# Reproducing youthified landscape character:

# An evaluation of diversity of built-forms in young adult neighbourhoods

by

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## Authors Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

## Abstract

The purpose of this thesis is to examine the built-form of young adult neighbourhoods across North America to assess the similarities and differences that exist across these landscapes. The thesis seeks to answer the following research question, 1) Are young adult neighbourhoods across North America characterized by a common aesthetic? To answer this research question the thesis examines current literature on ‘Place’, ‘Aesthetics’, ‘Young Adult Neighbourhoods’, and, ‘Character Assessments’ to develop a framework from within which it creates a new built-form character assessment tool that can systematically assess the diversity of built-forms in young adult neighbourhoods. Through the use of the tool the thesis collects data for 1279 establishments within 697 properties on 36 streets across 12 cities in Canada and the United States of America. The data provides evidence to suggest that dominant trends the built-form of young adult neighbourhoods do exist but they are not homogenous across neighbourhoods, cities, or countries.

## Acknowledgements

I would like to thank my supervisor Dr. Markus Moos for his ongoing encouragement, guidance, support, and mentorship throughout the duration of project. There is no easy route to the completion of a thesis but with his ongoing commitment to this project we have managed to answer the question that he pondered all those years ago when sitting in Wicker Park, Chicago.

I would like to thank my colleagues in the Generationed City lab at the University of Waterloo for the time that they have invested into this project. There were many challenges that arose through the completion of this project, but with their ongoing support this thesis has managed to overcome them all.

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## Dedication

For my mother and father.

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## CHAPTER ONE: Introduction

This thesis began with a story. As my Master's advisor (Markus Moos) tells me, a few years ago he found himself enjoying a drink in a local restaurant in Wicker Park, Chicago, when he noticed something about the view. Wicker Park is a gentrified neighbourhood home to a large share of young adults. He was visiting there as part of his research on youthification (Moos, 2016). As he sat there, he could not help but notice one simple transient thought: The landscape he saw looking out through the store window was very familiar.

In fact, the look and feel of the street and its buildings and people was almost too familiar, more so then it should be for a visitor on a work trip who has been in Chicago for no more than a couple of days, and who has never sat in this particular restaurant before. For him, the question became a matter of determining if this was simply a case of déjà vu? Or perhaps more likely, a question of if there is a true resemblance to other cities and neighbourhoods he had visited before?

For at that moment while Dr. Moos sat in the café quietly starring at the buildings that comprised the beautiful streetscape, he realized that these very buildings in this landscape share a similar resemblance to others that he had seen before elsewhere. He pondered a thought - if we were to pick him up and drop him in a café on Queen Street West in Toronto or perhaps in a neighbourhood of Vancouver, BC or Portland, OR, that also exists with a high percentage of young adults, would he know the difference? (**Figure 1**). It is important to note here that for the purpose of this thesis a neighbourhood is defined as having a high percentage of young adults (persons aged 25-34), if it has two or more times the number of young adults then that of the average that is expected in the given metropolitan area. This number is calculated through the use of a location quotient *(described in methods chapter).*

The materials, the shapes, the aesthetics, the facades, the colours, the setbacks, the heights, the densities, and even the use of public space, are very similar. If we were to splice together a streetscape of different neighbourhoods with high percentages of young adults across North America to form an imagined landscape, would we in fact create a landscape that is both located everywhere, yet belongs nowhere? Thus, this thesis asks are young adult neighbourhoods all that similar across North American cities?

***Figure 1: Similar Landscapes of Place***


*CAPTION: The two images depicted above illustrate the similarities found between youthified neighbourhoods in various North American cities. Specifically, the images draw our attention to the similarities found between the materials being used, the colours of the materials, the dwelling types, the dwelling heights, the sidewalk widths, and the setbacks. (Google Maps, 2017).*

Dr. Moos thought to himself about how these different kinds of neighbourhoods, which could all be classified as being youthified, appear similar to the casual observer. Which ultimately leads us to the question - Is there such a thing as a youthified aesthetic? Based on his recommendation, I will test this hypothesis in my thesis.

***The Research Problem***

The story about my advisor brings with it the purpose of this thesis, which is to understand why these seemingly different landscapes can look and feel so similar. A landscape can be many things to many different people as it is not a static concept. For a definition, the

thesis turns to Kevin Lynch (1962) who presents a landscape as being a technically organized and visually coherent image that reflects the life and action that takes place within it (p. 55). By this definition a landscape is not any one thing, but it can be many things. However, at the root of the definition is the organization and coherence. This is where the thesis draws its working definition for urban landscapes. If a landscape is technically organized and visually coherent image, then an urban landscape is a technically organized and coherent image of the built form. This is what the thesis infers when it uses the word 'landscape'.

To date, little academic work has been completed on the notion of character similarity across landscapes, and even less has been offered on the specific character of neighbourhoods with a high percentage of young adults (or youthified neighbourhoods). While we find a great deal of research being completed on the aesthetics and characteristics of "gentrification" (Ley, 2003; Gainza, 2017), much of it is focused on a specific neighbourhood or individual cities, while very little attention is given to understanding the similarities that exist among neighbourhoods in different cities.

The overarching hypothesis unfolds as follows: neighbourhoods with a high percentage of young adults have taken on a certain form and a certain aesthetic, which is identified as being unique. At the same time, the forces behind youthification, a process defined as the influx and retention of young adults in urban neighbourhoods (Moos, 2016), are perhaps reproducing very similar landscapes in various locations. The question that lays before us is are these landscapes, aesthetically speaking, unique both within a city, and across these cities?

The systematic characterization of landscapes is something that is completed through using mostly subjective tools and methods best suited to studying individual cases, such as historical urban landscapes (Aysegul, 2016; Zeayter, Mansour & Mansour, 2017), or landscape

ecological assessments (Kline, Moses & Alig, 2001; Zetterberg, Mörtberg & Balfors, 2010). Thus, one of the reasons there may be so little comparative work on this topic is because researchers have focused on understanding a limited number of topics within singular neighbourhoods and cities. Thus, researchers have not developed a tool or method that would allow them to study the systematic characterization of landscapes because the comparative analysis between neighbourhoods, cities, and even countries goes beyond the purpose of their own research. Given this, the very deliverables needing to be produced within their studies do not require a repeatable systematic methodology based upon comparative analysis, nor one that focuses on the specific characterization of a landscape.

***Research Question***

The purpose of this thesis is to conduct a systematic evaluation of the diversity of built-forms that exist within young adult neighbourhoods across North America to determine what similarities and differences exist. The research question that will be answered by this thesis is:

1) Are young adult neighbourhoods across North America characterized by a common built-form?

With this question the thesis presents its first hypothesis: Young adult neighbourhoods, as they exist in retail and commercial areas, across North America characterized by a common built-form.

In answering this research question, the thesis develops a tool that serves to objectively assesses the selected landscapes. The thesis draws on the literature in architecture, heritage, and urban geography to develop this unique tool that may also be used for further research. The thesis offers a second hypothesis in regard to this tool: The tool developed within this thesis will provide an objective assessment of the selected landscapes.

To refine the definition of young adult neighbourhoods this thesis will focus on neighborhoods that are zoned as retail and commercial areas and contain or are surrounded by high residential concentrations of 25-year olds to 34-year olds. The built-form analysis of young adult neighbourhoods is refined to those locations that share similar features, such as being retail corridors and having a high level of transit accessibility. For this thesis, the built-form of young adult neighbourhoods is limited to a discussion of the prominence, distribution, and composition of various features found within the streetscapes, buildings, and establishments located within these neighbourhoods.

***Research Contributions***

The first contribution of this thesis is empirical. Through a comparative analysis this thesis will provide a clear representation of the similarities and differences that are found to exist in neighbourhoods with a high percentage of young adults across North America. Such a study has not been completed and as such the comparative analysis that is presented in the pages below offers initial insight into a larger conversation of the characterization of the landscapes found to exist within neighbourhoods with a high percentage of young adults.

Second, through the application of this thesis a tool will be developed to systematically assess the landscapes being examined. While tools and methods for character analysis currently exist, it is true that they are highly subjective and rely upon the expertise of the observer to capture the essence of the landscape through qualitative observations, the application of a numerical value, or a combination of the two. Such an approach to character assessments leaves the evaluation being skewed towards the subjective thoughts and experiences of the observer, who is likely a professional working in the field or someone who has received formal training to effectively use the specified tool (Solomon, 1966; Reeve, Goodey, Shipley, 2006).

It is important to note that this thesis does not look to contest the value of 'experiencing' a landscape, nor to minimize the contribution of other tools and methods that incorporate or are completely defined by qualitative analysis. Rather the analysis seeks to provide a new tool that removes a high level of subjectivity in turn to provide a quantitative assessment of a landscape as a complementary tool suitable for comparative work. The new tool provides a more systematic approach that distils landscapes down into basic components that can be measured and compared.

### *Organization of the Thesis*

The thesis uses Chapter Two to provide an overview of important planning and philosophical literature to contextualize the work being carried out within this thesis. The focus in this chapter is to demonstrate key arguments and findings from other research projects and studies that have been completed on similar topics to that of the characterization of neighbourhoods with high percentages of young adults. Here the thesis draws upon the academy to discuss 'Place', 'Aesthetics', 'Young Adults', and 'Character Assessments', as they pertain specifically to the built environment, planning practices, and the characterization of landscapes. Wherein each term is clearly defined, and discussed for its importance to this specific thesis and its objective of examining young adult neighbourhoods, as they exist in retail and commercial areas, across North America with the intention of assessing the built-form of individual landscapes.

In Chapter Three the thesis describes in detail how this examination that is based in a positivist social science approach is developed, set within specific parameters, and executed. Specifically, this chapter explores the selection criteria and process for the cities, neighbourhoods, streets, and buildings that are included within this study. Additionally, it

reviews the development of the tool being used within the thesis. These discussions are accompanied by examples found within this thesis.

Chapter Four explores the similarities and differences that exist within the identified neighbourhoods with high percentages of young adults that are selected to be a part of this thesis. The results are presented as box plots, wherein the focus is placed upon discussing the similarities and differences that exist between cities; and, scatter plots, which focus on discussing the similarities and differences that exist within cities.

Chapter Five reviews the major findings presented within this thesis. This section also reviews the limitations that have presented themselves throughout the progression of the project, as well as recommending future areas of research based upon the data and findings examined within this thesis.

## CHAPTER TWO: Literature Review

As is previously identified, the purpose of this thesis is to conduct a systematic evaluation of the diversity of built-forms within young adult neighbourhoods across North America to assess the similarities and differences that are found to exist. In order to contribute to this discussion, the thesis must first describe the built-form of young adult neighbourhoods, giving particular attention to the similarities and differences that are found to exist within them. Following from this, the thesis must then show why a systematic quantitative analysis tool is best suited to address this research problem. The following literature review provides an in-depth discussion into how various elements affiliated with the development of a neighbourhood work to produce a landscape in order to demonstrate how a systematic quantitative analysis tool would work to measure this phenomenon. The literature review discusses prior works of various scholars on the different methods and approaches being applied to understand the characterization of the built-form in neighbourhoods with a high percentage of young adults.

The selected topics for discussion as part of this literature review reflect the different elements that are associated with the systematic qualitative analysis of built-form. The discussion to follow is divided into four topics, including ‘Place’, which focuses on how place is conceptualized from space and developed into being a shared public image; ‘Aesthetics’, which focuses on conceptualizing the landscape’s form as being its aesthetic; ‘Young Adult Neighbourhoods’, wherein the focus is placed upon understanding the characteristics associated with these types of neighbourhoods and identifying where they are found to exist; and, ‘Character Assessments’, where the focus of the discussion rests upon defining character assessments and building a tool that is valuable for this thesis.

***Place***

An understanding of 'Place' is important to this thesis as the analysis is concerned with the built-forms of particular landscapes. In and of itself the word 'Place' is not a highly contested term as it simply denotes a physical location; however, in the academic sense, 'Place' is used as part of a much larger discussion. The academic literature that exists on 'Place' and 'Place-making' is exhaustive and incorporates discussions from planning (Soini, Vaarala & Pouta, 2012; Williams, 2014), geography (Rippon, 2013; Guthey, Whiteman & Elmes, 2014), psychology (Wilson, 1997), and philosophy (Holgate, 1992; Soren & Johnson, 2012), each of which provide a different perspective on what 'Place' is, how we engage with it, and how our interactions with place deduce different meanings. As such, it is important to establish clear parameters for how the discussions within this thesis will use the term 'Place' to contextualize the empirical analysis.

First and foremost, when we discuss 'Place' we are engaging in the discussion of building an image (Madureira, 2015). Spaces as they exist throughout a city are diverse, as seen by the way in which they come to exist (i.e. urban forms, natural environment), the way in which we engage with them (i.e. recreational spaces, meeting spaces/civic centre's), the way in which they have been realized, (i.e. formal spaces, informal spaces), and even in where they are located (i.e. urban spaces, rural spaces). As such, it should be of no surprise that in order to discuss 'Place', we must understand the 'Image of Place' (Lynch, 1981).

For example, Kevin Lynch (1960) explains that physical landscapes and their images come to be because of a two-way process between the observer and the environment; wherein the environment suggests distinctions and relations and the observer selects, organizes, and endows with meaning what she/he sees (p. 6). This is to say that while any 'Place' is a 'Space',

not every ‘Space’ will be a ‘Place’ to every person. This is a result of the process in which a singular person endows meaning upon a ‘Space’ (or landscape) in which they choose to engage. Thus, a ‘Place’ only becomes a ‘Place’ because of our own images and the meanings we bring to it.

It is also important to note here that these images of a landscape are a result of how we experience it. Colin Ellard (2009) explains that the very size and shape of a ‘Space’ will greatly influence our feelings as we tread through it. He notes that a good urban vista, with good street plans, will draw our eye and our feet to it (p. 222-223). Where an urban form is well designed and encourages our participation, we will have positive experiences, which will in turn lead us to create a positive image of the landscape. Lynch (1960) argues that where areas of agreement are found to exist creating a single public image, or the common mental image that is carried by inhabitants, we have the development of a common culture and physical reality (p. 7). Where a landscape suggests distinctions and relations and observers come to select and organize the distinctions similarly to other observers, we will find the development of a common mental image or a singular public image. So, where you and I both walk through downtown Toronto and look up at the CN Tower and endow that it is a national Canadian symbol; we are identifying this landscape as being an image of Canadian identity. If enough people engage with this landscape in a similar fashion and endow the same meaning as you and me, the result is the creation of a public image.

While the CN Tower is an easy landscape for us to consider as having a common public image, this is less true when we engage with young adult neighbourhoods. Therefore, for the purposes of this thesis it is important to select cities and neighbourhoods from across North America that have enough commonalities (i.e. share of young adult population, location in retail

and commercial landscapes, similar access to public transit), to ensure that we are comparing areas that exist with similar public images, and not those in which a single person would endow drastically different meaning upon. While we have no way of ensuring that by selecting cities and neighbourhoods with similar characteristics that we are in fact selecting places with similar public images; the research of Colin Ellard (2009) suggests there is evidence to support that by selecting neighbourhoods with similar sizes and shapes that we will yield neighbourhoods which are experienced by observers in a similar manner. When this point is taken into consideration with Lynch's (1960) arguments, we can conclude that this would mean that observers would likely endow similar meaning upon these different landscapes.

Beyond the works of Ellard (2009) and Lynch (1960) there is also a body of literature that discusses retail geography, and with it the factors that create a consumer's image of the landscape, that can be drawn upon here to better understand how the participants in young adult neighbourhoods create their own image of a landscape. Our understanding of building a landscape image begins with identifying the differences that exist between similar retail clusters in various geographical locations within a city. Through the use of shopping centres as way of an example in Dublin, Parker (1973) explains that the distribution and design of shopping centres are heavily influenced by their geographical location within a city; suburban areas are found to have nucleated shopping centres, whereas inner city development is found to have linear shopping centres (p. 627). This is an important consideration for this thesis, because this study provides evidence that shopping centres will be inherently different in general size and shape given their placement within a city. Thus, a systematic assessment of the diversity of built-form in young adult neighbourhoods should then take geographical placement under consideration when selecting neighbourhood locations.

In addition to these findings, a study focusing on the development of retail locations in Eighteenth-Century Amsterdam by Clé Lesger (2011) confirmed that the general principles of location that are consistent with the practices of eightieth-century shopping centre development continues to be a relevant practice for the modern shopping industry (p. 47). That is, the local contexts that influence placement and distribution of shopping centres continues to be consistent with earlier practices. This is another important consideration because it provides evidence to suggest that the development of shopping centres within a given region has continued to be consistent with that regions development practices over time. Thus, this thesis does not have to give particular attention to when a neighbourhood was developed within a given city, because there is evidence to suggest that the local context for placement and development of these shopping areas has remained consistent through time.

Given what has just been discussed above, the question for this thesis becomes - will a consumer build a similar image of two separate landscapes? An answer to this question is provided by Abrudan, Plŭias, & Dabija (2015) who argue that the image of shopping centres or retailers, as it is created in the minds of a consumer, is the result of both the landscapes physical attributes and their own perceived attributes (p. 539). This argument, in conjunction with the earlier two points, suggests that for the practice of image building in retail geography the physical landscape is as important as the consumer's own subjective experiences. While this suggests that the images that are produced by a consumer will vary greatly between consumers and the landscapes that they engage with, it also indicates that the development of the image is reliant upon the physical attributes of the landscape. Thus, when giving consideration to how a consumer builds an image of a landscape in an evaluation of the diversity of built-forms in young adult neighbourhoods, the selection of similar neighbourhoods, by way of shape and size, will

reduce the variation found within the physical attributes ability to influence the consumers image.

An additional concept that is connected to the development of ‘Place’ is our notion of authenticity that accompanies our experiences. It is important to identify and discuss how the social, cultural, and economic conditions prevalent within the landscapes where young adults are concentrated lend themselves to the development of a distinctive sense of authenticity. Here it is important to specify what the thesis means by the use of the word ‘Authentic’ as it relates to its mandate of assessing the character of landscapes. Commonly, we will hear someone exclaim that their time spent in a given environment ‘felt like an authentic experience’, one to be considered as unique from that of other places they have visited or lived. It is this notion of authenticity which this thesis is concerned with operationalizing.

The definition of authenticity in the built-form begins by conceptualizing the relationship between ourselves and the landscape. As Kevin Lynch (1981) states, authenticity begins with our ability to read a ‘Space’, which is founded in our engagement with a ‘Space’ (p. 313). From Lynch’s perspective, authenticity can be encapsulated within a discussion of how a participant engages with a landscape. The relationship between an observer and a landscape is discussed by Augé (1995) who argues that an observer only ever catches glimpses of a landscape as they move through it; the result are snapshots of the landscape, similar to a slideshow, that will be recomposed within the observer’s memory with their own narrative (p. 69). Lynch (1981) would have us believe that authenticity is a product of what we create, but Augé (1995) would add that what we create is not always a replication of the full experience. Thus, even when we can have an authentic experience that is offered to us by a landscape, it is not always true that every passerby will take in this authentic experience as it is presented. An observer may in fact only

see what it is that they want to see, in part creating a new experience for themselves and solidifying their definition of that 'Place'.

Producing a shared common experience that is directly connected to a distinctive culture and that will become the bedrock of a community is thought to be dependent upon an intersection of societal expectations, landscape characterization, and selected narratives brought forward by local residents. Sharon Zukin (2011) explains that where societies offer citizens free movement; where a landscape is rich in local history and narratives; and, where a citizen, as entrepreneur, can emphasize and suppress specific narratives of that landscape, a distinctive culture will be produced (p. 161-162). While Zukin explores a detailed explanation as to why these three components are essential to the creation of a distinctive culture, for the purposes of this thesis it is only necessary to understand that an authentic sense of 'Place' does not merely occur by happenstance. Rather, the shared common experience that is rooted within the distinctive culture is a result of many different social, cultural, and economic conditions.

For this thesis, the literature provides two important perspectives, constructionist authenticity and existential authenticity. Constructionist authenticity, a value judgement approach, is primarily concerned with how a participant constructs reality from their interactions with a landscape. In an article that discusses identity and authenticity in the construction of destination image, Marine-Roig (2015) presents a constructionist conception of authenticity, arguing that it is not a tangible element, rather it is a judgement of value that a participant places upon a place or product within which they have experienced (p. 580). A constructionist approach suggests that meaning is created through a participant's own interaction with a landscape. An authentic landscape is one that is constructed from within the meaning that we attribute to our own experience of a landscape and not from the landscape itself.

Existential authenticity, a self-reflection approach, shares similarities with constructionist authenticity in that it also is created from our interactions with a landscape. However, unlike constructionist authenticity, existential authenticity is created when a participant's feelings, needs, and values are stimulated by the landscape itself. In an article that explores the importance of place in existential authenticity, Rickly-Boyd (2013) connects existential authenticity with our state of being and argues that authenticity is produced from engaging with the world, which includes a mediation of our own subjective experience, and our social, cultural, and physical surroundings (p. 684). This perspective maintains that the landscape itself is secondary to our own subjective experience and positionality. It is argued that 'who we are' matters more than 'what we experience', and as a result our determination for what is authentic within a landscape is more about us and less about the landscape itself. Within an existential approach to authenticity, our interaction with the landscape activates internal feelings and values, which we then connect to the landscape itself making it authentic.

These two perspectives demonstrate that the exercise of ascribing authenticity to a landscape is tangential to the physical attributes. Authenticity is derived from the experience that a participant has with a landscape, which is influenced by the physical attributes but not necessarily defined by them (Ricky-Boyd, 2012; Chhabra, 2012). This influence extends to the attributes that may or may not be present within the landscape, as the different attributes of the landscape that a participant can interact with will ultimately define their experience. Thus, the physical attributes of a landscape matter to the extent that they construct a city 'Space' within which a participant can interact (Reid & Beilin, 2015). From this, we can deduce that a landscape may seem similar to that of others because the observer infers a particular meaning when participating in neighbourhoods with a high percentage of young adults.

For this thesis, the important foundational concept of place that is essential to the research is place identity. Maria Lewicka (2008) explains place identity as being the relationship between a person and an environment (p. 211). This notion of place identity sees us create a relationship between the landscape and ourselves through daily engagement. In their respective works, Claudia Manenti (2011), Maria Lewicka (2008), and Orestic Droseltis & Vivian Vignles (2010) argue that to create place identity we must establish a significant relationship between ourselves and the environment, which includes a cognitive sense of place, transactions between us and the environment, and appreciation of the landscape (Manenti, 2011, p.1105; Lewicka, 2008, p. 211-212; Droseltis & Vignles, 2010 p. 31). The arguments that these authors present is that the city has its own distinctive character that makes it unique to that of others, and that through our own engagement with these unique landscape characteristics we come to understand our own identity. This is an important concept for this thesis because the experience from which the presented research questions have been developed is founded in a sense of familiarity that is shared between different landscapes that are said to be unique. Given that the literature presents place identity as being our relationship with an environment, it is entirely possible that when we engage with different landscapes that share common built-forms that we are left with constructing a similar place identity.

However, where this thesis pivots from the current literature is in the discussion of place attachment, specifically as it relates to periods of time and emotional ties to a landscape. In terms of time, Hernandez et. al. (2007) provides evidence to support that natives and non-natives experience a given landscape differently. Of key importance to this finding is that the period of time one spends around a place is directly correlated to their attachment to that place (p. 317-318). Here the argument is made, and the supporting evidence is provided, to suggest that

someone who spends more time in a ‘Place’ will experience a greater emotional attachment to that ‘Place’, which will result in a deeper connection to that ‘Place’, over that of someone who has spent less time in the same ‘Place’.

These findings derive from the research on place attachment where scholars, such as Maria Lewicka (2010) and William Clark et. al. (2017) argue that place attachment involves interplay of affect and emotions, knowledge and beliefs, and behaviours and actions in reference to a ‘Place’; the result is the creation of emotional ties to our places of residence and recreation (Lewicka, 2010, p. 35-36; Clark et. al., 2017, p. 3). While we can certainly think of places that we have a deep personal connection with, perhaps the landscape surrounding your family cottage or childhood home, this goes beyond an appreciation of space as place and looks to identify how we create ‘Place’. However, this discussion is beyond that of this thesis’s purview as place for this discussion is focused on identifying places that have similar shared public meanings, and not that of our own individual interpretations.

### *Aesthetics*

The foundation of this thesis’s comparative analysis is based upon the characterization of aesthetics in the built-form of neighbourhoods with high percentages of young adults. The thesis characterizes these landscapes through the collection of quantitative and qualitative data. The extent to which the data captures the aesthetic description of these landscapes is in large part associated within the definition of the word aesthetic and how it is operationalized in character analysis. The following provides an overview for how aesthetics is currently being discussed and studied in scholarly work.

Aesthetics are often thought of in terms of architectural form (Scruton, 1973; Horden, 1983). It is not only about creating a beautiful structure, a captivating streetscape, or head-

turning façade. In large part, aesthetics is about the interplay between variables that come together to produce what we have defined as being ‘aesthetics’. When discussing architectural form, Jennath & Nidhish (2016) explain that it is the visual characteristics of a landscape that make it unique; these include the building shape, the configuration of surfaces, the texture and colours, material usage and balance, composition of architectural elements, building massing, and light conditions (p. 1809). The authors provide evidence to argue that aesthetics is not merely how beautiful something is seen to be, rather it is about how all its parts come together to produce something beautiful.

A similar concept is explored in the work of Stewart Brand (1994) where he argues that the heart of the common and ordinary design is found in form and not style, as many would have us believe - He concludes that style is times fool, while form is time’s student (p. 132). The argument that he presents us with is that where aesthetics is based upon style it will lose its allure through time. However, where aesthetics is based upon good form it will produce a landscape capable of becoming timeless. This thesis incorporates these conceptualizations of aesthetics into its own character analysis of neighbourhoods with a high percentage of young adults. In place of focusing entirely on the style, the thesis brings form to the forefront of the discussion of aesthetics. To do this, the thesis expands the discussion of aesthetics beyond that of the beatification of a building. Specifically, the thesis looks to characterize the function of both the streetscape and the buildings through the collection of several variables that work together to define the overall aesthetic of a single building.

The term aesthetics is commonly associated with urban form along with the associated planning practices that inevitably bring a city to life. Ellis (2005) explains that urban planners are faced with an extremely difficult task of fusing function with design and aesthetics with the

expectation being to generate a physical landscape that is useable, beautiful, and produces cultural meaning (p.143). Ellis provides evidence to suggest that aesthetics is not a singular component of a landscape that is to be thought of in isolation of function and meaning, instead it is one piece of a much larger, and more complicated puzzle. Where the focus of an urban planner is solely on activating aesthetics in a landscape, the resultant urban form will be one that looks nice but exists with limited functionality and little meaning to those working and living in the landscape. Likewise, where the focus is only placed upon functionality and creating meaning, the true essence of the built form will be lost as it will not capture the attention the way that a beautiful landscape has the ability to do.

This sense of balancing aesthetics, function, and meaning in the urban form is a point of discussion in the literature. In her work, Talen (2005) argues that urban form can be distilled to include some optimal physical structures within cities, such as the form of urban neighbourhoods should be small, the street widths should be narrow, and there should be access to a mix of uses (p. 207). Again, the aesthetics of the neighbourhood are borne to a larger expectation. It is not simply about producing an urban form that is beautiful, rather it is about developing one that is functional, meaningful, and beautiful. This concept is expanded upon by Holgate (1992) and Chang (2016) who express that the urban aesthetic is not only drawn from architecture but also from the colours, smells, and sights of a neighbourhood; wherein the appeal or beauty of a landscape is found to exist within the experience that we have (Holgate, 1992, p. 27; Chang, 2016, p. 533-534). With consideration given to the limitations of conducting this research remotely, the goal of this thesis is to capture the aesthetics of the built form in the way that Holgate and Chang have expressed it to exist – as an experience – yet we must rely on the characteristics of the built form to extrapolate how the landscape might be experienced.

### *Young Adult Neighbourhood*

The key population of interest to this research are 'young adults'. The use of this term is not synonymous with a single set of characteristics and as such it is does not consistently describe the same group of people. For this thesis, young adults are classified as those who are between the ages of 25-years and 34-years. This classification of age is consistent with the precedent that has been set by principle researchers studying young adults in urban environments, and, it leads us to capture, if not entirely close too, a subsection of the population who are past post-secondary education and starting to enter housing and labour markets more permanently (Moos, 2014).

As a result of the changing generational values, the development and growth of young adult neighbourhoods is on the rise. When looking at Canada's five largest metropolitan areas, Markus Moos (2014) argues that there is an increase in the correlation between the proportion of high density housing and the proportion of young adults, specifically arguing that this is a result of a declining household size and delays in child bearing (p. 12). Moos draws our attention to the development of these young adult neighbourhoods, wherein we are finding larger clusters of young adults congregating within specific high-density neighbourhoods within the city. Through his research, Markus Moos (2014) concludes that there is an association between young adults and non-family housing, or those dwellings that are found to be smaller high-density units, within walkable neighbourhoods with fewer automobile commuters (p. 30). As such, it can be noted that young adults are attracted to a specific type of dwelling, but the question remains, where are these dwellings located within the city?

In their study that reviews the social trends that have been instrumental in the development of Halifax's downtown, authors Grant & Gregory (2016) argue that in Halifax, as

well as cities such as Vancouver and Montréal, central downtown districts saw greater changes in social trends then those elsewhere in the city, allowing them to become a zone for young adults and their lifestyles (p. 186). In consideration of this point, the thesis also draws upon Tallon & Bromley (2004) who find that the attraction of living in city centres for young adults is associated with the convenience of being close to employment and consumption, while also having access to the night-time entertainment economy (p. 784). The downtown core of the city is where young adults see themselves flocking, as these areas had the high density living and social amenities that were attractive to them. However, some of the social amenities that young adults require are not specifically by choice. In a study focusing on the travel patterns of young adults, Ralph et. al. (2016) note that the observed variation in neighbourhood level travel patterns is not only a result of the physical built form, but also of the economic resources available and adult roles of the inhabitants, which reflects neighbourhood type (p. 223). This thesis uses the collective works described above to define the types of neighbourhoods that that it is interested in studying as those which are characterized as walkable, transit accessible, and located closer to the downtown core. This is because these characteristics are found to be associated with the types neighbourhoods that truly reflect the neighbourhood choices of young adults in North America.

When discussing young adult neighbourhoods, it is important to review the changing characteristics of young adults. Here, Moos (2014) argues that we are seeing increases in service sector employment, educational attainment, declines in marriage rates, declines in child bearing, and decreases in housing sizes (p. 2094-2095). Overall, there is a very particular socio-economic landscape that it associated with the development of young adult neighbourhoods in Canada, which comes as a result of the changing characteristics of this demographic. Markus Moos

(2014) very clearly outlines who these young adults are, which in turn gives us a better understanding of where they will live. This is done in one of his subsequent works wherein Moos (2016) provides evidence that young age has become an important factor in delineating high-density living within cities (p. 2915-2916).

With all of the changes that we are seeing within this population, high-density living and the commodities and lifestyle that are found to exist within these neighbourhoods, are well suited for the current needs of young adults. However, while this is true today, there is a body of literature that proposes that we will surely see changes in the near future. Myers (2016) argues that the future housing of millennials will be characterized by inner suburban neighbourhoods that will be able to fulfill their urban preferences but also their changing needs (p. 945). As time progresses the population of young adults will subside and the needs of the larger community will again become focused on developing neighbourhoods that provide family oriented living conditions. While we do not know for sure what the future holds, what we can conclude here for the purposes of this thesis is that the neighbourhood where this research should be focused on are those that are walkable, transit accessible, and located closer to the downtown core. This is because these are the neighbourhoods where concentrations of young adults are highest, and youthification most apparent. The location of young adult neighbourhoods will also be verified empirically later in this thesis.

Finally, while this thesis focuses on young adult neighbourhoods, as they exist within a North American context, it is also valuable to explore how these types of neighbourhoods are being discussed in the literature more globally. In a book that explores the inequality associated with gentrifying European cities, author Cody Hochstenbach (2017) discusses the generational dynamics involved in the rise of rental gentrification in Amsterdam; within this discussion he

concludes that understanding the shifts in rental gentrification requires us to understand gentrification as a force of urban change (p. 144). This discussion is directly related to the changing dynamics of young adult neighbourhoods within inner-cities. The author attempts to describe how the general conditions of the cities are changing in conjunction with the rise in development of young adult neighbourhoods.

Another way in which young adult neighbourhoods are finding themselves becoming the centre of global discussions is as a contextualization of the growing phenomenon. Specifically, studies look to identify the extent to which youthification is being seen globally, as well as the intensity in which it is being found. In their article which explores the aforementioned topic, scholars Cocheci & Mitrea (2016) provide evidence that youthification is indirectly responsible for the generation of social homogeneity; specifically, the authors find evidence of an outmigration of young adults from other parts of the metropolitan area of Cluj to its suburbs (p. 128). This research shows that the youthification, as it is connected to young adult neighbourhoods, is not confined to a North American context, but that the same patterns are also being witnessed in Europe.

A third example for how young adult neighbourhoods are being discussed in the global literature is as a way of understanding the new trend in development of single person households within a given city. In a paper focused on the shifting urban and housing conditions that have produced an increased production of single-dwelling households, Richard Ronald (2017) shows how changes in socioeconomic and demographic conditions have greatly influenced the current development patterns of housing systems and urban conditions in Seoul and Tokyo (p. 45). While such a study goes beyond the purpose of this thesis, it illustrates how the global conversation is fixated upon understanding the development patterns of young adult

neighbourhoods. For the purposes of this thesis, which is focused on evaluating the diversity of built-form in young adult neighbourhoods, the literature solidifies the need for an empirical quantitative assessment of these neighbourhoods to better understand the similarities and differences that are found to exist between them.

These three examples of studies that are focused on young adult neighbourhoods in a global context, illustrate that the topic in which this thesis is concerned is one that is becoming more widely discussed in academia. It is worth noting that while the research on young adult neighbourhoods is more prominent in North American literature, there remains a growing body of global literature that is working to expand upon the known factors of this phenomenon. As such, this thesis in positioning itself in the characterization of young adult neighborhoods in North America provides a new contribution to the literature that can be repeated in other cities around the world to further our understanding of young adult neighbourhoods in the global context.

### *Landscape Character Assessments*

The exploration of character analyses begins with defining 'character'. The term 'character' is in itself a loaded term that can have many interpretations, as such it is important for this thesis to define the term. Gethin Davidson, Kim Dovey, Ian Woodcock (2012) explain that character is a term used to distinguish two places from one another, noting that the built form of neighbourhoods and buildings provide a sense of place and identity and is often preserved for its value (p. 48). Character is primarily a physical element found to exist within the landscape. This is precisely the beginning of the argument made by Jan Gehl (2010) wherein he expresses his thoughts on the relationship between character and built form, drawing our attention to how even the smallest physical change in a landscape can invite an entirely new pattern of use (p. 16). He

argues here that character is the built form, but he also expands upon this concept to suggest that changes in the built form inspire changes in our experiences. Thus, character is not only the built form, but also the sum of our own experiences within the physical landscape.

When discussing the character of place, authors Jivén & Larkham (2003), Dovey, Woodcock, Wood (2008), and Gethin Davidson (2011) suggest that it is both the social fabric and physical form of the landscape; character is more than just the built form that a landscape takes on, it is the essence of the activities, intentions, and values of its inhabitants (Jivén & Larkham, 2003, p. 78-79; Dovey, Woodcock, Wood, 2008, p. 2612-2613; Davidson, 2011, p. 118-119). A landscape should be separated in both its physical character and the social character because each is instrumental into the development of the overall landscape character. Thus, it is critical that the thesis recognizes that while it is focusing on separating out the built form to be examined, it is only assessing one aspect of the character. To understand the full character of a place the experiences of these landscapes must too find themselves at the core of the analysis. This is an essential component to character assessments for Coeterier (1996) who argues that we naturally attempt to organize the world around us in our brain, but it is an impossible task, so we select pieces of information, register it, and process it, thus constructing a landscape through experience (p. 28). Character is then not a simple term as some would think, it is very much a complex notion that is inspired by both physicality, but equally as much by our engagement.

While there is merit and resounding argumentation for character to be thought of as also being experience based, at its fundamental element character should be thought of through built form. Boulton (2011) argues that we must reassert landscape character as being a product of the tangible and visible scene that is fundamentally thought of in terms of safety and physical appeal (p. 240-241). As has been discussed within this chapter, experiences follow from form. Where

the focus is placed back onto retaining character in the built form, the result will be the generation of experiences through our interactions with the landscape. This approach to character is discussed at length within the literature, even Kevin Lynch (1972) discussed the doctrine that suggested only the external historical shell of a building needs to be preserved or reconstructed because it is public space, leaving the building's function to change and reflect the needs of the community (p. 32). The doctrine to which Lynch is citing speaks about the preservation of landscapes as the separation of the external from the internal. It maintains that the aesthetics of the building itself are separated from its use, so then as long as the building continues to look the same, how it functions is of little concern. The character is retained within the building and the string of buildings within a neighbourhood, not within the individual function of any one building. This is the approach that the thesis takes towards examining landscape character. It separates aesthetics from function. It recognizes that each play a role within the development of character, but it respects the doctrine that suggests the building is quasi-public space, and through it we develop character.

Character assessments are generally highly qualitative, thus relying heavily upon the local knowledge of the examiner. Unfortunately, this limits the broader applicability of character assessments, as it cannot easily be scaled up to include a larger number of places. Talen (2005) argues that the intention of character assessments and the measuring of urban form is to provide increased understanding and greater clarity of the value and purpose of a landscape, to help improve the physical urban environment (p. 210). Thus, an evaluation of a built form does not simply stop at creating the depiction of the landscape; it does this, but with the intention of using the information to further develop the landscape. This may mean driving harder conservation

policies, leading reclamation and remediation projects, or simply defining how infill project should fit within the landscape where they are planned to be developed.

Larkham and Jones (1993) argue that townscape analyses are of great importance to character assessments; while focus is placed upon architectural form and materials, more meaning can be derived from quantifying the features within the landscape, such as height, massing, and layouts (p. 402). Understanding both the individual structures themselves, as well as their relationship to other built forms within the landscape, provides significant insight into what is valuable and appreciated within a landscape.

Given that this thesis is conducting an evaluation of the diversity of built-forms in young adult neighbourhoods, it is fitting for the comparative analysis to be completed through an empirically quantitative approach. Such an approach provides this thesis with the ability to systematically assess different landscapes against similar criteria, which allows for the similarities and differences between various landscapes to be identified and measured. The nature of the quantitative assessment that is found within this thesis is based upon previous studies which have tested for Landscape Heterogeneity (Sklenička & Lhota, 2002), measured the physical features of landscapes (Inostroza & Tábbia, 2016), and worked to develop a quantitative assessment index to measure landscape differences (Lee, Kim, Lee & Kim, 2014).

Using the findings from these three quantitative landscape assessment studies, the thesis identified the principles for which its own quantitative tool will follow. Firstly, the quantitative assessment tool will provide an accurate depiction of the composition of landscape features found within young adult neighbourhoods. Sklenička & Lhota (2002) acknowledge that land-use information is essential for the development of meaningful management plans; as such, the authors use detailed knowledge of the surrounding area to create criterion of landscape

heterogeneity that when assessed provide a depiction of land-use patterns (p. 148). Such an approach to measuring landscape heterogeneity provides ample data that can be used by urban planners in the future development of similar landscapes within a given city. Given this, a quantitative assessment of a landscape should create the development of their measurement criterion based upon a detailed knowledge of the landscape in which the assessment tool will be used to evaluate.

A second principle that is presented within the literature on quantitative assessments of landscapes is that the list of closed-ended categories for each of the selected variables being assessed within a landscape should only reflect the purpose of your study. In a study that focuses on measuring the physical features of a landscape, authors Inostroza & Tábbia (2016) explain that the categories they measured for each of their selected variables were specifically chosen to reflect the purpose of their study and not to create an exhaustive list of categories (p. 2142). This study demonstrates how a smaller selection of categories can be more meaningful then creating a completely exhaustive list. The smaller selection allows the study to focus more specifically upon the elements of the landscape that it is most concerned with and to eliminate others that would only add additional findings that are not meaningful to the research problem and the presented questions. Thus, in the development of the variables and the selected categories found within this thesis, the above is noted and used as a guiding principle.

As discussed above, landscape character assessments in broad terms are tools that are used by either a government agency or a private company to assess the variation in character that exists within a designated parcel of land (Butler & Berglund, 2014). Landscape character assessments are popular in Canada, the United States of America, and the United Kingdom, and are commonly conducted by municipalities to inform discussion of heritage (Bury council,

2009), neighborhood character (Town of Milton, 2016), natural environment (Guildford Borough Council, 2007), and/or future development (Cheshire East Council, 2016). As well, many private urban planning companies also provide landscape character assessments as a service for municipalities, communities, and private citizens for purposes of heritage designation (Countryside Agency, 2002), neighbourhood character development (Cranborne Chase, 2016), managing natural landscape features (Scottish Natural Heritage, 1999), and for future development or reclamation projects (Landvision Landscape Architects, 2015).

Beyond these general applications, there are specific landscape character assessments that are of notable use to this thesis, including the Oxford City Landscape Character Assessment, the Planning Aid Landscape Character Assessment, and the City of Ottawa Neighbourhood Landscape Character Assessment. These tools prove to be of specific interest to this thesis because of their intended purpose, their quantitative assessment techniques, their ease of use, and the limited number of resources required for their application.

Oxford City (n.d.) presents its character assessment as being a tool to examine the character of landscapes, buildings, and places; the intent of such an examination is to identify how these features contribute to the distinctiveness, interest, and amenity of a landscape (p. 1). Here a character assessment has a very particular purpose; it is to effectively assess how different elements within a landscape contribute to its overall construction. The tool is then not to define each element individually; rather, it is to understand the interplay between elements and how they work to construct landscape character.

In contrast to Oxford City, the Planning Aid (n.d.) presents their character assessment as being a tool that works to describe the distinct appearance and feel of a landscape; through its use, we can determine the key physical features and attributes that combine to develop landscape

character (p. 3). At first glance, this character assessment seems very similar to that of the Oxford City assessment. However, in this assessment the focus is placed upon understanding what the key features are, as opposed to only describing how they combine to build landscape character.

Finally, a third style of character assessment is found to exist. The City of Ottawa (n.d.) presents its character assessment as a planning tool to effectively ensure that redevelopment and infill projects maintain the unique character of mature neighbourhoods; here the tool is designed to guide homeowners and developers though the process of preserving landscape character (p. 8). This third approach is entirely different form the first two, as it focuses on retaining the current landscape character. It is not a tool for evaluating the character that exists; rather, it is a tool to ensure that you understand what your neighbourhood character is in an attempt to preserve unique character throughout the city.

These three examples truly encapsulate the differences that can exist within the purposes of the tools and methods being applied to study landscape character. As such, for this thesis the development of its tool needs to reflect its goal. As the goal is to conduct a systematic evaluation of the diversity of built-forms within young adult neighbourhoods across North America to assess the similarities and differences that are found to exist, the method that is developed will more closely mimic that of the Planning Aid tool, as the two purposes are more closely aligned.

The value of using character assessments is two-fold: 1) to develop an image of a landscape, and 2) to assess that image against other landscapes. When discussing the purpose of their character assessment tool, Alan Reeve, Brian Goodey, & Robert Shipley (2006) explain that their technique for heritage evaluation allows researchers to assess the performance of a landscape through the use of explicit criteria; the tool allows researchers to account for high

levels of diversity, because the criteria are explicitly laid out (p. 36). The key to this approach is its ability to provide scholars with the opportunity to generate a quantitative image of a built heritage landscape that is otherwise created from a researcher's subjective observations. The authors conclude that this methodology provides researchers with the ability to use explicit criteria to assess the performance of a townscape. This technique allows researchers to produce quantitative data that can be compared and contrasted over time, or through different landscapes.

This approach is arguably very valuable for the evaluation of built heritage landscapes because of its ability to compare the non-use value of landscapes (i.e. a landscapes aesthetic appeal) and the economic value of different landscapes. Heritage landscapes are very different in form, function, and size and while this application is not perfect, it is able to offer a more 'objective' and 'standardized' technique for evaluating these dissimilar landscapes.

Beyond the construction of the image, comes the evaluation of the landscape against others. Morten Gjerde (2011) explains that character assessments that use a numerical scale under specified categorizations, allows researchers the ability to uniformly and objectively compare and contrast different landscapes (p. 155). Wherein the researcher acts consistently throughout each evaluation of the various landscapes, the use of the explicit criteria will allow the researcher to make objective inferences about various landscapes. Thus, a value of a character assessment is that it can be made to be a tool that allows us the opportunity to compare landscapes. This thesis incorporates both the building of an image and their comparative analysis into the tool that is used to assess young adult neighbourhoods.

***Summary***

The research question that is presented in this thesis asks if young adult neighbourhoods across North America are characterized by a common built-form and aesthetic. The literature

discussed above demonstrates that this question is an important one to consider because it provides a new perspective on the current discussion of young adult neighbourhoods. Currently, the literature is focused on defining the socio-economic conditions that are responsible for the development of young adult neighbourhoods, as well as discussing the elements of a neighbourhood that young adults find to be attractive and important to their lifestyle. From identifying these themes within the literature, it becomes clear that conducting a systematic evaluation of the diversity of built-forms within young adult neighbourhoods across North America builds upon this discussion by quantifying and expressing what elements of the built-form within these landscapes are similar, and to separate these from those that are found to be different. Such an addition to the current literature provides an opportunity to better depict these landscapes as an expression of built-form, beyond that of the current understanding of the socio-economic conditions that are found to exist within them.

This section has positioned the thesis within current literature to better describe the built-form of young adult neighbourhoods, giving particular attention to the similarities and differences that are found to exist within them, as well as to demonstrate why a systematic quantitative analysis tool is best suited to address the presented research problem. Through a discussion of place, the thesis defined how a place comes to be through the creation of images a landscape, wherein a place only becomes a place because of our own images and the meanings we bring to it. Furthermore, it expressed how our experience within a landscape has great influence over the image that we develop for a place. As well, the thesis discussed how we come to build an authentic experience within a landscape. These concepts are important for the purposes of this thesis because it positions the research question within a specific context, which is to evaluate place based upon the participant's understanding of building an image of place.

Such a position results in the development of a study of place that is framed by an experiential understanding of place.

The thesis also reviewed the literature for how academics currently define the term aesthetics. Specifically, the thesis discussed literature that positions aesthetics as being a part of architectural form, describing the variables that are known to define the aesthetic of a single building, as well as to describe how aesthetics is connected to that of a participant's experience. This discussion informed this thesis by clearly articulating what elements of a landscape are commonly associated with the term aesthetics. This is important for the selection of variables and categories because it will objectively position the conversation around those elements that are known to be associated with the built-form and its aesthetics.

The discussion provided within the literature review that focuses on young adult neighbourhoods contextualizes the research problem within the phenomenon that it is positioned to study. This portion of the literature review uses specific examples of current studies on young adult neighbourhoods to describe the types of neighbourhoods wherein young adults can commonly be found today, as well as to describe the socio-economic changes that have been seen within these neighbourhoods. In short, the discussion leads the thesis to better understand where these neighbourhoods can be found within a city (i.e. inner-cities, downtowns), and to also recognize the features that are similar between them (i.e. walkable, transit accessible). Finally, the discussion of young adult neighbourhoods also reviewed the current global literature on young adult neighbourhoods to illustrate how this specific thesis will fit within the more broad discussion currently being discussed within the literature. The purpose of this section has been to better inform the theses selection of young adult neighbourhoods, to allow for a more refined review and analysis.

Finally, and perhaps most importantly, the thesis defines character, reviews the evaluative methods for describing character, and presents the principles that have been withdrawn from current literature to inform the development of the new tool being used within this thesis. Such a discussion informs the overall development and application of the character assessment analysis tool used by this thesis to conduct a systematic evaluation of the diversity of built-forms within young adult neighbourhoods.

The four terms discussed within this chapter represent the most influential concepts that are associated with this theses research problem. Together the discussion of the above four terms creates a very specific framework within which this thesis can to conduct a systematic evaluation of the diversity of built-forms within young adult neighbourhoods across North America to assess the similarities and differences that are found to exist. Furthermore, the discussion of these terms provides justification for this study, specifically illustrating how the current literature views this topic and identifying the gaps that exist and require further research.

## CHAPTER THREE: Methodology

This thesis uses 12 metropolitan areas, selected from within Canada and the United States of America to systematically assess the diversity of built forms in commercial and retail built forms that are located within the prominent commercial and retail areas of neighbourhoods with high percentages of young adults in urban centres. The methodology consists of six stages, which includes: 1) Defining the Study Population; 2) Selecting 12 cities of interest; 3) Selecting three neighbourhoods of interest within each of the 12 cities; 4) Selecting one street within each of the three neighbourhoods; 5) Selecting 20 Buildings on each street; and, 6) Completing a Landscape Character Assessment for each of the buildings identified on each street. The thesis' systematic assessment of the built-form for these commercial and retail areas are based upon three elements, including 1) The streetscape; 2) The built form; and 3) The establishments.

The thesis conducts its research using a positivist social science lens, which holds that a phenomenon can be scientifically verified through an empirical quantitative approach that separates the researcher from the phenomenon in an attempt to produce a true measure of reality (Weber, 2004; Mackenzie, 2011). The value of using this approach to assess the diversity of built-forms in young adult neighbourhoods is that it provides an opportunity to isolate the influences of the physical structures found within these landscapes from other experiential elements found to be the focus of phenomenological studies. This results in the opportunity to critically assess the similarities and differences that exist between landscapes with an emphasis being placed on developing a systematic understanding of the landscape.

The literature discussed in chapter two clearly identified how constructionist authenticity and existential authenticity operate very differently from one another in the production of place-making. However, they also showed that the built-form remains to be an important element

within both of these approaches. From this, we can maintain that there is value in empirically studying the built-form as this will provide an opportunity to identify the similarities and differences that persist between landscapes in young adult neighbourhoods that ultimately are the foundation to both the constructionist and existentialist approach to authenticity and place-making.

The largest limitation that presents itself through the use of a positivist social science approach to studying the diversity of built-forms in young adult neighbourhoods has to do with epistemology. Specifically, Ron Weber (2004) notes that while positivism seeks to build knowledge that is explicitly separated from the human mind, it remains to be true that culture, experience, and history will always impact the work and thus the results of a positivist study (p. 6). Thus, when this thesis designs a systematic qualitative analysis tool for the evaluation of diversity of built-forms in young adult neighbourhoods, it is important to recognize that through a positivist approach the thesis does not provide an opportunity to critique elements of society and culture that influence the similarities and differences to be found between landscapes, as would be possible through a critical social science approach based in phenomenology.

### *Study Population*

As the objective of this thesis is to assess the aesthetic characteristics of commercial and retail built-forms surrounding young adult neighbourhoods within urban centres, a determination needs to be made for what age group this thesis recognizes as being its target demographic. Primarily, this thesis is interested in young adults who have graduated from their post-secondary institutions and who are now working and living in urban centres. As such, a determination is made to exclude the age demographic of young adults who are more likely to be currently attending college or university. This age demographic is defined by both Statistics Canada and

the United States Census Bureau as being young adults between the ages of 18 and 24. Given this, the subsequent age category that is inclusive of persons between the ages of 25 and 34 will be the selected age demographic used by this thesis. It is worth reiterating that the identified age classification is consistent with the precedent that has been set by principle researchers studying young adults in urban environments (Moos, 2014).

### *City Selection*

Twelve metropolitan areas across Canada and the U.S. were selected as part of this thesis. These twelve metropolitan areas are divided equally across both countries, and were selected as follows: 1) The top three most populous metropolitan areas from Canada were selected using the 2011 population count dataset from Statistics Canada, and the top three most populous metropolitan areas from the U.S. were selected using the 2010 population count dataset from the United States Census Bureau; and, 2) Three metropolitan areas of interest from within each country based upon their prominence in both academic studies and non-academic literature for marketing themselves as a destination for young adults to work and live.

The 2011 population count dataset from Statistics Canada yielded Toronto (Population: 5,583,064), Montréal (Population: 3,824,221), and Vancouver (Population: 2,313,328) as being the three most populous metropolitan areas in Canada; while, the 2010 population count dataset from the United States Census Bureau yielded New York City (Population: 8,175,133), Los Angeles (Population: 3,792,621), and Chicago (Population: 2,695,598) as being the three most populous metropolitan areas in the US. This thesis notes that while the population counts from 2011 and 2010 were used to identify the three most populous metropolitan areas within Canada and the U.S., the most recent population estimates provided by Statistics Canada and the United States Census Bureau identify the same metropolitan areas as currently being the most populous

areas in their respective countries. **Table 1** shows the population of Canadian cities, as provided from Statistics Canada, from 2012 to 2015.

***Table 1: Canadian Cities by Population Size***

| | Population (000's) | | | |
|---|---|---|---|---|
| **Census Metropolitan Area** | **2012** | **2013** | **2014** | **2015** |
| *Toronto (Ont.)* | 5868.70 | 5966.40 | 6053.40 | 6129.90 |
| *Montréal (Que.)* | 3937.40 | 3985.10 | 4028.00 | 4060.70 |
| *Vancouver (B.C.)* | 2408.10 | 2438.70 | 2475.70 | 2504.30 |
| *Calgary (Alta.)* | 1307.50 | 1357.80 | 1406.00 | 1439.80 |
| *Edmonton (Alta.)* | 1241.80 | 1286.00 | 1331.60 | 1363.30 |
| Ottawa-Gatineau (Ont.-Que.) | 1288.50 | 1302.90 | 1316.50 | 1332.00 |
| Québec (Que.) | 785.20 | 793.60 | 800.90 | 806.40 |
| Winnipeg (Man.) | 759.60 | 770.30 | 782.60 | 793.40 |
| Hamilton (Ont.) | 750.70 | 758.30 | 765.20 | 771.70 |
| Kitchener-Cambridge-Waterloo (Ont.) | 498.80 | 503.10 | 507.30 | 511.30 |

The selection of the six metropolitan areas from within Canada and the U.S. that are marketing themselves as being young adult destinations were not made in consideration to formal criteria. Instead, these six metropolitan areas were selected because of their prominence in both academic studies and non-academic literature for being places that are currently marketing themselves as a place for young adults to work and live. This thesis notes that the six selected metropolitan areas are commonly identified as being cities marketed towards young adults, as denoted by being listed as top tourist destinations, as having a high proportion of young professionals working and living within their boundaries, as having vibrant neighbourhoods with distinct cultures, or through having a low median age as compared to other metropolitan areas (Moos & Walter-Joseph, 2017). Metropolitan Areas being marketed as young adult destinations is becoming increasingly prevalent within literature that discusses the socio-economic conditions of young adults.

The purpose of adding these metropolitan areas of interest is to provide additional case studies that are known for having unique characteristics that are commonly associated with neighbourhoods that attract higher densities of young adults. The three metropolitan areas that

were selected from Canada include Calgary (Alberta), Edmonton (Alberta) and Halifax (Nova Scotia), while the three metropolitan areas from the U.S. include Austin (Texas), Seattle (Washington) and Portland City (Oregon). This thesis finds value in adding these six trendy metropolitan areas because they provide an opportunity to compare the aesthetic characteristics of commercial and retail developments across neighbourhoods with higher densities of young adults in trendy metropolitan areas against those with the largest populations.

***Neighbourhood Selection***

Following the city selection, the next step is to locate the census tracts that have the highest population of young adults in each metropolitan area. To do this, a location quotient is calculated. The location quotient is a tool that allows the thesis to calculate the relative concentration of an identified age demographic as compared to a larger geographical area of reference. Given that the selected metropolitan areas reside in five Canadian provinces and six

$$LQ = \frac{(CTPop_i \div \Sigma CityPop)}{(NatPop_i \div \Sigma NatPop)}$$

**Where :** LQ = Location Quotient
$CTPop_i$ = Census Tract Population (Age 25-34)
$\Sigma CityPop$ = Total Population of City (All ages)
$NatPop_i$ = National Population (Age 25-34)
$\Sigma NatPop$ = Total Population of Nation (All ages)

American states, this thesis uses the respective national data as its comparison (i.e. concentrations of young adults aged 25 to 34 in Toronto census tracts would be compared against the concentration of young adults aged 25 to 34 in Canada; and, concentrations of young adults aged 25 to 34 in New York City census tracts would be compared against the concentration of young adults aged 25 to 34 in the U.S.). The location quotients in this thesis are calculated using the provided formula:

As noted here, neither Statistics Canada nor the United States Census Bureau provide estimated census tract population counts for non-survey years, which are every five-years in Canada and every 10-years in the U.S. With consideration being given to ensuring data consistency throughout the thesis as well as its future needs, wherein estimated census tract population counts are required to calculate the location quotients to select young adult neighbourhoods within the twelve metropolitan areas, the thesis required a full data-set of population counts by census tract. The only dataset available to meet the needs of this thesis were the 2011 population count dataset from Statistics Canada and the 2010 population count dataset from the United States Census Bureau.

The top fifteen census tracts with the highest concentration of young adults for each metropolitan area are then exported into a new table. It is important to note that in this step the thesis uses a fixed number of census tracts (i.e. the fifteen census tracts with the highest densities of young adults for each metropolitan area) instead of using a percentage of the total census tracts within each metropolitan area. This methodological decision is made in consideration with how census tracts are defined by each governmental agency and the inherent purpose of this thesis.

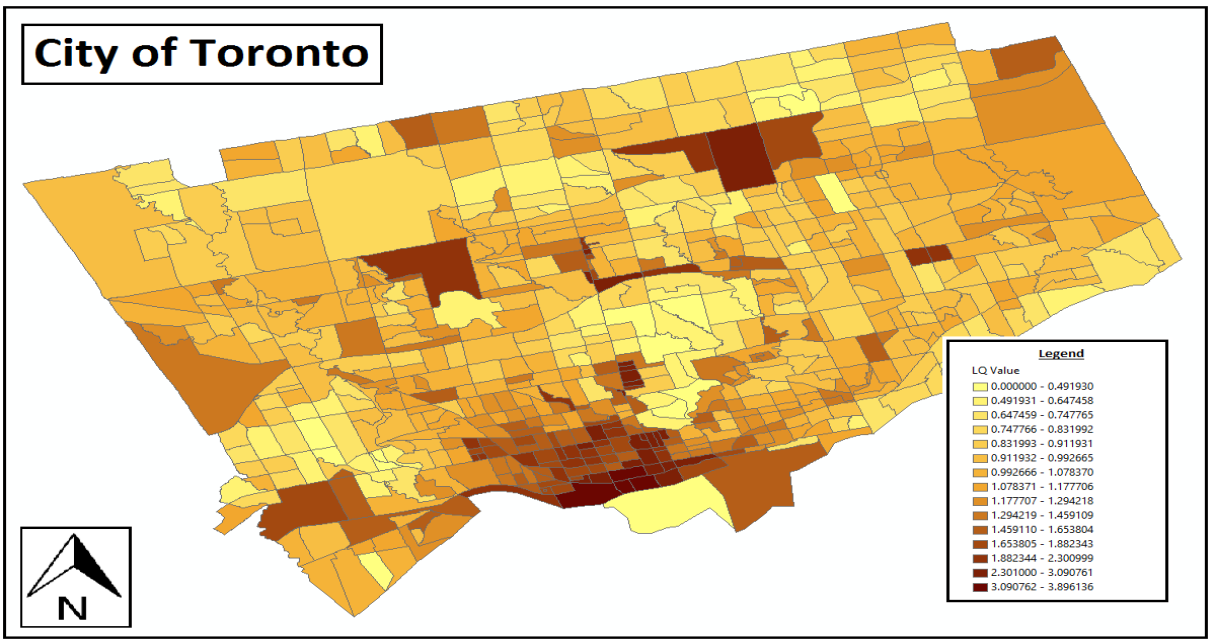
Statistics Canada characterizes its census tracts as an area comprised of a population of approximately 2,500 to 8,000 persons. Similarly, in the U.S., the United States Census Bureau characterizes its census tracts as an area comprised of a population of approximately 1,200 to 8,000 persons. The similar definition of ‘census tract’ being used by each respective governmental agency ensures consistency across each respective country within this study, allowing for accurate comparisons to be drawn between similar sized units.

With an understanding that this thesis's objective is to systematically assess the diversity of built-forms in commercial and retail built forms surrounding young adult neighbourhoods, a more meaningful comparison is drawn from assessing these characteristics within the most densely populated areas, as opposed to from within a percentage of the total census tracts within each metropolitan area. This is because an imbalance between the amounts of data being collected from within various metropolitan areas could misrepresent the aesthetic and functional characteristics, wherein they become more representative of the largest metropolitan area in the study because it has more census tracts included within this thesis.

This approach fosters a more reliable representation of the aesthetic and functional characteristics by comparing the most densely populated youthified neighbourhoods across all of the selected metropolitan areas. This thesis selects the top fifteen census tracts from within each metropolitan area based upon the relationship between the number of census tracts being selected and the visual pattern being created. To optimize the number of census tracts required to demonstrate a reoccurring pattern within each metropolitan area this thesis created visualizations (base maps) for each respective dataset. The thesis inputs the location quotients for each metropolitan area into the appropriate base map.

The data are subsequently organized into a choropleth map using a Jenks natural break optimization with ten classifications. As the choropleth map only illustrates the category within which the various census tracts fit based upon their corresponding location quotient value, the visualization demonstrates a clustering pattern without a listing of which census tracts within the same category have higher values. **Figure 2** shows an example of this map for the City of Toronto.

***Figure 2: City of Toronto Choropleth Map with Location Quotients***

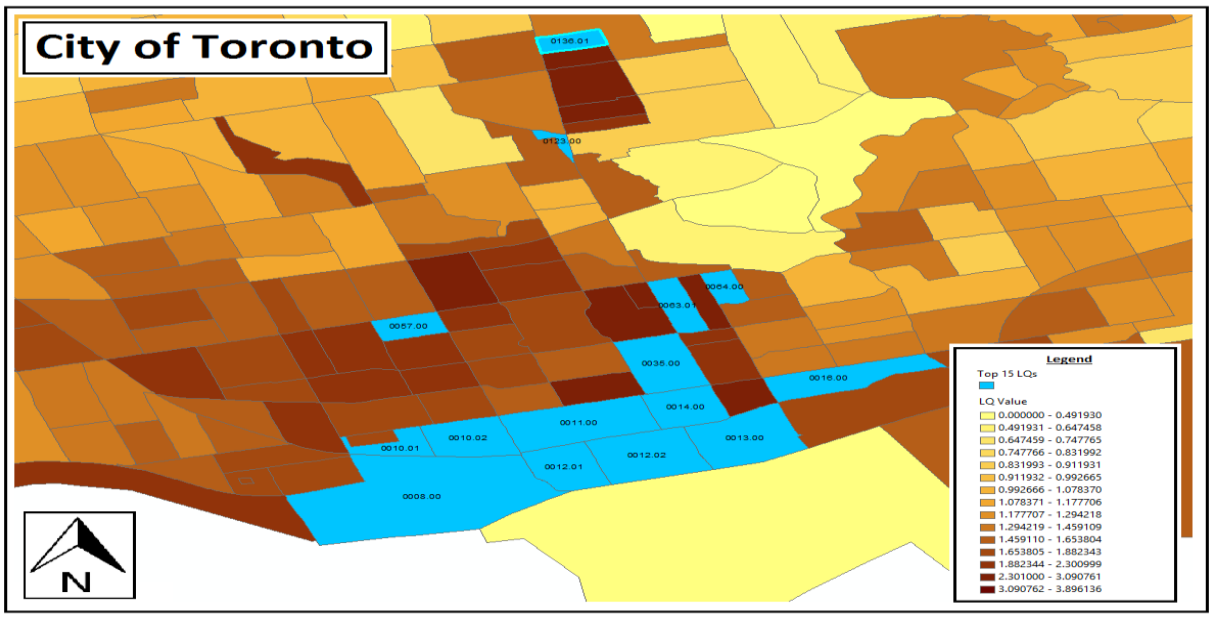



The next step is to add the tables for the corresponding fifteen census tracts in order to illustrate a numerical pattern within the clustering pattern. This thesis uses fifteen census tracts as its fixed number to optimize the number of census tracts required to demonstrate a reoccurring pattern within each metropolitan area. **Figure 3** shows an example of this map for the City of Toronto.

The resulting choropleth maps for each metropolitan area begin to demonstrate a clustering pattern between five and fifteen census tracts. When the selection is expanded to fifteen and twenty the pattern is confirmed and expanded upon, as the additional census tracts are usually located within the area surrounding the top fifteen census tracts. Given that a selection of fewer than fifteen census tracts (i.e. three and five) does not always demonstrate a clustering pattern, and that a selection of greater than fifteen census tracts (i.e. fifteen and twenty) confirm the clustering pattern around centralized areas within each metropolitan area. This decision is primarily based upon developing a thesis that passes the test of accuracy and reliability while

being limited by available resources (i.e. spatial data; metropolitan data; technical training; software; time; proximity to study locations; and, character assessment tools).

***Figure 3: City of Toronto Choropleth Map with top 15 LQ Overlay***




***Street Selection***

This thesis selects three streets from within each metropolitan area, which represent the largest commercial and retail areas that are in the closest proximity to the top fifteen census tracts. These streets are selected based upon the following steps: 1) Identifying the streets that are predominantly zoned for commercial and retail purposes based upon municipal zoning schedules; 2) Identifying the streets that have access to major public transportation systems (i.e. Subway, Light Rail Transit, and Bus Services), based upon transit maps; and, 3) Identifying the sections of the streets that are walkable, transit accessible and bikeable, as determined through the tool online tool ‘Walk Score’.

The decision to select three specific streets is motivated by this thesis’s objective of comparing urban retail landscapes where young adults are most concentrated among the different metropolitan areas. Through focusing on the most prominent landscapes that meet the above

criteria in all metropolitan areas, as opposed to selecting any street that that fits the criteria or a major street that fits a selection of that criteria, allows the thesis to refine its focus to discussing only those aesthetic characteristics of the primary commercial and retail areas within the identified young adult neighbourhoods. This means some areas are left out but it also made data collection manageable for this thesis.

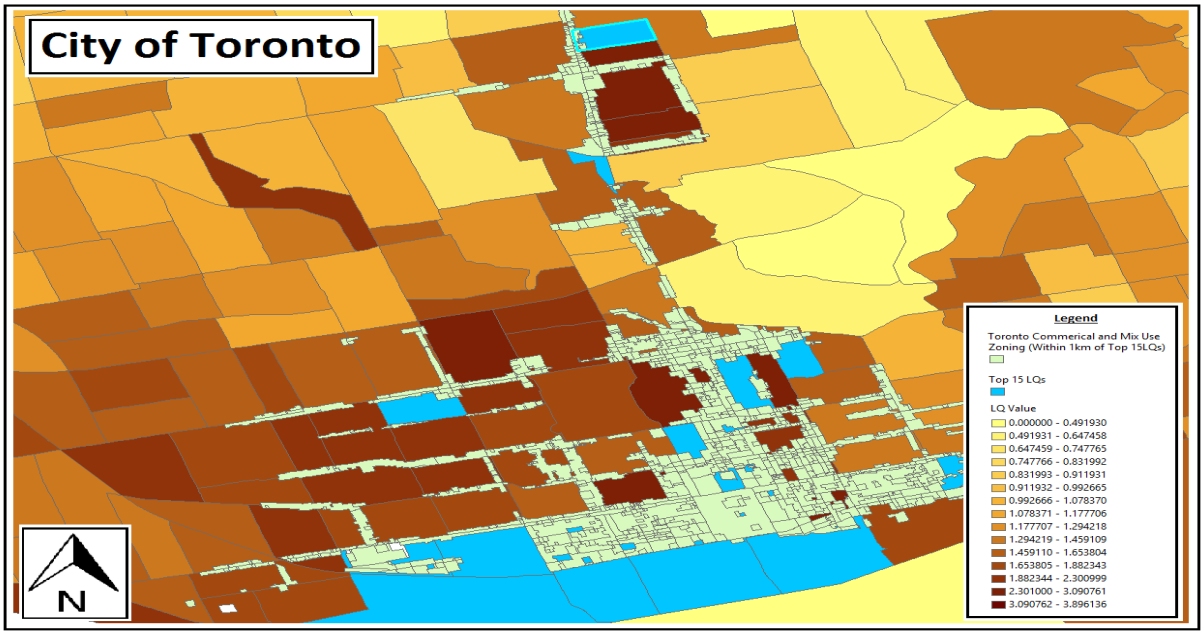
***Table 2: City of Toronto Zoning Classifications***

| Census Metropolitan Area (Toronto) | |
|---|---|
| **Symbol** | **Zone Name** |
| RAC | Residential Apartment Commercial |
| CL | Commercial Local |
| CR | Commercial Residential |
| CRE | Commercial Residential Employment |

Firstly, to identify the streets that are predominantly zoned for commercial and retail purposes this thesis adds municipal zoning layers to the previously developed choropleth maps. In the GIS software, the zoning classifications that were added as part of the municipal zoning layers are refined to reflect only those zones that are either commercial, retail, or mixed-use purposes. **Table 2** shows the appropriate zoning classifications for the City of Toronto. This step reduced the zoning classifications to be those that are of importance to this theses objective. The areas that are zoned with the corresponding classifications are reduced to only those that are within a 1.0km distance of the top ten census tracts in a given metropolitan area. Here the thesis reduces the number of location quotients from the top 15 to the top 10 to isolate the areas within the top 15 that have the highest proportion of young adults. This decision also helps to limit the number of possible streets to a more manageable number for the subsequent steps. An example of this is shown for the City of Toronto in **Figure 4**. The resulting map illustrates the streets that

are within close proximity of the top ten census tracts that have the greatest concentration of commercial and retail zoning classifications.

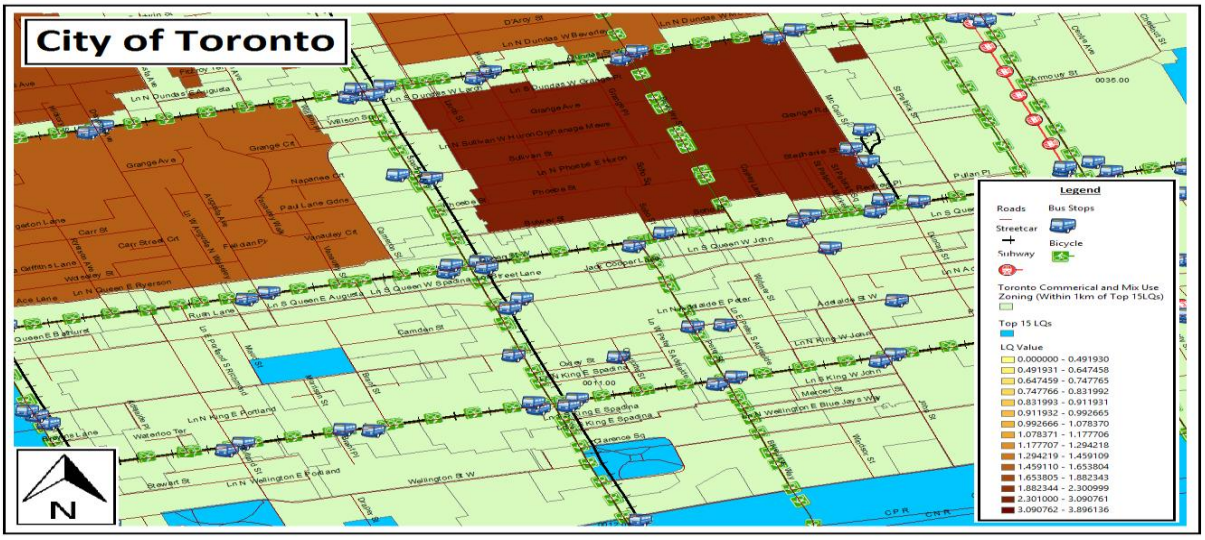
***Figure 4: City of Toronto Choropleth Map with Zoning Overlay***




Following this step, this thesis then uses the shapefiles associated with the metropolitan area's public transportation network to identify the roadways, which have the greatest concentration of commercial and retail zoning classifications, as well as also being sufficiently connected to regional and municipal transit services. Reviewing one street at a time, the thesis begins with assessing the transit availability on the streets that have the greatest concentration of commercial and retail zoning classifications and continues through to those streets with the fewest concentration of commercial and retail zoning classifications. In this step, emphasis is placed upon identifying the streets that have access to major public transportation systems (i.e. Subway, Light Rail Transit and Bus Services). Where a metropolitan area has several transit services, this thesis focuses on identifying those areas that are the most connected (i.e. if the metropolitan area has three transit services, where possible the thesis is focusing on finding

streets that have access to two or three transit services). An example of this is shown for the City of Toronto in **Figure 5**.

***Figure 5: City of Toronto Choropleth Map with Transit Overlay***




The result of this step is the identification of three streets, which have the highest level of connectivity to transit services, from the previously identified streets that have the highest concentration of commercial and retail zoning classifications from within each metropolitan area. This step provides the thesis with an opportunity to compare landscapes within various neighbourhoods that share similar zoning classifications and features.

Finally, using the online tool 'Walk Score', the thesis identifies one major intersection for each of the three identified streets from within each metropolitan area. The intersections are selected based upon three values for which the tool provides a numerical value, including the walkability, transit accessibility, and bikeability. This thesis uses these values to quantify the connectivity of each major intersection along the selected street in a metropolitan area. Through the assessment of each major intersection on each street, the thesis can identify which is the most appropriate to be selected as a case study site location. The numerical values assigned for the walkability, transit accessibility, and bikeability within a Walk Score are assessed on a scale

from 0-100, respectively. While each respective category has several classifications, this thesis is only concerned with identifying the most accessible intersections, which means that only those that have an individual score of ≥70 for walkability, ≥50 for transit accessibility, and ≥70 for bikeability, the average between the three values must be at ≥70 will be considered for evaluation. These above ranges are selected as they correlate with the inherent categorization of the Walk Score tool.

Given that there are several intersections that meet this criteria in the various neighbourhoods the thesis selected the intersection with the highest average, and the highest scores for Walkability and Transit Accessibility. Given the above, it is possible that the selected intersection may in fact be farther then 1km away from the centroid of the young adult neighbourhood, as indicated by the location quotient. This is seen as being reasonable, because in fact it is not known where within the census tract the young adults are or how they are distributed. As such, this level of selection actually provides a more systematic way of selecting similar sections of young adult neighbourhoods from across the twelve cities.

### *Building Selection*

Completing Character Analyses, with the purpose of comparing to other municipalities, is not something that is prominently done by municipalities. As such, in order to ensure that a systematic approach is taken, this thesis borrows the methodology of the City of Ottawa's Character Assessment, which is one of the few cities that has explicit guidelines on this front. The number of physical buildings to be included as part of each street, as identified above, is determined through an adaptation of the City of Ottawa's Streetscape Character Analysis. The City of Ottawa (n.d.) explains that the 21 lots around your property along your street, are what is to be included within the character assessment, which includes the property directly across from

you and the five prosperities the immediate left and right of this property, as well as the five properties to the immediate left and right of your own property (p. 3). Noting that this thesis has not identified a single property as its focus, but rather an intersection, the methodology must be adapted slightly.

This thesis uses the intersection as its 'property' point, and continues down the street for five properties both ways, and on both sides of the street. To ensure consistency throughout all landscapes the same number of lots for each city, where possible, are selected. The City of Ottawa provides several different approaches for how the buildings can be selected within a landscape, giving consideration to various differences that may exist. To streamline this process the thesis selected a single methodology to follow. The selected methodology was for a street where there exist less than five properties on a block. The City of Ottawa (n.d.) explains that given the situation where there are less than five properties on a block on either side of the street, the assessment should continue beyond the break in the landscape to reach the specified number of lots (p. 4). The thesis follows this methodology because unlike suburban neighbourhoods where a break in a housing development could mean that there are no properties for a good distance down the road, here in the downtown area, this is not the case.

It is noted that reaching a consistent number of observations between all landscapes is not always possible because some buildings are under construction/development eliminating buildings from the landscape. Additionally, not all landscapes that are selected will have an even number of buildings on either side of the intersection, and where this is true, it is possible that a landscape will have less than the desired number of buildings. It is also true that in some cases multiple buildings have been combined to become a single building within the landscape.

### *Landscape Character Assessment Tool Development*

The objective of this thesis is to systematically assess the diversity of built-form for young adult neighbourhoods in retail and commercial areas across North America. Currently, there is no method/tool for planners to carry out such a task in a systematic way. The closest approach that available to borrow from would be the Streetscape Character Analysis, which is not overly prominent, nor does it meet the needs of this study. As well, with these proformas, the name commonly used for these assessments, we need to recognize that they are highly subjective. This approach requires the user record in their own words what they have observed, and sometimes add a corresponding rank/value to their observations.

This approach to assessing landscape 'character' and/or 'fit' with the environment surrounding it, is not based upon the physical attributes but rather the reading of those attributes by a person/professional. As such, this thesis seeks to adapt these tools and methods into a new approach that allows the user to systematically assess the diversity of built-form, wherein subjectivity is largely removed and replaced with quantitative analysis. The development of this new tool is based within the philosophy of being largely quantitative, user friendly, requiring little training or professional knowledge, and also requiring very few resources to use.

As discussed in the literature review there are many different types of landscape character assessment tools that have been created for a variety of different uses. Given the wide range of applications, users, and methodologies that come together to formulate any one of the many landscape character analysis tools that are available for use, this thesis looked to incorporate the most consistent elements found between the various tools to bring them together into a new tool that served an entirely new purpose – to conduct a systematic evaluation of the diversity of built-forms.

When selecting the four tools that were used to inform the development of the tool used by this thesis, it was important that both private and public tools were used, that various methodologies (i.e. qualitative, quantitative, mixed-methods) were incorporated, that the tools were not all from a single country of origin, and that each tool served a different primary function. From the various tools that were collected and reviewed, the thesis then selected four that collectively covered a wide range of criteria.

Reviewing the variables and categories found within each of the four tools, the thesis then withdrew the elements that were found to be consistent between them and used these as the landscape elements that would become the object of focus for its evaluation. Through this process the thesis paid special attention to selecting elements that reduced the resources needed (i.e. time, money, software), as well as to select those elements that fit the purpose of the presented research problem.

The tool created within this thesis, divides each landscape into three components, the Streetscape, the Built Form, and the Function. Within each of these components, the landscape is further divided into categories and sub-categories, from within which we have the variables that are used to describe the landscape. The full list of variables, as they are recorded in the analysis tool, can be seen in (**Appendix A**). The variables that have been selected to be make up the analysis tool, are a culmination of the key variables that are found in four different character assessment analyses, including the Townscape Analysis, the Royal Town Planning Institute – Planning Aid Character Assessment Analysis, the Oxford City Council Character Assessment Analysis, and the Stonehouse Character Assessment Analysis (**Appendix B**). **Table 3** provides an illustration of the variables found within the various Character Analyses reviewed by this thesis. The comparison shows where similarities and differences are found. Each of the four tools

selected by this thesis to be used in the creation of a new quantitative tool capable of assessing the diversity of built-forms within young adult neighbourhoods were originally designed to serve different purposes and subsequently they each have different limitations.

The Townscape Analysis (**Appendix B**) is a tool focused on quantifying the heritage elements within a landscape, through a manner that allows for the landscape to be compared against itself at different periods in time. The purpose is to first establish the heritage value of a landscape and then to judge how that landscape changes overtime. This character analysis was created as a monitoring tool to evaluate the changes that came about in various landscapes as a result of an economic stimulus (Reeve, Goodey & Shipley, 2006). Such a tool designed specifically for temporal heritage evaluation the variables and methodology is valuable for assessing landscapes on their character; however, this particular tool is reflective of a very limited application. As such, this tool demonstrates the need for the development of a tool that can be used beyond that of only a single application.

The Royal Town Planning Institute – Planning Aid Character Assessment Analysis (**Appendix B**) is a tool designed to assess the character of a landscape for the purposes of future neighbourhood design policy; specifically, the tool serves the purpose of defining a single neighbourhood's character (Planning Aid, n.d.). The tool is designed to be used by any member of a community that desires to define the character of an entire neighbourhood. However, it is because of this intent that this tool has an identifiable limitation; its qualitative approach is not designed in a manner that this tool could be used to compare the character of between multiple landscapes. This tool proves to be a meaningful tool for defining the character of a single built environment, but it also suggests that a new tool is required if we are to want to draw comparisons between different built environments.

## *Table 3: Proforma Comparisons*

| | CHARACTER/SETTLEMENT ASSESSMENT PROFORMA | | | |
|---|---|---|---|---|
| | **UWATERLOO** | **RTPI** | **OXFORD** | **STONEHOUSE** |
| **Purpose** | A technique which records and / or assesses an urban or street view, and translates this into a manageable set of data | A character assessment is a document that describes the distinct appearance and feel of a settlement or an area. | The Oxford Character Assessment Toolkit has been prepared for you to assess the character of areas within the city. | It is a way of analysing and recording what makes a place distinctive: the local character. |
| **Evaluation Type** | Scorecard with annotation | Written Observation | Scorecard with annotation | Written Observation |
| **Mapping Element** | Yes | Yes | Yes | Yes |
| **Photographs** | Yes | Yes | Yes | Yes |
| **Evaluation Method** | Identify study location | Identify study location | Identify study location | Identify study location |
| | Condition Survey | Map broad character areas | Initial Walkthrough | Provide comments for each feature |
| | Land Use Survey | Initial Walkthrough | Physical Walkthrough | |
| | Streetscape Evaluation | Physical Walkthrough | Annotating a street plan/map | |
| | | Identify other sources of information | Provide score and comments for each feature | |
| **Criteria** | **Streetscape: Quality** | **Topography** | **Initial Reaction** | **Settlement Assessment** |
| | Pedestrian Friendly | Landscape setting | Featue | **Pattern** |
| | Cleanliness | Landscape Gradient | Spaces | Topography |
| | Coherence | **Land Uses** | Buildings | Layout |
| | Edge Feature Quality | Retail | Views | Spaces |
| | Floorscape Quality | Recreational and Leisure | Light/Dark | Green and Natural Features |
| | Legibility | Commercial | Surfaces | Wildlife and Ecology |
| | Sense of Threat | Employment | Views | Roads, Streets and Routes |
| | Personal Safety: Traffic | Community | Greenery & Landscape | Landmarks |
| | Planting: Public | **Layout** | Uses and Activities | Views Out |
| | Vitality | Relationship between buildings | Noises & Smells | Views In |
| | Appropriate Resting Places | Spaces and Routes | General Comments | **Building Area Details** |
| | Signage | Arrangement of Elements | **Spaces** | Predominant Building Shape |
| | Street Furniture Quality | Building plots | Formall/informal | Roofs |
| | Traffic Flow: Appropriateness | **Roads, Streets, Routes** | Gaps between buildings | Predominant Materials |
| | **Private Space in View** | Vehicular routes | Means of enclosure | Details |
| | Advertising, in keeping | Pedestrian pathways | Building plots | **Summary** |
| | Dereliction, Absence of | Cycle paths | Wide/open spaces | Summary - positive features |
| | Detailing Maintenance | Shared surfaces | Narrow / enclosed spaces | Summary - negative features |
| | Façade Quality | Rights of Way | Winding / straight spaces | **Landscape Assessment** |
| | Planting: Private | Bridleways | Space to buildings relationships | **Description** |
| | **Heritage in View** | Alleyways | Uses and activity | Landform |
| | Conserved Elements Evident | **Spaces** | Paving materials | Landcover |
| | Historic Reference Seen | Parks | Street furniture | Landuse |
| | Nomenclature/Place Reference | Playing Fields | Impact of vehicles/traffic | Field Boundaries |
| | Quality of Conservation Work | Allotments | Usability/access of space | Field Sizes and Patterns |
| | Quality of New Development | Cemeteries | **Building** | Routeways |
| | Neglected Historic Features | Village Greens | Buildings contribution to space | Buildings and Structures |
| | | Car Parks | Size/scale | Water and Drainage |
| | | Market Squares | Age | Enclosure and Scale |
| | | **Buildings** | Materials | **Views and Landmarks** |
| | | Building Heights | Windows | Views |
| | | Arrangement | Doors | Landmarks |
| | | Materials | Roofs / chimneys / gables | **Summary** |
| | | Construction era | Uses (past and present) | Scenic Quality |
| | | Roof types | Building alteration | Activities |
| | | Distinct/Predominant Architectural Features | Condition | Summary - positive features |
| | | Window Types | **Views** | Summary - negative features |
| | | Condition | Historic / popular views | |
| | | **Landmarks** | Form of view: | |
| | | Distinct local features | Short or long, | |
| | | **Green and Natural Features** | Unfolding, | |
| | | Trees | Glimpsed, channelled, wide | |
| | | Hedgerows | Focal points | |
| | | Streams | Streetscape | |
| | | Rivers | Roofscape | |
| | | Ponds | Urban/rural views | |
| | | Lakes | Views out of the space | |
| | | Woodland | **Landscape** | |
| | | Landscaped areas | Leafy and/or green image | |
| | | **Streetscape** | Hard urban landscape | |
| | | Lamp posts | Public/private greenery | |
| | | Benches and seating | Water as key feature | |
| | | Street Surfacing Materials | Topography | |
| | | Signage | **Ambience** | |
| | | Boundary Treatments | Activities | |
| | | **Views** | Level of activity | |
| | | Important views | Traffic | |
| | | | Dark, shady, light, airy | |
| | | | Day and night | |
| | | | Smells | |
| | | | Noises | |
| | | | **Spirit of place** | |
| | | | Summary of area character | |

The Oxford City Council Character Assessment Analysis (**Appendix B**) is a tool designed to capture the unique elements of areas, spaces, and buildings, to better help communities articulate the distinctive and important elements of their built environment (Oxford City, n.d.). This tool was developed with the intent of quantifying and describing the character of a landscape so that the value of a landscape can be defined and articulated. Such a tool is valuable for communities that wish to capture the significance of the built environment. Unlike that of the Townscape Analysis, this tool can be used to quantify the elements found within a broad range of landscapes. However, the limitation that then presents itself with the use of this tool is that the description and value being ascribed to the various elements within the built environment are done so through a subjective lens of the evaluator, who receives little formal training for the application of this tool. This specific limitation illuminates the need for a new character assessment tool that eliminates the need for the subjective assignment of a value to a landscape.

Finally, the Stonehouse Character Assessment Analysis is a tool that was designed for the specific intent of describing the landscape found in the Stonehouse neighbourhood. This tool seeks to provide a detailed depiction of both the natural and built environments of the neighbourhood, including the landmarks, buildings, green spaces, roadways, etc. The tool was adapted from other principle character assessment analysis tools, and shows value of informing the development of a tool from other existing tools. As with any tool, so too does the Stonehouse Character Assessment Analysis tool have a limitation. While the tool attempts to restrict the assessment of a landscape to key features and attributes through describing certain variables and categories, it limits the qualitative contributions of the assessor to specific features. What this tool demonstrates to this thesis is that the development of a character assessment analysis tool

should not limit the qualitative contributions of the assessor. As such, the tool that is used by this thesis provides ample opportunity for qualitative assessments of various features, but this is done to contrast the quantitative data that is collected through other variables.

The use of the tool was relatively easy. Once all of the variables were inputted, each having their own drop-down list of responses, the user only needed to virtually go through each landscape via GoogleEarth, and record the appropriate observations. As the tool is divided into the Streetscape, the Buildings, and the Establishments, the user was required to carryout three different observations on each street. To begin the user would virtually walk through the space taking note of all of the appropriate elements that are reflected in the variables for the Streetscape. Following the virtual walkthrough, the user then carries through the Streetscape section of the tool and records all of the appropriate observations. The next step is to evaluate the built form through an assessment of the buildings. Again, the user will virtually walk through the landscape, one building at a time, recording all of the appropriate observations for each of the approximate 20 properties. Finally, the user will carryout the analysis of the landscape's Function. Here the user records the observations for each of the selected variables at the establishment level.

This process is repeated for all three streets within each of the 12 cities. The result in the case of this study was the collection of 36 streets, 697 buildings, and 1279 establishments. This recorded data then provides a quantitative image of the landscape that can be analyzed through descriptive statistics to assess the similarities and differences that are found to exist among the landscapes. This assessment can be done at the property level, street level, the city level, and even through groupings of data (i.e. Geographical Locations, Population Sizes, Country of Origin).

### *Data Analysis*

The data analysis carried out within this thesis is done so with the sole purpose of addressing the three hypotheses presented in chapter one; 1) Young adult neighbourhoods, as they exist in retail and commercial areas, across North America characterized by a common aesthetic; 2) That the tool developed within this thesis will provide an objective assessment of the selected landscapes. Additionally, the primary purpose of the thesis guides the data analysis. This includes focusing on examining young adult neighbourhoods, as they exist in retail and commercial areas, across North America with the intention of assessing the aesthetics of their individual landscapes to make a determination of the similarities and differences that exist among them.

The data analysis is divided into three sections, 1) Inter-city Analysis is represented by Box Plots, to examine the inter-city variations for young adult neighbourhoods; 2) Intra-city Analysis is represented though Scatterplots, to examine the intracity variations about the mean for young adult neighbourhoods; and, 3) Statistical Significance is represented by Chi-square tests of independence to test whether the aesthetic and function of young adult neighbourhoods across metropolitan areas differ from each other at a statistically significant level.

## CHAPTER FOUR: Findings

Consistent with the literature on 'Place', 'Aesthetics', 'Young Adults', and 'Character Assessments', and the development of a new tool to systematically assess the diversity of built-forms, the thesis now analyses its collected data to evaluate the diversity of built-forms in young adult neighbourhoods. This discussion will focus on six variables of the 123 collected within the study. These variables will include: Primary Building Material, Dwelling Height, Dwelling Type, Primary Building Material Colour, Setback, and Frontage.

The data analysis and discussion provided in the findings chapter is divided into two categories, these include 1) Inter-City Analysis, and 2) Intra-City Analysis. The data analysis carried out in these three categories includes a corresponding descriptive statistic. Box Plots are used for Inter-City Analysis to examine the inter-city variations for young adult neighbourhoods in relation to a given variable. Scatterplots are used for Intra-City Analysis to examine the intracity variations about the mean for young adult neighbourhoods in relation to a given variable. Through the application of these descriptive statistics the thesis gathers data that can be used to address the presented research question discussed in Chapter One.

### *Data Organization*

The results of the data analysis and the discussion of the key findings are presented by this thesis in one of three ways, by street (n=36), by individual city (n=12), or as a group of cities (i.e. Country, Geography, and/or Population). This approach to examining the dataset provides the thesis with the ability to assess trends in the built-form of young adult neighbourhoods, as well as to identify how these trends are replicated across North America in different ways. Where there is evidence found to support similarities between landscapes, or consistent trends

across streets, cities, or within groups of cities, this thesis can evaluate the level of homogeneity that may exist in any one of the given cities, or on any one of the given streets.

Consistent with the thesis's methodology, a prescribed number of streets and properties were selected to be a part of the study. These include a maximum of three streets per individual city and approximately twenty properties per street, for a total of approximately sixty properties per individual city. In addition to the selection of streets and properties, the thesis also identifies an additional economy of scale to be measured, the establishments. These are the shops found within each of the selected properties. While the number of streets and properties are prescribed by the methodology, the number of establishments to be evaluated within this study is entirely dependent upon the composition of the selected properties from within each individual city and its corresponding streets. Where there are more establishments found within the properties on a given street there will be more establishments examined as part of the analysis. Subsequently, where there are a limited number of establishments found within the selected properties, there will be a smaller number of establishments to be examined as part of this analysis. The thesis does not find the difference found between the total number of establishments being examined within different cities as being inconsistent, rather it believes that the difference in the number of establishments is a vital discussion point for how these cities are comprised.

**Table 4** presents the composition of observations for streets, properties, and establishments by individual street. Within this table, the individual streets are sorted by city (rows) and categorized by classification within the different groups of cities (columns). This level of data organization provides this thesis with a high-level categorization, which allows for a comparative analysis of trends across streets, cities, groups of cities, or within any sub-categorization of these variables. This differentiation of cities and groups also provides an

additional level of categorization that assists in contextualizing the data analysis and discussion to follow in this chapter.

***Table 4: Data Organization***

| | | Groups | | | | | | | Counts | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **City** | **Street** | **Country** | | **Geography** | | | **Population** | | **Street** | | **Property** | | **Establishments** | |
| Austin | 5th Street | | USA | | Central | | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 31 | 2.4% |
| | Congress Avenue | | USA | | Central | | | < 2.5M | 1 | 2.8% | 16 | 2.3% | 21 | 1.6% |
| | S Lamar Boulevard | | USA | | Central | | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 31 | 2.4% |
| Calgary | 17th Avenue SW | CAN | | | Central | | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 39 | 3.0% |
| | 1st Street SW | CAN | | | Central | | | < 2.5M | 1 | 2.8% | 19 | 2.7% | 41 | 3.2% |
| | 8th Avenue SW | CAN | | | Central | | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 28 | 2.2% |
| Chicago | Halsted Street | | USA | | Central | | ≥ 2.5M | | 1 | 2.8% | 16 | 2.3% | 24 | 1.9% |
| | N Milwaukee Avenue | | USA | | Central | | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 39 | 3.0% |
| | Sheffield Avenue | | USA | | Central | | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 33 | 2.6% |
| Edmonton | 101 Street NW | CAN | | | Central | | | < 2.5M | 1 | 2.8% | 14 | 2.0% | 30 | 2.3% |
| | 82 Avenue NW | CAN | | | Central | | | < 2.5M | 1 | 2.8% | 21 | 3.0% | 35 | 2.7% |
| | Jasper Avenue | CAN | | | Central | | | < 2.5M | 1 | 2.8% | 19 | 2.7% | 44 | 3.4% |
| Halifax | Barrington Street | CAN | | East | | | | < 2.5M | 1 | 2.8% | 18 | 2.6% | 28 | 2.2% |
| | Quinpool Road | CAN | | East | | | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 30 | 2.3% |
| | Robie Street | CAN | | East | | | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 32 | 2.5% |
| Los Angeles | 7th Street | | USA | | | West | ≥ 2.5M | | 1 | 2.8% | 19 | 2.7% | 41 | 3.2% |
| | Hill Street | | USA | | | West | ≥ 2.5M | | 1 | 2.8% | 19 | 2.7% | 34 | 2.7% |
| | Hollywood Blvd | | USA | | | West | ≥ 2.5M | | 1 | 2.8% | 19 | 2.7% | 42 | 3.3% |
| Montréal | Avenue du Mont Royal | CAN | | East | | | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 30 | 2.3% |
| | Rue Beaubien E | CAN | | East | | | ≥ 2.5M | | 1 | 2.8% | 21 | 3.0% | 36 | 2.8% |
| | Rue Sainte-Catherin | CAN | | East | | | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 49 | 3.8% |
| New York City | 42nd Street | | USA | East | | | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 38 | 3.0% |
| | Broadway Ave | | USA | East | | | ≥ 2.5M | | 1 | 2.8% | 19 | 2.7% | 27 | 2.1% |
| | Manhattan Ave | | USA | East | | | ≥ 2.5M | | 1 | 2.8% | 18 | 2.6% | 25 | 2.0% |
| Portland | 5th Avenue | | USA | | | West | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 27 | 2.1% |
| | Weidler St | | USA | | | West | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 24 | 1.9% |
| | Yamhill St | | USA | | | West | | < 2.5M | 1 | 2.8% | 20 | 2.9% | 40 | 3.1% |
| Seattle | 3rd Avenue | | USA | | | West | | < 2.5M | 1 | 2.8% | 21 | 3.0% | 49 | 3.8% |
| | Broadway | | USA | | | West | | < 2.5M | 1 | 2.8% | 16 | 2.3% | 28 | 2.2% |
| | Pike Street | | USA | | | West | | < 2.5M | 1 | 2.8% | 23 | 3.3% | 57 | 4.5% |
| Toronto | Bloor Street, West | CAN | | East | | | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 32 | 2.5% |
| | Queen Street, West | CAN | | East | | | ≥ 2.5M | | 1 | 2.8% | 19 | 2.7% | 30 | 2.3% |
| | Yonge Street | CAN | | East | | | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 60 | 4.7% |
| Vancouver | 4th Avenue, West | CAN | | | | West | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 36 | 2.8% |
| | Main Street | CAN | | | | West | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 29 | 2.3% |
| | Robson Street | CAN | | | | West | ≥ 2.5M | | 1 | 2.8% | 20 | 2.9% | 59 | 4.6% |
| **Total** | | **6** | **6** | **4** | **4** | **4** | **6** | **6** | **36** | **100%** | **697** | **100%** | **1279** | **100%** |
| | | **12** | | **12** | | | **12** | | | | | | | |

The key detail presented within **Table 4** is that there is little variation found to exist between the composition of observations recorded, regardless of the categorization being applied to the dataset. When the dataset is left uncategorized (examined by individual street) the number of properties (n=697) per street (n=36) averaged 19 (s=1.6) with a range of 9. This is reflective of 1% difference between the minimum and maximum number of properties found within the individual streets. Such a small difference provides evidence to suggest that a minimal variance

exists between the number of properties being examined on any two individual streets within the dataset. A further analysis of the uncategorized dataset illustrates that the number of establishments (n=1279) per street (n=36) averaged 36 (s=9.6) with a range of 39 and a median value of 33. While there exists a 3% difference between the maximum value and the minimum value, the median suggests that the dataset is skewed left towards the minimum value of 21, leaving Yonge Street, Toronto (n=60), Robson street, Vancouver (n=59), and Pike Street, Seattle (n=57) to be outliers in this dataset.

When the dataset is categorized by city (n=12), the number of properties (n=697) averaged 58.1 (s=2.0) with a range of seven and a median of 59. This demonstrates that the distribution of observations is greater but within a smaller range, as compared to the earlier uncategorized dataset. A further analysis of the dataset, as categorized by city, finds that the number of establishment (n=1279) per city (n-12) averaged 107 (s=15.7) with a range of 51 and a median of 108. With consideration given to the fact that a city is comprised of three streets, the numbers suggest that there continues to be an even distribution of observations across cities, as was found within the uncategorized data.

When comparing the collected data by individual city, this thesis finds that Seattle, WA has the most establishments (n=134) per street (n=3) averaging 45(+9), and the most establishments (n=134) per property (n=60) averaging 2(+0.4), while Austin, TX is found to have the fewest establishments (n=83) per street (n=3) averaging 28(-8), and the fewest establishments (n=83) per property (n=56) averaging 2(-0.3). When the data is broken down by individual streets, the thesis finds that Toronto, ON has the greatest number of establishments on a single street with n=60(+25), and that Austin, TX has the fewest number of establishments on a single street with n=21(-15).

When the data found in **Table 4** are categorized by country, the twelve cities are placed into two mutually exclusive classifications, 1) Canada (n=6), which is comprised of Calgary, AB; Edmonton, AB; Halifax, NS; Montréal, QC; Toronto, ON; and, Vancouver, BC; and 2) U.S. (n=6), which is comprised of Austin, TX; Chicago, IL; Los Angeles, CA; New York, NY; Portland, OR; and, Seattle, WA. When looking at the data in **Table 4**, as sorted by Country, this thesis finds that the total number of properties are distributed equally between the two classifications, with 50% in Canada (n=351) and 50% in America (n=346). When looking at the number of properties per city this thesis finds that Canadian cities (n=6) averaged 59 (s=2.2) and that U.S. cities (n=6) averaged 58 (s=1.7). When the property observations are broken down into individual streets for each classification, the thesis finds that the number of properties per street in Canadian cities (n=6) averaged 20 (s=1.5) and that the number of properties per street for U.S. cities averaged 19 (s=1.4). The results illustrate that there is a small difference between the total number of properties found within each classification and their means, and that each classification shares a similar distribution.

When the data found in **Table 4** are categorized by country this thesis finds that establishments are similarly distributed between the two classifications, with 52% in Canada (n=668) and 48% in the U.S. (n=611). An analysis of this data further shows that the number of establishments per city in Canadian cities (n=6) averaged 111 (s=11.3) while the number of establishments per city in U.S. cities (n=6) averaged 102 (s=17.8). Additionally, when analyzing the data at a street level, this thesis finds that the number of establishments per street in Canadian cities (n=6) averaged 37 (s=3.8) and that the number of establishments per street in U.S. cities (n=6) averaged 34 (s=6.0). These results indicate that the Canadian cities within this study have a

greater number of establishments on a single street, while also having a smaller distribution from the mean, as is compared to that of the U.S. cities identified within this study.

Further analysis of these two classifications shows that Vancouver, BC is the Canadian city with greatest number of establishments (n=124) per street (n=3) averaging 41(+4), and the greatest number of establishments (n=124) per property (n=60) averaging 2(+0.2). It also shows that Halifax, NS is the Canadian city with the fewest number of establishments (n=90) per street (n=3) averaging 30(-7), and the fewest number of establishments (n=90) per property (n=58) averaging 2(-0.3). For U.S. cities Seattle, WA, has the greatest number of establishments (n=134) per street (n=3) averaging 45(+11), and the greatest number of establishments (n=134) per property (n=60) averaging 2(+0.4), while Austin, TX, has the fewest number of establishments (n=83) per street (n=3) averaging 28(-6), and the fewest number of establishments (n=83) per property (n=56) averaging 2(-0.3). Additionally, this thesis finds that for Canadian cities Toronto, ON, has the greatest number of establishments on a single street with n=60(+23), and that Halifax, NS, has the fewest number of establishments on a single street with n=28(-9). Comparatively, for U.S. cities Seattle, W,A has the greatest number of establishments on a single street with n=57(+23), and Austin, TX, has the fewest number of establishments on a single street with n=21(-13).

When the data found in **Table 4** are categorized by Geography, the twelve cities are placed into three mutually exclusive classifications, 1) Eastern cities (n=4), which is comprised of Halifax, NS; Montréal, QC; Toronto, ON; and, New York, NY; 2) Central cities (Mid West/Prairies) (n=4), which is comprised of Edmonton, AB; Calgary, AB; Chicago, IL; and, Austin, TX; and, 3) Western cities (n=4), which is comprised of Vancouver, BC; Seattle, WA; Portland, OR; and, Los Angeles, CA. When looking at the data in **Table 4**, as sorted by

Geography, this thesis finds that the total number of properties are similarly distributed between the three classifications, with 34% in Eastern cities (n=235), 32% in Central cities (n=225), and 34% in the Western cities (n=237). When looking at the number of properties per city this thesis finds that Eastern cities (n=4) averaged 59 (s=1.5), Central cities (n=4) averaged 56 (s=1.8), and that Western cities (n=4) averaged 59 (s=1.3). When the property observations are broken down into individual streets for each classification, the thesis finds that the number of properties per street in Eastern cities (n=4) averaged 19 (s=0.86), Central cities (n=4) averaged 19 (s=2.1), and that Western cities (n=4) averaged 20 (s=1.5).

When categorizing the data found in **Table 4** by Geography this thesis finds that establishments are similarly distributed between the three classifications, with 33% in Eastern cities (n=417), 31% in Central cities (n=396), and 36% in the Western cities (n=466). An analysis of this data further shows that the number of establishments per city in Eastern cities (n=4) averaged 104 (s=14.4), that the number of establishments per city in Central cities (n=4) averaged 99 (s=10.6), and that the number of establishments per city in Western cities (n=4) averaged 117 (s=15.9). Additionally, when analyzing the data at a street level, this thesis finds that the number of establishments per street in Eastern cities (n=4) averaged 35 (s=9.7), that the number of establishments per street in Central cities (n=4) averaged 33 (s=6.6), and that the number of establishments per street in Western cities (n=4) averaged 38 (s=11.0). These results show some greater variation between classifications then seen previously in the group country; however, the numbers remain to be such that the means and the distributions still reflect a similar pattern to one another. The thesis finds that when looking at the data by Geography, there is no one classification within this group that stands out as being significantly different from the other two.

When the data found in **Table 4** are categorized by population, the twelve cities are placed into two mutually exclusive classifications, 1) Population of ≥ 2.5M (n=6), which is comprised of Chicago, IL; Los Angeles, CA; Montréal, QC; New York, NY; Toronto, ON; and Vancouver, BC; and 2) Population of < 2.5M (n=6), which is comprised of Austin, TX; Calgary, AB; Edmonton, AB; Halifax, NS; Portland, OR; and Seattle, WA. When looking at the data in **Table 4**, as sorted by Population, this thesis finds that the total number of properties are distributed between the two classifications, with 50% in cities with a Population of ≥ 2.5M (n=350) and 50% in cities with a Population of < 2.5M (n=347). When looking at the number of properties per city this thesis finds that cities with a Population of ≥ 2.5M (n=6) averaged 58 (s=1.8), while cities with a Population of < 2.5M (n=6) averaged 58 (s=2.2). When the property observations are broken down into individual streets for each classification, the thesis finds that the number of properties per street in cities with a Population of ≥ 2.5M (m=6) averaged 20 (s=1.1), and that the number of properties per street in cities with a Population of < 2.5M (n=6) averaged 19 (s=1.8). The results illustrate that there is a small difference between the total number of properties found within each classification, as well as between their means and their distributions.

When categorizing the data found in **Table 4** are Population this thesis finds that establishments are equally distributed between the two classifications, with 52% in cities with a Population of ≥ 2.5M (n=664) and 48% in cities with a Population of < 2.5M (n=615). An analysis of this data further shows that the number of establishments per city in cities with a Population of ≥ 2.5M (n=6) averaged 110 (sd=13.0), while the number of establishments per city in cities with a Population of < 2.5M (n=6) averaged 103 (sd=17.0). When analyzing the data at a street level, this thesis finds that the number of establishment per street in cities with a

Population of ≥ 2.5M (n=6) averaged 37 (sd=10.0) and that the number of establishments per street in cities with a Population of < 2.5M (n=6) averaged 34 (sd=9.0). These results indicate that cities with a Population of ≥ 2.5M have slightly more shops per street, but that the distribution is father from the mean, as is seen with cities with a Population of < 2.5M.

Additional analysis of this classification data shows that Vancouver, BC is the city with a Population of ≥2.5M that has the greatest number of establishments (n=124) per street (n=3) averaging 41(+4.4) establishments, and the greatest number of establishments (n=124) per property (n=60) averaging 2(+0.2) establishments. It also shows that New York City, NY is the city with a Population of ≥2.5M that has the fewest number of establishments (n=90) per street (n=3) averaging 30.0(-6.8) establishments, and the fewest establishments (n=90) per property (n=57) averaging 2(-0.3) establishments. For Cities with a Population of < 2.5M cities Seattle, WA has the greatest number of establishments (n=134) per street (n=3) averaging 45(+10.5) establishments, and the greatest number of establishments (n=134) per property (n=60) averaging 2.2(+0.4) establishments. Additionally, it shows that Austin, TX is the city with a Population of <2.5M that has the fewest number of establishments (n=83) per street (n=3) averaging 28(-6.5) establishments, and the fewest number of establishments (n=83) per property (n=56) averaging 2(-0.3) establishments. Finally, this thesis finds that for Cities with a Population of ≥ 2.5M, Toronto, ON has the greatest number of establishments on a single street with n=60(+23.2), and that Chicago, IL has the fewest number of establishments on a single street with n=24(-12.8). Comparatively, for Cities with a Population of < 2.5M, Seattle, WA has the greatest number of establishments on a single street with n=57(+22.8), and that Austin, TX has the fewest number of establishments on a single street with n=21(-13.2).

The data analysis and discussion provided for **Table 4** can be summarized into a single key finding: So long as the classifications are created with an equal number of streets or cities, the dataset may be sorted or classified (i.e. by street, by city, by grouping of cities) in a variety of meaningful ways to assess the different trends and relationships that are found to exist within the dataset. This is made possible by the fact that the means, distributions, maximum values, minimum values, and ranges of observations across the various cities are similar, which provides the opportunity to compare these landscapes against one another. Thus, the following data analysis and discussion, as it pertains to aesthetics and function, do not need to be concerned with how the dataset is distributed between different classifications, instead this thesis can focus primarily on analyzing the prominent trends that are identified within the dataset.

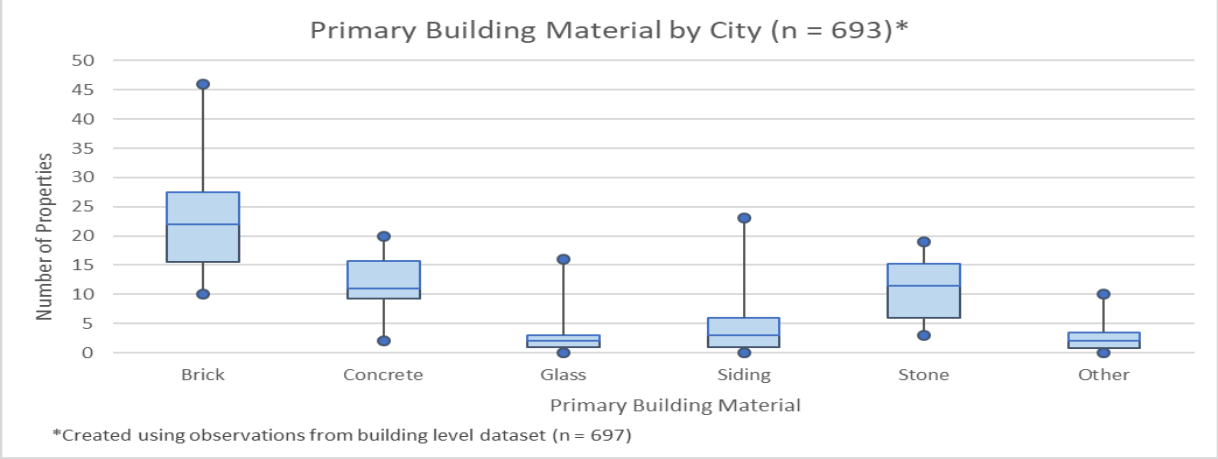
***Inter-City Analysis***

The purpose of this section is to identify the dominant trends found to exist within each of the six variables. The thesis uses box plots to show how the distributions for each variable exist across all cities. The data being presented within the box plots have been categorized either at the Property level (n=697) or the establishment level (n=1279) and are organized by the total number of properties/establishments by city for a given variable. The box plots demonstrate the intercity variance that exists within the dataset. From this the thesis can determine how uniform a selected classification is within a given variable, as compared to the other classifications. The information presented within each box plot includes the median value, the 1st quartile, the 3rd quartile, the minimum value, and the maximum value for each classification within the selected variable.

*Primary Building Material: Brick*

The distribution of primary building materials by type is shown as a box plot in **Figure 6**. When looking at the data for primary building material the box plot shows that brick is the most common material used with 42% of all properties having this material as its primary building material (**Appendix C**). The data shows that the median value of brick is 22-properties per city which accounts for approximate 1/3 of the total buildings within the landscape. It is noted that the median value of 22-properties is greater than the maximum value found in four of the other five material types, with the exception being siding, where Halifax has 23-properties. The maximum value is 46-properties, which is found to be in Montréal. This value is double that of the next maximum value for any material, which is found to be in siding with a value of 23-properties in Halifax. The minimum value is 10-properties, which is found in Los Angeles. This value is above that of the maximum value for glass, siding and other, and is just below that of concrete with 11, and stone with 11.5.

***Figure 6: Distribution of brick against other primary building materials***




The mean value for the variable is 23-properties (s=10.3), which is just slightly higher than the median at 22-properites. It is also noted that the mean value is greater than or equal too all the other maximum values found within the other categories. The interquartile range for brick

shows that the values within the central 50% of the dataset are evenly distributed on either side of the median value. This distribution indicates that there is a level of uniformity found to exist across all cities. The data also shows that the range itself is large, with a value of 12-properties, which indicates that there is some uniformity in type but that it is not consistent in numbers. This shows that while there are some cities that fall well above the median and mean, that the range falls within a tight distribution of 16-28 properties per city, which is representative of approximately 25-33% of the overall landscape of the three streets combined.

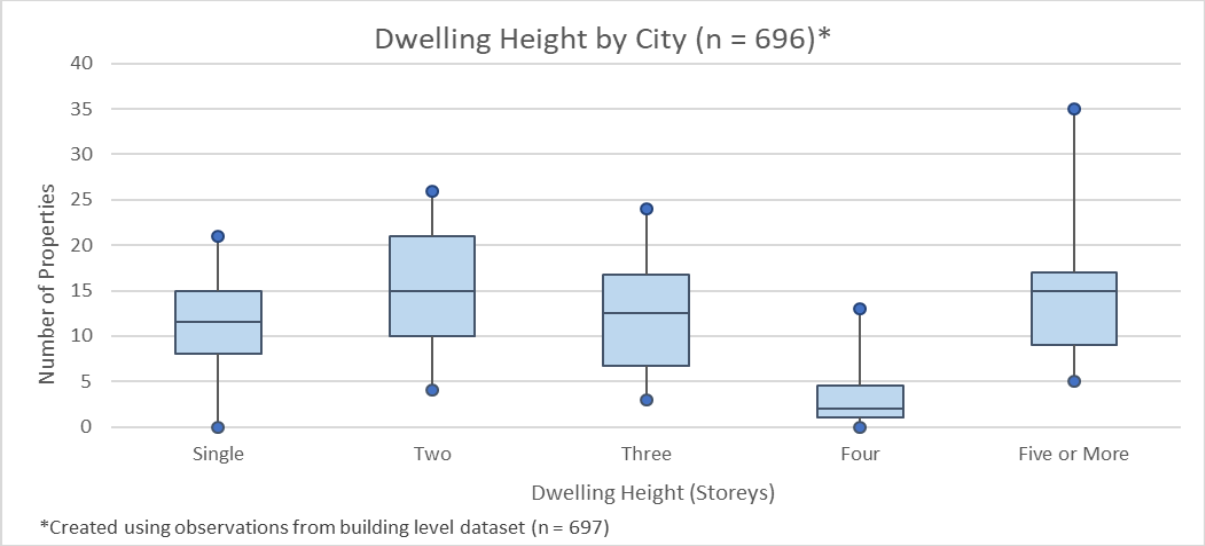
***Figure 7: Illustration of landscapes that are predominantly brick***


West)*CAPTION: The two images depicted above illustrate what a young adult neighbourhood with a high proportion of brick looks like. These images also show that these types of landscapes have additional similar characteristics, including height, secondary material, window type, setback, frontage. (Google Maps, 2017).*

The collected data shows that Montréal has the most brick buildings with a total of 46-properties (76%) in its landscape being brick. The dataset further shows that he second most prominent city is Toronto with 38-properties (64%), and the third most prominent is Chicago with 32-properties (57%). It is also found that the cities with the least amount of brick properties are Los Angeles with 10-properties (18%), Vancouver with 13-properties (22%), and Edmonton with 14-properties (26%). An example of the distribution of brick as it exists in the landscape can be seen in **Figure 7**, which shows photos from both Montréal and Toronto. For Montréal, the

selected street has 18/21 buildings comprised of brick (85%). For Toronto, the selected street has a street has 15/20 buildings composed of brick (75%).

***Figure 8: Distribution of dwelling heights for all properties***




*Dwelling Height: one-3 Storeys*

When looking at the recorded data for building heights this thesis finds that the dwelling height of one-3 storeys is the most common with 67% of all properties within this study being categorized by this type (**Appendix D**). The data for dwelling height is illustrated in **Figure 8**. The data shows that the median values are 11.5-properties for single storey dwellings, 15-properties for two storey dwellings, and 12.5-properties for three storey dwellings. It also shows that the maximum values as being 21-properties for single storey dwellings, 26 properties for two storey dwellings, and 24 properties for three storey dwellings. This distribution results in a normative curve for the number of properties that are found to exist with one-3 storeys within the cities. The data further shows that the minimum values are 0-properties for single storey dwellings, 4 properties for two storey dwellings, and three properties for two storey dwellings. The mean values are found to be 11.2-properties (s=6.3) for single storey dwellings, 15-

properties (s=6.8) for two-storey dwellings, and 12.7-properties (s=6.6) for three storey dwellings. Overall, the distributions by storey differ somewhat between one another, however, in general they share similar values for the total difference between their respective maximum and minimum values.

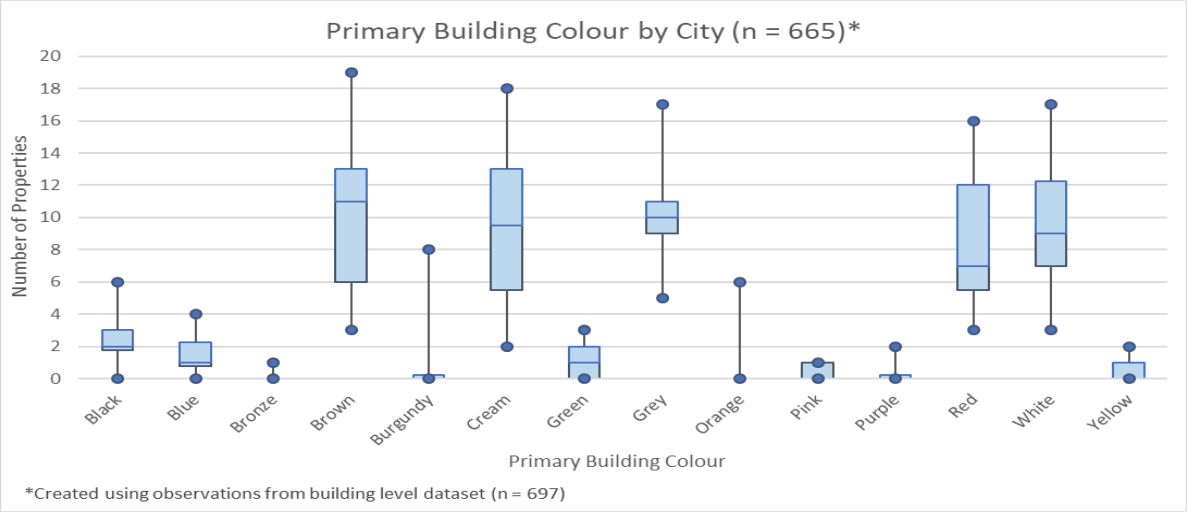
***Figure 9: Illustration of landscapes that are predominantly one-3 storeys***


*CAPTION: The two images depicted above illustrate the uniformity found within these landscapes. Both streets are 100% one-3 storeys and have a high proportion of dwellings being two storeys. These images are a representation of the landscapes found to be prominent. (Google Maps, 2017).*

The inter-quartile range for the three values have a significantly larger range then that of their respective range for the maximum and minimum values, with single storey dwellings having a difference of seven-properties, three storey dwellings having a difference of 10-properties, and two storey dwellings having a difference of 11-properties. The interquartile range shows that the distribution of the central 50% of the values are evenly spread on either side of the median value, which indicates that there is uniformity between the three types of building heights across all cities. The thesis acknowledges that there exists a notable difference between the total number of dwellings within each of the three classifications, however, given the similarities between the respective ranges and distribution patterns the thesis suggests that the dominant type be identified as being one-3 storeys. An example of the distribution of height in the landscape can be seen in **Figure 9**, which shows photos from both Seattle and Montréal.

When looking at the recorded data it is found that 10 cities have a minimum of 60% to a maximum of 88% of their respective landscapes being comprised of such. These 10 cities exclude that of Los Angeles and New York, however, even these two cities have 30% of their respective landscapes comprised of buildings that are one-3 storeys in height.

***Figure 10: The distribution of primary building material colours***




*Primary Building Material Colours: Brown, Cream, Grey, Red, and White*

When looking at the data for Primary Building Material Colours, the box plot shows that Brown, Cream, Grey, Red, and White are the most common colours with 85% of all properties being categorized as 'colours' (**Appendix E**). The data for Primary Building Material Colours is shown as being a box plot in **Figure 10**. The primary building colours are dominated by five categories, brown, cream, grey, red, and white. The median values for these colours are 11-properties for brown, 10-properties for grey, 9.5-properties for cream, nine-properties for white, and seven-properties for red, which makes the average of the medians 9.3-properties. This mean value of the medians is above the maximum value recorded for any of the other nine colours. The maximum values for the five colours are similar to one another, with 19-properties for brown, 18-properties for cream, 17-properties for grey, 17-properties for white, and 16- properties for

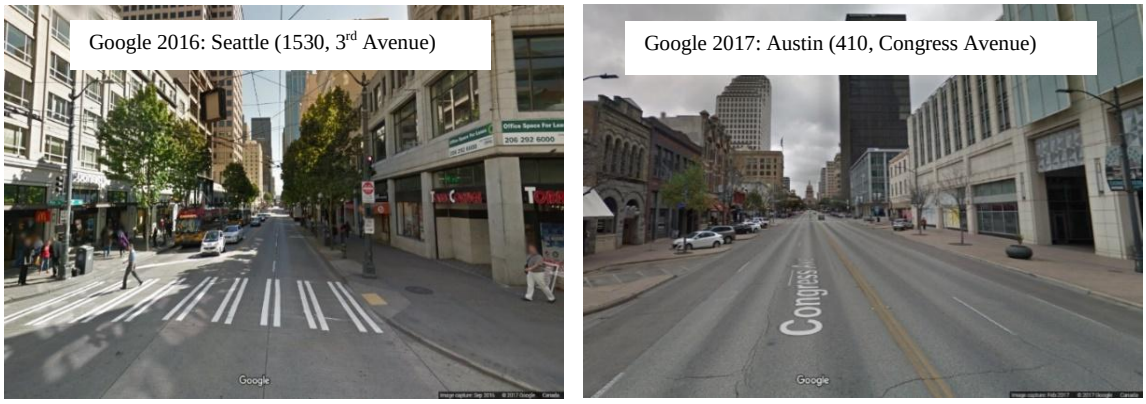
red, which produces a range of three-properties between the five categories. The minimum values also reflect a range of three-properties with five-properties for red, three-properties for brown, three-properties for cream, three-properties for white, and two-properties for grey.

The mean values for these categories are 10-properties (s=3.1) for grey, 10-properties (s=4.2) for brown, 9.6-properties (s=4.0) for white nine-properties (s=4.8) for cream, and eight-properties (s=4.2) for red. The inter-quartile range for brown, cream, red, and white is similar, with 7.5-properties for cream, seven-properties for brown, 6.5-properties for red, and 5.25-properties for white. The inter-quartile range for grey is slightly smaller then that of the other four, with a value of two-properties. A further evaluation of the data shows that the individual distributions of inter-quartile range for each of the five colours is different. For the colour brown 75% of its distribution is below the median value, indicating that there are more cities with a smaller number of properties that have brown buildings. This means that the colour largely dominates some streets while others have a much smaller number of buildings that are brown. The colour red and white have a distribution where the majority of the range is found to be above the median, which indicates that there is a lower level of uniformity across the cities. For the colours cream and grey the distribution is even with approximately 50% above and below the median. This distribution indicates that there is more uniformity of these colours across all cities then that which is seen to exist in the colours of brown, red, or white.

The data further shows that 10 of the twelve cities, excluding Toronto and Vancouver, have over 75% of their landscapes dominated by these five colours. The city with the highest percentage of buildings in these five colours is Edmonton with 94%, and the second most is seen in Chicago with 93%. It is also noted that these five types have an average of 85% across all cities. It is speculated that the reasons behind these five colours being so dominant with the

selected streetscapes, is not so much a reflection of the popularity of any one of the given colours, rather it is a result of the fact that these colours are most commonly found with the select building materials that dominate these landscapes. The lack of uniformity found to exist as indicated by the inter-quartile range suggests that the colours are very much a product of the materials being used, and not of themselves a choice because of their value or aesthetic appeal. An example of the distribution of Primary Building Material Colour in the landscape can be seen in **Figure 11**.

***Figure 11: Use of the most prominent colours in young adult neighbourhoods***



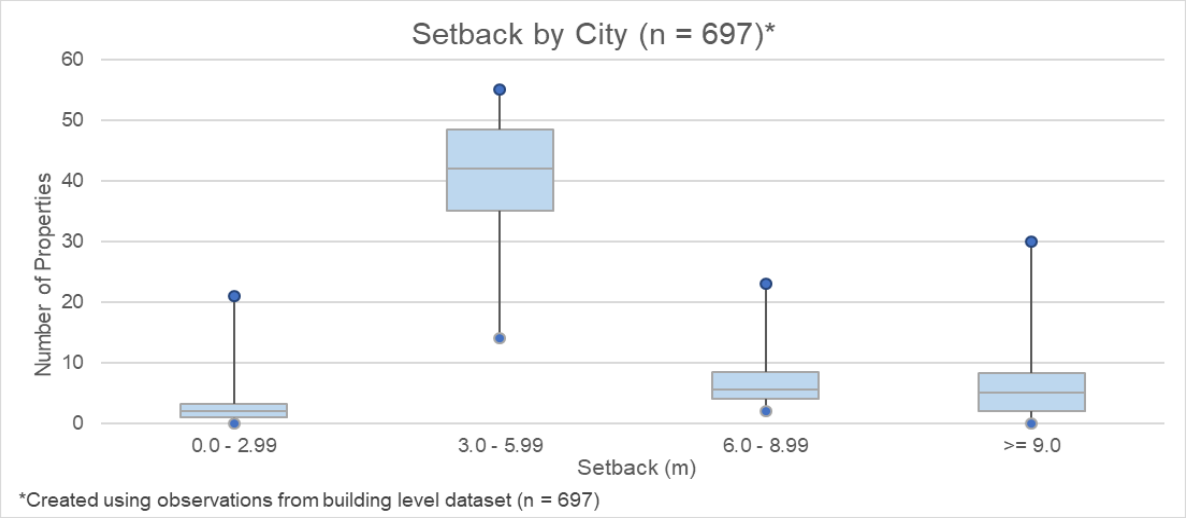

*CAPTION: The two images depicted above illustrate both the high frequency of use of the colours brown, grey, cream, white, and red, as well as the use of those colours by particular building material types. (Google Maps, 2017).*

*Dwelling Setback: 3.0m-5.99m*

When looking at the data for setbacks, the box plot shows that 3.0-5.99m is the most common setback distance with 68% of all properties being categorized as '3.0-5.99m' (**Appendix F**). The data for setbacks is presented as a box plot in **Figure 12**. The box plot shows that the median value for the 3.0-5.99m setback is 42-properties, which is above the maximum value found in either of the other three categories. It also shows that the maximum value for the 3.0-5.99m setback is 55-properties in Toronto, which is a difference of 13-properties from the

median value, and a difference of 6.5-properties from the third quartile. This indicates that there is uniformity amongst the different landscapes in the various cities.

***Figure 12: Distribution of building setbacks for all properties***




The minimum value for the 3.0-5.99m setback is 14-properties as seen in Austin, which is a 29-properties difference from the median, and a 21-property difference from the 1st quartile. The minimum value is also larger then the median values of the other three categories, indicating that the 3.0-5.99m setback is the most dominant within the landscape. The mean value for 3.0-5.99m setback is 39-properties (s=11.5), which is three-properties lower then the median value of 42-properties. A mean value that is lower then the median suggests that the distribution is representative of a negative skew, wherein there are more cities that have a lower proportion of properties with this value. The data also shows that the inter-quartile range is 13.5-properties, where the median value is found to be positioned within the middle. This small difference indicates that the distribution is very narrow and that there exists a high level of uniformity across the 12 cities, in regard to having a 3.0-5.99m setback.

An example of the distribution of Dwelling Setback in the landscape can be seen in **Figure 13**, which shows photos from both Toronto and New York. Both streets depicted,

Broadway Avenue in New York City and Bloor Street in Toronto, are have 100% of their properties with a 3.0-5.99m setback. The observation made here by this thesis is that while the range in the setbacks are dependent upon the physical location within the city, the range of setbacks between buildings within the same landscape is uniform. The thesis finds that 64% of the streets within the study, have ≥70% of their properties with 3.0-5.99m setbacks; these streets are in 10 cities, excluding Calgary and Chicago. Where Edmonton, Los Angeles, New York, and Toronto have all three of their streets with ≥70% of their properties having a 3.0-5.99m setback.

***Figure 13: Building setback similarities in young adult neighbourhoods***

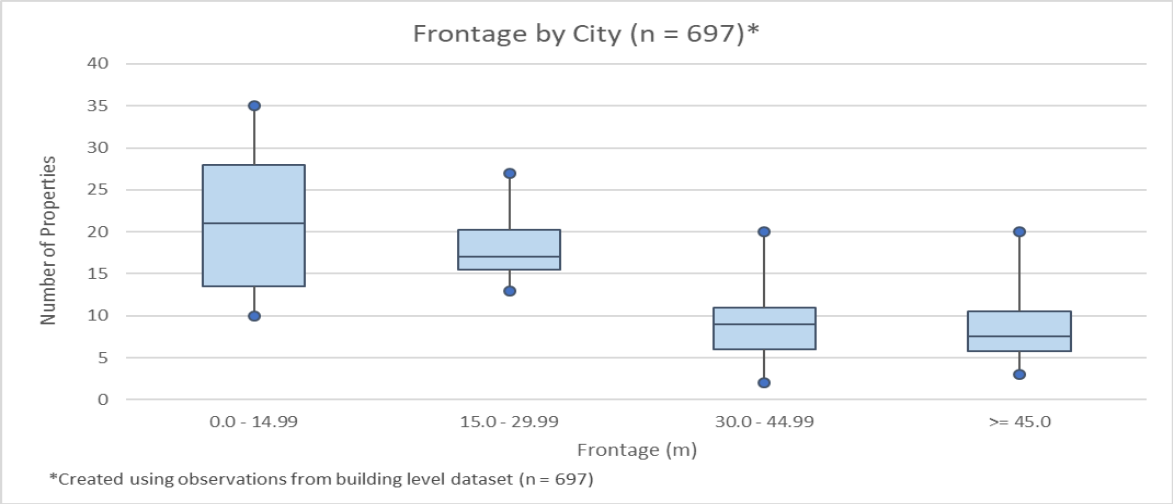

*CAPTION: The two images depicted above illustrate a consistent setback of 3.0m-5.99m. Additionally, these two streets show that the buildings share the same setback. This type of uniformity between the setbacks of different buildings is seen across much of the landscapes found within the dataset. (Google Maps, 2017).*

*Dwelling Frontage: 0m-14.99m*

When looking at the data for Dwelling Frontage, the box plot shows that 0-14.99m is the most common frontage distance with 37% of all properties being categorized as '0-14.99m' (**Appendix H**). The data for Dwelling Frontage is shown in **Figure 14**. The median value for a 0-14.99m Frontage is 21-properties, which is four-properties greater then the next highest median value. The maximum value is 35-properties, which is recorded in Halifax. It should also be noted that Toronto has a high number of recorded observations with a total of 34-properties. The lowest number of recorded observations is found in Los Angeles has with a total of 10-

properties. The second lowest number of recorded observations is found in Seattle is with a total of 11-properties.

***Figure 14: Illustrating building frontage size in young adult neighbourhoods***




The mean is the same as the median at 21-properties (s=8.7), which indicates that the category has a normal distribution. The inter-quartile range is 14.5-properties, which is fairly large and indicates that the prominence of this frontage size varies quite substantially between landscapes. The range between the maximum and minimum values is 25-properties, which is a fairly large range. However, it is worth noting that the difference between the first quartile and the minimum value is only 3.5-properties, while the difference between the maximum value and the 3rd quartile is 6.75-properties. This is indicative of a distribution where the variance of the data points outside of the central 50% of properties in the inter-quartile range are still relatively similar.

An example of the distribution of Dwelling Frontage in the landscape can be seen in **Figure 15**, which shows two photos from New York City. These properties have a single ground floor establishment with residential units above. Again, as is similar to dwelling setbacks, it is found to be true that these neighbourhoods not only fall within the specified range, but that each

building actually has a very similar frontage to that of the other buildings within the landscape. This type of uniformity between the frontages of different buildings is seen across the majority of landscapes within the dataset. The observation made here, similar to that of setbacks, is that while the range in the frontages are dependent upon the physical location within the city, the range of frontages between buildings within the same landscape are relatively uniform.

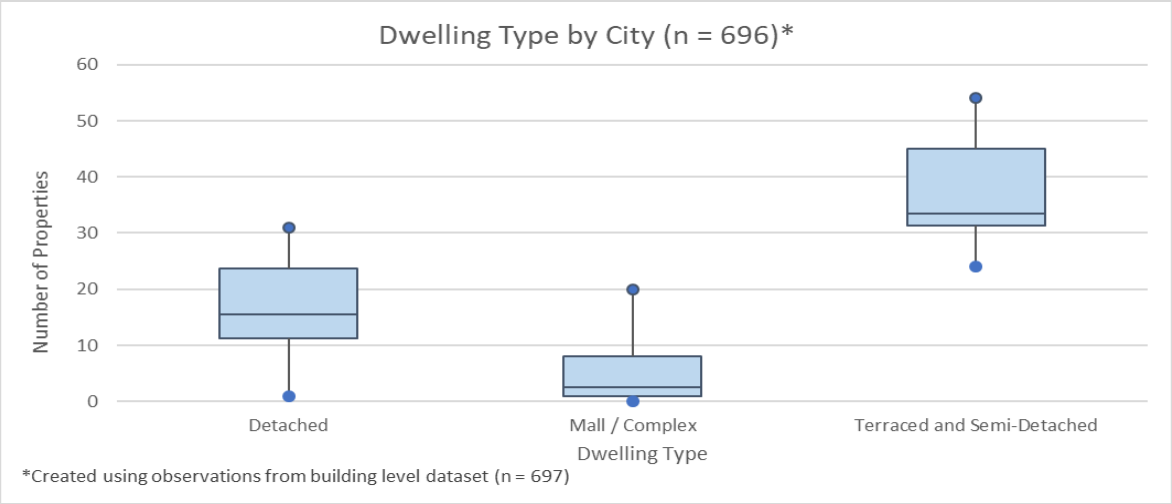
***Figure 15: Similarities in building frontage from New York City***


*CAPTION: The two images depicted above from Manhattan Avenue in New York city represent a street where 94% of the landscape has a frontage of 0.14.99m. This specific example shows a landscape with a high level of uniformity; however, the data suggests that young adult neighbourhoods exist with a greater level of diversity. (Google Maps, 2017).*

This type of frontage landscape is prominently found in Halifax with a total of 35 properties, Toronto with a total of 34 properties, and New York with a total of 31 properties. It is also found to be less prominent Los Angeles with a count of 10 properties, Seattle with 11 properties, and Edmonton with 12 properties. This thesis finds that the areas in which 0-14.99m frontages are most prominent are those areas within cities where two-three storey terraced or semi-detached buildings have been made to have an establishment on the ground floor with some residential units above. They are generally not high-density areas, but are in a major retail area within the city. However, where this is not the case it is on those streets that are found within

higher density areas within the city having dwellings of five-storey or more that are predominantly office and residential uses.

***Figure 16: Distribution of the dwelling types across cities***




*Dwelling Type: Terraced/Semi-Detached*

When looking at the data for Dwelling Type, the box plot shows that Terraced/Semi-Detached is the most common with 63% of all properties being categorized as 'Terraced/Semi-Detached' (**Appendix K**). The data for Dwelling Type is shown as being a box plot in **Figure 16**. The median value for terraced/semi-detached is 33.5-properties, which is well above the median values for the other two categories, detached (15.5-properties), and Mall/Complex (2.5-properties). It is also higher then the maximum value for either of the other two categories, Detached (31-properties), and Mall/Complex (20-properties). The maximum value for terraced/semi-detached is 54-properties, which is found in New York City, but it is also close to the number of properties found in Toronto at 51-properties. The minimum number of properties found is 24-properties in Austin, which is also close to both Edmonton with 27-properties and Portland with 29-properties. The mean value for terraced/semi-detached is 36.75-properties (s=9.2) which is larger then the median value. The difference between the mean and median

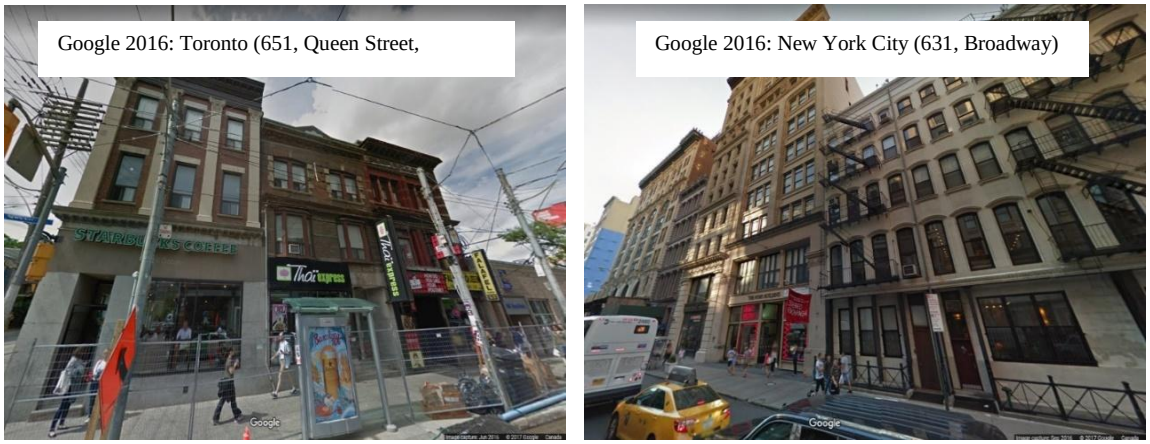
represents a positive skew in the dataset. As such, we can conclude that more cities have a number or properties consistent with the lower frequency. Finally, the inter-quartile range for this category is 13.75-properties, where the median is closer to the 1st quartile indicating that the dispersion of the middle 50% of the data is quite narrow between cities. Given that the median is closer to the 1st quartile this also indicates that there is less uniformity between cities.

This thesis finds that the terraced and semi-detached buildings/dwellings are more prominent in New York (95%), Toronto (86%), Calgary (76%), and Seattle (75%), where Calgary (8th Avenue), New York (Broadway Avenue), and Toronto (Queen street) are streets with 100%; the mean value is found to be 63%. The terraced/semi-detached buildings/dwellings are least prominent in Austin (43%), Portland (48%), and Edmonton (50%), where a single street has less then 10%, these include S Lamar Boulevard in Austin (0%), 101 Street NW in Edmonton (7%), and Weidler Street in Portland (10%). At the same time, the cities with the lowest values also have streets that share a high proportion of Terraced/Semi-Detached, such as Congress Avenue in Austin (94%), and 5th Avenue in Portland (90%). This trend seems to be a reflection upon how central the streets are too the downtown core and the major retail/commercial areas.

An example of the distribution of Dwelling Type in the landscape can be seen in **Figure 17**, which shows photos from both Toronto and New York. The landscapes in Toronto and New York show a set of buildings that are terraced. It should also be noted from these images that the building heights are different, where Toronto has three storey buildings and New York has buildings that are five storeys or more. This thesis finds, and these images demonstrate, that the dwelling type is not correlated to building height. This thesis finds examples of different dwelling types with various building heights. This is an important finding for this thesis because

it shows that the built form of young adult neighbourhoods is associated with the city, more then it is with a specific criterion or characteristic.

***Figure 17: Illustration of dwelling types in different landscapes***




*CAPTION: The two images depicted above show that dwelling types are consistent even when the building material and building heights are different. (Google Maps, 2017).*

*Inter-city Analysis Discussion*

The data presented for the six variables above suggests that young adult neighbourhoods share in large part a common built-form, or at the very least, they generally resemble the dominant trends that are found to exist. The thesis finds that specific built-form characteristics are associated with other characteristics. The 0-14.99m frontages are most prominent in those areas within cities where one-three storey terraced or semi-detached buildings have been made to have an establishment on the ground floor with some residential units above. The building setbacks are generally found to be between 0m-5.99m, which reflects the need of cities to maximize the use of limited space in their downtown areas. The building material colours are highly correlated to the material type, such that brick is found to exist in these landscapes in the colours of brown and red, stone is found to exist in these landscapes in the colours of cream and grey, and concrete is found to exist in these landscapes in the colours of grey and white.

When all of the data above is considered, this thesis finds evidence to argue that young adult neighbourhoods across cities are similar but not the same. They are similar because, as the literature suggests, young adults are particular about the areas in which they choose to live. They are looking for access to specific services, proximity to both work and nightlife, and they are fond of the historic nature of older built forms, regardless of where in North America they are living. The landscapes that have been studied by this thesis generally share these characteristics, as seen through the dominant trends in the above six variables. Most notable of these is that the neighbourhoods are generally older parts of the city that are located on the outskirts of the downtown corridor. They are often old retail areas that have been redeveloped and rejuvenated for the purpose of providing low-density mix-use developments.

At the same time, when evaluating the diversity of the built-forms, this thesis finds evidence to suggest that these landscapes are also different. These differences in built form are not drastic, but rather reflect the period of developments in which these landscapes were erected and the geography in which they were created. Thus, the landscapes are similar in their built forms because they are generally found to be in similar parts of the cities which historically were used in a similar fashion regardless of the city that they were located within. However, they are different because of the differences in local influencers on development, such as the period of development, access to resources and the climate in which they have been designed to stand-up against.

### *Intra-City Analysis*

The Inter-city analysis has shown through the box plots that there is a dominant trend to be found within each variable. Through the following analysis, the thesis will test to see if the dominant trend holds true at the intra-city level. This will be done using scatterplots, which will

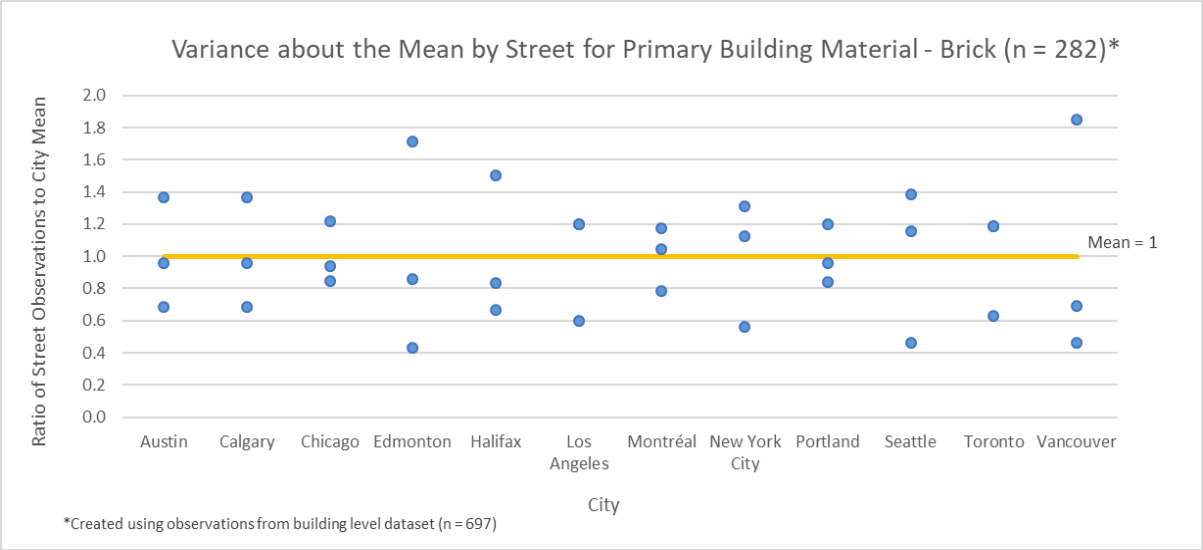
present the variable data for each of the dominant trends by street within each of the twelve cities. The data being shown in the scatter plots have been normalized so that each graph can demonstrate the variance about the mean, where the mean value is one, for all cities. The data being shown is then a ratio of the unique street value against the mean, which allows the thesis to assess how great the differences are between streets within a city, as well as how large the ratios are between cities. The wider the variance seen between the streets within the city the less homogeneity that exists between the landscapes. Likewise, the smaller the variance about the mean, the more uniformity that exists for this variable across the streets and thus across the city landscape for young adult neighbourhoods. The conclusions drawn from the presented data is discussed by category and not individual variables, as the built form and the function of the landscape are a product of its sum and not its individual variables from which it is comprised.

*Primary Building Material: Brick*

When examining Brick as being the dominant trend for Primary Building Material (**Figure 18**) the data shows that apart from Edmonton, Halifax, Seattle and Vancouver, the variance about the mean for Brick is within a ±40% range. The largest intra-city variance is seen in Vancouver (n=13), where the mean value is 4.3-properties (s=2.6), which is a product of Main street having eight-properties, 4th Avenue having two-properties, and Robson Street having three-properties. The smallest intra-city variance is seen in Portland (n=25), with a mean of 8.3-properties (s=1.2). The three streets within Portland have the following distributions, 5th Avenue has 10-properties, Weidler Street has eight-properties, and Yamhill Street has seven-properties. When examining the distribution patterns for the 12 cities this thesis finds that none of the cities present a normal distribution for the dominant building material type. However, it does find that seven of the cities present with a negative distribution, having more streets present with a fewer

number of properties and five cities present a positive distribution, having more streets present with a greater number of properties.

***Figure 18: Number of brick properties by street within a city***




In terms of the primary building material, the landscapes in Vancouver are very different, as evidenced through 4th Avenue and Main Street in **Figure 19**. No buildings on 4th Avenue are constructed out of brick while two of four buildings on Main Street are constructed out of brick. The total count for the Vancouver as a whole is the lowest out of any city with 13-properties, However the 50% difference evidenced in these photos illustrates how the intra-city variance about the mean can be large, showing that even though brick may not be prominent within the city as a whole, it may still be more prominent within a single landscape over that of another.

While 25-33% of the overall landscape of the three streets combined within a city are found to be brick, this does not mean that 25-33% of the buildings on each street are composed as such. The compositions of individual streets rely upon the period of development, location within the city (downtown vs. suburban area), zoning types, and community improvement plans (brownfield, downtown, industrial, commercial) for the materials that they are composed from.

Thus, while each of these cities will generally share some of these qualities, which will lead to their landscapes sharing a similar dominant primary building material, the differences between the period of development, location, zoning types, amongst other external influencers will also lead them to have different characteristics resulting in difference.

***Figure 19: Illustration of the different building materials in Vancouver***

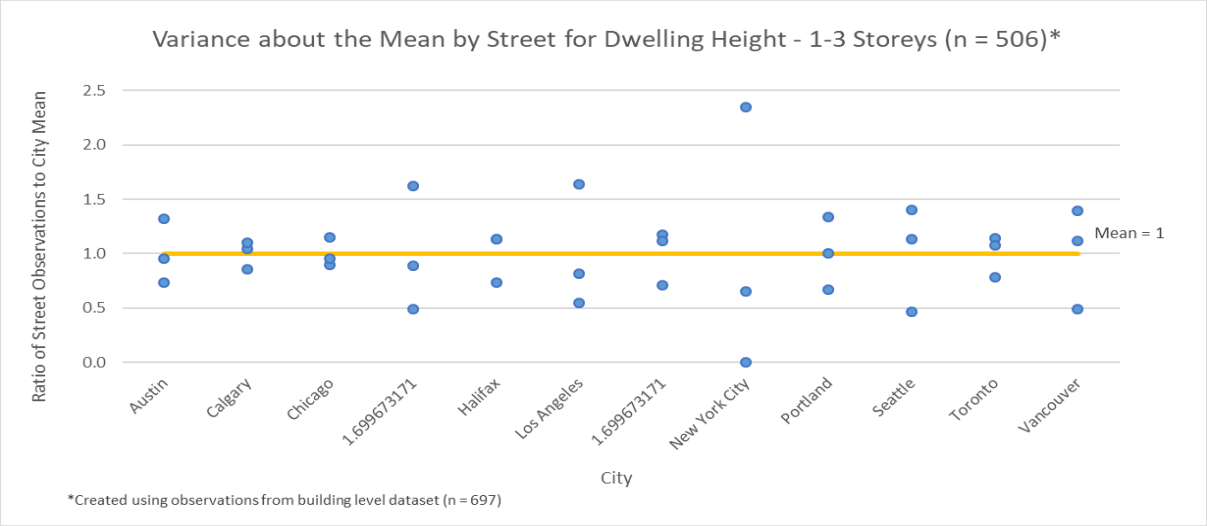

*CAPTION: The two images depicted above illustrate how the dominant primary building material is not uniformly found throughout the young adult neighbourhoods within a given city (Google Maps, 2017).*

*Dwelling Height: 1-3 Storeys*

When examining one-3 Storeys as being the dominant trend for Dwelling Height (**Figure 20**) the data shows that seven cities have a ±30% variance about the mean, including Austin, Calgary, Chicago, Halifax, Montréal, Portland, and Toronto and that 4 cities have a ±50% variance about the mean, including Edmonton, Los Angeles, Seattle, and Vancouver. The data further shows that the largest intra-city variance is found to exist in New York (n=23), with a mean value of 7.7-properties (s=7.6), where Manhattan Avenue has 18-properties, 42nd Street has five-properties, and Broadway Avenue has 0-properties. The smallest intra-city variance is found to exist in Chicago (n=47) and Calgary (n=49) where Chicago has a mean value of 15.7-properties (s=1.7), with Halsted Street having 14-properties, Sheffield Avenue having 15-properties and Milwaukee Avenue has 18-properties. Calgary has a mean value of 16.3-

properties (s=1.7), where 1st Street SW has 14-properties, 17th Avenue, Southwest has 17-properties and 8th Avenue, Southwest has 18-properties. When looking at the distribution patterns by city, one of the cities of the twelve presents a normal distribution for1-3 storey building height, which is Portland, four cities present with a negative distribution, having more cities present with a fewer number of properties. seven cities present a positive distribution, having more streets present with a greater number of properties.

***Figure 20: Distribution of one-3 Storey buildings within cities***




New York is an example of a city where the distribution is highly dependent upon the street. For example, Broadway Avenue has a total of 0 buildings that are one-3 storey, while Manhattan Avenue has a total of 18 buildings that are one-3 storeys, as seen in New York City through **Figure 21**. The total count for New York as a whole is the second lowest out of any city with 23-properties, only after Los Angeles with 22-properties. The difference between the dwelling heights is evidenced in the photos. These two streets illustrate how the intra-city variance about the mean can be large, showing that even though one-3 storey buildings may be the most prominent, it remains to be conditional upon the streets location within the downtown core. The photos show an example of a downtown neighbourhood (Broadway), where the

landscape is reflective of high density living, against that of Manhattan Avenue, which is a neighbourhood that is servicing a smaller population.

***Figure 21: Illustration of the difference in building heights in a single city***

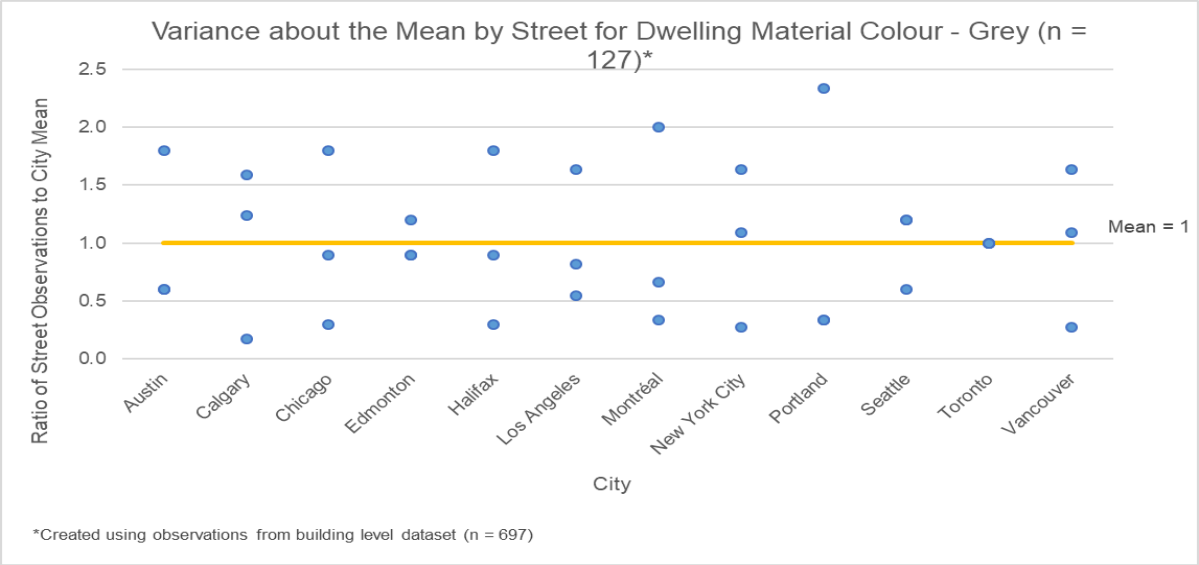

*CAPTION: The two images depicted above illustrate how the building heights on young adult neighbourhoods are not consistent within a single city. Here we can see two streets from New York, where one has buildings greater than five-storeys while the other has buildings between the heights of one-3 storeys (Google Maps, 2017).*

*Primary Dwelling Material Colour: Grey*

When examining Grey as being the dominant trend for Primary Building Material Colours the data shows that the general trend varies substantially at the intra-city level. The thesis finds that the variance about the mean is generally large within each city (**Figure 22**). The largest intra-city variance is found to exist in Portland (n=9) with a mean value of three-properties (s=2.8), where 5th Avenue and Weidler Street each have one-property, and Yamhill Street has seven-properties. The thesis also finds that nine-properties total out of 59-properties in Portland are found to be consistent with the colour grey. This is as compared to the smallest intra-city variance, which is found to exist in Toronto (n=6) with a mean value of two-properties (s=0.0), where Bloor Street, Queen Street, West, and Yonge Street each have two-properties. It is noted that Toronto has six-properties of 58-properties recorded as having this dominant trend. When looking at the distribution patterns for this trend, the thesis finds that there are no cities

within this dataset that present a normal distribution for the dominant primary building colour. However, it does find that seven cities present a negative distribution, having more streets present with a fewer number of properties, and that four cities present a positive distribution, having more streets present with a greater number of properties.

***Figure 22: Distribution of buildings with the primary colour grey across cities***

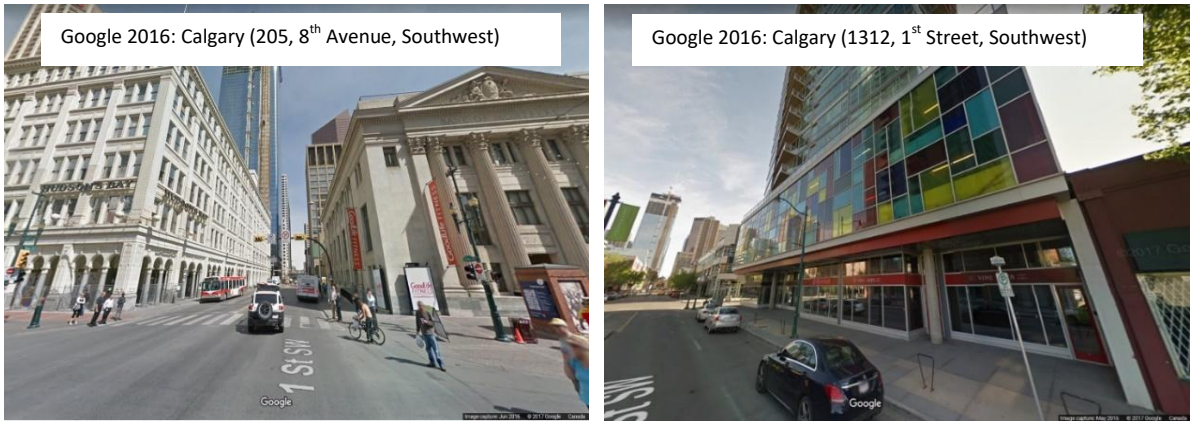



As is shown in Calgary (**Figure 23**), 8th Avenue has some older buildings, both retail and residential, of which the primary building material is grey and white concrete and stone, this is highly correlated to the period of development and style of buildings. In contrast to this landscape the thesis also shows that of 1st Street, which is a modern tower, which has been constructed with modern colours as to stand out in the landscape.

A demonstration of the colours that are associated with different building materials is shown in **Table 5**. While this research project has not specifically tested for the correlation between building materials and colours, it can be seen here that certain materials are more likely to be presented in certain colours. Take for example our dominant bulling material, brick. It is primarily found to be in the landscapes in one of two colours, Brown (32%) and Red (28%).

These patterns as they are seen to exist within the dataset provide evidence to suggest that the selection of colours are highly dependent upon the materials being used. Thus, those external influences that determine what materials will be used in a landscape also become important to consider such as the period of development.

***Figure 23: Illustrations of the use of various building colours within a city***




*CAPTION: The two images depicted above illustrate how the building material colours are not consistent within young adult neighbourhoods. Specifically, the images above show that two neighbourhoods within a single city can have very different building material colours, which is commonly associated with the materials comprising the landscape (Google Maps, 2017).*

***Table 5: The relationship between building material and material colour***

| | Primary Building Material by Primary Building Material Colour | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Material Type** | **Black** | **Blue** | **Bronze** | **Brown** | **Burgundy** | **Cream** | **Green** | **Grey** | **Orange** | **Pink** | **Purple** | **Red** | **White** | **Yellow** | **Total** |
| Aluminum siding | 10% | 5% | 0% | 0% | 0% | 0% | 0% | 70% | 0% | 0% | 0% | 0% | 15% | 0% | n=20 |
| Brick | 1% | 1% | 0% | 32% | 5% | 12% | 1% | 6% | 1% | 1% | 3% | 28% | 9% | 0% | n=519 |
| Cement Render Wall | 6% | 2% | 0% | 8% | 1% | 26% | 4% | 25% | 1% | 4% | 0% | 4% | 18% | 1% | n=178 |
| Cinder Block | 0% | 0% | 0% | 10% | 0% | 28% | 0% | 48% | 0% | 0% | 0% | 0% | 10% | 5% | n=40 |
| Composite Material | 13% | 2% | 0% | 8% | 0% | 10% | 0% | 31% | 0% | 0% | 0% | 8% | 29% | 0% | n=52 |
| Composite Siding | 12% | 28% | 0% | 4% | 0% | 0% | 0% | 24% | 0% | 0% | 0% | 0% | 32% | 0% | n=25 |
| Concrete | 0% | 0% | 0% | 0% | 0% | 16% | 0% | 34% | 0% | 0% | 0% | 0% | 47% | 3% | n=32 |
| Glass | 12% | 62% | 0% | 0% | 0% | 0% | 8% | 0% | 19% | 0% | 0% | 0% | 0% | 0% | n=26 |
| Hung Tile | 40% | 0% | 0% | 0% | 0% | 20% | 0% | 0% | 0% | 0% | 0% | 20% | 20% | 0% | n=5 |
| Metal | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | n=3 |
| Stone | 2% | 0% | 2% | 10% | 0% | 23% | 2% | 32% | 0% | 0% | 0% | 2% | 26% | 0% | n=252 |
| Vinyl Siding | 7% | 11% | 0% | 18% | 0% | 14% | 2% | 14% | 0% | 2% | 0% | 7% | 20% | 5% | n=44 |
| Wood | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | n=4 |
| Wood Siding | 10% | 0% | 0% | 50% | 0% | 10% | 0% | 0% | 0% | 0% | 0% | 10% | 20% | 0% | n=10 |
| **Total** | **4%** | **3%** | **1%** | **19%** | **2%** | **16%** | **2%** | **19%** | **1%** | **1%** | **1%** | **14%** | **17%** | **1%** | **n=1210** |

*Dwelling Setbacks: 3.0m-5.99m*

When examining 3.0-5.99m as being the dominant trend for Dwelling Setbacks the data shows that the distribution for eight cities is within ±40% variance about the mean (**Figure 24**).

Additionally, the data shows that only Austin has a recorded value of 0-properties for one of its streets. The thesis finds that the largest intra-city variance is found to exist in Austin (n=14) with a mean value of 4.7-properties (s=6.6), where 5th street has 14-properties and Congress Avenue and S Lamar Boulevard have 0-properties. Austin has 14-properties of 56-properties recorded as having this dominant trend. Comparatively, the smallest intra-city variance is found to exist in Los Angeles (n=51) and Toronto (n=55) where Los Angeles has a mean value of 17-properties (s=1.4), where 7th Street has 15-properties, Hill Street has 18-properties and Hollywood Boulevard has 18-properties. In Toronto, the mean value is 18.3-properties (s=1.2), where Bloor Street, West has 20-properties, Queen Street, West has 18-properties and Yonge Street has 18-properties. Finally, the data shows that Los Angeles has 51-properties of 57-properties recorded as having this dominant trend. When looking at the distributions of the trend within each city, the thesis finds that there are two of the cities within present a normal distribution for the dominant setback 3.0-5.99m, which are Edmonton and Seattle. Additionally, it finds that four cities present with a negative distribution, having more streets present with a fewer number of properties, and that six cities present a positive distribution, having more streets present with a greater number of properties.

The data supports that there are large differences between the intra-city values for this trend, as seen in **Figure 25**. The differences seen here are a reflection of the inherent intention and specific purpose that each street is looking to serve. Where the purpose is to provide a large number of amenities in a downtown area, the result is a high density major retail/commercially zoned landscape with limited space and a large number of pedestrians moving throughout the landscape. Thus, here each lot is maximized with consideration being given to wider sidewalks

for pedestrian use. However, the purpose of a landscape is not always the same, and thus the setbacks are a reflection of use of the landscape within a city.

***Figure 24: Distribution of setbacks by individual streets***

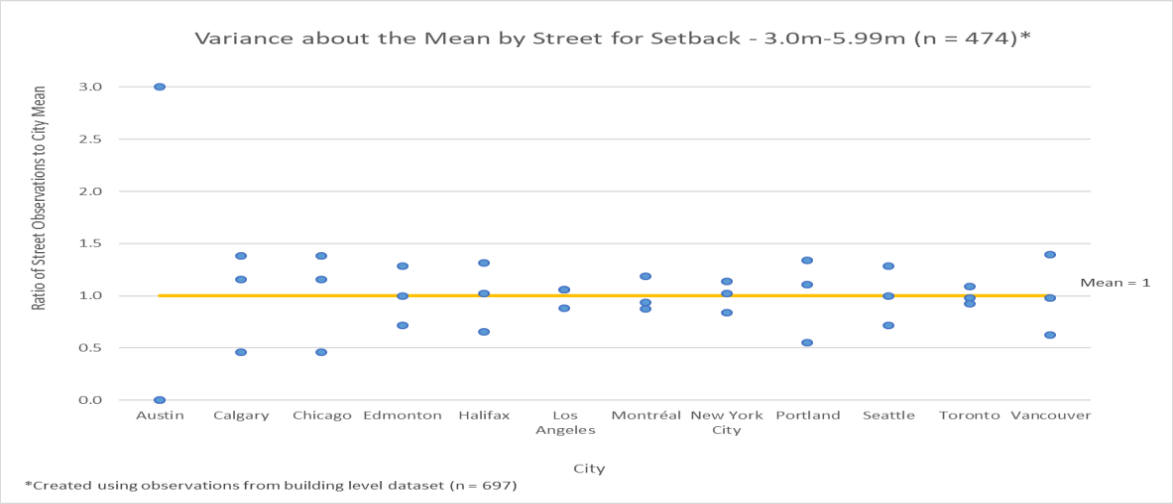
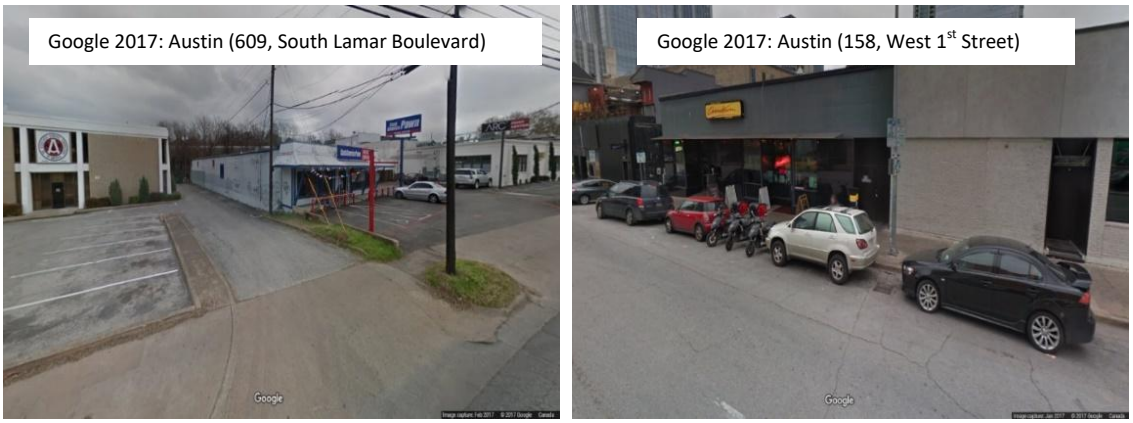



***Figure 25: Illustrations of different landscapes and their setbacks***



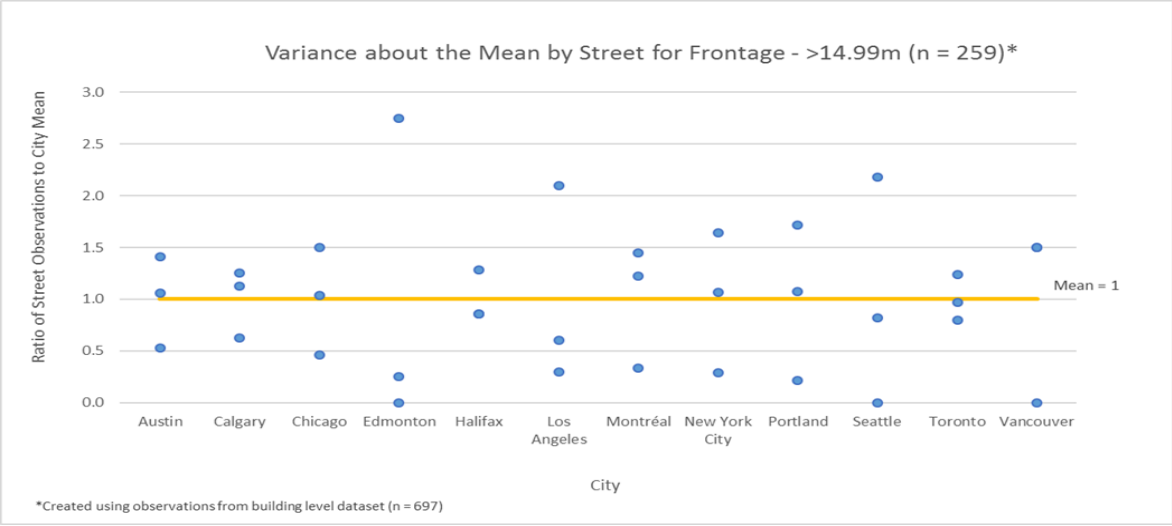

*CAPTION: The two images depicted above illustrate the difference that is seen between downtown high density/medium density retail/commercially zoned areas and non-downtown (commercial/industrial parks?) that are zoned for low density commercial/retail purposes (Google Maps, 2017).*

*<u>Dwelling Frontage: 0m-14.99m</u>*

When examining 0-14.99m as being the dominant trend for Dwelling Frontage the data shows that the cities demonstrate that frontage is highly dependent upon the street itself (**Figure 26**). Each city demonstrates a wide intra-city variance, apart from Toronto and Halifax. The

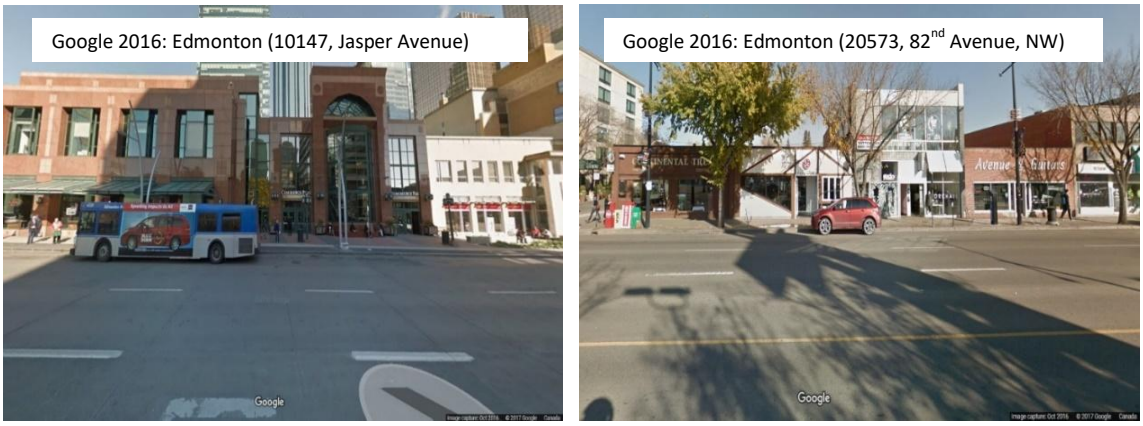
thesis shows that the largest intra-city variance is found to exist in Edmonton (n=12) with a mean value of 4.0-properties (s=5.0), where 101st Street Northwest has 0-properties, Jasper Avenue has one-property and 82nd Avenue has one-properties. It is noted that Edmonton has a total of 12 properties out of 54-properties recorded as having this dominant trend. The data also shows that the smallest intra-city variance is found to exist in Halifax (n=35) with a mean value of 11.7-properties (s=2.4), and in Toronto (n=59) with a mean value of 11.3-properties (s= 3.3). In Halifax, the distribution is such that Barrington Street and Robie Street each have 10-properties and Quinpool Road has 15-properties, while in Toronto it is such that Yonge Street has nine-properties, Bloor Street, West has 11-properties, and Queen Street, West has 14-properties. Halifax has 35-properties total out of 58 properties recorded as having this dominant trend. The distribution of the data is such that none of the cities present a normal distribution for the dominant building material type. It is found that five cities present with a negative distribution, having more streets present with a fewer number of properties and that seven cities present a positive distribution, having more streets present with a greater number of properties.

***Figure 26: Distribution of frontages by street***



The research project speculates that the variations in frontages are highly dependent upon the primary function of the street and the neighbourhood. Those areas that focus on commerce and attracting large corporate offices, or where the focus is on providing vertical neighbourhoods, will have more variance in the frontages found on the street, this is often the case in downtown areas where cities attempt to attract a high ratio of jobs/sqm and residents/sqm. In contrast, those areas that are older neighbourhoods, or that have been designed to attract major retail and commercial will have less variability between frontage sizes, as their will be fewer big-box stores in large buildings and more small retail shops to accommodate walk in traffic. An example of this can be seen in **Figure 27**.

***Figure 27: Illustration of frontage sizes within Edmonton***



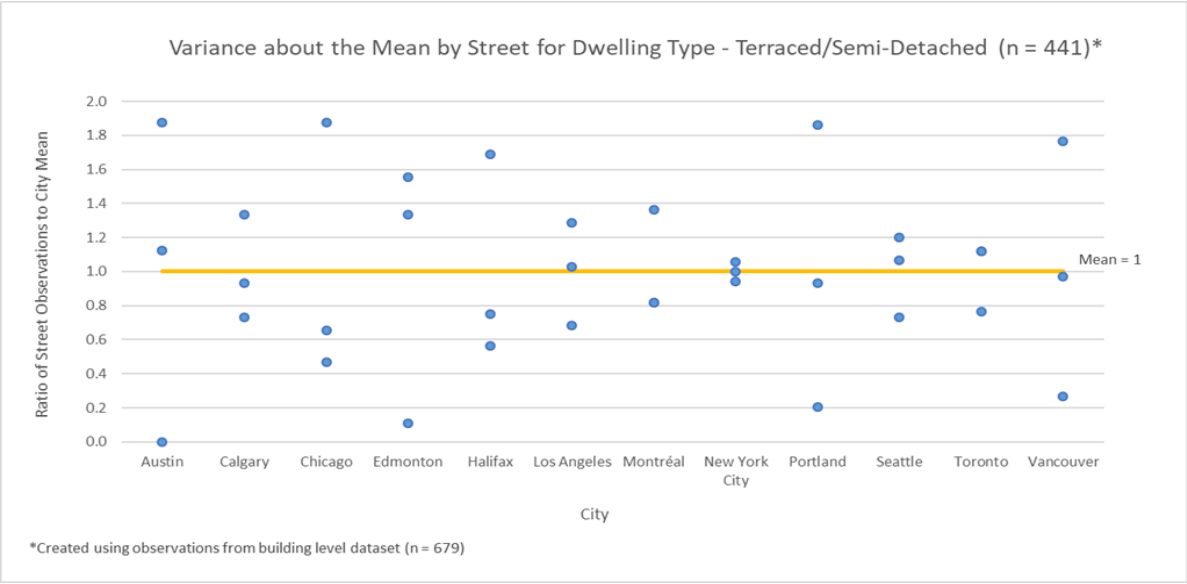

*CAPTION: The two images depicted above illustrate demonstrate how a landscape can be made to have a uniform frontage, as is the case on 82nd Street, or how it can allow for a mix of building frontage sizes, as is the case on Jasper Avenue (Google Maps, 2017).*

*Building/Dwelling Type: Terraced/Semi-Detached*

When examining Terraced/Semi-Detached as being the dominant trend for Building/Dwelling Type the data shows that the cities are either within a ±30% variance about the mean or greater then a ±50% variance about the mean (**Figure 28**). The data also illustrates that the cities generally fall within two categories, narrow dispersion, or large dispersion; the

streets are either uniform and resemble one another within a city or are very different. The largest intra-city variance is found to exist in Austin (n=24) with a mean value of eight-properties (s=6.2), where S Lamar Boulevard has 0-properties, 5th Street has nine-properties and Congress Avenue has 15-properties. It should be noted that Austin has 24-properties total out of 56-properties recorded as having this dominant trend. The data also shows that the smallest intra-city variance is found to exist in New York City (n= 54) with a mean value of 18-properties (s=0.8), where Manhattan has 17-properties, 42nd Street has 18-properties and Broadway Avenue has 19-properties. It is found that New York has a total of 54-properties out of 57-properties recorded as having this dominant trend. When looking for the distribution types within each city, the thesis finds that one city presents a normal distribution for the dominant building material type, which is New York City. The thesis also finds that six cities present with a negative distribution, having more streets present with a fewer number of properties and that five cities present a positive distribution, having more streets present with a greater number of properties.

***Figure 28: Distribution of building/dwelling type by street***



The data above leads the research project to conclude that depending upon the placement of the street within the city and the intended purpose of the area, as it is zoned, the type of buildings/dwellings will be different (**Figure 29**). This example, along with the data that has been collected gives evidence to support that the location within a city has a great deal to do with the building/dwelling type to be found. This is an important finding, because then we can understand that young adult neighbourhoods persist with a specific type of building/dwelling type because most of them are located in similar places within the various cities. The variance that is found to exist within the cities is then a result of f the physical placement of the street within the city. As such, the author of this study would expect that if the 36 streets were re-grouped by their distance from the downtown core, that we would find greater uniformity between the various streets within the different cities. However, as that is not the case here, the conclusions that can be drawn are that not all young adult neighbourhoods exist with a high proportionality of terraced/semi-detached buildings/dwellings.

***Figure 29:Illustrations of the differences in building/dwelling type in Austin***


*CAPTION: The two images depicted above illustrate how demonstrate how the area of the city that the neighbourhood is located within city can greatly impact the overall building/dwelling type that is seen. Above Congress Avenue shows a downtown setting where medium-density has been zoned, while Lamar Boulevard demonstrates a low-density zoning, and as a result there are single detached buildings/dwellings that are smaller in size (Google Maps, 2017).*

*Intra-city Discussion*

The largest takeaway from the scatterplots provided above is that when we look specifically at the intra-city variation that exists within the dominant trends, the thesis finds that they do not exist at consistent levels across all young adult neighbourhoods. The intra-city evaluation for young adult neighbourhoods shows that the dominant trends which exist across the various cities are not found uniformly within cities. For each of the six variables, an illustration is shown for a single city, which depicts two landscapes with contrasting images. This visual imagery provides an illustration of how different the landscapes can be within a single city. While it may be true that a dominant trend is found to exist within these cities for the six variables, it is also true that the trends are not uniformly distributed between the various landscapes. It is noted that the differences in the intra-city variations are likely a result of several factors, including the period of development, the primary function of the neighbourhoods, the zoning regulations in effect for the neighbourhood, the density targets for the neighbourhoods, as well as the correlations between establishments and additional variables (i.e. building material and height; window use and establishment type).

### *Discussion of Findings*

To begin the discussion regarding the findings presented above, it is first a meaningful exercise to explore the mechanisms that connect young adult neighbourhoods, as to better understand what similarities we should expect to find through the application of this tool. To begin, the creation of marketing strategies to promote cities as being young adult destinations, has become a prominent discourse in city development. Of course, we can return to Richard Florida's "Rise of the Creative Class", wherein he suggests that they are socially relevant because of their ability to enhance regional economic growth through innovation as a starting

point for marketing cities to a specific group of people (Florida, 2012). But too we can look at other scholars such as Jane Jacobs (1992) and Jan Gehl (2010) who express that the intricacy and vitality of use seen within a city space is responsible for constructing its shape, structure, and our pattern of use (Jacobs, 1992, p. 377; Gehl, 2010, p. 16). Through their extensive research, these two urban scholars find reason to argue that when we change an element of a city space we are redefining how participants will engage with the landscape. Thus, for Jacobs (1992) and Gehl (2010) where we change the function of a city space we too change the way in which we can engage with that place. Such a change will inevitably impact the 'sense of place' that we ascribe to a landscape, which in turn can change how a city will be marketed to attract a specific group of people, such as young adults.

The result of either of these theoretical discussions is the same, the construction of similar cityscapes, with the purpose of attracting a specific group of people, which in the case of this thesis is young adults. Thus, given cities are competing for their share of a given group of people, what we should expect to see is the creation of landscapes across various cities that encapsulate the preferences of that group. Which ultimately would mean the creation of similar landscapes. Here we can explore three mechanisms that lend themselves to the creation of similar landscapes.

First-off, all of these neighbourhoods are driven by their own local economic development. That is to say, these neighbourhoods are primarily concerned with the construction of an image that fits the lifestyles of those who they are looking to attract to work and live in, and subsequently attracts new businesses to meet the needs of this community. They maintain focus on developing a very specific image that is locally grown and primarily influenced by their own local economic development. With this notion comes the idea of globalization, a trend that

continues to affect many elements of our lives, and the topic of this thesis is no exception. The essence of globalization is that the world is shrinking and places are becoming similar as unique cultures are overcome by commercialization. But what globalization leads this thesis to expect is that the landscapes will lose some of their authenticity and features that make them unique, to the features of globalization. Essentially, the expectation becomes such that we should see landscapes located ‘everywhere’ that truly belong ‘nowhere’. An example of this is seen within the collected data collected, wherein an overwhelming number of ‘Starbucks’ were found across the different cities and neighbourhoods. The once very different landscapes become more similar, as each of the different cities attempts to build a neighbourhood based upon young adults and the local economic development. This mechanism leads the thesis to expect that it would find these neighbourhoods to have a similar built-form because they are all attempting to attract members of the same community, young adults.

Secondly, it has been seen over the past few decades that when young adults move into a given neighbourhood, that their very existence in that space is accompanied by change. The young adults, are themselves, an active driver of change. When a neighbourhood becomes associated with you adults, there are certain companies and stores that will accompany them, to meet the needs of their lifestyle. In short, companies that share similar philosophies on life and work will move to these areas to retain a local workforce. Likewise, specific retail stores will follow to meet the day-to-day needs of these members of this young adult community. This mechanism that connects young adult neighbourhoods is one that is based upon their presence in a given neighbourhood. As such, for this thesis, it would again lead to the conclusion that these neighbourhoods should in fact have similarities between them.

Finally, a third mechanism at play in young adult neighbourhoods is the corporate driver, or the attempt of a municipality to construct a neighbourhood that will be attractive to young adults. Specifically, municipalities will zone areas in a particular way that encourages the development of stores and shops that are attractive to young adults and associated with their lifestyle. This can go as far as constructing transit-infrastructure that meets the daily needs of a young adult and their philosophy on connected communities. In turn, the development of a neighbourhood that has the right markers of being a young adult neighbourhood, will then attract members of this community to work and live within it. Unlike the previous two mechanisms, this one suggests that we may find differences between the selected landscapes. Specifically, not all cities face similar socio-economic conditions, and not all neighbourhoods have the ability to react to the socio-economic being faced by their city. As such, it is not always possible for these neighbourhoods to develop in such a way that they would be similar between cities, or even within a given city.

As a result of the three mechanisms discussed in brief, it would be the expectation of this thesis that it will find overarching similarities between the built-form of the neighbourhoods being evaluated, but that it would also find nuanced differences within how they are actually being realized. The mechanisms suggest that we should find both similarities and differences within the selected young adult neighbourhoods. If this is connected back to the discussion of place, what we could conclude is that it is entirely possible that when we engage with different landscapes that share common built-forms that we are left with constructing a similar place identity. Not because of the similarities and differences that exist, but because of the importance of how we, ourselves, engage with the landscape to create an image of place.

With this in mind, the thesis can now discuss what it has found. The findings presented by this thesis provides evidence to reject the hypothesis that young adult neighbourhoods, as they exist in retail and commercial areas, across North America are characterized by a common aesthetic. Through the inter-city analysis, the thesis finds evidence to support the claim that there are dominant trends in the aesthetics of young adult neighbourhoods, as found to exist at the city specific level. When we look at these six variables for how the 697 properties are distributed over different categories, it becomes obvious that there is in fact dominant trends that can be found to exist across young adult neighbourhoods; which are:

- Primary building material: Brick
- Dwelling Height: one-3 storeys
- Primary Building Colour: Brown; Cream; Grey; Red; White
- Setback: 3.0-5.99m
- Frontage: 0-14.99m
- Dwelling Type: Terraced/Semi-Detached

However, it is shown that the dominant tends are not found to be homogeneous across all of the selected cities. With only 82/697 (12%) properties existing with all of the dominant built form characteristics (**Figure 30**), it can be concluded that the dominant trends in built-form do not exist uniformly across all cities. Given this, the expression of similarity that a person encounters when in these spaces does not come as a result of these streets actually sharing identical built forms, rather it likely comes about from having a mix of the dominant trends within the landscape. Beyond this, there is literature, some of which is discussed earlier within this thesis, that would suggest that the similarities that come about when we experience these landscapes is more to do with ourselves then it is to do with the landscape itself. This thesis provides evidence to suggest that there is not a single form that a young adult neighbourhood takes on, rather there are many different built-forms that are incorporated into their landscapes. While, we may not have a cookie cutter reproduction of young adult neighbourhoods across

North America, these neighbourhoods each resemble one another through having some small resemblance of one another.

***Figure 30: Streets and the dominant trends of built-form found within them***

| | | Built Form | | | | | | |
|---|---|---|---|---|---|---|---|---|
| City | Street | Brick | 1-3 Storeys | Primary Building Material Colour | Dwelling Type | Setback | Frontage | All Characteritsics (Count) |
| Austin | 5th Street | 5 | 13 | 16 | 9 | 14 | 3 | |
| | Congress Avenue | 7 | 10 | 15 | 15 | 0 | 8 | |
| | S Lamar Boulevard | 10 | 18 | 19 | 0 | 0 | 6 | |
| Calgary | 17th Avenue SW | 5 | 17 | 16 | 14 | 10 | 9 | **1** |
| | 1st Street SW | 11 | 14 | 16 | 11 | 12 | 5 | **2** |
| | 8th Avenue SW | 7 | 17 | 18 | 20 | 4 | 10 | **2** |
| Chicago | Halsted Street | 10 | 10 | 13 | 7 | 4 | 4 | |
| | N Milwaukee Avenue | 9 | 13 | 20 | 20 | 10 | 13 | **4** |
| | Sheffield Avenue | 14 | 11 | 18 | 5 | 12 | 9 | |
| Edmonton | 101 Street NW | 2 | 4 | 12 | 1 | 10 | 0 | |
| | 82 Avenue NW | 8 | 20 | 20 | 14 | 18 | 11 | **4** |
| | Jasper Avenue | 4 | 10 | 17 | 12 | 14 | 1 | |
| Halifax | Barrington Street | 10 | 11 | 14 | 18 | 14 | 10 | **5** |
| | Quinpool Road | 5 | 20 | 17 | 8 | 18 | 15 | **4** |
| | Robie Street | 4 | 20 | 17 | 6 | 9 | 10 | |
| Los Angeles | 7th Street | 4 | 3 | 14 | 8 | 15 | 1 | |
| | Hill Street | 3 | 6 | 14 | 15 | 18 | 7 | |
| | Hollywood Blvd | 4 | 12 | 14 | 12 | 18 | 2 | |
| Montréal | Avenue du Mont Royal | 16 | 19 | 16 | 15 | 19 | 13 | **12** |
| | Rue Beaubien E | 18 | 18 | 17 | 9 | 14 | 11 | **4** |
| | Rue Sainte-Catherin | 12 | 10 | 17 | 9 | 15 | 3 | **1** |
| New York City | 42nd Street | 3 | 3 | 11 | 18 | 14 | 3 | |
| | Broadway Ave | 6 | 0 | 16 | 19 | 19 | 11 | |
| | Manhattan Ave | 7 | 14 | 16 | 17 | 17 | 17 | **3** |
| Portland | 5th Avenue | 10 | 11 | 19 | 18 | 17 | 5 | **4** |
| | Weidler St | 8 | 20 | 18 | 2 | 7 | 8 | |
| | Yamhill St | 7 | 7 | 19 | 9 | 14 | 1 | |
| Seattle | 3rd Avenue | 4 | 7 | 21 | 18 | 10 | 0 | |
| | Broadway | 8 | 14 | 15 | 11 | 14 | 3 | |
| | Pike Street | 14 | 22 | 18 | 16 | 18 | 8 | **3** |
| Toronto | Bloor Street, West | 16 | 19 | 16 | 19 | 20 | 11 | **9** |
| | Queen Street, West | 16 | 18 | 10 | 19 | 18 | 14 | **14** |
| | Yonge Street | 8 | 12 | 17 | 13 | 17 | 9 | **8** |
| Vancouver | 4th Avenue, West | 2 | 20 | 12 | 20 | 20 | 9 | **1** |
| | Main Street | 8 | 16 | 15 | 11 | 14 | 9 | **1** |
| | Robson Street | 3 | 7 | 4 | 3 | 9 | 0 | |
| **TOTAL** | | **288** | **466** | **567** | **441** | **476** | **259** | **82** |
| | | **n=693** | **n=696** | **n=694** | **n=696** | **n=697** | **n=697** | **n=697** |

By having some of the dominant trends being prominently displayed within their respective landscapes, they create a similar atmosphere to that of the other neighbourhoods that can be experienced. This thesis has established that there exists a dominant trend within the inter-city landscape that is a product of the shared characteristics. However, through testing these dominant trends at the intra-city level, this thesis has also shown that these landscapes are not identical, and that there exists a wide range of variation between the dominant trends. While some streets exist with having a high proportion of buildings that reflect all of the dominant trends, such as Avenue du Mont Royal in Montréal, QU with 12-properties of 20 (60%) and Queen Street, West, Toronto, ON with 16-properties of 20 (70%), the average is only 2-

properties per street (10%). As such, the thesis can with great confidence reject the hypothesis that young adult neighbourhoods, as they exist in retail and commercial areas, across North America are characterized by a common built-form.

## CHAPTER FIVE: Conclusion

When we experience a landscape as being similar to that of another that we have seen before is it because these landscapes are similar? Reflecting upon our own subjective experiences, both my advisor and I had good reason to think that this was in fact the case. That where we see similarities in places that are seemingly different, there must be a fundamental component within them that makes us feel this way when we experience them. It is important to once again note that this is going beyond the known fact that buildings in older towns look similar because of shared materials, periods of development and planning practices. What we are looking for is an answer that offers insight into a more fundamental component of the landscape, the culture, the experience that is being replicated across these landscapes.

The purpose of this thesis was to examine young adult neighbourhoods, as they exist in retail and commercial areas, across North America with the intention of evaluating the diversity of built-forms to make a determination of the similarities and differences that exists. In order to do this, the thesis asked a question to guide the study - Are young adult neighbourhoods, as they exist in retail and commercial areas, across North America characterized by a common aesthetic?

A key consideration that is inherently intertwined within the methodology of this thesis is the criteria from which the site selection characteristics are selected and measured against. Within the thesis the preferences of young adults are identified as being the driving factor for the site selection characteristics. Noting that the young adult neighbourhoods that are selected within this study are those which have a prominent composition of preferential features found within the streetscape, built-forms, and establishments.

Following from this research question the thesis proposed two hypotheses: 1) Young adult neighbourhoods, as they exist in retail and commercial areas, across North America are

characterized by a common built-form and aesthetic; and 2) That the tool developed within this thesis will provide an objective assessment of the selected landscapes. In order to address these hypotheses the thesis operationalized a tool to systematically assess the diversity of built-forms in young adult neighbourhoods.

In this thesis, the tool is developed from four different character assessment analysis tools; from which, it is noted that the tool created for this thesis most closely mimics that of the Planning Aid Character Assessment. While it is true that the intended purpose of the PlanningAid tool most closely matches that of the tool which has been developed as part of this thesis, it is also important to recognize that there exists a shared theoretical base too which all of these tools have been subscribed. It is this reason that we find such great similarities between the categories and variables found within the four tools and it is also why each of the proposed methods being used are so similar to one another. The tool developed for the purposes of this thesis worked to address the inherent limitations found within the various other tools currently being used.

### *Major Findings*

This thesis presents three major findings as a result of the evaluation of diversity of built-forms in young adult neighbourhoods. Firstly, it is shown through the inter-city analysis that there is a dominant trend associated with each of the six variables being examined within across the 12 selected municipalities. From most prominent to least, these dominant trends are: 1) The building colour, with 82% of buildings being coloured red, white, grey, cream, or brown; 2) The building setback, with 68% of buildings being between 3.0-5.99m; 3) The building height, with 67% being 1-3 storeys; 4) The dwelling type, with 63% being either terraced or semi-detached;

5) The building material, with 42% being constructed of brick; and, 6) the building frontage, with 37% of the buildings having a frontage distance of between 0-14.99m.

Secondly, it is shown through the intra-city analysis that the dominant trends found to exist across the 12 selected municipalities are not homogenous within any given city. The thesis shows that only 12% of the total properties across the 36 neighbourhoods have all of the dominant trends found to exist in the inter-city analysis. This finding suggests that while certain elements within the selected young adult neighbourhood may be dominant, it is not a distinctive characteristic of the neighbourhoods themselves. As a result of the first two major findings, the thesis rejects its first hypothesis. There is evidence to support dominant trends within the landscapes, however, there is not evidence to support the development of a common built-form.

Thirdly, the thesis finds that the tool proved to be functional in its ability to systematically assess the diversity of built-forms in young adult neighbourhoods. The goal was to do this whilst removing a level of subjectivity that is commonly found in character assessment tools, and thus evaluating the character of a landscape through an objective method.

The tool was created to reflect philosophy of character assessments and to capture the essence of a landscape in a manner that was consistent with current literature. As discussed in Chapter Three, the variables that were selected for analysis as part of the tool were directly pulled from other character assessment tools. Using these variables, the thesis divided the landscapes into a set of characteristics that could be sorted into an exclusive and exhaustive list of classifications. Using these classifications for each variable the thesis was then able to build an image of a landscape not based upon the subjective thoughts of the researcher, but rather through the quantitative elements that were recorded.

The tool successfully provided a means to objectively examine the character of a landscape. It was easy to use, required little resources and training, and it provided a means to assess streets and cities from across North America in one place, by a single set of criteria. The data is stored in an excel file and is easily manipulated to work with any number of statistical packages for additional analysis. As such, the thesis determines that the tool was successful and served its purpose in the evaluation of the aesthetics of young adult neighbourhoods. For this reason, the thesis can with great confidence accept the hypothesis that the tool developed within this thesis will provide an objective assessment of the selected landscapes.

### *Research Implications*

The research question that has been answered as part of this study has significant implications for both researchers who are studying young adult neighbourhoods, as well as for urban planners who are working to develop landscapes that are both technically organized and visually coherent images. As a means of defining young adult neighbourhood, form through the aesthetics of the built-form, this thesis provides evidence to suggest that each young adult neighbourhood is unique in its own way.

For my colleagues in the Generationed City Lab at the University of Waterloo, the data analysis and discussion from within this thesis provides a means to answering the question of how similar these young adult landscapes are across North America, in terms of their visual diversity. The implications of the data, which finds that they are both similar and different, suggests that we need to further investigate the relationship between the characteristics of a landscape and experiences that they provide to participants. With only 12% of properties within this study sharing the dominant trends for the built-form there must be more to these landscapes then meets the eye. My advisor and I have no doubt experienced the similarities of these

landscapes, but the answer to these similar experiences does not lay here within the 6 variables that were analyzed as part of the built-form of these landscapes. Thus, for my colleagues working to better understand youthification, this thesis provides them a clue for how we should go about capturing the similarities.

This study has done well to unpack the authenticity that is found within young adult neighbourhoods. But where it has come up short is quantifying the experiences has by observers and participants who engage with the landscapes. Here is the second contribution of this thesis for my colleagues – look to understand these neighbourhoods through experience. This thesis has shown that we can quantify the neighbourhood form to better understand youthification, however, upon reflection this is only half of the puzzle. Our understanding of similarities of young adult neighbourhoods should expand to that of a larger experience of the landscapes. I believe that in doing this, we will be able to better understand how these neighbourhoods can be similar yet exist with their own authenticity.

For urban planners, this thesis demonstrates the value and impact a quantitative tool can have in regard to understanding a landscape's built-form and function. Local residents, Politicians, and Urban Planners alike are becoming more concerned with the preservation of landscapes, and the development of coherent visual images. However, this has been met only by the development of tools which require a professional hand, formal training, significant resources, and a level of subjectivity. The problem with these tools is that they do not have the ability to be commercialized, in that they are to technical or require too much knowledge to use effectively. Such a tool in the hands of a heritage planner may be both effective and efficient, however, for the average citizen the tool is unusable. Thus, what the thesis has shown is that we

can create tools that can be made for anyone to use, which require little technical expertise, little resources, and little time investment.

The tool used here is an example that a landscape can, and should, be reduced to a sum of quantitative variables. Such a tool allows for a direct comparison to be made between establishments in a building, between buildings on a street, between streets in a city, between cities in a county, and even between countries. Thus, when we ask, “is our landscape unique”, we can answer the question both quickly and easily through the application of a tool such as that used by this thesis. In doing so, we create an environment where our own personal beliefs of how a landscape should function or look, is replaced by how a landscape is actually functioning and being imaged.

### *Research Limitations*

The largest limitation experienced by this thesis was the technical limitations experienced through the use of Google Earth. While the software proves to be a very successful tool for many purposes, it is not the most suitable choice for carrying out accurate character assessments. Google Streetview provides the user with the ability to virtually explore the street, as it would exist if they were to walk it in reality. However, as with any medium there are limitations, and with virtual reality the obvious one becomes the loss of details, obstacles, and the loss of all senses but sight. The loss of detail is experienced as your sight is only as good as the resolution of the picture that you are looking at. As such, where there are times that the image quality is not high definition, or that you are zooming into the landscape to see something up close, the picture often becomes pixelated. This presents challenges with visually assessing the aesthetics and function of the landscape as you are unable to clearly discern the details that you would otherwise be able to in reality.

Obstacles in the landscape present a different challenge, albeit the implications are similar to pixelation. Wherein the image on Google Streeview was taken with a large vehicle in between the camera and the landscape, it is impossible to see the landscape from the optimal position. This causes the observer to have to use different angles to view the desired landscapes. Where there are no possible alternative views, the landscape is otherwise unavailable to the observer. Finally, the lack of sensory perception within the landscape proposes the most significant challenge as there are no solutions available. When viewing images of the landscape via Google Streetview, you are limited to just that, viewing. Our senses play an important role in our ability to experience anything. So, where we are limited to only using a single sense, we are unable to appreciate the entire experience. As such, wherein this research is completed through the use of Google Streetview, the observer does not have the same experience of the landscape as would someone who is physically walking through it.

The second limitation to this thesis was the availability of a current quantitative tool for assessing landscape character, to use in full or in part to complete the character analysis of these young adult neighbourhoods. The thesis discusses how the tool developed for the purpose of this study was informed by four other character assessment tools. Specifically, the thesis sought out to find four tools that were representative of both private and public tools, various methodologies (i.e. qualitative, quantitative, mixed-methods), different countries of origin, and that each tool served a different primary function. From the four selected tools the thesis then looked to develop variables and categories that resembled that of the most consistent elements of the landscape that was being evaluated within the various tools. Additionally, the thesis also looked to address limitations that were found to exist within each of the other four tools, such as to develop a tool that is: capable of being defining the character of many different types of built

environments; that can draw comparisons between different built environments; that eliminates the need for to subjectively assign a value to a landscape feature; and, that contrast the collected quantitative data against other quantitative variables.

The above process resulted in the development of a tool that could effectively ass the diversity of built-forms, which can be applied in this specific case to that of young adult neighbourhoods; however, its development has been informed by a limited number of character assessments. Unfortunately, while the thesis only selected four character assessment analysis tools from which to base its own development upon due to the limited availability of resources, this still needs to be noted as a limitation to this thesis. Through limiting the number of character assessments that informed the design of the one used in this thesis, the tool may still not address other concerns that are prominently found within character assessment analysis tools. As such, the tool presented here may in fact be guilty of its own limitations that are not known to the researcher.

### *Future Research*

This thesis suggests that two additional projects be undertaken following the completion of this study, 1) a secondary study of young adult neighbourhoods, and 2) an experiential study of young adult neighbourhoods. It is thought that these two future projects would provide some additional insight into the familiarity that is seen and experienced by those who find themselves in different young adult neighbourhoods.

Firstly, given the unfavorable results of having two rejected hypotheses it would be worthwhile for a second study to be carried out in a different location to see if the results are replicated. The intention with such a study would be to evaluate the methodology presented here to see if it was a research error that resulted in the rejection of these hypotheses, or if in fact the

truth is amongst these results. Such as study should be expanded to include additional cities, wherein more streets are added, and so too are more buildings. It is possible that the representative sample within this study was too limiting to yield an accurate result. As such, it would be beneficial to expand the number of observations to at all levels to see if the changes would provide additional detail.

Secondly, it is believed that by the author of this study that the experiences of the landscape are as important, if not more important, to the formation of a landscape's character. People experience the landscapes differently through their own subjective experiences and positionality. As such, the next step to understanding these landscapes is to collect first-hand accounts of different experiences within these landscapes, from both inhabitants and tourists. These first-hand experiences would provide a level of detail that just cannot be collected virtually, or even from walking the landscape once or twice. The experiences that are interwoven into the lives of those who live in the landscape would be very valuable to compare across the same cities that this study has reviewed.

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# APPENDIX A

## *Built-form Character Assessment Variables*

| | Categories | Sub-Categories | Variables |
|---|---|---|---|
| STREETSCAPE | Street Location | | Country |
| | | | City |
| | | | Street Name |
| | | | Cross Street |
| | Intersection Walk Score | | Walk Score |
| | | | Transit Score |
| | | | Bike Score |
| | | | Average |
| | Available Public Transit | Bus | Station / Stop Name |
| | | | Station / Stop Location |
| | | Streetcar / Light Rail/ SkyTrain | Station / Stop Name |
| | | | Station / Stop Location |
| | | Subway | Station / Stop Name |
| | | | Station / Stop Location |
| | Street Level Characteristics | Street | No. of Lanes |
| | | | Direction |
| | | | Seperation |
| | | | Primary Material |
| | | Sidewalk | Width (m) |
| | | | Primary Material |
| | | | Proximity |
| | | Public Planting | Flower Beds |
| | | | Planter Size |
| | | | Trees |
| | | | Canopy Size |
| | | Street Features | Bike Racks |
| | | | Garbage Cans |
| | | | Transit Shelter |
| | | Public Seating | Seating Type |
| | | | Description |
| | | Designated Active Transportation | Access |
| | | | Placement |
| | | Bus Stop | Access |
| | | | Placement |
| | | Streetcar / Light Rail | Access |
| | | | Proximity |
| | | Parking | Access |
| | | | Placement |

| | Categories | Sub-Categories | Variables |
|---|---|---|---|
| BUILT FORM | Property Location | | City |
| | | | Building |
| | Sitting and Sizing | | Height (Storeys) |
| | | | Frontage (m) |
| | | | Setback (m) |
| | Built Form Characteristics | | Dwelling Type |
| | | | Primary Building Material |
| | | | Primary Building Material Colour |
| | | | Secondary Building Material |
| | | | Secondary Building Material Colour |
| | | | Roof |
| | | | Building Quality |
| | | | Distinct/Predominant Architectural Feature |
| | | Exterior Elements (Second Story and above) | Window (Style 1) |
| | | | No. Of Windows Across Floor (Style 1) |
| | | | Window Size (Style 1) |
| | | | Window (Style 2) |
| | | | No. Of Windows Across Floor (Style 2) |
| | | | Window Size (Style 2) |
| | | | Balcony Style |
| | | | No. Of Balconys Across a Floor |
| | | | Fire Escape |
| | | | Awning Style |
| | | | No. Of Awnings Across Floor |
| | | Boundary Features | Left Side |
| | | | Right Side |

| | Categories | Sub-Categories | Variables |
|---|---|---|---|
| FUNCTION | Property Location | | City |
| | | | Building |
| | | | Property No. |
| | | | Buiness Name / Building Name |
| | | | Land Use |
| | Property Walk Score | | Walk Score |
| | | | Transit Score |
| | | | Bike Score |
| | | | Average |
| | Property Walk Score (Difference) | | Walk Score |
| | | | Transit Score |
| | | | Bike Score |
| | | | Average |
| | Establishment Characteristics | Exterior Elements | Primary Private Planting |
| | | | Patio Space |
| | | | Awning (Ground Floor) |
| | | Main Entrance | Entrance Accessibility |
| | | | No. of Doors |
| | | | Door Placement |
| | | | Door Style |
| | | | Door Material |
| | | Windows (Ground Floor) | Window (Style 1) |
| | | | No. Of Windows Across Floor (Style 1) |
| | | | Window Size (Style 1) |
| | | | Window (Style 2) |
| | | | No. Of Windows Across Floor (Style 2) |
| | | | Window Size (Style 2) |
| | | | Primary Use of Ground Floor Window |
| | Façade | Structure | Facade Quality |
| | | | Structure Alteration |
| | | Coherence | Building Arrangement |
| | | | If Building Arrangement is not Coherent, Why? |
| | | | Building Material |
| | | | If Building Material is not Coherent, Why? |
| | | | Building Function |
| | | | If Building Function is not Coherent, Why? |
| | | Signage | Primary Signage Type |
| | | | Primary Signage Style |
| | | | Primary Signage Lighting |
| | | | Primary Signage Size |
| | | | Primary Sign Readability |
| | | | Primary Signage Style Matches Façade |
| | | | If Primary Signage does not match Facade, Why? |
| | | | Primary Colour used in Signage Lettering |
| | | | Secondary Colour used in Signage Lettering |
| | | | Primary Colour used in Signage Background |
| | | | Secondary Colour used in Signage Background |
| | | | Signage Colours match Façade |
| | | | If Signage Colours do not match Facade, Why? |
| | | | Secondary Signage Type |
| | | | Secondary Signage Style |
| | | | Secondary Signage Lighting |
| | | | Secondary Signage Size |
| | | | Secondary Sign Readability |
| | | | Secondary Signage Style Matches Façade |
| | | | If Secondary Signage does not match Facade, Why? |
| | | | Primary Colour used in Signage Lettering |
| | | | Secondary Colour used in Signage Lettering |
| | | | Primary Colour used in Signage Background |
| | | | Secondary Colour used in Signage Background |
| | | | Signage Colours match Façade |
| | | | If Signage Colours do not match Facade, Why? |

# APPENDIX B

## *Character Assessment Proformas: Townscape Method*

### TOWNSCAPE EVALUATION PRO-FORMA

**LOCATION:**

DATE:

TIME:

REFERENCE:

WEATHER:

***Score between 0 (absent) and 5 (excellent) for each factor.***
***Impression Score out of 10 (1=couldn't be worse, 10=couldn't be better).***

| **A. STREETSCAPE: QUALITY & MAINTENANCE** | |
|---|---|
| A1 - Pedestrian Friendly ..... | A8 - Personal Safety: Traffic ..... |
| A2 – Cleanliness ..... | A9 - Planting: Public ..... |
| A3 - Coherence ..... | A10 - Vitality ..... |
| A4 - Edge Feature Quality ..... | A11 - Appropriate Resting Places ..... |
| A5 - Floorscape Quality ..... | A12 - Signage ..... |
| A6 - Legibility ..... | A13 - Street Furniture Quality ..... |
| A7 - Sense of Threat ..... | A14 - Traffic Flow. Appropriateness ..... |
| | /70 |
| **B. PRIVATE SPACE IN VIEW** | **C. HERITAGE IN VIEW** |
| B15 - Advertising, in keeping ..... | C20 - Conserved Elements Evident ..... |
| B16 - Dereliction, Absence of ..... | C21 - Historic Reference Seen ..... |
| B17 - Detailing Maintenance ..... | C22 - Nomenclature/Place Reference ..... |
| B18 - Facade Quality ..... | C23 - Quality of Conservation Work ..... |
| B19 - Planting : Private ..... | C24 - Quality of New Development ..... |
| | C25 - Neglected Historic Features ..... |
| /25 | /30 |

Impression Score

# [INSERT SETTLEMENT OR NEIGHBOURHOOD AREA NAME]

Insert iconic / attractive image of local area

# CHARACTER ASSESSMENT

[INSERT DATE]

## Introduction

*[Text on what the Character Assessment is, what it covers, how it was produced and how it should be used]*

## Overview of the settlement or neighbourhood area

*[Text detailing location of the settlement, extent of the area, high-level description of broad character. Can be supplemented with map of the local area]*

**Insert map of local area (optional)**

## Historic development of the settlement or neighbourhood area

*[Text providing a short commentary on the origins of the settlement or neighbourhood area and details of how it developed and evolved over time. This can be supplemented with historic maps and images]*

**Insert historic map(s) of local area (optional)**

**Insert historic image(s) of local area (optional)**

## Character Areas Overview

Insert map showing Character Areas

Insert key for map

- Character Area 1 [insert name]
- Character Area 2 [insert name]
- Character Area 3 [insert name]

## Character Area 1: [insert name]

### General overview of character

*[Text on what the general character of the area is]*

### Layout

*[Text on the layout of the character area]*

### Topography

*[Text on topography]*

### Spaces

*[Text on open spaces found in the area]*

### Roads, streets, routes

*[Text on the various routes - both vehicular, cycle and pedestrian - that run through the character area]*

### Green and natural features

*[Text on what green and natural features found in the character area]*

### Landmarks

*[Text on landmarks within the character area]*

**Insert images of character area to supplement text**

**Insert images of character area to supplement text**

**Insert images of character area to supplement text**

## Buildings and details

*[Text on appearance and character of buildings within the character area]*

## Streetscape features

*[Text on streetscape features in the character area]*

## Land use

*[Text on main land uses in the character area]*

**Insert images of character area to supplement text**

**Insert images of character area to supplement text**

**Insert images of character area to supplement text**

**Insert images of character area to supplement text**

## Views

### *[Text on key views relating to the character area]*

Where views do exist and need to be identified, you should communicate to the reader the following:

1. location of the view (i.e. the precise location from which the view is appreciated)
2. extent of the view
3. content and value of the view

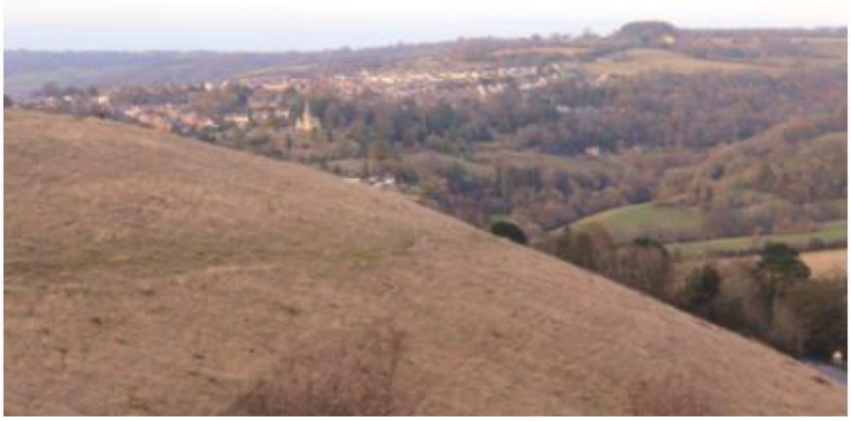
The view profile template shown on the following page is a useful way to communicate this essential information.

***[Insert view name]***

**Map of view direction and extent**


**Photograph with viewpoint location denoted**

**Photograph of view**



**Description of view**

*[Text describing content and value of view]*

***Figure 1: Sample view profile template (Images credit: Royal Town Planning Institute)***

## *Summary of key qualities and characteristics*

*[Text summarising the character of the area, and highlighting its distinct features and qualities]*

[REPEAT THIS SECTION (PAGES 5-9) FOR EACH OF THE IDENTIFIED CHARACTER AREAS]

Contact:
Planning Aid England
Royal Town Planning Institute
41 Botolph Lane
London EC3R 8DL
Tel. 020 3206 1880
E-mail: info@planningaid.rtpi.org.uk

For further information please visit **rtpi.org.uk/planning-aid**
Registered Charity Number: 262865
Scottish Registered Charity Number: SC 037841

| SURVEY DETAILS | |
|---|---|
| STREET/BUILDING/ AREA NAME | |
| DATE | |
| TIME | |
| WEATHER | |

**1: INITIAL REACTION:** What do you first see as making the most important contribution to the character of the area? Is the area's character defined by the public or private spaces, groups of buildings or particular views, the presence of particular materials or its trees and greenery? Do these reflect particular aspects of the area's history? Are less tangible features, such as the activity, noises and smells of the area significant? Please provide a few brief reasons for your choices.

| *FEATURE* | *COMMENTS* | *VALUE -5 TO +5* |
|---|---|---|
| SPACES | | |
| BUILDINGS | | |
| VIEWS | | |
| LIGHT/DARK | | |
| SURFACES | | |
| GREENERY & LANDSCAPE | | |
| USES AND ACTIVITY | | |
| NOISES AND SMELLS | | |
| GENERAL COMMENTS | | |

| **2: SPACES:** A 'space' is normally the gap between buildings and other features. They may be formally designed or develop informally over time. They may be enclosed by surrounding buildings, trees and foliage, have structure created by the alignment and spacing of surrounding buildings or property boundaries, and be narrow or wide and open. The character of areas can depend on their uses and vibrancy, as well as the choice of paving, kerbs, seating, telephone or post boxes or the presence of formal planting or other greenery. | | |
|---|---|---|
| ***FEATURE*** | ***COMMENTS*** | ***VALUE -5 TO +5*** |
| FORMAL / INFORMAL SPACES | | |
| GAPS BETWEEN BUILDINGS | | |
| MEANS OF ENCLOSURE | | |
| BUILDING PLOTS | | |
| WIDE/OPEN SPACES | | |
| NARROW / ENCLOSED SPACES | | |
| WINDING / STRAIGHT SPACES | | |
| RELATIONSHIP OF THE SPACE TO BUILDINGS AND STRUCTURES | | |
| USES AND ACTIVITY | | |
| PAVING MATERIALS | | |
| STREET FURNITURE | | |
| IMPACT OF VEHICLES AND TRAFFIC | | |
| USABILITY AND ACCESSIBILITY OF THE SPACE | | |

**3.0 BUILDINGS:** Do buildings make an important contribution to the character of the area and if so what features are significant to their contribution? Do buildings reflect an important period in the area's history and is this reflected in their past or current use? Do buildings share a uniform scale and size, or is there a high degree of variation that is visually attractive? Are the buildings very old or do they form a single development with shared or similar architectural detailing? Do styles of windows, doors or other features add to the visual interest of the buildings, reflect their origins and use, or form part of a designed scheme? What condition are the buildings in? Have changes increased or reduced their interest, or have they lost important features?

| *FEATURE* | *COMMENTS* | *VALUE -5 TO +5* |
|---|---|---|
| CONTRIBUTION OF BUILDINGS TO THE SPACE | | |
| SIZE/SCALE | | |
| AGE | | |
| MATERIALS | | |
| WINDOWS | | |
| DOORS | | |
| ROOFS / CHIMNEYS / GABLES | | |
| USES (PAST AND PRESENT) | | |
| CAN YOU TELL IF A BUILDING HAS BEEN ALTERED? | | |
| CONDITION | | |

**4.0 VIEWS:** Are there views of interest and distinction? Is a view well known because of a historical event, painting, prose or poetry, or is it popular with local residents as a part of a public place? Are views glimpsed through gaps between buildings, channelled by lines of trees or buildings, or open and expansive? Does the shape of a street create a series of views, or is a single viewing point particularly important? What features of the view contribute to its interest? Does a landmark, such as a building or group of trees, form a focal point? Does the view include an attractive frontage or roofscape? Is the view urban or rural in character? Do background features like the city's rural setting contribute to the view's attractiveness?

| *FEATURE* | *COMMENTS* | *VALUE -5 TO +5* |
|---|---|---|
| HISTORIC / POPULAR VIEWS | | |
| FORM OF VIEW: SHORT OR LONG, UNFOLDING, GLIMPSED, CHANNELLED OR WIDE AND OPEN | | |
| FOCAL POINTS | | |
| STREETSCAPE | | |
| ROOFSCAPE | | |
| URBAN/RURAL VIEWS | | |
| VIEWS OUT OF THE SPACE | | |

| **5.0 LANDSCAPE:** What landscape features contribute to the area's character and how do they affect it? Do hedgerows or grass verges create a rural feel or do street trees provide a leafy suburban character. What hard surfaces are present, are they attractively designed or do they use materials that are out of keeping with the area? Does their maintenance affect their contribution? Is a river of canal a significant feature in the area? Does it have scenic or wildlife value? | | |
|---|---|---|
| ***FEATURE*** | ***COMMENTS*** | ***VALUE -5 TO +5*** |
| LEAFY AND/OR GREEN IMAGE | | |
| HARD URBAN LANDSCAPE | | |
| PUBLIC/PRIVATE GREENERY | | |
| DOES WATER FORM A KEY FEATURE OF THE AREA | | |
| TOPOGRAPHY | | |

| **6.0 AMBIENCE:** Many less tangible features, such as activity, changes in light during the day, shadows and reflections affect reaction to an area. How does the area change between day and night? Do dark corners or alleyways feel unsafe at night time? What smells and noises are you aware of and is the area busy or tranquil? What affect, if any, does vehicle traffic have on character? | | |
|---|---|---|
| **FEATURE** | ***COMMENTS*** | ***VALUE -5 TO +5*** |
| ACTIVITIES | | |
| LEVEL OF ACTIVITY | | |
| TRAFFIC | | |
| DARK, SHADY, LIGHT, AIRY | | |
| DAY AND NIGHT | | |
| SMELLS | | |
| NOISES | | |

**7.0: FINAL REACTION:** Take a moment to consider the notes and scores that you made, in your initial reactions survey sheet and the subsequent pages. Are there any features that you would now rate as having a greater positive or negative value, or are there particular aspects of these features that you would highlight as having a high significance to the character of the area? Try ranking the features in order of their relative importance in forming the area's character and appearance.

*RANK IN ORDER OF CONTRIBUTION BETWEEN 1 (HIGH) AND 9 (LOW)*

| ***FEATURE*** | ***EXAMPLE*** | *YOUR **HIERARCHY*** |
|---|---|---|
| BUILDINGS | 1 | |
| SPACES | 5 | |
| LONG/SHORT VIEWS | 2 | |
| LIGHT/DARK | 4 | |
| SURFACES | 3 | |
| GREENERY & LANDSCAPE FEATURES | 6 | |
| NOISE, SMELL AND TRAFFIC | 7 | |

**8.0 SPIRIT OF PLACE:** Having undertaken the survey and scoring now try to sum up the character of the area in a few brief sentences, picking out the most significant positive and negative features of its character and appearance.

**Toolkit: Character Assessment**

## SETTLEMENT ASSESSMENT PROFORMA

**Surveyors(s):** **Character Area:**

**Date:** **Weather:**

- *Look through all the questions before starting.*
- *For almost all the questions on Pattern and Buildings just ring a word (or two) in each box that best fits what you know/see and, as necessary, add some notes about quality, condition etc. in the space below.*
- *The final Summary questions include their own instructions.*
- *Leave any questions that do not seem to apply.*
- *Take a form, clipboard, map, camera and a pen or two with you when you go out.*
- *Take any photos you think are useful (often more useful than some words) and add any photo names/numbers in the right hand boxes once you get back to 'base'.*

**1. PATTERN**

| Character Element | Photo(s) |
|---|---|
| **A. Topography:** *Flat Hilly Steep Shallow Plateau Valley Linear valley Several valleys* | |
| **B: Layout:** *Linear Grid-like Winding Regular Irregular Buildings close to the road Buildings well set back Front gardens Back gardens Long plots Thin plots Short plots Wide plots Clear centre No obvious centre* | |
| **C: Spaces:** *Gaps between buildings Green spaces Hard space Places where local events take place Well used Not well used* | |

**Toolkit: Character Assessment**

| | |
|---|---|
| **D: Green and Natural Features:** *Trees Bushes Hedges Green backcloth to buildings Areas of intense greenery Areas without greenery* | |
| **E: Wildlife and Ecology:** *Area used/inhabited by wildlife Not used at all Area used for wildlife to pass through What wildlife? Important plants?* | |
| **F: Roads, Streets and other Movement Routes:** *Pavements Kerbs Grass verges Drainage ditches Wide roads wide Narrow roads Straight roads Curving roads Cul-de-sacs Through roads On-plot parking On-street parking Parking courts* | |
| **G. Landmarks:** *Are there key landmarks visible from a distance (church tower), community landmarks (pub) or special but smaller features (old milestone)?* | |
| **H: Views Out:** *Are there places (often, occasional) where one can see out to other areas or to the landscape?* | |
| **I: Views In:** *Are there places around* where it is possible to get views into this area? (* You will need to go round and about to spot these.)* | |

## 2. BUILDINGS AND DETAILS

| | |
|---|---|
| **A: Predominant Building Shape and Heights:** *Wide frontages Narrow frontages Terraced Semi-detached Detached 1 storey 2 storeys 3 storeys Common shapes Varied shapes* | |
| **B: Roofs:** *Flat roofs Pitched roofs Steep pitch Shallow pitch Varied pitch Lean-tos Parapet fronts (hidden roofs)* | |
| **C. Predominant Materials:** *Some common Nothing common Walls (brick, stone, render, hung tile)? Roofs (tile, slate, other)? Boundaries (walls, hedges, fences)? Ground (tarmac, concrete, setts, paving stones)?* | |
| **D: Details:** *What details contribute to character: porches, window shapes, roof decorations, chimneys, benches, letter boxes, signs, flags?* | |

## 3. SUMMARY

| |
|---|
| **A: In a few words or a sentence or two, what are for your group the key <u>positive</u> features about this area? What makes it special?** |
| **B: In a few words or a sentence or two, what are for your group the key <u>negative</u> features about this area? What detracts from it?** |

**Toolkit: Character Assessment**

# LANDSCAPE ASSESSMENT PROFORMA

**Surveyors(s): ..... Area name or number: .....**

**View Point Numbers: .....** **Date: ..... Weather: .....**

- *Look through all the questions before starting.*
- *For almost all the questions on Description and Views and Landmarks, just ring a word (or two) in each box that best fits what you know/see and, as necessary, add some notes about quality, condition etc. in the space below.*
- *The final Summary questions include their own instructions.*
- *Leave any questions that do not seem to apply.*
- *Take a form, clipboard, map, camera and a pen or two with you when you go out.*
- *Take any photos you think are useful (often more useful than some words) and add any photo names/numbers in the right hand boxes once you get back to 'base'.*

## 1. DESCRIPTION

| Character Element | Photo(s) |
|---|---|
| **A. Landform:** *Flat Gently undulating Strongly undulating* ***Steep valley*** *Valley side/floor Plateau* | |
| **B. Landcover:** *Open farmland* ***Farmland with trees/woods*** *Woodland* ***Parkland*** *Wetland* | |
| **C. Landuse:** *Arable farmland Grassland* ***Grazing*** *Mixed Forestry Industrial Brownfield Orchards* | |
| **D. Field Boundaries:** *Tall Clipped Intermittent* ***Hedgerow*** ***With/without trees*** *Fences Walls* | |
| **E. Field Sizes and Patterns:** *Small* ***Medium*** *Large Regular Angular Linear* ***Irregular*** | |

**Toolkit: Character Assessment**

| | |
|---|---|
| **F. Routeways:** ***Few roads*** *Dense road network* *Tracks* *Straight*/***Winding*** /***Narrow*** | |
| **G. Buildings and Structures:** *What manmade elements are in the landscape?* ***Village(s)****/Town* ***Isolated Farms*** ***Barns*** *Groups of dwellings* *Pylons* *Masts* *Wires. How do they 'sit' and what natural features influence that?* | |
| **H. Water and Drainage:** ***Stream*** *River* *Reservoir* *Wet ditches* *Ponds* *Lake* | |
| **I. Enclosure and Scale:** *Tight* *Enclosed* ***Open*** ***Exposed****/Intimate* *Small* ***Large*** *Vast* | |

**2. VIEWS AND LANDMARKS** (mark on the map)

| | |
|---|---|
| **A. Views:** ***Sweeping*** *Channeled* *Long* *Short* *Glimpsed* *Across/to a place or landmark.* | |
| **B. Landmarks:** ***Buildings*** ***Structures*** ***Natural features*** ***History*** *Archaeology* | |

## 3. SUMMARY

| |
|---|
| **A. Scenic Quality:** *Think about sounds, smells and colours, how it makes you feel, does it feel tranquil? Think about balance (harmonious - chaotic) and diversity (uniform – complex) Seasonal features can also be important.* . |
| **B. Activities and Associations:** *What do people do in this landscape? Work and/or leisure? Do people paint or photograph it? Are there local poems or stories? What makes you identify with it or value it?* |
| **C: In a few words or a sentence or two, what are for you the key positive features about this area? What makes it special?** |
| **D: In a few words or a sentence or two, what are for you the key negative features about this area? What detracts from it?** |

# APPENDIX C

## *Primary Building Material Percentage Breakdown*

| | | Primary Building Material | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **City** | **Street** | **Brick** | **Concrete** | **Glass** | **Siding** | **Stone** | **Other** | **Total** |
| Austin | 5th Street | 25% | 45% | 5% | 0% | 15% | 10% | n=20 |
| | Congress Avenue | 44% | 25% | 6% | 0% | 25% | 0% | n=16 |
| | S Lamar Boulevard | 50% | 35% | 0% | 5% | 10% | 0% | n=20 |
| Calgary | 17th Avenue SW | 25% | 30% | 0% | 10% | 20% | 15% | n=20 |
| | 1st Street SW | 58% | 21% | 5% | 5% | 0% | 11% | n=19 |
| | 8th Avenue SW | 35% | 5% | 5% | 5% | 45% | 5% | n=20 |
| Chicago | Halsted Street | 63% | 6% | 6% | 0% | 19% | 6% | n=16 |
| | N Milwaukee Avenue | 45% | 25% | 0% | 0% | 25% | 5% | n=20 |
| | Sheffield Avenue | 70% | 0% | 0% | 15% | 15% | 0% | n=20 |
| Edmonton | 101 Street NW | 14% | 7% | 14% | 0% | 50% | 14% | n=14 |
| | 82 Avenue NW | 38% | 29% | 0% | 14% | 14% | 5% | n=21 |
| | Jasper Avenue | 21% | 16% | 0% | 0% | 26% | 37% | n=19 |
| Halifax | Barrington Street | 63% | 6% | 0% | 25% | 6% | 0% | n=16 |
| | Quinpool Road | 25% | 25% | 0% | 45% | 5% | 0% | n=20 |
| | Robie Street | 20% | 25% | 0% | 50% | 5% | 0% | n=20 |
| Los Angeles | 7th Street | 21% | 21% | 16% | 0% | 26% | 16% | n=19 |
| | Hill Street | 16% | 32% | 0% | 0% | 47% | 5% | n=19 |
| | Hollywood Blvd | 22% | 44% | 0% | 6% | 22% | 6% | n=18 |
| Montréal | Avenue du Mont Royal | 80% | 5% | 0% | 0% | 15% | 0% | n=20 |
| | Rue Beaubien E | 86% | 10% | 0% | 0% | 5% | 0% | n=21 |
| | Rue Sainte-Catherin | 63% | 21% | 5% | 0% | 11% | 0% | n=19 |
| New York City | 42nd Street | 15% | 5% | 40% | 0% | 25% | 15% | n=20 |
| | Broadway Ave | 32% | 0% | 5% | 0% | 63% | 0% | n=19 |
| | Manhattan Ave | 39% | 6% | 0% | 56% | 0% | 0% | n=18 |
| Portland | 5th Avenue | 50% | 40% | 0% | 0% | 10% | 0% | n=20 |
| | Weidler St | 40% | 40% | 0% | 10% | 5% | 5% | n=20 |
| | Yamhill St | 35% | 10% | 5% | 0% | 45% | 5% | n=20 |
| Seattle | 3rd Avenue | 19% | 19% | 0% | 0% | 57% | 5% | n=21 |
| | Broadway | 50% | 25% | 0% | 0% | 19% | 6% | n=16 |
| | Pike Street | 61% | 17% | 0% | 22% | 0% | 0% | n=23 |
| Toronto | Bloor Street, West | 80% | 10% | 5% | 5% | 0% | 0% | n=20 |
| | Queen Street, West | 84% | 11% | 5% | 0% | 0% | 0% | n=19 |
| | Yonge Street | 40% | 40% | 5% | 0% | 15% | 0% | n=20 |
| Vancouver | 4th Avenue, West | 10% | 45% | 10% | 15% | 20% | 0% | n=20 |
| | Main Street | 40% | 25% | 5% | 25% | 5% | 0% | n=20 |
| | Robson Street | 15% | 5% | 70% | 5% | 5% | 0% | n=20 |
| | **TOTAL** | **42%** | **20%** | **6%** | **9%** | **18%** | **5%** | **n=693** |

# APPENDIX D

## *Dwelling Height Percentage Breakdown*

| | | Building Height | | | | | |
|---|---|---|---|---|---|---|---|
| **City** | **Street** | **Single Storey** | **Two Storey** | **Three Storey** | **Four Storeys** | **Five or More** | **Total** |
| Austin | 5th Street | 25% | 30% | 10% | 0% | 35% | n=20 |
| | Congress Avenue | 6% | 44% | 13% | 0% | 38% | n=16 |
| | S Lamar Boulevard | 75% | 15% | 0% | 0% | 10% | n=20 |
| Calgary | 17th Avenue SW | 25% | 45% | 15% | 0% | 15% | n=20 |
| | 1st Street SW | 21% | 32% | 21% | 5% | 21% | n=19 |
| | 8th Avenue SW | 0% | 60% | 25% | 5% | 10% | n=20 |
| Chicago | Halsted Street | 19% | 31% | 13% | 25% | 13% | n=16 |
| | N Milwaukee Avenue | 15% | 20% | 30% | 25% | 10% | n=20 |
| | Sheffield Avenue | 15% | 10% | 30% | 20% | 25% | n=20 |
| Edmonton | 101 Street NW | 0% | 14% | 14% | 14% | 57% | n=14 |
| | 82 Avenue NW | 57% | 33% | 5% | 0% | 5% | n=21 |
| | Jasper Avenue | 5% | 26% | 21% | 5% | 42% | n=19 |
| Halifax | Barrington Street | 0% | 6% | 56% | 11% | 28% | n=18 |
| | Quinpool Road | 25% | 50% | 25% | 0% | 0% | n=20 |
| | Robie Street | 45% | 50% | 5% | 0% | 0% | n=20 |
| Los Angeles | 7th Street | 11% | 0% | 5% | 5% | 79% | n=19 |
| | Hill Street | 32% | 0% | 0% | 0% | 68% | n=19 |
| | Hollywood Blvd | 32% | 21% | 11% | 0% | 37% | n=19 |
| Montréal | Avenue du Mont Royal | 0% | 45% | 50% | 5% | 0% | n=20 |
| | Rue Beaubien E | 5% | 38% | 43% | 5% | 10% | n=21 |
| | Rue Sainte-Catherin | 5% | 21% | 26% | 11% | 37% | n=19 |
| New York City | 42nd Street | 0% | 10% | 5% | 10% | 75% | n=20 |
| | Broadway Ave | 0% | 0% | 0% | 0% | 100% | n=19 |
| | Manhattan Ave | 0% | 17% | 61% | 22% | 0% | n=18 |
| Portland | 5th Avenue | 10% | 15% | 30% | 20% | 25% | n=20 |
| | Weidler St | 75% | 15% | 10% | 0% | 0% | n=20 |
| | Yamhill St | 5% | 5% | 25% | 15% | 50% | n=20 |
| Seattle | 3rd Avenue | 0% | 5% | 29% | 0% | 67% | n=21 |
| | Broadway | 31% | 31% | 25% | 6% | 6% | n=16 |
| | Pike Street | 22% | 39% | 35% | 4% | 0% | n=23 |
| Toronto | Bloor Street, West | 0% | 55% | 40% | 0% | 5% | n=20 |
| | Queen Street, West | 16% | 42% | 37% | 0% | 5% | n=19 |
| | Yonge Street | 10% | 15% | 35% | 5% | 35% | n=20 |
| Vancouver | 4th Avenue, West | 20% | 65% | 15% | 0% | 0% | n=20 |
| | Main Street | 60% | 15% | 5% | 0% | 20% | n=20 |
| | Robson Street | 15% | 10% | 10% | 0% | 65% | n=20 |
| | **TOTAL** | **19%** | **26%** | **22%** | **6%** | **27%** | **n=696** |

# APPENDIX E

## *Primary Building Material Colour Percentage Breakdown*

| | | Primary Building Material Colour | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City | Street | Black | Blue | Bronze | Brown | Burgundy | Cream | Green | Grey | Orange | Pink | Purple | Red | White | Yellow | Total |
| Austin | 5th Street | 10% | 5% | 0% | 10% | 0% | 10% | 0% | 45% | 0% | 5% | 0% | 0% | 15% | 0% | n=20 |
| | Congress Avenue | 6% | 0% | 0% | 38% | 0% | 19% | 0% | 19% | 0% | 0% | 0% | 6% | 13% | 0% | n=16 |
| | S Lamar Boulevard | 0% | 0% | 0% | 25% | 0% | 20% | 5% | 15% | 0% | 0% | 0% | 10% | 25% | 0% | n=20 |
| Calgary | 17th Avenue SW | 5% | 5% | 0% | 15% | 0% | 25% | 5% | 35% | 0% | 5% | 0% | 0% | 5% | 0% | n=20 |
| | 1st Street SW | 11% | 0% | 0% | 39% | 0% | 6% | 0% | 6% | 0% | 0% | 0% | 39% | 0% | 0% | n=18 |
| | 8th Avenue SW | 0% | 0% | 0% | 5% | 0% | 0% | 0% | 47% | 0% | 0% | 5% | 26% | 16% | 0% | n=19 |
| Chicago | Halsted Street | 7% | 0% | 0% | 40% | 0% | 0% | 7% | 7% | 0% | 0% | 0% | 33% | 7% | 0% | n=15 |
| | N Milwaukee Avenue | 0% | 0% | 0% | 15% | 0% | 20% | 0% | 30% | 0% | 0% | 0% | 10% | 25% | 0% | n=20 |
| | Sheffield Avenue | 0% | 5% | 0% | 20% | 0% | 0% | 0% | 15% | 0% | 0% | 5% | 45% | 10% | 0% | n=20 |
| Edmonton | 101 Street NW | 0% | 0% | 0% | 17% | 0% | 0% | 0% | 25% | 0% | 0% | 0% | 25% | 33% | 0% | n=12 |
| | 82 Avenue NW | 0% | 5% | 0% | 24% | 0% | 5% | 0% | 14% | 0% | 0% | 0% | 19% | 33% | 0% | n=21 |
| | Jasper Avenue | 11% | 0% | 0% | 21% | 0% | 5% | 0% | 21% | 0% | 0% | 0% | 11% | 32% | 0% | n=19 |
| Halifax | Barrington Street | 13% | 0% | 0% | 6% | 0% | 6% | 0% | 19% | 0% | 0% | 0% | 56% | 0% | 0% | n=16 |
| | Quinpool Road | 0% | 10% | 0% | 20% | 0% | 15% | 0% | 30% | 0% | 5% | 0% | 5% | 15% | 0% | n=20 |
| | Robie Street | 0% | 10% | 0% | 15% | 0% | 10% | 0% | 5% | 0% | 0% | 0% | 10% | 45% | 5% | n=20 |
| Los Angeles | 7th Street | 16% | 11% | 0% | 5% | 0% | 42% | 0% | 16% | 0% | 0% | 0% | 5% | 5% | 0% | n=19 |
| | Hill Street | 11% | 0% | 0% | 0% | 0% | 16% | 5% | 32% | 0% | 0% | 0% | 0% | 26% | 11% | n=19 |
| | Hollywood Blvd | 6% | 6% | 0% | 11% | 0% | 11% | 11% | 11% | 0% | 0% | 0% | 11% | 33% | 0% | n=18 |
| Montréal | Avenue du Mont Royal | 0% | 0% | 0% | 30% | 15% | 10% | 0% | 30% | 0% | 5% | 0% | 5% | 5% | 0% | n=20 |
| | Rue Beaubien E | 0% | 0% | 0% | 24% | 19% | 33% | 0% | 5% | 0% | 0% | 0% | 14% | 5% | 0% | n=21 |
| | Rue Sainte-Catherin | 0% | 0% | 0% | 44% | 6% | 22% | 0% | 11% | 0% | 0% | 0% | 11% | 6% | 0% | n=18 |
| New York City | 42nd Street | 8% | 0% | 0% | 17% | 0% | 8% | 0% | 50% | 0% | 0% | 0% | 8% | 8% | 0% | n=12 |
| | Broadway Ave | 6% | 0% | 0% | 11% | 0% | 39% | 6% | 6% | 0% | 0% | 0% | 0% | 33% | 0% | n=18 |
| | Manhattan Ave | 6% | 0% | 0% | 11% | 0% | 11% | 0% | 22% | 0% | 0% | 0% | 39% | 6% | 6% | n=18 |
| Portland | 5th Avenue | 0% | 0% | 0% | 5% | 0% | 30% | 5% | 5% | 0% | 0% | 0% | 45% | 10% | 0% | n=20 |
| | Weidler St | 0% | 0% | 0% | 20% | 0% | 20% | 5% | 5% | 0% | 0% | 0% | 10% | 35% | 5% | n=20 |
| | Yamhill St | 0% | 0% | 0% | 5% | 0% | 21% | 0% | 37% | 0% | 0% | 0% | 16% | 21% | 0% | n=19 |
| Seattle | 3rd Avenue | 0% | 0% | 0% | 5% | 0% | 43% | 0% | 5% | 0% | 0% | 0% | 10% | 38% | 0% | n=21 |
| | Broadway | 6% | 0% | 0% | 19% | 0% | 31% | 0% | 13% | 0% | 0% | 0% | 13% | 19% | 0% | n=16 |
| | Pike Street | 4% | 4% | 0% | 30% | 0% | 17% | 0% | 9% | 0% | 4% | 9% | 9% | 13% | 0% | n=23 |
| Toronto | Bloor Street, West | 0% | 5% | 0% | 30% | 5% | 10% | 0% | 10% | 5% | 5% | 0% | 10% | 20% | 0% | n=20 |
| | Queen Street, West | 6% | 0% | 0% | 17% | 0% | 11% | 11% | 11% | 28% | 0% | 0% | 11% | 6% | 0% | n=18 |
| | Yonge Street | 5% | 5% | 5% | 20% | 0% | 35% | 0% | 10% | 0% | 0% | 0% | 10% | 10% | 0% | n=20 |
| Vancouver | 4th Avenue, West | 16% | 11% | 0% | 11% | 5% | 5% | 0% | 21% | 0% | 5% | 0% | 5% | 21% | 0% | n=19 |
| | Main Street | 5% | 5% | 0% | 10% | 5% | 10% | 5% | 30% | 0% | 0% | 0% | 10% | 15% | 5% | n=20 |
| | Robson Street | 11% | 0% | 0% | 22% | 0% | 0% | 22% | 11% | 22% | 0% | 0% | 11% | 0% | 0% | n=9 |
| | **TOTAL** | **4%** | **3%** | **0%** | **18%** | **2%** | **16%** | **2%** | **19%** | **1%** | **1%** | **1%** | **15%** | **17%** | **1%** | **n=664** |

## APPENDIX F

### *Building Setback Percentage Breakdown*

| | | Building Setback | | | | |
|---|---|---|---|---|---|---|
| **City** | **Street** | **0-2.99m** | **3.0-5.99m** | **6.0-8.99m** | **>9.0m** | **Total** |
| Austin | 5th Street | 20% | 70% | 10% | 0% | n=20 |
| | Congress Avenue | 0% | 0% | 19% | 81% | n=16 |
| | S Lamar Boulevard | 0% | 0% | 15% | 85% | n=20 |
| Calgary | 17th Avenue SW | 0% | 50% | 15% | 35% | n=20 |
| | 1st Street SW | 11% | 63% | 21% | 5% | n=19 |
| | 8th Avenue SW | 0% | 20% | 80% | 0% | n=20 |
| Chicago | Halsted Street | 69% | 25% | 0% | 6% | n=16 |
| | N Milwaukee Avenue | 50% | 50% | 0% | 0% | n=20 |
| | Sheffield Avenue | 0% | 60% | 10% | 30% | n=20 |
| Edmonton | 101 Street NW | 14% | 71% | 14% | 0% | n=14 |
| | 82 Avenue NW | 0% | 86% | 5% | 10% | n=21 |
| | Jasper Avenue | 0% | 74% | 26% | 0% | n=19 |
| Halifax | Barrington Street | 22% | 78% | 0% | 0% | n=18 |
| | Quinpool Road | 0% | 90% | 5% | 5% | n=20 |
| | Robie Street | 0% | 45% | 15% | 40% | n=20 |
| Los Angeles | 7th Street | 5% | 79% | 0% | 16% | n=19 |
| | Hill Street | 0% | 95% | 5% | 0% | n=19 |
| | Hollywood Blvd | 0% | 95% | 5% | 0% | n=19 |
| Montréal | Avenue du Mont Royal | 0% | 95% | 0% | 5% | n=20 |
| | Rue Beaubien E | 14% | 67% | 10% | 10% | n=21 |
| | Rue Sainte-Catherin | 0% | 75% | 20% | 5% | n=20 |
| New York City | 42nd Street | 5% | 70% | 25% | 0% | n=20 |
| | Broadway Ave | 0% | 100% | 0% | 0% | n=19 |
| | Manhattan Ave | 6% | 94% | 0% | 0% | n=18 |
| Portland | 5th Avenue | 0% | 85% | 10% | 5% | n=20 |
| | Weidler St | 5% | 35% | 10% | 50% | n=20 |
| | Yamhill St | 10% | 70% | 5% | 15% | n=20 |
| Seattle | 3rd Avenue | 0% | 48% | 52% | 0% | n=21 |
| | Broadway | 0% | 88% | 13% | 0% | n=16 |
| | Pike Street | 4% | 78% | 9% | 9% | n=23 |
| Toronto | Bloor Street, West | 0% | 100% | 0% | 0% | n=20 |
| | Queen Street, West | 0% | 95% | 5% | 0% | n=19 |
| | Yonge Street | 0% | 85% | 15% | 0% | n=20 |
| Vancouver | 4th Avenue, West | 0% | 100% | 0% | 0% | n=20 |
| | Main Street | 0% | 70% | 10% | 20% | n=20 |
| | Robson Street | 5% | 45% | 40% | 10% | n=20 |
| **TOTAL** | | **6%** | **68%** | **13%** | **12%** | **n=697** |

# APPENDIX G

## *Window Use Percentage Breakdown*

| | | Window Use | | | | | |
|---|---|---|---|---|---|---|---|
| **City** | **Street** | **Advertisments (Poster Display)** | **Display Area (Product)** | **Window** | **Window with Graphic / Writing** | **Not Applicable** | **Total** |
| Austin | 5th Street | 6% | 13% | 77% | 3% | 0% | **n=31** |
| | Congress Avenue | 10% | 0% | 71% | 5% | 14% | **n=21** |
| | S Lamar Boulevard | 0% | 3% | 77% | 10% | 10% | **n=31** |
| Calgary | 17th Avenue SW | 5% | 0% | 82% | 3% | 10% | **n=39** |
| | 1st Street SW | 5% | 0% | 90% | 0% | 5% | **n=41** |
| | 8th Avenue SW | 14% | 4% | 64% | 7% | 11% | **n=28** |
| Chicago | Halsted Street | 0% | 0% | 79% | 21% | 0% | **n=24** |
| | N Milwaukee Avenue | 13% | 8% | 41% | 10% | 28% | **n=39** |
| | Sheffield Avenue | 3% | 0% | 85% | 3% | 9% | **n=33** |
| Edmonton | 101 Street NW | 0% | 4% | 54% | 11% | 32% | **n=28** |
| | 82 Avenue NW | 26% | 6% | 40% | 9% | 20% | **n=35** |
| | Jasper Avenue | 2% | 14% | 52% | 14% | 18% | **n=44** |
| Halifax | Barrington Street | 12% | 8% | 50% | 12% | 19% | **n=26** |
| | Quinpool Road | 10% | 10% | 53% | 23% | 3% | **n=30** |
| | Robie Street | 0% | 0% | 88% | 3% | 9% | **n=32** |
| Los Angeles | 7th Street | 2% | 10% | 73% | 2% | 12% | **n=41** |
| | Hill Street | 41% | 9% | 24% | 18% | 9% | **n=34** |
| | Hollywood Blvd | 17% | 5% | 51% | 10% | 17% | **n=41** |
| Montréal | Avenue du Mont Royal | 13% | 17% | 30% | 7% | 33% | **n=30** |
| | Rue Beaubien E | 3% | 8% | 39% | 22% | 28% | **n=36** |
| | Rue Sainte-Catherin | 6% | 18% | 47% | 8% | 20% | **n=49** |
| New York City | 42nd Street | 16% | 29% | 29% | 3% | 24% | **n=38** |
| | Broadway Ave | 44% | 0% | 19% | 0% | 37% | **n=27** |
| | Manhattan Ave | 12% | 4% | 40% | 0% | 44% | **n=25** |
| Portland | 5th Avenue | 4% | 7% | 85% | 0% | 4% | **n=27** |
| | Weidler St | 0% | 4% | 50% | 0% | 46% | **n=24** |
| | Yamhill St | 31% | 3% | 54% | 0% | 13% | **n=39** |
| Seattle | 3rd Avenue | 10% | 2% | 59% | 10% | 18% | **n=49** |
| | Broadway | 7% | 4% | 71% | 4% | 14% | **n=28** |
| | Pike Street | 26% | 4% | 47% | 9% | 14% | **n=57** |
| Toronto | Bloor Street, West | 13% | 3% | 38% | 6% | 41% | **n=32** |
| | Queen Street, West | 7% | 7% | 30% | 17% | 40% | **n=30** |
| | Yonge Street | 3% | 0% | 32% | 15% | 50% | **n=60** |
| Vancouver | 4th Avenue, West | 61% | 3% | 17% | 14% | 6% | **n=36** |
| | Main Street | 3% | 3% | 66% | 14% | 14% | **n=29** |
| | Robson Street | 29% | 8% | 46% | 0% | 17% | **n=59** |
| | **TOTAL** | **13%** | **6%** | **53%** | **8%** | **19%** | **n=1273** |

# APPENDIX H

## *Building Frontage Percentage Breakdown*

| | | Building Frontage | | | | |
|---|---|---|---|---|---|---|
| **City** | **Street** | **0-14.99m** | **15.0m-29.99m** | **30.0-44.99m** | **> 45.0m** | **Total** |
| Austin | 5th Street | 15% | 30% | 5% | 50% | **n=20** |
| | Congress Avenue | 50% | 25% | 13% | 13% | **n=16** |
| | S Lamar Boulevard | 30% | 50% | 5% | 15% | **n=20** |
| Calgary | 17th Avenue SW | 45% | 35% | 5% | 15% | **n=20** |
| | 1st Street SW | 26% | 37% | 26% | 11% | **n=19** |
| | 8th Avenue SW | 50% | 35% | 10% | 5% | **n=20** |
| Chicago | Halsted Street | 25% | 44% | 25% | 6% | **n=16** |
| | N Milwaukee Avenue | 65% | 25% | 0% | 10% | **n=20** |
| | Sheffield Avenue | 45% | 20% | 25% | 10% | **n=20** |
| Edmonton | 101 Street NW | 0% | 7% | 21% | 71% | **n=14** |
| | 82 Avenue NW | 52% | 14% | 14% | 19% | **n=21** |
| | Jasper Avenue | 5% | 47% | 16% | 32% | **n=19** |
| Halifax | Barrington Street | 56% | 28% | 17% | 0% | **n=18** |
| | Quinpool Road | 75% | 25% | 0% | 0% | **n=20** |
| | Robie Street | 50% | 20% | 15% | 15% | **n=20** |
| Los Angeles | 7th Street | 5% | 21% | 32% | 42% | **n=19** |
| | Hill Street | 37% | 26% | 37% | 0% | **n=19** |
| | Hollywood Blvd | 11% | 47% | 21% | 21% | **n=19** |
| Montréal | Avenue du Mont Royal | 65% | 25% | 10% | 0% | **n=20** |
| | Rue Beaubien E | 52% | 24% | 10% | 14% | **n=21** |
| | Rue Sainte-Catherin | 15% | 30% | 30% | 25% | **n=20** |
| New York City | 42nd Street | 15% | 40% | 20% | 25% | **n=20** |
| | Broadway Ave | 58% | 26% | 11% | 5% | **n=19** |
| | Manhattan Ave | 94% | 6% | 0% | 0% | **n=18** |
| Portland | 5th Avenue | 25% | 45% | 20% | 10% | **n=20** |
| | Weidler St | 40% | 50% | 5% | 5% | **n=20** |
| | Yamhill St | 5% | 40% | 20% | 35% | **n=20** |
| Seattle | 3rd Avenue | 0% | 38% | 33% | 29% | **n=21** |
| | Broadway | 19% | 56% | 13% | 13% | **n=16** |
| | Pike Street | 35% | 35% | 22% | 9% | **n=23** |
| Toronto | Bloor Street, West | 55% | 35% | 5% | 5% | **n=20** |
| | Queen Street, West | 74% | 26% | 0% | 0% | **n=19** |
| | Yonge Street | 45% | 20% | 5% | 30% | **n=20** |
| Vancouver | 4th Avenue, West | 45% | 50% | 5% | 0% | **n=20** |
| | Main Street | 45% | 35% | 10% | 10% | **n=20** |
| | Robson Street | 0% | 10% | 85% | 5% | **n=20** |
| | **TOTAL** | **37%** | **31%** | **16%** | **15%** | **n=697** |

# APPENDIX I

## *Primary Signage Type Percentage Breakdown*

| | | Primary Signage Type | | | | | |
|---|---|---|---|---|---|---|---|
| **City** | **Street** | **Awning Sign** | **Sidewalk Sign** | **Wall Sign** | **Window Graphic** | **No Signage** | **Total** |
| Austin | 5th Street | 3% | 3% | 61% | 0% | 32% | n=31 |
| | Congress Avenue | 14% | 0% | 33% | 33% | 19% | n=21 |
| | S Lamar Boulevard | 0% | 0% | 94% | 0% | 6% | n=31 |
| Calgary | 17th Avenue SW | 15% | 3% | 69% | 0% | 13% | n=39 |
| | 1st Street SW | 7% | 2% | 59% | 7% | 24% | n=41 |
| | 8th Avenue SW | 11% | 0% | 71% | 7% | 11% | n=28 |
| Chicago | Halsted Street | 21% | 0% | 33% | 17% | 29% | n=24 |
| | N Milwaukee Avenue | 8% | 0% | 67% | 13% | 13% | n=39 |
| | Sheffield Avenue | 24% | 0% | 24% | 15% | 36% | n=33 |
| Edmonton | 101 Street NW | 0% | 0% | 97% | 0% | 3% | n=30 |
| | 82 Avenue NW | 9% | 6% | 77% | 3% | 6% | n=35 |
| | Jasper Avenue | 9% | 2% | 70% | 9% | 9% | n=44 |
| Halifax | Barrington Street | 12% | 0% | 65% | 8% | 15% | n=26 |
| | Quinpool Road | 17% | 0% | 80% | 3% | 0% | n=30 |
| | Robie Street | 9% | 0% | 78% | 0% | 13% | n=32 |
| Los Angeles | 7th Street | 0% | 0% | 68% | 7% | 24% | n=41 |
| | Hill Street | 29% | 0% | 29% | 24% | 18% | n=34 |
| | Hollywood Blvd | 12% | 2% | 68% | 12% | 5% | n=41 |
| Montréal | Avenue du Mont Royal | 3% | 3% | 70% | 13% | 10% | n=30 |
| | Rue Beaubien E | 11% | 6% | 50% | 14% | 19% | n=36 |
| | Rue Sainte-Catherin | 12% | 0% | 67% | 12% | 8% | n=49 |
| New York City | 42nd Street | 24% | 0% | 63% | 5% | 8% | n=38 |
| | Broadway Ave | 15% | 0% | 52% | 26% | 7% | n=27 |
| | Manhattan Ave | 60% | 0% | 28% | 0% | 12% | n=25 |
| Portland | 5th Avenue | 7% | 0% | 37% | 11% | 44% | n=27 |
| | Weidler St | 13% | 4% | 75% | 0% | 8% | n=24 |
| | Yamhill St | 8% | 3% | 63% | 18% | 10% | n=40 |
| Seattle | 3rd Avenue | 12% | 0% | 59% | 16% | 12% | n=49 |
| | Broadway | 7% | 4% | 68% | 0% | 21% | n=28 |
| | Pike Street | 9% | 0% | 60% | 16% | 16% | n=57 |
| Toronto | Bloor Street, West | 3% | 0% | 97% | 0% | 0% | n=32 |
| | Queen Street, West | 3% | 3% | 80% | 10% | 3% | n=30 |
| | Yonge Street | 10% | 0% | 80% | 5% | 5% | n=60 |
| Vancouver | 4th Avenue, West | 17% | 0% | 75% | 3% | 6% | n=36 |
| | Main Street | 14% | 21% | 38% | 3% | 24% | n=29 |
| | Robson Street | 41% | 0% | 47% | 10% | 2% | n=59 |
| | **TOTAL** | **13%** | **2%** | **63%** | **9%** | **13%** | **n=1276** |

# APPENDIX J

## *Primary Signage Placement Percentage Breakdown*

| | | Primary Signage Placement | | | | | |
|---|---|---|---|---|---|---|---|
| **City** | **Street** | **Readable / Unobscured** | **Readable / Obscured** | **Unreadable / Unobscured** | **Unreadable / Obscured** | **No Signage** | **Total** |
| Austin | 5th Street | 13% | 48% | 0% | 6% | 32% | n=31 |
| | Congress Avenue | 33% | 33% | 5% | 10% | 19% | n=21 |
| | S Lamar Boulevard | 16% | 71% | 6% | 0% | 6% | n=31 |
| Calgary | 17th Avenue SW | 26% | 31% | 26% | 5% | 13% | n=39 |
| | 1st Street SW | 32% | 29% | 2% | 12% | 24% | n=41 |
| | 8th Avenue SW | 14% | 64% | 4% | 7% | 11% | n=28 |
| Chicago | Halsted Street | 0% | 67% | 0% | 4% | 29% | n=24 |
| | N Milwaukee Avenue | 8% | 74% | 0% | 5% | 13% | n=39 |
| | Sheffield Avenue | 27% | 36% | 0% | 0% | 36% | n=33 |
| Edmonton | 101 Street NW | 3% | 86% | 3% | 3% | 3% | n=29 |
| | 82 Avenue NW | 37% | 40% | 6% | 11% | 6% | n=35 |
| | Jasper Avenue | 11% | 68% | 0% | 11% | 9% | n=44 |
| Halifax | Barrington Street | 35% | 31% | 4% | 15% | 15% | n=26 |
| | Quinpool Road | 27% | 63% | 0% | 10% | 0% | n=30 |
| | Robie Street | 6% | 84% | 0% | 0% | 10% | n=31 |
| Los Angeles | 7th Street | 2% | 41% | 0% | 32% | 24% | n=41 |
| | Hill Street | 15% | 47% | 3% | 18% | 18% | n=34 |
| | Hollywood Blvd | 2% | 83% | 0% | 10% | 5% | n=41 |
| Montréal | Avenue du Mont Royal | 3% | 70% | 0% | 17% | 10% | n=30 |
| | Rue Beaubien E | 3% | 67% | 0% | 11% | 19% | n=36 |
| | Rue Sainte-Catherin | 12% | 73% | 0% | 6% | 8% | n=49 |
| New York City | 42nd Street | 5% | 55% | 0% | 32% | 8% | n=38 |
| | Broadway Ave | 0% | 74% | 0% | 19% | 7% | n=27 |
| | Manhattan Ave | 0% | 76% | 0% | 12% | 12% | n=25 |
| Portland | 5th Avenue | 26% | 30% | 0% | 0% | 44% | n=27 |
| | Weidler St | 29% | 58% | 4% | 0% | 8% | n=24 |
| | Yamhill St | 55% | 33% | 3% | 0% | 10% | n=40 |
| Seattle | 3rd Avenue | 33% | 41% | 6% | 8% | 12% | n=49 |
| | Broadway | 39% | 32% | 4% | 0% | 25% | n=28 |
| | Pike Street | 60% | 11% | 9% | 5% | 16% | n=67 |
| Toronto | Bloor Street, West | 0% | 91% | 6% | 3% | 0% | n=32 |
| | Queen Street, West | 10% | 77% | 0% | 13% | 0% | n=30 |
| | Yonge Street | 8% | 87% | 0% | 0% | 5% | n=60 |
| Vancouver | 4th Avenue, West | 3% | 81% | 0% | 11% | 6% | n=36 |
| | Main Street | 7% | 66% | 0% | 3% | 24% | n=29 |
| | Robson Street | 7% | 81% | 0% | 10% | 2% | n=59 |
| | **TOTAL** | **17%** | **58%** | **3%** | **9%** | **13%** | **n=1274** |

# APPENDIX K

## *Building Dwelling Percentage Breakdown*

| | | Building/Dwelling Type | | | |
|---|---|---|---|---|---|
| **City** | **Street** | **Detached** | **Mall / Complex** | **Terraced/ Semi-Detached** | **Total** |
| Austin | 5th Street | 55% | 0% | 45% | n=20 |
| | Congress Avenue | 6% | 0% | 94% | n=16 |
| | S Lamar Boulevard | 95% | 5% | 0% | n=20 |
| Calgary | 17th Avenue SW | 30% | 0% | 70% | n=20 |
| | 1st Street SW | 37% | 5% | 58% | n=19 |
| | 8th Avenue SW | 0% | 0% | 100% | n=20 |
| Chicago | Halsted Street | 56% | 0% | 44% | n=16 |
| | N Milwaukee Avenue | 0% | 0% | 100% | n=20 |
| | Sheffield Avenue | 70% | 5% | 25% | n=20 |
| Edmonton | 101 Street NW | 43% | 50% | 7% | n=14 |
| | 82 Avenue NW | 29% | 5% | 67% | n=21 |
| | Jasper Avenue | 21% | 16% | 63% | n=19 |
| Halifax | Barrington Street | 0% | 0% | 100% | n=18 |
| | Quinpool Road | 60% | 0% | 40% | n=20 |
| | Robie Street | 70% | 0% | 30% | n=20 |
| Los Angeles | 7th Street | 42% | 16% | 42% | n=19 |
| | Hill Street | 21% | 0% | 79% | n=19 |
| | Hollywood Blvd | 32% | 5% | 63% | n=19 |
| Montréal | Avenue du Mont Royal | 25% | 0% | 75% | n=20 |
| | Rue Beaubien E | 43% | 14% | 43% | n=21 |
| | Rue Sainte-Catherin | 5% | 47% | 47% | n=19 |
| New York City | 42nd Street | 10% | 0% | 90% | n=20 |
| | Broadway Ave | 0% | 0% | 100% | n=19 |
| | Manhattan Ave | 6% | 0% | 94% | n=18 |
| Portland | 5th Avenue | 10% | 0% | 90% | n=20 |
| | Weidler St | 75% | 15% | 10% | n=20 |
| | Yamhill St | 50% | 5% | 45% | n=20 |
| Seattle | 3rd Avenue | 14% | 0% | 86% | n=21 |
| | Broadway | 38% | 0% | 63% | n=16 |
| | Pike Street | 22% | 4% | 74% | n=23 |
| Toronto | Bloor Street, West | 0% | 5% | 95% | n=20 |
| | Queen Street, West | 0% | 0% | 100% | n=19 |
| | Yonge Street | 5% | 30% | 65% | n=20 |
| Vancouver | 4th Avenue, West | 0% | 0% | 100% | n=20 |
| | Main Street | 25% | 20% | 55% | n=20 |
| | Robson Street | 5% | 80% | 15% | n=20 |
| | **TOTAL** | **28%** | **9%** | **63%** | **n=696** |

# APPENDIX L

## *Use Type Percentage Breakdown*

| | | Use Type | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City | Street | Arts | Banking | Gov't / Inst. | Housing | Office | Restrnt. | Retail | Services | Vacant | Worship | Total |
| Austin | 5th Street | 29% | 6% | 0% | 0% | 13% | 16% | 0% | 19% | 16% | 0% | n=31 |
| | Congress Avenue | 14% | 10% | 0% | 0% | 14% | 14% | 14% | 19% | 14% | 0% | n=21 |
| | S Lamar Boulevard | 10% | 0% | 3% | 3% | 0% | 23% | 19% | 39% | 3% | 0% | n=31 |
| Calgary | 17th Avenue SW | 5% | 0% | 0% | 5% | 5% | 36% | 13% | 31% | 5% | 0% | n=39 |
| | 1st Street SW | 10% | 0% | 0% | 5% | 17% | 27% | 20% | 12% | 10% | 0% | n=41 |
| | 8th Avenue SW | 11% | 0% | 0% | 0% | 4% | 32% | 43% | 4% | 7% | 0% | n=28 |
| Chicago | Halsted Street | 4% | 0% | 0% | 8% | 0% | 17% | 21% | 25% | 25% | 0% | n=24 |
| | N Milwaukee Avenue | 0% | 8% | 0% | 5% | 3% | 13% | 33% | 31% | 8% | 0% | n=39 |
| | Sheffield Avenue | 9% | 0% | 0% | 42% | 0% | 18% | 3% | 27% | 0% | 0% | n=33 |
| Edmonton | 101 Street NW | 0% | 20% | 13% | 0% | 20% | 27% | 10% | 3% | 3% | 3% | n=30 |
| | 82 Avenue NW | 6% | 3% | 0% | 0% | 0% | 29% | 34% | 20% | 3% | 6% | n=35 |
| | Jasper Avenue | 5% | 9% | 2% | 0% | 14% | 39% | 7% | 18% | 7% | 0% | n=44 |
| Halifax | Barrington Street | 18% | 0% | 4% | 4% | 4% | 21% | 21% | 7% | 21% | 0% | n=28 |
| | Quinpool Road | 7% | 7% | 0% | 0% | 0% | 30% | 20% | 33% | 3% | 0% | n=30 |
| | Robie Street | 0% | 0% | 0% | 9% | 0% | 19% | 13% | 56% | 0% | 3% | n=32 |
| Los Angeles | 7th Street | 2% | 7% | 2% | 10% | 12% | 41% | 5% | 17% | 2% | 0% | n=41 |
| | Hill Street | 3% | 0% | 0% | 9% | 0% | 18% | 56% | 6% | 9% | 0% | n=34 |
| | Hollywood Blvd | 14% | 0% | 0% | 5% | 0% | 43% | 14% | 17% | 5% | 2% | n=42 |
| Montréal | Avenue du Mont Royal | 7% | 3% | 0% | 0% | 3% | 47% | 23% | 13% | 3% | 0% | n=30 |
| | Rue Beaubien E | 3% | 0% | 0% | 11% | 0% | 22% | 11% | 47% | 3% | 3% | n=36 |
| | Rue Sainte-Catherin | 14% | 2% | 0% | 0% | 4% | 41% | 8% | 27% | 4% | 0% | n=49 |
| New York City | 42nd Street | 18% | 5% | 0% | 3% | 5% | 18% | 37% | 8% | 5% | 0% | n=38 |
| | Broadway Ave | 0% | 4% | 0% | 4% | 4% | 7% | 74% | 7% | 0% | 0% | n=27 |
| | Manhattan Ave | 4% | 0% | 0% | 0% | 0% | 36% | 24% | 28% | 8% | 0% | n=25 |
| Portland | 5th Avenue | 7% | 0% | 0% | 22% | 19% | 15% | 11% | 11% | 15% | 0% | n=27 |
| | Weidler St | 4% | 0% | 0% | 8% | 0% | 38% | 17% | 29% | 4% | 0% | n=24 |
| | Yamhill St | 10% | 3% | 5% | 8% | 3% | 18% | 43% | 8% | 3% | 3% | n=40 |
| Seattle | 3rd Avenue | 2% | 0% | 4% | 6% | 2% | 16% | 33% | 29% | 8% | 0% | n=49 |
| | Broadway | 4% | 0% | 0% | 7% | 0% | 25% | 11% | 39% | 14% | 0% | n=28 |
| | Pike Street | 4% | 0% | 0% | 12% | 0% | 32% | 25% | 23% | 5% | 0% | n=57 |
| Toronto | Bloor Street, West | 3% | 6% | 0% | 0% | 0% | 50% | 25% | 16% | 0% | 0% | n=32 |
| | Queen Street, West | 0% | 3% | 0% | 0% | 0% | 37% | 33% | 20% | 3% | 3% | n=30 |
| | Yonge Street | 2% | 0% | 0% | 2% | 2% | 37% | 23% | 32% | 3% | 0% | n=60 |
| Vancouver | 4th Avenue, West | 0% | 3% | 0% | 0% | 0% | 8% | 75% | 11% | 3% | 0% | n=36 |
| | Main Street | 0% | 0% | 3% | 0% | 3% | 7% | 31% | 34% | 21% | 0% | n=29 |
| | Robson Street | 2% | 2% | 2% | 0% | 3% | 29% | 53% | 10% | 0% | 0% | n=59 |
| | **TOTAL** | **6%** | **3%** | **1%** | **5%** | **4%** | **27%** | **25%** | **22%** | **6%** | **1%** | **n=1279** |