

**MAKING SPACE FOR CHILDREN AND YOUTH IN
SURREY CITY CENTRE:
AN ASSESSMENT OF CHILD AND YOUTH FRIENDLY POLICY &
PRACTICE IN SURREY, BRITISH COLUMBIA**

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ABSTRACT

The City of Surrey’s Plan for the Social Wellbeing of Surrey Residents, adopted in 2006, identifies creating a child and youth friendly city as a priority. This research project examines Surrey’s City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines to understand how the City’s priority to be child and youth friendly is reflected in long term plans for Surrey City Centre.

The analysis is framed around five physical elements or “building blocks” of a child and youth friendly city: land use and density, public realm, parks and play space, housing, and transportation.

Through qualitative content analysis and interviews with City of Surrey staff, the research reveals the extent to which the needs of young people have been incorporated into plans for Surrey City Centre and discusses challenges associated with planning for families in what will be Surrey’s highest density neighbourhood.

Keywords: children; youth; families; cities; suburbs; urban planning; urban design; sustainability; Surrey, BC.

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INTRODUCTION

A child and youth friendly city is a city where the voices, needs, priorities and rights of children are an integral part of public policies, programmes and decisions. It is, as a result, a city that is fit for all.

- UNICEF

“We live in an urbanising world, in which more and more children and young people live in cities. In industrialized countries, a half to three-quarters of all children live in urban areas; in the developing world, the majority of children and youth will be urban in the next few decades. Yet across a wide range of indicators, cities are failing to meet the needs of young people and their families.” (UNESCO, 2009, ¶1). As urban densities continue to increase on a global scale, more children and youth, in both the developed and developing world, will be living in neighbourhoods with much higher densities than ever before. If high-density urban neighbourhoods are to successfully accommodate and support the healthy development of children, youth, and their families, the needs of the youngest and most vulnerable residents will have to be addressed and planned for accordingly.

Many municipalities, including the City of Surrey, British Columbia have developed child and youth engagement strategies that have provided children and youth from neighbourhoods across the City with opportunities to learn about, and contribute their ideas to the development of city plans, policies and strategies. Academic research on the subject of children, youth, and cities has focussed primarily on the importance of engaging young people in community planning. There has been less research, however, on how the needs of children and youth translate into municipal policies and planning practices that shape the urban environment. In the City of Surrey, and likely in other municipalities as well, there is an apparent need to move beyond merely engaging children and youth in the development of city plans, policies, and strategies to actually developing child and youth friendly policies that can facilitate the development of child and youth friendly cities.

Context: The City of Surrey, British Columbia

Incorporated in 1879, Surrey, British Columbia is a geographically expansive city with a total land area of 317.19 square km. It is situated between Delta (on the west) and Langley (on the east) and is approximately 23 km southeast of Metro Vancouver's most populous City, Vancouver (Figure 1). The City of Surrey is one of Canada's fastest growing municipalities and, with a population of 394,976, is British Columbia's second largest city (Statistics Canada, 2006).

Figure 1 Location Map - City of Surrey, British Columbia

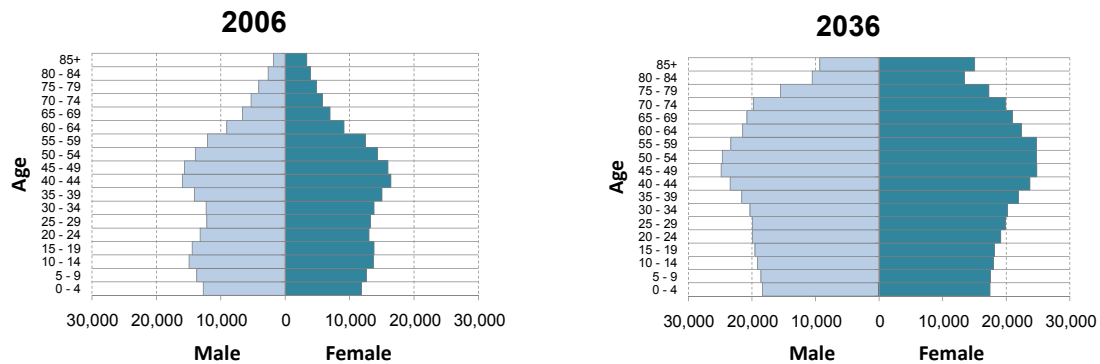


Source: <http://www.surrey.ca/Doing+Business/Business+Development/About+Us/Surrey/default.htm>, accessed April 17, 2010

Surrey's population is younger than that of most cities in British Columbia. In 2006, children and youth under 19 years of age comprised 27% of the City's population (City of Surrey, 2009a). "The median age in Surrey is almost four years younger than that of British Columbia. The numbers of children are growing, not declining as is the norm in most BC communities" (City of Surrey, 2008b, 5). Surrey is a city of young families and it is anticipated that this trend will continue due to immigration, job growth, and the availability of relatively affordable housing in the City (City of Surrey, 2008b). The City of Surrey projects that by 2036 the number of residents

19 years of age and under in the Surrey-White Rock area will have increased from 113,601 in 2006 to 146,761 in 2036 (Figure 2). In contrast, absolute numbers of young people in many other cities in British Columbia are expected to decline.

Figure 2 Surrey-White Rock Population Projections (2006-2036)



Source: City of Surrey, 2008a

While Surrey has commonly been known and often been criticized for being an unsustainable and placeless city of commuters with its sprawling suburbs, strip malls, large-lot single-family houses, and cul-de-sacs, the municipality is beginning to experience the densification of its existing town centres as well as the urbanization and revitalization of its City Centre. Surrey City Centre is projected to be an important urban centre and second downtown for Metro Vancouver and the Fraser Valley (The Georgia Straight, 2007; City of Surrey, 2008d). It is also a neighbourhood with a relatively high number of young people. According to the City of Surrey (2006a), 23% of City Centre residents are children and youth and the number of young people in the area is expected to grow not decline. “[W]hen compared to Downtown Vancouver and Metrotown [in Burnaby], there is a much larger proportion of children [under the age of 19] in Surrey City Centre than the other two [regional] town centres” (Bing Thom Architects, 2008, 153).

Surrey City Centre: A child and youth friendly urban neighbourhood?

Due to recent development trends in Surrey City Centre, and in anticipation of future growth and development pressure, the City is completing an update of its City Centre Plan. As a city of young families, it is critical that in the face of increasing urbanization and densification the City maintain its ability to attract and accommodate families. With families increasingly being “priced out” of neighbouring Vancouver due to the increased costs of living and home ownership, the critical role of Surrey as a city of families will likely continue to predominate (Cayo, 2009). The City’s Plan for the Social Wellbeing of Surrey Residents recognizes this and identifies creating a child and youth friendly city as a priority. In an effort to realize this priority, the City is currently developing a comprehensive Child and Youth Friendly City Strategy. As a planner at the City of Surrey, I have assisted with the development of this Strategy by completing background research on the physical elements of child and youth friendly cities, performing a review of existing child and youth friendly policy and practice in Surrey, and by consulting with the City’s children and youth.

The simultaneous development of Surrey’s City Centre Plan Update and Child and Youth Friendly City Strategy begs the question: How does the City of Surrey, a city with a higher proportion of young people than most British Columbian cities and a priority of creating a child and youth friendly city, plan for children, youth, and their families in neighbourhoods with increasing densities—neighbourhoods such as Surrey City Centre? If Surrey City Centre is to become a socially sustainable, diverse, and vibrant urban neighbourhood in which people can live, work, play and age in place, the City will need to ensure that children and youth are incorporated into regeneration and redevelopment plans for the area.

The UNICEF Innocenti Research Centre’s Child Friendly Cities (CFC) project defines child and youth friendly cities as those that are actively engaged in fulfilling the right of every young citizen to:

- Influence decisions about their city
- Express their opinion on the city they want
- Participate in family, community and social life
- Receive basic services such as health care and education
- Drink safe water and have access to proper sanitation
- Be protected from exploitation, violence and abuse
- Walk safely in the streets on their own
- Meet friends and play

- Have green spaces for plants and animals
- Live in an unpolluted environment
- Participate in cultural and social events
- Be an equal citizen of their city with access to every service, regardless of ethnic origin, religion, income, gender or disability

The City of Surrey (2009a) has broadly identified three dimensions of a child and youth friendly city that generally reflect UNICEF's definition: decision-making and governance, civic and community services, and physical environments.

Although each dimension is as important as the other and all are integral to the development of a complete child and youth friendly city, the following research paper concentrates on those elements of a city's physical environment that can contribute to making it child and youth friendly. The research focuses on the City of Surrey, British Columbia, exploring the extent to which overarching plans, policies and strategies, and more specifically, plans for Surrey City Centre, acknowledge and address the needs of the city's children and youth. The question that this research endeavours to answer, through an analysis of City policy and practice, is three-fold:

1. To what extent do Surrey's overarching plans, policies and strategies reflect the needs of Surrey's children and youth?
2. How have the needs of children and youth been articulated in plans for Surrey City Centre?
3. What are the challenges and potential obstacles associated with planning for children and youth in a high-density neighbourhood such as Surrey City Centre?

Although there are three dimensions of a child and youth friendly city, the scope of this research project is necessarily limited to the physical environment for two reasons. First, the primary data sources for this project, the Surrey City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines, are land use and urban design documents, and therefore, focus strictly on the physical environment. Second, Surrey City Centre is a culturally and socially diverse neighbourhood and issues related to the physical environment are much more universally relevant than issues related to service provision. Young people from different social and cultural backgrounds have very different needs with respect to services. Due to the complexity of the issues related to child and youth friendly service provision, it would not have been possible to fully address both the physical and social dimensions of a child and youth

friendly city in the context of Surrey City Centre within confines of this project. As a result, this project is limited in its ability to draw conclusions about the overall child and youth friendliness of both Surrey and Surrey City Centre.

The discussion begins with an overview of the multi-faceted relationship between young people and urban environments. It then elaborates on the linkages between child and youth friendly cities and overall community sustainability and livability. This is followed by a discussion of current perspectives on child and youth friendly cities including an overview of the physical elements or “building blocks” of child and youth friendly environments. An overview summary of Surrey’s recently completed high-level policies, plans, and strategies is provided to demonstrate how policies that benefit children and youth have been incorporated into broader City policy since the adoption of Surrey’s Plan for the Social Well-Being of Surrey Residents. This is followed by an in-depth assessment of the child and youth friendliness of Surrey’s recently approved City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines.

The research describes how the City of Surrey has begun to integrate child and youth friendly planning principles and policy into overarching policies, plans, and strategies that guide development in the City. It also reveals that while Surrey’s City Centre Plan Update and Interim Urban Design Guidelines have incorporated many of the physical building blocks of child and youth friendly cities, there are a number of challenges with respect to the physical environment that will need to be further addressed in order to ensure that this neighbourhood is able to fully accommodate children, youth, and their families. In light of the demonstrated similarities between child and youth friendly cities and overall community sustainability, the research speculates that the child and youth friendly planning framework may be leveraged to implement sustainable development in Surrey. The research concludes with a number of recommendations for policy-makers and practitioners in the City of Surrey, and elsewhere, to consider in developing child and youth friendly urban neighbourhoods.

CONCEPTUAL FRAMEWORK

The issue of child and youth friendly cities is closely intertwined with concepts of urban social sustainability and inclusivity, child and youth development, young people’s mobility and independent access to their neighbourhoods, and overall community sustainability. Academic research that links these concepts with child and youth friendly cities, in conjunction with the growing body of literature on child and youth friendly physical environments, provides one component of the conceptual framework for this research paper. The other, possibly more integral component, derives from four reports authored by the City of Surrey that summarize the ideas and perspectives of Surrey’s children, youth, and their parents as they were articulated in City-led consultations conducted between 2007 and 2009. These consultations were held in conjunction with the development of the City’s Sustainability Charter, Child and Youth Friendly City Strategy, and at two youth conferences designed to give young people from the community of Whalley the opportunity to “speak up” about the future of Surrey City Centre¹. Cumulatively, these consultations gave young people from neighbourhoods across the City, and from diverse social and cultural backgrounds, a venue for sharing their ideas about city building. Together, these sources provide complimentary perspectives on what is meant by “child and youth friendly city” with the perspectives of Surrey’s youngest residents and their parents serving to substantiate that which academics have identified as child and youth friendly.

Urban social sustainability and inclusivity

Urban social sustainability has been defined as “a process of urban development, supported by policies and institutions that ensure harmonious social relations, enhance social integration and improve living conditions for all groups” (Seasons et al, 2004, 22). A socially sustainable and inclusive society “integrates all of its members into the civic, social, and economic life of society” (Seasons et al, 2004, 22). Principles of social sustainability include

¹ Children and youth were also consulted in conjunction with the development of the Surrey City Centre Plan Update; however, the results of these consultations are not publicly available and therefore could not be used to inform this project.

equity, social inclusion and interaction, security, and adaptability (City of Vancouver, 2007). For cities to be socially sustainable they should support the needs and requirements of everyone, including children and youth, in all of these areas. They should, for instance, provide all young people with *safe* and *equitable* access to their neighbourhoods and opportunities for *interaction* with their physical and social environments regardless of age, ability, gender, and social and cultural background. Socially sustainable cities must also be able to *adapt* to the diverse and changing needs of young people as they grow and develop.

Historically, “urban planning policies, processes and other practices assumed a single public interest. In this way, they did not always address the full spectrum of human needs nor consider the social, economic and political barriers facing individuals and groups” (Seasons et al, 2004, 22). Many socially vulnerable groups, including children and youth, have unique needs that have not adequately been addressed in planning policy and practice. “Young people have in large measure been excluded historically from urban environmental design and planning processes; they have not been included in the definition of ‘The Public’” (Bridgman, 2004, 180). This is in large part due to the fact that children and youth are frequently viewed as citizens of tomorrow and the future beneficiaries of the policies of today (Tranter and Pawson, 2001). Bridgman (2004), however, argues that “young people are not future citizens—they are active citizens here and now” (180). As such, their needs should be addressed in the same way as other vulnerable groups.

While there is a dearth of literature that details the relationship between child and youth friendly cities and urban social sustainability, researchers are beginning to make the link between socially sustainable cities and those that are hospitable and welcoming of children and youth. Tranter and Pawson (2001) argue that the “boundaries between ‘adult’ and ‘child’ should be broken down to enhance the equity needed for sustainability” (29). They also suggest that “if children were carefully considered and involved in the planning process, cities could become more environmentally and socially sustainable” (45). Randolph (2006) suggests that “how we plan for the use of higher density housing by families will critically determine how well the future high-density city performs in terms of its social sustainability and... livability for the whole community” (3). Finally, Anna Kajumulo Tibaijuka, the Executive Director of UN Habitat, claims that “the state of the young in any city is the litmus test for the city's level of sustainability and vibrancy” (Ragan et al, 2004).

The values of social sustainability and inclusivity have also been addressed in discussions of urban regeneration and urban change (Clutterbuck and Novick, 2003). Research regarding community perspectives on the social issues facing Canadian cities has revealed that Canadians believe that urban areas do not adequately provide for children and youth (Clutterbuck and Novick, 2003). When asked to define how they would describe an “inclusive community”, participants in one research project used words such as integrative, diverse, equitable, accessible, participatory, and safe. When asked to comment on the social issues that were facing their respective communities, participants identified, among other issues, concern with regard to “the state of inclusion and wellbeing of children, youth, and families” (Clutterbuck and Novick, 2003, 31). Participants felt that “too many children and youth were being left behind, and too many families were living without the security of basic amenities and resources” (Clutterbuck and Novick, 2003, 31). Further, they believed that “urban communities had limited capacities to support the diverse and common requirements of vulnerable families, and the healthy development of all children and youth” (Clutterbuck and Novick, 2003, 31).

Cities and child and youth development

There has been considerable research regarding the role that cities and neighbourhoods play in child and youth development. Tranter and Pawson (2001) argue that, “children’s local environments help shape their level of cognitive development, their social and motor skills, and their personal identity” (27). This claim has been echoed by academics in the fields of geography, urban planning, sociology, and psychology (Lennard and Lennard, 2000; Leventhal and Brooks-Gunn, 2000; Curtis et al, 2004; Irwin et al, 2007; Gill, 2008). Despite this, as Blinkert (2004) notes, “very little has been done to show how spatial conditions of childhood have changed and have thus produced what is arguably an entirely new type of childhood” (100). This, he suggests, “is a serious problem because the situation of children in cities is heavily influenced by changes concerning their spatial environment” (100).

For children and youth to fully benefit from the socialization and development opportunities afforded by their environments, adequate independent access to appropriate urban spaces, places, and people is essential. Engwicht (1992) notes that:

The freedom to explore local neighbourhoods is probably the key ingredient in children developing a feeling that they belong to a neighbourhood, a place. It not only gives them an opportunity to develop relationships with people of all

ages who live in their neighbourhood, it gives them an opportunity to develop a relationship with the placeness of their physical environment. Robbing children of a sense of place robs them of the very essence of life (39).

Likewise, Lennard and Crowhurst Lennard (2000) argue that the isolation and segregation of children in cities “has meant a loss of freedom for children to explore their neighbourhood and city as they get older, their exclusion of varied contacts with diverse adults in a variety of settings, and their consequent inability to learn from personal experience, so essential to social emotional development” (9). And Malone (2006) suggests that if young people are not able to function relatively independently as they grow and develop, they will:

1. Be limited in their capacity to expand their environmental literacy;
2. Lack the experience of autonomy and consequently also lack self-esteem and self-confidence;
3. Lack the opportunity, due to restricted mobility, to make use of the diversity of people, environments, activities, resources and stimuli that the city offers; and
4. Be limited in their exposure to risks and challenges that would allow them to grow and become “streetwise”.

The changing nature of young people’s access to their neighbourhoods

Interest in creating child and youth friendly cities relates largely to the belief that children and youth have increasingly been marginalized and denied adequate independent access to their neighbourhoods due to a variety of social, psychological, and physical barriers (Gaster, 1991; Tranter and Pawson, 2001; Hart, 2002; Gill, 2008). Hart (2002), for example, argues that as cities grow and develop, there is a tendency for children to be increasingly contained. Similarly, Tranter and Pawson (2001) note that, “while governments and planners in many parts of the world are beginning to consider children’s needs, children still represent a disadvantaged group in terms of access to their local environment” (28).

Research suggests that urban children and youth have been increasingly cut off and excluded from using and enjoying their neighbourhoods over the last century. Gaster’s (1991) research with adults who grew up in one New York City neighbourhood looked at changes in children’s use of public space between 1915 and 1976. The research revealed increases over time in the age at which children were first allowed outdoors without supervision, decreases in the number and quality of places used by children, increases in the number and nature of environmental obstacles, increases in the number and nature of parent imposed obstacles, and

increases in the number of professionally supervised activities undertaken. It also showed that “children’s freedom of access to their neighbourhood has declined substantially over the generations” (Gaster, 1991, 84). This pattern has been attributed to “the erosion of the number and variety of places that children can or may visit and the increasingly adult-directed nature of outdoor play” (Gaster, 1991, 83).

Similarly, Gill’s (2008) research suggests that, “for the past 30 years or more, childhood prior to adolescence has been marked by shrinking freedom of action for children, and growing adult control and oversight” (Gill, 2008, 136). He attributes this pattern to wider social changes including increases in car ownership and use which has resulted in busier streets that “can be unfriendly, uninviting places for pedestrians of all ages” and reductions in “both the quality and quantity of local green space” (Gill, 2008, 136). The effect of these among other social changes has been a decline in the amount of contact and experience that children and youth have with people and places outside of their immediate environments. This decline “cuts across socioeconomic, cultural and gender divides. Its effect is to create an experiential deficit in the kind of self-directed, loosely supervised play activities and everyday adventures with friends, peers and adults that feature so prominently in the childhood memories of older generations” (Gill, 2008, 137).

According to Gill (2008), young people with comparatively high levels of everyday spatial freedom have the highest levels of social, physical, and mental wellbeing. Consequently, he argues for a space-oriented approach to children’s wellbeing, one that “would place a strong emphasis on easy access to welcoming, accessible parks, squares and public spaces” (Gill, 2008, 139). This, he argues, would contribute not only to children’s wellbeing but also to community sustainability and cohesion:

Providing better opportunities for children to play in green outdoor places near their homes can help them to grow up more mindful of their impact on the planet. Allowing and encouraging children to experience frequent, casual, loosely supervised contact with neighbours and relative strangers can foster their respect for their neighbourhood and the people in it. Welcoming children into the community makes them visible participants in community life, which will contribute to their wellbeing as well as that of the community they live in (Gill, 2008, 141).

Similarly, Tranter and Pawson (2001) argue that the broader community will likely benefit from making cities more accessible to children and youth.

If more children use the streets as pedestrians, this may help to generate a stronger local community. The presence of children is an effective way of breaking down the natural reserve between adults. Streets become more interesting, more livable and more communal places. This can be self-reinforcing: if more pedestrians use the streets, this in itself creates a situation that is far more conducive to children's independent access to the local neighbourhood and beyond (30).

A space-oriented approach to young people's wellbeing is complex and requires attention to a variety of urban planning and design issues. A space-oriented approach considers how the physical environment of urban spaces can be made more child and youth friendly. It explores how cities can be designed in such a way that obstacles to independent access may be reduced. And it reveals the building blocks of a child and youth friendly city and how can they make cities more sustainable and better for everyone.

Child and youth friendly cities and overall community sustainability

Many academics and practitioners have suggested that cities that are designed to be child and youth friendly not only benefit young people and their families, in many ways they also benefit the community as a whole. Child and youth friendly cities are arguably more sustainable than cities that are inhospitable to young people (Chawla, 2002; Tranter and Pawson, 2001; Ragan et al, 2004). It has been argued that "local governments that research, adapt, and utilize child and youth friendly policies invest in the long-term health and sustainability of their cities" (Ragan et al, 2004). According to Chawla (2002), "societies' investment in their children is the strongest reason for a commitment to sustainable development..." (13).

When cities are accommodating of children and youth, the result can be a reduction in the urban-suburban polarization, and consequently the sprawl, that characterizes many North American cities. Randolph (2006) argues that urban environments that do not take the needs of children and youth into account result in the creation of polarized cities, with high-density urban neighbourhoods exclusively for childless households and low density suburbs catering specifically to families. Urban neighbourhoods that are child and youth friendly provide a viable, and more sustainable option to families with children, many of who currently migrate to the suburbs in search of affordable housing in neighbourhoods perceived to be more conducive to raising children. Ensuring that there is a place for young people and their families in urban

neighbourhoods can result in the creation of more diverse cities with the added benefit of reducing sprawl.

Child and youth friendly cities are also more compact with an emphasis on the completeness of the local community. “Given their relative lack of mobility and their dependence on immediately accessible resources, children draw attention to development at the community level” (Chawla, 2002, 14). The result is more compact, accessible, and livable communities that provide better access to services, amenities, and transportation. “Due to increased density, the number, variety and quality of public and private services can be greater in terms of cultural, commercial, recreational, health, educational, psychological support, religious, and municipal services” (Malone, 2006, 27).

Cities that are child and youth friendly tend to be not only more complete and compact but more diverse and vibrant as well. Children and youth inject vitality and diversity into urban neighbourhoods creating more dynamic, intergenerational communities and more socially sustainable neighbourhoods. Child and youth friendly environments tend to reflect universal design principles as well. “There is a similarity between what makes a community family-friendly and built environments that are conducive to aging in place. Elderly advocates are interested in transportation, parks and other places for recreation, walkability, safety, crime, design, and the need for different types of housing, which are all important aspects to family-friendly communities” (Israel and Warner, 2008, ¶ 12). If the focus is on creating communities that benefit children and youth, the result will likely be cities that are better for everyone.

The link between cities that are child and youth friendly and those that are more livable for everyone has been well established. Lennard and Crowhurst Lennard (2000) argue that, “to design a city that promotes the wellbeing of children improves the city’s livability for other groups as well” (15). Likewise, former City of Vancouver Director of Planning, Larry Beasley suggests that, “if you design an environment for children, it will work for everyone” (Wilkinson et al., 2002, iv). Enrique Peñalosa, the former mayor of Bogotá, Columbia echoes this sentiment, arguing that “children are a kind of indicator species. If we can build a successful city for children we will have a successful city for all people” (Gilbert and O’Brien, 2009, 4). Supporting the development of children and youth through the creation of child and youth friendly neighbourhoods is essential to ensuring improved outcomes for children and youth and a better future for everyone.

Current perspectives on child and youth friendly cities

There has been considerable research on the elements of child and youth friendly cities from a variety of academic and non-academic perspectives. Academics have considered both the individual components and the broader implications of child and youth friendly cities. Some municipalities have incorporated child and youth friendly elements into their various plans and strategies. The Society for Children and Youth of BC has produced community guides for creating child and youth friendly environments. And the City of Surrey has produced several reports documenting what children and youth in Surrey along with their parents have identified as key elements of a child and youth friendly city.

Researchers with interests in universal or inclusive design have critically examined questions of inclusive design and planning to encourage children and youth's spatial mobility in public spaces (Haider, 2007). Inclusive design "is an approach to environment design that emphasizes use by as many people as possible regardless of age, ability, and economic, or ethnic background; it is therefore crucial to focus on how environments are conducive to children living together with other generations" (Haider, 2007, 83). Children and youth tend to be more invisible and/or unwelcome than other groups in public spaces including open areas and streets. This is problematic because these spaces have historically "contributed to the public realm by providing engaging play and gathering spaces for all ages" (Haider, 2007, 83).

It has been suggested that in order to be child and youth friendly, public spaces should be multi-sensory and encourage exploration (Haider, 2007). They should also be flexible, allowing the spaces to be manipulated and used for a variety of activities. They should also promote social interaction or sociality. Sociality "has a strong relationship to children's dependent and independent spatial mobility in contemporary cities, as public spaces that promote social interaction are generally safe and parents are more likely to accept the value of these places for children and youths" (Haider, 2007, 87).

Not unlike many municipalities that have engaged children and youth in planning processes, academics have also sought to understand the planning preferences of children and youth through direct consultation (Talen and Coffindaffer, 1999; O'Brien, 2003). Talen and Coffindaffer's (1999) survey of 248 elementary school children, kindergarten through second grade, revealed a preference among children for mixed land uses and for places associated with activity and social interaction. Children in this study also tended to favour diversity over

homogeneity and accessibility rather than privacy. One of the key and most relevant findings of this research was that children's neighbourhood preferences are quite compatible with many of the characteristics of relatively high-density urban neighbourhoods (Talen and Coffindaffer, 1999).

Similar research has assessed young people's perspectives on the neighbourhoods in which they live (O'Brien, 2003). In an effort to understand what makes cities child and youth friendly and to facilitate future child and youth friendly urban regeneration, children living in London, England were consulted about their views on their neighbourhoods. When children and their parents were asked to comment on what could make their city could be more child and youth friendly, they made the following suggestions:

- More powerful street lights that are closer to the ground
- Lighting up of passage ways
- Regular street cleaning
- Walkabouts with different children prior to new developments
- Removal of child unfriendly notices in parks (e.g. "no games")
- Consulting with girls to enhance the attractiveness of parks to girls
- Sensitivity to materials used in defensive structures for parks and buildings (e.g. hostile and sometimes dangerous fences and barricades)
- Play spaces closer to home
- Regular neighbourhood-based and central free access for children's leisure events
- Designing children's spaces within domestic dwellings

The research concluded that these practical steps, if implemented, "would begin to enhance the quality of life for urban children and...reduce divisions between children living in cities" (O'Brien, 2003, 160). While some academics and practitioners have more generally considered the relationship between children, youth, and their environments, others have begun to look more specifically at what might be called the individual building blocks of child and youth friendly cities.

The building blocks of child and youth friendly cities

Creating a child and youth friendly environment entails "designing a city that physically supports the developmental needs of children and youth" (City of Surrey, 2009a, 4). The following discussion takes into account issues related to land use and density, public realm, parks and play space, housing, and transportation—the physical "building blocks" of a child and

youth friendly city. Each section represents the perspectives of academics, practitioners, and most importantly, children and youth from across Surrey.

Building block #1 – land use and density

It has been argued that compact mixed-use urban neighbourhoods provide increased opportunities for children and youth to experience independent access to urban life (Freeman, 2006). Lower density, single-use, suburban neighbourhoods, conversely, have been linked with isolating young people and restricting their independent mobility.

What is not so good for children is the complete loss of autonomy they suffer in suburbia. In this environment where all activities are segregated and distances are measured on the odometer, a child's personal mobility extends no farther than the edge of the subdivision. Even the local softball field often exists beyond the child's independent reach.

The result is a new phenomenon: the 'cul-de-sac kid' who lives as a prisoner of a totally safe and unchallenging environment. While this state of affairs may be acceptable, even desirable, through about age five, what of the next ten or twelve years? Dependent always on some adult to drive them, children are unable to practice being adults. They cannot run so simple a household errand as picking up a carton of milk. They cannot bicycle to the toy store and spend their money on their own. They cannot drop in on mother at work.

Most cannot walk to school. Even pickup baseball games are a thing of the past, with parents now required to arrange car-pooling with near-military precision, to transport the children at the appointed times. Children are frozen in a form of infancy, utterly dependent on others, bereft of the ability to introduce variety into their own lives, robbed of the opportunity to make choices and exercise judgement (Duany, Plater-Zyberk, Speck, 2000, 116-117).

This type of isolation has been linked with a number of negative consequences for children and youth including discouraging interaction and contact with the surrounding neighbourhood, increasing exposure to the dangers associated with automobiles, and contributing to a sedentary lifestyle (Gleeson, 2006). As noted above, the isolation of low density, single-use, suburban neighbourhoods coupled with the typical lack of public transportation in suburbia require that children and youth be chauffeured virtually everywhere by their parents. In contrast, "children growing up within dense mixed-use urban fabric are likely to be within walking distance of school, friends' homes, movie theatres, shops, cafes, libraries, museums, parks and other places where they can hang out with friends" (Lennard and

Crowhurst Lennard, 2000, 23). It has been suggested that for neighbourhoods to be child and youth friendly, “[s]chools must be close enough to where children are living that walking or bicycling to school is possible” (Lennard and Crowhurst Lennard, 2000, 68). Higher density, mixed-use neighbourhoods tend to facilitate better access to schools than lower density suburban neighbourhoods. Compact and higher density neighbourhoods with mixed uses also provide better access to important family services including childcare and healthcare (Lennard and Crowhurst Lennard, 2000; Pawson, 2007).

It appears that Surrey’s children and youth agree in large part with what academics and practitioners have identified as child and youth friendly land use and density. Participants in the City of Surrey’s Youth Sustainability Forum² expressed concern and frustration with respect to the degree of sprawl in the City and indicated a preference for higher density development, a more walkable community, and homes closer to places of work. They also wanted to see less strip mall-type development and fewer large parking lots, which they referred to as an “ugly place for pedestrians and shoppers” (City of Surrey, 2007a, 2). The youth noted an overall preference for a less auto-oriented community, shorter blocks, more shops, smaller building footprints, more mixed-use buildings, corner stores, and a mix of small and large format businesses (City of Surrey, 2007a).

Children and youth who participated in Surrey’s Child and Youth Friendly City Strategy consultations³ also expressed a dislike for the sprawling nature of the city and indicated a preference for more compact walkable neighbourhoods: “Young people and parents value a community where the distance between amenities encourages walking” (City of Surrey, 2009b, 2). Young people also noted an association between the amount of perceived crime in a neighbourhood and the degree to which a neighbourhood is isolated from the rest of the City.

² Surrey’s Youth Sustainability Forum was held in conjunction with the City’s Sustainability Fair on June 9th 2007. The Fair provided Surrey residents with an opportunity to contribute their ideas to the development of the City’s Sustainability Charter. The results are summarized in a report available on the City of Surrey’s website.

³ As part of the community consultations for the City of Surrey’s Child and Youth Friendly City Strategy, approximately 1050 children, youth, and parents from across Surrey had the opportunity to tell the City what they believed would make Surrey more child and youth friendly. The results are summarized in a report available on the City of Surrey’s website.

With respect to Surrey City Centre specifically, youth who participated in Surrey's "Youth Speak Up!" forums⁴ said they wanted "City Centre to be a social and entertainment hub—one location for entertainment, shopping, and social gathering" (City of Surrey, 2007b, 6). They expressed a desire for City Centre to be a complete community with easy access to places like movie theatres so that they wouldn't have to travel to other parts of the City to have fun.

Building block #2 – public realm

A public realm that is child and youth friendly is multi-functional and versatile allowing for a variety of both structured and unstructured activities. "In well-designed, multi-functional, visually enclosed, safe and traffic calmed public spaces children and young people are able to participate in a rich and varied social life..." (Lennard and Crowhurst Lennard, 2000, 37). For children and youth to be safe in public space, spaces should be well lit and there should be sufficient passive surveillance from windows or balconies and "eyes on the street" (Tranter, 2007; Jacobs, 1961). Surrounding buildings should generate social life at street level; appropriate surrounding uses include shops, cafes, restaurants, workshops, and commercial with residential above. Windows should face public spaces and building facades at the street level should be attractive and permit a high degree of interaction between inside and out (Lennard and Crowhurst Lennard, 2000). Spaces such as these permit people to "supervise the incidental play of children and assimilate children into city society...in the course of carrying on their other pursuits" (Jacobs, 1961, 82).

Focal points or anchors in the public realm are also important for young people. "Freestanding fountains, sculptures, planters, or bollards – objects that offer a place to sit, to lean, to play, to climb on – function well as anchors" (Lennard and Crowhurst Lennard, 2000, 40). Sculptures and public art pieces that are designed with use in mind can offer both play and learning opportunities, functioning as climbing structures while informing young people of local culture and/or histories (Lennard and Crowhurst Lennard, 2000; UDAP, 1999). Areas for sitting, both formal and informal, are also important for children, youth, and their guardians. Parents and guardians need places from which they can comfortably oversee their children's activities.

⁴ [You]th Speak Up! is an annual day-long forum in which youth from Whalley, the neighbourhood surrounding Surrey City Centre, are given the opportunity to "speak up" about what they would like to see in Whalley and Surrey City Centre. Summary reports from the 2007 and 2008 forums are available on the City of Surrey's website.

Informal seating is especially important to youth who need legitimate spaces to meet and “hang out”. “Steps, fountains, balconies and ledges, therefore, should be incorporated in such a way that they support young people” (Lennard and Crowhurst Lennard, 2000, 43).

Enclosure, or the feeling of enclosure, can also contribute to the overall safety and security of public space for children and can make supervision of children a much easier task. “Parents with children feel more comfortable allowing their child to roam within an enclosed, traffic free space; and toddlers have the opportunity to explore small distances alone, knowing that the parent is still within sight” (Lennard and Crowhurst Lennard, 2000, 43). Most importantly, public spaces should be located close to where children and youth live and should be safely and easily accessible by foot, bicycle, or public transit. The city needs to be structured as “a city of short distances” to accommodate the relative lack of mobility that children and youth experience (Lennard and Crowhurst Lennard, 2000).

A child and youth friendly city should also be legible, navigable, and meaningful. “It must be possible for children to have a sense of where the city center is, where the city’s boundaries are, and to know where they live in relation to these two reference points, and how to get from one location to the other. The city as a whole must have a shape that is understandable; each neighbourhood within the city must be identifiable, with its own characteristic physical landscape and landmarks” (Lennard and Crowhurst Lennard, 2000, 32). The preservation of historic landmarks and the development of new ones can help to retain and/or create meaning increasing the legibility of a city and hence, its navigability as well. “Children’s social and emotional development is enhanced in cities that provide a meaningful physical environment that addresses them, that stimulates their imagination and fantasy, and that provides a legible environment for them to explore and make their own” (Lennard and Crowhurst Lennard, 2000, 36).

Most of what Surrey’s children and youth have said about Surrey’s public realm relates to their desire for attractive, safe, and vibrant public spaces. Participants in the City of Surrey’s Child and Youth Friendly City Strategy consultations noted that they felt safer in public spaces when there were more people around, when their parents were nearby, and when public spaces were clean and inviting. They also expressed a need for better safety at night. In a survey conducted by the City of Surrey, 43% of youth said they would feel safer in public space if there was better visibility (e.g., lighting), 24% said that having more people around would make them

feel safer, 20% wanted more police or security presence in public space, and 11% cited various other measures that would make them feel safer in public space. In general, young people who participated in these consultations wanted their public realm to be cleaner, friendlier, more beautiful, and more inviting (City of Surrey, 2009b).

With respect to Surrey City Centre, Surrey's youth recommended replacing the abundance of grey concrete in the area with grass, plants, foliage, and colour (City of Surrey, 2008c). They felt that community-based art would improve public spaces and discourage graffiti. Youth also wanted public spaces in Surrey City Centre to be safer with better lighting. They wanted comfortable places to gather outside, and covered areas with benches, washrooms, and phone booths (City of Surrey, 2007b; City of Surrey, 2008c).

Building block #3 – parks and play spaces

Play is a very important aspect of childhood development. A child and youth friendly city should provide opportunities for a variety of structured and unstructured play activities for children and youth of all ages in close proximity to their homes. Children and youth “learn by doing”, and play is the primary way that children become acquainted with their environment (Tranter and Pawson, 2001; Furlong and Cunningham, 2007). In a child and youth friendly city, play should not be limited to playgrounds; children and youth should be able to play safely, spontaneously and freely throughout their community (Tranter and Pawson, 2001; Walsh, 2006). It has been argued that “[s]andboxes, swings and slides inside chain link fences are no substitute for playing on a traffic free street where children can be part of the everyday life of the city” (Lennard and Crowhurst Lennard, 2000, 118). Research has consistently shown that children and youth would rather play in vacant lots, streets, sidewalks, and back alleys than in segregated playgrounds (Bartlett et al, 1999). “Places that are attractive for children should give them an opportunity to shape or create something according to their own ideas...Conventional playgrounds are far from realizing this principle” (Blinkert, 2004, 106). It has been argued that “[o]ne should be able to play everywhere, easily, loosely, and not forced into a 'playground' or 'park'. The failure of an urban environment can be measured in direct proportion to the number of playgrounds” (Ward, 1990, 73).

“Children have the creative capacity to turn all objects into elements in their games, and a good strategy is to design the city to be available for their play, rather than to herd children

together into fenced off playgrounds” (Lennard and Crowhurst Lennard, 2000, 41). Simple design elements such as paving stones, for example, can stimulate children’s imaginations and provide opportunities for hopscotch games. Other design elements such as planter edges, low walls, rails, ledges, pedestals, columns, and lamps, if designed appropriately, can all be used for children’s play (Lennard and Crowhurst Lennard, 2000).

Access to nature is an important factor in healthy child development. Natural green spaces provide important play opportunities that cannot be found in other environments. In natural environments children can manipulate their surroundings through activities such as fort construction, clearing the ground or building a dam in a stream (City of Surrey, 2009a). In urban areas children and youth infrequently have access to natural areas. This, however, can be remedied if parks are “roughed up” through the preservation of urban wilderness, the use of wild grasses, the planting of hardy species that can withstand children’s play activities, and the daylighting of creeks (Walsh, 2006; Blinkert, 2004; Bartlett et al, 1999). The preservation of small pockets of land in a “natural” state provides children with access to a small yet meaningful amount of wild space (Yates, 1995).

It is important that spaces designed for structured play offer children and youth diverse and challenging play opportunities. “Today there is a better understanding of child development, which results in more age/skill appropriate designs. They are not just scale related but skill related and interest related. They include quiet focused play (gazebo, stage), places that promote imagination and pretend play (elevated platforms, caves, mazes), areas for physically active play such as digging, open-ended fixed equipment, open space (ball games), areas for social interaction (seating, hidey holes) and areas to manipulate parts so as to work through an idea (sandpit, creek, nature area)” (Walsh, 2006, 147). Play structures are still an important component of parks and offer opportunities for semi-structured play activities. Water play is also very appealing to children, especially younger children. Fountains, paddling pools, waterparks, and streams should be accessible to children in urban play spaces (Lennard and Crowhurst Lennard, 2000; Blinkert, 2004).

Community gardens can also provide unique and educational play opportunities for children and youth of all ages. “Community gardens are built by groups of residents on unused city land to grow vegetables and flowers. They are often special places, reflecting a great deal of community collaboration. Because they are small, there can be many of them and they can offer

safe play opportunities close to home. The local gardeners offer protective eyes and serve as excellent non-directive role models in their care and tending of the gardens and their cooperative management of the space” (Hart, 2002, 146).

Youth participating in Surrey’s Youth Sustainability Forum highlighted the importance of preserving the City’s natural areas and creating additional “green areas”. They noted the following as important to them:

- ecological and recreational green networks;
- riparian setbacks;
- terrestrial and amphibian road crossings;
- clean parks with lots of trees and biodiversity;
- more community gardens, especially near schools and under the skytrain; and
- community compost sites.

Children and youth who participated in City consultations for the Child and Youth Friendly City Strategy noted the importance of preserving trees and green space in the City of Surrey. When asked to draw pictures of their favourite places to play, very young children under the age of five drew water parks, playgrounds, trees, natural spaces, places they can ride their bikes, and specifically noted Surrey’s Bear Creek Park as a favourite play place. Children between the ages of six and twelve identified playgrounds, water parks, and pools as important to them. When asked what would make Surrey’s parks better, young people noted that they wanted more parks, cleaner parks, and more community gardens. Youth and parents identified a need for more accessible parks closer to home. Youth specifically noted that “parks that are too out of the way, with few people, are the most likely to be unsafe” (City of Surrey, 2009b, 16). Parents who took part in these consultations had a number of suggestions for making Surrey’s parks more child and youth friendly including improving neighbourhood walking access to parks and increasing the number of water features and shallow pools.

Surrey’s young people also identified natural areas as important to them. Youth said that “access to nature is important, they enjoy being able to access forests and treed areas, access to nature encourages a healthy lifestyle, and they enjoy walking on pathways and trails in natural areas” (City of Surrey, 2009b, 17). Young people suggested that City trails would be safer if there was better lighting and that they would like to see green spaces linked by trails. Younger children between the ages of six and twelve also noted a preference for natural spaces. They said that “exploring the forest is a favourite activity; they like to play games in natural areas that

they can't play in other places; creeks and water are of particular interest; and they get to see animals and bugs in the woods" (City of Surrey, 2009b, 17).

With respect to Surrey City Centre, youth at Surrey's [You]th Speak Up! Forum also expressed a desire for more natural space in their community. They indicated that trails, open space, and nature are good things. They wanted more trees, greenery, and (well-lit) greenways for pedestrians and bikes. They specifically wanted greenways that connect City Centre to area parks including Bear Creek Park and Green Timbers Park. Youth in City Centre felt that area playgrounds needed to be both safer and cleaner (City of Surrey, 2007b; City of Surrey, 2008c).

Building block #4 – housing

Child and youth friendly housing is a combination of unit and neighbourhood design. Requiring a certain portion of housing in new developments to be "family-friendly" is one way to ensure that there is sufficient supply of housing suitable for families in urban neighbourhoods (City of Vancouver, 1992). In addition, urban residential developments should include units suitable for families that provide:

- Ground oriented entry if where possible (Yates, 1995);
- A minimum of 2-3 bedrooms with each bedroom large enough to accommodate a single bed, dresser, desk, and floor space for playing (City of Vancouver B.C., 1992);
- A separate versatile living area to accommodate informal family activities such as games, children's play, teenagers' entertaining, etc. (Cooper and Sarkissian, 1986);
- Accessible storage space (both in unit and in building) for toys, equipment etc. (Furlong and Cunningham, 2007);
- Sound proofing (Furlong and Cunningham, 2007); and
- Semi-private spaces such as patios, balconies, and porches, which allow for access to the outdoors and natural supervision (Cooper and Sarkissian, 1986).

It has been argued that high-rise housing may not provide a good solution for families with children due to the lack of direct access to the outdoors and reliance on elevators (Yates, 1995; Hart, 2002). However, the above considerations can make this type of housing more family-friendly. Additionally, the provision of roof top gardens, like in many European cities, can provide outdoor spaces that might otherwise be difficult to come by in tight urban spaces (Walsh, 2006).

In 2007, the City of Portland, Oregon hosted a courtyard housing design competition "to promote courtyard housing as an additional infill housing type for Portland's neighbourhoods,

and to explore how courtyard housing might serve as a higher density housing type appropriate for families with children” (City of Portland, 2008, 9). The resulting housing designs included numerous child and youth friendly features including:

- Adaptable house plans with either covered parking or parking gardens and personal storage spaces;
- A variety of unit types and sizes, including studios, one, two and three-bedroom homes;
- Units designed with “public” rooms (e.g., living room, kitchen) facing onto open spaces to provide “eyes on open spaces” or “eyes on the street”;
- Shared courtyards that accommodate both people and vehicles;
- Centrally located common greens or landscaped courtyards that serve a variety of community functions, such as common open space, gardens, child play areas, and recreational areas faced with permeable paving; and
- Transitional spaces, direct outdoor connections, and private outdoor spaces (City of Portland, 2008).

Courtyard housing incorporates many of the requirements that families with children have at densities higher than conventional single-family housing. It also provides an alternative to apartment buildings and high-rises, which have the potential to be less family-friendly.

The environment adjacent to young people’s homes should be safe from traffic, pollution, and other physical and social hazards (Cooper and Sarkissian, 1986). “Clustering” housing units can help to retain trees and green space, and family-oriented housing units clustered together can keep noise from bothering neighbours (Yates, 1995). A distinct visual identity created by unique design and clear markings can help children navigate their neighbourhood safely and independently and create a sense of comfort and belonging for children and youth.

Family-friendly housing should be within short distances of basic services. The City of Vancouver’s Guidelines for High-density Housing for Families with Children stipulate that “sites selected for family housing development should be within 0.8km walking distance of an elementary school and its outdoor play area, a daycare centre, an after-school care facility, a community centre, and grocery shopping and within 0.4 km walking distance to a playground and public transit stop” (City of Vancouver, 1992, 1).

Young participants in Surrey’s various child and youth consultations have not provided a lot of commentary on what they feel can make housing child and youth friendly. However, parents consulted for the City’s Child and Youth Friendly City Strategy indicated that “they live in Surrey because they can find affordable housing with enough space for their family” (City of

Surrey, 2009b, 15). Parents also expressed some hesitation with respect to living in dwellings such as townhouses and apartments due to concerns that their children would have limited places to play in these types of housing developments (City of Surrey, 2009b).

Building block #5 – transportation

The transportation options that are available to children and youth effect their independent mobility, health, and social development (Gilbert and O'Brien, 2005). In large part, "[c]hildren's need for autonomy and mobility" has been "sacrificed to accommodate the car" (Lennard and Crowhurst Lennard, 2000, 12). A child and youth friendly city reduces the need for travel by car, enables young people to use other, more active modes of transportation, and protects children and youth from the negative health and social effects of a car-based community (Tranter and Pawson, 2001; Gilbert and O'Brien, 2005). The low densities typical of many suburban neighbourhoods have the opposite effect on children's mobility requiring that parents drive their children virtually everywhere (Gilbert and O'Brien, 2005).

A city or neighbourhood can be an unwelcoming place for children and youth if they cannot find their way around it. For children and youth, getting around "in any urban environment requires safety, the lack of obstacles (such as wide highways), and the means of mobility (in the case of children the use of their feet, or bicycles, or public transportation)" (Lennard and Crowhurst Lennard, 2000, 35). Increasingly, children experience restricted mobility due to the dangers posed by traffic and the associated fears of their parents (Lennard and Crowhurst Lennard, 2000; Gill, 2008). "The unwillingness to reduce speed limits, the lack of pedestrian routes, bicycle networks and public transportation send a signal to young people that their community does not care to make their city accessible for them, and restricts their autonomy..." (Lennard and Crowhurst Lennard, 2000, 64).

Traffic policies that disrupt the flow of pedestrian movement create severe limitations for the mobility of children and youth. "Very broad traffic arteries are especially dysfunctional because they are almost impossible for children to cross" (Lennard and Crowhurst Lennard, 2000, 65). Reductions in speed limits and restricted road widths, as well as the provision of traffic lights provide better solutions to increasing the mobility of children and youth than do bridges and tunnels which further isolate children from urban life. Traffic calming strategies that have been successfully implemented in European cities include widening sidewalks, introducing

traffic circles and medians, “necking the traffic lanes at intersections, and constructing raised and ramped “table crosswalks” at the height of the sidewalk in order to slow traffic and make streets safer for children” (Lennard and Crowhurst Lennard, 2000, 67). Crosswalks that are distinctly different in texture and colour than the surrounding pavement can also make streets safer for children and youth. Sidewalks should ideally be somewhat buffered from heavily trafficked areas. They should also be wide enough to accommodate pedestrian traffic while allowing room for tricycles, bicycles, and strollers (Gilbert and O’Brien, 2005).

“Wohnstrasse” (also known as “Living Streets”, “Woonerf”, or “Home Zones”) also have the potential to increase children and youth’s mobility. These streets provide limited access to traffic at much reduced speeds and require that drivers yield to pedestrians and cyclists (Matthews, 2001). They are often paved with stone pavers and are landscaped with trees and climbing plants (Lennard and Crowhurst Lennard, 2000). Traffic calming mechanisms are also integrated into these types of streets. These types of streets are characteristic of courtyard housing (City of Portland, 2008).

“For many young people skateboards offer both a means of transportation and a challenge to their skills. Skateboarding, however, can be hazardous unless a little used section of the public space, equipped with steps and ramps, and visible to outdoor cafes or public seating is available to them” (Lennard and Crowhurst Lennard, 2000, 42). Like skateboarding, cycling is another child and youth friendly transportation option. It is a low cost alternative that promotes exercise and play, and increases the spatial range of activities that young people are able to access independently (Tranter and Pawson, 2001). A network of bike routes separated from traffic is ideal for both skateboarders and cyclists. Where this is not possible, infrastructure such as cyclist controlled lights and bike-priority waiting areas at intersections can also be useful (Gilbert and O’Brien, 2005; Lennard and Crowhurst Lennard, 2000). In cities where public transit is underdeveloped, infrequent, and/or inaccessible, “children are particularly dependent on their bicycle” (Lennard and Crowhurst Lennard, 2000, 70). The provision of the appropriate infrastructure can make cycling safer for young people increasing their independence.

Finally, the provision of high quality public transportation not only reduces traffic and makes streets safer for children and youth, but also provides them with increased independent mobility and better access to their communities. Public transportation needs to be frequent and to provide access to a variety of locations of interest to children and youth. Positioning transit

hubs as close as possible to public spaces and young people's activities and reducing the amount of transfers that children and youth need to take to get to their destination will increase the safety and ease of use of a transit system (UDAS, 1999; Gilbert and O'Brien, 2005). Transit stops should be well lit, provide seating, and be positioned in active locations where opportunities for passive surveillance exist (UDAS, 1999).

Participants in Surrey's Youth Sustainability Forum expressed a desire for Surrey to rethink existing transportation policies. Youth at the Sustainability Forum wanted narrower streets, less impervious paving, better public transit, safer SkyTrain stations, safe and comprehensive greenways and bikeways, more bike racks, bike lanes, bike only streets, and better separation between traffic and bike lanes. They also expressed a preference for "grid" systems of road networks rather than suburban "loops and lollipops". Youth wanted shorter blocks, wider sidewalks, more and shorter crosswalks, traffic calming roundabouts, and a generally more walkable community (City of Surrey, 2007a).

Young people who participated in the Surrey's Child and Youth Friendly City Strategy consultations also noted the importance of creating a walkable community. They indicated that "the current cul-de-sac design creates less traffic in neighbourhoods, but a grid system is easier to get around in" (City of Surrey, 2009b, 15). Young people also said that sidewalks made them feel safer when they were out walking and that "they prefer walking in places where they are not exposed to exhaust". Child and youth participants in these consultations expressed a desire for more sidewalks, better street lighting, gardens and greenery (to make walking more enjoyable), and less automobile traffic in general. Children and youth noted that the amount of traffic in Surrey makes them feel unsafe. They identified Surrey's King George Highway as "dangerous and difficult to cross" (City of Surrey, 2009b, 18) and viewed the lack of crosswalks and the distances between crosswalks as obstacles to walking safely in their community.

When asked about cycling, young people who participated in these consultations noted that "they only ride on the sidewalk, they feel cars don't care about them, [and] many young people's parents won't let them cycle places because of safety concerns" (City of Surrey, 2009b, 19). Suggestions for making cycling safer for young people included: providing more bike lanes and routes that are separated from traffic, implementing barriers between cyclists and traffic, and having better places to park bikes. In a survey conducted by the City of Surrey, 42% of youth said that they would be more likely to walk or cycle if places were closer together; 28% said that

if sidewalks and roads were designed better they would walk and cycle more; 15% said that they would walk/cycle more if they felt less threatened by people; 15% cited other reasons for not walking and cycling (City of Surrey, 2009b).

With respect to Surrey City Centre specifically, Surrey's youth had similar comments about how to make transportation in that part of the City more child and youth friendly. Youth wanted to see fewer cars in Surrey City Centre and they wanted an engaging and walkable City Centre with:

- Shorter blocks;
- More small shops, plants, greenery, and places to relax (to encourage walking);
- Wider sidewalks, better separation from traffic, and improved walking routes;
- More traffic lights and crosswalks to get across busy streets such as King George Highway;
- Better positioned transit stops; and
- Better and more well lit bus shelters with seats.

To make Surrey City Centre more bicycle-friendly, youth suggested increasing bike parking facilities and creating a proper cycling network with greenways and bike lanes separated from traffic (City of Surrey, 2007b, City of Surrey 2008c).

Surrey's children and youth have reiterated much of what academics and practitioners have identified as the key components of a child and youth friendly environment. From the perspectives of academics, practitioners, and Surrey's youngest residents, the physical building blocks of a child and youth friendly city appear to mirror many of the characteristics of sustainable cities. That is, the characteristics that make cities child and youth friendly tend to be the very same characteristics that make cities more livable and sustainable. The City of Surrey has expressed as one of its priorities the goal of creating a child and youth friendly city. Since the adoption of Surrey's Plan for the Social Well-Being of Surrey Residents, this has been reflected in several of Surrey's overarching policies, plans, and strategies. An overview of these documents is provided following a brief summary of the research design for this project.

RESEARCH DESIGN

This research examines the extent of efforts being made to ensure that future development in Surrey City Centre is child and youth friendly. The question that this research endeavours to answer, through an analysis of City policy and practice, is three-fold:

1. To what extent do Surrey's overarching plans, policies and strategies reflect the needs of Surrey's children and youth?
2. How have the needs of children and youth been articulated in plans for Surrey City Centre?
3. What are the challenges and potential obstacles associated with planning for children and youth in a high-density neighbourhood such as Surrey City Centre?

Data collection

Two separate, but complimentary, data sources were used for this research: City of Surrey plans, policies, and strategies and interviews with selected City of Surrey staff. This multi-method approach involving complimentary data sources increases the capacity to undertake triangulation. Triangulation "involves employing complimentary methods or data sources to circumvent the potential inadequacies of single data sources" (Hoggart et al, 2002, 312).

The following high-level City of Surrey plans, policies, and strategies were selected in consultation with the City of Surrey's Senior Social Planner:

- Sustainability Charter: A Commitment to Sustainability
- Transportation Strategic Plan: Transportation Working For Everyone;
- Crime Reduction Strategy;
- Beautification Strategy; and
- Parks, Recreation and Culture Strategic Plan.

These documents are the most up-to-date and relevant City of Surrey plans, policies, and strategies. While these high-level documents were utilized to ascertain a broad understanding of the types of City policies that are likely to benefit Surrey's young people, the City of Surrey's City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines provided the core focus and data source for this research project. A descriptive, qualitative content

analysis of these documents was utilized to assess the extent to which Surrey’s overarching plans, policies and strategies and plans for City Centre reflect the needs of Surrey’s children and youth.

Semi-structured interviews with selected staff from the City of Surrey’s Planning and Development and Parks, Recreation, and Culture Departments were utilized to supplement, clarify, and verify information gathered from the Surrey City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines, to gain further insight into the extent to which the needs of children and youth are being considered in the development of the Plan, and to develop an understanding of the challenges and potential obstacles associated with planning for children and youth in higher density neighbourhoods such as Surrey City Centre. A purposeful sample of six key informants was selected based on their involvement in the development of the Surrey City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines. Individual interviews were conducted in person at Surrey City Hall. A discussion guide consisting of six open-ended questions was used to provide some structure to the interviews (see Appendix A). Additional questions emerged during the course of each interview.

Analysis strategy and criteria

Qualitative content analysis was utilized to organize and understand the information gathered from the above noted data sources. Qualitative content analysis involves indexing or categorizing information by topic. This requires developing “a coding system to enable the investigator to draw together material on the same topic or explore similar themes from a variety of sources” (Hoggart et al., 2002, 148). According to Hoggart et al. (2002), when doing qualitative content analysis, “there must be explicit ground rules for accepting that passages of text represent a particular concept, otherwise different researchers will reach different conclusions from the same document” (151). For this research, categories and parameters of analysis, or “a coding system”, emerged from four sources:

- Academic literature;
- Policy reports and design guidelines from other jurisdictions;
- A child and youth friendly community guide developed by the Society for Children and Youth of BC; and
- Completed consultations with children, youth and parents from across Surrey.

Consequently, this method ensured a balanced approach with the pre-established categories and parameters of analysis reflecting the key elements of a child and youth friendly environment from the perspectives not only of academics and practitioners, but also, and most importantly, the children and youth of Surrey and their parents. The information gathered from the aforementioned sources, or the parameters of analysis, were organized according to the following categories which also emerged from these sources: land use and density, public realm, parks and play space, housing, and transportation. In other words, what was determined through literature review to characterize child and youth friendly land use and density, public realm, parks and play space, housing, and transportation became the criteria for assessing Surrey policy. Detailed analysis criteria are attached as Appendix B. The intent of this analysis strategy was to identify the degree to which Surrey's high-level plans, strategies, and policies as well as the Surrey City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines align with what has been determined, by academics, practitioners, and Surrey's children, youth, and their parents, to contribute to a child and youth friendly environment.

PLANNING FOR CHILDREN AND YOUTH IN SURREY: AN OVERVIEW OF CITY POLICIES, PLANS, AND STRATEGIES

A review of Surrey's overarching policies, plans, and strategies was conducted at the outset of this research to determine the extent to which high level policy in Surrey aligns with child and youth friendly planning principles. As already noted, the City's Plan for the Social Well-Being of Surrey Residents, adopted in 2006, has as one of its priorities the goal of creating a child and youth friendly city. It identifies a "need for resources to identify urban design, policies, community services and processes that will advance the development of a child and youth friendly City" (SPARC, 2006, 7). Surrey's child and youth friendly city initiative is one example of a number of recent paradigm shifts in the City of Surrey towards more sustainable development. In 2009, the City began the process of developing a Child and Youth Friendly City Strategy. The strategy will bring together existing child and youth friendly initiatives and policies that the City can build upon. It will highlight needs or gaps identified through extensive community consultation with children, youth, their parents and community stakeholders. And most importantly, the strategy will identify a set of recommendations for making Surrey more child and youth friendly on three fronts: decision making and governance, civic and community service provision, and the physical environment.

Surrey's Official Community Plan (OCP) is a comprehensive guiding document that sets out the vision, goals and objectives for the future development of the City of Surrey and contains policies, plans and strategies for achieving this vision. It guides the City's planning decisions in terms of land use designations, rezonings, environmental protection, transportation systems, social wellbeing, community development, infrastructure and services, and civic amenities. The last major review of the OCP was completed in 2002, four years before the adoption of Surrey's Plan for the Social Well-Being of Surrey Residents. Unfortunately, at the time that this research project was completed, Surrey's OCP was undergoing a major review and update, incorporating some of the City's recently completed policies and strategies. It was therefore not possible or sensible to review this document. Likewise, the City's Housing Action

Plan was also under development during this time and was also not available for review and assessment.

That being said, a number of City plans, policies, and strategies have either been completed or updated since Surrey adopted its Plan for the Social Well-Being of Surrey Residents. The following section describes how child and youth friendly policies, with respect to the physical environment, are embedded in several of Surrey's most recently completed overarching policies, plans, and strategies. Surrey's Sustainability Charter, Transportation Strategic Plan, Crime Reduction Strategy, Beautification Strategy, and Parks, Recreation and Culture Strategic Plan were analyzed based on the criteria summarized in Appendix B. The following is an overview of City of Surrey policies, plans, and strategies that demonstrate Surrey's priority to become a child and youth friendly city.

Sustainability Charter: A commitment to sustainability

The City of Surrey's Sustainability Charter, which was adopted in 2008, contains a number of goals and policies that are both explicitly and implicitly child and youth friendly. In light of the demonstrated similarities between child and youth friendly cities and those that are environmentally and socially sustainable this is not necessarily unexpected. Socio-cultural goals and policies in Surrey's Sustainability Charter relate largely to the provision of a range of housing types, the implementation of universal design principles, increasing safety and security, and the design of neighbourhoods and the public realm. Table 1 provides an overview of socio-cultural goals and policies in Surrey's Sustainability Charter that align well with child and youth friendly planning principles.

Environmental goals and policies in Surrey's Sustainability Charter are largely linked with the preservation of natural spaces, the development of neighbourhoods with densities and land uses that support walking, cycling, and transit use, and the enhancement of the public realm. Table 2 summarizes those environmental goals and policies with potential benefits to children and youth.

Table 1 Socio-cultural goals and policies in Surrey’s Sustainability Charter

Goals for achieving socio-cultural sustainability	
<ul style="list-style-type: none"> • Promote the development of a range of affordable and appropriate housing to meet the needs of households of varying incomes and compositions. • Institutionalize the principles of Universal Design to remove barriers and ensure accessibility throughout the City. • Create a City that is, and is perceived as being safe and secure. • Create neighbourhoods that have distinct identities, diverse populations, lively public spaces that promote social connections, and a range of accessible services and opportunities. • Design neighbourhoods that are friendly and responsive to the unique needs of children, youth, seniors and those with special needs. • Incorporate high quality design and beauty, including public art, in the public realm. 	
Policies for achieving socio-cultural sustainability	
SC6: Accessible & Appropriately Located Services within the City	The City will support the equitable distribution of services and amenities for Surrey residents.
SC9: Adequate, Appropriate & Affordable Housing	The City will develop and maintain a Housing Action Plan, which will set appropriate housing targets for the full range of housing needs for different household types.
SC11: Public Safety & Security	Prevention and deterring of crime, through measures such as the incorporation of Crime Prevention Through Environmental Design (CPTED) principles.
SC12: Adapting to Demographic Change	<p>The City will design town centres and neighbourhoods to accommodate a wide range of households throughout their life cycle, including a rapidly changing multi-cultural community, families with children, and seniors. This includes neighbourhoods that are child and youth friendly as well as safe, accessible and welcoming to seniors and new Canadians.</p> <ul style="list-style-type: none"> • Promoting Universal Design and Adaptable Design • Promoting Transit Oriented Development (TOD)
SC13: Create a Fully Accessible City	<p>The City will work towards providing access to all by:</p> <ul style="list-style-type: none"> • Creating an attractive, comfortable, walkable and accessible public realm • Ensuring that all new neighbourhoods and developments are accessible and pedestrian friendly, and have safe and welcoming public gathering places

Adapted from City of Surrey, 2008d

Table 2 Environmental goals and policies in Surrey’s Sustainability Charter

Goals for achieving environmental sustainability	
<ul style="list-style-type: none"> • Protecting to the extent possible, existing urban forests and natural coverage, protecting trees and maximizing the city’s tree canopy. • Incorporate opportunities for natural areas and urban wildlife. 	
Policies for achieving environmental sustainability	
EN9: Sustainable Land Use Planning and Development Practices	<p>Requiring land use densities and mixes of land use and activities that allow local access to goods and services and support high levels of walking, cycling and transit use for residents and employees.</p> <p>Formalizing site-planning processes that avoid critical habitat and preserve, protect and enhance natural habitat and landscape features.</p>
EN12: Enhancement/ Protection of Natural Areas, Fish Habitat and Wildlife Habitat	Continue to protect and remediate existing natural areas and to acquire additional new natural areas.
EN13: Enhancing the Public Realm	<p>Design of public streets, sidewalks, walkways and the spaces between shall minimize negative social, economic and environmental impacts, and maximize comfortable, safe, and beautiful streets.</p> <p>The City will support sustainability through the public realm by:</p> <ul style="list-style-type: none"> • Implementing street widths and roadway design standards that minimize the negative impacts of transportation facilities on communities while providing appropriate infrastructure in support of the transportation needs of the City. • Establishing attractive pedestrian environment with appropriate sidewalks or paths wherever walking is a viable option. • Expediting the completion of a continuous Greenway, bicycle and trail systems throughout the City. • Installing lighting, street furniture such as benches, bike racks, and transit shelters at appropriate locations that supports walking, cycling and transit use within attractive, complete and compact communities. • Applying CPTED principles to make streets safe, comfortable and welcoming for all users. • Designing active public spaces and streetscapes to increase public safety and a sense of ownership and community.

Adapted from City of Surrey, 2008d

Transportation Strategic Plan: Transportation working for everyone

Child and youth friendly policies can also be found in Surrey’s Transportation Strategic Plan, adopted in 2008. Generally, the Transportation Strategic Plan calls for increasing alternative and sustainable travel choice, improving community safety, health, and quality of life, and the integration of transportation with land use planning in support of high-density, mixed-use, compact development. The planned order for transportation consideration identified in the plan, and described below, is also child and youth friendly with the top three modes being highly accessible to young people:

1. Walking
2. Transit
3. Bicycles
4. Commercial Traffic and Trucks
5. High Occupancy Vehicles
6. Single Occupancy Vehicles

The plan states that “each and every time a new roadway is designed or an existing one improved, opportunities for improving walking and cycling will be routinely reviewed” (City of Surrey, 2008e, 43). The plan also identifies a number of “Actions for Change” that are child and youth friendly and that can generally be organized into three categories: overall safety, walking and cycling, and transit (Table 3).

Table 3 “Actions for change” in Surrey’s Transportation Strategic Plan

Overall Safety
<ul style="list-style-type: none"> • Promote safety audit for larger design assignments • Establish a discrete local safety program • Develop School Safety Zone and Safe routes to school programs • Use collision data to help inform need for medians, pedestrian barrier fencing or anti-skid paving • Promote an annual program of community identified traffic calming projects • Recognize the contribution of well maintained street lighting, pavement markings and signage • Enhance relevant contracts to include safety elements such as street lighting, bus stop shelters & traffic signals • Formalize casualty reduction and road safety projects/programs within a new Road Safety Strategy • Identify locations for new and improved street lighting • Introduce a speed management program and speed limit review
Walking and Cycling
<ul style="list-style-type: none"> • Promote community connectivity for all modes through the development of a finer grid road network and reduction in the number of cul-de-sacs • Continue to maximize enhanced greening guidelines for landscaping and tree planting in transportation corridors including roads, multi-use pathways and greenways • Promote walking, cycling, and transit through application of a development sustainability checklist • Improve parking for cyclists within new developments and fully apply bicycle parking bylaw • Revise bicycle parking design criteria • Identify and promote the use of utility corridors for walking and cycling routes • Continue the implementation of the strategic bicycle network • Update the Pedestrian Master Plan • Update the Bicycle Blueprint • Develop a strategy to improve lighting and other relevant assets on key walking and cycling connections
Transit
<ul style="list-style-type: none"> • Complete the strategic road network and promote a finer grid system for transit service • Improve pedestrian routes to and from transit facilities • Integrate accessible, integrated and safe bus stop infrastructure

Adapted from City of Surrey, 2008e

Transportation initiatives currently underway

On the implementation side, there are a number of transportation initiatives identified in the Strategic Plan that are currently underway in the City's Engineering Department and that also integrate child and youth friendly elements. Surrey's "Safe & Active Schools" program aims "to create a safe and friendly environment for children and teenagers to walk or cycle to school, building a more lively community and healthier and more active youth" (City of Surrey, 2009c, 2). The program will look at implementing engineering improvements designed to make streets safer for young people. These improvements include speed humps, curb bulges, traffic circles, pedestrian crosswalks, signage, vegetation clearance, speed control, improved street lighting, sidewalk improvements, and walkways and bikeways. In an effort to increase alternative and sustainable travel choice, Surrey is currently developing a Walking Plan that "will seek to develop a complete, attractive and functional pedestrian network, accessible to all, and well-integrated with its surrounding neighbourhoods and destinations" (City of Surrey, 2009d, 1). Likewise, the City's Cycling Plan "will aim to create a seamless bicycle network with end-of-trip and parking facilities well designed and integrated with buildings, public facilities, public transit and other modes of transportation" (City of Surrey, 2009e, 1). The City has also allocated part of its budget to go towards the installation and maintenance of traffic calming devices such as curb extensions, raised crosswalks, raised intersections, raised medians, speed humps, speed tables, and traffic circles.

Crime Reduction Strategy

Surrey's Crime Reduction Strategy, adopted in 2007, endeavours to reduce crime and improve safety for all Surrey residents including children and youth. With respect to the physical environment, the Strategy contains a number of policy directives with benefits to children and youth. There are a several recommendations, for example, with respect to increasing community safety through environmental design. Crime Prevention Through Environmental Design (CPTED) or "target hardening" involves the implementation of urban design principles that are thought to lead to a reduction in the incidence and fear of crime. The Strategy recommends that Surrey:

- Continue to apply CPTED principles to new developments
- Introduce an enhanced program of street and public space lighting

- Expand the Crime Free Multi-Housing (rental multi-family residential developments, motels and hotels) Program with dedicated resources

The Strategy also includes recommendations to identify key areas within the city for enhanced beautification (City of Surrey, 2007c). The underlying assumption being that beautiful spaces attract people and encourage more eyes on the street, thereby deterring criminal activity and improving safety.

Beautification Program

In light of this, the City has established a Beautification Program that includes many initiatives designed to improve the physical environment, make it more engaging for everyone including young people, and reduce graffiti. The City has implemented the following beautification initiatives among others:

- Decorative lighting adorning trees and lamp poles to brighten the evening streetscape.
- Banners to promote overall community-building images.
- Decorative vinyl wraps and mural art.
- Median redevelopment to create attractive corridors by introducing landscaping and other design elements.
- Bus shelters, lamp poles, benches, median fencing and other functional elements to augment the streetscape appearance.
- Planters and other landscaping techniques in key locations to establish a significant visual impression.

Parks, Recreation, and Culture Strategic Plan

Perhaps not surprisingly, Surrey's Parks, Recreation, and Culture Strategic Plan, updated in 2008, contains the bulk of Surrey's child and youth friendly policy. The Plan includes a number of service objectives with benefits to children and youth including: facilitating opportunities for social interaction, protecting natural resources, supporting family-oriented leisure opportunities, beautifying the community, integrating generations in the community, fostering inclusivity, fostering leisure opportunities for all ages and skill levels, and fostering reflection and escape from urban form through opportunities for escape, reflection, contact with nature and relaxation in a natural environment. Recommendations and strategic directions in the Strategic Plan that benefit children and youth are summarized in Table 4.

Table 4 Strategic directions in Surrey’s PRC Strategic Plan

<ul style="list-style-type: none">• Update and complete the new Greenway/Blueway Master Plan• Continue the development of a city-wide trail system in new and existing parks• Create new horticultural displays in each Community• Update Natural Areas Strategic Management Plan• Update the Street and Shade Trees Management Plan• Build new synthetic turf surfaces• Update playfield infrastructure• Develop park infrastructure to meet expanding community needs• Enhance outdoor programming and nature play in parks• Replace outdated playgrounds• Continue construction of park infrastructure• Plan and construct three covered sport courts for lacrosse, basketball, roller hockey, skateboarding and other activities• Enhance the public art program by providing more substantial art in higher profile locations and explore a broader base of funding
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Adapted from City of Surrey, 2008b

The Strategic Plan sets forth numerous recommendations with respect to the accessibility, location, design, and size of parks. It calls for revisions to Surrey’s parks classification system, summarized in Table 5, that would more adequately address the needs of Surrey’s residents in the future. It also notes that the City’s Parkland Acquisition Strategy should be updated to include “detailed research to determine equity, focusing on walking distances for seniors and children to service centres, recreation areas, libraries, parks and schools” (City of Surrey, 2008b, 58).

The Strategic Plan acknowledges that “exposure to, involvement with and understanding of nature is an increasingly scarce experience for children and yet it is clear that the long term health of children depends to a great extent on these experiences. Park planning and design needs to be informed by the evidence in this emerging area of child development and community planning, and continuing education opportunities for development should be sought out” (City of Surrey, 2008b, 67). More specifically, it notes that:

- Informal play should be integrated within the Playground Strategy
- Semi-structured play should be facilitated in natural areas that have been identified and planned for this purpose
- Ropes courses, night events, fort building and other structured elements and programs should be facilitated and/or delivered by the department in natural areas

Table 5 Recommended Parks Classification System

Park Type	Description	Recommendations
Destination Parks	Parks that would attract people from across the city and region.	<ul style="list-style-type: none"> - The optimal minimum size of a Destination Parks is 50 hectares, however, in the case of waterfront parks, the measure should be linear, maximizing public access to the water’s edge.
City Parks	Parks intended to provide services for all city residents. Divided into three park types: city parks, conservation areas, and natural areas.	<ul style="list-style-type: none"> - City Parks should be connected via a network of multi-use recreational paths. These paths should be on lands that are 10 to 70 metres wide to accommodate pedestrian and bicycle traffic, to provide appropriate buffering, and to also serve as wildlife corridors. - The adequacy of City Parks has traditionally been measured on a “hectares per capita” basis at 1.2 hectares per 1000 population. This should be the ongoing aspirational goal. - City Parks should be adjacent to or including significant natural areas; accessible by transit, car, on foot or bicycle; optimally, be a minimum 50 hectares in size; include multiple opportunities for recreation; and accommodate major water play, youth and senior’s activities.
Community/ Town Centre Parks	These are large urban parks that underpin the public open space system throughout the city. The programming and design of these parks should be integrated with Town Centre urban designs. There are three primary types of community park space: major athletic parks, large integrated-use parks, and natural and conservation areas.	<ul style="list-style-type: none"> - Community-Level Connectivity should take the form of a multi-use off-road greenway system, the primary focus of which is getting people safely from one major destination to another through a series of interesting experiences. These paths should be 3-5 metres wide, should be paved and include a generous landscaped buffer that is 6-10 metres wide. - With reference to the adequacy of Community / Town Centre Parks, one hectare per thousand population should be an aspirational goal, recognizing that major new parkland may be difficult to acquire. If that is the case, then the finish of the park(s), amenities and quality of other aspects of the public realm (public squares, plazas, boulevards, streetscapes, etc) become increasingly important. - The optimal minimum size should be 20-50 hectares.
Neighbourhood Parks	These parks fulfill the needs of residents at the neighbourhood level and are divided into three types: large neighbourhood integrated-use parks, mini-parks and plazas, and school parks. Mini-parks and plazas have been approved by City Council to be located in high-density areas, with a goal of meeting a 400 m. radius walking distance from the high-density area (50 – 190 people per hectare) for family amenity needs.	<ul style="list-style-type: none"> - Where possible, neighbourhood parks should incorporate small pockets of natural areas to serve both habitat and creative play purposes. - These parks are should be designed to include multiple uses. - Neighbourhood-Level Connectivity is enhanced through extended sidewalks and narrower pathways, connecting residential areas with schools and pocket parks within the neighbourhood, and to the larger parks and circulation systems. - Neighbourhood parks should be located within a 10-minute walk from every new residence, and be based on 1.2-hectares/1000 population. The optimal size would be 0.5-5.0 hectares.

Adapted from City of Surrey, 2008b

The Strategic Plan also recommends updating the City's Playground Strategy to include the following criteria:

- Consult with specialists in playground design to increase physical and cognitive experiences in local playgrounds
- Ensure the parks system provides play opportunities that fit the demographics of the neighbourhood: where possible, for new medium and high-density neighbourhoods, play opportunities should be available within a 400 meter direct line radius from the primary park entries for the majority of houses; in existing neighbourhoods where this new standard may be unachievable, a 600 meter direct-line radius for play opportunities should be considered
- Incorporate age appropriate equipment that meets or exceeds CSA standards in every playground
- Incorporate barrier free play equipment and site designs to foster the play of children with physical and developmental disabilities
- As opportunities arise, incorporate opportunities to interact with water beginning at the community park level and expanding to the neighbourhood park level. Water interaction can be in the form of sprinklers, shallow streams, traditional water or spray parks, and other creative means (City of Surrey, 2008b, 68).

This section has provided an overview of how the needs of Surrey's youngest residents have been recognized in broad overarching City policies, plans, and strategies. It has also demonstrated how children and youth can be the unintended beneficiaries these policies. Surrey's Sustainability Charter, Transportation Strategic Plan, Crime Reduction Strategy, Beautification Strategy, and Parks, Recreation, and Culture Strategic Plan have incorporated child and youth friendly considerations into their respective goals, directions, and recommended actions. The following section drills down to look at the planning of one Surrey neighbourhood, Surrey City Centre, to determine how the needs of children and youth are being incorporated into redevelopment plans for this future high-density urban neighbourhood.

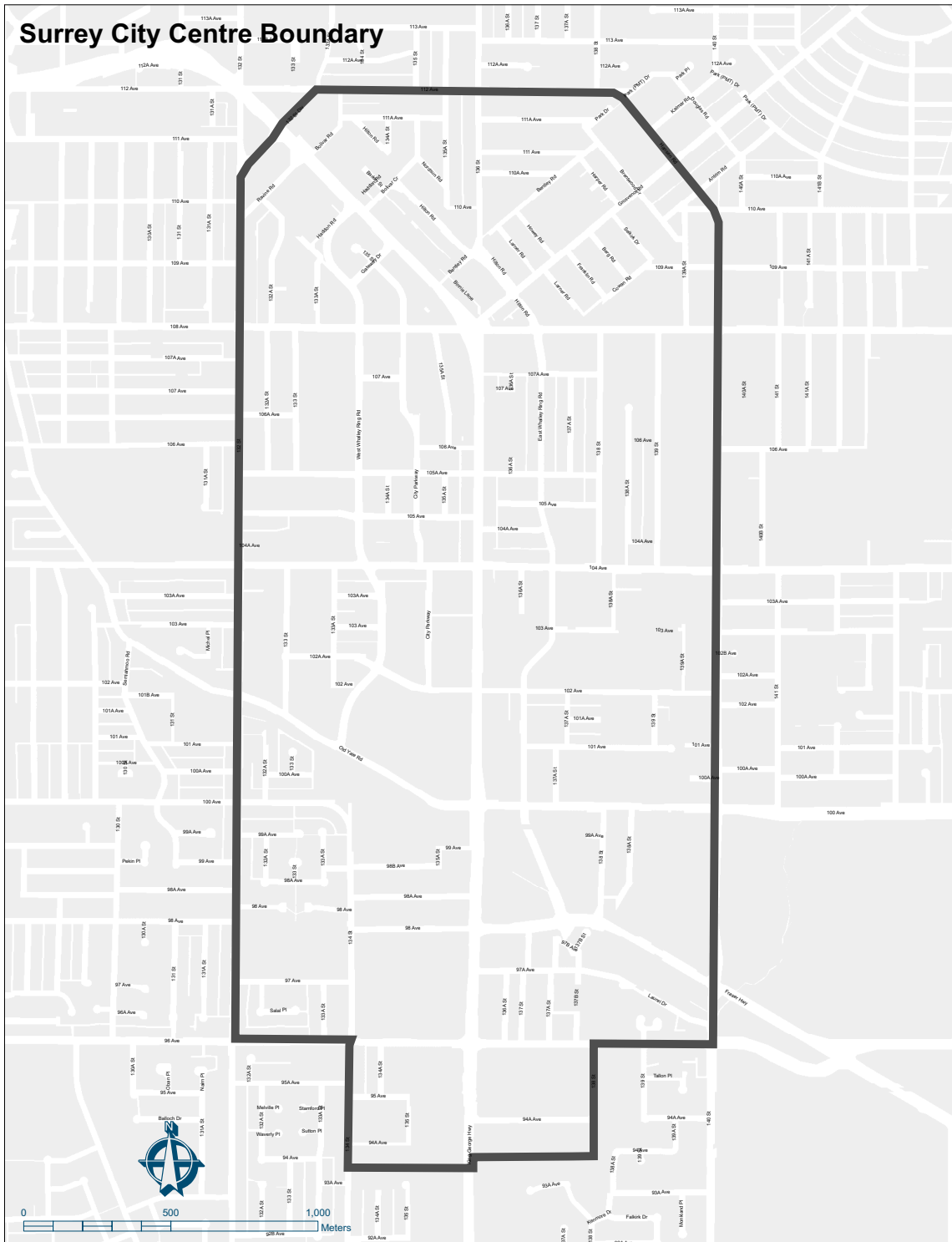
SURREY CITY CENTRE: ASSESSING THE POTENTIAL FOR A CHILD AND YOUTH FRIENDLY FUTURE

Surrey City Centre is approximately 561 hectares in size. It is bounded, generally, by 112 Avenue to the north, 96 Avenue to the south, 132 Street to the west and 140 Street to the east (Figure 3). Since 2000, Surrey City Centre has experienced a significant increase in development activity that has begun to transform the culturally and socially diverse but relatively impoverished and underdeveloped neighbourhood into a compact, urban, mixed-use downtown. An update of Surrey's City Centre Plan has been underway since 2006 when "it became apparent that the [existing] 1991 Surrey City Centre Plan was not able to adequately address the scale and amount of development taking place in Surrey City Centre" (City of Surrey, 2009f, 3).

On February 6, 2009, Surrey City Council adopted the Surrey City Centre Plan Update, Phase II, Stage 1 report. The report, prepared by Bing Thom Architects and City of Surrey Planning, Engineering, and Parks, Recreation and Culture staff, includes land use and density concepts, street concepts, and green network, parks, and open space concepts. At the time that Council adopted the Phase II, Stage 1 report, they also approved Interim Urban Design Guidelines intended to guide development until the completion of Phase II, Stage 2 of the Plan ("Achieving the Plan").

The Surrey City Centre Plan Update, Phase II, Stage 1 report identifies "levels of family-friendliness for Surrey City Centre" and how family-friendliness can "be achieved through design and land use regulation" as key demographic issues for Surrey City Centre. The Plan Update sets out a number of milestones for measuring the progress of future development in Surrey City Centre many of which relate either directly or indirectly to the successful inclusion and overall wellbeing of children, youth, and families in Surrey City Centre (Table 6). Dominant child and youth friendly themes include: integration of public transit, increasing livability, connecting neighbourhoods, the provision of a variety of housing types, and designing the road network and streets to improve walkability.

Figure 3 Surrey City Centre Boundaries



Source: <http://www.surrey.ca/NR/rdonlyres/E4248E95-EC50-47AC-96D0-86F1F5ADE64F/46798/CityCentreBoundary.pdf>, accessed November 18, 2009

Table 6 Major milestones for measuring the future progress of development in Surrey City Centre

- Creating a high quality civic and commercial centre
- Capitalizing on the existing SkyTrain system and integrating new public transit systems within this system
- Increasing livability in existing neighbourhoods
- Physically connecting all Surrey City Centre neighbourhoods
- Providing for a variety of housing types and choices for singles, families with children, and seniors who are of low, middle, and high incomes
- Taming King George Highway with a boulevard-like extension of the downtown grid system
- Providing a more integrated street grid that creates smaller scaled blocks for development and walkability
- Providing an integrated and coherent road network and a series of linked pathways
- Developing a collection of recreation and cultural amenities and facilities for a local, citywide, and regional audience
- Completing and resolving the ring road system
- Reducing truck traffic and traffic speed along King George Highway between the three Skytrain development areas
- Creating a high quality, inclusive community that is highly urban in the centre and yet livable: a good place to live, learn, work and play

Source: Bing Thom Architects (2008)

The following section summarizes the results of the qualitative content analysis of the City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines approved by Surrey City Council in February 2009. The results of interviews with City of Surrey staff involved with the ongoing development of the Plan Update are also incorporated into the following discussion.

Analysis: Children and youth in Surrey’s City Centre Plan Update

Based on the analysis criteria attached as Appendix B, the Surrey City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines were analyzed to determine the extent to which the needs of children, youth, and their families have been incorporated into plans for Surrey City Centre. Selected City of Surrey staff were interviewed utilizing the discussion guide attached as Appendix A. For continuity, the results of the qualitative content analysis and staff interviews are integrated and organized by each of the previously established “building blocks” of child and youth friendly cities – land use and density, public realm, parks and play space, housing, and transportation.

Building block #1 – land use and density

High-density residential areas should combine a variety of built forms and unit types for a full range of prospective households, including families with children.

- Bing Thom Architects, 2008, 92

Despite the emphasis on high-density urban development in Surrey City Centre, considerable efforts have been made in the development of the Surrey City Centre Plan Update Land Use and Density Concept to ensure that the area is able to accommodate the type of development suitable for families with children. Density is the maximum built floor area or the number of units allowed on a parcel. This is typically expressed as a Floor Area Ratio (FAR) or the total floor area of a building divided by the area of the lot it occupies. When asked what makes the Land Use and Density Concept child and youth friendly, City of Surrey staff noted that Surrey City Centre is planned to be much more dense, compact, and thus more accessible than many Surrey neighbourhoods (City of Surrey staff interview).

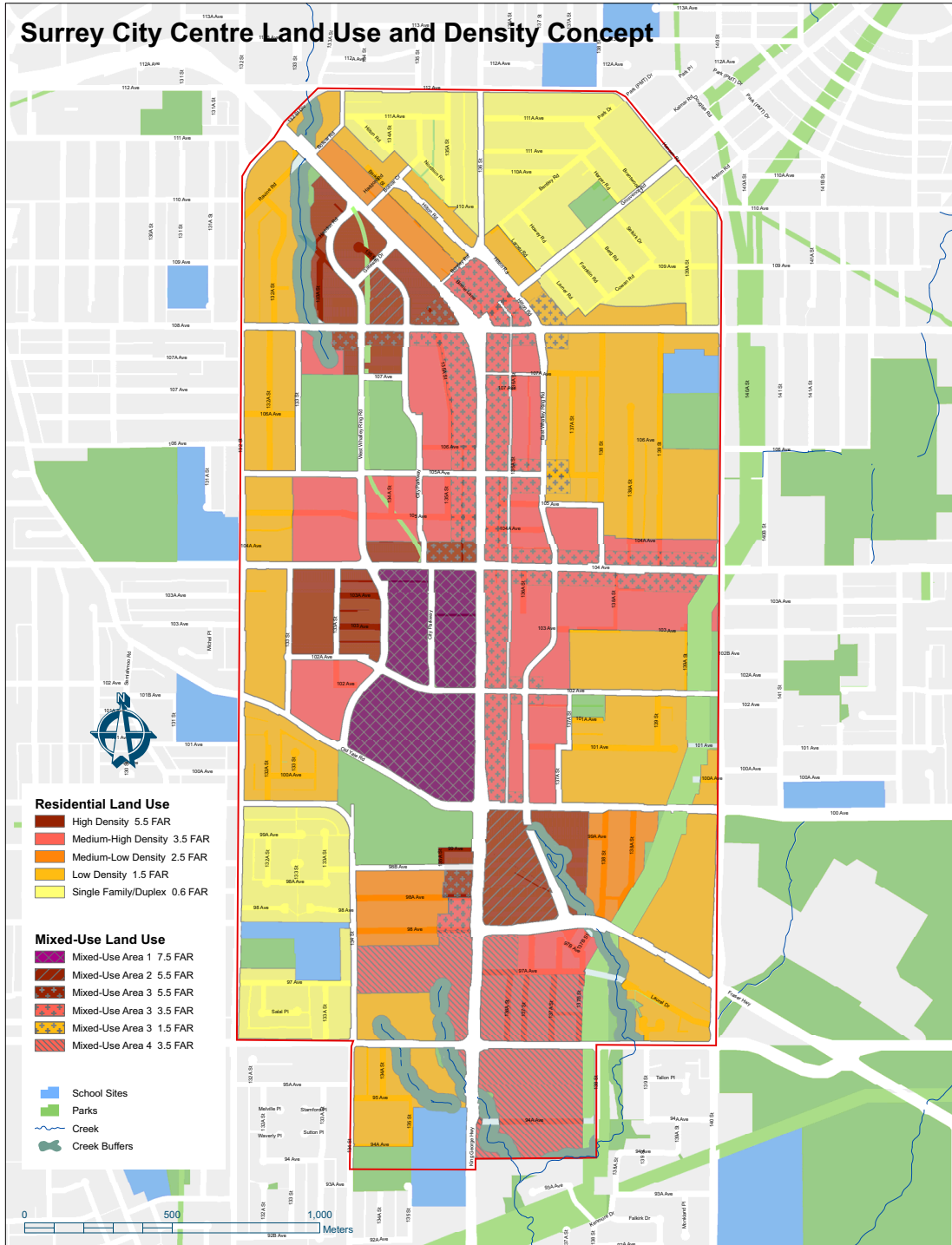
The Plan Update envisions the development of “nodes of high-density around each of the three SkyTrain stations, linked by a corridor of high-density” (City of Surrey, 2009f, 8). The highest densities (7.5 FAR) are proposed for the area immediately surrounding Surrey Central SkyTrain station to increase the legibility of what is destined to become the “heart of City Centre”. Densities progressively decline as distance from the high-density core increases to accommodate a variety of housing types in the City Centre area.

In recognition of the fact that the functioning of a healthy downtown includes strong residential neighbourhoods, one of the founding principles of the Plan Update is the establishment of lower density family and pedestrian oriented residential neighbourhoods surrounding, and in relatively close proximity, to the much higher density transit hubs. Consequently, areas that currently accommodate predominantly single-family dwellings and are shown on the Land Use and Density Concept as Single Family/Duplex 0.6 are destined to remain single-family areas (Figure 4).

It is proposed in the short to medium term the remaining land around the downtown core areas be focussed on serving families. Using the existing and possibly new elementary schools as a community focus for each neighbourhood

and co-locating community facilities for each school where possible, there should be an emphasis on walking and cycling to local services (Bing Thom Architects, 2008, 27).

Figure 4 Surrey City Centre Plan Update Land Use and Density Concept



Source: Bing Thom Architects, 2008

The Plan Update also proposes reductions in maximum FAR for areas currently designated Multiple Residential in the Official Community Plan with an existing maximum FAR of 2.5. The Land Use and Density Concept proposes to reduce the maximum FAR in these areas from 2.5 to 1.5 FAR to facilitate the development of residential buildings more conducive to accommodating families.

The rationale for reducing the density is that lower densities will encourage developers to provide a wider variety of housing types within City Centre, particularly family-oriented housing units. Further, the densities proposed in the Land Use and Density Concept will permit three times the residential growth anticipated in Surrey City Centre in the next 20 years. Retaining a density of 2.5 FAR within the peripheral areas of City Centre will increase the theoretical capacity of the residential areas even further, which may dilute or defer the development of multiple residential projects in the higher density areas of City Centre (City of Surrey, 2009f, 8).

Although cautious about whether the reduced densities would indeed facilitate the development of family-oriented housing, City of Surrey staff acknowledged that a conscious effort was made to create the preconditions necessary for family friendly development.

There was a desire to provide more family-oriented housing and [Surrey's Long Range Planning division] suggested that lowering the densities in certain parts of City Centre would achieve that. I am not sure if that is actually the case, if that actually will happen. I think that needs to be explored more, but it was a conscious effort to try and get these family-oriented developments (City of Surrey staff interview).

The founding principles of the City Centre Plan Update are supported by a number of key values. The mixing of uses is one of those values: "mixed uses will ensure a vibrant social, cultural, and economic life" in Surrey City Centre (Bing Thom Architects, 2008, 28). City of Surrey staff echoed this principle noting that Surrey City Centre is already naturally a mixed-use neighbourhood that is more accessible than many other Surrey neighbourhoods. Although the Land Use and Density Concept calls for a reduction in the overall area currently designated for commercial use in the OCP, it does allow for the establishment of neighbourhood service nodes at key points and intersections making services more immediately accessible in predominantly residential areas. While most commercial activities and mixed uses are proposed to be concentrated around Surrey Central SkyTrain Station, along both sides of King George Highway from 108 Avenue to 96 Avenue, and along 104 Avenue from West Whalley Ring Road to 140 Street, the Plan Update states that "a range of convenience shops and services will be included

in close proximity to all residential neighbourhoods” (Bing Thom Architects, 2008, 28). In the lower density residential neighbourhoods (1.5 FAR), for example, it is proposed that some commercial be permitted on major streets and that small neighbourhood serving retail be allowed in these areas to allow access by foot or bicycle.

Building block #2 – public realm

The City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines do not delve deeply into the proposed nature and fine-grain details of the public realm in Surrey City Centre. Nor do they identify those elements of the public realm that will necessarily make City Centre child and youth friendly. At the time that this research was being completed, a separate study was underway at the City of Surrey looking at character areas and the overall “public realm branding” for the area. The Plan Update does, however, recognize the myriad of opportunities in the area with respect to the public realm: “Many urban design opportunities can be found throughout the Surrey City Centre study area. By creating landmarks, great streets, and animating areas in close vicinity to green spaces, good urban design can serve as a tool towards attracting investment, residents, and workers into the area” (Bing Thom Architects, 2008, 63).

The development of plazas is a central element of the City Centre Plan Update Phase II, Stage 1 report. This will be discussed in greater detail in the following section, “Parks and Play Spaces”. However, the development of a new Civic Plaza mirroring the existing Central City Plaza will result in the creation of a new, large, and vibrant public gathering place in the heart of City Centre. The plaza will include a pedestrian priority street that will be shut down to traffic completely for community events. City of Surrey staff noted the importance of creating gathering places in Surrey City Centre:

We want to have gathering places [in Surrey City Centre] with plazas ranging from large, centralized spaces that host special events to smaller neighbourhood plazas that would serve as an amenity for a particular building but would also have public rights of passage so that everyone can use them (City of Surrey staff interview).

The integration of art into the public realm is also identified as an opportunity for animating the public realm in Surrey City Centre.

Public art can be either integrated into the public realm or act as standalone experiences. Art at a variety of scales has the unique ability to embellish the public realm and, more importantly, speak to a community's collective memories, hopes, fears, and dreams. Whimsy and storytelling can be used to engage one's attention. Grand pieces of public art should be used sparingly and in the most accessible and significant places, like squares and civic and institutional locations. Another opportunity for placement of larger installations is to act as orienting landmarks or punctuations at key intersections and wide medians (Bing Thom Architects, 2008, 87).

The Interim Urban Design Guidelines for Surrey City Centre contain a number of provisions for the development of a public realm hospitable to young people. The Guidelines, summarized in Table 7, speak to the importance of creating a sense of enclosure through building design considerations both at the edges of public spaces and along streets. Both the Plan Update and the Interim Urban Design Guidelines highlight the importance of engaging life at street level through both the development of townhouses with front doors, porches and interactive rooms facing streets/courtyards and the development of interactive commercial frontages with outdoor seating and activity at street level.

[With] townhouses, if you avoid putting bedrooms on the ground floor, you will have much more interactive rooms [at street level]. Living rooms are better than a poke in the eye but kitchens are better than that (City of Surrey staff interview).

We are really working on [developing] commercial frontages at grade, close to the property line, with nice paving, and few or no driveways (City of Surrey staff interview).

City of Surrey staff generally felt that creating more life at street level would be key to making City Centre a good place for children and youth.

We are promoting the podium and tower so there is more animation at street level. If you just have a straight tower there is no street life at all. That is something that we are looking at as part of the City Centre Plan – creating more street activity to bring people into City Centre (City of Surrey staff interview).

To further increase the safety and sense of security in Surrey City Centre's public spaces, it is also proposed that Crime Prevention Through Environmental Design (CPTED) considerations continue to be incorporated into all development proposals for the area.

Table 7 Interim design guidelines for the public realm

1.0 City Form	
1.5	Prominent building forms at open spaces edges to enclose the spaces and create ‘urban rooms’.
1.8	A strong sense of street enclosure. The majority of streets would have a four-storey apartment building enclosure. Higher street enclosure may be considered for wider streets.
2.0 Building Form and Treatments	
2.2	At the ground level, the expression of two storey townhouses within the building massing is crucial to engage and create the street life of the residential neighbourhoods.
3.0 Public Realm and Ground Plane Interface	
3.4	Retention of natural features and trees should be considered on each development site.
3.5	Lining the streets and public spaces, people’s interest should be engaged at the ground level with active uses and unarticulated or blank walls should be avoided.
3.6	Commercial frontages should have:
3.6.4	Opportunities for outdoor seating and display of goods in the public realm;
3.6.6	A consistent landscape and furnishings package of high quality materials and treatments; and
3.6.5	Distinctive character elements and art features for specific shopping areas.
3.7	Residential uses lining the streets and public spaces should have:
3.7.1	Front doors and porches facing the street;
3.7.2	Semi-private uses such as living, dining rooms and kitchens facing the street with private bedrooms located on the 2nd floor;
3.7.3	Clear definition between public and private spaces in the setback areas;
3.7.4	Windows, which encourage overlook onto the street;
3.7.5	Individual entrances with markers, landscaping and art features;
3.7.6	An inside row of trees at each residential entrance to reinforce the formal tree lined promenade along the streets; and
3.7.7	Distinctive character elements, which express the individual neighbourhoods.
3.11	Crime Prevention Through Environmental Design (CPTED) considerations should be incorporated into the development proposals.

Adapted from City of Surrey, 2009f, Appendix X

Overall, the Plan Update and Interim Urban Design Guidelines make provision for a safe and engaging public realm with active uses at street level, “eyes on the street”, public art and character elements but do not specify those elements that might make for a public realm more conducive to accommodating young people. These details will be addressed in an upcoming public realm study and on a development application by development application basis.

Building block #3 – parks and play spaces

The Surrey City Centre Plan Update, Phase II, Stage 1 report makes numerous recommendations for the greening of Surrey City Centre, the provision of more parks, play, and open space, the development of green streets and a green network, and improving access to nature – all important contributors to child and youth friendly cities (Figure 5). City of Surrey staff highlighted many child and youth friendly features of the parks and open space concept and generally indicated that plans for the area would increase the amount and variety of play opportunities for children in the area. One staff person speculated: “I think the open space network coupled with the [public realm] study will create and define a more child and family friendly outdoor amenity network” (City of Surrey staff interview).

Several existing parks are proposed to be enhanced and/or expanded as part of the Plan Update to include amenities such as multi-purpose playing fields, play structures, picnic areas, pathways, community gardens, and off-leash dog areas.

As part of the City Centre Plan, we are looking at a green network Master Plan which allows for greenways and improvements to existing parks. For instance, in Holland Park there are slated improvements for a playground and waterpark as a part of a subsequent phase (City of Surrey staff interview).

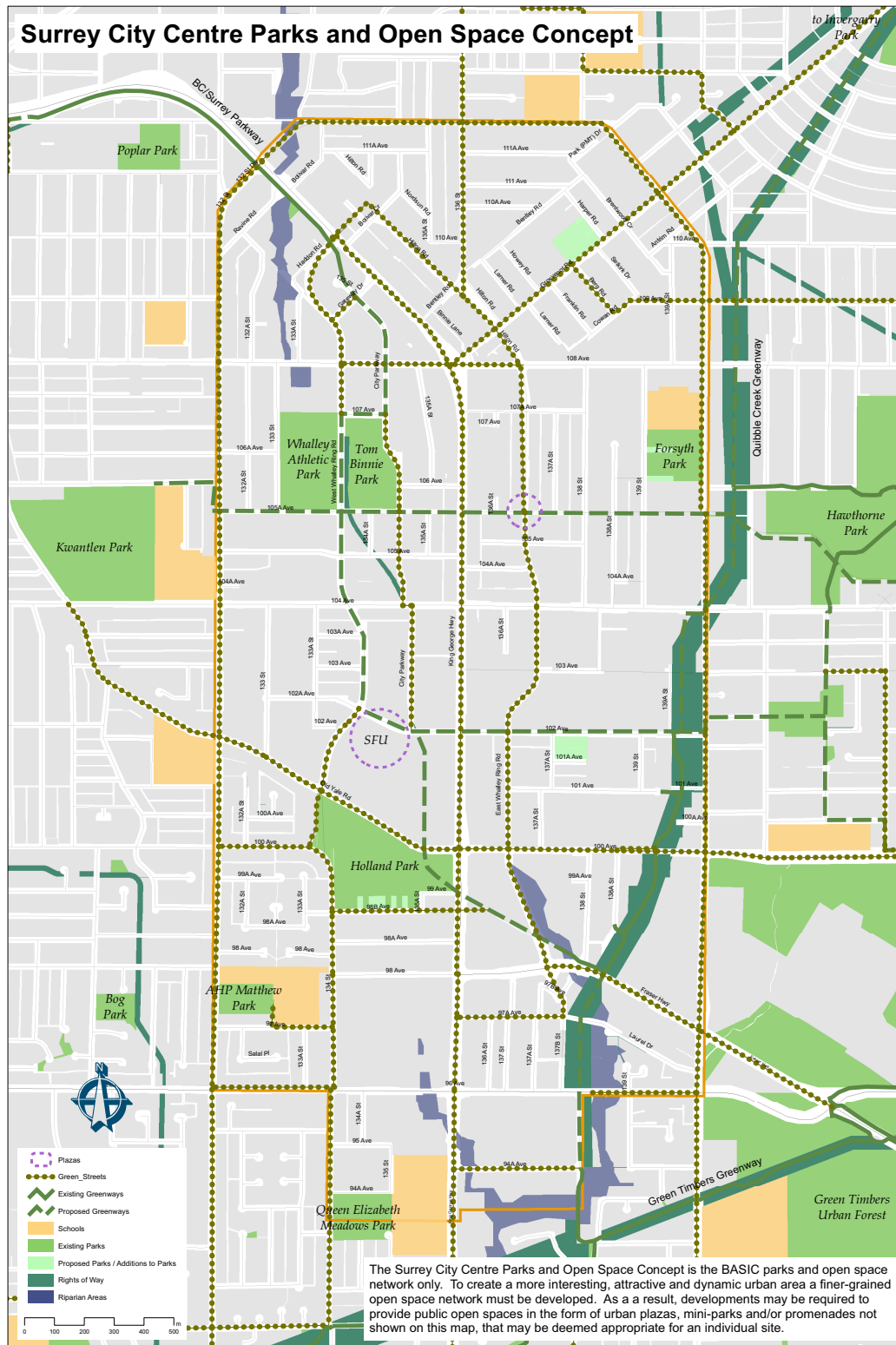
The Plan Update also proposes the creation of “additional neighbourhood parks or pocket parks to ensure all areas of Surrey City Centre are adequately served...” (Bing Thom Architects, 2008, 95). It is proposed that pocket parks and mini-plazas be developed within a 10-minute walking distance or 400 metres of residences to ensure that young people have green and/or open space in close proximity to their homes.

At the neighbourhood level we will be ensuring that we have parks and play spaces within walking distance (City of Surrey staff interview).

City of Surrey staff emphasized the importance of small neighbourhood park spaces and open spaces on private property, in addition to larger City parks:

We are going for a finer-grained open space network. We have new public parks, two of them being acquired. We have [development] sites that can give [additional] open space where there will be public access ultimately on private land (City of Surrey staff interview).

Figure 5 Surrey City Centre Plan Update Parks and Open Space Concept



Source: Bing Thom Architect, 2009

The Plan Update recommends the integration of additional privately owned green spaces and plazas into new developments provided public right of access is guaranteed. This will further increase the density of the proposed parks and open space network beyond what the City is able to provide through acquisition.

We are hoping that developers will provide the pocket parks and mini-plazas as part of their developments. [We have one development application] right now where we are getting a pocket park that is actually being developed by the developer but can be used by the whole community (City of Surrey staff interview).

There will have to be programming for children's play areas in all of the public open spaces that we do [as part of private development]. It is actually better if it is built by the developer and maintained by the strata. So what we are trying to do with those places is make them feel public enough that outsiders don't feel bad about coming in... (City of Surrey staff interview).

The Plan Update makes provisions for a variety of types of pocket parks and mini-plazas allowing for a diversity of play experiences. These include green parks, water parks, sculpture parks, gardens, plazas, and entertainment parks. It is noted that while mini-plazas will likely be more urban and include focal points such as public art, monuments, educational pieces, or fountains, pocket parks will be developed in predominantly residential neighbourhoods and will include basic family-oriented amenities such as play structures. Both, by design, are intended to be engaging and hospitable to children and youth. In terms of ensuring ease of access to these small parks and plazas, the Plan Update notes that pocket parks and mini-plazas "should be located along and complimentary to the pedestrian, bicycle, and greenway network..." (Bing Thom Architects, 2008, 98). The Plan Update includes design considerations and criteria for the siting of pocket parks and mini-plazas to ensure they are safe and highly usable spaces (Table 8).

Improving access to nature is an important component of the City Centre Plan Update. The Plan Update recommends re-establishing connections to historic water bodies and creeks. Both Bolivar Creek and Quibble Creek (a local salmon-spawning creek) will be partially restored as part of the redevelopment of Surrey City Centre. The proposed redevelopment of a storm water pond located south of 100 Avenue and east of West Whalley Ring Road as a publicly accessible amenity creates further access to water, an important component of a child and youth friendly environment. City of Surrey staff identified access to various forms of nature as a key child and youth friendly feature of the City Centre Plan and an asset quite unique to Surrey:

Access to nature is something that a lot of downtowns don't have...we are one of the only ones so we are going to try to enhance that where we can (City of Surrey staff interview).

The bad news in Surrey is that it hasn't developed much. The good news is that because it hasn't developed much, it hasn't gone through the industrial age of dumping batteries into creeks (City of Surrey staff interview).

Table 8 Design considerations and criteria for pocket parks or mini-plazas

<p>Design Considerations</p> <ul style="list-style-type: none"> • Ensure clear sightlines across the entire location. • The pocket park or mini-plaza must be open to the street on 2-4 sides. • Any and all buildings adjacent to or integrated into the park must be front facing, with walkways joining into the park and all active rooms in adjacent buildings facing onto the park. • Cafes or commercial/business interfaces with the mini-plazas should open onto the mini-plaza. • Mini-plazas should be oriented and easily accessible to public transportation, and should not face onto automobile parking areas. • The design of the pocket park or mini-plaza must reflect human scale, as should adjacent developments. • Lighting must be included to increase visibility in the winter and may deter some negative use of the pocket park/mini plaza during evening and night time hours. • The local community should be engaged in the design process, both for built form and for artistic enhancement of the pocket parks/mini plazas, reflecting the requirements of the City's public art process. • The locations of both parks and plazas should maximize sunlight exposure while minimizing the effects of shadows from surrounding buildings during peak usage hours.
<p>Additional Criteria</p> <ul style="list-style-type: none"> • Residential areas with high numbers of families with children 0-14 years old and/or family demographic clusters will favour development of mini-parks. • If there are identified gaps or needs for basic 0-14 local amenities in residential areas as noted above, children's play amenities (e.g., play structures) should be located within a pocket park within a 400m walkable distance of residences. • Where possible, there should be some emphasis on natural landscapes in which children can interact, in order to gain a better understanding and appreciation for nature. • A mini-park may feature a unique environmental niche or rare ecosystem needing protection, and would be connected to a larger natural system, corridor or node via a linear park, or riparian setback area.

Adapted from Bing Thom Architects, 2008, 97.

The importance of creating connections between green spaces is also a key element of the Plan Update.

Surrey has an opportunity to create a unique downtown that incorporates a network of "green ribbons" - greenways, green streets and nature trails—that tie together the parks, open spaces, meeting places and residential neighbourhoods within City Centre, which create opportunities for those living, working, learning and recreating in City Centre (City of Surrey, 2009f, 5).

The Plan Update proposes that access to significant peripheral parks outside of City Centre be improved to further increase the amount of park and open space available to City Centre residents. Especially important is the proposed connection to Green Timbers Park, a large urban forest adjacent to City Centre.

Large park spaces such as Green Timbers and Bear Creek Park are in close proximity to [Surrey City Centre] and can serve as supplemental park space for area residents. To take advantage of these large park spaces, a series of clear access routes such as greenways need to be established to connect these parks with [Surrey City Centre] (Bing Thom Architects, 2008, 143).

Surrey Nature Centre and Green Timbers will be an amenity for City Centre residents. People are going to be walking there and cycling there. There will be a destination playground (City of Surrey staff interview).

The Plan Update also proposes the creation of neighbourhood walking loops that tie in with a larger interconnected multi-use pathway and greenway system.

Designated civic greenways will include Surrey Parkway, City Parkway, Streamside Greenway, Quibble Creek Greenway, 105A Avenue and 102 Avenue Greenways. These multi-use pathways will connect local walking loops and provide longer distance recreational circuits to the new civic precinct, Green Timbers Urban Forest, and Invergarry, Bolivar, Hawthorne, and Royal Kwantlen Parks (City of Surrey, 2009f, 15).

The Interim Urban Design Guidelines for Surrey City Centre contain a few provisions for ensuring that open spaces are child and youth friendly. These are summarized in Table 9.

Table 9 Interim design guidelines for open spaces

4.0 Open Spaces and the Green Network	
4.1	Create local public open spaces (pocket parks, mini plazas and widened promenades) on development sites where available due to lot configuration or proximity to the green network. These should be at grade, connected to the streets and have continuous ground level uses surrounding them.
4.2	Family oriented facilities such as child play areas should be considered.
4.3	Cycling amenity nodes should be considered at specific locations along the designated bikeways.

Adapted from City of Surrey, 2009f, Appendix X

Building block #4 – housing

Families with children have a tendency of favouring ground-oriented housing (housing with ground floor entrances and ready access to backyards such as duplexes and townhouses).

- Bing Thom Architects, 2008, 140

The City Centre Plan Update makes special provision for the accommodation of family-oriented housing in several City Centre sub-areas (Figure 6).

One of the fundamental visions of the City Centre is to create residential neighbourhoods and that means families, generally (City of Surrey staff interview).

The Gateway subarea, for example, is proposed to include high-density transit oriented development (TOD) with much lower density ground-oriented housing to the east of the TOD zone. The types of housing in this part of Gateway are proposed to include townhouses and duplexes and will “offer family-friendly housing in close proximity to the downtown” (Bing Thom Architects, 2008, 116). City of Surrey staff emphasized the City’s focus on townhouse development for families in City Centre.

Grosvenor Park is proposed to be a “predominantly residential area where families with children can enjoy an urban lifestyle” (Bing Thom Architects, 2008, 116). The Plan Update suggests that “the area should follow a ‘families first’ attitude towards amenities development and physical planning as well as public realm programming” (Bing Thom Architects, 2008, 116). Tom Binnie Park surrounds one of City Centre’s largest green spaces. Residential buildings surrounding this green space are proposed to include a range of housing type including high-rises, mid-rises, and family-friendly ground-oriented housing. It is proposed that residential buildings fronting the park be oriented to maximize the “eyes on the street” effect on the park. This area will also support the development of several neighbourhood-servicing nodes. “Given the amount of young families with children in the area, a particular amenity of importance to be developed will be licensed daycares and playgrounds” (Bing Thom Architects, 2008, 117).

Figure 6 Surrey City Centre Sub-Areas



Source: Bing Thom Architects, 2008

Forsyth Park is a subarea with an established precedent of high-density, mid-rise forms. However, because the area includes a school and a park, the Plan Update suggests that there is a need in this area for more family-friendly forms, such as townhouses, and the “public and private amenities to support families with children” (Bing Thom Architects, 2008, 118). Central City West is proposed to include low to mid-density residential areas and family-friendly housing close to City Centre’s Central Business District. Residential development in Central City East will be “largely restricted to low to mid-rise ground oriented housing which encourages families with children to stay in the area” (Bing Thom Architects, 2008, 119). The AHP Mathews sub-area is a residential area anchored by Holland Park and AHP Mathews Elementary School. The Plan Update states that “[b]etween these major amenities, they present opportunities to create

another family-friendly downtown which allows for families with children to live in a downtown environment” (Bing Thom Architects, 2008, 120).

The area would feature a variety of housing types from mid-rise, mid-density residential to ground oriented duplexes and single-family homes. The area would remain residential in nature with an urban design fabric that is family and child friendly with gathering places and pocket parks. For the parts of the subarea facing Holland Park, the front doors of the residential buildings will face the park (Bing Thom Architects, 2008, 120).

Housing types appropriate for families have been planned for in Surrey City Centre by lowering the maximum densities in several neighbourhoods adjacent to higher density mixed-use nodes and by retaining some of the older, lower income, single-family housing stock. This type of development is key to ensuring ease of access to services and appropriate housing for families with children from varied economic backgrounds. The Interim Urban Design Guidelines for Surrey City Centre contain just a few specific provisions for making housing and the areas around family-oriented housing more family-friendly (Table 10).

Table 10 Interim design guidelines for housing

2.0 Building Form and Treatments	
2.2	At the ground level, the expression of two storey townhouses within the building massing is crucial to engage and create the street life of the residential neighbourhoods.
2.3	A strong sense of entry to individual units should be expressed at the street level.
2.5	Residential livability should be provided including privacy separation and the provision of open space for private and shared use. Garden plots in the shared open spaces of residential developments can support urban agriculture objectives. Roofs of lower buildings should be greened and treated to address overlook from higher buildings. Acoustical considerations should be incorporated into the building design.
3.0 Public Realm and Ground Plane Interface	
3.4	Retention of natural features and trees should be considered on each development site.

Adapted from City of Surrey, 2009f, Appendix X

Recognizing that “[r]esidential livability for families requires a minimum of two bedrooms with each bedroom being large enough to accommodate a single bed, a dresser, a desk or table, [and] some floor space for playing” (Bing Thom Architects, 2008, 157), the Plan Update recommends the establishment of family livability zoning targeted at ensuring that there

is ultimately a sufficient supply of appropriately designed family-oriented housing in Surrey City Centre.

A family livability zoning ordinance could require developments of a certain size or in certain areas (for example, with a close proximity to a school) to have a number of these two bedroom units. For residential areas within a 400 metre proximity of school, the City may wish to consider an overlay zone which is intended to encourage family-friendly housing which, at the minimum, requires 2 or more bedroom suites. This type of overlay zoning would have considerations towards urban design and transportation which ensure that neighbourhood would remain welcoming for families (Bing Thom Architects, 2008, 157).

Building block #5 – transportation

One of the founding principles of the City Centre Plan Update is the development of a finer street grid and an integrated and coherent road network with the intent of increasing walkability. City of Surrey staff identified this as one of the key child and youth friendly features of the Plan Update. One staff person noted: “a finer-grained road network is one of the biggest ambitions that we have”, while another stated “we are looking to achieve shorter blocks and a finer grid. Ideally, we don’t want to have blocks longer than 100 meters” (City of Surrey staff interview).

The Plan Update engages a “complete streets philosophy” in which streets develop around pedestrians, cyclists, public transit, and private automobiles (in that order) (Bing Thom Architects, 2008). The existing street network in Surrey City Centre was developed around the automobile, and as a result, consists of very large and often disjointed blocks that make navigating the area on foot or by bicycle extremely difficult and frequently dangerous (Figure 7). The Plan Update proposes the development of more urban sized blocks:

The massive size of the existing City Centre blocks and incomplete road network are major existing challenges towards creating a pedestrian oriented downtown. A smaller grain block size with an ideal target of 80-100 metre-sized blocks would greatly increase the pedestrian and bicycle friendliness of the area... The major benefit of such a resilient street system is the opportunity to tame currently pedestrian hostile streets like King George Highway and create walkable neighbourhoods (Bing Thom Architects, 2008, 28).

Figure 7 Figure Ground showing Surrey City Centre's Existing Block Structure



Source: Bing Thom Architects, 2008

In order to achieve this finer grid, “it is expected that developments, where required, will dedicate additional roads and lanes, in addition to the roads and lanes shown on the Basic Road Network Concept” (City of Surrey, 2009f, 13). In order to further increase the pedestrian friendliness, and therefore child and youth friendliness, of Surrey City Centre, the Plan Update proposes that the number of vehicle access points from streets be reduced. Instead, it is proposed that vehicle access points be facilitated through the provision of rear lanes making sidewalks safer for pedestrians. City of Surrey staff identified many other child and youth friendly street features including: narrower streets, more pedestrian crossings, raised pedestrian crossings, wider sidewalks, corner bulges, and rain gardens and other environmental features intended to improve the pedestrian environment.

The Plan Update recognizes that “pedestrian and bicycle networks must be complete and connect to major area destinations to be effective” (Bing Thom Architects, 2008, 100). It recommends continuing “to build and enhance a continuous and safe bicycle network with an infrastructure that allows for bicycles to be a viable mode of transportation” (Bing Thom Architects, 2008, 95). It also recommends continuing “the green network throughout City Centre with a comprehensive urban forestry strategy in areas that do not have on-street parking and are usually not pedestrian-friendly” (Bing Thom Architects, 2008, 95). City of Surrey staff spoke about the provision of wider sidewalks, off-street dedicated bike lanes, and 3-4 metre wide multi-use pathways in Surrey City Centre on specific streets that are part of the green network. They also identified the implementation of on street parking as a way of buffering pedestrians from busy urban streets.

The Plan Update places strong emphasis on ensuring that the appropriate infrastructure is in place to facilitate young people’s ability to walk or cycle to school.

A strong network of schools anchors the principle that Surrey City Centre should offer a supportive environment for those residents with children who wish to move into and grow with the area. Wherever possible, schools will be integrated into the green network of bicycle and pedestrian paths. Students will have a safe and viable option to either walk or bike to school. Developments within a 400 metre (15 minute walk) of an elementary school or 600-metre (20 minute) walk of a secondary school should have a family-friendly design and amenity attitude. While the current capacity of the area schools will likely be able to accommodate most of the growth expected in the next 25 years, the creation of an urban school near the heart of Surrey City Centre should be considered (Bing Thom Architects, 2008, 123).

City of Surrey staff also noted the emphasis placed on creating a transportation system that would encourage young people to walk or cycle to school. The integration of schools into the proposed green network was identified by Surrey staff as an important component of an ultimately child and youth friendly transportation system:

We are proposing to have paths radiate to and from schools. All of these trails, whether they are existing or proposed, either pass by or lead to schools (City of Surrey staff interview).

Staff also noted the importance of legibility and navigational tools to creating a child and youth friendly transportation network:

What we want to try to do as part of the [green network] is incorporate way-finding [that could take the form of] an interesting public art piece or feature intended to guide people (City of Surrey staff interview).

City of Surrey staff identified the transformation of King George highway as an integral component of making City Centre more child and youth friendly. King George Highway runs through the middle of Surrey City Centre and is an important route for through traffic. The Plan Update proposes to transform this auto-oriented highway into a “great street” or boulevard.

King George Highway, in the future, will be tamed and become a boulevard. That is going to be a whole exercise unto itself. And there is the whole issue of transit on King George which still hasn't been resolved which also will have a big impact (City of Surrey staff interview).

A staff report to Surrey City Council notes:

There are some challenges to this being achieved, for example, with background research identifying the high traffic volumes and the impact this had on the pedestrian environment and connectivity. The Plan Update responds to these challenges by:

- Creating smaller street blocks through the development process thereby improving pedestrian and cycling accessibility and connectivity and the number of crossing opportunities;
- Considering the construction of additional pedestrian crossing locations, including innovative strategies such as crosswalks with median refuges that allow pedestrians to safely cross one direction of traffic at a time;
- Enhancing the current street design elements in conjunction with a review of road cross-sections to create more comfortable, attractive, human-scaled streets with wide sidewalks, landscaping, quality street furniture and lighting;
- Where the opportunity exists, in conjunction with the review of road cross-sections, providing on street parking to improve the "buffer" between moving traffic and pedestrians;
- Proposing 140 Street as a truck route to reduce truck traffic on King George Highway through the City Centre and to help disperse goods movement; and
- Acknowledging that within the City Centre, King George Highway will have a multiple role serving vehicular traffic, expanded transit, goods movement, cycling and walking (City of Surrey, 2009f, 15).

The Plan Update also proposes relieving at least some of the congestion on King George Highway by completing the existing Ring Road network to provide an alternate route to disperse traffic.

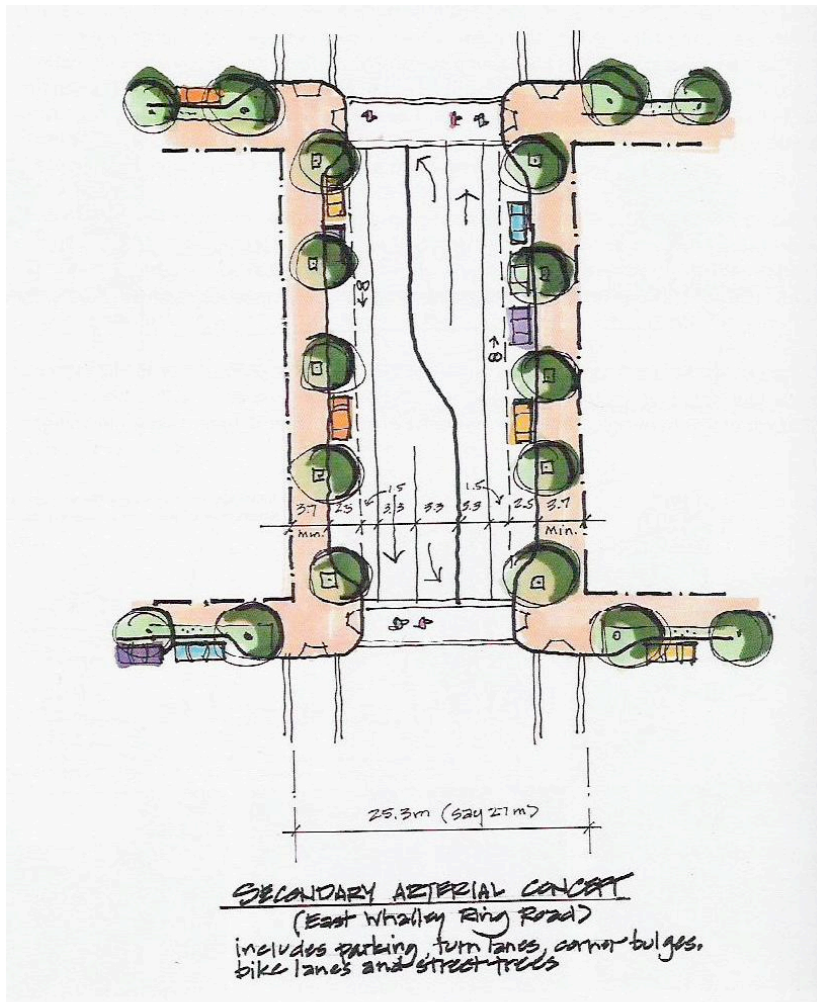
The Plan Update proposes changes to road widths to accommodate both bus rapid transit/LRT and projected increases in traffic volume associated with the growth and development of the area. The width of 104 Avenue from City Parkway to 140 Street and King George Highway south of 102 Avenue, for example, are proposed to be increased to 40 metres (130 ft.) or more in order to accommodate rapid bus and future light rapid transit (LRT) lines. Increased road widths are also proposed for a number of other streets in Surrey City Centre in order to accommodate the projected increases in traffic volume that come with increases in population. The widths of these streets have been increased to an arterial standard of 27 metres. While the widening of roads does not generally produce a hospitable pedestrian environment for young people, it is proposed that some of these expanded secondary arterial roads be “designed to accommodate multiple modes of transportation from bicycles to cars and feature street trees to create a welcoming pedestrian environment” (Figure 8). Some of the child and youth friendly components of this design concept include multi-use pathways that are a minimum of 3.7 metres wide, bike lanes (although not always separated or buffered from traffic), and curb bulges at pedestrian crossings. The Interim Urban Design Guidelines for Surrey City Centre, summarized in Table 11, contain a number of parameters that may have the effect of making streets better for children and youth in Surrey City Centre.

Table 11 Interim design guidelines for streets

1. City Form	
1.8	A strong sense of street enclosure. The majority of streets would have a four-storey apartment building enclosure. Higher street enclosure may be considered for wider streets.
3.0 Public Realm and Ground Plane Interface	
3.8	Parking should be located underground and ramps should not interrupt the pedestrian amenity and safety on street sidewalks and be located on lanes. The ramp sidewalks should be treated with materials to reduce impacts from public realm views.
3.9	Residential drop off and short-term parking should be considered along the lane side rather than interrupting the pedestrian sidewalks on the streets.
4.0 Open Spaces and the Green Network	
4.3	Cycling amenity nodes should be considered at specific locations along the designated bikeways.

Adapted from City of Surrey, 2009f, Appendix X

Figure 8 Secondary Arterial Design Concept



Source: Bing Thom Architects, 2008

DISCUSSION

The previous section provided an overview of the results of the qualitative content analysis of the Surrey City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines for Surrey City Centre and revealed the child and youth friendly features planned for Surrey City Centre. Interviews with City of Surrey staff who were directly involved in developing the Plan supplemented and corroborated the results of the analysis. The following discussion, once again, is informed largely by interviews with City of Surrey staff and offers some critical assessment of plans for Surrey City Centre noting apparent contradictions, potential challenges, and foreseen obstacles to creating a child and youth friendly downtown in Surrey. The issues identified are certainly not unique to Surrey, and generally reflect the challenges associated with retrofitting suburban fabric and implementing sustainable development policies in suburban areas. The second part of the discussion revisits Surrey's recent paradigm shift towards more sustainable development that is expressed in several of the City's overarching policies, plans and strategies, and speculates as to whether the child and youth friendly framework can be leveraged to achieve more sustainable development in Surrey.

At projected full build out, in approximately 80 years, Surrey City Centre will be the highest density, most compact, and most urban neighbourhood in Surrey. Although research has shown that higher density, mixed-use, compact development generally makes for a more accessible and thus a more child and youth friendly environment, it has also shown that families with children generally prefer lower density, and where possible, ground-oriented housing such as townhouses, courtyard houses, duplexes, or single family homes. The Plan Update seeks to achieve the best of both worlds through the provision of a variety of lower density housing types in close proximity to higher density, mixed-use, transit oriented development.

Reconciling the needs of families while accommodating the development of a strong urban core in Surrey City Centre has presented a challenge to City staff working on the plan. Although there is clearly a strong desire to ensure that there is a place for families in Surrey City

Centre, some City staff suggested that parts of City Centre might ultimately be too urban to accommodate young people and their families:

There are areas that are going to be very high-density, there are the corridors along King George, 104th and around the core which is probably going to be very urban and therefore probably not conducive to family housing but other than that I don't think that there are any obstacles on the perimeter of City Centre that would prevent the development of family-oriented neighbourhoods (City of Surrey staff interview).

Staff also expressed some uncertainty about whether it would be possible to accommodate a sufficient supply of lower density, family-oriented housing while still maintaining an acceptable level of urbanity in Surrey City Centre.

It's a real balancing act between the densities needed to facilitate transit oriented development and the type of housing that would be family-oriented – ground-oriented units with two or three bedrooms (City of Surrey staff interview).

There is a challenge to provide family-oriented housing and at the same time to achieve the densities that you need to create to the critical mass and to support public transit and a certain level of services. It is a real fine balance and I am not quite sure if we have resolved that issue (City of Surrey staff interview).

We are pushing to get townhouses on all multi-family projects along the streets. Now whether all of these townhouses are actually family-oriented, I am not sure. There is real difficulty in trying to get these densities and these larger units at the same time (City of Surrey staff interview).

Despite the preferences of some families for lower density housing forms, some staff felt that high-density housing could ultimately work quite well for families:

I think we have gotten used to the assumption that family-oriented housing is in fact ground oriented housing or low rise. I think that although some parents may think that, that might not always be the case. In a four-storey, wood-frame building the noise carries, unlike in a high rise. With kids running around, especially above you, that always poses a problem. In a high rise you never have that issue. So again that might be another reason that [family-oriented units] would be an easier sell in high-rises than in low-rises (City of Surrey staff interview).

Likewise, another staff person noted:

I think that [high-density housing] can be made more family-friendly – it really has nothing to do with whether it is ground-oriented or in a high rise – as a long

as you provide really good accessible public spaces. You are going to have that regardless of whether it is ground-oriented or if you live on the eighth floor or tenth floor for that matter (City of Surrey staff interview).

Some City of Surrey staff even speculated that it might ultimately be easier to accommodate family-oriented housing in high-rise than in low-rise developments:

I am wondering when we talk about making it mandatory to have family-oriented housing, I am wondering if that is actually easier to implement in a high-rise than in a low rise. Because of the price point and the densities you have a greater opportunity to absorb the cost of that larger unit in a larger building than in a four story where you are pretty limited in density and how much flexibility you have in terms of juggling your unit count but if you have a big high rise with 250 units you have more flexibility (City of Surrey staff interview).

Despite this perspective among City staff, to date there appears to have been little consideration for how families with children can be accommodated in the higher density residential and mixed-use neighbourhoods planned for Surrey City Centre. Instead, emphasis thus far has focussed primarily on accommodating families with children in the lower density and peripheral neighbourhoods near schools. In fact, staff noted that not unlike in neighbouring Vancouver, the current trend in higher-density residential developments in Surrey is to maximize unit yield through the provision of a higher number of smaller units rather than a lower number of two and three-bedroom units.

Right now a lot of developments are redesigning to create more but smaller units. They are almost all being geared to younger adults, 18-24, who need to get into the housing market but certainly don't have families at all. It is also a reflection of the economy. At one time in the early 1990s, these two and three bedroom units were the norm. Now it is just the opposite; they are really smaller units (City of Surrey staff interview).

This leads to another issue noted by City staff. Like other neighbourhood plans, the Surrey City Centre Plan is just that – a plan. Whether or not the plan comes to fruition is largely dependent upon both development community and market conditions that will ultimately dictate the nature of development. In other words, if developers can't sell it, they won't build it. In general, City of Surrey staff emphasized that how well Surrey City Centre performs, with respect to children and youth, will depend largely on the development community. As one staff member put it: "We do depend on working with the development community. We have to wait

for development for the changes to happen” (City of Surrey staff interview). Similarly, in regard to the child and youth friendly amenities that are typically provided by developers and are needed to support families in new residential developments, one staff person noted:

“Developers are very market-driven and some developers are bare bones” (City of Surrey staff interview).

The provision of sufficiently sized units for families was also identified as a potential challenge. Staff indicated that although developers in Surrey are always encouraged to provide larger units that can accommodate families, there are currently no provisions for requiring that developers provide these units.

We always look at varied types of units, we try to encourage that as much as possible, but usually that is dictated by the market. We don’t have any type of policy or legislation that demands that a developer provide a three-bedroom unit or a two-bedroom unit. In the end, it is economics that dictates unit mix (City of Surrey staff interview).

When we see a building that has a lot of one-bedroom units in it or studios then we will say, ‘shouldn’t you really be thinking about larger units?’, but we do not mandate three-bedroom units in any way (City of Surrey staff interview).

City of Surrey staff also indicated that a family livability zoning ordinance that would require residential developments to have a minimum number of two and three-bedroom units would likely be difficult to implement in Surrey where land is plentiful, facilitating urban development is a prime directive, and there is a sufficient supply of larger residential units in the more suburban neighbourhoods in the City. One staff member speculated that, “if inclusionary zoning is going to be considered it is going to be a long way down the road and I am sure it would be met with a lot of resistance from the development community” (City of Surrey staff interview).

While it does appear that the accommodation of families in the higher density pockets of City Centre has been largely overlooked, City of Surrey staff indicated that this, at least in part, is a reflection of the market in Surrey. Staff noted that there may not be the cultural proclivity for very urban living among Surrey families at this time.

The high-rise option for family-oriented housing has never been considered. Everyone is still of the suburban mindset because they haven’t experienced growing up or living in a high-rise with children. Families move to Surrey so they can live in a single-family house with a lot. They would never say, ‘I moved to

Surrey to live in a high-rise in City Centre'. That just wouldn't cross anyone's mind (City of Surrey staff interview).

Most families, if they want a three-bedroom unit, are going to go for a townhouse or they are going to seek a single-family residence and that is just the nature of our experience and our culture. If you look elsewhere, in Europe or Asia, a three-bedroom unit in a high rise is very acceptable [for families with children]. That is something that you are used to seeing. There is limited space. It is market driven. You don't see a lot of three-bedroom units anymore. You may see two-bedroom and a den but the den is like a closet. I would love to see three-bedroom units. I just don't think there is a market for it right now. I just think the developers are reacting to what the market wants (City of Surrey staff interview).

City of Surrey staff identified very high densities, the development community, market conditions, and cultural tendencies as potential challenges or obstacles to achieving a child and youth friendly Surrey City Centre. However, above all else, staff uniformly highlighted the proposed basic road network and arterial road section standards in Surrey City Centre as the most profound obstacle to achieving a truly child and youth friendly physical environment in City Centre. Some staff identified increasing connectivity in City Centre a significant challenge, noting that "part of the challenge of City Centre is that it is a big area and we are big suburban municipality so making things connected and walkable at a local level is a challenge because we are big and our budgets aren't huge" (City of Surrey staff interview).

Others identified the City's tendency to focus on auto-oriented street design as a foremost concern:

One of the biggest challenges I find is that there is no understanding here about roads as being anything other than vehicle-oriented because as I say, people drive hard to get to the cul-de-sac. That is the character of Surrey. Any road design that you get is ferociously and fiercely oriented to the car and is unfriendly to pedestrians so we are trying to change that. To create roads for something other than driving hard to get to the cul-de-sac is something that is foreign to Surrey and traditionally all the roads have been given away in favour of development because Surrey is a place to do business and that is the most important prime directive. That has meant that the pedestrian and cycling environment has not been important, not thought of. No one would get out and go for a walk. There was no understanding that if you don't get that finer road network, no one will go for a walk because you don't walk 1000 metres and walk back. Nobody wants to do that along a hostile road with lots of driveways on it. One of the biggest things I do is to try not to have driveways on the streets. They should be from back lanes or consolidated or minimized because every time a kid tries to walk to school, every time they have to cross a driveway

it is scary. Then they try to cross any of the four monster streets in Surrey City Centre that are intimidating for everybody, let alone seniors or children. There doesn't seem to be an understanding that if you just create a lot of streets, they are not just for driving hard, they are for pedestrians and making interesting public spaces so people get out. That is the biggest thing that we are trying to achieve [to make City Centre better for] children, youth, and families (City of Surrey staff interview).

According to City staff, arterial road section standards, in particular, pose a significant obstacle to creating a child and youth friendly environment in Surrey City Centre. Staff expressed concern and frustration with respect to the challenges associated with simultaneously accommodating adequate passage for vehicular traffic and the infrastructure needed to support alternative, more sustainable modes of transportation that are accessible to young people:

The distances travelled and the width of road rights-of-way will likely pose obstacles to creating a child and youth friendly City Centre. The standards on road sections are really limiting us and increasing all of the competing demands of the physical environment (City of Surrey staff interview).

Roads are designed to go fast. If you look at road design in Surrey it is to allow cars to go fast. Therefore you have to do all kinds of safety things [to mediate this] like big turning radiuses. Our arterial design is pedestrian hostile. None of the road standards are changing in City Centre for any of the roads on the basic road network and they are all pedestrian hostile (City of Surrey staff interview).

Basically, we have been told that that primary focus of roads is to move people in cars. When we first started out we were looking at squeezing lanes to accommodate bike lanes and significant planting strips. Engineering basically shot us down, for sure on arterials (City of Surrey staff interview).

King George Highway, which bisects Surrey City Centre and will ultimately accommodate rapid transit, was identified by City staff as a significant obstacle to achieving a child and youth friendly City Centre. Although there are plans to transform King George Highway into a Boulevard and "great street", staff were still concerned about the pedestrian hostile nature of this significant transportation route.

King George Highway is going to 40 metres to accommodate rapid transit. Do you know what it is like to try to traffic calm a street with Bus Rapid Transit going down the middle of it? (City of Surrey staff interview).

There has been some discussion about providing raised crossings which not only provide an actual visual crossing, they also form a bit of a break in the road. Whether or not transportation is on board with that is an entirely different story because, in their minds, [King George Highway] is a major arterial where you can't have [on street] parking and it is all about the flow of cars. It's not about slowing traffic, it is about free-flowing traffic (City of Surrey staff interview).

Surrey started as a suburb of Vancouver and [the Planning Department] is trying to change some mentalities that are stuck in the automobile suburb mentality where the "I need a 36-metre right-of-way and it is not going to function without it" perspective is prevalent. On the one hand, with some of the wider rights-of-way, you definitely need them because ultimately they will accommodate light rapid transit. Sometimes you do need that to accommodate [transit]. But with some of the road widths, it has been quite the battle about what at a minimum we need for adequate passage and then, can we have parking on the road? Can we enclose the road a little bit more with pocket parks or something to slow down traffic? It has been a tough, tough battle. Sometimes we have gotten some support and I think they are coming along but it has taken a while (City of Surrey staff interview).

Despite their concerns, City of Surrey staff identified many child and youth friendly features of the Surrey City Centre Plan Update Phase II, Stage 1 report and Interim Urban Design Guidelines and are generally optimistic about the potential for Surrey City Centre to be a sustainable urban neighbourhood that can successfully accommodate children, youth, and their families. This sense of optimism is likely, at least in part, driven by a recent paradigm shift in Surrey towards more sustainable development, and yet is tempered by the realization that the implementation of these changes will take time and will require a real shift in thinking and most importantly, buy-in from local politicians, the development community, and the public. One City staff person noted that the implementation of more progressive planning principles would require "political will," including a serious commitment from Surrey City Council. (City of Surrey staff interview).

Although staff noted that families in Surrey might not be ready for an urban lifestyle just yet, they are confident that in time Surrey's suburban mindset will evolve, perhaps out of necessity:

People will have to make a lifestyle decision that they are going to live more urban. I think there is pent up demand for 'young and funky'. People who say 'I don't really want to move to Cloverdale on the cul-de-sac and I am not quite ready for Clayton, I want a little more lifestyle, and I can't afford Yaletown, so I

am going to move to this place' and then they will pop some babies there. That is where it will start (City of Surrey staff interview).

While reliance upon the development community and market conditions were noted as potential obstacles to achieving a family-oriented urban environment in City Centre, staff emphasized that developers build according to what the market dictates and, in time, when the market dictates family-oriented housing in City Centre, they will ultimately build it.

Developers will just serve their communities. Whoever buys is what they will build. As soon as they find children and families moving in they will build it. We have to create an identity. We have to get the people in there first. I think it is going to be singles and couples first, but soon, as in Yaletown in Vancouver, those people will start having children and it would be nice if they didn't have to move out (City of Surrey staff interview).

One staff person indicated that they have already begun to notice a shift in thinking among developers in Surrey City Centre: "So much of it is economy related. Two years ago nobody wanted to do townhouses [in City Centre]. This week I have had two inquiries already" (City of Surrey staff interview). Another staff person indicated that the key to achieving good family-friendly development in Surrey City Centre would be "a couple of great projects to go through to set precedents." (City of Surrey staff interview).

Finally, despite significant concerns regarding the challenges posed by Surrey's arterial road section standards, staff still appear to be confident that they will be able to facilitate the development of a finer grained transportation network by completing missing links, developing the green network, and by breaking up large blocks through the dedication of additional streets on private land (City of Surrey staff interview).

Many of the challenges and obstacles identified by City of Surrey staff, with respect to creating a child and youth friendly City Centre, relate more generally to the challenges associated with retrofitting and urbanizing suburbs. Transforming the existing, car-oriented suburban fabric, and reinventing it through the implementation of sustainable urban development policies is a challenge unto itself, especially given the incremental nature of redevelopment. The City of Surrey has very recently adopted a number of overarching plans, policies and strategies intended to guide the City towards more sustainable development. Without a doubt, the implementation of these sustainable development policies will take time,

will require a shift in thinking, and more than anything, will require buy-in from local politicians, the development community, and the public.

The suburban way of life has so often been critiqued as dysfunctional and as the very antithesis of sustainable living. Yet it has also commonly been viewed as uniformly good for families. Research has begun to unravel the suburban dream for families with children, revealing that contained and compact development provides far more benefits to young people and their families than the conditions created by sprawl. It has revealed that sustainable development is child and youth friendly and that child and youth friendly development is sustainable. Gaining support for sustainable development can be difficult in suburban cities where change, especially change characterized by increased densities and more urban-type development, is sometimes met with resistance. However, with so many families with children living in Surrey, and other suburban cities for that matter, it is entirely possible that the ideas of sustainability can be made more palatable and relevant to suburbanites by framing them in a child and youth friendly context.

CONCLUDING REMARKS AND RECOMMENDATIONS

So often plans for downtown urban areas assume a single public interest, usually young, childless urban professionals, and fail to fully address the long-term needs of families with children. Research has shown that cities can play a vital role in child and youth development. However, it has also shown that children and youth are frequently and increasingly denied adequate access to their neighbourhoods. For cities to be socially sustainable, inclusive, and accessible they must be planned in such a way that children and youth can fully participate in urban life with at least some degree of age-appropriate mobility and independence. This means designing urban environments that are hospitable to families with children. This paper has shown how land use and density, the design of the public realm, the amount and type of parks and play spaces, the availability of appropriate housing, and the variety of transportation options available to children and youth, or the physical building blocks of a child and youth friendly city, can present both obstacles and opportunities for young people in urban areas.

The Surrey City Centre Plan Update, Phase II, Stage 1 report and Interim Urban Design Guidelines envision a future urban centre in which children, youth, and their families have the opportunity to live in a compact, accessible, and family-friendly urban neighbourhood. The provision of lower density ground-oriented housing adjacent to higher density, mixed-use, transit oriented development facilitates the development of family-oriented housing while ensuring ease of access to services. Improving connectivity through the development of a finer-grained street network (albeit, outside of the proposed basic road network) and through the implementation of a green network will improve young people's mobility and encourage them to walk or cycle to school. The creation of additional green spaces, the improvement of existing parks and play spaces, better access to natural areas, and the provision of pocket parks and mini-plazas contributes to an urban environment that facilitates a variety of play experiences for young people in close proximity to their homes.

This being said, there are a number of ways in which the child and youth friendliness of Surrey City Centre and Surrey in general can be further enhanced. The following recommendations reflect issues identified by City of Surrey staff as well as gaps identified

through the qualitative content analysis of the City Centre Plan Update Phase II, Stage 1 report and Interim Urban Design Guidelines. It is therefore recommended that the City of Surrey:

- Implement a family livability zoning ordinance in Surrey City Centre (and Surrey's Town Centres) to facilitate the development of a sufficient supply of 3-bedroom units in Surrey's higher density urban areas.
- Engage the development community to raise awareness of child and youth friendly planning principles.
- Research and develop design guidelines explicitly for child and youth friendly housing noting the importance of unit size, unit flexibility, sound attenuation, storage, outdoor space and access to services.
- Utilise the input of Surrey's young people to develop design guidelines explicitly for child and youth friendly public spaces noting the importance of engaging anchors (public art, sculptures, monuments, fountains, bollards, planters), street furniture, varied textures, colours, materials, shapes and forms, and covered areas.
- Increase the provision and quality of sidewalks and bicycle routes, and implement traffic calming in high-traffic and family-oriented neighbourhoods in Surrey City Centre with the intent of increasing safety and independent mobility.
- Evaluate all Town Centre Plans and Neighbourhood Concept Plans for child and youth friendly considerations.
- Complete a comprehensive review and analysis of Surrey's Zoning By-law and Subdivision By-law with the ultimate goal of making neighbourhoods across the City more child and youth friendly.
- Consider how child and youth friendly planning principles can be leveraged to achieve more sustainable development in the City of Surrey.

In addition to the above recommendations, there are also opportunities for further research in Surrey City Centre specifically. This paper has focussed on the physical elements of a child and youth friendly city, however the physical environment is just one component of a child and youth friendly city. Without access to appropriate services and amenities, Surrey City Centre will not successfully accommodate families with children no matter how well designed the neighbourhood. A review and analysis of child and youth friendly service provision in Surrey City Centre would compliment and substantially add to this research. Future research may also include post-occupancy analysis of Surrey City Centre, at specified increments and at build out, focussing specifically on how well the neighbourhood supports the needs of children, youth, and families.

Efforts to restructure the city with children and youth in mind are not incompatible with current planning principles and practices in many cities. In fact, many of the City of Surrey's recently developed overarching plans, policies, and strategies already incorporate policies that are likely to benefit the city's youngest and most vulnerable residents. Trends towards more

sustainable development, in Surrey and elsewhere, align well with child and youth friendly planning principles. Child and youth friendly cities are more sustainable: “All of the characteristics of a child-friendly city are the same characteristics that would lead to a cleaner environment, less energy-greedy transport systems, a more equitable society with a more participatory democracy, and safe and welcoming public spaces with opportunities for spontaneous contact with people” (Tranter and Pawson, 2001, 45). Cities and neighbourhoods that are good for children and youth are good for the entire community. The child and youth friendly planning framework presents an opportunity for the City of Surrey to reframe its sustainability initiatives and to leverage planning principles that are known to be good for young people to create a community that good for everyone.

APPENDICES

Appendix A Interview Discussion Guide

1. Has there been a conscious effort to create a downtown that will accommodate young people and their families? How was this reflected in the planning process?
2. How are the needs of children, youth, and families being incorporated into plans for Surrey City Centre?
3. What are some child and youth friendly features of the plans for Surrey City Centre?

With respect to:

1. land use and density
 2. public space
 3. parks and play space
 4. housing
 5. transportation
4. Are there any features of the plans for Surrey City Centre that make it particularly unfriendly to children, youth, and their families? What are they? Why and how do they pose a challenge?
 5. What is missing from plans for Surrey City Centre that would make it more accommodating of children, youth, and their families?
 6. What do you foresee as potential obstacles to creating a child and youth friendly City Centre? (physical, political, economic, cultural etc.)

Appendix B Analysis Criteria

Analysis Criteria	
Category	Parameters
Land use & density	<p>Child and youth friendly land use and density is characterized by:</p> <ul style="list-style-type: none"> - a mix of uses - shorter blocks and a finer grid - contained compact development (smaller lots, higher densities) - continuous urban fabric (limited underutilized space) - appropriate scale (at the neighbourhood and building scale) - services such as shops, schools, libraries, community facilities, and parks located within neighbourhoods to facilitate access by pedestrians and cyclists - unique and identifiable neighbourhoods
Public space	<p>Child and youth friendly public spaces should:</p> <ul style="list-style-type: none"> - be safely and easily accessible - be multi-functional and versatile - offer enclosure or the sense of enclosure - be well-lit and visible - be traffic free or traffic calmed - contain anchors (public art, sculptures, monuments, fountains, bollards, planters) - contain street furniture - contain varied textures, colours, materials, shapes and forms - contain grass, plants, foliage - contain covered areas - contain places to sit (both formal and informal – i.e., stairs and ledges) - facilitate passive surveillance - facilitate socialization among the generations - provide play opportunities for young people - discourage criminal activity - increase social life at street level

Category	Parameters
<p>Parks and play space</p>	<p>Child and youth friendly parks and play spaces should:</p> <ul style="list-style-type: none"> - be located close to residential development (consideration should be given to the creating many small parks/play spaces rather than singular large spaces) - be located close to schools - include a wide range of environments to encourage a variety of children's play, including social as well as physical play - include natural or roughed up areas or elements - include places where children can play informal sports (e.g., street hockey) safely without complaints - cater to the interests of youth (e.g., skateboarding; cycling) - include community gardens where children can plant, care for and pick their own flowers and vegetables - provide opportunities for water play - emphasize tree preservation - offer children and youth opportunities for climbing, challenge and adventure - include ecological and recreational green networks - include a variety of playgrounds - include green spaces linked by trails
<p>Housing</p>	<p>Child and youth friendly housing should:</p> <ul style="list-style-type: none"> - be ground-oriented entry where possible - provide a variety of unit types with a minimum of 2-3 bedrooms - include rooms that are sufficiently flexible to allow for change as children grow - include safe, semi-private outdoor spaces such as patios, balconies, and porches for children's play - provide easy access to the outside for play - have access to shared community space in housing complexes - be designed so that children playing in common outdoor areas can be seen by their parents from their dwelling's main rooms - include roof gardens and large public terraces where ground orientation is not possible - provide accessible storage for children's equipment such as strollers, bicycles - clustered - have a distinct visual identity - promote privacy - be located in a convenient location (with respect to access to services and amenities)

Category	Parameters
Transportation	<p>Child and youth friendly transportation is facilitated and characterized by:</p> <ul style="list-style-type: none"> - narrow streets - a fine-grained road network - road layouts that reduce traffic speeds - a network of safe, traffic-reduced, or traffic-free places and streets - traffic calming (e.g., speed bumps, traffic circles, roundabouts) - patterns of development that keep children away from traffic - special routes to the places that young people regularly go such as the school and park that are - streets and paths that are well-lit - bike lanes and trails for walking, cycling, rollerblading, both for recreation and for travel between key locations (e.g. town centre, recreation facilities, major parks) - pedestrian crossings or traffic signals at road crossings - wide roads with two-stage crossings, with a protected island between traffic streams - at road crossings, the pedestrian crossing area should be maintained at the same grade as the sidewalk, i.e., vehicles use ramps, not pedestrians - walking routes and signage should be visible to children - ramps for strollers and other aids used on sidewalks - walking routes separated from traffic where traffic moves faster than about 30 kilometres/hour - reduced traffic speeds - ‘eyes’ on the route - sidewalks wide enough (3-4 metres) to minimize proximity to traffic and to accommodate pedestrians and young cyclists - bicycle lanes on the pavement only as a last resort

Note: Analysis criteria for this research was derived from four sources:

- Academic literature;
- Policy reports and design guidelines from other jurisdictions;
- A child and youth friendly community guide developed by the Society for Children and Youth of BC; and
- Completed consultations with children, youth and parents in Surrey.

REFERENCE LIST

- Bartlett, S., Hart, R., Satterthwaite, D., De La Barra, X., and Missair, A. (1999). *Cities for children: Children's rights, poverty and urban management*. London: Earthscan.
- Bing Thom Architects. (2008). *Surrey City Centre Plan Update Phase II, Stage 1 report*.
- Blinkert, B. (2004). Quality of the city for children: chaos and order. *Children, Youth and Environments, 14, 2*, 99–112.
- Bridgman, R. (2004). Child-Friendly Cities: Canadian Perspectives. *Children, Youth and Environments, 14, 2*, 178–200.
- Cayo, D. (2009, September 23). Families are being priced out of Vancouver, study shows. *The Vancouver Sun*. Retrieved from <http://www.vancouversun.com>
- Chawla, L. (2002). "Insight, creativity and thoughts on the environment": integrating children and youth into human settlement development. *Environment and Urbanization, 14, 2*, 11–21.
- City of Portland, Oregon. (2008). *Courtyard Housing: A Catalogue of Designs and Design Principles*. Portland: Strategy Custom Publishing, LLC.
- City of Surrey. (2006a). *Community Services In The City Centre*. Retrieved from <http://www.surrey.ca/NR/rdonlyres/86C6F270-E5FE-4F1B-A38F-89B94ECF6F96/0/FinalDisplayBoardsPart3.pdf>
- City of Surrey. (2007a). *Youth Sustainability Forum Notes*. Retrieved from <http://www.surrey.ca/NR/rdonlyres/400CE77D-4876-48D2-A405-E0308FFB7892/0/YouthSustainabilityForumNotes2.pdf>
- City of Surrey. (2007b). *Youth Speak Up! on Surrey City Centre*. Retrieved from <http://www.surrey.ca/NR/rdonlyres/D3E49127-CE2B-4C10-BCD5-F83C76A3DCB4/46300/YouthSpeakUpOnCityCentre2007.pdf>
- City of Surrey. (2007c). *Crime Reduction Strategy*. Retrieved from <http://www.crimereduction.surrey.ca/NR/rdonlyres/5C8C968C-DCCE-4C06-87C0-E6327569105B/33777/SurreyCrimeReductionStrategyweb.pdf>
- City of Surrey. (2008a). *Population fact sheet: Age and Gender*. Retrieved from http://www.surrey.ca/NR/rdonlyres/08069E7D-7329-4794-867D-129FBB700D9D/0/2006_Age_Gender.pdf
- City of Surrey. (2008b). *Parks, Recreation And Culture Strategic Plan*. Retrieved from <http://www.surrey.ca/NR/rdonlyres/1C088F3C-3933-4535-B2EC-51BEF955F077/42288/surreyfinalstrategicplanreport.pdf>

- City of Surrey. (2008c). *Youth Speak Up! 2008 Highlights*. Retrieved from <http://www.surrey.ca/NR/rdonlyres/D3E49127-CE2B-4C10-BCD5-F83C76A3DCB4/46301/YouthSpeakUp2008Highlights.pdf>
- City of Surrey. (2008d). *Sustainability Charter: a commitment to sustainability*. Retrieved from <http://www.surrey.ca/NR/rdonlyres/8A8B8E61-D2DE-4377-B183-98DF2A0AFFA0/43421/COSSC5final.pdf>
- City of Surrey. (2008e). *Transportation Strategic Plan: Transportation Working for Everyone*. Retrieved from http://www.surrey.ca/NR/rdonlyres/BE23ED97-8DF5-4E47-BECC-02139800F669/43933/COSTransportCover_new2.pdf
- City of Surrey. (2009a). *Creating A Child and Youth Friendly City: What Does It Mean? A Review of Child and Youth Friendly Practices From Other Cities*. Retrieved from <http://www.surrey.ca/NR/rdonlyres/D3E49127-CE2B-4C10-BCD5-F83C76A3DCB4/46299/CreatingaCYFCityReport2009.pdf>
- City of Surrey. (2009b). *Results of Consultations with Children, Youth and Families*. Retrieved from <http://surrey.ihostez.com/Documents/DocumentDisplay.aspx?ID=21930>
- City of Surrey. (2009c). *Safe & Active Schools: A priority for the City of Surrey*. Retrieved from http://www.surrey.ca/NR/rdonlyres/BE23ED97-8DF5-4E47-BECC-02139800F669/47051/SafeActiveSchools_ApproachStrategy.pdf
- City of Surrey. (2009d). *City of Surrey Walking Plan – An Approach Strategy*. Retrieved from http://www.surrey.ca/NR/rdonlyres/BE23ED97-8DF5-4E47-BECC-02139800F669/47050/WalkingPlan_ApproachStrategy.pdf
- City of Surrey. (2009e). *City of Surrey Cycling Plan: towards a bicycle-friendly community*. Retrieved from http://www.surrey.ca/NR/rdonlyres/BE23ED97-8DF5-4E47-BECC-02139800F669/47049/CyclingPlan_ApproachStrategy.pdf
- City of Surrey. (2009f). *Surrey City Centre Plan Update - Phase II, Stage 1*. Retrieved from <http://surrey.fileprosite.com/Documents/DocumentList.aspx?ID=20684>
- City of Vancouver. (1992). *High-Density Housing for Families with Children Guidelines*. Retrieved from <http://vancouver.ca/commsvcs/Guidelines/H004.pdf>
- City of Vancouver. (2007). *Social Development, Social Sustainability & Quality of Life*. Retrieved from <http://vancouver.ca/commsvcs/socialplanning/initiatives/socdev/concepts.htm>
- Clutterbuck, P. and Novick, M. (2003). *Building Inclusive Communities: Cross-Canada Perspectives and Strategies*. Prepared for the Federation of Canadian Municipalities and The Laidlaw Foundation.
- Cooper, C. and Sarkissian, W. (1986). *Housing as if People Mattered: Site Design Guidelines for Medium-Density Family Housing*. University of California Press.
- Curtis, L.J., Dooley, M.D., and Phipps, S.A. (2004). Child wellbeing and neighbourhood quality: evidence from the Canadian National Longitudinal Survey of Children and Youth. *Social Science and Medicine*, 58, 1917–1927.

- Duany, A. Plater-Zyberk, E., and Speck, J. (2000). *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream*. New York: North Point Press.
- Engwicht, D. (1992). *Towards an Eco-city: calming the traffic*. Sydney: Envirobook.
- Freeman, C. (1995). The changing nature of children's environmental experience: The shrinking realm of outdoor play. *Environmental Education & Information*, 14, 3, 259–280.
- Furlong, T. and Cunningham, B. (2007). *Principles of child friendly housing*. City of Portland, Bureau of Planning.
- Gaster, S. (1991). Urban children's access to their neighborhood: Changes over three generations. *Environment and Behavior*, 23, 70–85.
- Gilbert, R. and O'Brien, C. (2005). *Child and youth friendly land use and transport planning guidelines*. Ontario: Retrieved from http://cst.uwinnipeg.ca/documents/Guidelines_ON.pdf
- Gilbert, R. and O'Brien, C. (2009). *Child and youth friendly land use and transport planning guidelines for British Columbia (DRAFT 2)*. Retrieved from <http://www.kidsonthemove.ca/uploads/Guidelines%20BC2.pdf>
- Gill, T. (2008). Space-oriented children's policy: Creating child-friendly communities to improve children's wellbeing. *Children & Society*, 22, 136-142.
- Gleeson, B. and Sipe, N. (eds). (2006). *Creating child friendly cities: Reinstating kids in the city*. London: Routledge.
- Groc, I. (2007). Family-friendly: Parents with young children say 'yes' to living downtown. *American Planning Association*. 8–13.
- Haider, J. (2007). Inclusive design: planning public urban spaces for children. *Proceedings of the Institution of Civil Engineers: Municipal Engineer*, 160, 2, 83–88.
- Hart, R. (2002). Containing children: some lessons on planning for play from New York City. *Environment and Urbanization*, 14, 2, 135–148.
- Hoggart, K., Lees, L., and Davies, A. (2002). *Researching Human Geography*. London: Arnold.
- Irwin, L.G., Siddiqi, A., and Hertzman, C. (2007). *Early Child Development: A Powerful Equalizer* (final report). World Health Organization.
- Israel, E. and Warner, M. (2008). *Planning for Family Friendly Communities*. Retrieved from <http://www.planning.org/pas/memo/open/nov2008/index.htm>
- Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Random House.
- Lennard, H. and Crowhurst Lennard, S. (2000). *The Forgotten Child: Cities for the wellbeing of children*. Carmel: Gondolier Press.
- Leventhal, T., Brooks-Gunn, J., 2000. The neighborhoods they live in: the effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*, 126, 2, 309–337.

- Malone, K. (2006). United Nations: a key player in a global movement for child friendly cities. In B. Gleeson and N. Sipe (eds.), *Creating child friendly cities: reinstating kids in the city*. (pp. 13-32). London: Routledge.
- Matthews, H. (2001). Home zones: Children, neighbourhoods and the quality of life. *Geography: Journal of the Geographical Association*, 86, 2, 168–171.
- O'Brien, M. and Christensen, P. (eds.). (2003). *Children in the city: Home, neighbourhood and community*. London: RoutledgeFalmer Press.
- O'Brien, M. (2003). Regenerating children's neighbourhoods: What do children want? In Christensen, P. and O'Brien, M. (eds.), *Children in the city: Home, neighbourhood and community* (pp. 142-161). London: RoutledgeFalmer.
- Pawson, P. (2007). *Strategies for building child friendly cities*. Presented at the Creating Child Friendly Environments Forum. Retrieved from <http://www.children.act.gov.au/Forums/Tranter%20Child%20Friendly%20Cities%20-%20%20Canberra%20.pdf>
- Ragan, D. et al. (2004). *The Youth Friendly City—Vancouver Working Group Discussion Paper*. Retrieved from <http://www.wd.gc.ca/eng/9729.asp>
- Randolph, B. (2006). *Creating a socially sustainable higher density Sydney*. City Futures Research Centre, Faculty of the Built Environment, University of New South Wales. Retrieved from <http://www.fbe.unsw.edu.au/cf/publications/presentations/attachments/sgsseminar.pdf>
- Seasons, M. et al. (2004). *The Planning City—Vancouver Working Group Discussion Paper*. Retrieved from <http://www.wd.gc.ca/eng/9730.asp>
- Social Planning and Research Council of BC (SPARC). (2006). *Plan for the Social Well-Being of Surrey Residents*. <http://www.surrey.ca/NR/rdonlyres/A71D6102-0D77-47D7-9448-2FF6C281639B/46286/SocialPlanFinalReport2006.pdf>
- Society for Children and Youth of BC. (2001). *Making your community more child and youth friendly: Getting started*. Burnaby: The Society for Children and Youth of British Columbia.
- Statistics Canada. (2006). Community Profiles. Retrieved from <http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-591/details/Page.cfm?Lang=E&Geo1=CSD&Code1=5915004&Geo2=PR&Code2=59&Data=Count&SearchText=surrey&SearchType=Begins&SearchPR=01&B1=All&Custom=>
- Talen, E. and Coffindaffer, M. (1999). The Utopianism of Children: An Empirical Study of Children's Neighborhood Design Preferences. *Journal of Planning Education and Research*, 18, 321–331.
- The Georgia Straight. (2007). Audio interview with Mike Harcourt. Retrieved from <http://www.straight.com/article-108496/mike-harcourt>.
- Tranter, P. and Pawson, E. (2001). Children's Access to Local Environments: A case-study of Christchurch, New Zealand. *Local Environment*, 6, 1, 27–48.

- UNESCO. (2009). Growing Up in an Urbanising World-Summary. Retrieved from <http://www.unesco.org/most/guic/guicguuw.htm>.
- Urban Design Advisory Service. (1999). *Urban design guidelines with young people in mind*. Retrieved from http://www.planning.nsw.gov.au/programservices/pdf/udas_yo.pdf
- Walsh, P. (2006). Creating child friendly playspaces: a practitioner's perspective. In B. Gleeson and N. Sipe (eds.), *Creating child friendly cities: reinstating kids in the city*. (pp. 136-150). London: Routledge.
- Ward, C. (1990). *The child in the city*. London: Bedford Square Press.
- Wilkinson, W., Eddy, N., and MacFadden, G., and Burgess, B. (2002). *Increasing Physical Activity Through Community Design: A Guide for Public Health Practitioners*. Washington: National Center for Bicycling & Walking.
- Yates, R. (1995). *Child friendly housing: A guide for professionals*. Vancouver: The Society for Children and Youth of British Columbia.