• R1
Minimum lot size	<ul style="list-style-type: none">• 5000 sq.ft.
Number of units	<ul style="list-style-type: none">• 3 – 4 units.
Unit size	<ul style="list-style-type: none">• 1000 – 1400 sq.ft.
Height	<ul style="list-style-type: none">• 40 feet.
Open Space Requirement	<ul style="list-style-type: none">• 50 percent.
Parking Standards	<ul style="list-style-type: none">• The parking guidelines are flexible and depend on the availability of transit;• They range from 0 to 4 spaces.
Approval process	<ul style="list-style-type: none">• No rezoning nor municipal council involvement required;• If pre-approved plans are used, development permits are granted immediately.
Tenure	<ul style="list-style-type: none">• Strata ownership or rental.
Other provisions	<ul style="list-style-type: none">• Street frontage requirements to match existing neighbourhood pattern.

Benefits

1. New housing option for residential neighbourhoods

More compact housing forms have typically been reserved for urban centres and commercial areas. The house-plex allows new residents - such as young professionals, small families and retirees - to access neighborhoods that were previously inaccessible, due to finances or undesirable due to maintenance. They are drawn to the housing form because of its similarity to freestanding housing - with the private green space and street-oriented features - but with the affordability of attached housing.

2. Pre-approved plan permit option

Portland offers homeowners or contractors the opportunity to purchase and use house plans that have been pre-approved and conform with local building codes and many other standards. This simple, inexpensive-to-implement option reduces the permit process time for selected housing types and, in doing so, can contribute to reduced housing costs and making the units more affordable.

3. Accommodating density, preserving existing neighbourhood

The house-plex units and site organization, significantly reduce the appearance of density. The housing form has height restrictions similar to a typical single-family home. The requirements to match the existing neighbourhood patterns - including street trees, front yard setbacks, allowable frontage, and others - must all be maintained in order to provide a seamless integration at the street and neighbourhood scales.

1. Insufficient parking

This is the most challenging issue when creating house-plexes, especially given that there may not be enough space for rear parking. This being the case, the construction of a concrete garage that is “tucked under” the house-plex can make the construction cost-prohibitive. Portland allows parking relaxations if the house-plex is near transit, but off-street parking is one of the biggest challenges for this style of housing.

3. Grow Homes

Montreal, Quebec

THE BIG IDEA

Do-it-yourself
(DIY) housing
model



Grow Homes in suburban Montreal, Quebec. Credit: Avi Friedman.

Montreal, Quebec is the second largest city in Canada, with a population fast approaching 4 million. Montreal is unique in the country, insofar that it is known for its low homeownership rates and more compact housing patterns. [Canadian homeownership statistics in 2011](#) showed that 69 percent of households owned their home. In contrast, Montreal dominated by tenants, with 64 percent of households renting housing. These rental rates are the highest in the country, even surpassing those found in Vancouver – the most expensive real estate market in Canada. .

Another distinguishing feature of the Montreal is the diversity of its the housing stock. Unlike many urban centres, detached single-family homes do not make up the majority of the housing. In fact, 65 percent of households live in attached dwellings such as row houses, duplexes and apartments. This contributes to its reputation as a compact city, with close to 900 people per square kilometer typical for most neighbourhoods, according to the [2011 Canadian Census](#).

The challenge for Montreal has been to continue to provide affordable housing options for its residents. While rental and cooperative housing

have been the main vehicles for affordability, in the 1990s, the city piloted a new housing form, called the *Grow Home*, that was created to assist renters with the leap to homeownership.

The first *Grow Homes* were built in the suburbs of Montreal, in 1990. All of the units were sold before completion of the project. At the time, construction costs came to \$35,000 per unit. Once land cost was included, the final sale price was less than \$60,000. This was roughly half of the price of a detached single-family house, during that era.

Today, the cost of construction has remained essentially the same. This is due, in part, to the use of prefabricated units being built in a warehouse and pieced together on site. However, even in suburban areas where the price of a new *Grow Home* has risen to approximately \$150,000, this is still considerably less than a single-family home, whose value has doubled or tripled in similar areas.

As of 1999, there were 6,000 *Grow Homes* produced in the Montreal region, and a further 4,000 were produced in the rest of Canada and United States. Today, Avi Friedman - creator of the *Grow Home*, in collaboration with Witold Rybczynski - believes there to be as many as 10,000 *Grow Homes* in Montreal.

The Grow Home

The *Grow Home* is an attempt to create an affordable ownership option through informed design and prefabrication. *Grow Homes* are narrow row houses that are largely unfinished and lack partition walls. The lack of finishes reduces the costs and time required for construction, with savings passed on to the homeowner. At their leisure, or when finances permit, residents “grow” their home - finishing rooms, building partitions and adding fixtures. This is similar to the standard building practices in places such as South America, where limited income requires many to ‘grow’ into their homes over longer periods of time than is typical in North America.

The simple construction and design of the *Grow Home* also keep prices accessible for single-parent families and single-income households - groups that would have otherwise been shut out of the ownership market.

The *Grow Home* is typically built on a small lot. The homes are often 14 ft wide and approximately 1000 sq.ft. There are four models ranging from

A study conducted by the Canadian Mortgage and Housing Corporation found that 2/3rds of *Grow Home* residents finished their space after the 1990 purchase date, and 75 percent of those did it themselves or with neighbors.

the most basic to a more elaborate option. The entry-level model has two floors and is built as a slab-on-grade. Typically, there is a kitchen, small bathroom, and living room on the main floor. The second floor has an unpartitioned master bedroom and secondary bedroom with an additional bathroom. In this model, there are no balconies, the upper level flooring is left as unpainted plywood and the kitchen is finished with melamine cabinets and countertops.

The most elaborate option includes two balconies, a basement (adding a third level), garage, hardwood flooring on the main level and carpeting on the second. Additionally, the buyer can request certain features be ready-installed into the home such as a roof window, a second bathroom, or an enclosed kitchen.

Since the housing form is a rowhouse, there was no new zone created - or bylaw amendment introduced - to facilitate the construction of the Grow Home. However, many development projects had to be rezoned to allow for more flexible land-use and smaller lots. Existing zoning also favoured condominium or co-op ownership options, as units under 18 ft wide could not be offered for sale as fee-simple or freehold.

The third of four Grow Home models

Configurations: Unfinished basement; lower balconies front and rear; no balconies at upper level; upper area with single partition; flat roof.

Exterior: Canexel siding; single-clad windows and patio doors; window shutters.

Interior: Vinyl and carpet flooring on ground level; unpainted plywood on upper level; pine stairs; L-shaped pine kitchen.



FACT SHEET - Grow Homes

Demographic	<ul style="list-style-type: none">• Low income families (single mothers, single-income households).
Zones	<ul style="list-style-type: none">• Townhouse or rowhouse development (H3-G-347).
Minimum lot size	<ul style="list-style-type: none">• 2421 sq.ft.
Density	<ul style="list-style-type: none">• 0.25 to 0.9 FSR.
Number of units	<ul style="list-style-type: none">• 3 – 8 units per rowhouse development.
Unit size	<ul style="list-style-type: none">• 800 – 1000 square feet on two levels.
Unit dimensions	<ul style="list-style-type: none">• 14 ft wide, 36 ft long.
Height	<ul style="list-style-type: none">• 32 ft.
Number of units	<ul style="list-style-type: none">• 3 – 8 units per rowhouse development.
Open Space Requirement	<ul style="list-style-type: none">• A rear yard is required.
Setbacks	<ul style="list-style-type: none">• The front setback is 19.6 ft.• The back setback is 23 ft.
Parking Standards	<ul style="list-style-type: none">• 1 – 1.8 per unit.
Separation of units	<ul style="list-style-type: none">• Party wall agreement.
Orientation	<ul style="list-style-type: none">• Street-oriented.
Approval process	<ul style="list-style-type: none">• Rezoning with council approval required.
Ownership	<ul style="list-style-type: none">• Strata ownership (under 18 ft wide) and fee-simple ownership (over 18 ft wide).
Other provisions	<ul style="list-style-type: none">• Rental units possible within the home.

1. Effective affordable housing strategy

The Grow Home has a number of attributes that contribute to affordability. The most obvious are the simple design and reduced finishing requirements. The costs to build a Grow Home range from \$10 to \$30 per sq. ft. - in stark contrast to average cost of \$300 per sq. ft in Vancouver. Costs are further minimized because of the efficient land-use model.

The lots required for development are relatively small and the fact that the housing form is attached typically saves approximately 60 percent on infrastructure costs, in comparison to a detached single-family home. That the home is also designed to be affordable post-occupancy is unique. Homeowners gain the ability to modify their home and upgrade the features, as they become more financially secure.

2. Flexible use of space to meet changing household needs

At the point of sale, homeowners are only required to approve a minimum number of finishes. That said, they have the option to add additional features such as a secondary bathroom, a dormer window, or enclosing walls within the suite. Over time, as the needs and financial stability of the household changes, walls and fences can be added, additional floors completed and new features introduced.

3. Energy efficient housing form

Through the compact design of the Grow Home, there can be savings on utilities such as heating and cooling. Witold Rybczynski, the co-creator of the Grow Home found that the narrow-front of the home resulted in a significant reduction in operating costs, since heat loss was limited to two exposed walls (front and rear) and a small roof area. A servicing cost of \$400 per linear foot totals \$20,000 for a typical 50-foot lot. This cost is lowered to \$5,600 for a 14-foot wide Grow Home.

1. Ghettoization of community

The majority of the units have been built in the suburban communities of Montreal. In many cases, the Grow Home was replicated over 400 times in close proximity to one another. The built form facilitated an enclave of low-income residents and, because the units were isolated from transit, commercial activity and other housing types, a ghetto-like community emerged.

2. Compromised quality finishings

One of the ways that the Grow Home ensures affordability is by selecting entry-level finishings in certain models. Thus, for example, melamine is used for the kitchen cabinets and vinyl siding for the homes exterior of certain options. These products typically break down and damage more easily. As such, the shorter lifespan of the interior finishings may increase costs over the long term, as broken or damaged products need to be replaced more rapidly.

4. Cottage Housing

Langley and Seattle, Washington

THE BIG IDEA

Small homes oriented around a common space.



Cottage housing development, or 'pocket neighbourhood,' in Langley, Washington. Credit: Third Street Cottages designed by Ross Chapin Architects.

Langley is a small community of approximately 1000 residents town located on Whidbey Island – an hour ferry commute to Seattle, Washington. In the early 1990s, development pressures stemming from the nearby urban metropolis offered new vitality to the Langley community through an increase in tourism and permanent residents. However, the changes also threatened to overwhelm the town's rural character. A typical Pacific Northwest community, virtually all of the housing stock at the time consisted of conventional detached homes. In 1995, in response to the increased demand for housing, the community championed the first cottage housing ordinance in the state.

Cottage houses are single-family detached homes, typically less than 1000 sq.ft. in size. They incorporate many of the amenities prized by conventional single-family homes, such as no shared exterior walls and private green space. However, unlike conventional housing which is oriented towards the street and away from neighbours, cottage housing arrange 8 to 12 small homes around a introverted common open space, or courtyard, with parking screened from public view.

The *Cottage Housing Development Ordinance* in Langley, Washington led to several developments within the village. Interest in the housing form was not limited to the island community, but rather caught on throughout the Pacific Northwest. Several communities including Spokane, Kirkland, Bothell Bainbridge Island and Shoreline developed their own cottage housing ordinances (many as pilot ordinances) and embraced the housing option as a way to diversify their housing stock, introduce affordable options and increase density.

For a number of reasons - including the availability of larger lots and the preference towards high-density infill developments - cottage housing is primarily viewed as an alternative housing solution for suburban and rural communities. However, Seattle – the fastest growing major city in the United States with 4 million residents - has recently included cottage housing as an option for infill development on larger lots, within existing single-family neighbourhoods. Seattle's *Residential Small Lot Zone*, which was modified in 2012 to include guidelines for cottage housing, is an attempt to build on the success of cottage housing in other communities, while tailoring the housing form to meet the constraints of an urban context.

Cottage Housing Development Model Standards

Although most aspects remain the same, cottage housing developments typically manifest themselves differently between suburban or rural communities, and urban centres. As a rule, cottage housing developments in less populated communities tend to be built on larger lots with larger homes (800 sq.ft. and greater). They also tend to allocate more space between common areas, semi-private and private zones. Lastly, they are more likely to include a common building which could be used as a workshop, guesthouse or 'great hall'. That said, there are still strong principles that often underpin the development of any cottage housing ordinance.

A pocket neighborhood is a grouping of smaller residences, often around a courtyard or common garden, designed to promote a close knit sense of community and neighborliness with an increased level of contact. Unlike cottage housing, pocket neighborhoods are not restricted to detached homes and can include any number of housing forms so long as they are oriented around a common space.

Tatlow Park is a de facto pocket neighborhood located on the West side of Vancouver. The 12 units were built as rental cottages in 1928. The homes stand out for their English country style steep pitched rooftops, bay windows, diamond leaded and arched windows, and traditional exterior beams. The homes surround a large landscaped enclosed courtyard, with a lychgate entryway.

Tatlow Park was saved from demolition in 1974. The cottages were converted to two level homes, without destroying the Tudor style.



Southlands is a neighbourhood development plan for the municipality of Delta. It will provide residents with a walkable, diverse neighbourhood connected to an agricultural resource area and one of the largest community farms in North America. As one of the housing options it plans to include cottages. The cottages will range in size from 900 to 1,600 sq.ft., with a main floor living concept. Each home will be surrounded by its own private small yard, offering an outdoor area for a patio and small garden.



FACT SHEET - Cottage Housing Development Model Standards

Demographic	<ul style="list-style-type: none">• Retirees and small families.
Zones	<ul style="list-style-type: none">• Residential
Minimum lot size	<ul style="list-style-type: none">• 6400 sq.ft.
Density	<ul style="list-style-type: none">• Cottage housing developments may be built at up to twice the allowed density for the underlying zone. This could be achieved three ways, depending on the municipality's zoning system:<ol style="list-style-type: none">1. Double the allowed units per acre;2. Halve the minimum lot size requirements;3. Allow two cottages on each single-family lot.
Clusters	<ul style="list-style-type: none">• Minimum of 4 cottages and no more than 14 cottages;• Developments tend to be made up of 1 or 2 clusters.
Unit orientation	<ul style="list-style-type: none">• Facing inward on a common open space.
Setbacks and separation	<ul style="list-style-type: none">• Cottages must be within 25 ft of the common open space;• All buildings must be at least 6 ft apart and 5 ft from the lot line.
Parking	<ul style="list-style-type: none">• Clustered and hidden from public view, either off of an alley or a private driveway;• Garages are permitted;• No more than five contiguous parking spaces.
Open space	<ul style="list-style-type: none">• At least 400 sq.ft. per unit;• Minimum of 200 sq.ft. for public space;• 150 sq.ft. or greater to a private yard;• All remaining space should be allocated for semi-private transitional landscaping.
Community infrastructure	<ul style="list-style-type: none">• A community building is encouraged, but not required.
Lot coverage	<ul style="list-style-type: none">• 40 percent of the lot can be covered by all built forms (homes and common spaces).
Cottage size	<ul style="list-style-type: none">• Cottages may be no larger than 1200 sq.ft.;• Ground floor limited to 850 sq.ft. in rural communities and 650 sq.ft. in Seattle.
Height	<ul style="list-style-type: none">• Limited to 25 ft. in rural communities and 18 ft. in Seattle.
Ownership	<ul style="list-style-type: none">• Fee-simple ownership, strata ownership or rental.

Benefits

1. Appealing to a demographic that might otherwise choose a single-family home

Cottage housing has become popular with a wide range of residents, but often attracts retirees looking to downsize and small families seeking an affordable, community-oriented housing option. Cottage housing offers the privacy of a conventional single-family home by virtue of its detached housing model. Additionally, each cottage retains private green space, typical of conventional housing. However, because cottages are smaller and have much less private land, they tend to be more affordable to purchase and maintain.

2. More efficient use of land

Cottages can make the most of a smaller piece of land through their compact size and orientation on the lot. Typically, cottage housing developments double the underlying zoned density.

3. Clustered arrangements can contribute to a sense of community

Homes face inward, towards a common open space. Additional design features - such as large, covered porches - encourage the mingling of neighbours. A shared meeting or eating area further nurtures community relations.

1. Not always affordable

On a per-square-foot basis, cottages are more expensive to build than larger houses. This poses a direct challenge to the goal of using cottage housing to make homes more affordable. Cottages contain all of the same expensive parts of a conventional house - kitchen and bathrooms - but none of the builder's typical profit centres (such as sitting rooms, dining rooms or extra bedrooms) that add to the price of a house, but are inexpensive to build.

2. Limitations on density

Cottage housing does require a larger lot and there are more efficient models of land-use when density is the goal. Cottage housing alone is unlikely to increase population densities sufficiently to support additional amenities and address some the impacts of unsustainable land-use.

3. Not necessarily transit-oriented

Cottage housing development ordinances still require on-site parking and, as a result, reflect the car-oriented development approach typical in North America. However, the densities allowed are sufficient to prompt frequent bus service and projects could be developed with transit in mind.

5. Cohousing

Burnaby, British Columbia



A cohousing outdoor common space in Langley, British Columbia
Credit: Julien Lamarche courtesy of Creative Commons.

THE BIG IDEA

Small, private homes with a large, shared common space

In 1964, a group of senior residents and an architect purchased a site outside of Copenhagen, with the intent of co-developing the property for their own use. The group envisioned a development suited to supportive living. The site design included 12 terraced rowhouses, surrounding a common house and a swimming pool. Local officials supported the plan, however, residents living adjacent to the property vocally opposed the project and prevented it from proceeding. This early attempt at community-led development was the first iteration of cohousing. Since then, the idea of private ownership combined with shared amenities has spread worldwide. The *Canadian Cohousing Network* has counted more than 119 cohousing units in North America completed since 1991 and there are currently 100 more being developed.

Cranberry Commons Cohousing Development

In March 1999, a number of families from New Westminister and Vancouver came together with one shared purpose – to build a community that would be walkable, sustainable, and would provide a balance of privacy and community.

These were early days for the cohousing movement in North America. Not many people knew what cohousing was and many people assumed it was a type of social housing.

The Vancouver group had secured a site in North Burnaby (after many years of searching in the Vancouver area), and the New Westminster group had secured a site in the Sapperton area. However, neither group was able to attract the membership needed to make their project happen on the sites they had optioned. By joining together they had enough financial capacity to move forward. They made the decision to focus on the North Burnaby location.

In order to generate the funds and enter into contracts to purchase land and construct homes they formed a development company called *Cranberry Commons Cohousing Development Corporation* (a standard limited liability corporation). They had secured one lot, but needed to purchase the four adjacent lots from the City of Burnaby in order to have enough land for the multi-family development.

The neighborhood reflected all of their needs. It was within walking distance to restaurants, a recreation center, library, parks, medical services and a grocery store. The neighbourhood was also well served by transit, with connections to downtown and major skytrain hubs.

The site was originally zoned R5 Residential and had been designated for redevelopment by the City of Burnaby. The initial rezoning application by

Cranberry Commons was for CD Comprehensive Development based on RM4 guidelines however they found the RM4 guidelines were too restrictive to accommodate the shared spaces and intergenerational community.

Therefore an application was made to increase the FAR from 1.1 to 1.3 to include the additional area required for the common amenities as well as increased circulation space required to accommodate a combination of apartment and townhouse units that would serve the needs of both young families and elders. After zoning had been completed, the 5 properties were consolidated into one parcel.



View of cohousing development on Bowen Island. Credit: Belterra Cohousing.

The *Cranberry Commons* members moved into their homes, in October 2001. The cohousing development featured 22 units that mix townhouses with apartments. The buildings range in height from 3 to 3.5 stories tall and are arranged around a common courtyard. There is a great variety of unit sizes, ranging from 500 sq.ft. for a bachelor suite, to 1300 sq.ft. for a 3 bedroom townhouse. Each unit has their own private outdoor space.

The greatest distinguishing feature of cohousing developments, from a built form perspective, is the common space. *Cranberry Commons* has approximately 6000 sq.ft. of shared outdoor space (featuring a courtyard, roof deck and garden). The interior common amenity, referred to as a

common house, totals an additional 3400 sq.ft. of common area and features a lounge, kitchen, dining/ multi-purpose room, laundry space, guest room, a workshop, office space, meeting room, children's playroom, Teen's room and storage. At the parking level, there is bicycle storage, a car servicing area and a woodworking room.



Courtyard view of Cranberry Commons Credit: Northwest Intentional Communities Association website.

FACT SHEET - Cranberry Commons Cohousing Development

- Demographic**
 - Families and seniors with shared values.
- Zones**
 - CD (Comprehensive development)
- Lot size**
 - 20,117 sq.ft.
- Density**
 - 1.3 FSR
- Units**
 - 22 homes: 10 apartments and 12 townhomes;
 - Smallest unit a bachelor apartment 493 sq.ft.;
 - Largest unit a 3 bedroom townhouse 1,267 sq.ft.
- Height**
 - 35-40 feet
- Parking Standards**
 - Total 38 stalls (32 residents and 6 visitor stalls)
- Orientation**
 - All unit kitchens face towards the inner courtyard (to support connection with neighbours) and also face outwards to the street to allow for the balance of privacy.
- Ownership**
 - Strata ownership
- Other Provisions**
 - Rezoning required

1. Private small homes mixed with large shared amenities

Because the resident group is involved in all decisions related to the design, the homes can be as large or as small as they choose. However the desire to live more sustainability and the opportunities for sharing that exist with the extensive common amenities means the homes can be much smaller without negatively impacting life style.

2. An intentional community that prioritizes neighbourliness

Cohousing residents participate in the planning, design, ongoing management and maintenance of their community– the final product is a direct response to the needs and desires of the group. They meet once or twice a month to address each of these processes. The cohousing model for decision-making works with individual interests while balancing the interests of the whole in order to come to a solution that is in the best interest of the group. In that process they build the bonds that are the foundation for on-going community. In *Cranberry Commons*, one of the residents is 95 years old, living independently, but benefiting from the support of the community.

3. Contributes to affordability and environmental sustainability

Cohousing neighbourhoods tend to offer environmentally sensitive, pedestrian-oriented design, at a price that is comparable to conventional homes in the local area. However, because of the social structure and access to shared resources, cohousing homes provide opportunities for reducing home sizes and thus living costs that are not available in conventional neighbourhoods. Since one of the deep-rooted principles of cohousing is to reduce the community's ecological footprint, choices related to compact design, energy management and sustainable material use tend to be prevalent. In the case of *Cranberry Commons*, the homes included solar panels to augment domestic hot water, high-efficiency in-floor radiant heating, water-efficient toilets and showers, resource-efficient building materials, and non-toxic interior finishes.

1. Lengthy and complicated development process

Cohousing is predicated on a large group of committed individuals coming together to find, secure and develop a property. This is a complicated process for an experienced developer, let alone a group of passionate individuals. In the case of *Cranberry Commons*, they had to form their own development company and contribute their own money in order to purchase a property. The fact that they were seeking a walkable, affordable neighbourhood complicated matters, as they competed directly with developers for desirable lots. Groups need to work with experienced professionals and many groups make the mistake of thinking they can do it themselves. The Vancouver group spent five years trying to make a project happen before coming to the realization that they needed to hire professional help. Once professionals were involved, the project took approximately three and a half years from site acquisition to move-in.

2. Consensus-based decision-making model

A traditional strata property is made up of a council of homeowners that use a voting system, based on proportionate unit entitlement, to set rules about the use of common and private space for all residents. A cohousing strata is based on a consensus decision-making model. While not everyone has to agree, all residents are invited to share their opinions and are asked to strive for agreement, in all of their decisions. In the case of stalemates, residents are asked to consider whether or not they can live with the result, and if the response is 'yes,' a decision can be reached. This is a highly involved and challenging process that tests the residents' ability to compromise, communicate and keep the collective good of the community in mind.

6. Laneway Houses

Vancouver, British Columbia

THE BIG IDEA

Backyard homes
for family or
rental



Street view of laneway house and principal residence. Credit: Smallworks.

On July 28th, 2009 Vancouver City Council approved a bylaw amendment allowing small homes to be built in the backyards of single-family residences. With one of the largest proportions of single-family lots in North America, laneway housing marked an important decision by the City of Vancouver to introduce policies of urban intensification into low-density neighbourhoods. Many Vancouver residents had been anxiously awaiting the new housing form, attracted by the role laneway housing could play as a mortgage-helper and easing the financial burdens of homeownership in city's expensive real estate market. For others, laneway housing had the potential to solve family problems, such as providing aging parents and adult children with a home of their own.

Early iterations of laneway housing (LWH) were introduced to the public through *EcoDensity* neighbourhood consultations in the early 2000s, however, it would take many more years before Vancouver became the first city in North America to widely embrace the idea of building small homes in residential backyards.

In July 2009, Council adopted laneway housing regulations and guidelines for properties in the RS-1 and RS-5 single-family districts, which make up 94 percent of the city's single-family lots. In November 2010, after 100 laneway housing permits were issued, staff reported to City Council with a *Monitoring Report on Laneway Housing Development*. Council directed staff to report back with amendments to address key issues of neighbourliness, livability, and length of the permitting process. Staff reported to Council with proposed amendments to the laneway housing regulations and guidelines, as well as the expansion of the laneway housing program into new RS districts in spring 2013.

Well over 1,500 laneway house permits have been issued in Vancouver since they became legal in 2009.

Laneway Housing Program

According to the city's specifications, laneway houses are detached dwellings located in the backyard of a single-family lots, ranging in size from 500 sq.ft. to 900 sq.ft. The program allows for the placement of a small residential building on almost every 33 foot wide (or larger) detached housing lot in Vancouver. The laneway housing program has established design guidelines which must be followed to access a development permit.

Vancouver is not the only municipality in the region to permit laneway housing, however, it has implemented the most expansive, inclusive program. Homeowners can undertake a laneway home development while retaining or establishing a secondary suite (basement apartment) in the main home - adding to the overall density of the lot. As long as the lots meet certain minimum requirements, laneway housing is permitted in the city's entire single-family home lots, allowing over 70,000 homeowners to build them on their property.



Laneway house on a corner lot, approximately 700 sq.ft.. Credit: Lanefab.

Laneway housing has been present in the community over the last century and has many different names including coach houses, carriage homes, granny flats, garden suites and infill housing. In the early 1900s, a coach house was sometimes the first unit built on a lot to house the owners while the principal residence was constructed. The coach house sometimes survived afterwards at the rear of the lot. Usually they were replaced by a garage. Other times they were built to provide housing for expanding or extended families.



Laneway house on a corner lot, approximately 700 sq.ft. Credit: Lanefab.



Edwardian-style laneway home, approximately 500 sq.ft.. Credit: Smallworks.

FACT SHEET - Laneway Houses in Vancouver

Demographic	<ul style="list-style-type: none"> • Young professionals, small families and retirees.
Zones	<ul style="list-style-type: none"> • RS-1 & RS-5 (Single-family dwelling district)
Minimum lot size	<ul style="list-style-type: none"> • 33ft. x 122ft.
Number of units	<ul style="list-style-type: none"> • 3 units are allowed on the property. A principal dwelling with secondary suite and laneway home
Unit size	<ul style="list-style-type: none"> • The floor area of a laneway house must be a minimum of 26m² (280ft²), with a possible relaxation down to 19m² (204ft²); • The maximum floor area of a laneway house is determined by multiplying the lot area by 0.16. This results in maximum unit sizes of approximately 56m² (644ft²) on standard 33' x 122' lots, and 84m² (900ft²) on 50' x 122' lots. The maximum size of a laneway house is 900ft², regardless of lot size.
Height	<ul style="list-style-type: none"> • A 1 storey laneway house is limited to the same maximum height as a garage, which ranges from 3.7m (12ft.) if a flat roof or to 4.6m (15ft.) for a sloped roof; • A laneway house with a partial upper storey can have a maximum height of 5.5m (18ft.) to 6.1m (20ft.) depending on roof type and pitch; • The partial upper storey (measured to the extreme outer limits) is restricted to 60% of the footprint of the laneway house. This is intended to limit shadowing and overlook on neighbouring backyards.
Open Space Requirement	<ul style="list-style-type: none"> • A laneway house should have access to private outdoor space in the backyard and/or on an upper level deck facing the lane; • Landscaping is encouraged along the edge of the lane. A permeable surface is required for parking areas. Green roofs, green walls, and drought-tolerant plantings and deciduous trees are also encouraged.
Parking Standards	<ul style="list-style-type: none"> • A minimum of one unenclosed and uncovered parking space MUST be provided on site adjacent the laneway house for both one and 1 and 1½ storey laneway houses. The parking space may be for the use of any of the dwelling units on site.
Privacy standards	<ul style="list-style-type: none"> • To enhance both livability and neighbourliness, upper level decks are allowed, but are limited in size and must face the lane, not the backyard or a neighbouring garden; • Upper level windows facing sideyards and gardens are limited and/or designed to increase privacy and reduce overlook of neighbouring properties. If a 0.6m (2ft.) sideyard setback is provided, windows are not permitted along the side facing the sideyard.

NOTE: A more comprehensive list of laneway house requirements across various municipalities in Metro Vancouver can be found in the Appendix and at: www.smallhousingbc.org/

Benefits

1. Typifies gentle densification

Unlike towers and apartment buildings, laneway housing is a relatively benign form of densification. Since the homes are hidden away from the street and smaller than the principal residence, the added density is not immediately visible. With pressures to accommodate new residents in urban centers and move away from unsustainable land use patterns, laneway housing offers a reasonable solution for existing residential neighbourhoods.

2. Flexible housing arrangements

Laneway housing facilitates intergenerational living and more flexible family arrangements. The homes can be used for aging family members, adult children, caregivers and homeowners wishing to downsize.

3. Acts as a mortgage helper

Vancouver has the highest housing prices in Canada. A [2012 article on homeownership](#), written by the Vancouver Sun's Tracy Sherlock, calculated that owning a single-family detached bungalow in the city would take up 91 percent of a typical household's pre-tax income. The revenue generated from the rental of a laneway house can currently range from \$1500 to \$3000 per month, which can contribute substantially to mortgage payments.

1. Neighbourhood resistance

Single-family neighbourhoods are often characterized by a uniformity of available housing options. The introduction of a housing form that facilitates more residents into low-density communities has been met with some resistance. Opponents have raised concerns about the lack of available parking, privacy (since some homes look onto their neighbour's backyard), shading on adjacent lots, and the impact on housing prices. The development process is also very disruptive. Laneway house construction typically involves noisy and messy processes with cranes, hammering and many truck loads of product, which can last for months and aggravate neighbours.

2. Permanence of built form

Unlike a basement suite which can be easily re-absorbed into the main home if circumstances change, a laneway house is much more permanent. Even if the financial stability of the homeowner changes and they no longer need the income from a rental property, the laneway house cannot be easily re-absorbed. To reclaim a backyard would require the laneway house to be destroyed...an expensive solution.

3. Cost prohibitive

Even though the homes are small, the construction costs are significant, with the average development ranging from \$250K to \$350K. This can be mostly attributed to the nature of infill housing, which is typically done on a case-by-case basis and requires navigation of existing infrastructure - such as other homes, cars, power lines etc. Similar to cottage housing, laneway homes can cost more since they retain the more expensive elements of housing such as kitchens and bathrooms, while forfeiting inexpensive additions, such as extra bedrooms.

7. Suites in Duplexes

City of North Vancouver, British Columbia

THE BIG IDEA

Four residences within a duplex that meet fire and safety codes.



Front view of first legal duplex with secondary suites Credit: City of North Vancouver and Terry Sidhu.

The City of North Vancouver is a waterfront municipality located on the north shore of Burrard Inlet, directly across from Vancouver, British Columbia. It is unique within the region because of its small size (11 km²) and highly urbanized land use. Pressures to accommodate a growing population, coupled with limited affordable housing options, have driven the city to diversify their residential rental and homeownership options, ranging from apartments, townhouses and coach houses. Residents of single-family homes have not been exempt from the housing pressures and the uptake on secondary suites within single-family homes has been tremendous.

The trend first began in the 1990s, as homeowners seeking mortgage helpers illegal created secondary suites. In 1997, the City of North Vancouver responded by approving secondary suites within detached single-family homes.

Secondary suites have not remained limited to detached single-family homes. Within the last five years, the City of North Vancouver noted well over 100 instances where residents added suites to their duplexes.

Recognizing that the units served an important role of providing affordable rental housing stock, the City was hesitant to enforce their own bylaw restricting their use to single-family homes. After much deliberation, the city enacted a moratorium on the enforcement of their bylaw, in 2012. They also initiated steps to address the health and safety issues within existing duplex suites and establish the parameters for the development of secondary suites within duplexes.

In March 2013, the City of North Vancouver passed a bylaw amendment allowing the development of secondary suites within duplexes. They are the first municipality in North America to allow for the provision of an accessory dwelling within a duplex.

The bylaw amendment legalizes the development of new dwelling units on the City's 670 lots with duplex designation, in the *Official Community Plan*. This lays the foundation for upwards of 1,300 accessory suites. The change will result in a more efficient use of land in close proximity to the city's service core, with little or no visual change to established neighbourhoods.

Accessory Dwelling Units in Two Unit Residential Buildings

A duplex, or semi-detached house, is a structure where two dwellings are attached side-by-side (or back-to-front) by a common wall(s). There is no dwelling above or below each unit, and each has its own separate entry. The installation of a secondary suite in a new or existing single-family dwelling or duplex is permitted in the City of North Vancouver, subject to both the *City of North Vancouver Zoning Bylaw* and the *British Columbia Building Code* (BCBC).

As defined by the BCBC, a secondary suite is an additional self-contained dwelling unit within single-family dwelling or duplex that includes cooking and sleeping facilities and a washroom.

The bylaw amendment includes the following requirements:

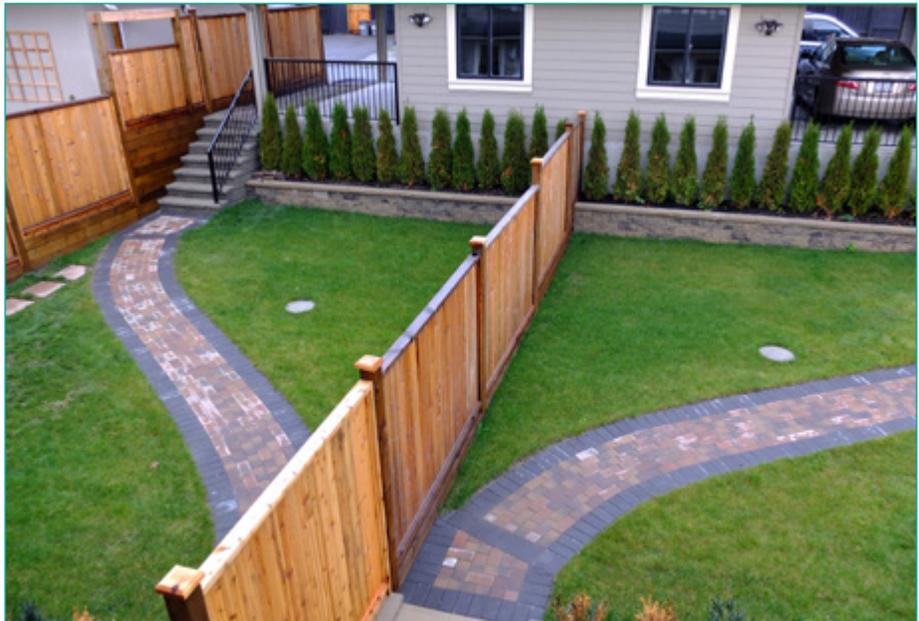
- The owner of the building must live in one of the units;
- The accessory suite must be enclosed within the principal building;
- An off-street parking space must be provided;

A secondary suite is an additional separate dwelling unit either in the basement or the ground floor, within a home that would normally accommodate only one dwelling unit.

- Secondary suites are limited to one per principal dwelling unit;
- The size of the suite is limited to a minimum of 400 sq.ft. and a maximum of 969 sq.ft. OR 40 percent gross floor area, whichever is less; and
- The accessory unit shall not be stratified as a separate unit under the Strata Property Act.



View of secondary suite entrance from inside the unit.
Credit: City of North Vancouver and Terry Sidhu.



Pathways to secondary suites from back alley.
Credit: City of North Vancouver and Terry Sidhu.

FACT SHEET - Suites in Duplexes

Demographic	<ul style="list-style-type: none">• Students and young professionals.
Zones	<ul style="list-style-type: none">• RT-1 (Two-family dwelling district)
Minimum lot size	<ul style="list-style-type: none">• 4800 sq.ft.
Number of units	<ul style="list-style-type: none">• 1 accessory unit per duplex;• 4 units total if both basements are developed into suites.
Unit size	<ul style="list-style-type: none">• Minimum of 400 sq.ft.;• Maximum of 969 sq.ft.
Height	<ul style="list-style-type: none">• 33 ft maximum height.
Open Space Requirement	<ul style="list-style-type: none">• 35 percent of the lot size must be dedicated to open space.
Usable porches	<ul style="list-style-type: none">• Porches and decks cannot exceed 10 percent of usable floor space;• Recessed porches are preferred.
Parking Standards	<ul style="list-style-type: none">• 1 additional parking space for accessory suite.
Privacy standards	<ul style="list-style-type: none">• Minimum of 8 ft. of private outdoor amenity space.
Separation of units	<ul style="list-style-type: none">• Smoke tight barrier and a wall with 1 hour fire protection rating;• A 6.1m separation between duplex and rear garage.
Approval process	<ul style="list-style-type: none">• Development permit process.
Tenure	<ul style="list-style-type: none">• Owner must occupy one of the duplex units;• The secondary suite may be used for rental or family.
Other provisions	<ul style="list-style-type: none">• The entry to a secondary suite should be a discrete element when viewed from the street.

Benefits

1. Staggered changes led to improved policy choices

The City of North Vancouver spread out the implementation of the bylaw amendment over several years. The timing of each successive lever allowed for appropriate public consultation and feedback, as well as the time necessary to modify the policy and legislative levers. For example, the bylaw was suspended in 2012 and amended (following community consultation) in 2013. Design guidelines aimed at improving livability were only developed and approved in 2014. The delay ensured that the design guidelines addressed real challenges regarding the implementation of the bylaw.

2. Responsive community engagement strategy

The City of North Vancouver ensured that many of the concerns expressed by residents - such as parking shortages, traffic congestion, overcrowding and character change - could be addressed through the planning process. The City's engagement process included a survey, several open houses and city council hearing. Furthermore, residents were given the option to opt-out of a zoning change on their property, if they felt strong opposition.

3. Facilitated hidden density

Since the accessory dwellings are located within the duplex, the increase in density is not explicitly visible from the street.

4. Increases housing options

The option to develop a duplex within a secondary suite, or retrofit an existing duplex to support one, increases the options available to potential homeowners. Such options become particularly appealing for families with children seeking a mortgage helper, as well as multi-generational families looking for a two-family home.

1. Challenges to fire and safety standards

The *British Columbia Building Code* (BCBC) provisions make secondary suites in duplexes difficult and cost prohibitive to build. Currently, under the building code, a duplex building with an accessory unit is considered a four-plex. This results in a requirement, among other considerations, for a firewall between units, and makes conversions in existing buildings impractical. A firewall is a non-combustible wall, usually made of concrete. Such a wall is only really feasible within a new development and is nearly impossible within older housing stock. While the City of North Vancouver is working with the Province and developers to address this, current regulations limit the option to new construction.

2. Allocating space for parking

Parking can prove to be a challenge when adding a suite to an existing duplex, or in the case of a new construction. The City of North Vancouver intends to keep the requirements unchanged. Therefore, an additional parking space would be required for the new suite. This can be costly for a homeowner to do themselves, as well as reduce green space available on the lot. As transit infrastructure improves, planners will have to identify where parking requirements could potentially be reduced.

3. Compromised livability in existing duplexes

There are design and construction challenges when creating accessory suites in duplexes. In existing duplexes, the challenge of meeting design guidelines for daylighting and livable suites would be very difficult for a building with a sunken basement. The firewall retrofit is also not always feasible. As a result, this bylaw amendment will most likely apply to new developments rather than existing housing stock - greatly reducing the potential impact of the policy.

8. Lock-off Suites

Burnaby, British Columbia

THE BIG IDEA

Basement
suites within
apartments.



View of multi-family residential building with lock-off suites located in UniverCity.

The City of Burnaby was the first municipality in North America to legalize secondary suites within apartments. Also called lock-off suites, they enable owners of condominiums to rent out extra space in their homes. Burnaby is a municipality east of Vancouver, British Columbia with a population of almost 250,000. The city has two large post-secondary schools - Simon Fraser University and British Columbia Institute of Technology. Those institutions have approximate student populations of 23,000, and 18,000, respectively, and a significant proportion of those students require rental housing.

In 2000, prompted by a proposed development adjacent to the Simon Fraser University campus, the City of Burnaby introduced zoning to allow secondary suites in apartment buildings.

The proposed development has become *UniverCity* - an intact high-density, mixed-use, transit accessible, walkable and family-friendly community at the top of a mountain. *UniverCity* is managed by the *Simon Fraser University Community Trust* and one of the goals of which is to champion innovative

neighbourhood development approaches. Lock-off suites are one such innovation and a product of the collaboration between the *Trust* and the City of Burnaby.

Lock-off Suites

The lock-off suites were created in response to the greater rental need on Burnaby mountain, due to the large student population at Simon Fraser University. The P11 and P11e zones were created in the municipality to facilitate lock-off suites. The terminology used at the time was “multi-flex housing.” However, the term “lock-off suites” has emerged as the more popular vernacular, within Metro Vancouver.

At the time of their inception, lock-off suites were seen as a mechanism to prevent a culture of investors purchasing units and renting them to students. Instead, the apartments were designed to appeal to families and singles that might, at some point, want to rent the semi-private suites for additional revenue. The lock-off suites are currently in three developments: *NOVA 1*, *NOVA 2*, and *One UniverCity Crescent*. There is currently one additional project slated to incorporate the lock-off suites in its design.

The design guidelines were inspired by hotel rooms that feature separate suites in the same unit, by using a lockable door between its rooms.

Review and Approval Process

The requirements for approval within UniverCity are comparable to other multi-family units - requiring topographic data, a grading plan, floor plans, materials, and massing documentation. However, in order to approve the lock-off suites at *UniverCity*, the development application must also include:

- A summary of public consultation activities and input; and
- Certification by Simon Fraser University and Burnaby Mountain Community Corporation that the development meets their development guidelines.



Floor plan of lock-off suite. Credit: Perkins & Co.

FACT SHEET - Lock-off Suites

Demographic	<ul style="list-style-type: none">• Students and extended family.
Zones	<ul style="list-style-type: none">• P11 and P11e (Public and Institutional Districts).
Minimum lot size	<ul style="list-style-type: none">• 43,057.53 sq.ft.
Density	<ul style="list-style-type: none">• 0.45
Number of units	<ul style="list-style-type: none">• Minimum 10 per building, maximum of 50 percent of total units can be lock-off suites;• The suites can take up a maximum of 35 percent of gross floor area of building.
Unit size	<ul style="list-style-type: none">• Minimum 258 sq.ft.
Height	<ul style="list-style-type: none">• P11: 4 stories maximum (54 ft.);• P11e: 10 stories maximum (110 ft.)
Lot coverage	<ul style="list-style-type: none">• P11: 30 percent of lot area;• P11e: 35 percent of lot area.
Parking Standards	<ul style="list-style-type: none">• 1 additional parking space for accessory suite.
Bicycle parking	<ul style="list-style-type: none">• 1 residential parking space unit;• 2 visitor bicycle parking spaces per unit.
Privacy standards	<ul style="list-style-type: none">• Secondary Suite is lockable.
Approval process	<ul style="list-style-type: none">• Development Permit Process.
Tenure	<ul style="list-style-type: none">• Strata title ownership;• Owner must occupy one of the duplex units, and the lock-off suite can be used for rental or family.
Other provisions	<ul style="list-style-type: none">• If the unit is made available for rent then it must be registered with the Student Housing Registry at Simon Fraser University.

1. Increased housing options

The lock off-suites provide an additional form of rental housing that introduces newer suites, at a reasonable rental rates. The newer suites have greater design and livability standards, as they have gone through an appropriate review process. Unlike secondary suites in single-family homes, lock-off suites allow a renter to live without a car, by virtue of the housing type being more connected to transit and amenities.

2. Increase affordable rental stock

When compared to the rents in purpose-built rental buildings, the rate for secondary suites is typically seen to be lower. The rents for the lock-off suites in Burnaby range from \$525 per month to \$750 per month. The lock-off suites are considered another form of secondary suites. According to the *Canadian Mortgage and Housing Corporation*, secondary suites have been estimated to make up as much as [one fifth of the rental units](#) in British Columbia. The inclusion of these suites into new condominiums can significantly increase the rental stock in cities.

3. Mortgage helper

A homeowner of an apartment can factor in rental income when calculating mortgage payments. The additional rental income can greatly help to meet mortgage payments. This rate can be affordable for a renter who, in Vancouver, would pay an average of slightly over \$1,000 for a one-bedroom apartment ([Numbeo, Cost of Living in Vancouver, Canada](#)).

4. Room for extended family

Multi-generational housing arrangements are increasing, as a result of the high cost in housing in Metro Vancouver and an emerging consumer that values shared living arrangements with family. The ability to use the units for adult children or aging parents is one option presented by the lock-off suites. In the case of one building in *UniverCity*, the secondary suite is on a separate floor, for additional privacy.

1. High construction costs

The requirements for the suite which include a second kitchen, lockable doors, and fireproofing standards, add to construction costs. The increased construction costs are passed on to the consumer and overall purchasing prices tend to be higher, when compared to a traditional 2- or 3-bedroom unit.

2. Parking availability

All secondary suites have had issues with the new tenants needing more parking space. In the case of *UniverCity*, the parking requirements were lowered due to transit accessibility and the walkable nature of the community. However, the community (which is situated atop Burnaby Mountain) is still located far from other amenities and communities in Burnaby and, as a result, rates of car ownership are higher than expected.

3. Security of tenure

The hidden nature of these suites makes poor rental practices more likely. Landlords may increase rent prices unfairly and rapidly. Additionally, the agreements may be informal in nature, so the tenants can be evicted without proper notice. Registration into a secondary suites program and enforcement of the *Residential Tenancy Branch* are important for successful implementation of the lock-off suites - or secondary suites, in general - as they provide protection for the renter.

4. Incentivizing lock-off suite construction

Lock-off suites are more complicated and costly to build than typical apartment buildings and, since profit margins are sufficient in traditional development, there are few incentives to build them. Furthermore, in areas that are considered more affordable - such as suburban municipalities - there may not be a market for this type of accommodation.

9. Micro Suites

San Francisco & Los Angeles, California

THE BIG IDEA

Tiny homes
with multi-
purpose space



Micro-suite development in San Francisco, California.
Credit: The Harriet Building Panoramic Interests

San Francisco is a city that has had a notorious affordability problem, similar to the metropolitan Vancouver region. Over the last 10 years, wealthy high-tech programmers and entrepreneurs seeking an opportunity to live in the culturally rich city, have flooded the housing market. The influx of capital has increased rental rates and decreased vacancy in many areas of the city. San Francisco has taken steps to tackle their affordability problem using a historically large stock of public housing, stringent rent control regulations on over 100,000 rental units, and the development of micro suites.

The creation of micro suites - or efficiency suites - was done in response to the challenge of affordable housing. The choice was predicated on the belief that smaller unit sizes would allow increased density of units in a similar sized lot, and the smaller unit size would command a smaller rent. The efficiency units are also an effort to engage the middle class, in a city where policies are meant to help the poorest and the existing housing serves the upper-middle and wealthy classes.

The Efficiency Dwelling Units Ordinance

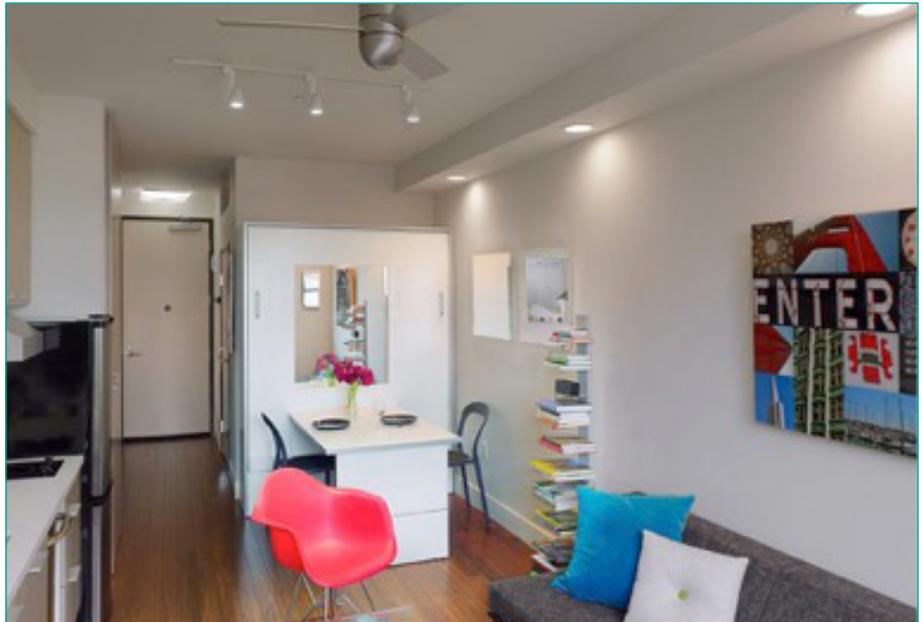
In 2012, the San Francisco Planning Department introduced *Efficiency Dwelling Units*, authorizing the development of micro-suites in the city.

San Francisco planning department set out several requirements for the development of the suites:

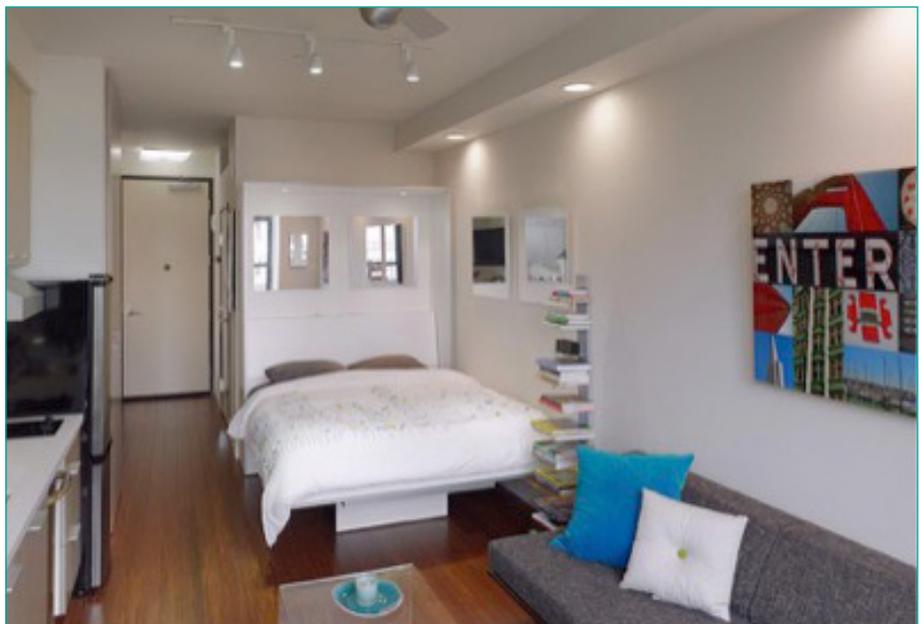
- The minimum suite envelope was defined as 220 sq.ft., measured from the inside perimeter of the exterior walls of the unit. It can include closets, bathrooms, kitchen cabinets, living, and sleeping areas.
- A minimum of 150 sq.ft. must be retained for the living area.
- Each unit must be equipped with a kitchen sink, cooking appliance and refrigeration facilities, each having a clear working space of not less than 30 inches.
- Each unit is required to have a separate closet.
- A separate bathroom containing a water closet, lavatory and bathtub or shower is required.
- No more than 2 residents can inhabit the micro suite.
- The open space requirements are calculated based on number of units built and the location of these units.
- 15 percent of the approved units must be priced below market rate. Exceptions can be made for suites that are intended for student housing.



Multi-purpose furniture is important for Micro Suites. View of kitchen and living area.
Credit: The Harriet Building Panoramic Interests.



The table can be used as a workspace or eating area by day.
Credit: The Harriet Building Panoramic Interests.



The same unit converts to a bed. Credit: The Harriet Building Panoramic Interests.

FACT SHEET - Micro Suites

Demographic	<ul style="list-style-type: none">• Singles, high-tech professionals and millennials.
Zones	<ul style="list-style-type: none">• Mixed-use and multi-family zones.
Lot size	<ul style="list-style-type: none">• Dependent on zone.
Density	<ul style="list-style-type: none">• Dependent on zone.
Number of units	<ul style="list-style-type: none">• 375 maximum.
Unit size	<ul style="list-style-type: none">• 150sq.ft. for living area;• 220 sq.ft. for total unit.
Height	<ul style="list-style-type: none">• Dependent on zone.
Open Space Requirements	<ul style="list-style-type: none">• 50 sq.ft. – 300 sq.ft. per unit dependant on location.
Parking	<ul style="list-style-type: none">• Bicycle parking required, zero parking requirements in the urban core;• Car share parking requirement.
Green space	<ul style="list-style-type: none">• There is no mandatory green space requirement for efficiency suites, however there are appropriate landscaping and street tree requirements for street facing buildings.
Review process	<ul style="list-style-type: none">• Full application and council review.
Tenure	<ul style="list-style-type: none">• Strata title ownership or rental.

1. Increased density

Micro suites allow for high levels of density without towers. The units are best located in mid-rise apartment buildings, where the density can be hidden. An example is Vancouver's [Burns Block](#) building, which has 30 units contained in a 6 story building, with the first level serving as commercial space.

The San Francisco Planning Department conducted an analysis that demonstrated that a 50,000 sq.ft. micro suite building can gain as much as 32 percent in additional suites (55 units). This can be a very large gain for the rental stock in a city, non-market units, or other subsidized housing.

2. Improved affordability

The San Francisco Planning Department demonstrated that the overall cost of construction is similar to the traditional-sized apartment. However, the absolute cost of rental or ownership of these units is lower than a traditional-sized unit. The average rental price in San Francisco regularly increases, with the average price of a studio apartment in 2014 being greater than \$2,000 monthly. The new micro units have been shown to reduce the rent to \$1,200 - \$1,500 monthly which is a 25 to 40 percent drop from market rates.

3. Housing for millennials and singles.

The inner cities are attracting more and more young people, while the demand for larger suburban houses decrease. This is creating a significant demand for one- or two-bedroom units close to amenities, and micro suites are poised to fill this demand.

4. Meeting social housing goals.

According to the San Francisco Planning Department, the key advantage of micro suites is the promise of affordable social housing. Building subsidized housing is expensive for government or non-profits, and this alternative can become a cost effective solution to that problem. While upfront costs may be similar, the operating costs can be lower for the suites. Micro suites can also be purpose-built for seniors with limited mobility, persons with special needs, or at risk youth.

1. Lack of prior examples and successes

The affordability crisis is an emerging trend in North America, partially due to increasing land constraints. Micro suites are a response to those constraints. However, there are no historical examples in the western world where micro units have gone through a full life-cycle. Thus, the degree to which this housing type is sustainable - versus a simple trend - is difficult to gauge.

2. Livability

A major drawback for micro suites has been the perception that they compromise livability. The lack of space makes storage a challenge and the multi-purpose nature of the space may not be practical. Natural lighting and visibility also tends to be reduced, as windows can only be built on one small wall.

3. "Twitter Apartments"

Tenancy rights activists, as well as affordable housing advocates, have taken issue with micro suites, asserting that they are intended for high-tech workers to have a 'crash pad' and that they speak to the fact that is okay to 'box people up.' Opponents believe that San Francisco should do more to make family housing affordable. In response, the city limited the number of micro suites that can be built per building.

10. Tiny Homes

Portland, Oregon / Vancouver, BC

THE BIG IDEA

Mortgage-free,
bylaw exempt,
ecologically
sensitive small-
living.



A demonstration tiny house village in the District of Columbia.. Credit: Boneyard Studios.

It would be impossible to discuss the innovations that have occurred in small housing over the last two decades, without paying tribute to the tiny house movement. It is an architectural and social movement that encourages the development of small homes, as a means to live minimalist lifestyles that are both environmentally and financially sustainable.

The tiny house movement is most often associated with a few key individuals who, over the course of several decades, influenced the thinking of ten of thousands of people. In the 1980s, an architect named Lester Walker published a book of photographs and drawings called *Tiny Houses: or How to Get Away From It All*. The book included pictures of the dune shacks in Provincetown, Massachusetts; 200 sq.ft. houses built in Texas, in the late nineteenth century by German farmers; and the 140 sq.ft. houses that San Francisco built in 1906 for survivors of the earthquake.

In 1998, Sarah Susanka published the book *The Not So Big House* which is credited with starting the backlash against supersized homes. Susanka challenged Americans to think about housing as a sanctuary that simplifies our lives, rather than taxing our energies in maintaining it.

Soon afterwards, in 1999, Jay Shafer built a 110 sq.ft. home on wheels and lived in it for 5 years. His decision to place his home on a trailer platform was a deliberate choice to circumvent “minimum size standards” required by city bylaws. The trailer platform made the home mobile and, as a result, exempt from the municipal regulatory framework. His ‘tiny’ decision became instrumental in propelling the tiny house movement into the realm of possibility for thousands of North Americans and he would go on to become the first tiny house builder/designer, as well as an author of several books.

Outside of the thought leaders on the subject, the tiny house movement is often explained as a response to several external factors, such as climate change, ecological degradation, the economic crisis and a rejection of consumerism.

Mirroring the interest in small homes, a burgeoning industry has emerged to support the proliferation of tiny houses. There are dozens of blogs, books and even a television



One of the first tiny house designs by Jay Shafer.
Credit: Tumbleweed Houses and The Small House Book.

show dedicated to exploring the phenomenon. Builders have sprung up to meet the consumer demand for prefab trailer homes. Workshops, equipping tiny house enthusiasts with the tools to build their own home, regularly sell out. The first tiny house hotel opened its doors in 2010, and several communities have begun to explore how the houses can be used to address homelessness.

Tiny Homes

Although there is no authority on the definition of tiny homes, the emergent understanding is that they range from between 80 to 180 sq.ft. They are detached houses, usually on a trailer bed, and often fall under the category of accessory building or ‘shed’. Since they are typically built as a mobile unit, they are usually between 6 and 8 ft wide and between 10 ft. and 18 ft. long. Similar to micro-suites, space is simple, consisting of one multi-functional space with a private washroom. Many are designed with a small loft space that houses a bed.

Surprisingly, it is illegal to inhabit a tiny home in most urban centres in North America. Referred to as *minimum size standards*, the purpose of these restrictions is to preserve health, safety and accessibility. According to Canada's *National Building Code*, living areas within dwelling units, either as separate rooms or in combination with other spaces, cannot be less than 145 sq.ft. The *Code* also stipulates a minimum kitchen size of approximately 40 sq.ft., a bedroom of 105 sq.ft., dining room of 75 sq.ft. and space allocated for a toilet, shower and/or bathtub.

On the other hand, temporary housing is often described in building codes as "any tent, trailer, motor home or other structure used from more than 30 calendar days" (Shafer J, 2009). Such structures are often exempt from building codes and, hence, development permits etc. So long as a tiny home is built to be portable, it can (if unplugged periodically) be inhabited on the lot of an existing residence indefinitely.

Vancouver Tiny Homes

Vancouver and the Lower Mainland have demonstrated a great interest in tiny homes. From workshops equipping tiny homesteaders with the skills to build their own shelter, to builders such as Western Camera Buildings Inc. selling mobile units across British Columbia for between \$30,000 and \$70,000, the tiny house movement is alive and well in the region.



Interior view shows main floor and loft
Credit: Tumbleweed Houses and The Small House Book



The Caravan Tiny House Hotel comprises 6 tiny houses in Portland, Oregon. Credit: Sharable Blog.



Tiny house built in Vancouver, BC Credit: Camera Building Inc.

Subtractive design: A well-designed little house is like an oversized house with the unusable parts removed. Such refinement is achieved through subtractive design — the systematic elimination of all that does not contribute to the intended function of a composition. In the case of residential architecture, everything not enhancing the quality of life within a dwelling must go. Anything not working to this end works against it. Extra bathrooms, bedrooms, gables and extra space require extra money, time and energy from the occupant(s). Superfluous luxury items are a burden. A simple home, unfettered by extraneous gadgets, is the most effective labor-saving device there is.

Jay Shafer

1. Facilitates simpler, more sustainable lifestyles

By virtue of the smaller footprint, residents of tiny homes own fewer possessions and consume less. Additionally, a tiny house uses less materials to build and energy to maintain. According to Jay Shaffer, his homes were built with 4,800 pounds of building materials, less than 100 pounds of which went to the local landfill. Each produced less than 900 pounds of greenhouse gases during a typical Iowa winter. In contrast, the average American house consumes about three quarters of an acre of forest, produces about 7 tonnes of construction waste and emits 18 tons of greenhouse gases, annually.

2. Affordable housing option

According to Western Camera Buildings Inc., their typical tiny homes sell for between \$30,000 and \$70,000. For individuals that choose to undertake the project themselves, these costs can be reduced even further. For many, this is an accessible path to homeownership.

3. Advances the conversation on the role of housing today

Tiny homes exemplify a shift towards simpler living, financial freedom and more time for ourselves and loved ones. While most Canadians and American's cannot imagine living in a home barely 100 sq.ft., many are seeking greater balance between work life and personal time. The tiny house movement inspires great deliberation on the value we place on money, time, possessions and people.

4. Exempt from most bylaws and development permits

Development permits and municipal regulatory frameworks are complicated, expensive and onerous processes. By virtue of the fact that most tiny homes are built on a trailer bed and are typically considered a de facto shed and do not have to gain permission or approval from municipally governments.

5. Cost savings in space can be allocated towards better finishings

Energy efficient windows, green roofs, hand-selected wood in a typical home can significantly increase development costs. However, these items are more feasible in tiny homes because the number and size required is greatly reduced.

1. Securing a location for the tiny home

While building a tiny home may be feasible and accessible to many individuals, finding a location to set-up the house may be more difficult. Unlike most traditional options for homeownership, tiny homes do not come with a location. Instead, the homeowner must either own or have access to an existing property, where the house can be placed.

2. Difficult to access traditional tools for homeownership

Ironically, one of the greatest benefits of tiny homes - the fact that they are outside of the regulatory framework - is also a significant drawback. Because tiny homes are not recognized as permanent dwellings, banks will not loan individuals money to build them. Similarly, insurance companies are unlikely to protect the contents from theft, fire or floods and service providers are challenged to connect tiny homes with water, electrical and internet provisions.

3. Insufficient amount of storage

A common complaint for residents of small housing is the lack of storage. This is exacerbated in a tiny house. There is little to no room for storing items, forcing residents to significantly downsize the number of items they retain and use in their household.

Glossary

Accessory Dwelling Unit (ADU) – An additional living quarter on a typical single-family lot. ADUs can be attached to the principal home such as with basement suites. However they are detached from the primary dwelling unit such as coach houses or laneway home.

Basement suite - One form of a secondary suite where the lower floor of a single family home, or townhouse is given up for rent. The suite has livability requirements if registered and can feature a separate entrance. The basement suite can also have a private kitchen and bathroom.

Coach homes - A detached dwelling located in the back yard of a typical single-family residential lot. In most cases the coach house is smaller in size than the principal dwelling.

Comprehensive development - Comprehensive Development Zoning is typically used in large, mixed-use, and complicated plans. This form of zoning enables a municipality to negotiate detailed guidelines and specifications for all aspects of a development in an integrated manner.

Cottage housing - Multiple detached homes that are 1,000 square feet or less and are arranged around a common open space rather than street facing. There are typically 8 to 12 homes that share a common courtyard for example. The parking is tucked away at the rear of the home.

Cluster housing - The mechanism or strategy that facilitates small housing grouped together around a large open space. Lot size, setbacks, and private open space requirements are usually reduced in order to create a neighborhood that is more compact.

Detached townhomes - Detached townhomes have 2 or more floors and an exterior entrance. However unlike traditional townhomes, they are structurally independent and do not share common walls. Instead they have a 6inch (or more) separation that may be covered by flashing.

Efficiency suite - Terminology used in San Francisco which is similar to "Micro-Suites" in the Canadian context. The small sized nature of the apartment makes maximum use of dwelling unit yield on a lot.

Granny Flat - A small separated unit in the rear yard of a single family lot. The granny flat is a detached, self-contained dwelling located totally on the ground floor in the rear yard of a single family residential lot with lane access.

Laneway housing - A detached small house at the rear of a single family lot. There are many variations in terminology, however the laneway house term has become popular in Vancouver due to the prevalence of existing lanes in the city's neighborhoods. The house can be used for residential, parking, and accessory uses.

Lock-off suite - A rental suite that is placed within a strata apartment or townhouse. Can feature a small kitchen and bathroom and has a lockable, separating door within the strata unit.

Mother-in-law suite - Similar to a granny flat, but the terminology is used more in Britain, New Zealand, and Australia. The small unit can be rental or for family use. The unit is typically built above a garage, but not always and will generally have a separate entrance. The suites will typically accommodate an elderly family member.

Micro-suite - Apartment buildings that usually meet the minimum size requirement for livable space according to local building code. Most suites are below 500 square feet, and as little as 150 square feet for livable space in San Francisco.

Multi-flex family housing - The zoning terminology applied by the City of Burnaby to facilitate rental suites within a mixed-use type development. The rental suite would be built within a strata apartment building or townhouse.

Pocket Neighbourhood - A cluster of neighbouring housing or apartments gathered around a shared open space – a garden courtyard, a pedestrian street, series of joined backyards, or a reclaimed alley – all of which have a clear sense of territory and shared stewardship. They can be in urban, suburban or rural areas.

Secondary suite - An additional separate dwelling unit either in the basement or the ground floor, within a home that accommodate only one dwelling unit. The suite is usually meant for rental purposes under the legislation in British Columbia.

Single Room Occupancy (SRO) Units - Short-term or long-term accommodation in single rooms that are usually subsidized by senior levels of government. These suites generally lack a private bathroom and kitchen but are provided in a shared arrangement. The purpose of the SRO is to provide housing for those who are at risk of being homeless.

Corner-Lot “Captain’s Homes” - These homes typically include 3-5 units with a single entry, shared front porch, common front yard, and a backyard with private space. Parking is shared, with an entry from the side street or the alley. These homes are ideal for large corner lots either in the downtown or residential areas.

The New “Boarding House” - These homes are a combination of a captain’s home and an adult family home. They can include private space with cooking facilities, a shared social space, and intimate work space. Like the captain’s homes, corner lots in the downtown corridor are suitable.

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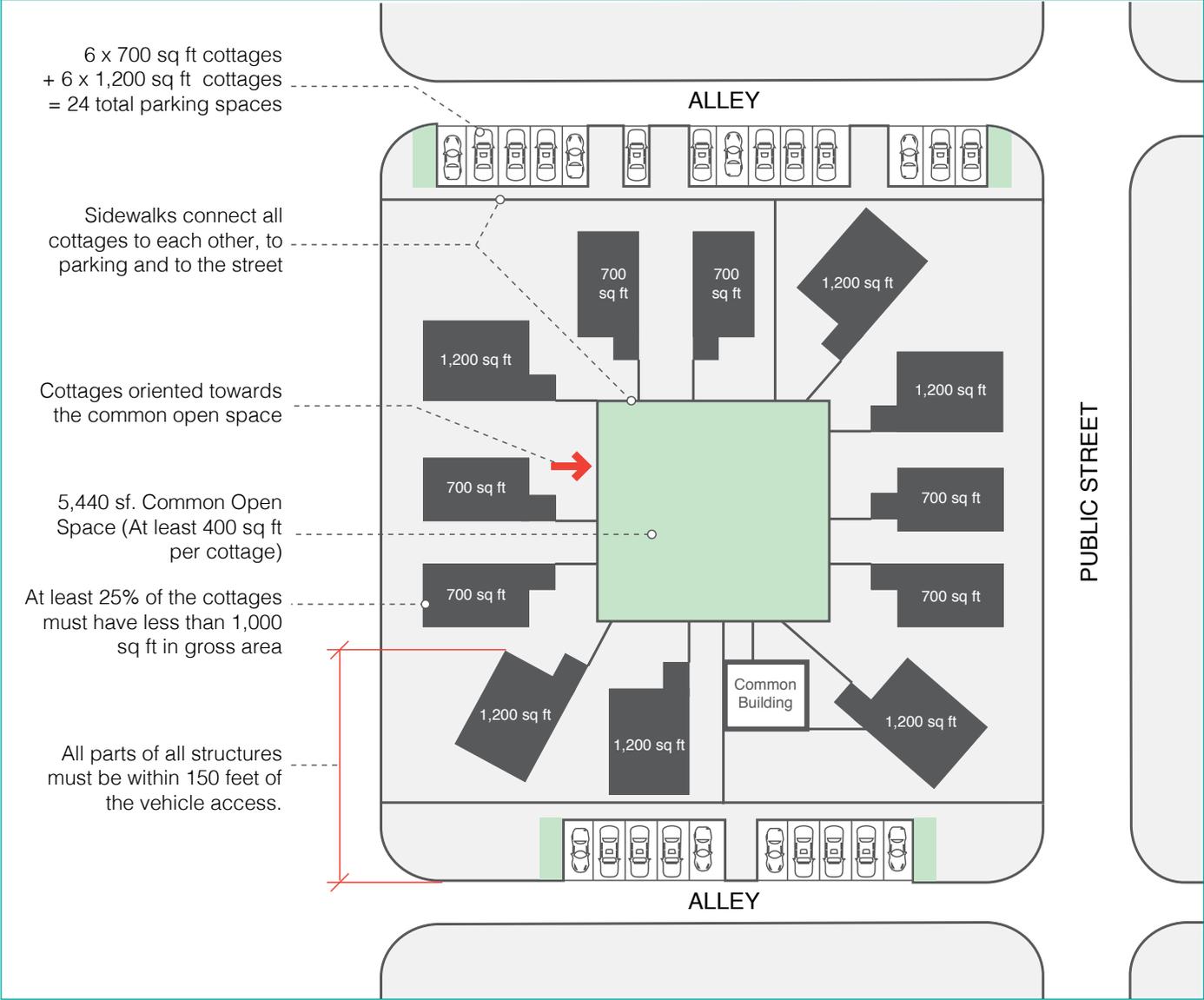
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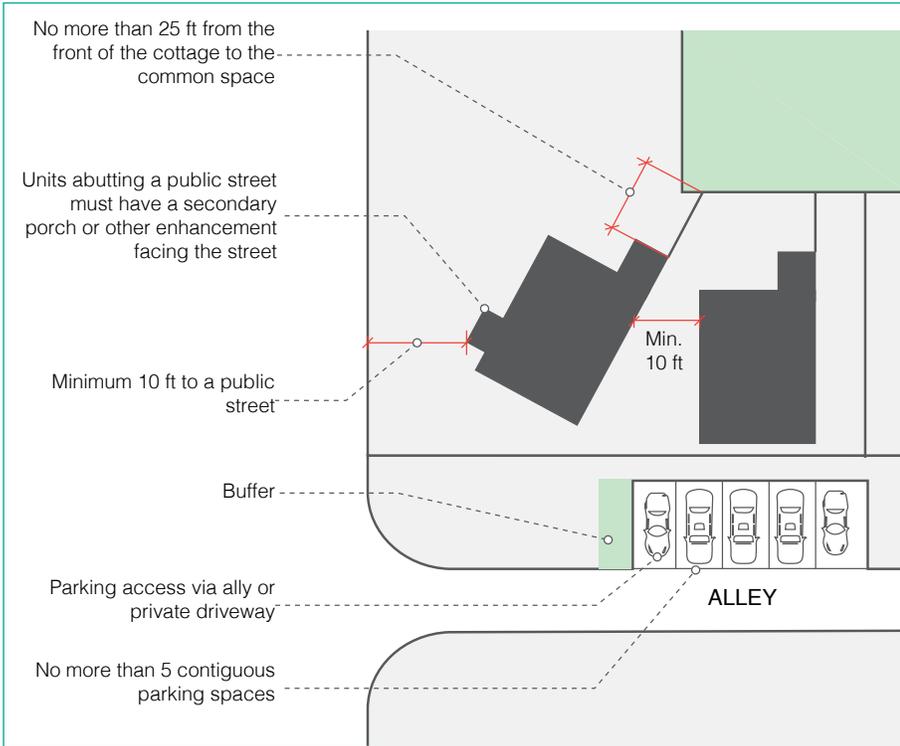
Appendix

Sample Cottage Housing Development Plan



Development plan for cottage housing in Delta, British Columbia
Credit: Southlands community plan by Century Group

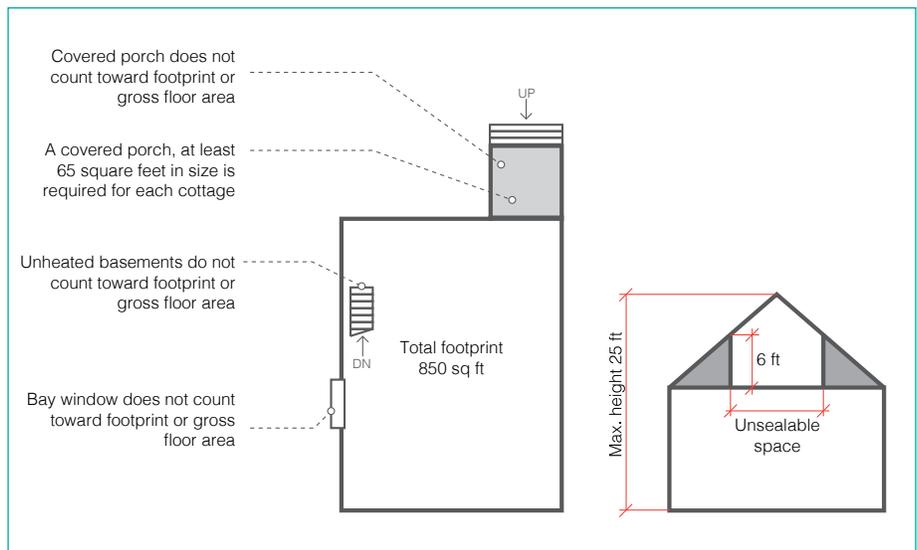
Sample Cottage Housing Parking and Setback Details



Front view photo of de facto cottage housing in Vancouver, British Columbia.
Credit: Tatlow Park from City of Vancouver website

Sample Cottage House

Replication of sample parking plan and cottage design. Image credit: Cottage Housing Development - Lehigh Valley Planning Commission



Cohousing Principles

- Cohousing is based on private ownership of complete, self-contained homes centered around and focused on shared facilities such as children's play spaces, adult meeting spaces, library, office, workshop, guest rooms, common kitchen and dining room, gardens, greenhouse and other features the members may choose. Although every home has its own complete kitchen, shared dinners are typically available a few days each week, at the common house for those who wish to participate.
- Participatory process - residents participate in planning and development so that the design directly meets their needs.
- The physical design encourages a sense of community, providing opportunities for spontaneous connection as well as maintaining the option for privacy.
- Non-hierarchical structure and decision-making.

3rd North American Cohousing Conference
Seattle, September 1997

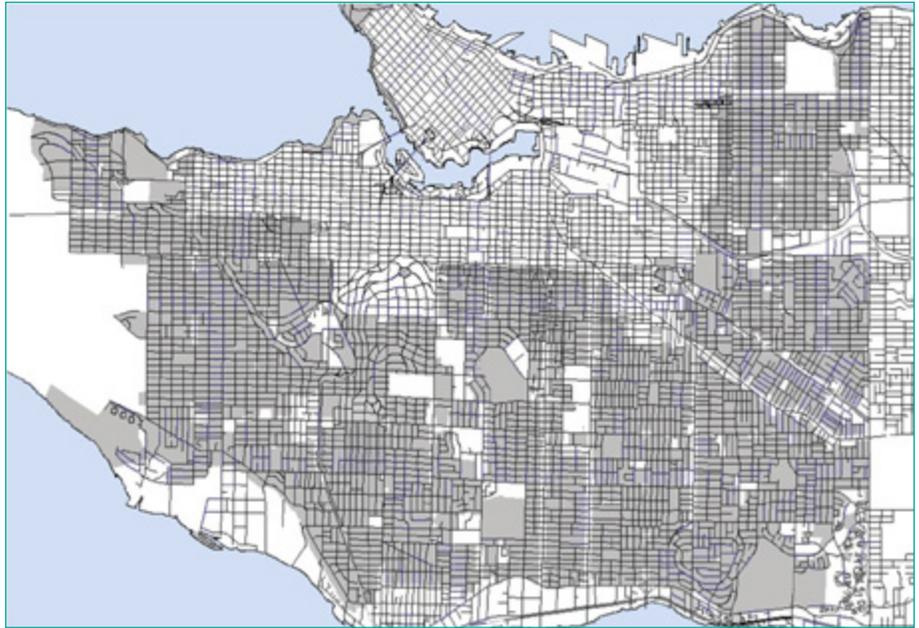
Cohousing in British Columbia

Belterra Cohousing is a new cohousing unit is being built on Bowen Island, BC. This unit will feature 30, 2 story townhome units in 5 separate buildings. Some of the features of the common house will include a large commercial-style kitchen, dining area, workshop area, guest rooms, and children's play room. The majority of units were sold before completion of construction, but the remaining units are typically priced from \$420,000 to \$440,000.

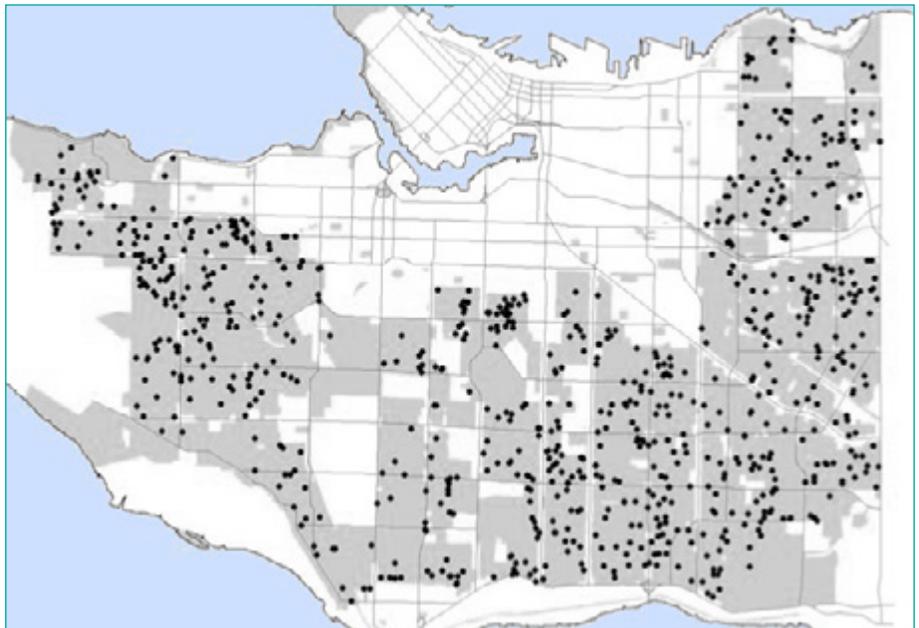


View of cohousing development on Bowen Island
Credit: Belterra Cohousing

Laneway Housing in Vancouver



All RS single-family zones can build a laneway house on their lot.
Credit: City of Vancouver



Permitted laneway houses as of February 2013.
Credit: City of Vancouver

Design Issues for Micro Suites

How do you fit appliances and electronics?

- Thinner and smaller appliances and electronics can be sourced.

How do you address large pieces of furniture such as tables, couches and a bed?

- Murphy beds, which can be tucked away into a wall, are a useful solution. Sourcing modular and multi-purpose furniture is also key.

How do you accommodate storage?

- Make ceilings higher and building storage space above closets and cabinetry.

What about open space?

- Requirements should follow a similar process as other multi-family buildings in order to preserve livability.

Micro Suites in North America

	New York City (USA)	Vancouver (Canada)	San Francisco (USA)	Surrey (Canada)
Size of Units	<ul style="list-style-type: none"> • 275-300 sq.ft. 	<ul style="list-style-type: none"> • 226 sq.ft. 	<ul style="list-style-type: none"> • 150 sq (minimum living area) • 220 sq.ft. for total unit envelope 	<ul style="list-style-type: none"> • 300-648 sq.ft.
Requirements	<ul style="list-style-type: none"> • Entire building cannot consist of micro suites • 40% of micro suites must be below market rental 	<ul style="list-style-type: none"> • Only 1 person may occupy • Mandatory housing agreement for rental 	<ul style="list-style-type: none"> • 2 persons maximum • Must contain a kitchen and bathroom. 	<ul style="list-style-type: none"> • N/A
Tenure	<ul style="list-style-type: none"> • Strata title ownership or rental 	<ul style="list-style-type: none"> • Rental 	<ul style="list-style-type: none"> • Strata title ownership or rental 	<ul style="list-style-type: none"> • Strata title ownership
Cost to rent or own	<ul style="list-style-type: none"> • Monthly rent varies by income. • \$939/month for those who earn 80 percent of the area's average annual income, or \$55,000 annually per couple • \$1,873 for those earning 155 percent, or \$106,640 per couple 	<ul style="list-style-type: none"> • Average monthly rent of \$875-\$1100 	<ul style="list-style-type: none"> • Average monthly rent of \$1200-\$1500 • \$199,000-300,000 Ownership 	<ul style="list-style-type: none"> • Average cost to purchase is \$130,900 to \$240,900.

Laneway Housing in Metro Vancouver

LOCATION	West Vancouver	City of North Vancouver	District of North Vancouver	Richmond
BYLAW OR POLICY	<ul style="list-style-type: none"> Coach Houses (2014) 	<ul style="list-style-type: none"> Accessory Coach House Program (2010) 	<ul style="list-style-type: none"> Coach Houses (2014) Bylaw 3210 	<ul style="list-style-type: none"> Granny Flats -Bylaw 8922 (2012) Coach Houses Bylaw 8922 (2012)
HOUSING TERM AND DESCRIPTION	<p>Coach House</p> <ul style="list-style-type: none"> A coach house replaces “carriage house,” which means a detached unit that is smaller than the primary dwelling on a residential lot, and maybe attached to the garage. 	<p>Coach House</p> <ul style="list-style-type: none"> A coach house is a detached non-strata unit also known as granny suite, laneway house, garden suite and carriage house. They are accessory to a principal one-unit dwelling. 	<p>Coach House</p> <ul style="list-style-type: none"> Coach houses are compact homes, usually built in the rear year of a single-family residential lot, that are smaller than the principal dwelling. 	<p>Granny Flat and Coach House</p> <ul style="list-style-type: none"> A granny flat is a detached, self-contained dwelling located totally on the ground floor in the rear yard of a single family residential lot with lane access. A coach house is a detached, self-contained dwelling located beside and above the garage accessed by a lane in the rear yard of a single family residential lot.
ZONING	<ul style="list-style-type: none"> All RS single family zones, RD1 and RD2 zones (duplex dwelling zones) 	<ul style="list-style-type: none"> All RS single family zones 	<ul style="list-style-type: none"> Limited to residential lots greater than 10000 sq ft. Some exceptions for corner lots and homes with laneways. Development variance permit required. 	<ul style="list-style-type: none"> RE1 (single detached zone – Edgemere)
NUMBER OF ALLOWABLE DWELLINGS PER LOT	<ul style="list-style-type: none"> 2 - principal dwelling, secondary suite or coach house 	<ul style="list-style-type: none"> 2 – principal dwelling, secondary suite or coach house 	<ul style="list-style-type: none"> 2 – principal dwelling, secondary suite or coach house 	<ul style="list-style-type: none"> 2 – principal dwelling, secondary suite or coach house
TENURE	<ul style="list-style-type: none"> Rental or family use 	<ul style="list-style-type: none"> Rental or family use 	<ul style="list-style-type: none"> Rental or family use 	<ul style="list-style-type: none"> Rental or family use
UNIT SIZE	<ul style="list-style-type: none"> A maximum floor area not exceeding the lesser of 10% of lot area or 1238 sq ft, whichever is less 	<ul style="list-style-type: none"> The maximum floor area of a 1 storey coach house is 800 sq ft. The maximum floor area of a 2 storey coach house is 1000 sq ft. 	<ul style="list-style-type: none"> Maximum size not exceeding 968 sq ft plus a 232 sq ft garage. 	<ul style="list-style-type: none"> The minimum floor area of a granny flat is 355 sq ft and the maximum is 452 sq ft. The minimum floor area of a coach house is 355 sq ft and the maximum is 645 sq ft.
HEIGHT AND STOREY LIMITS	<ul style="list-style-type: none"> 1 and 2 storey homes are allowed. A 1 storey is limited to 15ft. A 2 storey can have a maximum height of 22ft. The upper storey is restricted to 60 percent of the footprint of the coach house. 	<ul style="list-style-type: none"> 1 and 2 storey homes are allowed. A 1 storey is limited to 10ft if it is a flat roof or 15ft for a sloped roof. A 2 storey can have a maximum height of 22ft. 	<ul style="list-style-type: none"> 1 and 2 storey homes are allowed A 1 storey is limited to 15 ft A 2 storey is limited to 22 ft 	<ul style="list-style-type: none"> 1 and 2 storey homes are allowed. A granny flat is limited to 16ft A 2 storey can have a maximum height of 24ft.
MINIMUM LOT SIZE	<ul style="list-style-type: none"> NA 	<ul style="list-style-type: none"> 3900 sq ft 	<ul style="list-style-type: none"> 10,000 sq ft 6,000 sq ft and greater will be considered if it is a corner lot or is on a laneway. 	<ul style="list-style-type: none"> 4843 sq ft for a granny flat and 5920 sq ft for a coach house
LOCATION ON LOT (SETBACKS, DISTANCE FROM PRINCIPAL HOME)	<ul style="list-style-type: none"> The coach house must be set back from the rear property line by a minimum of 6ft and 4ft for any portion of the building containing an enclosed garage. There must be a minimum separation of 16ft between the coach house and principal house. 	<ul style="list-style-type: none"> The coach house must be set back 2.5 ft from the rear property line. There must be a minimum separation of 16ft between the coach house and principal house. 	<ul style="list-style-type: none"> The coach house must be set back 4 ft from the rear property line and 8ft from the side yard. There must be a minimum separation of 20 ft between the coach house and the principal dwelling. 	<ul style="list-style-type: none"> A granny flat or coach house shall be located within 4ft and 26ft of the rear lot line. There must be a minimum separation between the principal house and a granny flat of 10ft or 14ft for a coach house.
PARKING REQUIREMENTS	<ul style="list-style-type: none"> 1 off-street parking required exclusively for the use of the coach house. 	<ul style="list-style-type: none"> 2 onsite parking spaces are required (one parking space for each unit) A maximum of one enclosed stall in the Accessory Coach House is permitted. 	<ul style="list-style-type: none"> 3 onsite parking spaces are required (2 parking spaces for the principal unit and 1 for the coach house) 	<ul style="list-style-type: none"> 1 parking space is required and must be accessed from lane. It must be unenclosed and uncovered.
LANDSCAPING AND ALLOCATION OF OPEN SPACE	<ul style="list-style-type: none"> Design private open space between the dwelling and the coach house, so that it is useable open space for occupants. 	<ul style="list-style-type: none"> The coach house can occupy up to 15% of the lot. Prominent existing trees and vegetation should be retained. 	<ul style="list-style-type: none"> Retain mature vegetation where possible Landscaping encouraged along rear lot line Required usable outdoor private space for coach house occupants. 	<ul style="list-style-type: none"> Prominent existing trees and vegetation should be retained. 30% of the lot area is restricted to landscaping with live plant material.

Laneway Housing in Metro Vancouver

LOCATION	Vancouver	Coquitlam	Delta - Ladner	Maple Ridge
BYLAW OR POLICY	<ul style="list-style-type: none"> Vancouver Laneway Housing Program (2009) 	<ul style="list-style-type: none"> Housing Choices Development (2011) 	<ul style="list-style-type: none"> Single Family Infill Residential (1999) 	<ul style="list-style-type: none"> Garden Suites (2008)
HOUSING TERM AND DESCRIPTION	<p>Laneway house</p> <ul style="list-style-type: none"> A laneway house is a small house at the rear of a lot near the lane and includes both a dwelling unit and parking/accessory uses. 	<p>Garden Cottage/Carriage House</p> <ul style="list-style-type: none"> A garden cottage is an accessory residential suite to a one-family dwelling unit. It is a one-storey building with the suite at-grade. A carriage house is an accessory residential suite, located on the second storey above a garage. 	<p>Coach House</p> <ul style="list-style-type: none"> A coach house refers to a second dwelling unit located in an accessory building on a lot. The accessory building is typically a separate garage with the dwelling unit situated on the second storey or at ground level. 	<p>Detached Garden Suite</p> <ul style="list-style-type: none"> A detached garden suite is a self-contained second dwelling unit that is separate, subordinate in size and accessory to the principal dwelling unit. The unit may be a free-standing structure, or may be located beside or above a detached garage or other accessory structure."
ZONING	<ul style="list-style-type: none"> All RS single family zones, RT11 (two-family dwelling district - Norquay) and RM7 (multiple-dwelling district - Norquay) 	<ul style="list-style-type: none"> RT1 (Two-family residential) 	<ul style="list-style-type: none"> RS9 (Infill residential zone) 	<ul style="list-style-type: none"> All RS single family zones and A zones (agriculture)
NUMBER OF ALLOWABLE DWELLINGS PER LOT	<ul style="list-style-type: none"> 3 – principal dwelling, secondary suite and laneway house 	<ul style="list-style-type: none"> 2 – principal dwelling and garden cottage or carriage house 	<ul style="list-style-type: none"> 2 – principal dwelling, secondary suite or coach house 	<ul style="list-style-type: none"> 2 – principal dwelling, secondary suite or coach house
TENURE	<ul style="list-style-type: none"> Rental or family use 	<ul style="list-style-type: none"> Rental or family use 	<ul style="list-style-type: none"> Rental or family use 	<ul style="list-style-type: none"> Rental or family use
UNIT SIZE	<ul style="list-style-type: none"> The maximum floor area of a laneway house is determined by multiplying the lot area by 0.16. This results in maximum unit sizes of approximately 644 ft sq on standard 33 x 122 ft lots, and 900 ft sq on 50 x 122 lots. The maximum size of a laneway house is 900 ft sq, regardless of lot size. The minimum size of a laneway house is 280 ft sq with a possible relaxation down to 204 ft sq. 	<ul style="list-style-type: none"> The maximum size of the garden cottage or carriage house is 540 sq ft. 	<ul style="list-style-type: none"> The maximum floor area of a coach house is 1184 sq ft. The minimum floor area of a coach house is 452 sq ft. 	<ul style="list-style-type: none"> The maximum floor area of a garden suite is 968 sq ft. The minimum floor area of a coach house is 398 sq ft.
HEIGHT AND STOREY LIMITS	<ul style="list-style-type: none"> 1 and 2 storey homes are allowed. A 1 storey is limited to 12ft if it is a flat roof or 15ft for a sloped roof. A 2 storey can have a maximum height of 18ft to 20ft depending on roof type and pitch. The upper storey is restricted to 60 percent of the footprint of the laneway house. 	<ul style="list-style-type: none"> 1 storey homes are allowed. Height limits are not specified. 	<ul style="list-style-type: none"> 1 and 2 storey homes are allowed. Coach houses must be clearly distinguishable from principal structures in terms height. A 2 storey can have a maximum height of 27ft for a flat roof and 32ft for a sloped roof. 	<ul style="list-style-type: none"> Height limits are informed by underlying zoning.
MINIMUM LOT SIZE	<ul style="list-style-type: none"> 3595 sq ft and 32.15 ft wide 	<ul style="list-style-type: none"> 3983 sq ft and 33 ft wide 	<ul style="list-style-type: none"> 3552 sq ft 	<ul style="list-style-type: none"> 5995 sq ft
LOCATION ON LOT (SETBACKS, DISTANCE FROM PRINCIPAL HOME)	<ul style="list-style-type: none"> The laneway house must be set back from the lane a minimum of 3ft, and more where possible. Entries facing the lane should be set back a minimum of 5ft There must be a minimum separation of 16ft between the laneway house and principal house for both 1 and 2 storey laneway houses. 	<ul style="list-style-type: none"> Setbacks 4' rear setback 6' interior side setback 12.5' exterior side setback 	<ul style="list-style-type: none"> Setbacks: 82' front setback 3' side setback 5' rear setback 	<ul style="list-style-type: none"> 10 ft rear setback on average Distance from principal building varies on the zone
PARKING REQUIREMENTS	<ul style="list-style-type: none"> A minimum of 1 unenclosed and uncovered parking space MUST be provided on site adjacent the laneway house. The parking space may be for the use of any of the dwelling units on site. 	<ul style="list-style-type: none"> A minimum of 1 parking space per garden cottage or carriage house plus the 2 parking spaces for the principal house for a total of 3 spaces, provided on site. 	<ul style="list-style-type: none"> One parking space per "secondary suite" is required. 	<ul style="list-style-type: none"> 1 spot for 1 bedroom garden suite 2 spots for 2 bedroom garden suite Must register for parking covenant with Land Titles Office.

