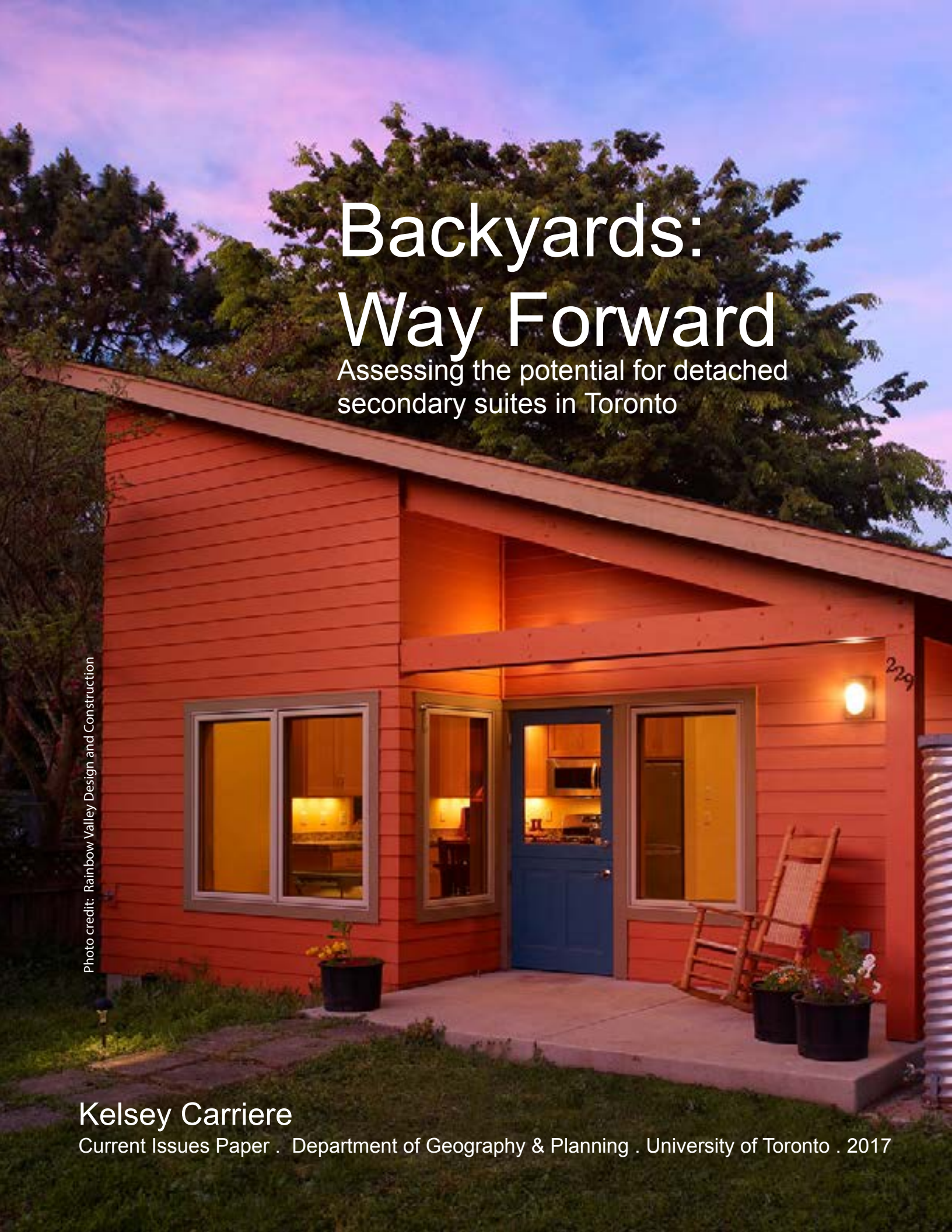

Backyards: Way Forward

Assessing the potential for detached secondary suites in Toronto

Photo credit: Rainbow Valley Design and Construction

Kelsey Carriere

Current Issues Paper . Department of Geography & Planning . University of Toronto . 2017

This report was prepared in partial fulfillment of a Masters of Science degree in Planning from the University of Toronto, April 2017.

This document is meant to inform planners, and municipal decision-makers around the potential of detached secondary suites to increase rental unit supply, among other social benefits, and for homeowners, residents associations, designers, and architects to consider the possibilities of garden suites or backyard housing and raise the conversation within their neighbourhoods and professional fields.

I wish to thank my advising committee Anna Kramer, Maria Denegri, Lindsay Stephens, Jo Flatt and Sa'ad Ahmed for their support in developing this research and for their dedication to research and city-building; and my family for their patience while I completed this work, especially to my daughters who are eager to build their own house in our backyard.

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Executive Summary

As the Greater Toronto Area struggles to accommodate over 100,000 new residents every year, and house prices continue to soar, how can we maintain an adequate supply of rental units? The success of Toronto's 1999 Secondary Suites bylaw, with secondary apartments now making up 1/5 of our rental stock, would suggest that one way to accomplished this is by putting the benefits in the pockets of homeowners through expanded provisions to allow detached secondary suites in the form of a laneway or garden suites.
The City of Toronto is currently considering options for laneway suite performance standards based on feedback from three public consultations conducted in partnership with Lanescape, Evergreen, Councillor Mary-Margaret McMahon and Councillor Ana Bailao. Meanwhile, across Canada, most other major cities' bylaws address both garage (laneway) *and* garden (backyard) suites.

In this context, I spoke with planners in major cities across Canada about their recently adopted detached secondary suite (DSS) regulations, about how and why they were implemented, and about how laneway and garden suites are treated differently in their design guidelines. I mapped out the estimated potential for DSS in Toronto using two neighbourhood case studies, one downtown and one suburban, to apply these findings to the local context of drastically different neighbourhood typologies.

This research analyses the guidelines of eight Canadian cities, and two American cities, and makes recommendations for Toronto, proposing a set of design guidelines to encourage gentle density through not only laneway housing, but garden suite construction across the City of Toronto. The guidelines recommend setbacks and the appropriate placement of windows, entrances, and balconies to minimize overlook and shadowing on neighbouring properties; addresses concerns around servicing, garbage collection, and emergency service access; and suggests a tiered permitting approach that would allow simple guideline-compliant 1 or 1 ½ story DSS to be built as-of-right city-wide, yet allow planners to retain design control over taller or more potentially intrusive projects. This study suggests that, depending on how the performance standards were defined, between 100,00 and 200,000 rental units could be introduced through a permissive DSS bylaw.

Although most active proponents of laneway housing in Toronto consider it politically premature to act on the potential for backyard or garden suites city-wide currently, this research makes it clear that a city-wide DSS bylaw offers the potential to increase the rental unit supply 30 times more than considering laneway housing alone, with fewer complications in terms of municipal services and emergency vehicle access.

Photo credit: Smallworks Studios

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Overview

Introduction

Toronto's 250 kms of laneways present an idle piece of affordable housing potential that has been sparking the imagination of architects and city-builders for decades, representing between 6,000 and 10,000 properties that could incorporate a laneway house (Stinton and Elslander, 2003). Yet broadening the scope of our conversation just a bit beyond laneway-abutting properties could make up to 200,000 properties eligible to add rental housing with detached secondary suites (**DSS**). DSS function the same way as laneway suites, but while not abutting laneways, require access from the street frontage, and in doing so, address many of the concerns that must be surmounted to permit laneway housing, while expanding the benefits of DSS geographically across the city.

Laneway housing was last discussed at Toronto City Council in 2006, and was defeated with the assumption that laneway suites would involve severing lots and create complications with servicing. It has been widely recognized in the ordinances passed in over a dozen Canadian municipalities since then, that DSS should *not* require severances and instead should remain as rental units of the principal residence, with water, sewage and hydro services connecting to the main house, not unlike basement apartments or secondary suites within the main house, except with more light and privacy. Now, with Lanescape and Evergreen working collaboratively on developing performance standards to inform a laneway ordinance for Toronto, it is the ideal time to consider the potential of expanding the conversation beyond laneway houses to include backyard houses or ***garden suites*** in the decision-making process.

Considering the difficulty of changing a bylaw in the City of Toronto, and the education required to inform Toronto's 44 councillors about DSS, most active proponents of laneway suites consider it politically premature to push for a garden suite bylaw as well at this time. With that in mind, the purpose of this paper is to demonstrate the immense potential of looking beyond laneway abutting properties and to recommend that adopting a garden suite ordinance for the City of Toronto be considered as a part of the laneway suite conversation. This paper illustrates the relative simplicity of addressing servicing and access issues in garden suite compared to laneway suites, and proposes design guidelines specific to garden suites that would ensure that they were developed in such a way as to not have detrimental impacts on privacy, livability, or neighborhood form.

How to read this document

This document is recommended for planners and municipal decision-makers to inform their decisions around expanding the definition of secondary suites, and for homeowners, residents associations, designers, and architects to consider the possibilities of DSS and raise the conversation within their neighbourhoods and professional fields.

This document is organized with an overview of the subject, rationale and policy context, followed by a description of the research methods employed, including return on investment calculations of several DSS scenarios, and an estimate of the potential number of DSS that could be built in Toronto based on two neighbourhood study site analyses. Next, I present an overview of key considerations and a comparison of municipal DSS guidelines from ten other cities which inform the proposed garden suite design guidelines for Toronto.

This research was informed by the input of my advisory committee:

- **Supervisor - Anna Kramer**, Assistant Professor, Urban Planning, University of Toronto
- **Second reader - Maria Denegri**, Architect and Lecturer at Daniels Faculty of Architecture, Landscape and Design, University of Toronto, and partner at Denegri Bessai Architecture and Design Studio
- **Professional advisor - Jo Flatt**, Senior Project Manager for the Laneway Suites project at Evergreen

Community stakeholder - Sa'ad Ahmed, founder of TinyTO, provider of attainable homes

Terminology

Backyard housing goes by many names, depending on the nature of the building or its intended use. I use the terms ***laneway suites*** and ***garden suites*** here to differentiate between properties abutting laneways and those that do not. The word *suites* is used instead of *houses* to reflect the smaller, secondary, rental nature of the intended buildings. I use the technical term ***detached secondary suites*** (**DSS**) to refer to both laneway and garden suites, though I would suggest that when developing the municipal policy framework, that a more illustrative term like *coach houses* be adopted to better reflect the concept and refer to both laneway and garden suites. See **Appendix A** (pg 44) for a full list of terms and definitions.

The laneway suite conversation in Toronto

Currently, the terminology used for DSS in Toronto is focused on the *Laneway*. Evergreen and Lanescape collaborated on the *Citywide Laneway Suites Consultation.* Garden suites were not ruled out of the conversation, in fact one of the 12 questions on their city-wide survey clearly asked *Could detached auxiliary suites be accommodated in rear yards without laneways?* (Lanescape, 2016), and received majority of positive responses (Flatt, 2017), yet this terminology has a very specific geographic and regulatory connotation relating specifically to properties abutting laneways.

The Pembina Institute's *Make Way for the Laneway* report (Pembina, 2015), speaks to three "innovative small-scale housing options" including attached secondary suites (basement and attic apartments), detached secondary suites (laneway houses, granny flats and garage suites), and infill townhouses, yet the title again reinforces the idea that we are only really speaking about properties on laneways which happen to be located predominantly in the Old

> "**A big part of it came down to a perception of fairness**...we wanted to have a uniform guideline city-wide so that everybody has the right to have a secondary suite. It could be in the basement or it could be in the back yard, on a lane or not…**Everybody has the opportunity**, it's up to you to make it fit in accordance with the guidelines."
>
> -Chris Sale
> Planner, Regina

City of Toronto and most numerously in the west end. This is important because, as will be discussed later in the **Existing Municipal Guideline Overviews** (page 24) most other cities to recently adopt DSS ordinances have chosen a more inclusionary, city-wide policy that addresses design and by-law considerations for neighbourhoods of various typologies and for properties abutting laneways or not, as a way of both increasing the potential uptake for the initiative and offering a fair distribution of the benefits of DSS city-wide.

Rationale & Precedent

Detached secondary suites (DSS) have been recognized as a means of addressing a broad range of social issues including aging in place, caring for dependents, increasing the supply of affordable rental stock, making homeownership more attainable, creating "gentle density," and as a way of beginning to build more compact and complete communities. In Canada, DSS have now been introduced in Vancouver, Victoria, Edmonton, Calgary, Regina, Saskatoon, Winnipeg, Ottawa, and Moncton as well as several smaller cities. They are also being considered in Halifax and as close by as Hamilton. The rationale for their implementation will be explored below.

Aging in place and caring for dependents

> One of the main reasons for this is a solution for **multigenerational living** for growing children and aging parents, this is the kind of thing that would really make a lot of sense. **There is a huge social element to it.** We're hearing a lot of that.
>
> -Andrew Sorbara
> Planner at Lanescape

With over 25% of Ontario's population expected to reach their senior years by 2041—up from 16% today, (Ontario Ministry of Finance, 2016)—the needs of an aging population has huge implications for planning, care services and accessible housing stock. A recent survey by the Canadian Association of Retired Persons suggests that 85% of seniors want to age in place in familiar surroundings until their health makes this impossible (CARP, 2008). Aging in place is often cited as a motivator for building DSS, as a means of having older generations remain in their communities and close to family, yet maintaining independence. Often a young couple will live in a DSS on one of their parent's properties until they have children and need more room, then the young family would switch to the main house, and the grandparents down-scale to the DSS.

As our public health system begins to prepare for higher proportions of senior citizens, home care is being touted as the preferred and most cost-effective means of supplying care (CARP, 2008). In fact, the DSS market is already starting to respond to this with the new company *Garden Loft* in Calgary prototyping a pre-fabricated drop-in garden suite designed specifically for seniors, with interchangeable elements for differing levels of care (CBC, 2016).

DSS are equally empowering for families with dependents who need care, but also a sense of independence. According to Statistics Canada, in 2012, 8 million Canadians, or 28% of the population aged 15 and over, provided care to family members or friends with a long-term health condition, a disability or problems associated with aging (Turcotte, 2015).
Clearly DSS would not be relevant to all of these diverse care needs, but, in many cases, the opportunity to maintain independence while being in close proximity to care can ease the associated emotional, time and financial stresses of caring for dependents.

Increasing rental stock

In Toronto, nearly half of residents rent their accommodations, with the tenure split having remained roughly even for the past 35 years (Toronto City Planning, 2006). Yet since 1996, 95% of all new housing built in Toronto has been purpose-built for ownership, while only 5% was rental. The overall supply of rental housing in the city has not kept up with population growth (Toronto City Planning, 2006). The average cost of rent of a two-bedroom apartment in Toronto in 2016 was $1288 compared with $942 in the rest of Canada, with rent prices in Toronto having risen 24% since 2000. Currently 43% of renters spend 30% or more of their income on shelter (a rate above which housing is considered *unaffordable*), of them, almost half spend 50% or more of their income on shelter (Bula, 2016). And this is all considering city-wide statistics. If we apply David Hulchanski's Three Cities thesis that illustrates increasing income polarity and a dissolving of the middle class, we would see this hit some communities much harder than city-wide percentages would imply (Hukchanski, 2007).

> Laneway, basement and granny suites tend to be more affordable than even purpose built rental apartment buildings.
>
> **They provide an important component of the housing spectrum.**
>
> They allow for a greater mix and inclusiveness in terms of different socioeconomic backgrounds being able to live in some of the more desirable transit-connected communities where there are jobs, where there is retail. I think that point can't be emphasized enough.
>
> -Mike Collins-Williams
> Ontario Home Builders Association

DDS are recognized throughout North America as an effective means of increasing the supply of rental stock by expanding on the success of the introduction of secondary suites. To give a sense of the impact of permitting secondary suites, it was estimated that there were about 26,600 secondary units in Vancouver in 2014, forming about a fifth of the rental stock. About a fifth of the rental stock in Edmonton is in secondary suites and accessory dwellings, as well (CMHC, 2014a). In the words of Kevin McNaney, Vancouver's assistant director of planning, permitting secondary suites "allows us to add rental with an incentive and without a subsidy" (Bula, 2015). Since Vancouver began permitting laneway suites in 2009, 2,500 permits have been issued (Robinson, 2016), with laneway suites now representing almost 10% of their secondary suite supply in only eight years.

In Toronto, since 2000 when secondary suites were regulated, they have come to represent 20% of our total rental stock (Second Suites, 2000), or almost 100,000 units (CMHC, 2014b). Rents in secondary suites are often lower than those for apartments in purpose-built rental buildings, and the suites can be developed without or with minimal government assistance. Despite fluctuating vacancy rates, second suites tend to be 10% to 15% cheaper than regular low-rise and high-rise apartments (Second Suites, 2000), enabling low- and moderate-income households to live in ground-related housing in a residential setting. Although DSS have the potential to raise the quality of secondary rental units, which may have the effect of increasing prices, increasing over-all supply of rental units would help to bring down the demand, and consequently, prices. Interestingly, according to CMHC's 2016 Rental Market Report, average rental prices are seeing some stability in the GTA due to condo development, but mortgage carrying costs continue to outweigh rental (CMHC, 2016).

Making homeownership more attainable

Home prices in Toronto have been skyrocketing for over a decade in what is being considered a housing supply crisis (Tencer, 2017). Average home prices rose 22% in the past year, and those were up 17% since 2015 (Remax, 2017). When home prices are greater than 3 times the region's average income, the area is considered unaffordable. Toronto's 2016 average home price reached $730,472 or 6.5 times the average income (Pigg, 2015). Rising property taxes for long-standing homeowners can also put financial stress on homeownership. DSS offer opportunities to increase affordability for homeowners by providing rental income from their existing property or housing for family members. For a comparative analysis of the financial benefits of investing in DSS and other secondary suits see **Investing in DSS as a household income supplement** page 21.

Creating "gentle density"

NIMBYism (Not In My Back Yard) can be a powerful force, and stable single family neighbourhoods can hold great resistance to any form of intensification. According to our Official Plan, "some physical change will occur over time [in our established neighbourhoods in the form of] enhancements, additions and infill housing on individual sites. A cornerstone policy is to ensure that new development in our neighbourhoods respects the existing physical character of the area, reinforcing the stability of the neighbourhood" (Toronto Official Plan, 2015).

DSS fall very neatly into this policy. They are often referred to as a form of "gentle density." Because of their scale and location, they don't significantly alter the look or feel of the community—in fact, with the following of appropriate guidelines, they may not be noticeable from the street at all. Additionally, most municipalities work it into their by-law that garden suites or laneway houses cannot have more residents on the property than the maximum allowed in the principal residence which in Toronto is defined as one person per 9 square meters (City of Toronto, 2016), so, the fear of spurring inappropriate levels of density can be assuaged.

> **This doesn't change the look, it doesn't change the feel of the neighbourhood.**
>
> "...they really fit into this missing middle, gentle density part of the equation…these are methods of increasing the supply of housing without drastically altering the character of neighbourhooods. The streetscape will look the same. The laneways if anything, will be spruced up, but this doesn't change the look, it doesn't change the feel of the neighbourhood, so it's a great way of increasing density in these types of neighbourhoods."
>
> -Mike Collins-Williams
> Ontario Home Builders Association

Although DSS that are not garage or existing structure conversions will be located on previous private green space, provisions can be made to reinforce sustainability measures by enforcing maximum lot coverage of buildings, ensuring stormwater management and permeable surfaces, incentivizing greenroofs, protecting existing trees, and encouraging greater biodiversity of retained greenspaces. Vancouver, for example has a tree protection bylaw and their laneway housing bylaw offers relaxation of their setback and footprint guidelines if adapted to protect an existing tree (Vancouver, 2013). In terms of loss of green space, it could also be argued that a more compact but more diverse garden has greater ecological benefit that a larger expanse of lawn requiring mowing (Babbs, 2013).

Figure 1. Even with increased built area on the lot, ecological function of the yard can be increased over mere lawn through landscaping and green roofs.

Complete and compact communities

DSS can contribute to reaching provincial intensification targets and the development of complete and compact communities in many ways. They make efficient use of existing infrastructure and services by providing homes in neighbourhoods already serviced by sewers, streets, schools, libraries, and transit. By adding population to these neighbourhoods we increase not only the efficiency of service provision, but build also, increased support for local businesses and potential for improved transit service. As Kramer and Burchfield noted in *Growing Pains: Understanding the new reality of population and dwelling patterns in the Toronto and Vancouver regions*, many existing walkable neighbourhoods with high demand for housing and lack of supply in Toronto have either maintained a stable population or have lost population over time due to gentrification and smaller household size (Kramer and Burchfield, 2015). This can lead to the loss of services and school closures in prime neighbourhoods.

DSS can also take the form of a home office, facilitating telecommuting and minimizing commute times and the subsequent greenhouse gas emissions. Re-investment in neighbourhoods in the form of DSS could also increase property taxes, through increased property values, and therefore lend support for ongoing renewal and revitalization in the area.

Background and Context

Provincial Policy Context

Places to Grow Act

Heralded as one of North America's most progressive growth plans, Ontario's *Places to Grow Act* has made bold strides to change the way cities grow and develop, making provisions to contain sprawl and intensify development around existing infrastructure. Although its critics would argue that by decreasing the supply of development land this act has had a negative effect on housing affordability (Kalinowski, 2016a), the *Places to Grow Act* specifically requires municipalities to develop a housing strategy addressing *affordable* homeownership and rental housing plans and policies to develop for a diverse range of housing types and densities, including detached secondary suites, to support the achievement of the minimum intensification and density targets (Ministry of Municipal Affairs, 2016).

> "Everything is really set in the context of this provincial mandate, so **there's really no choice** [about whether or not to permit detached secondary suites]."
>
> -Andrew Sorbara
> Planner at Lanescape

Ontario's Long-term Affordable Housing Strategy

In Ontario's *Long-term Affordable Housing Strategy*, secondary units, including DSS, are recognized as one of the most affordable ways for the government to encourage the supply of rental housing units since they do not require the purchase of land (Ministry of Municipal Affairs and Housing, 2016). The Ontario Home Builders Association has long been an advocate for secondary suites, pressuring the province to permit them over the concern that, "primarily due to NIMBY pressures from ratepayers and intolerance towards the elderly, students, young renters and working-poor, that many municipalities have made secondary suites illegal in various areas of the municipality. It is the opinion of OHBA that this constitutes 'zoning-for-people' rather than 'zoning-for-use' and is a restrictive and discriminatory practice that limits housing affordability and choice for a significant proportion of Ontarians" (Ontario Home Builders' Association, 2015). For this reason, municipalities are now required to develop permissive secondary suite policies (Minister of Housing, 2016).

The Strong Communities Through Affordable Housing Act

Likewise, in 2011, *The Strong Communities Through Affordable Housing Act* amended the *Planning Act* to enhance land use planning tools to support municipalities in making provisions for secondary suites and garden suites in order to address the affordable housing crisis. Second units must now be permitted in primary dwellings and accessory buildings regardless of date of construction of the primary or the second unit (Ministry of Municipal Affairs and Housing, 2015).

Recently passed *Bill 7*, *Promoting Affordable Housing Act* has amended the *Development Charges Act* and now exempts secondary units in new homes from development charges in order to encourage new builds. Previously only buildings that were at least five years old were permitted to add secondary suites although retrofitting is a much less efficient means of accommodating secondary suites (Ministry of Housing, 2017).

These policies all clearly add up to directive for Toronto to explore varying degrees of infill development including laneway and garden suites. With over 100,000 people moving to Toronto each year (Toronto Foundation, 2016), and decreasing rates of car ownership, we must explore creative options to accommodate residents in the neighbourhoods where they want to live.

Local Context

Although provincial policy for the provision of DSS seems relatively clear in its directive, the local context for DSS in the City of Toronto is complex and deserves some consideration.

Official Plan

Our Official Plan, while respecting single-family neighbourhoods and directing growth to transit hubs, corridors, and cores, also recognizes that there will be "some physical change [to established neighbourhoods in the form of] enhancements, additions and infill housing in a way which respects the existing physical character of the area, reinforcing the stability of the neighbourhood" (Toronto Official Plan, 2015). Although DSS would seem to fall seamlessly into both of these intentions, after public consultation, the 2015 proposed amendments to the Official Plan recommend that stable neighbourhoods be specifically described as 'low density and low rise' which could challenge the introduction of DSS, as many interpret the increased density achieved through secondary suites as changing neighbourhood form (City of Toronto, Assistant Planner, 2017).

> "The official plan and the housing policy state that we allow many **different forms of housing** – so an argument could be made that that would include laneway and garden suites. On the other hand, our neighbourhood policy talks about the physical character of the neighbourhood and there aren't currently any. **If it doesn't fit the neighbourhood, it wouldn't be allowed**. Yet there are a lot of spots in downtown Toronto where there are existing laneway or garden suites so **there could be an argument made that it does meet policy.**"
>
> -An assistant planner,
> City of Toronto

Affordable housing

Toronto is in the midst of an affordable housing crisis. With average home prices recently rising $40,000 in one month (Tencer, 2017), home ownership is becoming less and less attainable to the average resident. At the same time, with 43% of renters spending over 30% of their income on shelter, and 22% of renters spending more than 50%, shelter is becoming unattainable (Bula, 2016). It is crucial in this juncture that Toronto act as quickly as it can to address the low hanging fruit of affordable housing policy in attempts to meet market demand for affordable rental units. Building on the legacy of legal secondary suites, DSS can increase rental supply, helping to ease the lack-of-supply price bubble, while at the same time easing the costs of homeownership for homeowners.

Although my analysis of Vancouver Laneway House rental prices, adjusted for the difference in Toronto and Vancouver average home sale prices (see **Table 1** and notes, **page 22**) suggest that DSS would not be the most affordable of rental options, provincial policy statements across the country suggest otherwise, so perhaps in a housing bubble, the affordability of DSS get distorted as well as home prices.

Housing strategy

Although there are over 340 community not-for-profit agencies working to help vulnerable Toronto residents find, keep and live in affordable and permanent housing, Toronto does not have a city-wide affordable housing strategy (City of Toronto, 2017). The Toronto Community Housing Corporation is a large affordable landlord, but is underfunded and behind in maintenance and repairs, and the waiting list is long. As mandated by the *Places to Grow Act*, Toronto needs to develop an integrated strategy to address affordable housing, which, by the examples of Edmonton, Regina, and Austin, and the *Strong Communities through Affordable Housing Act*, would likely include permitting laneway housing and garden suites across the GTA. In Design Regina's *Comprehensive Housing Strategy*, secondary suites, including garden suites were flagged as a "quick win" recommendation for action (SHS Consulting, n.d.).

The "missing middle"

Developers will argue that what people really want are single family detached homes which both population growth and the Growth Plan are limiting the supply of. We are barely keeping up with growth demands

Figure 2: Toronto suburb

Figure 3: Toronto condominium development

Figure 4: The "missing middle," image courtesy of Opticos Design, Inc

Figures 2 and 3 illustrate the housing types most strongly represented in current development, and **Figure 4 depicts** the "missing middle" required to bring more diversity to the housing market

through condo development, but this housing typology does not suit all family types. We are missing what Cherise Burda of the City Building Institute calls the "missing middle" of housing—mid-rises, stacked townhouses, and to a lesser and even more discrete degree, DSS (Kalinowski, 2016b). DSS unique among building typologies as they offer ground level affordable housing without changing the aesthetics of the neighbourhood. The Pembina Institute's *Home Location Reference Survey* also articulates the preference for GTA residents to live in walkable, transit-friendly neighbourhoods, but notes that they are driven to make the home location decisions that they do based predominantly on price (Burda, 2014).

History of secondary suites in Toronto

Secondary suites have been permitted in Toronto since 1999, following a 1995 provincial legislation to permit them. It is estimated that 20% of all rental stock in Toronto can be found in private homes containing second suites (Second Suites, 2000). DSS are currently being presented in Toronto as merely a secondary suite that instead of being located in the basement is located on laneways, or in the backyard. Framing DSS like this is very effective to understanding their potential while mitigating fears of their intrusiveness on privacy or their impact on changing neighbourhood form.

History of laneway housing at Toronto City Council

Laneway Housing was last discussed at Toronto City Council in 2006 and was not recommended primarily on the grounds that "the construction of a laneway dwelling almost invariably involves the severance of the rear portion of a lot and relief from the zoning by-law standards for lot size, setbacks, landscaped open space and where there is no severance, for construction of a 'house behind a house' on the lot" (City of Toronto, 2006). This issue has been addressed by Lanescape and Evergreen who are developing proposed laneway housing performance standards for the City of Toronto. Every other Canadian municipality who has passed DSS ordinances since 2009 by requiring that DSS remain accessory to the principal residence for rental purposes only and may not be severed, sold or strata titled. Servicing, snow clearing, and emergency vehicle access, which were also considered unsurmountable complications by council in 2006 have all been addressed by other municipalities through the stipulations of their bylaws.

Suburbs neglected

Toronto has now had ten years to re-envision the idea of DSS, and meanwhile most other major Canadian cities have expanded DSS policy beyond laneways to include garden suites.

The amalgamation of Toronto Council in 1998 continues to impact municipal politics as issues that seem to have relevance either only in the former City of Toronto and East York (ie, the downtown core) or the suburbs (Etobicoke, North York, and Scarborough) are voted on by Councillors from the entire City of Toronto. The vastly divergent patterns of land use plans—and therefore lifestyles—exercised in the suburbs and core affect perceptions and decision-making. In the context of DSS, if presented as *laneway housing*, it would seem to be a downtown issue, but if presented as *laneway and garden suites,* it would suddenly become a city-wide issue garnering a very different interest from suburban councillors. Although some councillors might succumb to NIMBY pressures of their constituents, others may very likely see this as a democratization of opportunities to increase housing affordability, provide new rental housing supply, and create jobs in their wards through the construction of DSS.

Methods

In order to measure the potential for garden suites in Toronto and inform a comprehensive set of design guidelines, this study has utilized a wide range of methods including an analysis of DSS regulations and design guidelines from 10 Study Cities, as well as interviews with planners and stakeholders, modeling, mapping, and financial analyses. Application for the local context is explored through two neighbourhood case studies.

Measuring the Potential

In order to develop a holistic understanding of the issues DSS policies must address, and how they might be applied across the City of Toronto, I chose to study two neighbourhoods in two vastly different wards to use as a comparative analysis of the breadth of key considerations required.

Study areas

The two wards, 18 and 41, were chosen for admittedly political reasons. If we think of garden suites as a housing affordability issue, it makes sense to study the Wards of municipal decision makers involved in affordable housing. Downtown, **Ward 18**, is represented by Ana Bailao, a vocal and active proponent for a laneway housing ordinance in Toronto (Powell, 2016) and she also sits as chair of the Affordable Housing Committee. Her ward is also highly serviced by laneways and has sparked much local interest in the laneway housing conversation, yet it also houses many properties that could be eligible for garden suites. **Ward 41** in North-Central Scarborough, is represented by Councillor Chin Lee who also sits on the Affordable Housing Committee. The two wards have similar average rental costs (City of Toronto Ward Profiles, 2011) and a comparable tax base (Smith Cross, 2015) but vastly different neighborhood structures. With no laneways in Ward 41, they would be entirely reliant on a garden suite accommodation for DSS development.

Figure 5 : This table illustrates the locations of the two study areas: Ward 18 – Davenport, and Ward 41 – Scarborough-Rouge River overlaid on a map of Toronto's laneway system (in orange). Base map source: The Laneway Project

Figure 6 : Shows neighbourhood morphologies and standard lots sizes in Wards 18 and 41.
Ward 18 consists of mainly narrow deep lots with many laneways. Ward 41 has no laneways and varying lots sizes as laid out through typical curvilinear suburban street layout.

Assessing the potential to increase rental stock with DSS

Accurately assessing the number of properties eligible for building DSS in the entire City of Toronto would require complex GIS analysis based on a precise set of design guidelines, denoting properties that have not only adequate lot area, but also proper accessibility to the street, enough room to accommodate setbacks, and massing of existing built structures that would still allow a DSS without surpassing a maximum building coverage on the lot.

For the purpose of this study, I have used two approaches to *estimating* the number of properties eligible to build DSS. The first utilizes a very conservative city-wide minimum lot size of **5,750 ft²** that could accommodate DSS. This is the minimum lot area used in Austin, Texas—the highest minimum lot area to permit DSS of all of the Study Cities. Preliminary GIS calculations, based on lot area alone (not taking into account setbacks, entrances or percentage of built form on lot) suggests that there are **175,801 properties** in the City of Toronto, or **34% of all single family residential lots**, eligible to build garden suites, nearly 30 times the **6,150 potential laneway suites** estimated by Architects in Association (Stinson and Van Elslander, 2003). The calculation of the properties eligible for garden suites was reached using City of Toronto's Open Data for Parcels and Mass, counting single family residential properties with a minimum lot area of 5,750 ft² (City of Toronto Open Data, 2017). Using a lower minimum lot size would increase the preliminary calculation of eligible lots, but applying the entrance and built-form coverage stipulations would have the opposite effect, so this initial estimate may not be too far off.

The second method, meant to refine the preliminary calculation, is based on a representative sample area from each ward and utilizes GIS measurements to account for the essential 4 ft accessway to back yards required by emergency and service vehicles and the Accessibility for Ontarians with Disabilities Act. Utilizing a 1 km² square sample area with typical morphology from each of the two study areas, I used GIS to measure distances between the houses to calculate what percentage of the properties would have adequate access for a backyard garden suite. In the downtown study area, Ward 18, the 1 km² sample area was bounded by Bloor Street, Dovercourt, Dupont and the laneway just west of Emerson Avenue. In Ward 41, the sample area was bounded by the 401, McCowan Road, Sheppard Ave, and McDairmid Road.

Figure 7: The 1 km² sample areas. the downtown study area, Ward 18, was bounded by Bloor Street, Dovercourt, Dupont and the laneway just west of Emerson Avenue. In Ward 41, the sample area was bounded by the 401, McCowan Road, Sheppard Ave, and McDairmid Road.

In **Ward 18** the 4 foot accessway was measured from building to building, recognizing the common occurrence of shared driveways and pathways between houses, which showed that **43%** of properties could accommodate access to a garden suite. If we include properties that abut laneways and could access the property from the lane (but don't necessarily have the 4 foot accessway) the number that could accommodate a DSS rises to **61%**.

In **Ward 41**, respecting the prevalence of property line fencing, measurements were made from house to property line. Even considering this, **61%** of properties could accommodate access to a garden suite. If we can assume the Study Areas of these two drastically different neighbourhoods to be together be representative of the majority of GTA properties, **61%** of Toronto's **517,000** single family residential properties, or **315,000** could accommodate a DSS in the form of either a laneway or garden suite.

Figure 8: Depicting examples of minimum 4 foot accessways between houses in Wards 18 (on the left) and 41 (right).

One other calculation conducted through GIS analysis was the prevalence of existing structures that could potentially be converted to DSS without disruption to the neighbourhood form. In Ward 18, **48% of properties already have a structure over 205 ft,²** the minimum permitted square footage for a laneway suite in Vancouver. This means that merely grandfathering in the footprint of existing structures would allow for many DSS without causing unprecedented shading, built form on lot coverage, or massing issues. In Ward 41, where most houses include a built-in garage, only **3%** of properties have such existing structures, suggesting that in the suburbs there may be more education required to introduce this new building typology.

Model

Since the lots sizes and shapes vary so much in neighbourhoods like those typical of Ward 41, and there would be no standard orientation for DSS, I have also built a scale model of a Ward 41 neighbourhood with typical typology, based on the Agincourt South-Malvern West community in the south-east of the Ward where Pitfield Road, Lawnmere Crescent, and Charterhouse Road intersect. This model depicts existing lots and building stock at a 1:120 scale in order to explore different configurations of windows and entrances, and the effects of privacy, shadowing, and overlook on neighbouring properties. In this instance, DSS units (the structures in white) from 300 ft² to 720 ft² could be utilized with access to the street through typical 4 foot setbacks from lot lines between houses.

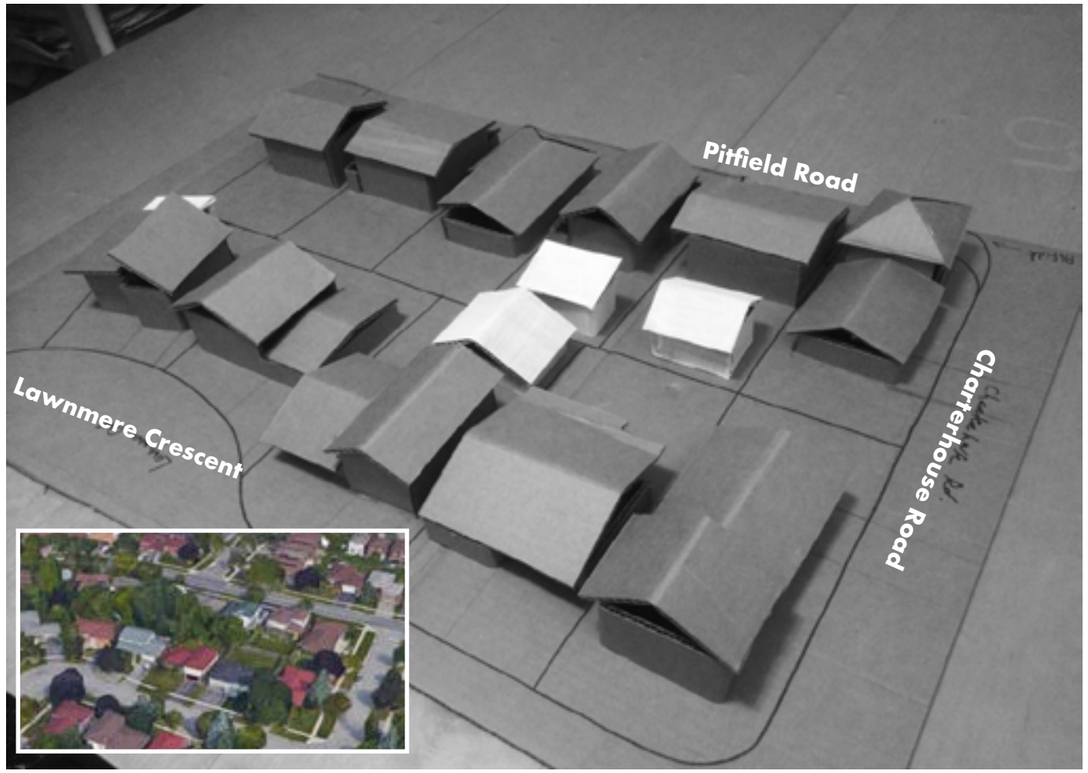

Figure 9: A 1:120 Scale model of Agincourt suburban block, Ward 41.

The model offers a physical sense of the potential scale and orientation of such structures, and allow us to see from the street view how guidelines like restricting the height of DSS could mean little impact on the visual character of the street (**Figure 10**). See Design Guidelines (pages 36-42) for discussion of proposed setbacks and building design restrictions utilizing this model.

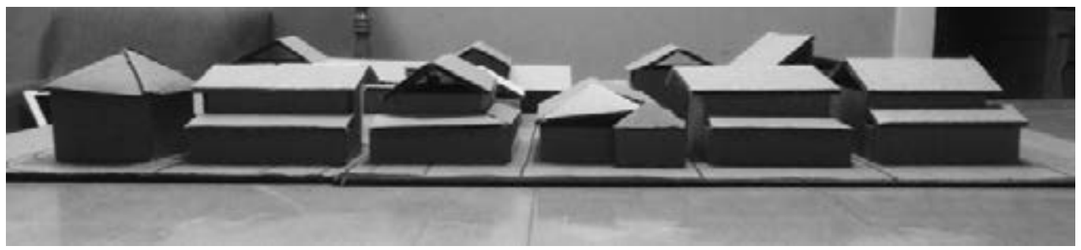

Figure 10: Street view of the model illustrating how using height restrictions, DSS can be regulated to not change the aesthetic character of the neighbourhood as they are barely visible from the street.

Financial Analysis

In order to frame the issue of garden suites it is important to be able to articulate how much impact such an ordinance could have on housing affordability and what a municipality might stand to gain from this policy. In order to accomplish this, I have calculated the expense and return on investment for a homeowner investing in a DSS and looked at research on municipal revenue from DSS.

Investing in a DSS as a household income supplement

The uptake of DSS construction—of the up to 315,000 *potential* units—depend heavily on the financial benefits to homeowners of making the investment to build one. The chart on the following page **(Table 1)** breaks down the change in housing affordability offered by adding secondary suites of various forms to a Toronto property and compares this with investing in a condo purchased for rental income. As we can see, an 800 square foot DSS offers the greatest return of all of the options. Options of sweat-equity or prefabricated units would also lower the investment costs and increase the net financial benefit significantly.

Considering the comparable average rent (City of Toronto Ward Profiles, 2011) and tax base (Smith Cross, 2015) of the two study sites, these numbers should be roughly suited to Ward 41 as well as Ward 18 from which the rental prices were derived. As the popularity of DSS increases, financial lending institutions will respond. In Vancouver for example, Prospera Credit Union and Vancity both offer special laneway house financing programs.

DSS as a municipal revenue stream

As DSS are added to properties, the property value increases. Though there are conflicting reports about the increased property value of adding a DSS, several researchers have made estimates of their impact on municipal property tax revenue increases. Based on a Vancouver average of land value gains of $21,250 for properties adding a laneway house, increased annual property tax payment average $3,700 per year. This multiplied by Vancouver's 2,000 laneway suites equals $7,400,000 of taxes per year generated by laneway suites for the City of Vancouver (MountainMath Analytics, 2016). Toronto's tax gains for allowing laneway suites was estimated back in 2003 on an estimated 6,150 potential laneway units with a modest tax rate of $1,800 per year resulting in an increase in annual municipal revenue of $11,070,000 without substantial infrastructure changes (Stinton and Elslander, 2003). Incentives should be used to encourage the initial construction of DSS, but over time appropriate property tax increases in relation to property values can increase revenue for investment in transit improvements or other efforts that support gentle density and complete and compact communities.

Table 1: Comparative return on investment based on three different secondary suite scenarios and a condo purchase.

Return on investment for Toronto homeowners: comparison of basement secondary suites, DSS & Condos				
House price (Toronto average single family home price)	$1,340,000[1]			
Mortgage principal (based on 20% down payment)	$1,072,000			
Monthly carrying costs				
Mortgage payment (based on 25 year amortization)	$4,850			
Taxes ($9,218.84 /year)[2]	$768			
Maintenance and Utilities (1% of house price) and $250 utilities	$1350			
Total monthly payments for house	$6,968			
Required annual income for mortgage	$200,000			
Investment	**Basement suite conversion**	**DSS 400 ft²**	**DSS 800ft²**	**1 bdrm condo**
Investment cost (incl. servicing, permits, and architect)[3]	$50,000	$100,000	$200,000	$471,000
Mortgage payment	$226	$452	$905	$2131
Tax Maintenance Utilities	$30 $40 $100	$60 $80 $100	$120 $160 $150	$270 $472[4] $50
Total for additional unit	396	692	1335	2923
Total monthly carrying costs (house + unit)	7,364	7,660	8,303	9,891
Rent for additional unit	1,16[6]	1,285[7]	2390[8]	1925[10]
Net monthly carrying costs (total home and rental unit)	6,248	6,375	5,913	7,966
Net monthly financial benefit (rental unit total)	**720**	**593**	**1,055**	**-998**
Value added to property	50,000	100,000	200,000	N/A

Notes and data sources:

1. Tencer, Daniel (2017). Toronto's Average House Price Jumps $40,000 In A Month Amid Supply 'Crisis'. The Huffington Post, March 3, 2017. http://www.huffingtonpost.ca/2017/02/03/toronto-house-prices-treb_n_14594144.html
2. Calculated using City of Toronto Tax Finder: http://wx.toronto.ca/inter/fin/tax.nsf/tax?OpenForm&Seq=1
3. Based on $250 sq ft industry standard for construction costs including permits, architectural drawings, servicing, foundation, plumbing, electrical, and finishing.
4. Based on typical Toronto condo fees
5. Hungerford, Michael, (2013). Vancouver's laneway numbers don't add up. Huffington Post, November 19, 2013. http://www.huffingtonpost.ca/michael-hungerford/laneway-housing-vancouver_b_4298984.html
6. Based on an analysis of Toronto basement apartment prices in proximity of Ward 18, Craigslist, March 19, 2017.
7. Projected rent for 400 sq ft DADU based on average 800 sq ft Vancouver laneway house rent[5] adjusted for Toronto prices[9], and multiplied by the percentage difference of prices between average 400 and 800 sq ft apartments in Toronto (based on craigslist posting analysis, March 19, 2017)
8. Based on average 800 sq ft Vancouver laneway house rent adjusted for Toronto rents which average 11% more[9]
9. Toronto rents average 11% higher than Vancouver. Tencer, Daniel (2015). Toronto vs. Vancouver: Which one is more expensive? Huffington Post. August 15, 2015. http://www.huffingtonpost.ca/2015/08/15/toronto-vancouver-price-comparison_n_7989480.html
10. Based on an analysis of Toronto 1 bdrm condominiums rental prices in proximity of Ward 18, Craigslist, March 19, 2017.

Guideline Development

Interviews

In order to gain a holistic perspective on the development of DSS guideline and bylaw development, I have interviewed eight planners, including planners in Vancouver, Regina, Saskatoon, and Ottawa, and four stakeholders including a Toronto homeowner, a DSS developer, and two DSS advocates. See **Appendix B** for a full list of the interviewees who informed this research and a description of their perspectives.

Municipal guideline analysis

In order to prepare a comprehensive and appropriate set of proposed design guidelines for garden suites and DSS for the City of Toronto, I studied the guidelines of eight Canadian cities—Vancouver, Victoria, Edmonton, Calgary, Regina, Saskatoon, Ottawa, and Moncton, all of whom have passed laneway and garden suite ordinances since 2007 (see **Table 2**). I focused on Canadian cities to use best practices from places with similar weather, political, and planning patterns as Toronto. I also studied the guidelines from Austin, Texas and Portland, Oregon for external reference points. Austin was chosen because their housing affordability, growth patterns, and neighbourhood morphology are similar to those of Toronto, and Portland because their ordinance is so long-standing and has recently undergone another revision, giving insight into the evolution of DSS policy. These guidelines have been reviewed in the context of Toronto, and form the basis of the **Proposed Garden Suite Design Guidelines for Toronto** (see **page 36**).

Table 2 : Cities reviewed to inform design guideline development

City	Year	Reference Document	Permit
Vancouver	2009	Laneway House Guidelines	As-of Right*
Victoria	2011	The Garden Suite Policy	As-of-Right (as of 2016)
Edmonton	2007	Zoning Bylaw 12800 Garage and Garden Suites	Discretionary
Calgary	2007	Secondary Suites and Backyard Suites	As-of-right in 4 central wards, discretionary elsewhere
Saskatoon	2014	Design Guidelines for Garden and Garage Suites	Discretionary
Regina	2016	Laneway and Garden Suites Guidelines for Pilot Projects	In Phase 2 of pilot project
Ottawa	2016	How to Plan Your Coach House in Ottawa	As-of-right
Moncton	1998**	Garden Suites By-Law	Originally only for elderly relatives, now permitted through a "change-of-use"
Austin	2001	Secondary Apartment Infill Option	As-of-right in neighbourhoods that opted to adopt the Secondary Apartment Infill Tool
Portland	1991	Accessory Structure Zoning Code Update: New Rules for the Design and location of garages, ADUs and other accessory structures	As-of-right city-wide as of 1997. Guidelines revised in 2015.

*As-of-right permitting means that applications go directly to the building department, reducing fees and processing time. Discretionary permitting means that every application must be approved by the planning department and pass through a committee of adjustment process.

** (Revised 2013)

Municipal Guideline Overviews

This section presents an overview of the DSS guidelines for the ten Study Cities—how they were developed and how they relate to the specifics of neighbourhood typology. I also consulted any discussion papers or consultation reports that were available for each of these cities. Personal interviews with planners from many of these cities further informed the local context, motivations and approach to developing the program in each municipality. The following section will discuss **Key Considerations** of design, highlighting which guideline issues were common across the Study Cities, as well as an analysis of the reasons for any variation and recommendations for Toronto. Please see **Appendix C** (**pages 46-50**) for full itemized comparisons of municipal guidelines and proposed guidelines for garden suites in Toronto.

Vancouver

Vancouver is generally considered the pioneer of laneway housing ordinances in Canada, although the nearby municipality of Maple Ridge was technically the first to pass a by-law in 2008 (Smith, 2013) and Edmonton and Calgary passed their bylaws in 2007. In the midst of an affordable housing crisis and sustainability aspirations Vancouver embraced laneway houses as a way of gently intensifying neighbourhoods while maintaining neighbourhood character and increasing the supply of affordable rental housing. Originally presented as part of their EcoDensity program in 2007, this program was initially criticized for its lack of consultation (Rosol, 2013), but the idea stuck. With its extensive laneway grid and early onset supportive policies, Vancouver has permitted 2,500 laneway suites since 2009 (Powell, 2016). Laneway suites are permitted as-of-right in Vancouver's two main residential zones on lots with a minimum 33 ft width (the standard lot width in Vancouver). Heights are limited to 1 ½ stories with second story setback requirements and guidelines designed to address solar orientation to avoid shadowing. Design guidelines require a non-enclosed parking space (so it cannot be converted to additional living quarters) and lane-facing orientation with a minimum landscaped setback. The writing of their guidelines stress principles over strict measurements, stating that "numerical values are given to assist with quick evaluation of proposed laneway house designs. Flexibility is intended, and the numbers should be seen as neither finite limits nor conversely a means to justify height unnecessary to the building design" (City of Vancouver, 2013). Guidelines are clearly laid out in their recent Laneway Housing How-to Guide (Vancouver Laneway Housing, 2016).

Victoria

Garden suites are permitted in all of Victoria's single and two-family dwelling zones, though their size restrictions quite limit their application. A maximum lot coverage of 25% of the backyard, maximum

400 ft² footprint, and maximum 12 ft height (City of Victoria, 2011), which severely limits their application for housing options. Recognizing this, the City of Victoria has made two exemptions to the regulations: one for grandfathered structures, should a homeowner wish to convert as existing non-compliant structure into a garden suite; and two, for properties in what are referred to as "Garden Suite Plus" sites. These are lots which are

- a corner lot
- a lot with two street frontages
- a lot with rear yard laneway access
- lots greater than 6,000 ft².

On "plus sites", it is permissible to increase the height or floor area of a Garden Suite up to a maximum of 600 ft² if it can be demonstrated that it would not have a negative impact on privacy, shading, or overlook onto neighbouring properties.

Edmonton

Edmonton's Garage and Garden Suite By-Law was implemented as part of their Secondary Suites Program as a way addressing the lack of affordable rental housing in the City. The City started the program in two phases. The first phase allowed for the testing of new regulations on a small number of properties to determine the impact of the program and fine-tune it if any changes were needed. The second phase involved changing regulations to allow secondary suites city-wide. A grant program was developed to generate the greatest number of suites over the shortest period of time, thus increasing the affordable housing stock. *Edmonton's Cornerstone Grant Program: Edmonton's Plan for Affordable Housing* has run for two consecutive five-year periods offering homeowners up to 50% of construction costs or $20,000 towards the development of a secondary suite. Garage and garden suites are not distinguished in the numbers, but almost 1000 secondary suites have been granted through the program since 2006.

Garage and garden suites are a discretionary use allowed on lots with a minimum 49 ft width in most residential neighbourhoods. Edmonton's guidelines specify that secondary suites have a minimum size of 323 ft², with a maximum size of 538 ft² for garden or garage suites at grade, or 645ft² for a garage suite above parking, but are ultimately approved on a case-by-case basis at the discretion of the planner. Site and built form considerations are subject to the Mature Neighbourhood Overlay, a tool designed to permit gentle density while maintaining the "look and feel of streets, homes and buildings, and the presence of tree lined streets and alleys" (City of Edmonton).

Calgary

Calgary's Secondary Suites and Backyard Suites program was introduced in 2007, around the same time as Edmonton's, in conjuction with their secondary suites bylaw as a part of their goals to increase affordable housing stock and have half of their population growth accommodated within existing neighbourhoods by 2020. A design competition was hosted in order to engage architects in the concept and build support for the idea throughout the city. Much of the focus is on garage suites located above, alongside, or taking the place of garages though garden suites are also permitted as-of-right in the four central wards and discretionary elsewhere.

Regina

Under their official plan policy to accommodate 30% of future growth through established neighbourhood infill (Design Regina, 2013), Regina proposed their Laneway and Garden Suites pilot project which was approved by Council on January 25, 2016. The pilot project consists of three phases:

1) 31 Laneway suites between two new greenfield developments (complete)
2) 8 Laneway and Garden Suites in established neighbourhoods (in progress) and
3) City-wide adoption after consideration of post-occupancy surveys of residents and neighbours from Phase 1 and 2 pilots.

Currently ground has been broken on the first of the Phase 2 projects.

Regina has three distinct neighbourhood morphologies, each posing different challenges and needs for regulation of DSS. Despite these differing morphologies, the city chose to make the benefits of Laneway and Garden Suites applicable city-wide in the name of "fairness" (Sale, 2017). To do so, they distinguished the neighbourhoods into three property types which have different ramifications for DSS within each of the key guideline considerations:

Property Type 1: **Core Area** – Pre-war grid network with small lots and rear laneways throughout. Mature tree cover and minimal front yard parking.

Property Type 2: **Early Suburban** — Post-war mix of grid and crescent streets, fewer intersections, wider but shallower lots, some laneways, front or side yard parking, garages at front or rear, less mature tree cover.

Property Type 3: **Recent Suburban** – Crescents, curvilinear streets and cul-de-sacs. Little porosity of blocks, no laneways. Garages mainly located in front of houses. Less mature tree cover.

Regina's design treatment by neighbourhood differ in that 1 ½ story suites are allowed in the early suburban and core areas, but only a single story in recent suburban, though setbacks remain consistent throughout the three property types.

Another interesting note from Regina's DSS guideline development is that Regina has measurements of radon (a radioactive gas naturally occurring in certain deposits underground) over three times the national average (Smith, 2014) which makes the development of secondary suites in basements less desirable (Sale, 2017). In the case of Regina, the allowance for laneway and garden suites offers a more suitable option for the addition of secondary suites.

Saskatoon

Saskatoon's Garage and Garden Suite guidelines were written by Brook McIlroy who also wrote Regina's Infill Guidelines and Laneway and Garden Suite Guidelines, and are also one of the firms collaborating on Toronto's Huron Sussex Neighbourhood Planning Study which is utilizing laneway and infill housing as a pilot project and "catalyst for the future" (Pembina, 2015).

Saskatoon has a very distinct built form which is reflected in the two distinct neighbourhood categories defined in their Design Guidelines for Garden and Garage Suites:

In **Category 1 Neighbourhoods,** which include the older city core where laneways are common, 2 stories are allowed as are smaller side setbacks from neighbouring properties. DSS are meant to be oriented towards the lane.

Category 2 Neighbourhoods are mainly recent suburbs build beyond the ring road and in those neighbourhoods DSS are limited to one story in height and would require access from the main street through the side yard.

Ottawa

Ottawa is the first municipality in Ontario to pass a city-wide as-of-right ordinance for DSS. Termed *coach houses*, as of 2016 they are permitted both on laneways (of which there are only a handful in Ottawa), and in rear yards. Ottawa passed its secondary suites ordinance in 2011 and it was always understood that a DSS ordinance would follow (City of Ottawa, Planner, 2107). The City of Ottawa states no minimum lot sizes nor maximum square footage for their coach houses—only maximum height (one story, or two if above a garage), setbacks, and a maximum total built form coverage (including DSS and the principal residence) of the lot at 40%. It is left up to the landowner to determine if they can fit an adequate DSS in their yard.

Similarly, parking is left up to owner preference and market demand. Having recently completed a minimum parking study which informed the removal of minimum parking standards in low-density neighbourhoods city-wide, additional parking is not required to be supplied for a coach house (City of Ottawa, 2015). This has coincided with a recent major investment in light rail.

According to a planner from the City of Ottawa, they expect coach houses to be "mostly built for family needs, elderly parents, and children who can't afford to break into the housing market" (City of Ottawa, Planner, 2017). Having just passed council in the fall, ground is currently breaking on the first coach house now. Evaluation will happen in two year's time.

Moncton

Moncton has permitted granny suites since 1998. The original goal of permitting this type of suite was to offer housing options for an aging population and to allow seniors to live with family if they couldn't remain in their own home. At the time, the definition stated that a garden suite needed to be portable (ie. without a foundation) as they were intended to be used only on a temporary basis for elderly family members (CMHC, 2017). In 2011, a study was undertaken by the City of Moncton to look at opportunities and barriers to providing affordable housing, and it identified accessory apartments or garden suites without tenant restrictions as a way to increase the affordable housing stock. These units also help to address the changing demographics of the city, including the aging population (CMHC, 2017). Moncton offers a very simple set of guidelines including 4' and 8' setbacks from side and rear lots respectively, a maximum height of 20', a maximum square footage of 800, and provision of one additional parking spot.

Austin, Texas

Austin's approach is informed by its SMART Housing Policy, requiring Safe, Mixed-Income, Accessible, Reasonably-priced, Transit-oriented housing, and it continues to be challenged towards greater performance through the rewriting of CodeNext, Austin's initiative to revise the current Land Development Code, by community organizations like AURA (Austinites for Urban Rail Action), Imagine Austin, and the Austin Community Design and Development Centre (AURA, 2017). Currently its DSS guidelines are implemented according to whether or not a neighbourhood has adopted the Secondary Apartment Infill Option which reduces the minimum lot size permitting a DSS from 7,000 ft² to 5750 ft² therefore making up to 3,385 lots eligible (Moore and Palleroni, 2008).

Although not yet widely implemented (Moore, 2017) Austin's Alley Flat Initiative was founded on the principle of providing a "flexible and self-perpetuating delivery system for sustainable and affordable housing in Austin." Their delivery system includes not only efficient housing designs constructed with sustainable technologies, but also "innovative methods of financing and home ownership that equitably benefit all neighborhoods in Austin," (Moore and Palleroni, 2008) namely, a third party financer that would fund the construction of the flat, rent it out and pay dividends to the property owner, not unlike the Microfit rooftop solar program in Ontario. Although the City of Austin has not adopted all of the principles adhered to by the Alley Flat Initiative, these principles, based on accessibility, affordability, and sustainability could inform a city-wide policy for Toronto.

Portland, Oregon

Portland is considered America's most DSS-friendly city, a title it earned, with over 2,200 units permitted, through a relaxation and streamlining of regulations, and a waiver of System Development Charges—fees that many homeowners have noted as one of their key reasons for building a DSS, citing savings of up to $12,000 (Accessory Dwellings, 2016). Having had an ordinance permitting DSS since 1991, the relationship between Portland neighbourhoods and their DSS has had almost a quarter of a century to mature. Portland's most recent guideline revisions are therefore interesting to consider as they may be considered the evolution of DSS policy.

Portland's revised 2015 *Accessory Structure Zoning Code Update: New Rules for the Design and location of garages, ADUs and other accessory structures* coordinates regulations for the placement of all accessory structures that were previously regulated by use, not form. Its purpose is to respect the existing intent of DSS regulations while preventing accessory structures from becoming the predominant element on the site. Other purposes include providing access around structures, helping maintain privacy to abutting properties, and ensuring that all structures respect the look and scale of single-dwelling development (Portland Bureau of Planning and Sustainability, 2105). Note: Portland uses the term ADU (Accessory Dwelling Units) because they do permit ADUs to be built as an addition onto the back on the house (ie *attached*) but their purpose and function are the same as DSS.

Some interesting highlights from this revised policy include enforcing a universal setback from the street of 40 feet or behind the back wall of the house for any covered accessory structure.
Any structure of one story (maximum 15 feet in height) and less than 24x24 feet is permitted as-of-right, and compatibility standards apply to structures up to a maximum height of 20 feet. Rather than measuring the total built form lot coverage, Portland has put a maximum of 15% lot coverage for *accessory structures*. Portland has a minimum lot size of 3,000 square feet city-wide (Portland Bureau of Planning and Sustainability, 2017) making any standard lot eligible for a DSS.

Being one of the longest standing and most established DSS municipal policies, Portland also offered a prime opportunity to study DSS use. In Portland State University's 2013 survey of over 300 owners of secondary suites, **54% of the units were detached secondary suites.** They conclude that 78% of these secondary suites are used as rental units, (with 26% of those occupied by friends or family). The majority of the rest were used as extra household space, and less than 5% as short-term rental. 64% of units were occupied by a single person, 34% by two people. 20% of secondary suite residents did not own cars while 63% supplied parking for one vehicle although provision of parking for DSS is not mandated in Portland. Over half of the respondents reported the cost of constructing or renovating their suite to be under $80,000 (USD) while less than 20% cost over $80,000. The rest were uncertain of an accurate price due to calculations of sweat-equity. The average size of DSS built was 665 ft² (Department of Environmental Quality, 2013).

Key Considerations

A proposed set of **Design Guidelines for Garden Suites for the City of Toronto** is included in the following section, and a **Comparison of Municipal Guidelines** of the ten Study Cities is compiled in **Appendix C**, but prior to delving into the details of recommended setbacks and orientation of windows etc, there are some key program elements that ought to be considered including: how and where DSS are permitted, parking requirements, allowances for multiple secondary suites, sustainability standards, accessibility standards, incentive programs, and consultation.

Permitting

Currently, the process to gain a permit for a laneway house or garden suite in Toronto is financially and logistically prohibitive. Besides having to work through the Committee of Adjustment which could cost about $10,000, there is the looming fear of the case being sent to the Ontario Municipal Board, with each stage potentially rejecting plans—rendering architects fees wasted as architect Brandon Donnelly explains in his article *Why it's next to impossible to get a laneway house built in Toronto* (Donnelly, 2015).

We must add to this the question of development fees. Though I posed the question to two City of Toronto planners, it is uncertain what development charges Toronto would apply to a laneway or garden suite, if any, but standard development charges for a bachelor apartment or 1 bedroom in a single family dwelling unit are $16,746, and $39,150 respectfully (City of Toronto Finances, 2016). The province has now exempt secondary suites and DSS from development charges in new homes, and most of the Study Cities exempt DSS from development charges as an incentive to provide more rental supply.

As-of-right permitting would ease work at the planning department and also significantly reduce costs for homeowners. The City, of course would retain discretionary approval over developments that fall outside of the design guideline specifications.

Where to permit

In recognition of the vastly different neighbourhood morphologies within their cities, many cities have chosen to designate zones or property types which have slightly different restrictions as they apply to garden suite construction and orientation. Regina distinguishes three property types: Core area, Early Suburban, and Recent Suburban. Saskatoon designated two Categories which apply to the core and suburban neighbourhood forms. In Austin, neighbourhoods were given the option of adopting the Secondary Apartment Infill Tool which would then permit DSS within that neighbourhood. As of 2008, 20 of Austin's 65 neighbourhoods have adopted the tool (Moore and Palleroni, 2008). This could be an approach for the City of Toronto to consider, though it would require a great deal of education on behalf of our 44 councillors. Alternatively, regulatory details could be distinguished by either neighbourhood or building typology, but as I suggest in the design guidelines, height can be restricted in relation to the principle residence therefore respecting neighbourhood form even in bungalow-style neighbourhoods. For maximum benefit and impact DSS policy would implemented city-wide.

Consultation process

With the introduction of a new building typology, residents city-wide should be highly engaged in the consultation process. Lanescape, Evergreen, and Councillors Ana Bailao and Mary Margaret McMahon did a great job of the surveying and public notification, with the Crazy Dames facilitating creative and engaging consultation sessions around the concept of laneway suites and engaged nearly 3,000 residents in the process.

Ottawa's consultation process can also act as a good model with citizen's deeply engaged through the Discussion Paper, Guiding Principles, Draft Recommendations, and final citywide bylaw approval, all within 2 years.

Lot sizes and coverage

Many of the Study Cities have chosen to limit either minimum lot areas eligible for DSS construction (Austin, Edmonton), or minimum lot width (Vancouver). Others have chosen to let the designated setbacks and maximum lot coverage calculations determine whether there is sufficient room for a DSS. In Toronto, downtown lot sizes are typically long and narrow (often 30' x '120') and typical suburban lots range wildly from 40' x 40' to 60' x 130', I would recommend focusing on total built lot coverage and the assurance of a minimum 4 foot access to suit pleasant entranceways, emergency access requirements and Accessibility for Ontarians with Disabilities Act standards for eligibility to construct a garden suite.

Height, massing and basements

Heights, number of stories and maximum square footage of DSS are strictly regulated in most of the study cities. Twenty feet seems to be a standard maximum height for DSS, with the most common regulations requiring a maximum of 1 ½ stories with sloped roofs or set back second stories. 800 ft^2 is the standard maximum square footage with most cities strictly stating that the DSS must be smaller than the principle residence. Only Vancouver and Ottawa permit basements, though they count towards the total square footage of the suite, and due to the cost of excavating are really only practical at the DSS scale if used to slightly sink the house to gain a full second story within maximum height allowances.

Parking

As population density increases in auto-oriented neighbourhoods, adequate supply of parking is always a concern. This has been addressed through several approaches throughout the Study Cities. The most common approach is to require that the homeowner supply one off-street parking spot for the DSS in addition to the parking required for the principal residence, but in some cases this perpetuates automobile culture and can be prohibitive to the development of DSS.

Of the Study Cities, neither Victoria, Ottawa, nor Portland require DSS to supply additional off-street parking, despite the 2013 Portland study showing that 63% of secondary suite residents there own at least one car (Department of Environmental Quality, 2013). Ottawa's recently completed city-wide parking study determined that minimum parking requirements in low density residential neighbourhoods were unnecessary (City of Ottawa, 2015), and considering recent investments in new transit lines, they determined that additional parking was not required to be supplied with new DSS, but left up to market demand, and homeowners' preference to provide parking or not (City of Ottawa, Planner, 2017).

In an extensive study of transit and DSS in The San Francisco Bay Area, The Center for Community Innovation found the "the cities we studied could likely reduce parking requirements without contributing to parking problems, particularly because secondary unit tenants are less likely than other residents to own a car" (Chappel, *et al*., 2012). Other municipalities have taken the route of Regina who has standard parking requirements, but with exemptions within 400m of a transit stop or proximity to downtown (Design Regina, 2016).

Within Toronto's current by-law, parking is not required for secondary suites (City of Toronto, 2013). Going forward, if Toronto wishes to pursue a garden suite ordinance city-wide the issue of parking should either be left to market forces, or be regulated differently across Toronto's diverse neighbourhood types to reflect car-ownership levels and transit accessibility.

As we move towards more compact and less auto-dependent city-building, it also cannot be ignored that the advents of Uber, car share and car pooling services, the expansion of transit, and the looming introduction of automated vehicles will drastically change our current reliance on residential off-street parking supply.

Toronto's 2016 Transportation Tomorrow Survey also reveals some interesting statistics about car ownership. In Ward 18, our downtown study site, 36% of households have no access to a car, 46% share one car, 14% have two cars, while 3% have 3 or more. In Ward 41, located just north of the 401 in Scarborough, 8% of households have no car, 47% share one car, 36% have two cars, and only 9% have three or more (Transportation Tomorrow, 2011). Also, without suggesting that transit is adequate enough city wide, TTC Chief Customer Officer, Chris Upfold claims that there are no vast transit deserts in the City and that 99% of Toronto residents live within a 10-minute walk of a transit stop (Metro News, 2015).

Another interim parking provision may be to permit tandem parking in existing single-width laneways or to explore the utilization of converting the generous mowed right-of-ways in suburban neighbourhoods with permeable spaces for neighbourhood car share services (Ahmed, 2017).

Figure 11: Rendering of car share lot on public right of way

Multiple units

Secondary suites can take the form of apartments within the principal residence or in DSS. Although both DSS and secondary suites within the principle dwelling have the characteristic of "gently" increasing density without changing the character of the neighbourhood, 8 of the 10 Study Cities prohibit DSS construction if the principal residence already has a secondary suite within it (with Vancouver and Victoria being the only exceptions). This has been stipulated to ensure that densities and the perceived lack of parking or associated crowding would not affect the character of the neighbourhood.

If by-laws and design guidelines restrict the physical form of the DSS, then logic would suggest that the only complication to permitting a secondary suite or DSS would be parking availability. We would therefore expect to see DSS and secondary suites both allowed on the same property in locations where parking was determined not to be an issue, as is the case with Ottawa, or in areas that exempt parking restrictions because of proximities to transit, as is the case with Regina. Since we do not see this correlation, we can assume that prohibition of DSS where a secondary suite already exists is perhaps dependent on more subjective concerns associated with rental units, about which the Ontario Home Builders Association has raised concerns, regarding discrimination against students, seniors, and renters (Ontario Home Builders Association, 2015).

Moving forward, I would recommend that Toronto permit DSS where lot specifications and parking requirements allow—regardless of existing permitted secondary suites.

Permitted uses

With this new building typology comes the opportunity to further reverse the outdated planning memes which separated work and play from home, requiring an automobile for almost any daily endeavor. There was great interest expressed at Lanescape and Evergreen's well-attended laneway suites consultations about the potential of small, appropriate businesses like coffee shops, tailors, and childcare facilities being permitted to work out of laneway suites. These businesses would of course be subject to strict noise, olfactory, and parking restrictions because of the nature of their location, but could provide a great sense of liveliness to laneways. Although the privacy of their location, in the case of garden suites, limits the type of businesses that would be appropriate, the same types of businesses that are permitted as home-based businesses should be permitted in garden suites, so long as the nature of the business does not require extra parking.

In her last book *Dark Age Ahead*, Jane Jacobs foresees the introduction of DSS in the suburbs:

> *…some resourceful homeowners will convert their rec rooms to low-cost rental suites, and others may notice that their lots can accommodate one or two small buildings at their rear which they can either rent or move into themselves, reducing their chores and their upkeep.*
>
> **This will free up their former home and its garages for another family, a bed-and-breakfast, a hair salon, a funeral home, or offices.**
>
> *Any number of other possibilities can be visualized: studios, childcare centers…*
> *If less adventurous owners see that such experiments are producing outcomes, they will imitate them.*
> *From the viewpoint of society, it will be preferable for owners to put their lots to more intensive use because their ingenuities will not necessarily require demolition of still serviceable buildings, as developers' ambitions are prone to do,*
>
> **and will almost certainly introduce wider ranges of uses as well as charm.**
>
> *-Jane Jacobs, Dark Age Ahead 2004*

Accessibility standards

As we move towards an accessible Ontario, there are new building and design standards that have arisen with the advent of the Accessibility for Ontarians with Disabilities Act including 4 foot wide entrance paths at grade (AODA, 2005). These should be adopted as the minimum access widths for garden suites as they would equally provide ample access for emergency service and access with strollers, walkers or grocery trolleys. The Alley Flat Initiative in collaboration with the Austin Community Design and Development Center are an example of designers taking these guidelines to heart (ACDDC, 2008).

Sustainability Standards

As Toronto introduces a new building typology permit, the potential arises to raise the bar for standards of water and energy efficiency and energy production. In Austin, the Alley Flat Initiative is committed to the highest levels of energy efficiency as part of their commitment to supply affordable housing units. Although this can increase the initial building costs, in the long run, high energy costs due to inefficiency adversely affect those in greatest need of affordable housing, and energy efficiency continues to provide benefits long after the investment is paid off.

Although minimum sustainable building codes are monitored through the Ontario Building Code, there is an opportunity for the city to provide incentives for net zero units, or partner with photovoltaic providers, or builders of prefabricated high performance units.

Thomas Frauenberger, a Vancouver builder with Lanecraft, suggests that from an energy efficiency standpoint all of the laneway houses he's built far exceed that of the main house (Wishpad, 2017). The compact nature of the suites mean they use less material and are easier to heat and cool. Vancouver also has its own Building Bylaw which can allow the city to change building code specifications.

DSS Incentives

If a city is serious about increasing rental unit supply, allocating an incentive fund can be a very effective model for spurring homeowner investment in secondary suites. The long-term financial benefits to the homeowner of building a DSS include a continuous revenue stream and increased property value, but the initial investment can be prohibitive. It would also be prudent for provincial and federal sources to direct funds to DSS incentives as many of the issues DSS address (aging, housing, accessibility) fall under their jurisdiction. Here we'll look closer at the incentive programs used in Austin and Edmonton.

Texas SMART Housing Policy

Austin's S.M.A.R.T. Housing Policy Initiative (Safe, Mixed-Income, Accessible, Reasonably-priced, Transit oriented) started in 2001 and aims to stimulate the production of housing for Austin residents with low and moderate income. The program waives development fees and fast-tracks applications for projects which will provide rents at no more than 30% of the income for tenants earning less than 80% of the Median Family Income. Not unlike many Inclusionary Zoning plans, there are incremental benefits to developers in increasing the supply of affordable units, where providing 10% reasonably priced units receive 25% fee waiver and fast-tracked review, and providing 40% reasonably priced units would garner 100% fee waiver. For single family infill projects, like DSS, fee waivers would equal approximately $1500 in permit and water/ wastewater recovery capital recovery fees (SMART Housing Policy, 2008). As part of this program, the Austin Housing Finance Corporation also receives first right of refusal on any City-owned surplus property.

Edmonton Cornerstones Grant Program

Edmonton has just completed it's second term of the Cornerstones Grant Program aimed at incentivizing the construction of affordable housing units through grants for secondary suites, garage suites and garden suites. Grants are available to homeowners for up to $20,000 or 50% of the construction costs. The first round of Cornerstones (2006-2011) provided funding for over 530 units in 5 years. City of Edmonton Cornerstones II: Edmonton's Plan for Affordable Housing, renewed their funding commitment of $3 Million and had expected to fund another 450 units between 2011 and 2016 (City of Edmonton, 2016). According to these numbers, the 450 units were built with an average investment from the City of under $7,000 per unit.

Proposed Garden Suite Design Guidelines for Toronto

This section lays out proposed design guidelines for garden suites for the City of Toronto. They were informed by a thorough analysis of the Study Cities' guidelines, the two Study Areas, and the broader Toronto context. They are meant to act as an addendum to the laneway housing performance standards being prepared by Lanescape and Evergreen, as they address the similar issues confronted with both types of detached secondary suites (DSS). Rationale for the ideas proposed here are discussed in part, in the previous section, **Key Considerations**, and in itemized detail, in the Toronto section of **Appendix C: Municipal Design Guideline Comparison (pages 46-50)**.

These guidelines have been developed with the intention that if followed, permits would be granted as-of-right. Applications falling outside of these guidelines on any point would require Committee of Adjustment approval.

Guiding principles

The guiding principles of these design guidelines are that garden suite are:

1. **Secondary in nature**

Detached secondary suites (DSS), either garden or laneway suites, are meant to be secondary to the principle residence and respect the look and feel of their surrounding neighbourhood. Without Committee of Adjustment approval no DSS shall be larger than the principle residence in height nor total square footage.

2. **For rental or family use**

DSS are meant for rental or family use. The unit shall not be severed and servicing must attach to the services of the main house.

3. **Unobtrusive**

The primary design consideration of DSS should be *consideration for neighbouring properties*. The suite should be oriented within the lot and designed to minimize shadowing and overlook, and maintain privacy for adjacent properties.

4. **Accessible**

As we build towards an accessible Ontario, garden suites shall have barrier free entrances and an accessible main floor washroom.

5. **Sustainable**

Detached secondary suites should incorporate passive solar design and should be made to ensure energy efficiency. Storm water shall be mitigated onsite either through a green roof or rain harvesting.

6. **Respectful of trees and landscape**

Every effort shall be made to preserve existing trees. Relaxation of other design elements may be awarded in order to preserve a tree. Native species are encouraged over grass wherever practical and any hardsurfaces outside of foot paths should be permeable.

Site design

Minimum 4' accessway

The primary site consideration for a garden suite is the presence of a minimum 4' wide barrier-free accessway. This minimum width is required by emergency services and the Accessibility for Ontarians with Disabilities Act, and makes for a comfortable entranceway with which to pass with furniture, groceries, strollers, mobility devices, etc.

Entranceway to DSS

Location of garden suite

Although **no minimum lot area** area is defined for eligibility for a garden suite, the following restrictions apply:

- **Minimum lot width 17 ft** - this ensures enough room for required setbacks
- **Maximum footprint 20% of total lot area** - this calculation helps to ensure that the garden suite remains proportionately small for the size of the property

DSS entrance faces the principal residence

Orientation

Except in the case of corner lots, garden suites should be oriented to the yard of the primary residence, facing the main street wherever possible. Laneway suites should face the lane. This encourages "eyes on the street" promoting lively and safe public spaces, and a clear and vibrant connection between the street or lane and the DSS.

Setbacks

Garden suites shall be set back a minimum of 4' from the rear property line, with no transparent windows facing the neighbouring property and preferably screened with a fence or landscaping. Setbacks from side properties shall have a minimum of 4' on one side and 2' on the other (screened, no transparent windows), unless jointly constructing a semi-detached unit with a side neighbour.

Setback restrictions

Distance to principle residence

A minimum of 12' shall be maintained between the principal residence and the DSS (or 4' if DSS is less than 50% the width of the property). This space may be enclosed to a maximum width of 8'. This stipulation differentiates a DSS from a renovation, maintains outdoor ammenity space, and accommodates a climate controlled access for dependents requiring care from residents of the principal residence.

With height restrictions and proper orientation, shading can be minimal.

Morning sun

Evening sun

Trees protected

Trees add considerable social and environmental value to every neighbourhood. As such, garden suites and their services should be designed and positioned so that they will not affect existing mature trees or their underground critical root system. Relaxation of other regulations may be permitted if protecting existing trees require considerable site redesign.

Outdoor space

Garden suite tenants shall have either shared access to the back yard, or a private outdoor amenity space. Laneway suites could have shared access to the principal residence rear yard, or provide outdoor amenity space beside the laneway house, on a ground level set-back at the lane frontage, or with a balcony or terrace.

Addressing

Garden suites should use the address of the principle residence followed by an “R” for rear. Laneways should be named and addresses should pertain to the main entrance from the lane. Community mail boxes and waste collection points at either end of the lane can avoid adding extra mail delivery or waste collection routes.

Servicing and severability

Electrical, water, sewage and gas lines should be connected to the services of the main house. Reinforcing the concept of laneway and garden suites as *rental secondary suites* that cannot be severed from the main property.

Conversion of existing structures

If there is an existing structure on the property as of April, 2017 which exceeds the required setbacks or orientation, it may be converted, to a garden suite. Height may only be added up to the maximum of 1 1/2 stories, or the height of the principle residence without Committee of Adjustment approval.

Parking

The provision of an additional off street parking space should **not** be a requirement for DSS eligibility, but rather left up to the homeowner to decide if their lot can accommodate one and if they wish to provide a parking space for their tenant. Market demand should be enough incentive if homeowners feel that their tenants would require private automobile accommodation. See discussion and rationale for this in **Key Considerations** on page 31. If a homeowner chose to provide parking, it must be made of permeable pavers or wheel paths with ground-cover planting in the centre and sides.

What if I already have a secondary suite?

In Toronto, detached secondary suites should be permitted regardless of whether or not the main residence has a secondary suite, although only one garden suite or laneway suite should be permitted per lot.

Some outdoor amenity space required

Addresses simply add an “R” for “rear”

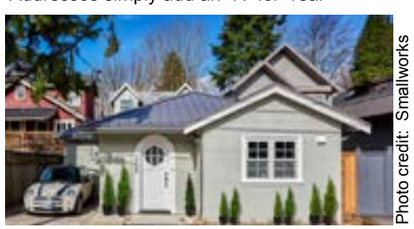

Photo credit: Smallworks

Homeowners may incorporate parking if they feel it would help rentability, but is not required

Size considerations

Maximum square footage and lot coverage

800 ft^2 or 60% gross floor area of the principle residence, whichever is smaller. Additionally, the DSS may have a footprint of no more than 20% of the entire lot area maintaining its proportion to the property.

Height

Building height is measured from grade level to the highest point of a flat roof or the mean level between the top of the highest exterior wall plate and the ridge of a pitched roof. Maximum height for a single story is 15’, and 20’ for 1 1/2 story. Under no circumstance should the DSS be taller that principle residence. This ensures that the garden suite remains accessory to the principle residence and respects the character of the neighbourhood in which they are situated.

Stories

A maximum of 1 1/2 stories should be permitted as-of-right. The purpose of the upper 1/2 story is that the second floor can either have sloped roofs or be setback on the north side of the building in order to minimize shadowing of neighbouring properties. In the case of laneways where there are existing garages on either side, the solar orientation is less relevant and the set back can take the form of a balcony overlooking the lane.

Basements

Though not necessarily cost-effective on the scale of most DSS, flexibility should be offered for homeowners to include basements, though they shall not be used as a second unit within the garden suite, and floor area will count towards the maximum allowable square footage.

1 1/2 story garden suite

Photo credit: Colin Perry

1 1/2 story garden suite

2 story with sunken main floor

Figure 12: How roof heights are measured. Image courtesy for Design Regina.

Building design

Windows

Large windows should be oriented to face the shared garden of the principle residence, or in the case of laneway suites, widows should be oriented towards the laneway to increase the lane-facing character of the buildings. Any windows, glass doors, or skylights facing neighbouring properties must be smaller in scale than those on the garden- or lane-oriented wall, and must be for the purpose of light only, using frosted or textured glass to maintain privacy and minimize overlook on neighbouring properties.

Balconies and terraces

Garden suite balconies or terraces should face the yard of the principle residence. On laneways, balconies or terraces should be oriented to the lane to increase a lane-facing character. Balconies may be no higher that the second story floor height.

Rooftops and dormers

Rooftop decks should not be permitted to minimize overlook on neighbouring properties, and dormers should face the laneway or principle residence or be made of textured or frosted glass or be located a minimum of 6 feet above the interior floor level.

Photo credit: Tiny House for Us

Prominent windows should face the principle residence yard

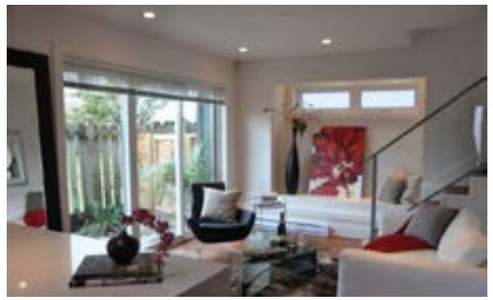

Photo credit: Lanecraft

Frosted windows can permit light while maintaining privacy

Photo credit: Tiny House Town

Smaller window should face neighbouring properties

Photo credit: Ross Chapin Homes

Balconies and terraces should face the principle residence

Entrances and accessibility

Entrances at grade

Entranceways should be made accessible both in terms of width, barrier-free design, and choice of pathway material. Exceptions can be made where the terrain does not permit at grade accessibility, but buildings should not be rendered inaccessible by the nature of their design (ie a step to the front door).

Orientation

Entrances that face the street frontage (or the lane in the case of laneway suites) create safer, more vibrant spaces and facilitate locating addresses for deliveries, emergency services, and visitors. Main entrances should be designed to provide weather protection, and can include features such as recessed entries, front porches and verandas. In laneways, the building should be set back, or the entrance recessed as gables cannot protrude out into the laneway.

Visible from the main street

The entranceway to the garden suite should be clearly visible from the sidewalk or front of the principle residence with the address demarcated such that someone who had the address with no special directions could locate the suite.

Lighting

Down-cast pedestrian scale lighting such as porch lights or bollard lights should be installed to ensure a safely lit entrance without causing light pollution for neighbours. Motion or light sensors and timers minimize light pollution and conserve energy.

Garbage, recycling and organics

Homeowners should design for and provide convenient storage of garbage, recycling, and organics bins for the tenant, or convenient access to bins shared with the principal residence. Where there is access to the main street, garbage, recycling and organics shall go out along with the bins of the principal residence. In the case of laneway suites, Solid Waste Management should arrange for pickup locations where the lane meets the nearest serviced street. A traffic-calming bulb out would serve as a good location.

Snow

Homeowners shall tend to or arrange for snow clearing and consider an area for snow storage that doesn't obstruct any entrances. Considering snow storage in the design stage of building or landscaping can ease your work for many winters to come.

Photo credit: California Home + Design

Example of an accessible entrance

Pedestrian scale lighting at clear entranceway

Convenient storage for waste and recycling

Landscaping, stormwater and sustainability

Grading and drainage

A formal Grading and Drainage Plan should be required as part of a complete building permit application for laneway or garden suites that are 592 ft² or larger in size or within 4 feet from a property line. Although water harvesting and infiltration is encouraged, especially in small lots, overflow should be anticipated and designed for. The Grading and Drainage Plan is to ensure that any changes made to the property do not negatively impact the grading and drainage on the property and the neighbouring properties.

Native species landscaping

The use of native plant species is encouraged in landscaping as they require less water and enhance local habitat and biodiversity.

Screening

As an additional measure to respect neighbour's privacy, screening in the form of a fence or vegetation should be utilized to delineate sight-lines between properties.

Rooftops for sustainability

As rooftops cannot be used for terraces due to privacy and overlook issues, they should be put to maximum use as green roofs to conserve stormwater and add to the roof's insulative character, as well as being utilized for collecting solar energy. These two ideas are not mutually exclusive as new trends in bio-solar roofs show.

Native plants, rain harvesting, and vegetative screening all work to maintain a private sustainable yard.

Photo credit: Livingroofs.org

Bio-solar roofs manage stormwater and collect solar power.

Next Steps

In order to proceed with DSS regulations for Toronto, the following steps should be taken:

1. Council should direct planning staff to **consider this research** on garden suites alongside the performance standards being developed for laneway suites by Lanescape and Evergreen
2. Planning should prepare a **discussion paper** including preliminary performance standards to inform and educate council, the public, other city departments, and architects about the benefits of and issues surrounding laneway and garden suites and how the proposed policy will address them
3. Comments on the discussion paper should be thoroughly reviewed, synthesized and incorporated into **proposed bylaw and design guidelines**
4. A second public **consultation** should be conducted in order to fine-tune design and policy approaches to issues and concerns
5. The first 100 DSS permits can act as a **pilot project**
6. After the issuance of the first 100 permits, or two years time, the policy should be reviewed based on **post-occupancy evaluation** surveys of homeowners, DSS tenants, and neighbours

"In order for a [DSS] program to succeed, it has to be flexible, uncomplicated, include fiscal incentives, and be supported by a public education campaign that increases awareness and generates community support".

(US Dept of Housing and Urban Development, 2008)

Appendix A - Terminology

Although all of the terms below refer to self-contained units (containing a kitchen, bathroom, and sleeping quarters) that are located as an auxiliary unit on the same lot as a primary residence, there are some practical distinctions between them.

Term	Distinctions
Granny Flats	CMHC considers granny flats a temporary structure meant for aging relatives. Permits must be renewed every three years. In Australia, granny flat is the standard term for backyard suites.
Alley Flats	The Alley Flat Initiative in Austin, Texas uses this term to refer to their affordable housing alternative. Lots do **not** need to be on a laneway.
Carriage Houses	Historically, where horses and carriages were kept. Today they refer to either a repurposed carriage house or garages with living quarters above or beside, or built in its place. Carriage houses can be accessed from a rear lane or the street front.
Coach Houses	Ottawa has adopted this term to refer to either garage or garden suites.
Laneway Houses	Laneway Housing can involve new builds or conversions of garages with parking incorporated or not. Units are accessed via a laneway. Vancouver uses LWH.
Laneway Suites	Same definition as Laneway Houses, though recognizing their secondary nature.
Garage Suites	Garage Suites can be new builds or conversions on laneways or in backyards. They have parking at grade with living quarters above or beside. Garage suites can be accessed from lane or street.
Garden Suites	Garden Suites do not incorporate parking in the structure and can be located in backyards accessed from the street-front or an alley.
Secondary Suites	Secondary Suites are self-contained apartments, purpose-built or renovated for the purpose of rental. They can be located within the primary residence, or as a detached unit.
Accessory Dwelling Units (ADUs)	Same definition as Secondary Suites.
Detached Accessory Dwelling Units (DADU)	DADUs are a catch-all term referring to secondary suites that are separate from the primary residence. They include all of the definitions for laneway, garage, or garden suites.
Detached Additional Dwelling Units	Same definition as Detached Accessory Dwelling Units.
Detached Auxiliary Suites	Same definition as Detached Accessory Dwelling Units.
Detached Secondary Suites	Same definition as Detached Accessory Dwelling Units.

Appendix B - Interviewees

I wish to thank the following people for taking the time to speak with me about their experience and expertise as it pertains to garden suites.

Interviewee	Perspective
A Planner City of Ottawa (preferred anonymity)	This planner spoke with me about the development and adoption of Ottawa's Coach House ordinance.
Chris Sale Senior Planner, Project Manager City of Regina	Chris headed up the development of Regina's Laneway and Garden Suite pilot project which is currently in the 2nd phase, building pilots in established neighbourhoods. Post-occupancy evaluations will inform city-wide adoption.
Paula Kotasek-Toth Senior Planner City of Saskatoon	Paula oversees the Garage and Garden Suite program in Saskatoon and will be responsible for upcoming program evaluation and a potential switch to as-of-right permitting in the future.
Mike Collins-Williams Director of Policy, Ontario Home Builders Association	Mike co-authored *Make Way for the Laneway* with the Pembina Institute and is instrumental in helping inform policy around housing and engaging builders in adapting to policy.
Steven A. Moore Founder, Alley Flat Initiative, Austin, Texas	Steven, also a professor at the University of Texas, is extremely informed on the social context for developing Alley Flats in Austin and continues to work to inform Smart Growth Policies which make housing inclusive, equitable, affordable.
Sa'ad Ahmed Founder TinyTO	Sa'ad is the founder of Tiny Toronto offering Attainable Homes. They are the ultimate in space and energy efficiency utilizing sustainable building technologies. These small footprint dwellings are produced off-site using Passive House principles.
An Assistant Planner, City of Toronto (preferred anonymity)	This planner spoke with me about the importance of developing a thorough rationale for why DSS should be pursued municipally.
A Planner, City of Toronto (preferred anonymity)	I spoke with this planner about the process of developing a DSS ordinance and what information would be relevant in persuading council to pursue this.
Jo Flatt Evergreen, Project Manager	Head of the advocacy and consultation on laneway suites in Toronto, Jo spoke with me about the details of municipal servicing, critical questions about housing affordability, and the political nature of this subject.
Andrew Sorbara Planner/developer, Lanescape	Andrew spoke with me about Lanescape's research in developing performance standards and the process of liaising with all of the City departments to address concerns of servicing and emergency access.
A Planner (preferred anonymity) Vancouver Planning Department	Vancouver has the longest standing as-of-right permit for laneway houses, yet does not permit garden suites. I spoke with one of their planners about the details of their bylaw and guideline development.
Paul Ornstein Toronto homeowner	Paul attempted to build a DSS on Jersey Avenue and spoke with me about his personal insights into Toronto's current permitting process.

Appendix C- Existing Municipal Guidelines Comparison

--- = Data not found Further discussions of each of these policy and design issues are addressed in Key Considerations (pages 30-35) and in the Proposed Garden Suite Design Guidelines for Toronto (pages 36-42)

Policy Context	Vancouver	Victoria	Edmonton	Calgary	Regina	Saskatoon	Ottawa	Moncton	Austin	Portland	Recommendations for Toronto	Rationale
Guiding Document	Laneway Housing How-to Guide	The Garden Suite Policy	Edmonton Zoning Bylaw 12800 Garage and Garden Suites	Secondary Suites and Backyards Suites	Laneway and Garden Suites Guidelines for Pilot Projects	Design Guidelines for Garden and Garage Suites - Neighbourhood Infill Development Strategy	How to Plan Your Coach House in Ottawa	Garden Suites By-law	Secondary apartment infill option	Accessory Structure Zoning Code Update	The City of Toronto should develop a set of clear and purposeful performance standards for laneway and garden suites based on the work of Lanescape and Evergreen as well as this research, and develop the bylaw and Official plan amendments which will be required to implement them.	Combining laneway and garden suites would reduce the efforts of city staff and councillors in consulting on and developing these bylaws separately. If politically or logistically they seemed too strenuous to pursue in conjunction, they should be considered as progressions of the same project.
Year established	2009 (amended 2013)	2011	2007 (amended 2009)	2007	2016	2014	2016	1998	2001	1991 (amended 2016)	With much of the preliminary research done, with the political will, these amendments could be made by 2018.	Ottawa's coach house ordinance went from the Discussion Paper , September 2015 to breaking ground on their first permitted coach house December 2016.
Policy Context	Addressing a crisis in affordable housing	---	Introduced along with Secondary Suites to increase affordable housing stock.	Introduced along with Secondary Suites to increase affordable housing stock.	Increase supply of rental and affordable housing and direct 30% of future growth through infill	Introduced as part of residential infill development strategy	Addressing affordable housing in suit with Provincial Policy	Originally permitted temporary, portable structures. Revised, 2014 for affordable housing	Introduced to combat rising housing costs, and ensure more sustainable patterns of growth	To ensure accessory structures do not become the predominant element on site	The introduction of DSS could help to address many urgent urban issues including the lack of rental stock and affordable home ownership options, the need for gentle density, aging in place, and helping to build more complete and compact communities. See **Rationale and Precedent** (page 7).	Toronto is in an affordable housing crisis with rental stock supply failing to keep up with population growth. With an aging demographic and the need to accommodate a growing population in creative ways that do not disrupt the character of our neighbourhoods, laneway and garden suites present an opportunity to allow homeowners to build our rental supply while easing their own affordability constraints.
Permitting	As-of-right for simple one story. Taller DSS or outside of guidelines is discretionary	Discretionary – requires re-zoning	Discretionary	Permitted in four central Wards Discretionary elsewhere	In Phase 2 of pilot project	Administratively discretionary[1]	As-of-right for one simple story. Two stories involves committee of adjustment approval	Discretionary "change in use"	As-of-right where Secondary Apartment Infill Tool has been adopted	As-of-right city-wide	Permitting could be as-of-right for simple or preferred designs (ie, under 1 ½ stories and following all guidelines) and discretionary otherwise.	Both Ottawa and Vancouver have adopted tiered permitting processes which allow the city to encourage simple, small, conforming plans while maintaining discretionary control over larger or more complex proposals.
Public Consultation and evaluation	On- going consultation and evaluation between 2009 and 2013 informed program revisions	---	Initial stakeholder consultation, "What we heard report," A Garage and Garden Suite Buildability Engagement Session to address issues raised in previous consultations	In conjunction with secondary suites consultation. 5 focus groups, telephone public opinion survey	Online Survey, Community advisory committee, online feedback. Consultation 1 - considering infill options, Consultation 2 - reviewing guiding principles and guidelines	2 public meetings, 125 attendance, council bus tour of exiting DSS, external working group	354 Comments received over 1 month comment period on Guiding Principles and Draft Recom-mendations. Comments informed final bylaw and guide.	Resident feedback was against city-wide regulations. DADUs allowed in one of the two single-unit zones, the two-unit dwelling zone, and the urban dwelling zone.	Informed through many non-profit housing advocacy partnerships	Focus group, draft public review, commission review, public hearing. Updated zoning based on public feedback.	While Lanescape and Evergreen (Crazy Dames facilitated) conducted very effective and well attended consultations regarding laneways housing, in order to democratize the conversation and potential for garden suites, consultation must be extended city-wide through an online survey, councillor's newsletters, clear and simple information dissemination and open house events in each of Toronto's Community Council Areas. Post-occupancy evaluation of both homeowners, tenants and neighbours seem to bring to the surface all of the relevant issues that may need to be amended upon review.	Education, consultation and clear disemination of information is vital to the success of a program like this, especially in the suburbs where accessory structures in general are uncommon. Despite extensive research and consultation, unintended consequences of regulation details is inevitable. For this reason it is important to keep detailed records of projects and conduct a thorough post-occupancy consultation.

1. Saskatoon has a discretionary approach, but it is administratively discretionary so it doesn't have to go to council. As an administration they have more control and responsibility in terms of addressing whether or not the proposal meets the guidelines. There is some question as to whether our provincial planning act actually gives them that authority, but one thing about Saskatoon is that they are always pushing the envelope (Sale, 2017).

Policy Context	Vancouver	Victoria	Edmonton	Calgary	Regina	Saskatoon	Ottawa	Moncton	Austin	Portland	Recommendations for Toronto	Rationale
DADUs allowed in backyards?	Laneways only	Only in backyards (laneways are not prominent)	Laneways and backyards	Laneways and backyards	Laneways and backyards	Laneways and backyards	Laneways and backyards	Laneways and backyards	Laneways and backyards	Laneways and backyards	For maximum uptake, efficiency, and expediency Toronto's DSS performance standards could be combined into one regulatory document to address common concerns and highlight laneway or backyard–specific issues.	Except for Vancouver which strictly addresses laneways because of their ubiquitous nature in the city, all of the guidelines studied within this report very effectively communicate the common purpose for and concerns surrounding both laneway and garden suites, and are able to articulate when and where variations of regulation are necessary including corner lots, row houses, and whether or not the property abuts a laneway.
Regulated by neighbour-hood, or city-wide?	Permitted in two main residential zones with lanes	Permitted in all single and two-family dwelling zones	Permitted in all 4 main residential zones. Infill Design Guidelines apply to "Mature Neighbourhoods" in block-specific locations[1]	Permitted in 4 central Wards, Discretionary elsewhere	On pilot project sites, expansion city-wide pending evaluation. 3 distinct property types	All properties with detached single family homes	Permitted in all single and two-family zones. Row houses permitted if a corner lot or serviced by a lane	Permitted within some single-unit, and all two-unit, and urban dwelling zones	As-of-right where Secondary Apartment Infill Tool has been adopted	As-of-right where single detached homes are permitted	The design responses to DSS in Toronto's various neighbourhood forms can be addressed city-wide through the specifics of the performance standards. See **Proposed Garden Suite Design Guidelines for Toronto (pages 36-42)**.	Many of the study cities have created property types, categories, or zones to reflect their diverse neighbourhood typologies, but as DSS sizes and design specifications are often articulated in relation to the main house, creating city-wide standards can easily reflect the built form of each neighbourhood while democratizing the benefits of DSS across the city.
Servicing	---	---	---	---	From principle residence	---	From principle residence[2]	---	---	---	Servicing should be run from the principal residence.	This makes effective use of existing infrastructure. In identified places where infrastructure upgrades are imminent, cost-sharing of new infrastructure for the DSS can be a cost effective means of replacement while minimizing service interruption.
Severances	Severances not permitted	---	---	Severances not permitted	Severances not permitted	Severances not permitted	Severances not permitted	---	Severances not permitted	Severances not permitted	Toronto should not allow severing of lots. Legal agreements can be written up with the City (as in Vancouver) to ensure that the garden suite remains rental and accessory to the principle residence.	Severing of lots would undermine the rental stock creation and affordability benefits of a DSS implementation program. Severance of lots was also one of the major concerns highlighted when council last addressed laneway suites in 2006.
Addressing	---	Garden suite will have a unique address	---	---	Same as main house, L for 'lane' or R for 'rear'	---	Garden suite will have a unique address	---	---	---	Logically garden suites would use the address of the principal residence suffixed with an R for "rear," and the entrance clearly marked with the address from the street. Laneways should be named with a house address applied to laneway suites accordingly.	Toronto has been in the process of naming its laneways for some time, so if we plan on them becoming more inhabited over time, for orientation it makes sense that laneway suites would have numbered addresses on those named laneways. This would clarify any confusions as to how to enter the property.
Permitted Uses	Long or short term rental	Long or short term rental	Long or short term rental	Long or short term rental	Long or short term rental	Long or short term rental	Long or short term rental	Long or short term rental	Short term rental NOT permitted	Long or short term rental, home business, no parking.	DSS should not permit short-term accommodation (ie Air B&B) and should permit home-based business	If the purpose of the DSS bylaw was to increase rental unit supply, then DSS should remain residential long-term rental in nature. Recognizing the need for home office and studio space, DSS should also be permitted for any home-based business that are permitted within a regular residence, so long as they do not require additional parking.
Incentives or Fees	$1,150 simple one story, $1760 all other cases	$1,200 base fee $400 notice fee $1,400 public hearing = $3,000	Cornerstones Grant, up to $20,000 or 50%	City has waived permit application fees	Fee exemption for secondary suites and laneway / garden suite pilot	$1,950 application fee, 100% rebate on building and plumbing permit fees	Exempt from development fees except public transit charges	"change in use" as well as a building permit fees, no registration fees	Sliding scale of permit fee rebate based on percentage of affordable units	Waiver of System Development Charges = $8,000 to $13,000 USD savings per unit	The city of Toronto should strike a balance between establishing a cost-recovery program and incentivising DSS. Recognizing that property taxes will also increase with the building of DSS, fess could be waived during an evaluation period (for example for first 100 units, or a period of two years). A fee could be considered to reinstate as demand increases.	By utilizing this type of self-sufficient rental unit supply mechanism, the City would be saving money from incentivizing developers to create affordable units. It is also possible to waive fees for as-of-right minimal impact, standard-conforming applications, and maintain fees for projects requiring committee of adjustment attention.
Units to date	As of July 2016, 2,329 permits issued to construct laneway homes[3]	From 2011-2014, 3 built, 12 applications pending [4]	2 garden suites, 64 garage suites[5]	458 secondary suites from 2012 - 2015[6] Backyard suites not distinguished.	31 purpose-built suites in new developments[7]. Applications in for 8 in established neighbour-hoods.[8]	since 2014, 15 approved, 8 under construction[9]	First project currently breaking ground	---	5 as of September 2016	From 2000-2016 2,200 permits issued	The number of currently existing laneway or garden suites is unknown as they have not been recorded as such by the building department.	If the brewing interest in Toronto, the experience of Vancouver's uptake of laneway houses, and our similar housing affordability situations are any indicator for the future of DSS in Toronto, we should be planning our policy with the expectation of permitting over 1,000 units in Toronto within the next 5 years

1. Garage and Garden Suites in Edmonton are permitted in the following locations: on corner lots throughout the neighbourhood, on lots fronting onto a service road, on lots backing onto a lane adjacent to an arterial road that is separated from the lane by a landscaped boulevard, on lots abutting or separated by a laneway from sites zoned for Row Housing, Apartments, Community Services or Public Parks.
2. In Ottawa, coach houses are also permitted on rural or village lots over .8 hectares in size and must share either water or wastewater services with the main house, subject to Site Control Plan

3. City of Vancouver (2016) 4. Cleverly (2014) 5. Edmonton Open Data (2017) 6. Klingbeil (2016) 7. (Design Regina, 2016) 8. (Sale, 2017) 9. (Kotasek-Toth, 2017)

Lot Guidelines	Vancouver	Victoria	Edmonton	Calgary	Regina	Saskatoon	Ottawa	Moncton	Austin	Portland	Recommendations for Toronto	Rationale
Typical city lot size (for comparison)	33 x 122 ft 4,026 ft ^{2}	50 x 100 ft 5,000 ft ^{2}	4,300 ft ^{2}	25 ft wide ---	--- 4,795 ft^2	25 x 125 ft 3,125 ft ^{2}	38 ft wide ---	---	50' x 140' 7,000 ft^2	50 x 100 ft 5,000 ft ^{2}	Average is roughly 2,000 ft^2	Lots come as narrow as 11 ft wide in Old Toronto with lots stretching as deep as 300 ft. In Scarborough, Etobicoke and North York, lots tend to vary wildly in size and shape as divided around curvilinear streets and cul-de-sacs.
Minimum lot area	N/A	N/A	4,300 ft ^{2}	N/A	N/A	N/A	N/A	N/A	5,750 ft ^{2}	3,000 ft ^{2}	N/A	As many municipalities have discovered, it is unnecessary to determine a minimum lot size, but rather let the Building Code determine minimums for room sizes and let architects and designers determine if their lot can accommodate minimum unit size while meeting setback requirements. This allows for maximum flexibility for homeowners.
Minimum lot width	33'	N/A	N/A	30'	N/A	N/A	N/A	N/A	N/A	Min. 36' standard development	17'	This lot width would accommodate a 4' emergency access path as well as a 2' set back from the adjoining property and a minimal width unit for long, narrow lots. Neighbours should be permitted to build semi-detached units straddling their lots so long as emergency access in maintained on the other side of each, and permits are submitted together.
Maximum total built coverage	Laneway house width must not exceed 50% of lot width	25% of backyard or 40% of total lot	25% including garage and accessory buildings	45% including garage and accessory buildings	50% including garage and accessory buildings	50% of back yard	40% including garage and accessory buildings	---	40% including garage and accessory buildings	Accessory building may cover no more than 15% of lot area	Footprint of DSS my be no bigger than 20% of total lot coverage	This stipulation relates the DSS to the size of the whole lot,which has the effect of keeping its footprint proportionate to the property regardless of the size of the principle residence.
Size Guidelines												
Minimum square footage	205 ft^2	N/A	323 ft^2	40-60% depending on zone	N/A	N/A	Standard, regulated by Building Code	N/A	500 ft^2	N/A	N/A	Building Code determines minimum livable spaces.
Maximum allowable square footage	900 ft^2	400 ft^2	538 ft^2 (at grade)	646 ft^2 (above garage)	750 ft^2	861 ft^2 (or 80% GFA of principal residence)	829 ft^2	861 ft^2 (or 40% of GFA principal residence)	800 ft^2	1,100 ft^2	800 ft^2 (or 75% GFA of principal residence)	This maximum square footage ensures that DSS remain proportionately smaller than the principal residence and that they don't overpower the neighbourhood
Number of stories permitted	1 ½ (2nd floor must be setback from lane and maximum 60% of main floor area)	1 (with exemptions for existing garage conversions and "plus sites")	No taller than main house	1	1 ½ for core	2 in core (with 2nd floor setback), 1 in suburbs	1 (2 if above garage)[1]	---	2 (max 550 ft^2 on 2nd floor	2	1 or 1 ½ as of right, higher permitted through committee of adjustment. The second floor can be limited by angled roofs or with a maximum percentage of 1st floor area. If the roof has only one angle, the higher side must face south to minimize shading on surrounding properties.	This stipulation works toward minimum shading on neighbouring properties by retaining the highest point of the roof well within the primary residence property. This also ensures that full height two story houses must be approved through committee of adjustment.
Max building height	20'	12'	21' (sloped roof) 18' (flat roof)	15'	19'	20' (in core) 12' (in suburbs)	12'	20'	30'	20', or 15' if within setback	20,' or 15' for single story	Heights are commensurate with standard story heights
Maximum size compared to principal residence	N/A	N/A	N/A	N/A	must be smaller than principal residence	DSS (incl. garage) must be smaller than principal residence	must be smaller than principal residence	N/A	---	Maximum 75% of principal residence	Under no circumstances can the DSS be taller that the principle residence. Applications proposing additional height would have to go through committee of adjustments. Maximum 800 ft^2 or 75% of the principle residence.	This stipulation ensures that the visual character of the neighbourhood is not affected from the street and shading is minimized

1. Applications for minor variances with respect to coach houses shall have regard for all of the following considerations: the coach house is in no circumstance taller than the primary dwelling, the proponent can demonstrate that the privacy of the adjoining properties is maintained, the siting and scale of the coach house does not negatively impact the abutting properties, significant trees and plantings are preserved on the subject property; and any streetscape character impacts are addressed through the coach house design and siting.

	Vancouver	Victoria	Edmonton	Calgary	Regina	Saskatoon	Ottawa	Moncton	Austin	Portland	Recommendations for Toronto	Rationale
Number of DSS permitted												
Number of allowable DSS	1	1	1	1	1	1	1	1	1	1	1	Any lot that could accommodate more would need committee of adjustment approval.
Allowed if existing secondary unit is principal residence	yes	yes	no	no	no	no	no	no	no	no	Yes	DSS should be permitted on properties regardless of existing secondary suites within the principle residence.
Orientation and Setbacks												
Location	Within the rear 26' of principal yard (32' if 1 story)	Rear of yard. [1]	Rear of yard	Rear of yard	Rear of yard	Rear of yard	Rear of yard	Rear of yard or on top of garage	Rear of yard	Set back 40' from lot frontage	DSS should be located at the rear of the property	This ensures that the character of the street does not get over-whelmed with accessory buildings and accommodates rental units with "invisible density" in a way that does not crowd the streetscape
Orientation	Facing Lane	Facing lane or backyard	Facing lane or backyard	Facing lane or backyard	Facing lane or backyard	Facing lane or backyard	Facing lane or backyard	Facing lane or backyard	Facing lane or backyard	Facing lane or backyard	DSS should face the lane, if on a laneway, or be oriented to the street or shared yard if in a backyard, or the perpendicular street, if on a corner lot.	This stipulation encourages frontages on the lane or or street which encourage "eyes on the street," lively and safe public places and a clear and vibrant connection between the street or lane and the DSS
Minimum rear set back	5'	2'	---	2'	---	7'	---	8'	10'	---	For garden suites, rear setbacks should be a minimum of 4 feet with no transparent windows and the lowest point of the roof angle facing the adjoining property to minimize shadowing. [2]	For laneways, this ensures that the will be adequate width to accommodate two passing vehicles and safe passage for pedestrians when vehicles are present. For garden suites, this avoids crowding, shading and overlook to adjacent properties.
Minimum side setback	Minimum 10% of the lot width	2'	4'	2'	---	3' in core, 10' in suburbs. One side must have at least 4'.	3' if no windows. 13' with windows. One side must have at least 4'.	4'	---	---	Minimum 4' unobstructed emergency access, and 2' on the other side, unless jointly constructing a semi-detached unit with neighbour	The 4' pathway ensures emergency services access and also facilitates movement for wheelchairs, strollers, shopping carts, luggage, or moving furniture or building materials.
Distance between DSS and principal dwelling	16'	8'	13'	3'	---	13'	---	---	10'	N/A	A minimum of four feet shall be maintained between the principal residence and the DSS though this space may be enclosed to a maximum width of 8'	This stipulation would differentiate a DSS from an addition or secondary suite, and could accommodate a climate controlled access for dependents requiring care from residents of the principal residence.
Basements	Permitted. Counts towards total floor area.	---	---	---	Not permitted to prevent risk of flood damage	Not permitted	Permitted	---	---	---	Basements should be permitted	Though not necessarily cost-effective on the scale of most DSS, flexibility should be offered for homeowners to include basements, though they shall not be used as second unit within the garden or laneway suite.
Parking												
Parking spots required?	1 non-enclosed parking	No additional parking required	Sufficient as per the bylaw	1 (2 in some neighbour-hoods)	1	1	No additional parking required	1	1 (or 2 if main house has none)	No additional parking required	No additional parking required	Parking should be provided at market demand. With the increasing use of car-share, carpooling, and cycling, and the advent of AVs, parking should not be required but rather left up to the homeowner to supply based on perceived demand. In suburban neighbourhoods, appropriate locations on the public right of way could be covered in permeable pavers and utilized for small Car-to-Go car-share lots. A parking study may be required to justify this decision.[3]
Exemptions	---	---	---	----	Exempt within 400m of transit stop or near downtown	---	---	---	---	---	N/A	

1. In Victoria it is encouraged that on corner lots the Garden Suite is sited as close to the side street as possible to create a consistent streetscape pattern.
2. On laneways narrower than 4m (13') width, laneway suites should be set back from the laneway property line 3' to accommodate frontage and entrances that will not obstruct laneway usage, encourage safety, and allow for greenery.
3. See **Key Considerations: Parking** (**page 31**) for a more thorough analysis of parking considerations as they relate to DSS.

Accessibility Affordability Sustainability	Vancouver	Victoria	Edmonton	Calgary	Regina	Saskatoon	Ottawa	Moncton	Austin	Portland	Recommendations for Toronto	Rationale
Accessibility guidelines	Must have one accessible washroom on the first/ground floor	---	---	---	All publicly accessible areas should be barrier-free	Entrance paths should accommodate barrier-free access	---	---	---	---	4 ft minimum width for entrance paths, at grade entrances and main floor washroom	As we move towards an accessible Ontario, introducing a new building typology offers a perfect opportunity to introduce accessibility standards. With their particular suitability for seniors and dependents this is even more relevant to DSS.
Affordability regulations	---	---	---	---	---	---	---	---	SMART program. Short-term rental not permitted to help ensure supply of affordable housing	---	Incentivise the building of DSS though permit fee reductions or rebates to encourage the uptake of the program and increase rental unit supply.	Because of the high variation of circumstances when dealing with homeowner development of DSS, it is very difficult to attempt to control rent or require rent to be attainable to lower income families in a way that ensures finacial viability for the homeowner. Focus should instead be placed on making the program more attractive and address rental prices through helping increase supply.
Sustainability	Surface parking spaces should have permeable pavers or impermeable wheel paths with ground cover in centre and sides	---	---	---	---	Passive solar design, energy efficiency encouraged	---	---	---	---	Passive solar design and energy efficiency should be encouraged and incentivised to address rising energy costs. Green roofs should be incentivsed. Native landscaping and rain water harvesting should be encouraged. Parking should not be required.	Addressing concerns around shading for neighbouring properties can go hand in hand with passive solar design. Investing in energy efficiency now helps with rising electrical and heating costs. The Greenroofs could be incentivised specifically for this new building typology to help deal with issues of stormwater run-off and increased built area. Native landscaping adds to biodiversity and uses less water. This sort of gentle intensification should encourage walking biking and transit and inspire infrastructure improvements.

Appendix D - Design Notes by City

--- = this item not mentioned in their design guideline documents

Vancouver	Design Notes - Vancouver notes are specific to Laneway Houses (LWH)
Design guideline notes	The guidelines apply to any orientation of site, as they are intended to address both solar access and perceived scale from adjacent neighbours. Numerical values are given to assist with quick evaluation of proposed LWH designs. Flexibility is intended, and the numbers should be seen as neither finite limits nor conversely a means to justify height unnecessary to the building design. While LWH may have a full range of architectural expressions, a LWH should clearly express its function as a residence.
Permanence	Laneway housing should be designed to be a lasting, quality addition to the neighbourhood. Buildings which are not designed to last are not environmentally sustainable, nor can they be considered affordable when the costs of maintenance and replacement of materials over time is considered.
Materials	Material selection and detailing should ensure performance over time. Modular construction can be used to advantage to reduce on site construction time and costs, however, LWH using modular construction must be permanent non-moveable dwellings following all the by-laws that apply to conventional site-built dwellings. Once assembled, a LWH of modular construction should be indistinguishable from a site-built dwelling.
Entrance	---
Windows	Upper level windows facing side yards and gardens are limited and/or designed to increase privacy and reduce overlook of neighbouring properties. If a 0.6m (2ft) side yard setback is provided, windows are not permitted along the side facing the side yard.
Terraces / Balconies	Should face lane. Max 86 ft^2
Rooftops / Dormers	Access to rooftop prohibited for all uses. Ladder or hatch for green roof maintenance only.
Trees / Landscaping	A LWH should be located and designed to preserve existing trees where possible. The Director of Planning may require the retention of a significant tree. The Director of Planning may relax the regulations regarding LWH location and massing, and the required number of parking stalls to accomplish this. 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.
Outdoor space	A laneway house should have access to private outdoor space in the backyard and/or on an upper level deck facing the lane.
Lighting	Pedestrian-friendly lighting, such as porch lights or bollard lights, help make the lane a safe and welcoming public space.
Permeable surfaces	A permeable surface is required for parking areas.
Grading and drainage	---
Garbage & Recycling	---
Snow clearing	---

Victoria	Design Notes
Design guideline notes	Quality in design, high quality architectural expression, and unique individual identity of a Garden Suite are encouraged. However, the Garden Suite should relate to the principal building on site in terms of materials, roof form, and general architectural expression. The intent, however, is not to create a "miniature version" of the primary building.
Permanence	Modular and pre-fabricated housing represents a potential opportunity for homeowners to reduce the construction cost and to reduce construction time and disturbance of neighbours. Therefore, these construction methods are supportable. However, the finished structure must be undifferentiated from on-site and adjacent existing structures in terms of quality of construction and the appearance of permanence
Materials	Unit entries should be oriented to the street. When this is not practical, a secondary preference would be to locate the entry to the interior portion of the site.
Entrance	An unobstructed pathway must be constructed and maintained between the public street and the Garden Suite entrance, with a minimum width of 1 m for private and emergency access.
Windows	Windows should be maximized along those façades oriented to the interior of the site. Windows oriented towards adjacent properties are discouraged and, in some cases, may be prohibited by Building Code regulations. On corner lots, lots with laneway access or double-fronting lots, windows should be oriented to the street or laneway.
Terraces / Balconies	---
Rooftops / Dormers	Rooftop outdoor space is prohibited to mitigate privacy concerns of neighbourhoods. Rooftop energy initiatives such as solar panels or solar hot water heating may be considered.
Trees / Landscaping	Siting should respect mature trees both on site and on adjacent properties. This means locating the Garden Suite so as to minimize impact on a tree's root system. Green roofs are encouraged as benefits include reducing stormwater runoff, improving water quality, reducing urban heat island effect, conserving energy, creating wildlife habitat, and prolonging the life of the roof membrane. An added benefit is that the green roof may soften the appearance of the Garden Suite from neighbouring lots.
Outdoor space	Native plant species and drought-tolerant plants are encouraged in side yard areas, particularly within narrow setbacks between the Garden Suite and adjacent lots where access for maintenance and upkeep is limited.
Lighting	Design and orientation of the Garden Suite should ensure a direct connection with usable outdoor space. A minimum of 15 m of semi-private outdoor space should be clearly associated with the Garden Suite. This may be achieved through plantings or changes in surface materials.
Permeable surfaces	---
Grading and drainage	---
Garbage & Recycling	The proposed site plan should consider the location of extra garbage and recycling bins and screen these from view. These should not be located near the primary entrance of either residence.
Snow clearing	---

Edmonton	Design Notes - Garage and Garden Suites guidelines are part of a larger document articulating guidelines for Secondary Suites, duplexes, rowhouses, lowrise and highrise apartments
Design guideline notes	Garage and Garden Suites should be consistent with the materials and proportions of the principal dwelling, and should incorporate fundamental design elements found within the neighbourhood. The site design should, in concert with the design and placement of the building, optimize access to sunlight, and minimize overlook and loss of privacy on adjacent properties.
Permanence	---
Materials	Should be constructed of quality, durable materials and be of a character that minimizes visual impact on and maximizes integration with the existing neighbourhood.
Entrance	The suite should have an entrance separate from the garage door.
Windows	At least one window of the suite should face onto the lane. Windows should be placed to minimize overlook of neighbouring properties, by off-setting window placement from those of abutting structures. Larger windows should face a lane, flanking street, or the larger of any side yard.
Terraces / Balconies	Locate balconies so that they face the lane or flanking street.
Rooftops / Dormers	---
Trees / Landscaping	---
Outdoor space	Sufficient separation space between the Garden Suite and principal dwelling should be provided to accommodate an amenity area for one or both dwellings. Backyard amenity space should be retained on site after all parking requirements have been met.
Lighting	---
Permeable surfaces	---
Grading and drainage	---
Garbage & Recycling	---
Snow clearing	---

Calgary	Design Notes
Design guideline notes	Calgary's Backyard suites are treated as secondary suites and subject mainly to safety and scale regulations. Design details are minimal.
Permanence	---
Materials	---
Entrance	Each bedroom must have at least one window that can be fully opened and used to escape during an emergency. Unobstructed openings must be 3.8 ft ² with no dimension less than 15 inches
Windows	---
Terraces / Balconies	Rooftop decks and balconies on accessory residential buildings are not permitted under the current Land Use Bylaw on accessory residential buildings without an approved development permit.
Rooftops / Dormers	---
Trees / Landscaping	---
Outdoor space	Outdoor amenity space should have a minimum area of 7.5 square metres with no dimension less than 1.5 metres
Lighting	---
Permeable surfaces	---
Grading and drainage	---
Garbage & Recycling	---
Snow clearing	---

Regina	Design Notes
Design guideline notes	Should be complimentary to Primary Dwelling and adjacent properties. Laneway and Garden Suites should not incorporate blank exterior walls facing the rear yard, amenity space, the rear lane, or exterior side yard in the case of corner properties.
Permanence	---
Materials	Laneway and Garden Suites should incorporate a palette of high quality building materials, which extend to all sides of the suite and complement the Primary Dwelling. Building materials should be selected for their functionality and aesthetic quality, as well as their durability, long-term maintenance requirements, and energy efficiency.
Entrance	Laneway Suites should incorporate principal entrances which are visible and accessible from adjacent rear laneways (either directly from the laneway or from the side of the building), or flanking streets in the case of corner properties. Interior-facing DSS should be clearly visible from the public street.
Windows	Windows should be arranged to enhance views and provide natural ventilation and light, without sacrificing privacy between adjacent dwellings. Clerestory windows and pitched roof skylights are encouraged to provide light and ventilation without impacting the privacy of surrounding properties.
Terraces / Balconies	Terraces and balconies shall only be incorporated into one and a half story Laneway and Garden Suites above a height of 3.5 metres. Laneway Suites may only incorporate upper story terraces or balconies adjacent to the rear yard amenity space and rear laneway. Garden Suites may only incorporate upper story terraces or balconies adjacent to the rear yard amenity space. Upper story terraces and balconies should be positioned to avoid overlook of adjacent properties. Such areas should be visually screened.
Rooftops / Dormers	Pitched roofs should be sloped to match the Primary Dwelling, where appropriate. Dormers should be massed to maintain appropriate building and roof proportions, and shall occupy no more than 70% of the total roof area.
Trees / Landscaping	Mature trees should be promoted through adequate soil volumes, placement of built structures and space for root systems to grow. Landscaping within rear yard setbacks, garage entrances or parking pads, as applicable, is encouraged and should enhance the visual appeal of the laneway, accommodate snow storage and maximize absorption of run-off. Plantings should be specified and strategically located to maintain privacy for the Primary Dwelling, neighbouring properties, and the adjacent rear laneway, where applicable. Planting specification and location should account for infrastructure and utility placement, as well as servicing requirements. The rear setback area for Laneway Suites should be landscaped to promote comfort and activity in the lane. Landscaping should be designed in keeping with Crime Prevention through Environmental Design principles.
Outdoor space	Rear yard amenity space should be provided between the Primary Dwelling and the Laneway or Garden Suite, occupying an area in keeping with applicable minimum side yard setbacks and separation distances
Lighting	Downcast pedestrian-scaled lighting that does not spill over into neighbouring properties should be provided in key locations, including primary and secondary building entrances. Downcast pedestrian-scaled lighting should be operated by motion-sensors to minimize light pollution and impacts on neighbouring properties.
Permeable surfaces	Parking pads may include permeable pavers or pavement. Rocks, gravel and other loose materials are not permitted. Landscape design should incorporate stormwater run-off mitigation strategies.
Grading and drainage	Plans shall be completed for all properties where a Laneway or Garden Suite is proposed in order to ensure that development sufficiently minimizes potential impacts on adjacent properties and manages stormwater run-off. These plans shall be stamped by a Professional Engineer licensed to practice in the Province of Saskatchewan.
Garbage & Recycling	Storage space for waste/recycle bins should be included on the Site Plan. Consideration of snow clearing and garbage removal practices should be done on a site-by-site basis. Where these functions are carried out in the laneway, landscaping, storage of garbage receptacles and other considerations should ensure that these functions are not impacted.
Snow clearing	Consideration of snow clearing and garbage removal practices should be done on a site-by-site basis. Where these functions are carried out in the laneway, landscaping, storage of garbage receptacles and other considerations should ensure that these functions are not impacted.

Saskatoon	Design Notes
Design guideline notes	Garden or garage suites should be positioned and oriented to maximize overview of adjacent rear lanes or rear yards, and minimize overview of adjacent properties. Garden and garage suites should be directly accessible from the sidewalk or roadway located at the front of the property and also from the rear lane, where rear lanes exist. The design of garden or garage suites should be complementary in character and quality of detail to the principal dwelling.
Permanence	---
Materials	Buildings should use a variety of materials and architectural details, both vertical and horizontal, to break up the facade. Such articulation should include three- dimensional depth and composition, which can be achieved by varying the massing of the facade through the use of bays, recesses, reveals, substantial trim and secondary building elements including porches, verandas, balconies and bay windows.
Entrance	Garden and garage suites shall be connected to the front yard of the site by means of an internal path, the width of which should accommodate barrier free access. Where lanes exist, garden and garage suites shall also be connected to the rear yard by means of a path. The preferred location of the main entrance of a garden or garage suite is to be directly accessible and visible from the lane where lanes exist. Main entrances should be designed to provide weather protection, and can include features such as recessed entries, front porches and verandas.
Windows	Windows and doors in garden and garage suites shall be of a size and in locations which will not result in the loss of privacy for residents of adjacent sites. Up to 60% of walls facing rear yards and rear lanes may be glazed. Restrictions on the placement of Frosted windows are recommended for Category 1 garden or garage suites as a means of maintaining the privacy of adjacent properties on either side of the suite. Since Category 2 suites are restricted to a single story and require 3 metre side yard setbacks, the extent of glazing should not be regulated provided that sufficient screening (fencing or landscaping) is present on side property lines to screen the suite from neighbouring rear yards.
Terraces / Balconies	Balconies may be provided on the second story of garden suites and garage suites facing a lane, or on corner sites, facing a side street. Balconies shall be screened appropriately so as to inhibit the view into adjacent sites.
Rooftops / Dormers	Dormers and secondary roof components should be positioned and proportioned to remain secondary to the primary roof form. Dormers on upper storys should remain relatively small in order to maintain appropriate building and roof proportions.
Trees / Landscaping	Trees, landscaping and site furnishings should not obstruct the path of travel. Existing significant trees, tree stands, and vegetation should be protected and incorporated into infill development to the extent possible. New trees should be planted to contribute to the existing tree canopy of the neighbourhood. Where appropriate, retaining walls should be incorporated into the overall landscaping plan for the site. They should be low in profile and should be designed in a manner which is compatible with the streetscape.
Outdoor space	The design of private outdoor amenity spaces and site landscaping features should incorporate sustainable site design principles.
Lighting	Internal pathways should incorporate pedestrian-scaled lighting at key locations including main and secondary dwelling entrances. Pedestrian-scaled lighting may be free-standing or wall- mounted depending on the desired application. Pedestrian-scaled lighting should be down lit to avoid unnecessary light pollution. Pedestrian-scaled lighting should be provided adjacent to rear lanes to enhance the perception of safety. Outdoor lighting systems should incorporate LED technology to reduce energy and maintenance demand.
Permeable surfaces	---
Grading and drainage	The site must be adequately drained. A storm water management plan is required.
Garbage & Recycling	All garbage and recycling bins should be stored on-site in designated locations, screened from public view. Garbage and recycling storage areas should be integrated into the design of garden or garage suites where feasible.
Snow clearing	---

Ottawa	Design Notes
Design guideline notes	Coach houses must be designed and located to minimize impacts on neighbouring properties with regards to privacy, shadowing and overlook. They must not negatively impact the streetscape character of the neighbourhood, and must integrate with the existing streetscape character in the case of corner lots or lots having a secondary frontage on a rear lane.
Permanence	---
Materials	---
Entrance	The Zoning By-law requires a 1.2-metre-wide access from the coach house to a public street. This is to provide direct pedestrian access for the coach house, and access for emergency response services. The Zoning By-law requires the location of a doorway entrance to a coach house to be set back further than 4 m from the lot line unless the lot line in question borders a travelled lane.
Windows	Window placement affects the privacy of neighbours. Strategic window placement will allow for light penetration into the coach house while respecting the privacy of adjacent properties. Where windows are desired, the Zoning By-law performance standard requires a coach house to be 4 metres from a rear and interior side lot line.
Terraces / Balconies	---
Rooftops / Dormers	---
Trees / Landscaping	Trees add considerable social and environmental value to every neighbourhood. It is important to take trees on the subject property and adjacent properties into consideration when planning a coach house. Coach houses and its services should be designed and positioned so that they will not affect trees or the underground critical root system.
Outdoor space	---
Lighting	---
Permeable surfaces	---
Grading and drainage	A formal Grading and Drainage Plan is required as part of a complete building permit application for coach houses that are 55 m2 or larger in size and/or for coach houses which are within 1.2 metres from a property line. The Grading and Drainage Plan is to ensure that any changes made to the property do not negatively impact the grading and drainage on the property and the neighbouring properties.
Garbage & Recycling	---
Snow clearing	---

Moncton	Design Notes
	Insufficient data regarding design details

Austin	Design Notes
Design guideline notes	The City of Austin has not prepared design guidelines for DSS, but The Alley Flat Initiative in partnership with the Austin Community Design and Development Center has some very interesting models designed with accessibility and sustainability in mind. See www.TheAlleyFlatInitiative.org
Permanence	---
Materials	---
Entrance	May be connected to the principal structure by a covered walkway
Windows	---
Terraces / Balconies	---
Rooftops / Dormers	---
Trees / Landscaping	---
Outdoor space	---
Lighting	---
Permeable surfaces	No more than 40% of the required front yard may be impervious cover, including sidewalks and driveways.
Grading and drainage	---
Garbage & Recycling	---
Snow clearing	---

Portland	Design Notes
Design guideline notes	Portland's Zoning Code Update was designed to create more flexibility in the siting of accessory structures. Its standards are meant to ensure that accessory structures respect the look and scale of single-dwelling development, do not become the predominant element on site, and help to maintain privacy, and limit visual impacts. The code refers strictly to height, massing, and location and does not address design specific issues.

References

Accessory Dwellings (2016). *How Portland Became ADU-Friendly (And How Your City Can Too!)* https://accessorydwellings.org/2016/03/04/how-portland-became-adu-friendly/

ACDDC (2008). Austin Community Design and Development Center: The Alley Flat initiative. http://acddc.org/projects.html

Ahmed, Sa'ad (2017). Personal communication with Sa'ad Ahmed, founder of TinyTO. January 31, 2017.

AODA (2005). https://www.ontario.ca/laws/statute/05a11

AURA (Austinites for Urban Rail Action) (2017). http://www.aura-atx.org

Babbs, Helen (2013). *Gardens: Must lawns be made of grass*? The Guardian. July 12, 2013. https://www.theguardian.com/lifeandstyle/2013/jul/12/gardens-grass-free-floral-lawns

Brown, John Martin (2014). *Stradivarius violins and cigar box guitars: making sense of ADU construction costs.* https://accessorydwellings.org/2014/05/01/stradivarius-violins-and-cigar-box-guitars-how-much-does-an-adu-cost/

Bula, Frances (2015). *Vancouver policy to create rental housing brings life to the laneways.* Cityscope. December 11, 2015. http://citiscope.org/story/2015/vancouver-policy-create-rental-housing-brings-life-laneways

Bula, Frances (2016). *'I can't set down roots:' Canadians who rent are forced to scrap over a dwindling supply of housing that has never been more expensive*. Globe and Mail, July 11, 2016. http://www.theglobeandmail.com/news/british-columbia/rent-series-part1/article30832544/

Burda, Cherise (2014). *Home Location Preference Survey: Understanding where GTA residents prefer to live and commute.* Pembina Institute. http://www.rbc.com/community-sustainability/_assets-custom/pdf/RBC-Pembina-Home-Location-Preference-Survey.pdf

Canadian Automobile Association (2012). *Driving Costs: Beyond the price tag, Understanding your vehicle's expenses*. https://caa.ca/docs/eng/CAA_Driving_Costs_English.pdf

CARP (2008). *Impacts of the Aging of the Canadian Population on Housing and Communities*. Canadian Association of Retired Persons. https://www.cmhc-schl.gc.ca/odpub/pdf/65913.pdf

CBC (2016). *Laneway housing pilot project for seniors touted by Calgary councillor.* CBC News, May 16, 2016. http://www.cbc.ca/news/canada/calgary/laneway-housing-seniors-400-square-foot-calgary-university-councill-carra-1.3583909

Chapel, Karen, Jake Wegmann, Alison Nemirow, and Colin Dentel-Post (2012). *Yes, in my backyard: Mobilising the market for secondary units.* The Center for Community Innovation at the Institute of Urban and Regional Development. http://communityinnovation.berkeley.edu/reports/secondary-units.pdf

City of Calgary (2007). Calgary Land Use Bylaw IP2007. http://www.calgary.ca/PDA/pd/Documents/Calgary-Land-Use-bylaw-1P2007/bylaw_1p2007.pdf

City of Calgary (2007). Secondary Suites and Backyard Suites. http://www.calgary.ca/PDA/pd/Pages/Permits/Projects/Applying-For-A-Secondary-Suite.aspx

City of Edmonton (2007). Bylaw 12800 Garage and Garden Suites. http://webdocs.edmonton.ca/zoningbylaw/ZoningBylaw/Part1/Special_Land/87_Garage_and_Garden_Suites.htm

City of Edmonton (2009). Residential Infill Guidelines: A Manual of Planning and Design Guidelines for Residential infill in Mature Neighbourhoods. Prepared by Fletcher & Co Municipal Consulting. https://www.edmonton.ca/business_economy/documents/PDF/Residential_Infill_Guidelines_Sept_2009.pdf

City of Edmonton (2016). Secondary, Garage, and Garden Suite Grants https://www.edmonton.ca/programs_services/funding_grants/cornerstones-grant-secondary-suite.aspx

City of Edmonton, Mature Cities Overlay (n.d.) https://www.edmonton.ca/city_government/urban_planning_and_design/mature-neighbourhood-overlay.aspx

City of Edmonton Open Data (2017). Residential Building Permits 2009-2014 https://data.edmonton.ca/Indicators/Residential-Building-Permits-2009-2014/25sf-z8zd/data

City of Moncton. Garden Suites Bylaw. https://www.cmhc-schl.gc.ca/en/inpr/afhoce/afhoce/afhostcast/afhoid/pore/prgasu/prgasu_005.cfm

City of Ottawa (2015). Zoning By-law Review of minimum parking requirements. http://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/min_parking_en.pdf

City of Ottawa (2016). Coach houses: Secondary dwelling units in accessory structures: guiding principles and draft recommendation paper. http://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/coach_houses_draft_recc_en.pdf

City of Ottawa (2016). How to Plan your Coach House in Ottawa. https://documents.ottawa.ca/sites/documents.ottawa.ca/files/how_to_coach_en.pdf

City of Ottawa, Planner (2017). *Anonymity preferred*. Personal Communication. January 17, 2017.

City of Regina (2016). Laneway & Garden Suites Guidelines for Pilot Projects. http://www.designregina.ca/wp-content/uploads/LanewayGuidelines.pdf

City of Regina's Comprehensive Housing Strategy SHS Consulting Consultant's rationale for recommendations. http://designregina.ca/wp-content/uploads/Regina-Comprehensive-Housing-Strategy-Rationale.pdf

City of Saskatoon (n.d.). Design Guidelines for Garden and Garage Suites: Neighbourhood Infill Development. (Illustrated guide). https://www.saskatoon.ca/sites/default/files/documents/community-services/planning-development/development-review/ggs_design_guidelines_website.pdf

City of Saskatoon (n.d.). Regulations for Garden and Garage Suites: Neighbourhood Infill Development. (Illustrated guide). https://www.saskatoon.ca/sites/default/files/documents/community-services/planning-development/development-review/garden_and_garage_suites_website.pdf

City of Saskatoon Planning and Development (n.d.). Garden and Garage Suite Regulations https://www.saskatoon.ca/sites/default/files/documents/community-services/planning-development/development-review/garden_and_garage_suite_regulations_pkt_for_pubs.pdf

City of Toronto (2006) Staff Report Re: Construction of Housing in Laneways ALL WARDS. June 20, 2006. http://www.toronto.ca/legdocs/2006/agendas/committees/wks/wks060705/it007b.pdf

City of Toronto (2013). City of Toronto Zoning By-law 569-2013 http://www.toronto.ca/zoning/bylaw_amendments/ZBL_NewProvision_Chapter150_10.htm#150.10.80

City of Toronto (2016). By-law enforcement occupancy standards http://www.toronto.ca/311/knowledgebase/35/101000038235.html

City of Toronto (2017). Home is where it starts. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=c0aeab2cedfb0410VgnVCM10000071d60f89RCRD

City of Toronto, Assistant Planner (2017). *Anonymity preferred*. Personal communication. February 21, 2017.

City of Toronto, Planner (2017). *Anonymity preferred*. Personal communication. February 10, 2017.

City of Toronto Finances (2016). Residential Development Charges Rates Effective February 1, 2016. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=acd97487cdd61510VgnVCM10000071d60f89RCRD&vgnextchannel=a90b285441f71410VgnVCM10000071d60f89RCRD

City of Toronto Official Plan (2015). http://www1.toronto.ca/planning/chapters1-5.pdf

City of Toronto Open Data (2017). http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=1a66e03bb8d1e310VgnVCM10000071d60f89RCRD

City of Toronto Ward Profiles (2011). http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=2394fe17e5648410VgnVCM10000071d60f89RCRD

City of Vancouver (2013). Laneway House (LWH) Guidelines. http://vancouver.ca/files/cov/L007-vancouver-laneway-house-guidelines-2013.pdf

City of Vancouver (2016). Housing Characteristics Fact Sheet. http://vancouver.ca/files/cov/housing-characteristics-fact-sheet.pdf

City of Vancouver, Planner (2017). *Anonymity Preferred.* Personal communication. February 16, 2017.

City of Victoria (2011). The Garden Suite Policy. http://www.victoria.ca/assets/Departments/Planning~Development/Development~Services/Documents/Garden%20Suite%20Policy.pdf

Cleverly, Bill (2014). *No Rush to build garden suites in Victoria.* Times Colonist, May 3, 2014. http://www.timescolonist.com/news/local/no-rush-to-build-garden-suites-in-victoria-1.1020472

CMHC (2014a). Permitting Secondary Suites: How the strategy works. https://www.cmhc-schl.gc.ca/en/inpr/afhoce/afhoce/afhostcast/afhoid/pore/pesesu/pesesu_001.cfm

CHMC (2014b). Rental Market Report, GTA. https://www.cmhc-schl.gc.ca/odpub/esub/64459/64459_2014_A01.pdf

CHMC (2016). Rental Market Report, GTA. https://www03.cmhc-schl.gc.ca/catalog/productDetail.cfm?lang=en&cat=79&itm=37&fr=1491256057532

CMHC, (2017). Providing for garden suites: Garden suite by-law, Moncton NB. https://www.cmhc-schl.gc.ca/en/inpr/afhoce/afhoce/afhostcast/afhoid/pore/prgasu/prgasu_005.cfm

Collins-Williams, Michael. Personal communication with Director of Policy, Ontario Home Builders Association, January 20, 2017.

Crawford, Tiffany (2013). *Laneway houses continue to soar in popularity in Vancouver.* Vancouver Sun, December 29, 2013. http://www.vancouversun.com/Laneway+houses+continue+soar+popularity+Vancouver/9331159/story.html

Data Edmonton (2017). Garage and Garden Suite Permits. https://data.edmonton.ca/Sustainable-Development/Garage-and-Garden-Suite-Permits-Filtered-/5shq-47ft/data

Department of Environmental Quality, State of Oregon (2013). Accessory Dwelling Unit Survey of Portland, Eugene, and Ashland Oregon: Final Methodology and Data Report. http://www.deq.state.or.us/lq/sw/docs/ADUReportFRev.pdf

Design Regina (2016). Laneway & Garden Suites Guidelines for Pilot Projects. http://www.designregina.ca/wp-content/uploads/LanewayGuidelines.pdf

Dolski, Megan (2016). 'Mom and pop' landlords: Vancouver's housing crisis has turned many homeowners into DIY landlords who use rental income to pay the bills. Globe and Mail August 16, 2016. http://www.theglobeandmail.com/news/british-columbia/with-home-prices-on-the-rise-vancouver-homeowners-become-mom-and-poplandlords/article31484002/

Donnelly, Brandon (2015). *Why Its Next to impossible to get a laneway house built in Toronto* http://brandondonnelly.com/post/102805630828/why-its-next-to-impossible-to-get-a-laneway-house

Hulchanski, David (2017). The Three Cities within Toronto: Income Polarization among Toronto's Neighbourhoods 1970-2005. http://www.urbancentre.utoronto.ca/pdfs/curp/tnrn/Three-Cities-Within-Toronto-2010-Final.pdf https://www.huduser.gov/portal/publications/adu.pdf

Kalinowski, Tess (2016a). *Growth plan fuelling GTA housing prices, developers told CIBC economist says the province's policy is driving up home prices.* Toronto Star, October 13, 2016. https://www.thestar.com/business/real_estate/2016/10/13/growth-plan-fuelling-gta-housing-prices-developers-told.html

Kalinowski, Tess (2016b). *Growth plan will fill in 'missing middle' of housing choices: report.* Toronto Star, September 7, 2016. https://www.thestar.com/business/real_estate/2016/09/07/growth-plan-will-fill-in-missing-middle-of-housing-choices-report.html

Klingbeil, Cailynne (2016). *Calgary architects look to kick-start shift to laneway housing.* The Globe and Mail. February 12, 2016. http://www.theglobeandmail.com/life/home-and-garden/architecture/calgary-architects-look-to-kickstart-shift-to-laneway-housing/article28745384/

Kotasek-Toth, Paula (2017). Personal communication with Senior Planner of Saskatoon, February 2, 2017.

Kramer, Anna and Marcy Burchfield (2015). Growing Pains: Understanding the new reality of population and dwelling patterns in the Toronto and Vancouver regions. Neptis Foundation. http://www.neptis.org/publications/growing-pains-understanding-new-reality-population-and-dwelling-patterns-toronto-and

Lanescape (2016). Citywide laneway suites consultation Survey. http://lanescape.ca/survey/

Metro News (2015). Toronto 'transit deserts' show how infrequent TTC routes reveal inequality. http://www.metronews.ca/news/toronto/2015/04/25/toronto-transit-deserts-show-how-infrequent-ttc-routes-reveal-inequality.html

Ministry of Housing (2016). Letter from Minister Chris Ballard, November 14, 2016.

Ministry of Municipal Affairs (2016). Proposed Growth Plan for the Greater Golden Horseshoe. https://www.placestogrow.ca/index.php?option=com_content&task=view&id=420&Itemid=12#2.2.6

Ministry of Municipal Affairs and Housing (2015). Strong Communities through Affordable Housing Act, 2011. http://www.mah.gov.on.ca/Page9572.aspx

Ministry of Municipal Affairs and Housing (2016). Ontario's Long-term Affordable Housing Strategy. http://www.mah.gov.on.ca/AssetFactory.aspx?did=13683

Moore, Steven A. (2017), personal communication, Jan 25, 2017.

Moore, Steven A and Sergio Palleroni, ed. (2008). The Alley Flat Initiative: Topics in Sustainable Development 2008 Report. http://251.sustainablesources.com/alleyflat2016demo/af-content/uploads/2016/02/AFI-SOA-2008-report.pdf

MountainMath Analytics (2016). Secondary Suites and Taxes. http://doodles.mountainmath.ca/blog/2016/10/04/secondary-suites-and-taxes/

Ontario Home Builders' Association (2015). Long-term Affordable Housing Strategy Submission to MMAH. http://ohba.ca/system/documents/documents/317/original/OHBA_-_Affordable_Housing_Submission_-_2009_-_FINAL.PDF?1433170662

Ontario Ministry of Finance (2016). Ontario Population Projections Update, 2015-2041. http://www.fin.gov.on.ca/en/economy/demographics/projections/

Pembina Institute and Ontario Home Builders Association (2015). Make Way for the Laneway: Providing more housing options for the Greater Toronto Area https://www.pembina.org/reports/mwfl-report-final.pdf

Pigg, Susan (2015). GTA housing affordability falling: we're not far behind New York. *The Toronto Star.* January 19, 2015. https://www.thestar.com/business/real_estate/2015/01/19/gta-structural-challenges-pushing-housing-prices-out-of-reach.html

Portland Bureau of Development Services (2016). Portland Accessory Dwelling Units Program Guide. https://www.portlandoregon.gov/bds/article/68689

Portland Bureau of Planning and Sustainability (2105). Accessory Structure Zoning Code Update 2015. https://www.portlandoregon.gov/bps/article/549245

Portland Bureau of Planning and Sustainability (2017). Single Dwelling Zones: Lot Dimension Standards. https://www.portlandoregon.gov/bps/article/64609

Powell, Betsy (2016). *Toronto Councillors push to allow laneway housing.* The Toronto Star. November 14, 2016. https://www.thestar.com/news/city_hall/2016/11/14/toronto-councillors-push-to-allow-laneway-housing.html

Remax (2017). Housing Market Outlook Report 2017. http://download.remax.ca/PR/HMO2017/Report/REMAX_2017HousingMarketOutlookReport.pdf

Robinson, Matt (2016). *Vancouver approves 2,500th laneway home permit.* Vancouver Sun. December 29, 2016. http://vancouversun.com/news/local-news/vancouver-approves-2500th-laneway-home-permit

Rosol, Marit (2013). *Vancouver's "EcoDensity" Planning Initiative: A Struggle over Hegemony?* Urban Studies. 50 (11) 2238-2255, August 2013.

Sale, Chris (2017). Personal communication with Senior Planner for Regina, January 27, 2017.

Second Suites (2000). Second Suites: An Information guide for Homeowners. http://www.secondsuites.info/Homeowners_Guide.pdf

SHS Consulting (n.d.) City of Regina Comprehensive Housing Strategy. http://designregina.ca/wp-content/uploads/Regina-Comprehensive-Housing-Strategy-Rationale.pdf

Smith, Charlie (2013). *Laneway homes, garden suites, and carriage houses sprouting up across Lower Mainland*, The Georgia Straight, October 16th, 2013. http://www.straight.com/life/504441/laneway-homes-garden-suites-and-carriage-houses-sprouting-across-lower-mainland

Smith, Kim (2014). *Saskatchewan radon gas levels higher than national average.* Global News. November 25, 2014. http://globalnews.ca/news/1690007/saskatchewan-radon-gas-levels-higher-than-national-average/

Smith Cross, Jessica (2015). *Who's paying for Toronto? A ward-by-ward breakdown of property taxes in Toronto.* Metro Toronto, April 20, 2015. http://www.metronews.ca/news/toronto/2015/04/20/whos-paying-for-toronto-a-ward-by-ward-breakdown-of-property-taxes-in-toronto.html

SMART Housing Policy (2008). Resource Guide. http://www.mayorsinnovation.org/images/uploads/pdf/13_-_Austin_housing.pdf

Stinson, Jeffery and Terrance Van Elsander (2003). A Study of Laneway Housing in Toronto. Architects in Association. https://www.cagbctoronto.org/files/9.%20LanewayPresentation%20pt1.pdf

Tencer, Daniel (2017). Toronto's Average House Price Jumps $40,000 In A Month Amid Supply 'Crisis'. The Huffington Post, February 3, 2017. http://www.huffingtonpost.ca/2017/02/03/toronto-house-prices-treb_n_14594144.html

Theis, Michael (2015). Granny Flats Get Green Light from City Council. *Austin Business Journal*, November 20, 2015). http://www.bizjournals.com/austin/news/2015/11/20/granny-flats-get-green-light-from-city-council.html

Toronto City Planning Policy and Research (2006). Rental housing supply and demand indicators. https://www1.toronto.ca/city_of_toronto/social_development_finance__administration/files/pdf/housing_rental.pdf

Toronto Foundation (2016). Demographics: How is Toronto's Population growing? http://torontosvitalsigns.ca/main-sections/demographics/

Transportation Tomorrow Survey Results (2011). Data Management Group. http://dmg.utoronto.ca/pdf/tts/2011/travel_summaries_by_ward/toronto_wards11.pdf

Turcotte, Martin (2015). Family Caregiving: What are the consequences? Statistics Canada http://www.statcan.gc.ca/pub/75-006-x/2013001/article/11858-eng.htm

United States Department of Housing and Urban Development (2008). *Accessory Dwelling Units Case Study.* https://www.huduser.gov/portal/publications/adu.pdf

Vancouver Laneway Housing (2016). Laneway Housing How-to Guide. http://vancouver.ca/files/cov/laneway-housing-howto-guide.pdf