Preface

1.0  What is the Health Background Study Framework?
The following compilation of documents comprehensively details the key deliverables produced as part of joint initiative between Region of Peel Public Health and Toronto Public Health to develop a framework for municipalities to establish a mechanism to integrate considerations of health impacts into the land use development approvals process. Building on the extensive work undertaken by the Region of Peel to develop the Healthy Development Index, the primary outcomes of this initiative include a stakeholder-tested Health Background Study Terms of Reference/User Guide, and a corresponding Implementation Strategy that provides recommendations on implementation responsibilities and how/where in the planning process the Health Background Study requirement best fits.

2.0  Study Structure
The Terms of Reference and supporting User Guide are the product of an exceptionally collaborative working relationship between the Region of Peel Public Health and Toronto Public Health Departments, working with a team of professional planning consultants. In order to get a broader perspective on the local context and professional practices of those who would be implementing such a planning requirement and its impact, dozens of interviews were conducted with local and regional municipal public health and planning staff, private development interests and private planning consultants. The stakeholder consultation process included:

•  **Key informant interviews:** to establish a local and professional knowledge base from which to scope the framework for the Terms of Reference.

•  **Workshop 1 (Nov./Dec. 2011):** to review the draft Terms of Reference and provide a forum for discussion to further its development.

•  **Workshop 2 (March 2011) – Feasibility Workshop:** to test the revised Terms of Reference and User Guide in the evaluation of actual/hypothetical development scenarios and to discuss overall feasibility/usability and potential modifications to the draft Terms of Reference.

The complete Health Background Study Framework ensures that this complex process is done in a way that ensures that healthy design is integrated throughout the evolution of a project. From major area regeneration schemes or extensions to small applications for infill development, individual buildings or spaces, the Health Background Study Framework can provide both private developers and the evaluating team with the triggers it requires to ensure that the core elements/criteria are understood and that a comprehensive assessment of a project’s healthy design potential can occur. Building on the Region of Peel’s
Health Development Index, this package of documents includes the following:

- **Situational Assessment** – provides an overview of the current policy context in Ontario in relation to the linkage between public health and land use planning, while examining current work at the municipal level to implement Health Impact Assessments. It examines existing municipal studies required as part of the development process. It also reviews how health-related initiatives are being implemented by other municipal jurisdictions, to inform the development of the health background studies framework and the identification of its core elements.

- **Health Background Study Terms of Reference and User Guide** – the Health Background Study (HBS) Terms of Reference is intended to serve as a ‘checklist’ to evaluate the success of new developments in achieving minimum standards of community health and a forum to encourage applicants to justify their development decisions. The aim of the User Guide is to support the HBS Terms of Reference by giving additional information corresponding to each of the key healthy community design elements that promote higher development standards for practical application in new development and re-development within existing communities.

- **Evaluation Report** – provides an overview of the feedback received and lessons learned from the Feasibility Workshop, held on March 4, 2011 to pilot test the applicability, usability and application of the new Health Background Study (HBS) User Guide in the context of different development typologies.

- **Implementation Strategy** – builds on the User Guide by providing the Region of Peel a game plan for implementing the Health Background Study, should it chose to do so. It presents the requirements for a supportive legislative environment, specific procedural details such as who does what and when, and a plan for monitoring the implementation and success of the Health Background Study.

3.0 **How to use this document**

The Health Background Study Framework has been constructed in such a way that it can be read as a single coherent narrative, tracing the healthy design qualities of a project from first principles to specific features, but at the same time it can be dipped into on a topic-by-topic basis and used as an education tool, or to inform and augment current and future planning practices. Thus, throughout the report, there are many criteria and guideline values that should be considered in drawing up development proposals, as well as by the reviewer, evaluating these proposals. Different sections of the Terms of Reference and User Guide will be relevant to different types and scales of projects. In recognition of this, both of these documents provide direction on what aspects are applicable in different development typologies. In respect of significant area regeneration schemes, city extensions or new settlements, most of the material contained in this document package will be relevant. For smaller infill schemes, it is the case of extracting those items that are applicable in any given case. Remember, even the most straightforward infill scheme must have due respect for its site context and its overall contribution to the neighbouring urban structure.
Acknowledgements

Finally, this report could not have been written without the significant effort of both the Region of Peel and Toronto Public Health Project Teams. Their contribution has been invaluable and is greatly appreciated. We encourage everyone to carefully review this document. It is our intention, that the criteria and supporting information in this framework will serve as a road map that will lead to the development of communities that integrate a concern for health and sustainable living at their core.

In the preparation of the Health Background Study Framework, sincere gratitude is extended to the following dedicated individuals, who were vital in its development:

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We also want to thank representatives from the cities of Brampton and Mississauga, Town of Caledon, and other workshop participants for providing valuable input into this study.

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The views expressed in this report do not necessarily represent the views of the project funder.
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1.1 Project Overview
As a collaborative effort between the Region of Peel and the City of Toronto, the purpose of this project is to build on the Peel Healthy Development Index and explore the possibility of establishing a context-sensitive system requiring consideration of health impacts during the land use development approvals process. One step in this process will involve the development of a Health Background Study Framework whereby development proponents are accountable for identifying health related risks that might arise from their developments. This system will provide the flexibility to address context-specific constraints or opportunities and will create criteria by which to require and evaluate these studies.

1.2 Purpose of this Report
This report addresses the formative stages of the Health Background Study Framework project, including the establishment of a set of criteria to inform the Framework, an initial discussion of where the Study should be inserted in the development application process, and what scale of development it should deal with.

To inform the development of this Framework, this report examines how the linkage between public health and land use planning is currently treated in policy and programs at the provincial, regional and local level, with a particular focus on the Region of Peel and the City of Toronto. In addition to planning policies and health-related initiatives such as Health Impact Assessments, this report includes an examination of studies that are already required as part of the municipal development process, and a summary of stakeholder interviews with regional and local planners, public health professionals and developers. Recommendations for a Health Background Study Framework that builds on the Peel Healthy Development Index conclude this report.

1.3 The Built Environment and Public Health – Past, Present and Future
Over the past century, our understanding of the complex interactions between our health and the environment in which we live have become increasingly apparent. Notwithstanding that recognition, it has not been until the last several decades that research has been able to provide evidence of these connections. The evolution of the public health profession in North America has, in large part, been about the associations between health and the built and physical environment.

The growing awareness of the associations between health and the built environment has corresponded with a measurable shift in the burden of illness, from communicable diseases to chronic diseases. While public health once focused on controlling and preventing communicable diseases caused by overcrowding, poor sanitation systems, and poor food preparation/storage practices, these sorts of issues have been largely resolved in the developed world. The majority of the burden of disease in industrialized societies is now made up of chronic illness, as reflected in some of the current research findings outlined below:

• Cancer is the leading cause of premature death in Canada. 40% of women and 45% of men will develop cancer in their lifetime. An estimated 50% of cancers are preventable (Canadian Cancer Society 2010). Obesity is a risk factor for a number of cancers - breast, colon, endometrial, esophageal, and kidney (Canadian Partnership Against Cancer 2008).

• Cardiovascular disease (CDV) is the leading cause of hospitalization in Canada, and drug costs in Canada. CVD is responsible for an estimated cost of $22 billion per year in direct healthcare costs and lost productivity in Canada. 80% of CVD is preventable (Heart & Stroke Foundation of Canada 2010).

• In Canada more than 3 million people have diabetes, and this is expected to rise to 3.7 million by 2020. Canadian adults with diabetes are twice as likely to die prematurely compared with the rest of the population. By 2020 it’s estimated that diabetes...
will cost the Canadian healthcare system $16.9 billion per year (Canadian Diabetes Association 2010).

Much of this is preventable through healthy eating, not smoking, getting adequate physical activity, and not becoming obese – activities that are influenced by the built environment (with the exception of smoking).

In addition to specific connections to chronic illness, the built environment is also recognized for its influence on more general key determinants of health. The list of key determinants of health vary among agencies and between jurisdictions, but they are consistently defined by their relevance for improving or influencing the health status of a population – an end goal that requires all health determinants of health to be considered within strategies that address specific health conditions or risks. Of the 12 key determinants of health identified by the Public Health Agency of Canada (Table 1), three have particular relevance to the development of a Health Background Study Framework: social environments, physical environments, and health services.

Given that there is a role for those involved in building our communities to integrate health considerations, land use decisions and the way communities are designed have multiple impacts on people lives, from how they get around to how they interact with their neighbours. The physical form of a community can impact its vitality, define its character and shape its ability to attract business and residents. It can also affect the overall physical and mental health of the people who live there.

Research has shown that the physical form and development patterns of a community have significant impact on a wide range of elements, including, but not limited to, air pollutants and greenhouse gases, water quality, levels of physical activity, social cohesion and rates of crime, and rates of injuries and fatalities for motorists, pedestrians and cyclists. While these elements may seem disparate, they all have direct impacts on our health.

### Table 1 - Key Determinants of Health

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income and Social Status</td>
<td>Income and social status influence people’s access to housing and food, and their sense of control over life decisions. Health status generally improves as people’s income and social status improve.</td>
</tr>
<tr>
<td>Social Support Networks</td>
<td>Support from family, friends and the community contribute to better health.</td>
</tr>
<tr>
<td>Education and Literacy</td>
<td>People’s level of education influences their opportunities for job selection and security, and a sufficient income. Enhanced education and literacy contribute to better health.</td>
</tr>
<tr>
<td>Employment/Working Conditions</td>
<td>People with a steady job that provides sufficient income and safe workplaces are generally healthier.</td>
</tr>
<tr>
<td>Social Environments</td>
<td>Social stability, recognition of diversity, good working relationships and cohesive communities contribute to healthy social environments, and healthier people.</td>
</tr>
<tr>
<td>Physical Environments</td>
<td>The natural environment, which includes air, water and soil, influences health. A cleaner environment supports better health. The human-built environment, which includes housing, workplaces and road design, also influences health. A better-designed community can result in improved public health.</td>
</tr>
<tr>
<td>Personal Health Practices and Coping Skills</td>
<td>People’s knowledge, behaviours and abilities to handle outside influences and stressors affect health. Enhanced personal health practices and coping skills improves health.</td>
</tr>
<tr>
<td>Healthy Child Development</td>
<td>Early child development influences health throughout the life span. Factors that influence healthy child development include appropriate birth weights, positive parenting and safe, friendly neighbourhoods.</td>
</tr>
<tr>
<td>Biology and Genetic Endowment</td>
<td>People’s genetic endowment contributes to their predisposition to certain diseases. Biology influences their response to sources of stress, such as viruses or emotional strain.</td>
</tr>
<tr>
<td>Health Services</td>
<td>Health is influenced by having access to services that are structured to restore, maintain and promote health, and prevent disease. Better access to health services improves health.</td>
</tr>
</tbody>
</table>

Current Context - Provincial Planning Policy and Community Health

2.1 Introduction
A number of recent policy initiatives at the provincial, regional and local levels recognize the link between the public’s health and development decisions. These policy initiatives acknowledge that as municipalities become increasingly built-out, careful attention must be given to the effect of new development on the overall health of community populations. To ensure the consideration of community health throughout the planning and development process, these Provincial policies address land use, development and growth planning in Ontario in a way that has effectively transformed the Provincial planning policy regime.

The key policy initiatives include recent regulatory changes under the Planning Act, and two policy documents that provide clear direction on the creation of healthy and complete communities – the Provincial Policy Statement (2005), and Places to Grow: The Growth Plan for the Greater Golden Horseshoe (2006). The Regional Transportation Plan (2008) complements these last two policy documents with a vision for “Transforming Transportation in the Greater Toronto and Hamilton Area” towards a more sustainable and healthy model. The underlying principles within these policies are supportive of a municipal vision that addresses several public health concepts.

2.2 The Planning Act (Bill 51)
Under recent amendments to the Planning Act (implemented under Bill 51), municipalities have increased powers to establish requirements for complete development applications. These amendments enable municipalities to require an applicant to provide supporting studies and information required to make an informed decision about the proposed development at the time a planning application is made.

In addition to establishing prescribed minimum complete application requirements, the amended Planning Act (Sections 22(5), 34(10.2), and 51(18)) now empowers municipalities to identify “any other information or material” required beyond the prescribed minimum, so long as such information and/or study requirements are supported by enabling policies within a municipality’s Official Plan. As part of their current Official Plan Review, some municipalities in Peel have included health-related studies in their lists of potential steps that may be required in the consideration of a development application (which may be an Official Plan Amendment, Zoning By-law Amendment, Plan of Subdivision/Condominium, Consent or Site Plan Control).

2.3 Provincial Policy Statement (2005)
The Provincial Policy Statement (PPS) provides broad policy direction to municipalities on matters of Provincial interest related to land use planning and development. The PPS supports good land use planning, which in turn, contributes to a more effective and efficient land use planning system.

The PPS is premised on the understanding that the long-term prosperity and the well being of Ontario is dependent on the development and maintenance of strong, healthy, active, livable and safe communities. The following excerpts highlight some of the linkages drawn between development and health:

Healthy, active communities should be promoted by:…
b. providing for a full range and equitable distribution of publicly-accessible built and natural settings for recreation, including facilities, parklands, open space areas, trails and, where practical, water-based resources. (Section 1.5.1)

Healthy, liveable and safe communities are sustained by: …
ensuring that necessary infrastructure and public service facilities are or will be available to meet current and projected needs. (Section 1.1.1)

Healthy, liveable and safe communities are sustained by:
b. accommodating an appropriate range and mix of residential, employment (including industrial, commercial and institutional uses), recreational and open space uses to meet long term needs. (Section 1.1.1)
Throughout, a strong connection is made between the health of a community and the provision of a complete mix of land uses, services and infrastructure.


Building on the broad directives of the Provincial Policy Statement, Places to Grow provides the framework for implementing the Province’s vision for building stronger, prosperous communities by better managing growth throughout the Greater Golden Horseshoe to the year 2031.

The vision of Places to Grow is articulated through a number of guiding principles. These guiding principles, found in Section 1.2.2 of Places to Grow, are intended to provide the basis for making decisions on how land is developed, resources are managed and public dollars are invested. The guiding principles of the vision articulated in Places to Grow are as follows:

- Build compact, vibrant and complete communities.
- Plan and manage growth to support a strong and competitive economy.
- Protect, conserve, enhance and wisely use the valuable natural resources of land, air and water for current and future generations.
- Optimize the use of existing and new infrastructure to support growth in a compact, efficient form.
- Provide for different approaches to managing growth that recognize the diversity of communities in the GGH.
- Promote collaboration among all sectors - government, private and non-profit - and residents to achieve the vision.

While public health outcomes are not an explicit aim of Places to Grow, there are clear linkages between its guiding principles and community health. Generally, building compact communities increases opportunities for active modes of transportation by bringing destinations in closer (walkable) proximity to one another, which also creates the necessary demand for public transit. Building communities that are more compact also protects land and resources outside of the community, which helps maintain clean air and water, and local sources of fresh food.

2.5 The Regional Transportation Plan (2008)

The purpose of the Regional Transportation Plan (RTP) is to implement the transportation component of Places to Grow. The RTP is premised on a shift away from private automobile use and towards the use of public transit and active modes of travel (i.e. walking and bicycling). Although the RTP focuses on the economic and environmental imperatives for this shift, the connection to public health outcomes is clearly outlined, particularly in terms of the link between how we travel and obesity, as well as the health impacts of transportation-related air pollution.

The RTP outlines nine “Big Moves” and 10 strategies to achieve those “Moves”. Of particular relevance to public health are strategies 1, 2, 7 and 8:

- **Strategy #1 Build a Comprehensive Regional Rapid Transit Network**
- **Strategy #2 Enhance and Expand Active Transportation**
- **Strategy #7 Build Communities that are Pedestrian, Cycling and Transit-Supportive**
- **Strategy #8 Plan For Universal Access**

The connection between transportation, community development, and community health is most clearly outlined in the policies related to Strategy #7, which focus on the connection between healthy transportation options and land use.

2.6 Summary of Findings

New Provincial policy, as articulated in the Planning Act, the Provincial Policy Statement, Places to Grow, and the Regional Transportation Plan is fundamentally aimed at establishing the principles of good planning throughout Ontario, with, in some instances, specific focus on the Greater Golden Horseshoe. Some of those fundamental principles supported by Provincial Policy include:

- Conservation of all significant natural heritage features;
- Promotion of a mix of uses, at increased densities;
- Support for transit, and a reduction on automobile reliance;
- Creation of complete communities with places to live, work, shop, play and be educated in proximity to each other.

These principles inherently can promote improved public health outcomes. The current Planning Act gives municipalities the ability to make a direct connection between urban development and public health.

Based on a review of the Provincial policies, the following is a summary of specific land use, built form and environmental elements, as identified in provincial policy, which have pertinence to health outcomes.
**General Goals**

- Protect Sensitive Land Uses:
  - Mitigate nuisance impacts such as odours, noise and contaminants with buffers/separation.
- Protect Water
  - Where necessary, restrict development and site alteration with an aim to protect, improve, restore water quantity and quality.
- Minimize Impacts on Air Quality
  - Promote public transit and active modes of travel.
  - Promote energy efficiency and use of alternative forms of energy.
- Sustain Local Agriculture
  - Promote and protect local agricultural resources and minimizing land use conflicts.

**Element-specific Goals**

- Recreation
  - Provide accessible built and natural settings for facilities such as parklands, open spaces, trails, water-based resources
- Transportation
  - Design public streets to be safe spaces that meet the needs of pedestrians, and to facilitate non-motorized modes of transportation.
  - Facilitate the movement of people and goods.
  - Reduce dependency on automobiles.
  - Promote active transportation modes.
  - Promote connectivity within and among transportation systems.
- Land Use Patterns
  - Support land use patterns that include higher densities and mixed-uses, and that make efficient use of public infrastructure.
- Housing
  - Provide a range of housing types and densities.
  - Establish targets for affordability.
  - Require development to meet social, health and well-being needs of current and future residents, including residents with special needs.
  - Direct development to areas with appropriate infrastructure and public services.
  - Build at densities that efficiently use land and support alternative transportation and transit.
    - Develop standards for intensification that minimize the cost of housing and promote compact form, healthy living and safety.

The policy elements highlighted here are informative for developing theme-based criteria for a Health Background Study.
3.1 Introduction
Echoing the broad policy directives at the Provincial level, recent policy initiatives at the local level demonstrate increasing support for using available planning and development mechanisms to achieve healthy community development objectives.

As part of this Situational Assessment, a number of planning and health-related policy and research documents were reviewed. The purpose of this review was to understand the respective policy contexts within the Region of Peel and the City of Toronto related to the potential implementation of a Health Background Study requirement and to examine methods, strategies and policy support that could inform the development of a Health Background Study Framework.

3.2 What is the Region of Peel doing?
The Region of Peel, through its Official Plan, Public Health 10-Year Strategic Plan and Peel Healthy Development Index has demonstrated a clear commitment improving public health through the planning and development process.

3.2.1 Region of Peel Official Plan
The Region of Peel outlines clearly in its updated Official Plan support for an assessment tool which allows the evaluation of public health impacts of a proposed plan or development, as part of the approval process (ROPA 24, Section 7.9.2.9, and ROPA 25, Section 7.3.6.2.2).

Further, the Region, through its updated Official Plan has committed to collaborating with the area municipalities on the development of this tool and its indicators. The Official Plan commits the Region to raise awareness of public health issues related to planning through partnerships within all levels of the public and private sector (Section 7.9.2.10).

3.2.2 Peel Active Transportation Study
The Region of Peel is working with the local municipalities of Mississauga, Brampton and Caledon on an Active Transportation Study that is focused on improving conditions for pedestrians and cyclists across the Region. The Study will produce a Regional vision for active transportation, with recommendations for: policies and guidelines that support that vision; an integrated pedestrian and cycling network and related facilities; and implementation strategies, including a phasing schedule. The Study is expected to be completed in Fall 2011.

3.2.3 The Peel Public Health 10-Year Strategic Plan
Further reflecting the Region’s commitment to health promotion, the Peel Public Health Department 10-Year Strategic Plan establishes a primary health vision and principles for the Region. Grounded in the ‘Public Health Way,’ this set of principles acts to clarify the direction the Region wishes to take in regards to public health and the promotion of a healthier population. This strategy specifically highlights benefits to the population as a whole, rather than individuals.

Additionally, the Strategic Plan places considerable emphasis on prevention rather than treatment. This emphasis undoubtedly will inform the development of a Health Background Study which allows planning activities to have a greater role in shaping aspects of the built environment, and policy that promotes activities that are preventative in nature. One of the Plan’s four program priorities is entitled “Supportive Environments, Healthy Weights” and specifically states that policies will be developed at the Regional level to promote healthier built environments.
3.2.4 Peel Healthy Development Index

Augmenting the Region’s updated Official Plan policies and its Public Health Strategic Plan, the Peel Healthy Development Index supports an evidence-based tool that will encourage future development in a form more conducive to active living. Elements and associated measures are identified that are directly related to health and the built environment. The Elements and their connection to health were derived from evidence in scientific literature, and include:

- Density
- Service Proximity
- Land Use Mix
- Street Connectivity
- Road Network and Sidewalk Characteristics
- Parking
- Aesthetics and Human Scale.

On the whole, the Peel Healthy Development Index provides a wealth of information to be considered in the development of a framework to promote a healthy population through appropriate land use planning activities. Of particular importance are the establishment of context-specific criteria and the need to link these criteria and targets both within and between regional and local municipalities.

3.2.4.1 Core Element Review

Since the Healthy Development Index has been identified as a central building block towards developing a Health Background Study Framework, the purpose of this section is to outline the key findings of our detailed review of all seven Core Elements. Our review focused on the feasibility of using these Elements as the basis for the Health Background Study Framework, and the full assessment can be found in Appendix I. In brief, the review looked at the following:

- typical standards/measures for each Element (e.g. for Density, a typical measure would be “the number of people and jobs per net hectare”, or floor area ratio (FAR));
- whether the element is under the influence of planners/the planning regime;
- if there is a practical way of assessing the Element within a development proposal; and
- whether its reasonable to expect developers to address the Element in their proposed development.

The review revealed that the seven Core Elements as defined by the Peel Healthy Development Index have clear connections to existing planning policy and development approvals. In a general sense, all Core Elements are already being addressed in existing planning policy, although the standards in existing policy may not be up to the optimal standards for achieving desired health outcomes. All the Core Elements also have accepted methods of measurement (qualitative and quantitative) associated with them, which developers must demonstrate adherence to through existing planning approvals mechanisms.

As a result, the feasibility of using these elements as the basis of a Health Background Study is not in question. What is in question is how policy and standards around these elements can be strengthened to meet desired health outcomes. This raises deeper questions with respect to defining what standards/performance measures are achievable, and in turn, whether specific standards/performance measures should be mandated and others voluntary.

Finally, while the Peel Healthy Development Index provides a very comprehensive analysis of how elements of the built environment may be addressed in regards to public health, there are other areas that relate to environmental quality (air, water, noise, vibration, odour) mental health, access to healthcare, safety concerns and cultural considerations that may also be considered in the creation of a Health Background Study Framework.

3.3 What is the City of Mississauga doing?

The City of Mississauga is undertaking a number of initiatives regarding development, active transportation, and environmental sustainability – all of which are relevant to the development of healthy communities. The initiatives include the Mississauga Official Plan, Cycling Master Plan, Green Development Strategy, and Living Green Master Plan.

3.3.1 Official Plan

The Mississauga Official Plan builds on the directives of the updated Region of Peel Official Plan, and is committed to raising awareness of the link between the built environment and public health. This is supported by the potential requirement of a Health Impact Study associated with development proposals as part of a complete application submission, as proposed in the current draft Mississauga Official Plan.

3.3.2 Cycling Master Plan

Mississauga approved its first Cycling Master Plan in September 2010. The Plan outlines a strategy to develop
over 900 kilometres of on and off-road cycling routes in the city over the next 20 years. The Plan takes an integrated multi-modal approach to transportation planning, and when fully implemented it will put 95 per cent of the city's population within one kilometre of a primary cycling route. The Cycling Master Plan is relevant to any components of a future Health Background Study that address active transportation.

3.3.3  Green Development Strategy

In July 2010, Mississauga adopted a Green Development Strategy\(^5\) that “focuses on achieving sustainability and environmental responsibility in new development”. The Strategy calls for the implementation of a Task Force, a request for new development applications to voluntarily achieve LEED for New Construction Silver certification and “Stage One Green Development Standards”. The Stage One Standards address stormwater management, pedestrian and cycling comfort, and bird-friendly glazing on the exterior of buildings.

Although the Strategy and associated standards are focused on environmental impacts, it has relevance for a future Health Background Study. The Stage One Standards address water quality and opportunities for active transportation, which are both relevant to health. Standards that are added in subsequent stages may also be relevant to the health impacts of development.

3.3.4  Living Green Master Plan

The City of Mississauga is also currently developing a Living Green Master Plan that will outline the city’s strategic environmental goals and provide direction for the City’s polices, practices and operations. The plan will also identify roles for residents, community groups, corporations and other partners.

Although the Plan is focused on environmental sustainability, its key areas of focus (air, climate change, energy, land, transportation, waste and water) impact health directly. The concurrent development of a Living Green Master Plan and the Health Background Study Framework should provide opportunities for the two documents to inform one another.

3.4  What is the City of Brampton doing?

The City of Brampton has responded to provincial planning initiatives and regional directives with updates to its Official Plan policies and the Transportation and Transit Master Plan. Healthy development is also supported by the City’s existing PathWays Plan and the development of a Sustainable Plan and Environmental Master Plan. These two documents focus on the environment, but have the potential to address health outcomes.

3.4.1  Official Plan

The Brampton Official Plan, while not explicitly establishing directives for the implementation of a public health impact evaluative tool, highlights a variety of policies related to public health, its promotion, and the role of the built environment. These health-related policies address the Sustainable City Concept, residential communities, the transportation system and demand management measures, public transit, parking management and the pathways system. The Official Plan policies generally establish direction for the implementation of Sustainable Community Design Guidelines, which are currently being developed as part of the City’s Sustainable Plan. While the Sustainable Community Design Guidelines will not directly address health, there may be potential overlap with standards developed for the Health Background Study.

Notably, the Official Plan strives to develop land use patterns that do not pose a risk to public health and safety, as opposed to a more positive approach that would develop land use patterns that enhance public health and safety.

3.4.2  Transportation and Transit Master Plan (TTMP) Sustainable Update 2009

The 2004 Brampton TTMP recently underwent a “Sustainable Update” that brings the original Master Plan up-to-date with new planning initiatives at the provincial level, recent growth trends, and changes to the city’s development charge by-law. The TTMP Sustainable Update builds on the 2004 vision regarding sustainable development, protection of the natural environment, economic vitality, and healthy communities, with a focus on providing safe, affordable, and efficient transportation for people and goods. The TTMP promotes active transportation facilities for recreational and commuting use, and supports the implementation of the PathWays Master Plan for a network of mostly off-road trails.

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\(^4\) For more information on the City of Mississauga Cycling Master Plan, visit the project website at: http://www.mississauga.ca/portal/residents/mississaugacyclingplan
3.4.3 Pathways Master Plan 2002

The PathWays Master Plan outlines a pathways network of 500 km of proposed on- and off-road trails, with the goal of connecting all residents to neighbourhood, community and city-wide destinations. In support of the PathWays Master Plan, the City endorsed draft trail design guidelines entitled Pathways Hierarchy (2008), which are used to determine the type and location of trails at the block planning phase. The hierarchy is also used by the City when constructing new pathways in existing communities.

In addition, the City will be preparing an Implementation Plan for Bicycle Facilities for on-road bikeways. The Plan will outline a strategic approach to implementing on-road trails, including making use of the development review process to identify new opportunities.

3.5 What is the Town of Caledon doing?

The Caledon Official Plan supports the Region in its goal of evaluating public health impacts of development, and the role of public health in achieving complete communities. The Official Plan highlights the relationship between community design and public health and the Town’s intention to work with the Region and other local municipal counterparts to develop a tool for evaluating the public health impacts of development proposals as part of the approval process. The Plan also expresses the Town’s intention to raise awareness of public health issues related to planning through partnerships with the public and private sectors.

3.6 What is the City of Toronto doing?

3.6.1 Official Plan

Similar to Provincial directives, the Toronto Official Plan supports the evolution of the city as a healthy and attractive place to live and work. While the Toronto Official Plan does not establish specific policies related to public health outcomes, it does recognize the linkage between planning and healthy communities in a broad sense with a number of references related to health, including the promotion of healthy active neighbourhoods, access to healthy food, supporting recreation opportunities through a comprehensive parks and open spaces system, preservation of the natural environment and ensuring the provision of appropriate and accessible community services and facilities.

3.6.2 Toward a Healthy City – Strategic Plan 2005-2009

Toward a Healthy City is the City’s most current public health strategic plan. The plan establishes a vision for public health in the City and includes a set of guiding principles and a series of strategic directions for the delivery of public health services in the City. The overarching mission of the plan is to improve the health of the City’s population and reduce health inequalities. While the plan does not draw an explicit linkage to built form or community design as a determinant of health, it does establish a broad framework that supports the integration of health-related public policy into the City’s wider programs and initiatives.

3.6.3 Toronto Bike Plan

The City of Toronto adopted a Bike Plan in 2001 that proposes a 1,000 kilometre bikeway network that is within a 5-minute bicycle ride of all residents. The Bike Plan also includes policies for bicycle friendly streets, safety and education, promotion, cycling and transit, and bicycle parking. The City has made progress on all fronts including the implementation of hundreds of kilometers of bikeways and the inclusion of a bicycle parking requirement in its new Zoning Bylaw. The Bike Plan is relevant to any components of a future Health Background Study that address cycling for transportation or recreation.

3.6.4 Toronto Walking Strategy

The City of Toronto adopted a Walking Strategy in 2009 that builds on the 2002 Pedestrian Charter. The Strategy includes six steps towards building a physical and cultural environment that supports and encourages walking. The six steps relate to leadership, promotion, integrated networks for walking, street design, creating spaces and places for people, and focusing on priority and tower renewal neighbourhoods. The Walking Strategy is relevant to any components of a future Health Background Study that address pedestrian-friendly streets and development.

3.6.5 Toronto Green Standard

The Toronto Green Standard is a set of performance measures with supporting guidelines related to sustainable site and building design for new development. Official Plan policy has enabled many components of the Toronto Green Standard to become formal requirements that developments must now satisfy.
Although not explicitly focused on health impacts, several aspects of the Standard make it a useful structure to inform the development of a Health Background Study Framework, and to define key evaluation criteria. The admirable characteristics of the Standard include:

- the use of mandatory and voluntary measures and incentives,
- clearly defined environmental drivers,
- practical implementation principles, and
- a simplified reporting structure.

Because of the particular applicability of the Standard to the development a Health Background Study Framework, the characteristics of the Standard are outlined in more detail in Table 2. Of particular relevance is the use of combined mandatory and voluntary performance measures, the latter of which are promoted through a financial incentive. This two-tiered framework of mandatory and voluntary performance measures may be an avenue worth exploring in the development of a Health Background Study Framework.

In addition, the simplified reporting structure, i.e. the Toronto Green Standard Checklist, may serve as a functional submission template for a health-related study requirement that is part of the development approvals process. The Checklist requires applicants to describe how each performance measure is being met in a simple matrix. Not only is the template relatively simple for applicants to complete, it also facilitates the timely review by the approving jurisdiction.

### 3.6.6 Toronto Health Impact Assessment

The focus of the Health Impact Assessment (HIA) is to assess the impacts of a proposed policy or project on the determinants of health. Compared to the Green Development Standard, which can be applied uniformly to development projects, the HIA begins with a uniform review process to determine whether a full scale study is needed, and if so provides the framework for developing an individualized approach to fulfilling that study. Further, the HIA can apply to policies or projects of various types, although it is most relevant for large-scale developments rather than smaller scale forms of development and individual applications. The advantages of the HIA process are that it provides a systematic way to address both positive and negative impacts of a proposal, and allows for recommendations based on process-based evaluation of the evidence.

Although the HIA model ultimately may not be transferable to the Health Background Study, elements of each step in the HIA process can inform the development of a Health Background Study Framework. The four steps in the HIA process are:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory measures</td>
<td>Required as a condition of development approval.</td>
</tr>
<tr>
<td>Voluntary measures and incentives</td>
<td>More stringent performance measures that are encouraged through incentives, such as eligibility for up to a 20% reduction in applicable development charges.</td>
</tr>
</tbody>
</table>
| Environmental drivers | • Better air quality  
• Reduced greenhouse gas emissions and urban heat island effects  
• Greater energy efficiency  
• Improved water quality and water efficiency  
• Less solid waste  
• Protection of the urban forest and wildlife habitat  
• Reduced light pollution |
| Implementation principles | • Measurable, e.g. plant shade trees to provide a 20% canopy at maturity.  
• Performance-based to allow for flexibility and innovation, e.g. achieve 25% energy savings above the Model National Energy Code.  
• Focused on the design and construction of the built form (not on building operations or workplace programs that could also influence environmental performance).  
• User friendly.  
• Set standards high enough to raise the bar on environmental performance, but still allow for green competition amongst developers. |
| Social Environments | Social stability, recognition of diversity, good working relationships and cohesive communities contribute to healthy social environments, and healthier people. |
### Table 3 - The Four-Stage HIA Process

#### Step 1: Screening

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Tools</th>
<th>Deliverables</th>
</tr>
</thead>
</table>
| • Establish: Whether there is a potential impact on health.  
• What segments of the population could be affected.  
• The likely direction and scale of the potential impacts.  
• The need for a more detailed assessment.  
• Whether HIA is the most effective way to address potential health impacts. | A two-part sequential series of questions and checklists that guide the respondent through the process:  
Part A clarifies the importance of the proposal, which groups it might affect, and potential health impacts.  
Part B summarizes Part A responses, and establishes the need for further appraisal and next steps. | Final report that includes:  
• A description of the proposal;  
• Population affected by the proposal;  
• Potential impacts on detriments of health; and,  
• A basis for decision and a final recommendation. |

#### Outcome of Step 1:

<table>
<thead>
<tr>
<th>A) Further health appraisal</th>
<th>B) No further appraisal because health impacts are negligible.</th>
<th>C) No further health appraisal because health impacts are well known.</th>
</tr>
</thead>
</table>

#### Step 2: Scoping

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Tools</th>
<th>Deliverables</th>
</tr>
</thead>
</table>
| • Select a Steering Committee.  
• Develop the Terms of Reference (Assessment Plan).  
• Determine the depth and scope of the HIA required. | Limited Scope Assessment Tool (Health Lens) – assesses key impacts and then assesses the scale and importance of those impacts.  
In-Depth Assessment Tool (Health Appraisal Tool) – identifies key health impacts, collects data, assess the scale and importance of impacts. | Terms of Reference (Assessment Plan) |

#### Step 3: Assessment

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Tools</th>
<th>Deliverables</th>
</tr>
</thead>
</table>
| • Work through an Assessment Tool to identify and describe potential impacts.  
• Assess the significance of health impacts using the assessment matrix.  
• Report results and formulate recommendations. | • Community profiling  
• Collection of baseline environmental data  
• Policy analysis  
• Literature review  
• Professional bodies  
• Post secondary and senior practitioners  
• Participatory qualitative methods  
• Quantitative methods | • Results of Assessment  
• Recommendations |

#### Step 4: Monitoring and evaluation of the process

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Tool(s)</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualized approach to be determined in the Recommendations. Generally, monitoring should assess whether the anticipated positive impacts were enhanced and whether the negative impacts were minimized.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Screening: Determine if a full scale assessment is warranted based on key questions, checklists and a report.
2. Scoping: Create a blueprint for the assessment in collaboration with stakeholders.
3. Assessment: Complete a detailed, evidence-based assessment and describe the potential nature and magnitude of impacts.
4. Reporting, monitoring and evaluation. These steps are further outlined in Table 3. Given the potential applicability of the HIA to the Health Background Study Framework, a detailed analysis is provided in sections 3.6.6.1 to 3.6.6.4, which highlight key components of the HIA steps, and how they might be applied to the Health Background Study Framework.

3.6.6.1 Step 1: Screening

During the screening step of the HIA, a two-part sequential series of questions and checklists are used to guide the applicant through the process and give insight into the scope and impact of a project in regards to impacts on public health. A similar tool could be used during the pre-consultation process of a development project when developers meet with planning staff. Key considerations outlined in the screening step could be used by the planning professional to inform analysis and recommendations. The screening tool would not necessarily need to be completed by the applicant (though the preliminary checklist and questions may aid the applicant in understanding health impacts), instead the planning professional may take the questions and components of this tool into consideration when assessing proposal for a Health Background Study requirement.

3.6.6.2 Step 2: Scoping

At step two, the scoping stage, a blueprint for the assessment is developed in consultation with stakeholder groups of different backgrounds. While valuable in large-scale developments, this may be less essential and likely not feasible for smaller scale forms of development and individual development applications. Development of a certain magnitude, assessed in the screening and in this scoping stage, could be recommend for a more intensive review.

That said, as part of the pre-consultation process for a development that justifies a Health Background Study, the planning professional could determine the terms of reference or study requirements for the development based on a context sensitive analysis. The HIA includes several components that could assist the planner in completing this terms of reference, including Limited Scope and In-Depth Assessment Tools; a sample terms of reference; and a list of the determinants of health and specific examples that could serve as prompts at the scoping stage. Using these tools, a professional planner may be able to determine the depth of study needed for a particular development, if such a study would be required at all. Developing a terms of reference that is context specific is essential when considering the variety of scales and types of development and their impacts on health.

3.6.6.3 Step 3: Assessment

The assessment stage of the Toronto HIA framework report describes the potential health impacts of the proposed policy or project, their impacts on health determinants, and the potential nature and magnitude of those impacts. This step includes the application of a variety of data collection methods (identified in Table 3), and no one method is considered best. As indicated in the HIA report, the selection of methods will likely depend on funds, the nature and scope of the project or policy and the time available.

If applied to private development the assessment stage would generally fall into the domain of the applicant as part of the development submission, and would rely on their resources and understanding to complete. Although the HIA report is not typically circulated for peer review, this additional step could be considered within a Health Background Study Framework.

3.6.6.4 Step 4: Monitoring and evaluation of the process

Additional steps, such as monitoring, evaluation and public consultation are identified as important features in the Toronto HIA report. In the context of development projects, the assessment of the actual impact on health is often difficult to do, due to the cost of long-term follow-up and the limitation of the data that can be collected and analyzed. Additionally the resources and time required for public consultation does not justify this requirement for all developments. Consultation resources should be reserved for more significant master plan and Secondary Plan projects. However, health information for all development applications could be made publically available.

Monitoring, while perhaps not required for each development, would be best served as an assessment of the process, and could be conducted by the municipality over a pre-designated time period to review outcomes and adjust requirements.
3.7 Summary of Findings

It is clear from the review of the current policy documents and health related planning initiatives in the Region of Peel and in the City of Toronto that there is a clear recognition of the link between urban development/design and positive public health outcomes.

The following elements are drawn from the various Peel and Toronto policy documents and may be used to inform the goals and criteria of a Health Background Study Framework:

- Support active, healthy communities through compact built form and mixed use development that integrates residential, community and recreational land uses.
- Promote active transportation (walking and cycling) and public transit, and design streets to facilitate these modes of transportation.
- Promote incidental and recreational activity by providing a comprehensive parks and open space system.
- Protect the natural environment, public health and safety, the provision of educational, health and transportation services and facilities.
- Mitigate impacts on air and water quality and quantity.
- Protect and provide access to healthy food.

In addition to providing insight into the goals and substance of the Health Background Study Framework, the Peel and Toronto policies and programs include transferable elements to inform the structure of the Health Background Study. Within Peel, the most significant document is the Peel Healthy Development Index, which provides a means of measurement for a comprehensive range of health-related variables. In Toronto, the Green Development Standard, while not specifically related to health, provides a template for evaluating the quality of proposed developments. On the other hand, the Toronto Health Impact Assessment offers a step-by-step approach to considering community health impacts. These documents will provide an excellent background to begin to make the choices necessary in the development of a Health Background Study Framework.

From the Toronto Green Standard experience, we are provided with ‘principles’ for the establishment of standards. These ‘principles’ with appropriate adjustment, should form the basis for considering criteria within a Health Background Study. For example, criteria should be:

- Measurable
- Performance-oriented
- Focused on the design and construction of the built form;
- User-friendly; and,
- Set high enough to raise the bar on performance, without creating an undue, adverse impact on competitiveness.

The Toronto Health Impact Assessment provides a comprehensive individualized process, and while this framework may not be applicable to all development types, such as smaller scale/ individual development applications, it provides criteria and methods for consideration in the development of a Health Background Study Framework.

The screening and scoping stages could fit in with current pre-consultation processes, where study requirements associated with a development application are determined. The assessment stage could be used to inform the terms of reference for a Health Background Study, but would likely need to be scoped appropriately for individual development applications. Notwithstanding, the Limited and In-Depth assessment tools, could serve as a template for the preparation of a Health Background Study completed as part of a larger scale Secondary Plan development process. Monitoring would again make more sense at a master plan and Secondary Plan level to ensure that policy objectives related to health are being achieved in the long-term. The responsibility for monitoring, however would likely fall under the purview of the municipality.
4.1 Introduction
As a growing body of research demonstrates a clear linkage between the built environment and health outcomes, the implementation of policy and associated regulatory tools is gaining momentum, but is still in its infancy.

A scan of municipal jurisdictions across North America reveals that while many are adopting language that recognizes the linkage between the built environment and health outcomes in their long-term planning documents, few have developed and/or implemented mechanisms to directly influence health outcomes through the planning and development approval process. Further, given the emerging nature of development-related health assessment mechanisms, information on the application, success/failures and resulting lessons learned are, at this point in time, still highly limited.

Like Toronto, a number of municipal jurisdictions in North America and Europe have developed and adopted Health Impact Assessment processes and procedures. While Health Impact Assessments have significantly advanced the recognition of the linkage between health and the built environment within local and regional planning regimes, Health Impact Assessment processes are primarily focused on evaluating large scale public sector development projects and/or planning initiatives, with little bearing, if any, on smaller-scale privately-initiated development proposals.

The following initiatives are highlighted to demonstrate the varied approaches being used to manage health outcomes through the development process. The examples provided below are by no means a complete inventory of approaches in support of healthy development, but rather an informative sampling.

4.2 San Francisco, California – Development Checklist
Building on the Health Impact Assessment process, the San Francisco Department of Public Health’s Program on Health, Equity and Sustainability developed the ‘Healthy Development Measurement Tool’ to measure and evaluate a wide range of health-related outcomes associated with built form and development (including both residential and non-residential development). An indication of the Tool’s success is that it is now used by municipalities across the US.

In San Francisco, this measurement tool has subsequently informed the development of a ‘Development Checklist’ to aid in the evaluation of plans and development proposals. Updated annually to reflect the ever-evolving understanding of the linkage between development and health, the checklist is intended as a strictly voluntary instrument to be used by community groups, developers or other interests in the development process. The latest version of the checklist is found at: www.thehdmt.org/development_checklist.php.

4.3 Galveston, Texas – Health Development Measurement Tool
The City of Galveston, Texas recently adopted the Healthy Development Measurement Tool as part of its post-disaster recovery efforts following Hurricane Ike, which damaged or destroyed approximately 70% of the city’s buildings. In partnership with the Center to Eliminate Health Disparities at the University of Texas Medical Branch, county agencies and community-based service providers, the City of Galveston is working to ensure that rebuilding efforts support desired health outcomes and has amended its development ordinances to incorporate this tool as a way to assess impacts on health. The Tool is also being used to test and evaluate large scale public sector development initiatives, such as area plans. More information on the City of Galveston’s use of the Healthy Development Measurement Tool can be found here: www.utmb.edu/cehd/projects/ghiap.html.

4.4 Decatur, Georgia – Active Living Initiative
The City of Decatur, Georgia, a suburban community of about 19,000 people just outside of Atlanta, has emerged as a leader in promoting public health and active living through planning and development. The City incorporated the Health Impact Assessment process...
into the development of its new Transportation Plan. Decatur also restructured its Recreation Division into a new Active Living Division and created an Active Living Advisory Board that provides direction to the City on a variety of long-term active living and urban agricultural initiatives. More information on the City of Decatur’s use of the Health Impact Assessment process and its active living initiatives can be found here: www.decaturga.com/Modules/ShowDocument.aspx?documentid=1211 and www.decaturga.com/cgs_citysvcs_activeliving.aspx.

4.5 Simcoe Muskoka District Health Unit – Healthy Community Design: Policy Statements for Official Plans

Working with planning professionals and community stakeholders, the Simcoe Muskoka District Health Unit recently developed Healthy Community Design: Policy Statements for Official Plans (2010), a document designed to provide direction to local municipalities with suggested policy language for inclusion in local Official Plans and related initiatives. The Healthy Community Design document highlights five broad elements that it regards as integral to promoting community health through the planning process (Table 4).

The Healthy Community Design document has directly resulted in the inclusion of new supporting policies within some of the area municipalities through their ongoing Official Plan Reviews, although whether these policy recommendations get incorporated into the future regional and local Official Plan’s remains to be seen.

In addition, the Healthy Community Design document has resulted in some area municipalities, like the City of Orillia, opting to circulate development applications through the Health Unit for review and comment, albeit on an ad hoc basis. More detailed information on the Simcoe Muskoka District Health Unit’s Healthy Community Design document can be found here: www.simcoemuskokahealth.org/JFY/OurCommunity/healthyplaces/Healthydesign.aspx.

<table>
<thead>
<tr>
<th>Element</th>
<th>Actions</th>
</tr>
</thead>
</table>
| Environment                  | • Ensure land use designation has minimal impact on health, the environment and overall quality of life  
                                • Protect and preserve the natural environment and greenspace  
                                • Reduce reliance on traditional energy systems, conserve energy and protect air quality  
                                • Decrease use of single occupancy motor vehicles and reduce motor vehicle trips |
| Injury and Safety             | • Build compact neighbourhoods that increase density and reduce automobile dependency  
                                • Provide infrastructure that supports safe walking and cycling  
                                • Design roads that ensure the safety of all users |
| Physical Activity and Sun Safety | • Ensure a built environment that supports and encourages active transportation  
                                • Provide recreational opportunities for all  
                                • Develop a transportation system that is multi-modal, accessible and interconnected  
                                • Ensure shade protection is available at outdoor venues |
| Food Access                  | • Ensure that healthy food is available in every neighbourhood  
                                • Preserve and protect land currently used or with the potential for future use in the growing and production of food |
| Social Cohesion and Well-being | • Support complete, cohesive neighbourhoods and mixed housing for all ages to promote health and safety  
                                • Provide green spaces and build public spaces for residents to meet and congregate |

4.6 Summary of Findings

While recognition and understanding of health outcomes related to planning and development decisions is increasing, a scan of municipalities across North America did not reveal the implementation of any Health Background Study requirements as part of the municipal planning and development approvals process. Although Health Impact Assessments are becoming an accepted standard by many municipalities worldwide, to date, their application is geared towards the evaluation of large-scale publicly driven development and infrastructure initiatives, rather than smaller-scale development applications.

Notwithstanding this, it is clear that the inclusion of enabling policies in a number of municipal long-range planning documents reflects a growing desire to include health-based evaluation mechanisms into the approvals process. Enabling policies are crucial for laying the groundwork for such mechanisms, because they establish a basis for them and inform the public and development community of the municipality’s intentions.
5.1 Introduction
Under the Planning Act jurisdiction is given to a municipality to identify study requirements that support/deny a development application through the requirements of complete application policies in an Official Plan. Council may refuse to accept or further consider a planning application until all such materials have been received. Many forms of these study requirements are already being used by municipalities. Learning from background studies already in place will provide additional information in the advancement of methods and strategies in the development and implementation of a Health Background Study Framework.

5.2 Traditional Study Requirements
Our review (see Appendix II: Review of Other Studies) looked at the following seven key studies that may be required as part of complete development application:

1. Planning Rationale Study (also called Planning Justification Study)
2. Environmental Impact Study
3. Transportation Impact Study
4. Community Services and Facilities Assessment
5. Sun/Shadow Study
6. Servicing Report
7. Noise Impact Study

These studies, as opposed to the myriad of other studies that may be required by a municipality, were chosen for the simple reason that they are arguably the most common studies required as part of a development application submission. Common to each of these study requirements is a statement of purpose, the articulation of minimum information and technical requirements, guidance on the analysis of the information and conclusions.

The overarching objective of all of these required studies is to avoid the creation of undue adverse impacts associated with the nature, scale and form of development. The common purpose of these studies is to determine whether or not the development is supportable from a technical standpoint (specific to the study requirements) and, where appropriate, to identify ways to enhance and/or mitigate specific impacts associated with the development.

5.2.1 Study Triggers
Each of the seven reviewed studies is associated with either:

• a particular type or types of planning application (i.e., Official Plan amendment, Zoning By-law amendment, etc.), or
• the nature of a proposed development (i.e., being adjacent to a natural area).

In some cases, both factors may be required to trigger a study. While some of the studies are mandatory if the trigger factors are met, others rely on the discretion of planning officials. In all cases, it was found that the discretionary studies were very frequently required, although no statistics are kept regarding what percentage of applicants are made to complete them.

5.2.2 Scope of Study
Three of the seven studies required all applicants to meet the same requirements and did not allow for any variance in scope. It can be surmised, however, that smaller development applications would probably result in more succinct studies and that some required study elements might not apply. Four studies allowed some variance in the scope of study, whether based on project scale or the category it fell under.

5.2.3 Format
Format requirements varied widely among the seven studies, from brief summary letters to lengthy technical reports drafted by professionals. Study costs and time periods all depended on the scale and complexity of individual developments and could not be generalized.
Most of the existing studies do, however, offer precedents for a future Health Background Study, in so far as the formats are not particularly regimented (i.e. none of them are structured as responses to forms), allowing the applicant freedom as to how to draft the report, even if specific topics must be covered. Further, many technical studies include a “YES/NO” to the individual development application, and if “YES”, there is typically an array of improvement requirements and/or suggested enhancement or mitigation techniques.

5.2.4 Health Impacts

A number of the studies contained specific references to health-impacting issues. These most commonly related to density and land use, specifically proximity to other land uses, as well as general aesthetic conditions that encourage walking by making the public realm more appealing to pedestrians. These aspects might be relocated from their present position into the scope of a Health Background Study, but would probably be more appropriate to strengthen and leave in place.

The scope of a specifically health-related study would naturally have to be more extensive and comprehensive than these individual components currently found in other studies. By addressing health as a primary study topic, as opposed to an incidental outcome of another study, it could be dealt with in a more deliberate and direct manner.

5.3 Case Example: City of Toronto Development Guide

The City of Toronto's Development Guide is the most comprehensive document in terms of establishing terms of references for the various studies required through the planning and development approvals process. The Guide includes the following components:

- **Study Description**
  A general description of the study, its intent and desired format (often including guidance on the length of the document).

- **Study Triggers**
  When such a study is or may be required based on the type of development application (i.e. Official Plan Amendment, Zoning By-law Amendment, Plans of Subdivision, Plans of Condominium or Site Plan Control).

- **Rationale**
  The reasons the study is required and its importance in the application review/evaluation process.

- **Required Content/Core Elements**
  Documentation of the specific technical requirements and elements to be addressed, as they relate to the specific development proposal. In many circumstances, the required content references specific policies and/or standards for which compliance must be demonstrated.

The Toronto Guide establishes a very simple, but effective terms of reference for each report and study that may be required as part of the development application. This makes the Toronto Guide a user-friendly format that should be considered as a potential template for the development of the terms of reference for the Health Background Study.

5.4 Summary of Findings

There is a strong tradition in the Ontario planning approvals process for a municipality to require detailed thematic studies that deal with specific issues affecting neighbouring properties, infrastructure and the environment. The new Planning Act has now enshrined this practice with legislative requirements around the definition of a “complete application”.

Of the surveyed materials, the City of Toronto’s Development Guide provides a strong starting point for the development of a Health Background Study Terms of Reference. Since the Health Background Study would be a new requirement, the Terms of Reference would need to be established with a significant amount of precision to ensure appropriate study conclusions, and to articulate how those conclusions are to be implemented. Ultimately, the Health Background Study Terms of Reference will need to be fully cognizant of its ultimate purpose, and expected effect on development decisions.
6 Summary of Interview Outcomes

6.1 Overview
The consultant team conducted a series of interviews with stakeholders to gain a sense of general support levels for the concept of a new study requirement, and seek advice for what directions it should or could take. Interview subjects included planners, developers and public health professionals who would likely be directly involved in any such future practice. In total, 25 interviews were conducted, representing 13 planners, two developers, 11 public health officers and two private health consultants.

The following is a highly condensed summary of the responses received during the stakeholder interviews. Please refer to Appendix III for more detailed interview question/response summaries. As a condition of the interviews, stakeholders are to remain anonymous. However, the correlation between responses and professional sector (planning, development or public health) are indicated where relevant.

6.2 Summary of Findings
There was broad divergence in opinion about the implementation of a Health Background Study among the interviewees. Not surprisingly, the development industry is extremely concerned about cost and time delay. These are legitimate concerns that may be ameliorated by further education and a commitment to ensure clear Terms of Reference, and reasonable response times.

Public health officials were highly supportive, while planners tended to be supportive in principle, but questioned the manner in which it could be implemented. In particular, the question of how it could fit into the development application process and what types of development it should deal with was raised. Many planners emphasized the relative strength of the existing system and expressed concern that additional study requirements, if broadly imposed, could unduly slow the development process.

Planners in the Region of Peel and its local municipalities were generally accepting of a Health Background Study component. Mechanisms, elements, issues and challenges were discussed, with an underlying consensus supporting the need and further development of this study. Questions and concerns posed by respondents focused on logistics. How this study would be incorporated into current practice, the measurement of elements, and the role such a study would play in development decisions were highlighted. While open and supportive of this concept, planners were concerned with its implementation. Despite this, respondents acknowledged this project as crucial to furthering public health goals.

In contrast, Toronto planners were more hesitant when asked their opinion of a Health Background Study Framework. On the whole, planners were generally unsupportive or moderately supportive of this initiative. Toronto planners were generally sympathetic to the idea that health considerations should factor more prominently in planning decisions, but were mostly unsupportive of an additional study to address these considerations. As a counter argument, respondents promoted the role of planning policy in achieving health goals, and reinforced the position that health considerations were already addressed, or should be addressed in Official Plan policy. Generally consensus was that no new study is required.

The primary conclusion drawn from these interviews is the overall lack of any particular consensus in terms of purpose, content, applicability and implementation. It is assumed that this lack of overall preference is a result of the newness of the topic, rather than the approach. (The study requirement approach is relatively typical in dealing with other technical requirements of the planning approvals process in Ontario). Ultimately, a diverse and competing range of interests must be managed and balanced in the development of a Health Background Study or comparable initiative that raises standards, promotes value-added development, generates broad stakeholders buy-in, and successfully integrates competing disciplines to achieve a desired public health outcome.
7.1 Key Findings from Work to Date

1. The Planning Act empowers municipalities with the ability to require “studies” applicable to development applications of all types, through the requirements for a “complete application”. This applies to the potential requirement for a Health Background Study.

2. Recent Provincial policy strongly supports the interconnections between land use planning and improved public health. Key Provincial directives specifically promote:
   - Conservation of all significant natural heritage features;
   - A mix of uses at higher densities;
   - Use of public transit, and a reduction in auto dependence;
   - Creation of complete communities with places to live, work, shop, recreate and be educated in proximity; and,
   - Creation of liveable healthy communities.

3. The Region of Peel and its constituent municipalities are developing policies that are supportive of healthy communities and provide a framework that would facilitate the implementation of Health Background Studies in selected circumstances.

4. The Peel Healthy Development Index is a useful starting point for the establishment of criteria that could be included within a Health Background Study, with clear connections with existing policies, planning objectives, and according to the literature, health outcomes.

5. The City of Toronto’s Green Building Standards identifies key principles for establishing evidence-based criteria that should provide guidance for the development of a Terms of Reference for a Health Background Study requirement. Specifically, the criteria should be:
   - measurable;
   - performance-oriented;
   - focused on the design and construction of the built form;
   - user-friendly; and,
   - set a high, but achievable, expectation for performance.

6. The Toronto Health Impact Assessment represents a potential basis from which to build upon in establishing the requirements – both content and process – for the Health Background Study.

7. Jurisdictions across North America have begun to recognize the important link between land use planning and public health outcomes. Many have included enabling policies in their long-term planning documents. However, notwithstanding that broad recognition, there is little information available on actually implementing a direct requirement that evaluates the relative health merits of individual development applications.

8. The interview process has identified a number of key observations:
   - there is general recognition amongst both planning and health professionals of the linkage between the built environment and public health;
   - the development industry is extremely wary of any new requirements that may add to the cost, or delay the development approval process; and,
   - while there are no clear preference trends in terms of the purpose, content, applicability and implementation of a Health Background Study, there appears to be general support for strengthened Official Plan policies around public health and willingness to explore the
application of a Health Background Study requirement at the Secondary Plan scale.

7.2 Key Recommendations for Implementation of a Health Background Study Terms of Reference

1. Establish a Supportive Policy Framework – As an initial step, municipalities, through their respective Official Plans should establish a strong policy framework that makes the connection between development and health outcomes, establishes corresponding policy objectives/targets for public health, and enables the implementation of a Health Background Study requirement as an optional part of the development approvals process. In all cases, regulatory requirements should flow explicitly from policy. This policy framework for healthy development, which originates at the provincial level, is transmuted down to municipal Official Plans and from there to regulations; each step increasing in detail and specificity.

In the case of a multi-tiered jurisdiction, the upper tier municipality is primarily responsible for health policy. It is therefore recommended that the upper tier municipality should, in addition to updating its Official Plan, play a leading role in working with lower tier municipalities to develop a Health Background Study template for their use. This would have the benefit of speeding up the implementation process, while ensuring consistency across lower tier municipalities and guaranteed conformity with the upper tier Official Plan.

2. Determine where in the planning process can the Health Background Study be applied – With enabling policies in place, municipalities should determine the most appropriate application of such a study requirement. It is recommended that the Health Background Study requirement be, at least initially, best applied at the Secondary Plan stage. This recommendation stems from the recognition of the comprehensive nature of the Secondary Plan process and the subsequent ability to influence all aspects of a community’s structure and components that are known to affect public health.

While developments involving an individual building, or small group of buildings, may impact health, the fact that they do not construct a complete community environment means that that effect is less significant. For such developments, existing study requirements are sufficient and adding more would create undue complexity and delay in the application process. Secondary or block plans, meanwhile, clearly affect density, land use proximity and road alignments and should be open to greater scrutiny. Limiting the Health Background Study to such large-scale developments would also help to avoid additional backlog in planning departments.

Overtime, modified versions of the Health Background Study may be developed that would apply to a broader range of planning and development contexts, such as Draft Plans of Subdivisions of various scales, and Site Plan proposals for developments on individual sites.

In the event that a municipality is not supportive of implementing a requirement for a new separate study, opportunities for the inclusion of health considerations could be administered through the existing Planning Rationale Report/Planning Justification Report. A Planning Rationale Report is a complete document designed to demonstrate conformity with policies and standards, including those identified in the Official Plan(s). If a municipality updates policy requirements and guidelines (e.g. for urban/community design) to include specific standards aimed at health, the relationship between health and the built environment could be systematically addressed at this level. Present Planning Rationale Reports do indirectly address health issues through discussion of land use and density, however, a more explicit component on health impacts could be added.

3. Health Background Study Scope – The scope of the Health Background Study is also a critical consideration in determining its application. Undoubtedly, as evidenced by the response from interviewees, there are countless elements that could be measured that may have a direct or indirect impact on public health. At this early stage, it is recommended that the Core Elements as defined by the Peel Healthy Development Index from the initial basis for the scope of the Health Background Study required.

The Peel Healthy Development Index presents a variety of elements for consideration in the relationship between health and the built environment. Reviewing the Index from a planning context, the elements are already addressed in one form or another in municipal planning policy and have existing standards and measures which developers must demonstrate adherence to through existing study requirements.

Furthermore, the establishment of any new Health Background Study requirements should rationalize and justify the inclusion of specific measures. Of
those existing policies and documents reviewed, the Peel Healthy Development Index forms the strongest template for the scope of issues to be dealt with through such a study, as well as a viable scoring system.

In the future, as developers and local area planners gain familiarity with the Health Background Study requirement and as research and policy evolves, other elements that have a demonstrated effect on the determinants of health – beyond those currently present in the Peel Healthy Development Index – could be integrated into the study’s scope. For example, access to healthy food is one element that has a significant impact on health, but is not addressed in the current Health Background Study and there are several others.

4. Health Background Study Format – The study format should be as simple, standardized, and instructive as possible in order to aid applicants in achieving the desired objectives and aid municipal planning staff in the evaluation of study submissions.

Ultimately, the purpose of the Health Background Study is to ensure that new development promotes and supports healthy and active communities. The requirement for a Health Background Study should not serve as a burden to developers or local planners and should be designed to minimize any additional delays or costs to the already complex development approvals process.

The Terms of Reference should be designed to create a standardized method for development interests (applicants) to demonstrate their achievement of key healthy community design elements and for municipalities to evaluate development proposals based on key community health objectives.

The Terms of Reference should provide a ‘checklist’ to evaluate the success of new developments in achieving minimum standards of community health. It should not be applied alone as a means for approving or rejecting private development proposals, but rather as an informative tool in the application evaluation process.

The following are the key components that should be included in the Terms of Reference for each of the Core Elements being evaluated:

- **Rationale:** Description of the Core Element and why it is important from a community health perspective.

- **Objectives:** Statement of desired development objective

- **Standards:** Associated minimum development standards to be achieved by the proposed development.

- **Key Questions:** List of key questions that the applicant should consider in the planning and preparation of their proposed development. These questions are intended to initiate dialogue within the development team and with the municipality on strategies/approaches to meet desired outcomes.

- **Reporting/Content Requirements:** Description of the minimum reporting requirements to demonstrate compliance/achievement of the Objectives/Standards.

5. Other Considerations for Implementation – The implementation of an additional study requirement as part of the planning approvals process should recognize the need for an educational process or time period as development applicants and regulators familiarize themselves with expectations and technical elements associated with preparing and reviewing such studies. It is recommended that each municipality begin by developing a repository of such studies to share examples of high quality submissions with subsequent applicants and counterparts in other municipalities to communicate submission expectations. Finally, municipalities should determine the appropriate study review process and which department and/or departments will be responsible for review of such studies, or components thereof.

7.3 Next Steps

Further work with the Steering Committee and stakeholders will be required to define/refine potential elements and consider their prioritization based on which will have the greatest impact with an appropriate level of effort (both by applicants responsible for preparing the study and reviewers at the municipal level). Additionally, further consideration will be given to the positions taken by developers, and the means by which they could be engaged in a future policy development process.

In this report, elements for further reflection and discussion were extrapolated from related background reports required by municipalities, as well as from provincial policy, municipal policy, the Peel Healthy Development Index and a variety of other relevant studies and reports. Identified elements must now be broken down into their criteria
to further explore the impact of certain aspects of the built environment on public health outcomes. Elements must be rooted in key health drivers that will be further refined through comprehensive consultation process and discussion with both the Region of Peel and City of Toronto.

Ultimately, this report has shown that there exists a wealth of opportunity for real change and progress in influencing health within our communities. The next steps will deal with translating that opportunity into a practical and action-oriented approach to developing a Health Background Study Framework and defining how it is best integrated into the development application process.
Appendix I
## Appendix I: Review of Peel Healthy Development Index Core Elements

<table>
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<tr>
<th>Core Elements</th>
<th>Typical Standard/Measure</th>
<th>Is the element/measure under the influence of planners and/or developers?</th>
<th>Is there a practical way of assessing this?</th>
<th>Is it reasonable to expect developers to address it?</th>
<th>Key Conclusions</th>
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<tr>
<td><strong>Density:</strong></td>
<td>Density refers to a measurement of the number of families, individuals, employees, dwelling units, households or housing structures per unit of land area. Higher residential densities, not only result in a more efficient use of land, but also increase a community’s ability to support a variety of services and facilities within proximity, which in turn support walkability and physical activity outcomes.</td>
<td>Planners&lt;br&gt;- Planners have some influence over density, in so far as they assist municipalities in establishing targeted density requirements to achieve particular development objectives (i.e. transit-supportive development, etc.).&lt;br&gt;- Density standards are established and prescribed in municipal and Provincial planning policy. At the municipal level, density is regulated both through Official Plan policies, which establish broad density targets, and Zoning By-laws that establish more site/area specific density requirements (typically through min. and max. density provisions). Overall, planners must adhere to these established density standards. Developers&lt;br&gt;- Developers (and planners acting on their behalf) have to conform with established standards with some potential leeway through height and density bonusing (allowance for increased density in exchange for the provision of some community benefits) and development agreements.</td>
<td>Yes:&lt;br&gt;- Conformity with existing density requirements is a key consideration in the review of development applications. Developers, as part of the development approvals process, must demonstrate how their proposed development conforms with those density requirements (or, if not, how the development meets the intent of the local planning regime).&lt;br&gt;- Density measurements in the Peel Health Index are relatively standard measures already in place in municipal planning policy and development approval processes.</td>
<td>Yes:&lt;br&gt;- Developers must conform with municipal planning policy (Official Plan and Zoning By-law) that establish density requirements.</td>
<td>• Density is highly regulated by current planning policy (Official Plan and Zoning By-law).&lt;br&gt;• Developers have to work within those policy requirements. Through the development application process developers must demonstrate achievement of density standards through existing planning and supporting studies, namely Planning Justification Reports.</td>
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<td>Density standards/targets are established in both Official Plan policies and implementing zoning. Typical density measures include:</td>
<td>Planners&lt;br&gt;- Planners have some influence over density, in so far as they assist municipalities in establishing targeted density requirements to achieve particular development objectives (i.e. transit-supportive development, etc.).&lt;br&gt;- Density standards are established and prescribed in municipal and Provincial planning policy. At the municipal level, density is regulated both through Official Plan policies, which establish broad density targets, and Zoning By-laws that establish more site/area specific density requirements (typically through min. and max. density provisions). Overall, planners must adhere to these established density standards. Developers&lt;br&gt;- Developers (and planners acting on their behalf) have to conform with established standards with some potential leeway through height and density bonusing (allowance for increased density in exchange for the provision of some community benefits) and development agreements.</td>
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<td><strong>Residential Density</strong></td>
<td>Units per unit of land area&lt;br&gt;- Floor Space Index (FSI)/Floor Area Ratio (FAR)&lt;br&gt;- Persons per unit of land area</td>
<td>Yes:&lt;br&gt;- Conformity with existing density requirements is a key consideration in the review of development applications. Developers, as part of the development approvals process, must demonstrate how their proposed development conforms with those density requirements (or, if not, how the development meets the intent of the local planning regime).&lt;br&gt;- Density measurements in the Peel Health Index are relatively standard measures already in place in municipal planning policy and development approval processes.</td>
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<td><strong>Non-Residential Density</strong></td>
<td>FSI/FAR&lt;br&gt;- Jobs per unit of land area</td>
<td>Yes:&lt;br&gt;- Conformity with existing density requirements is a key consideration in the review of development applications. Developers, as part of the development approvals process, must demonstrate how their proposed development conforms with those density requirements (or, if not, how the development meets the intent of the local planning regime).&lt;br&gt;- Density measurements in the Peel Health Index are relatively standard measures already in place in municipal planning policy and development approval processes.</td>
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<td><strong>Note:</strong> Places to Grow: The Growth Plan for the Greater Golden Horseshoe establishes density targets using persons and jobs per hectare as its primary measure. This measure, as a Provincial conformity requirement, has or will be incorporated into all Official Plans for municipalities within the Growth Plan Area. However, other measures, such as FSI, may still be utilized to support the achievement of Provincial density targets.</td>
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<td><strong>Service Proximity:</strong></td>
<td>Service proximity refers to the optimal distance between particular uses to maximize their accessibility (i.e. living near jobs and services, or even better, to have jobs and services provided where one lives). Employment proximity considerations are outlined in Provincial and local policy where live work communities rather than 'bedroom communities' are promoted, however no strict standards exist.</td>
<td>On a site-specific basis, proximity to services and/or other uses is somewhat difficult to influence. At a broader planning scale, such as a Secondary Plan or Block Plan level where more comprehensive planning is done, planners and developers can have a greater influence on ensuring appropriate service proximity objectives are achieved. Service proximity is somewhat easier to address in an existing urban setting (such as in parts of Toronto versus the Region of Peel), insofar as land use mix, population densities, and community service infrastructure is more or less established and already achieving desired levels of proximity/accessibility.</td>
<td>Yes: Municipalities may establish specific service proximity requirements. The recommended measures established in the Initial Scoring Guide, found in the Peel Health Index, is a reasonable basis for establishing such standards and their subsequent measurement.</td>
<td>Yes: So long as municipalities establish requirements for achieving specific service proximity requirements, developers must conform to those policies. The City of Toronto, as part of its development application process, requires developers to undertake Community Services and Facilities Assessments to identify available community services/facilities in proximity to their subject development and to demonstrate that the population generated by their proposed development can be appropriately served by existing community services/facilities.</td>
<td>• Service proximity may be regulated through current planning policy. In some instances, it already is, through transit-supportive density requirements requiring higher density developments in proximity to existing or planned transit facilities. • Developers have to work within existing policy requirements. Through the current development application process developers must demonstrate achievement of service proximity through existing planning and supporting studies, namely Planning Justification and Community Services and Facilities reports. • Proximity to employment is more difficult to address, given that land use designations, particularly with respect to employment areas are strictly regulated by Provincial and municipal policy. In other words, with the exception of neighbourhood scale service and retail commercial uses, it is difficult to influence the location of larger scale employment uses. Notwithstanding that, there is considerable policy support at the provincial and local level for live-work employment opportunities.</td>
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<td><strong>Land Use Mix</strong>&lt;br&gt;Land Use Mix refers to the mix of uses either within a building or an area of land. The achievement of mixed use forms of development can contribute to positive health outcomes by promoting service/use proximity, more compact urban development and subsequent walkability.</td>
<td>Like density, land use mix is highly regulated in existing planning policy (both through Official Plan policy and implementing zoning standards). Such policies may establish specific mixed use districts, but also establish permissions/requirements for neighbourhood scale service and retail commercial uses within new residential developments. Municipal Official Plan policies, taking their cues from Provincial policy, also establish requirements for the provision of a diversity of housing types, forms and tenures to meet the current and future needs of a community. As part of housing mix policies, municipalities typically establish affordable housing targets, based on a targeted percentage of the total housing stock (i.e. 35% percent of total units shall be affordable). Parkland and open spaces are also a key consideration in the overall land use structure. Parkland provisions are established by the Planning Act, which are in turn implemented through enabling policies in municipal Official Plans.</td>
<td>Planners&lt;br&gt;• Managing and directing land use to achieve efficient development and land use patterns is a fundamental objective of Provincial planning policy (as per both the Provincial Policy Statement and the Growth Plan).&lt;br&gt;• Correspondingly, municipal Official Plans typically include a range of supporting policies to promote land use mix and mixed use areas through the delineation of land use designations, which are then carried forward through implementing zoning and/or Secondary Plan policies.</td>
<td>Yes:&lt;br&gt;Under the current development approvals process, developers must demonstrate compliance with land use designations, achievement of housing mix targets and parkland provisions.</td>
<td>Yes:&lt;br&gt;Developers must conform with municipal planning policy (Official Plan and Zoning By-law) that establish land use designations and objectives for mix use development. If a developer seeks to stray from those established objectives, they must go through an Official Plan and Zoning By-law Amendment process to rationalize their proposed divergence from the policy/regulation.</td>
<td>- Land Use Mix is highly regulated by current planning policy, both through Official Plans which establish the overall land use structure of a community, as well as through Zoning By-laws which establish land use permissions at a site/area-specific scale.&lt;br&gt;- Developers have to work within land use policy requirements in the Official and Secondary Plans. Through the development application process, developers must demonstrate achievement of an appropriate mix of uses in keeping with those designated by the municipality through Planning Rational Studies.</td>
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<td>Street Connectivity</td>
<td>Policy directives with respect to maximum block size and street network are typically established through the design and transportation policies of a municipal Official Plan, with further refinement and specificity occurring at the Secondary Plan scale. Standards pertaining to intersection location/frequency are typically established at the Regional or Single-Tier scale through Transportation/Road Standards.</td>
<td>Planners • Transportation policy, standard street types, and accessibility standards are provided in both Provincial and municipal policy.</td>
<td>Yes, with conditions: Block size and street connectivity tend to be context specific and not necessarily based on rigid/measurable standards. At a Secondary Plan or Block Plan scale, more rigid or alternative requirements for block size and street connectivity may be established.</td>
<td>Yes: Developers must conform with municipal Official Plan/Secondary Plan policies.</td>
<td>• Developers have to work within Official Plan and Secondary plan policy requirements, which establish general directives for street connectivity. Through the development application process developers will be asked to complete a Traffic Operations Assessment and a Transportation Impact Study. • Unfortunately, many existing municipal standards pertaining to road connectivity are not in line with contemporary planning and/or healthy community objectives. In the current context, the desire to implement alternative standards, in some cases requires private initiative/innovation to demonstrate to municipal transportation and engineering departments the benefits of alternative/progressive standards for roads and road network design.</td>
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<td>Road Network and Sidewalk Characteristics</td>
<td>Road Network and Sidewalk Characteristics may include a myriad of considerations, including, but not limited to roadway hierarchy and design, traffic calming measures, sidewalk provision/design, cycling facility provision/design and streetscape design elements (lighting, paving, landscaping, etc.). Standards for these elements are established through municipal transportation and engineering standards, Official Plan/Secondary Plan policies and Urban Design Standards/Guidelines, and typically vary between contexts.</td>
<td>Planners • Planners must adhere to established standards and may work to institute alternative standards/approaches at the Secondary Plan or Block Plan level (i.e. implementation of woonerfs in Toronto’s West Don Lands)</td>
<td>Yes, with conditions: Road network and streetscape design tend to be context specific and not necessarily based on rigid/measurable standards. At a Secondary Plan or Block Plan scale, more rigid or alternative requirements for road network and streetscape/sidewalk characteristics may be established.</td>
<td>Yes: Developers must conform with municipal Official Plan/Secondary Plan policies.</td>
<td>• Developers have to work within Official Plan and Secondary plan policy requirements, which direct the general premise for the development of or changes to, the Road Network and Sidewalk Characteristics. Through the development application process developers will be asked to complete a Planning Rationale Report, Traffic Operations Assessment and a Transportation Impact Study.</td>
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<td>Parking</td>
<td>Automobile and bicycle parking standards are typically established through Zoning By-laws, which establish land use specific parking requirements. Residential parking standards are typically measured on the basis of ‘x’ parking spaces per ‘x’ residential units. Non-residential parking standards are typically measured on the basis of ‘x’ parking spaces per ‘x’ units of Gross Floor Area.</td>
<td>Planners • Planners must adhere to established standards and may work to institute alternative standards/approaches at the Secondary Plan or Block Plan level (i.e. Toronto City Council recently approved a 42 storey condominium tower – 426 University Ave. – with no permanent parking spaces, in place of 9 autoshare spaces and 315 bicycle parking spaces) Developers • Developers must adhere to municipal parking standards and may pursue alternative standards/approaches subject to justification and approval by the local approval authority.</td>
<td>Yes: Demonstrated adherence to parking standards.</td>
<td>Yes: Developers must conform with parking standards as established through local Zoning By-laws, some exemptions or cash-in-lieu of parking may be permitted on a site-specific basis.</td>
<td>• Developers must work within existing parking standards (as established in local Zoning By-laws) Through the development application process developers will be asked to complete a Planning Rationale Report, which often includes a parking study component to demonstrate proposed parking provisions and compliance with existing standards (or justification for alternative standards if proposed).</td>
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<td>Aesthetics and Human Scale</td>
<td>Aesthetics and Human Scale are typically measured based on built form requirements established at the Secondary Plan level and accompanying Urban Design Guidelines/Standards, as well as through Zoning By-law regulations. Typical measures include: minimum and maximum setbacks to ensure streetwall consistency; building step-backs to mitigate impacts of taller building elements; building heights (minimum and maximum); requirements for ground level entrance locations and façade treatments; landscaping standards and public realm requirements; and, screening requirements for loading and servicing elements.</td>
<td>Planners • Planners must adhere to established design and built form standards as established by municipal requirements. Developers • Developers must adhere to established design and built form standards as established by municipal requirements.</td>
<td>Yes: Demonstrated adherence to established design standards.</td>
<td>Yes: Developers must conform with established design standards and may pursue design innovations, subject to demonstration that they adhere to general policy objectives and subsequent approval by municipal authorities.</td>
<td>• Developers have to work within policy requirements that integrate human scale and design aesthetics into development. Through the development application process developers may have to demonstrate achievement of human scale through the Site Plan approvals process and/or Secondary Plan process (depending on the scale of the development application).</td>
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Appendix II
### Appendix II: Other Relevant Studies

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<th>Study Name and Description</th>
<th>Purpose and Intent</th>
<th>Triggers</th>
<th>How Common (if Discretionary)</th>
<th>Variance in Scope</th>
<th>Format</th>
<th>Required Resources, cost, time</th>
<th>Health Components (Elements from the Index)</th>
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| Planning Rationale Study (City of Toronto) | A Planning Rationale study provides an overall planning framework for understanding the proposal from the applicant’s point of view. | Full Planning Rationale report required for:  
• Official Plan Amendment  
• Zoning By-law Amendment  
• Plans of Subdivision  
• Plans of Condominium (conversion of existing rental to condominium)  
• Significant Site Plan Control applications  
Planning Rationale in cover letter format required for:  
• Plans of Condominium (new condominiums)  
• Smaller Site Plan Control applications  
• Part Lot Control  
• Plan Revisions | The overall Planning Rationale requirement is non-discretionary. | Depending on the complexity of the application, the information requirements can be addressed in a letter of several pages or a lengthy report. | A Planning Rationale Study includes:  
| a) Description of the proposal, overview, major statistics (i.e., height, density, parking), relevant phasing issues, site and contextual considerations.  
| b) Process steps/approvals required (i.e., Zoning, Site Plan Control, Land Division, Condominium).  
| c) Site description and surrounding land uses/context/built form.  
| d) Site’s planning history such as previous approvals, legislative references, relevant authorities (i.e., Site Plan Control Agreements, site specific By-law) with copies of relevant documents.  
| e) Planning Rationale, if applicable, should address relevant Provincial Policy Statement and Planning Act considerations; relevant Official Plan policies (Metropolitan, former municipal OF, Toronto Official Plan) including information/rationale as to how and why Official Plan policy is being addressed by the proposal; with relevant Zoning By-law information, areas of compliance and non-compliance and why.  
| f) Discussion of how the proposal will address Official Plan Section 37 policies (Policies 5.1.1.1 to 5.1.1.9 and any Secondary Plan provisions), if applicable.  
| g) Analysis and opinion as to why the proposal is good planning, including issues of impact.  
| h) Summary and conclusions.  
| i) For Zoning By-law Amendments, the results of the Preliminary Project Review should be provided or a list prepared detailing the potential amendments to the Zoning By-law; a formatted draft Zoning By-law Amendment is not required for a complete application. | The Covering Letter for Plans of Condominium involving new condominiums, smaller Site Plan Control and Part Lot Control applications should contain:  
| a) Description of the proposal, overview, major statistics (i.e., height, density, parking), relevant phasing issues, site and contextual considerations.  
| b) Site description and surrounding land uses/context/built form.  
| c) Site’s planning history such as previous approvals, legislative references, relevant authorities (i.e., Site Plan Control Agreements, site specific By-law) with copies of relevant documents.  
| In addition, the Covering Letter for Plan of Condominium applications should provide a description and background on the type of application (i.e., leasehold, common elements, phased, vacant land, standard) and on any related planning approval process or on any unusual circumstances (i.e., strata plan). The letter should identify whether the application is the same as the approved Site Plan and if there have been any changes, what those changes are and why. If there was no previous planning process including Site Plan Revisions or on any unusual circumstances (i.e., strata plan). The letter should identify whether the application is the same as the approved Site Plan and if there have been any changes, what those changes are and why. If there was no previous planning process including Site Plan Revisions or on any unusual circumstances (i.e., strata plan). The letter should identify whether the application is the same as the approved Site Plan and if there have been any changes, what those changes are and why. |  |

Cost and Timing

Vary widely based on complexity and scale of project.
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<th>Study Name and Description</th>
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<td>Environmental Impact Study (Conservation Halton)</td>
<td>An objective assessment of a development proposal in or adjacent to a natural area or feature of interest and if and to what extent the proposed development might reasonably be expected to change the biological and physical characteristics of the feature or area.</td>
<td>The EIS identifies anticipated adverse impacts of a proposal on the significant area or feature and recommends ways to avoid or minimize these effects and enhance the area if feasible.</td>
<td>Required if: &lt;ul&gt;&lt;li&gt;The development is within or adjacent to a significant natural area or feature and is reasonably expected to have adverse effects on the area or feature as a result of changes in land use&lt;/li&gt;&lt;/ul&gt; Triggered by the following application types (if the above applies): &lt;ul&gt;&lt;li&gt;Zoning By-law amendments&lt;/li&gt;&lt;li&gt;Official Plan amendments&lt;/li&gt;&lt;li&gt;Niagara Escarpment Plan amendments&lt;/li&gt;&lt;li&gt;Parkway Belt West Plan amendments&lt;/li&gt;&lt;li&gt;Development Permits&lt;/li&gt;&lt;li&gt;Plans of Subdivision&lt;/li&gt;&lt;li&gt;Severances&lt;/li&gt;&lt;li&gt;Zoning Variances&lt;/li&gt;&lt;/ul&gt;</td>
<td>The overall Planning Rationale requirement is non-discretionary.</td>
<td>Scope is discretionary and laid out in the Terms of Reference drafted by proponent following consultation with Conservation Halton. Scope determined by: &lt;ul&gt;&lt;li&gt;The significance of natural features and function in the area of the proposal&lt;/li&gt;&lt;li&gt;The availability of detailed sub-watershed studies and/or field work&lt;/li&gt;&lt;li&gt;Specific boundaries, methods and protocols required&lt;/li&gt;&lt;li&gt;The need for three season biophysical inventory&lt;/li&gt;&lt;/ul&gt;</td>
<td>Each municipality/Region has developed criteria specific to their needs. The EIS should also meet the standards identified in the Greenbelt Act (2005), if applicable. The EIS should begin early in the development process when there is the greatest opportunity to design in harmony with the natural environment.</td>
<td>• Density - the development should address density and site layout and make sure that it does not detrimentally affect its surroundings&lt;br&gt;• Land Use Mix - The mix of land use must not have detrimental to the surrounding environment.</td>
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**Cost and Timing**
Vary widely based on complexity and scale of project.
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<th>Study Name and Description</th>
<th>Purpose and Intent</th>
<th>Triggers</th>
<th>How Common (if Discretionary)</th>
<th>Variance in Scope</th>
<th>Format</th>
<th>Required Resources, cost, time</th>
<th>Health Components (Elements from the Index)</th>
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| Transportation Impact Study (City of Toronto) | The goal of a traffic impact study (TIS) is to assess the potential impact of traffic generated by a proposed development or redevelopment and to identify the roadway improvements required to ensure that the road network will operate safely and efficiently upon completion of the development. | May be required for:  
- Zoning By-law Amendment  
- Plans of Subdivision | Discretionary, but very commonly required. | None. | Letter or report | A Transportation Impact Study should include the following information:  
1. Location plan of the subject property.  
2. Property description.  
3. Owner/Consultant contact.  
4. Transportation context for horizon year and time periods for analysis.  
5. Estimate of travel demand generated by different development scenarios.  
7. Identification of transportation system improvements required to mitigate adverse impacts.  
8. Assessments of parking and access issues.  
9. Supporting data used in the analyses.  
**Cost and Timing**  
Vary widely based on complexity and scale of project. | • Street Connectivity – how is a accessible and walkable community supported  
• Road Network and Sidewalk Characteristics - how does the design of the road/sidewalks foster a sense of space and reduce the impact of the automobile on pedestrians and other users  
• Parking and Aesthetics - how is parking integrated into the development which positively impacts the surrounding environment  
• Service Proximity - what effect a development will have on municipal services. |
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<th>Study Name and Description</th>
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<th>How Common (if Discretionary)</th>
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<td><strong>Community Services and Facilities Studies (City of Toronto)</strong></td>
<td>A Community Services and Facilities Study may be required by an applicant to assist in the identification of necessary levels of social infrastructure required to support the health, safety and well being of local residents.</td>
<td>The undertaking of Community Services and Facilities Studies allows for the identification of issues that exist within the study area and what improvements may be necessary to enhance the quality of life for area residents.</td>
<td>May be required for a proposal that:</td>
<td>Discretionary, but very commonly required.</td>
<td>None.</td>
<td>A CS&amp;F Study contains specific information about demographics, community services and facilities that exist in a study area surrounding the development application.</td>
<td>• Service Proximity - what effect a development will have on municipal services, their location and amount provided.</td>
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<td>• May have a significant impact on community services and facilities</td>
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<td><strong>Sun/Shadow Study (City of Toronto)</strong></td>
<td>A technical document that provides a visual model and written description of the impact of shadows cast by a proposed development on adjacent streets, parks and properties.</td>
<td>These studies are done to evaluate the impact of shadows at various times of day, through the year.</td>
<td>May be required for the following applications for developments over 20 m (6 storeys) in height:</td>
<td>Discretionary, but very commonly required.</td>
<td>None.</td>
<td>The applicant may be requested to submit a proposed and final shadow study. This takes the form of a report.</td>
<td>• Human Scale – how shadows and sun will affect the public realm.</td>
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<td>• Site Plan Control applications (complex applications only)</td>
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<td>May also be required for developments under 20 m if additional height is being applied for near shadow-sensitive areas.</td>
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| Servicing Report (City of Toronto) | A study that evaluates the effect of a proposed change on municipal servicing infrastructure and watercourses. | The objective of a Servicing Report is to evaluate the effects of a proposed change in land use or development on the City’s municipal servicing infrastructure and watercourses. | The Servicing Report requirement is non-discretionary. | There is no variance in scope. However, more significant developments are expected to have more detail. | A Servicing Report is undertaken by a registered professional engineer, qualified in municipal engineering. The report must include sufficient details for City staff to determine the financial and infrastructure implications of servicing the proposed development. | The report includes the following information:  
1. Location map of the subject property  
2. Property description  
3. Present owner contact  
4. Information on the magnitude of the proposed development, including preliminary site, lots and street layouts, etc.  
5. Basic design assumptions and parameters  
6. Information related to existing surface and underground storm, sanitary and water services (e.g., location, size, grade and invert elevations, etc.)  
7. Supporting calculations such as sanitary sewer design calculations  
8. Identify upgrades to existing infrastructure required to support the proposed development  
9. Plans and profiles of sewers in an appropriate scale  
10. The proposed basement and ground floor elevations of all buildings to be constructed  

Cost and Timing  
Vary widely based on complexity and scale of project. | Service Proximity - what effect a development will have on municipal services. |
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<tr>
<th>Study Name and Description</th>
<th>Purpose and Intent</th>
<th>Triggers</th>
<th>How Common (if Discretionary)</th>
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<th>Health Components (Elements from the Index)</th>
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<tr>
<td>Noise Impact Study (Provincial)</td>
<td>This study presents information relating to the details of technical assessment and review of noise impact on planned sensitive land uses.</td>
<td>The purpose of the detailed study is to assess the impact of all noise sources affecting the subject lands and determine the appropriate layout, design and required control measures. May be triggered by any form of development submission. Feasibility Noise Studies may be required for developments where:</td>
<td>Discretionary, but very commonly required.</td>
<td>Feasibility studies address the following:</td>
<td>The study report should include details of assessment methods, a summary of the results and recommendations concerning required outdoor as well as indoor control measures. This background assessment should take the form of a report.</td>
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<td>• The sound levels resulting from surface transportation noise affecting the proposed lands exceed the noise criteria by more than 10 dBA.</td>
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<td>• Feasibility of the proposal in context of site design</td>
<td>• Feasibility studies should be submitted with the initial proposal.</td>
<td>Density - the development should address density and site layout that does not detrimentally affect noise on its surroundings.</td>
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<td>• The proposed lands are within 100 m from a freeway right-of-way or 50m from a provincial highway right-of-way.</td>
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<td>• Extent of control measures (such as barriers, etc.)</td>
<td>• Noise impact studies should be prepared by a qualified individual, preferably a Professional Engineer with experience in environmental acoustics.</td>
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<td>• The proposed lands are within 100 m from a Principal Main Railway Line right-of-way or 50 m from a Secondary Main Railway Line right-of-way.</td>
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<td>• Site layout (positioning of roads and buildings, land use compatibility)</td>
<td>The requirements for a Noise Impact Study include:</td>
<td>Land Use Mix - The mix of land use must not have detrimental noise affects on the surrounding environment.</td>
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<td>Detailed Noise Studies may be required for developments where:</td>
<td>• The sound levels resulting from surface transportation noise affecting the proposed lands exceed the noise criteria by more than 5 dBA.</td>
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<td>• Identify additional studies needed</td>
<td>• Site layout including the roadways and orientation of the buildings, as well as allow for consideration of the appropriate zoning including industrial, commercial, high, low and medium density residential use.</td>
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<td>• The proposed lands are within 500 m from a freeway right-of-way, 250 m from a provincial highway, or 100 m from the right-of-ways of other roads.</td>
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<td>• Timing associated with implementing of control measures</td>
<td>• Alert the proponent and the approving agency of potential land use conflicts as well as determine the practicality and economic feasibility of physical noise control measures, in conjunction with the selected site design.</td>
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<td>• The proposed lands are within 500 m from a Principal Main Railway Line, 250 m from a Secondary Main Railway Line, or 100 m from other railway lines.</td>
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<td>Detailed Noise Studies address the following:</td>
<td>The study should provide a clear direction regarding the need for additional studies and the timing associated with the implementation of required control measures.</td>
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<td>• Impact of external noise affecting the subject area</td>
<td>Cost and Timing</td>
<td>Vary widely based on complexity and scale of project.</td>
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<td>• Details of assessment methods</td>
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<td>Recommend outdoor and indoor control measures</td>
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Appendix III
Appendix III: Interview Question/Response Summaries

The consultant team conducted a series of interviews with stakeholders to gain a sense of general support levels for the concept of a new study requirement, and seek advice for what directions it should or could take.

Interview subjects included planners, developers and public health professionals who would likely be directly involved in any such future practice. In total, 25 interviews were conducted, representing 13 planners, two developers, 11 public health officers and two private health consultants.

This Appendix provides a highly condensed summary of the responses received during stakeholder interviews. The responses are presented in the same order the questions were asked to stakeholders. As a condition of the interviews, stakeholders are to remain anonymous. However, the correlation between responses and professional sector (planning, development or public health) are indicated where relevant.

**QUESTION 1:** To what extent are you as a (planner, developer, public health professional) supportive of implementing a mechanism to ensure that the health impacts of development are considered during the development approval process?

There was broad support for linking planning for the built environment and health promotion among the planners and public health officials interviewed. One respondent argued that it would actually create an incentive for development by addressing the public health-related concerns of ‘NIMBY’s.

Generally public health professionals were more supportive of a Health Background Study than other respondents interviewed. Public health officials highlighted the link between the built environment and planning as critical, and highly supported the concept as a potential tool to create meaningful and value-added change in how we think about and develop places.

Some planning officials, who also understood the value of healthy environments, noted that public health is to some extent already addressed in Official Plans and other planning policy documents, as well as in existing background studies already required by municipalities. One interviewee, who was particularly unsupportive of the project, believed health considerations are well embedded in Official Plan policy and did not see the value of an additional tool. Other planners were very supportive of this initiative, and cited the importance of such a study that takes into consideration the life of residents, not just development in terms of buildings and structure.

Overall, the majority of planners interviewed were unsure – with some outright dismissive – of the need for further tools and standards. The mechanisms by which such a study would be required were also discussed, with planners wary of holding developers to particular expectations. Developers interviewed were strongly opposed to any additional approval process mechanisms.

**QUESTION 2:** To what extent is your department/organization interested in/supportive of integrating health considerations into planning decision-making?

The views of planners and public health officials ranged from highly supportive to moderately supportive of integrating health considerations into planning decision making. Planners expressed the need for clear expectations to ensure that delays are minimized. The food security aspect of public health, and its connection to physical planning – particularly distances between residential areas and food retailers – was brought up. Others expressed concerns, regarding the measurement and evaluation of the relationship between built form and health. The view that the majority of development now occurring in some parts of the study area, particularly Toronto and Mississauga, is infill, and therefore have less impact on public health, was also expressed.

The extent to which both departments (public health and planning) could be integrated was pointed to by respondents in both departments. Before amalgamation in Toronto, public health and planning had a closer professional relationship, where public health played a more formal and integrated role in the planning approval process. Triggers were in place which identified development applications where public health support was needed. However, public health’s involvement focused primarily on environmental concerns rather than on design considerations.

The involvement of public health in planning and the planning process was questioned, with some respondents positive and some skeptical about increased communications between the departments. Skepticism was mainly attributed to the sense that current policy already covered health considerations and that further planning background studies were not required.

Developers were strongly opposed to the integration of
such considerations, and were concerned that they might significantly slow the development process and increase its cost.

**QUESTION 3: What are the possible mechanisms that could be used to assess potential health impacts of developments?**

Some respondents struggled with this question, but a number of suggestions were put forward including:

- Development application approval, possibly through a simple checklist for development proposals
- A Board of Health-led Health Impact Assessment
- The Environmental Assessment process
- The Toronto Green Standard – setting performance measures rather than assessment
- The use of the Peel Healthy Development Index as targets
- Through Secondary Plans
- Consultation with communities
- Academic literature
- Expert opinion
- Software programs (iplan) are being developed in the US. These should be available shortly and planning staff should be trained in their use.

The need for health requirements to be embedded in the development approval process was highlighted, as well as the need for increased communication between departments. One respondent discussed the requirements of vulnerable populations (i.e. children, elderly) when undertaking both policy and/or health studies.

Interviewees also noted that mechanisms used to assess potential health impacts of developments should also respond to the context of the area. Again the influence of infill development was raised, as this is the majority of development in Toronto and Mississauga. Respondents also indicated that the criteria developed for such a study would also play a role in the mechanisms used.

**QUESTION 4: At what stage of the development process should the health impacts be addressed?**

There was general consensus from respondents that health impacts should be assessed at the earliest stages in the development process. However, many respondents also thought that health considerations should be assessed throughout the development process to respond to changes and inform decisions as part of what they saw as an iterative process.

Many said that the guiding policies should be laid out in the Official Plan, and further enshrined in Secondary Plan and block-level plans. There seemed to be agreement that developers should be educated as to the requirements before putting forward their applications and that initial applications should be required to address compliance. The pre-consultation process was mentioned by planners as a tool for addressing such considerations.

**QUESTION 5: Should different study requirements be established for different types of development? If so, how and why?**

Respondents were split by this question. Some felt strongly that one regime should be applied to all applications, regardless of size and context, and that multiple systems would only confuse and alienate the public. While discretion should be used by planners in evaluating applications, these respondents argued that applying a uniform process would simplify the system.

Others argued that different requirements should exist for large greenfield and small infill development. Greenfield developments are likely to hold greater public health significance because they have wide and far-reaching effects on built form.

Alternatively some respondents took a middle ground, suggesting that there should be general requirements of health issues required for all development, however each development should be assessed in regards to its specific context with judgments made regarding the applicability of certain requirements.

A variety of triggers were suggested by respondents to categorize application types, including density, scale and context, impacts and inclusivity, and location.

- Density was suggested as a possible determinant, for example, the provision of gym or recreational facilities is a significant component of public health contribution for large multi-unit developments, but does not apply to low-rise developments.
- Issues of scale and context were also raised as significant factors. Land use was suggested as a basis for different requirements, as commercial and industrial developments having significantly different effects on public health than residential developments.
- The effect of development on a community and on vulnerable people within a community was also raised. People have different preferences of how they prefer to live, and it should be noted that the built environment affects people in different ways at different stages in their life. Development and health requirements need to consider these preferences and life stages when assessing health.
- Finally, geographic location was also brought up
by respondents. Some believed that the public health impacts of developments within significant nodes or corridors should require them to follow a different set of rules. It was suggested that developments could be scoped during the pre-consultation stage to identify context specific study requirements.

Ultimately respondents varied in their opinion concerning the requirements for different types of development, with no clear preference supported. Responses ranged amongst respondents from a preference for a simple and uniform processes, to context-dependant processes, depending on the development type.

**QUESTION 6: Should all types/forms of development and/or application types (OPA/Secondary Plan, Block Plan, Zoning, Subdivision, etc.) trigger the requirements for such a study? If no, what types/forms of development and/or application type do you feel should trigger potential study requirements?**

Once again, respondents were split by this question, indeed quite broadly this time. Some argued that public health requirements should be ‘hard’, and contained within Official Plan or bylaws. Developments would either pass or fail the test of meeting these requirements. Others agreed that all application types should trigger requirements for a study. Several respondents, primarily planners, preferred Secondary Plans as the level at which the study would be applied, while one preferred zoning.

Issues of scale were repeatedly cited by planners, with larger developments (i.e. Secondary Plan level) seen as having the greatest influence on public health. Here triggers of square footage and number of employees were suggested. Of note was the point of view of one respondent who identified the cumulative impact of many small developments on public health. This statement is particularly important considering that the context of most development in Toronto and Mississauga is infill rather than greenfield development.

Legal requirements, and what a municipality can request from developers was also discussed. The LEED criteria was mentioned as an example of standards that are not required by the Planning Act, and therefore can not be enforced. Understanding the policy parameters of health requirements is essential.

These responses appear to reflect two essential philosophical approaches by respondents. Some, motivated by a need for thoroughness, felt that more study across the board would be the best policy. Others, concerned about bogging down the development process, wished to make the system as simple and concise as possible. In this regard, it was suggested that large scale development should trigger a Health Background Study, however, as development progresses no further studies should be required.

**QUESTION 7: What elements/issues/considerations should a Health Background Study focus on or be included in the study’s terms of reference?**

Respondents put forward a number of suggestions in response to this question:

- Access to food retail
- Access to health services
- Access to employment
- Walkability
- Cycling and pedestrian amenities
- Safety from crime (which encourages walking)
- Safety from accidents (such as separating schools and long-term care facilities from major transportation corridors)
- Recreation opportunities
- Access to green space (view and proximity)
- Community garden space
- Public spaces
- Pedestrian friendly areas
- Access to public transit
- Urban form and mix of uses
- Factors affecting disease and obesity
- Special program space for activities like community kitchens or markets, which raise awareness and support behavioural changes
- Environmental effects on public health (for example, effects of proposed industrial uses on air, soil and water quality)
- Factors affecting mental health
- Mobility considerations
- Urban heat island effect
- Climate change adaptation
- Conditions inside buildings
- Street layout and connectivity
- Density considerations
- Tree planting requirements
- Active transportation infrastructure
- Mix of housing type
- Protection from noise
- Disease and problems of obesity relating to different urban forms
- Background history of an area
- Analysis of surrounding neighbourhoods
- Character of the overall region
- Location and compatibility
- Risk analysis and magnitude
One planner interviewed suggested that the sheer magnitude of elements for consideration was overwhelming, instead it was suggested that the elements with the greatest impact should be focused on.

**QUESTION 8: What format should this study requirement take?**

As stated earlier, a number of stakeholders felt that the requirement should be based on the category of the development proposal (with more extensive studies required for larger developments). A few respondents felt that a checklist would be a simple and easily understood means of testing how well developments met the requirements. On the other hand, most argued that this was too simplistic and that a full-scale report should be undertaken to evaluate developments. While a checklist might serve as an initial terms of reference statement, they were skeptical about how well it could address the complicated issues associated with public health.

Many respondents mentioned the need for a Health Background Study to be integrated into the planning process. A stand-alone document was seen as a risk in achieving this goal, and a majority of respondents suggested integrating health requirements and assessment within other background studies.

An Environmental Assessment study was mentioned, however this format was recognized as perhaps not the most appropriate for all developments, especially those of a smaller scale. Interviewees noted that in addition to identifying health impacts, the development proponent should put forward mitigation strategies and be held accountable for their implementation throughout the various stages of development.

Interviewees noted that guidance would be required to address how influential such a study would be in planning decision-making. Regardless of the format of the Health Background Study (whether it is a simple checklist, stand-alone report or integrated document), to gain buy-in from planning staff, developers and the public, it is imperative that the Study results in improved development outcomes that contribute to better health.

**QUESTION 9: From your perspective as a (planner/developer/public health official), what challenges, if any, do you foresee with implementing a requirement for a Health Background Study?**

The number one concern expressed was the difficulty in engaging stakeholders in the process and building political support for it. The involvement of developers, landowners and the general public as well as getting clear direction from Council was seen as important. This support was closely tied to the idea of education, and communicating the significance of this issue to individuals and groups who may not currently see it. The issue of the public’s response to health study outcomes was also raised as a potential issue when marketing developments.

As noted throughout this interview summary, an additional background report was questioned in regards to its feasibility, specifically in insuring that requirements would not be so onerous as to prevent development from occurring altogether. (The highly negative responses given by developers during these interviews appear to confirm the current presence of a political divide).

The difficulty in measuring some public health indicators, the criteria they are measured against, and the complication of developing uniform regulations for a diverse array of developments and built forms was also seen as challenge. One respondent expressed particular concern about difficulties institutions may face in complying with more stringent public health requirements in the development approval process. For example, schools, hospitals and places or worship today strongly follow models of geographic centralization. The imposition of walkable distance requirements may substantially draw in these organizations and requirements to dramatically rethink their strategies.

Integrating a comprehensive assessment tool also involves challenges to industry, shifting discourse, and engaging different disciplines and cultures. Challenges relating to cost, expertise and resources were specifically identified by respondents. These challenges may result in unintended outcomes including pushback from all involved (planners, public health officers and developers). A lack of expertise in this area was discussed, as experts in public health may be required as part of an assessment. Training planners or drawing these experts from public health staff may strain resources and result in increased costs to both of these departments.

Finally, outcomes must demonstrate added value and best practice and examples should be provided to demonstrate this. Illustrating best practice will fuel public demand, engage developers and support planners in their decisions. Ultimately the ‘newness’ of the concept is a challenge in itself, as planners are not used to examining health issues. It will take time to allow for planners to become more comfortable with these considerations and change behavior.
Region of Peel

Health Background Study
TERMS OF REFERENCE & USER GUIDE

May 27, 2011
Prepared by The Planning Partnership

In Association With:
Health Background Study Framework for the Region of Peel and the City of Toronto

TERMS OF REFERENCE

May 27, 2011

Prepared by The Planning Partnership
1.0 PREAMBLE

1.1 Purpose:

The purpose of the Health Background Study is to ensure that new development and re-development promotes and supports healthy and active communities. These Terms of Reference are designed to create a standardized method for development interests (applicants) to demonstrate their achievement of key healthy community design elements and, in turn, for municipalities to evaluate development proposals based on key community health objectives as specified by the municipality.

The concept of healthy communities is intrinsically tied to the Provincial planning policy’s promotion of complete communities. Complete communities meet people’s needs for daily living by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, opportunities for aging in place, and accessible community infrastructure including schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided. These considerations have been integrated into these Terms of Reference.

The Health Background Study is intended to serve as a ‘checklist’ to evaluate the success of new developments in achieving minimum standards of community health and a forum to encourage applicants to justify their development decisions. It should not be applied alone as a means for approving or rejecting private development proposals, but rather as an informative tool in the application evaluation process.

There are many factors that influence the health of a community. The Health Background Study reflects six of the seven inter-related Core Elements as identified through the research and design of the Peel Healthy Development Evaluation Tool, which include:

1. Density
2. Service Proximity
3. Land Use Mix
4. Street Connectivity
5. Streetscape Characteristics
6. Parking

The seventh Core Element, Aesthetics and Human Scale, has been excluded due to its overlap with existing urban design policies and guidelines. The Health Background Study standards outlined in this Terms of Reference have further been shaped by the expert opinions of planners and urban designers. All developments should comply with local urban design standards.
1.2 How to use this Terms of Reference:

This Terms of Reference is divided into six main sections that correspond with the six Core Elements as described above. Each section is divided into the following components:

- **Rationale:** Description of the Core Element and why it is important from a community health perspective.

- **Objective:** Statement of desired development objective.

- **Standards:** Associated minimum development standards to be achieved by the proposed development. The application and achievement of standards will depend on the site-specific context and scale of the proposed development, and should not be considered as absolutes.

- **Key Questions:** List of key questions that the applicant should consider in the planning and preparation of their proposed development. These questions are intended to initiate dialogue within the development team and with the municipality on strategies/approaches to meet desired outcomes.

- **Reporting/Content Requirements:** Description of the minimum reporting requirements to demonstrate compliance/achievement of the Objectives/Standards.

1.3 Disclaimer:

It should be noted that the evaluation of a development proposal based on specific Core Elements may vary depending on the scale of the proposed development as well as the overriding planning policies in place at the time the development application is made. The Core Elements are evaluated separately in these Terms of Reference, however it is recognized that overlap does occur between elements and that all Core Elements should be considered holistically when evaluating a development proposal. Consider the question “How is this contributing to healthy communities” throughout the reading of these Terms of Reference.

It is at the discretion of the local municipality to determine the applicability of each Core Element and the precise evaluation parameters for a specific development proposal. This will occur during the pre-application phase.

Further, participating municipalities shall continue to update their Official Plan policies and other land use/development policies to reflect the important linkage between community design and community health to ensure that new development contributes to the achievement of key health objectives as the understanding of this linkage evolves over time.
CORE ELEMENT 1: DENSITY

a) Rationale:

Optimal development densities support and facilitate walkability. Interacting closely with other Core Elements such as service proximity and land use mix, density influences the concentration and distribution of people and destinations within the built environment. Higher development densities, both residential and non-residential, are better able to support a variety of services, employment opportunities, transit and other community destinations/facilities within walking distance of where people live, work, play and learn. Achieving higher densities also contributes to a more efficient use of land, and encourages the protection of agricultural lands and natural areas that serve important ecological functions that benefit human health both directly and indirectly.

b) Objective

To achieve effective and high quality density that supports walkable access to/from housing, employment, transit, schools and community services and facilities.

c) Minimum Standards:

- All development on Designated Greenfield Areas shall achieve a minimum overall density target of 50 people and jobs per hectare.

- All development in designated Urban Growth Centres in the Region of Peel (including downtown Brampton and Mississauga City Centre) shall achieve a minimum overall density target of 200 people and jobs per hectare.

- Notwithstanding the above standards, where the local municipality has established higher density targets than those established by The Growth Plan, the higher density target should apply.

d) Key Questions:

- What are the current density permissions for the subject lands?

- Does the surrounding context reflect high quality and context appropriate density? Should this context be emulated?

- Is the density of the proposed development compatible with the surrounding context?
What areas of the site have the opportunity to increase density?
What are the current and projected number of residents and jobs, and how will this influence future transit and service provision?

Based on the proximity of employment opportunities, transit, schools and community services and facilities, will the density of the proposed development support walkable communities and complete streets?

Have the specific additional needs of the elderly been considered?

e) Reporting / Content Requirements:

Greenfield Development – Density calculations that demonstrate unit counts, the type of units and unit size (residential), gross floor area (non residential), land area and achieved density in relation to Provincial policy.

Redevelopment – Density calculations that demonstrate unit counts, the type of units and unit size (residential), gross floor area (non-residential), land area and achieved density in relation to existing development on the subject site or lands.

A short written description of achieved density and how it complies with objectives and minimum standards.
CORE ELEMENT 2: SERVICE PROXIMITY

a) Rationale:

Like density, proximity to services, employment opportunities and green space facilitates walking. Also, interacting closely with land use mix, proximity to services provides people with a feasible alternative to automobile use, and makes the community more inclusive for those who cannot drive (especially children or seniors).

While some people are willing to walk long distances, setting maximums ensures that a high incentive to walk is maintained through all seasons and weather conditions, and across a reasonable range of physical abilities.

Standard measures for proximity to transit have been well researched. The standard for proximity to continuous high-order transit (subway/light rail) is a 5-minute walk. For lower-order continuous transit (bus), the standard measure is a 2.5 minute walk. The standard measures for appropriate proximity include:

- A 2.5 minute walk (no more than 200 m), appropriate for very frequent, or spontaneous trips, such as access to transit.
- A 5-minute walk (no more than 400 m), appropriate for frequent trips, such as access to basic retail, grocery or community facilities, or transit in some cases.
- A 10 minute walk (800 m), appropriate for longer, more deliberate trips to a wider range of retail or community facilities.
- A 15 minute walk (1.2 km) or a half an hour walk (2.4 km), appropriate for substantial trips to major destinations, such as schools or nearby employment clusters.

Distances must be calculated based on the shortest potential walking path of a pedestrian (network distance), as opposed to a straight line (Euclidean distance or ‘as the crow flies’).

b) Objective

To achieve a reasonable proximity and cluster of uses, based on walking distance, of key services and employment opportunities to residences and transport nodes. This level of proximity promotes physical activity (walking or cycling), improves mental health by stimulating greater community interaction, and creates a feasible alternative to automobile use, while at the same time reducing greenhouse gas emissions. At the appropriate scale, a community should have a fully array of uses.
c) Minimum Standards

Transit

☐ The distance between at least 50% of the projected population of the development and a low-order transit stop shall be no more than 200 m. The transit service proposed should provide a direct route to a Regional Urban Node, Intensification Corridor, or smaller higher-density, mixed-use transit supportive activity centre with a maximum transit trip of 30 minutes.

☐ Where a high-order transit route bisects the development area, 75% of the projected population should be within 400 m of it.

☐ Ensure design quality of both transit stops and the journey to the stop. Transit stops should, where appropriate, provide shelter from the sun and inclement weather and seating. High-order transit stops/stations should also include secure bicycle parking facilities.

Neighbourhood Community and Retail Services

☐ The distance between at least 75% of the projected population and three or more of the following amenities and services must be no more than 800 m:

Childcare facility, community garden, park, hospital or health clinic, public library, places of worship, adult/senior care facility, social service facility, performance or cultural space, post office or recreation centre. (Multiple services of the same type may be counted.)

☐ The distance between at least 25% of the projected population and a minimum of 5,000 m² of mixed service commercial and retail space shall be no more than 800 m.

☐ The distance between at least 75% of the projected population and a minimum of 150 m² of mixed service commercial retail space shall be no more than 800 m.

☐ The distance between at least 90% of the projected population and a playing field, park, square or natural open space should be no more than 400 m.

☐ The distance between 100% of the projected population and a planned elementary school shall be no more than 1.2 km.
The distance between 100% of the projected population and a planned secondary school shall be no more than 2.4 km.

Where appropriate, a new community should provide mixed service commercial retail facilities that can be used by adjacent communities.

**Employment**

The development should be within reasonable proximity to an existing or planned employment centre or urban centre. Specifically, the distance should be no more than 10 km.

d) **Key Questions:**

What are the current zoning permissions, and land use designations (Secondary Plan and Official Plan) for the subject lands and their surroundings?

What is the existing service context of the subject lands? Are sufficient transit, employment and public and retail servicing available or planned?

Based on the proximity of employment opportunities, transit and community services and facilities, will the development support walkability and cycling access?

Have the specific additional needs of the elderly been considered?

e) **Reporting / Content Requirements:**

Site plans demonstrating the location of residential units within the surrounding context, including: transit stops (indicating higher or lower order), community and retail services (indicating types and Gross Floor Area, respectively), parks, schools (indicating elementary or secondary), and employment or urban centres.

A short written description of the achieved proximity, and how the development complies with the objectives and minimum standards.
CORE ELEMENT 3: LAND USE MIX

a) Rationale:

An equitable mix of household sizes and incomes contributes to a community’s overall well being and quality of life in residential neighbourhoods. Providing a range of housing options also allows residents to remain with their community as their needs change; from living alone, to as a couple, to as a family, to without children, to as seniors. Proximity of these housing options allows extended families to remain close.

Furthermore, a range and mix of uses within a community, as well as within buildings themselves, provides the opportunity to support walkable communities. Locating employment, institutional and industrial uses in close proximity allows for the development of a more compact urban form, which supports the provision of public transit nodes, walkable neighbourhoods and safer communities. More specifically the location of these uses, such as the provision of retail uses on the ground floor should be encouraged.

Certain commercial uses that discourage walking, such as drive-throughs, are also dealt with in this Core Element.

b) Objective

Recognizing that land use mix is closely associated with service proximity and the surrounding context, the primary objective of this element is to promote a broad mix of land uses, with a particular focus on housing mix.

c) Minimum Standards:

- Where the scale of the residential community is large enough, a range of uses should be provided, as follows:
  - for communities of 5,000 people or more, provide neighbourhood-scale retail and services (such as corner stores, elementary school, library, etc.)
  - for communities of 10,000 people or more, provide a full-range of uses, including larger-scale retail, services, and employment opportunities.

- Where the scale of employment lands is large enough, small scale commercial retail and services should be encouraged, where appropriate.
Where the scale of the community permits, it should include dwelling structures from all three of the following housing type groups, with no group making up more than 50% or fewer than 10% of total units:

i. Single detached, semi-detached, and duplex.
ii. Townhouses and multiplex.
iii. Apartment building

Special housing types, such as group homes or seniors’ residences, should be encouraged.

Secondary suites should be encouraged where appropriate.

Live-work units should be encouraged where appropriate.

Site design of auto-oriented developments, such as uses which include drive through facilities, gas bars and related uses shall make pedestrian access a priority and contribute to high quality public realm and streetscapes.

The location of retail uses on the ground floor of multi-unit and mixed use buildings should be encouraged.

d) Key Questions:

What are the current zoning permissions and land use designations (Official Plan and Secondary Plan) for the subject lands?

Is there sufficient diversity of housing and unit types in the community to accommodate households of varying income, size and needs? Can the community accommodate a full life-cycle of housing needs for persons with varying physical abilities?

How can infill development contribute to ensuring a diversity of housing types?

How can a mix of uses be integrated into the development/redevelopment?

Have the specific additional needs of the elderly been considered?

d) Reporting / Content Requirements:

A count of proposed units and their types. A short written description of achieved mix and how the development complies with objectives and minimum standards.
CORE ELEMENT 4: STREET CONNECTIVITY

a) Rationale:

A connected street network is essential for encouraging active transportation. When a dense grid/connector network is achieved, pedestrians have access to the greatest freedom of movement and the most direct routes to their destinations. Connectivity is evaluated through the avoidance of certain street types (such as cul-de-sacs) and through block size. For infill development the ability to influence street layout is limited. In this case, proposed infill development should strive to ensure a better street environment for pedestrians through attention paid to design details.

b) Objective:

To promote a highly connected network of streets and active transit nodes to support opportunities for active transportation.

c) Minimum Standards:

- Infill development should identify opportunities to increase street connectivity.

- Street networks and off-road paths in greenfields should always:
  
  • provide the maximum choice for how people will make trips; take full account of the kinds of movement a development will generate; and
  • make clear connections to existing routes and facilities.

- Cul-de-sacs are not permitted unless required for technical reasons.

- Crescent streets, reverse frontage lots, and loop roads must not constitute more than 20% of total street frontage and should be discouraged.

- Blocks in the proposed development must not exceed 80 m x 150 m in size. Exceptions are made for blocks consisting solely of Parkland or of Employment uses.

- Intersections should be frequent, with street blocks decreasing in size as density increases.

- Sidewalks, bike lanes and multi-use paths should connect to street networks, major destinations and transport nodes.
d) **Key Questions:**

Does the proposed development have a sufficient density of intersections and sufficiently small block size to encourage active transportation?

How can infill development contribute to a higher level of street connectivity on the site and beyond?

How is the layout of parks and open spaces used to improve the directness and freedom of pedestrian and bicycle travel?

Has the proposed plan set out direct routes through a permeable and linked road and pedestrian network including trails, to ensure that short walking distances can be achieved?

Have the specific additional needs of the elderly been considered?

e) **Reporting / Content Requirements:**

Site plans demonstrating the number of intersections and block sizes within the proposed development, and a brief summary showing how it complies with the requirements.
CORE ELEMENT 5: STREETSCAPE CHARACTERISTICS

a) Rationale:

In order to encourage walking and cycling activity, streets must provide appropriate facilities for pedestrians and cyclists. While walking and cycling may be possible without specific amenities, a certain level of comfort and prioritization should be offered through design to create inviting public spaces and promote injury prevention. Core Element 5 includes minimum standards for sidewalks and bicycle lanes, adequate shading, various traffic calming devices, and sufficient lighting for pedestrian safety. Additionally, recognition and integration with cycling and trails facilities will ensure continuous links to key transport nodes and areas of interest.

b) Objective:

To promote active transportation through street and sidewalk design.

c) Minimum Standards:

Sidewalk Amenities

☐ All streets must have sidewalks on each side that are at least 1.5 m wide in low-density residential areas, and at least 2 m wide in medium-density residential neighbourhoods, high-density residential neighbourhoods, mixed use areas, and commercial areas.

☐ A variety of street trees that are hardy, resilient, and low maintenance should be planted at regular intervals (as specified by the municipality) adjacent to all streets.

☐ Transit shelters and other street furniture should be provided, especially on major pedestrian routes. Other street furniture may include benches, waste receptacles, newspaper outlets, community information boards, water fountains, public washrooms, bicycle parking, and bicycle sharing system components.

Cycling Amenities

☐ A connected and destination-oriented bikeway network should be provided throughout the community, including a variety of on- and off-street bikeway facilities that provide an appropriate degree of separation from motorized traffic, given the speed and volume of traffic on the street. These on-street bikeway facilities may include (but are not limited to) bicycle lanes, cycle tracks, sharrows, signed routes, bicycle boulevards, and multi-use paths on the boulevard.
Where there is a local Bicycle Plan, the bikeway network proposed in the Plan shall be implemented in the development area, and opportunities to enhance or connect to the proposed bikeway network should be identified.

At a minimum, 100% of the population should be within 150 m of a continuous and connected bikeway facility.

Intersections

All intersections should be designed to increase the visibility of cyclists and pedestrians, give them priority, reduce crossing distance, and provide adequate crossing time. Intersection design elements may include, but are not limited to:

- Pavement treatments and markings for pedestrian crossings (e.g. brick paving, zebra/ladder markings)
- Curb cuts/ramps
- Raised crosswalk
- Curb extension/bulb out
- Centre Median or refuge island
- Pedestrian scramble (a.k.a. Barnes dance)
- Bicycle box
- Conflict zone markings for bicycles (e.g. coloured lane, skip lines, chevrons, sharrows)
- Audible pedestrian crossing signals
- Countdown signals
- Leading pedestrian and/or bicycle signals (advance walk/bike signal)
- Pedestrian and/or bicycle actuated signals
- Right-turn on red light prohibitions
- Mid-block signalized crossings

Lighting

All mixed-use streets must have an average luminance of 10 lux, with a minimum of 5 lux.

Pedestrian-level street lamps of 4.6 m in height or less, spaced apart no more than 30 m, must be provided on all streets.

Wayfinding
A wayfinding system should be implemented on a community-wide basis to allow residents and visitors to determine their location; identify key destinations (parks, transit stations, community and cultural facilities, shopping centres, off road trails); and develop a plan to take them from their location to desired destination by walking or cycling. The wayfinding system may include maps, directional signs or other elements, and should be useful and easy to understand.

Traffic Calming

In greenfield development, or where new streets are introduced through infill development, traffic calming will be achieved on neighbourhood streets by using:

- Minimum traffic lane widths
- Minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, woonerfs or home-zones (speed limit under 15 km/hr, vehicles must yield to pedestrians and cyclists)

For infill development, traffic calming should be achieved on existing neighbourhood streets by using any of, but not limited to, the following elements:

- Reduced/minimum traffic lane width
- Reduced/minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, woonerfs or home-zones (speed limit under 15 km/hr, vehicles must yield to pedestrians and cyclists)
- Speed humps
- Bollards (short vertical posts)
- Channelization islands (raised islands that force traffic to turn in a particular direction)
- Chicane (curb bulges or planters or alternating sides, forcing motorists to slow down)
- Choker (raised islands in parking zones that narrow a roadway)
- Curb extension, planter, or centerline traffic island that narrows traffic lanes
- Horizontal shift (a lane centerline that curves or shifts)
- Rumble or warning strip
- Semi-diverter or partial closure (restricts entry and limits traffic flow at intersections)
- Signal timing to reduce traffic speeds
- Radar trailer that shows drivers their current speed and the posted speed limit
- Traffic circles or roundabouts
- Speed table

While increasing comfort and safety for pedestrians, the design of traffic calming elements should not create undue hazards or obstacles for cyclists.
d) **Key Questions:**

What are the municipally-designated standards for sidewalk and bicycle lane dimensions and design? What are the standards for other amenities?

Is there a local Bicycle/Walking/Active Transportation Plan? If yes, what bicycle or pedestrian facilities are designated or recommended within the development site?

Does the proposed community provide sufficient pedestrian and bicycle amenities to encourage active transportation?

How can intersections been designed to increase safety and comfort for pedestrians and cyclists?

Which neighbourhood streets should be targeted for traffic calming? How will traffic calming be achieved on these streets?

Have the specific additional needs of the elderly been considered?

e) **Reporting / Content Requirements:**

A detailed and integrated plan of the entire proposed community, demonstrating widths of sidewalks, bikeways, street tree planting, intersection treatments, traffic calming measures, pedestrian priority streets, bicycle amenities and pedestrian lighting fixtures (including illuminance level).

A short written description of road and sidewalk characteristics and how the development complies with objectives and minimum standards.
CORE ELEMENT 6: PARKING

a) Rationale:

Historically, planning has been overly accommodating to automobiles by providing very high parking requirements. However, large surface parking lots, oversized garages and significant front yard parking harm the aesthetic of the public realm. Likewise, abundant low-cost parking provides little incentive for residents, employees and shoppers to use other means of transportation. Logically, frequent transit, cycling and walking opportunities should facilitate lower parking requirements.

b) Objective:

To discourage automobile use and promote alternative modes of transit through modified parking standards.

c) Minimum Standards:

Automobile Parking

- Reductions in parking requirements should be given to:
  - buildings and other facilities within 400 m of a transit stop; and
  - apartments/condominiums offering car share parking spaces (with each car share space equivalent to 10 regular spaces).

- On-street parking should be included on all streets except where inappropriate for technical or safety reasons.

- Efficient use of parking should be promoted by identifying systems for sharing parking spaces by two or more user groups at different times of the day or week (for example, office staff during weekdays and restaurant clientele in the evenings and on weekends), and by providing preferential parking for carpool vehicles.

- Where available, economic incentives should be identified and utilized to provide structured parking, rather than surface parking.

- Where surface parking is provided, it should be designed to minimize negative aesthetic and environmental impacts. This can be achieved by locating the parking lot away from the street frontage and by incorporating the following into the parking lot design:
  - Tree planting
• Landscaping
• Stormwater management
• Porous/permeable surfaces
• Light-coloured materials (rather than black asphalt)
• Pedestrian access and circulation

Bicycle Parking

☐ All new developments should meet or exceed the higher of: j

a) Local bicycle parking requirements (provided in local zoning by-laws, Bicycle Master Plans); or
b) The minimum bicycle parking standards outlined in Table 1.

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<thead>
<tr>
<th>Table 1. Minimum Bicycle Parking Standards, by Use and Type</th>
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<tbody>
<tr>
<td><strong>Use</strong></td>
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<tr>
<td>Multi-unit Residential</td>
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<tr>
<td>Retail, Services, &amp; Community Facilities</td>
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<tr>
<td>General Office</td>
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<tr>
<td>Medical Office</td>
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<tr>
<td>Hospital</td>
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<tr>
<td>Elementary/Secondary School</td>
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<tr>
<td>Post-Secondary School</td>
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<tr>
<td>Other non-residential (e.g. Industrial)</td>
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<tr>
<td>High-order Transit Station</td>
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*Occupant/Employee (A.K.A long-term) parking refers to secure, enclosed bicycle storage that is locked, weather protected and easily accessible to residents and/or workers. Signage indicating the location and information on use of these parking facilities should be provided.

c) Key Questions:

Is infrastructure for transit in place, and what is the level of transit service currently provided?

Is the automobile parking for the proposed development sufficient, or excessive, given the planned level of transit service, and pedestrian and cycling facilities?

Can automobile parking be provided more efficiently through an unbundled or shared system?

Has paid parking been considered to reflect the cost of providing parking?

How are the environmental and aesthetic impacts of surface parking being minimized or mitigated?

Is there sufficient visitor and occupant bicycle parking provided in the proposed development?

Have the specific additional needs of the elderly been considered?

d) Reporting / Content Requirements:

A plan showing the number and distribution of bicycle (visitor and occupant) and automobile parking (private and on-street), along with the proposed uses and Gross Floor Area (for industrial and commercial buildings) or number of residential units.

The location of transit stops, to give context to numbers of bicycle and automobile parking spaces.

A short written description explaining how the automobile parking supply is being minimized and used more efficiently.
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Introduction

Background
This User Guide has been produced as part of the Heart and Stroke Foundation’s, Region of Peel’s and City of Toronto’s commitment to healthy, active communities and design quality in the Region of Peel. This document is complementary to the Health Background Study (HBS) Terms of Reference, and is part of the toolkit to assess the health impacts of development proposals.

This User Guide is intended to be used by anyone who has a role in the planning, design and approval of development, including built environment professionals, key stakeholders (including financiers), the municipality and community.

What is a Health Background Study (HBS)?
The HBS is intended to serve as a ‘checklist’ to evaluate the success of new developments in achieving minimum standards of community health and a forum to encourage applicants to justify their development decisions.

The HBS should not be applied alone as a means for approving or rejecting private development proposals, but rather as an informative tool in the application evaluation process. Further, the HBS is intended to work with existing provincial, regional and local planning policies, regulations and standards, with which all developments should comply.

The Core Elements
There are many factors that influence the health of a community. The HBS reflects six of the seven inter-related Core Elements as identified through the research and design of the Peel Healthy Development Index, which include:

- Density
- Service Proximity
- Land Use Mix
- Street Connectivity
- Streetscape Characteristics
- Parking

* The seventh Core Element, Aesthetics and Human Scale, has been excluded due to its overlap with existing urban design policies and guidelines.

What is healthy development?
The concept of healthy communities is intrinsically tied to the Provincial planning policy’s promotion of complete communities. Complete communities meet people’s needs for daily living by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, opportunities for aging in place, and accessible community infrastructure including schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also a key part of complete communities.
The standards outlined in this User Guide for each core element have further been shaped by the expert opinions of planners and urban designers.

All six elements are interdependent and work together to promote healthy, walkable communities. Achieving one or two elements within a development is not sufficient and will not satisfy the goal of creating complete, active communities. For example, a development that achieves higher densities without service proximity or land use mix will lack opportunities for walking and cycling, and will promote the same type of automobile dependence as traditional development. Conversely, service proximity and land use mix are difficult to achieve without appropriate development densities. On the streets, a development that provides a good level of street connectivity but lacks an inviting and safe streetscape for walking and cycling will also fail to achieve the Region of Peel’s goal of creating healthy communities.

Scope and Applicability
The HBS and this User Guide are relevant to all aspects of the built environment, including the design of buildings and spaces, landscapes and transport systems. These documents have implications for planning and development of every land use, scale and location, including greenfield and infill developments. In the process of completing the HBS the Core Elements are evaluated separately, however it is recognized that overlap occurs between elements and that all Core Elements should be considered holistically when evaluating a development proposal. Consider the overarching question “How is this contributing to healthy communities” when completing a HBS.

Scale and Location of Development
The applicability of the Standards will vary depending on the scale and location of development, and as such the applicability of each Standard to either greenfield or infill development, or both, is indicated throughout the User Guide with the following icons:

- G Greenfield Development
- I Infill Development
- G-I Greenfield and Infill Development

Most Standards can be applied to both greenfield and infill development, and that is because the applicability of each Standard is ultimately determined by the scale of development - not the location. While infill development is usually of a smaller scale than greenfield development, the User Guide recognizes that some infill developments can be large enough to warrant the provision of a broader range of densities, infrastructure, services, land uses, and amenities. Proximity to existing services beyond the development site is also important to evaluate when assessing the merits of infill development.

The Planning & Development Approvals Process
The HBS and its Standards are applicable throughout the various stages of the planning and development approvals process, including the Secondary Plan, Draft Plan, Block Plan and/or Site Plan.

The achievement of some Standards can be assessed at a higher level of planning, such as in the Secondary Plan. For example, Standards for Density and Street Connectivity can be applied and evaluated at this level. The Secondary Plan also establishes the policies for more detailed Standards for Core Elements such as Service Proximity, Land Use Mix, Streetscape Characteristics and Parking that are further outlined and evaluated at subsequent levels of approval, including the Draft Plan, Block Plan and/or Site Plan.

A table indicating where in the planning and development approval process each HBS Standard applies is provided in the Appendix of this User Guide. This table has been developed to assist developers, municipal staff, and others involved in the planning and development process in completing the HBS.

Local Implementation & Supporting Policies
It is at the discretion of the local municipality to determine the applicability of each HBS Standard and the precise evaluation parameters for a specific development proposal. Evaluation parameters will recognize challenges and opportunities posed by the natural environment, economics, and logistics. This assessment will occur during the development pre-application phase.

Participating municipalities will also continue to update their Official Plan policies and other land use/development policies to reflect the important linkage between community design and community health to ensure that new development contributes to the achievement of key health objectives as the understanding of this linkage evolves over time.

The evaluation of a development proposal based on specific Standards may vary depending on the overriding planning policies in place at the time the development application is made. The Terms of Reference and User Guide may be updated periodically to reflect changes in the policies and standards.

The User Guide
The aim of the User Guide is to support the HBS Terms of Reference by giving additional information corresponding to each of the key healthy community design elements that promote higher development standards for practical application in new development and re-development within existing communities.
The User Guide also aims to equip individuals involved in the development process with the knowledge and tools to meaningfully review development proposals based on healthy development criteria, and allow both development applicants and reviewers to respond to the unique issues and opportunities of the site.

**How to use this User Guide**

This User Guide is divided into six main sections that correspond with the six Core Elements of Density, Service Proximity, Land Use Mix, Street Connectivity, Streetscape Characteristics, and Parking.

Each section addresses the following, with regard to the specific Core Element:

- **What is it?**
  - Description of the Core Element.

- **Why does it matter?**
  - Why it is important from a community health perspective.

- **What does it look like?**
  - How the desired form of the Element can be achieved.

- **Standards**
  - Minimum standards for development, as identified in the Health Background Study Terms of Reference.

- **Resources**
  - Additional resources on design or policy guidance and standards.

The text is supported by precedent images to help the end user visualize what each Core Element is referring to, and what it looks like in practice. The images are examples only, and each development should respond to its local context.

To assist developers in achieving the minimum standards in their proposed developments, the Core Element sections are followed by two checklists:

- **Key Questions**
  - Questions that the applicant should consider in planning their proposed development. These questions are intended to initiate dialogue within the development team and with the municipality on strategies/approaches to meet desired outcomes.

- **Reporting Requirements**
  - Description of the minimum reporting requirements to demonstrate achievement of the Standards.

Finally, proponents who are completing a HBS, (and the staff responsible for evaluating the development proposal and HBS), should refer to the table in the Appendix of the User Guide, which indicates where in the planning and development approvals process each Standard applies.

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**Why does healthy development matter?**

Healthy development in the form of complete communities is associated with desirable health outcomes, such as increased rates of physical activity and reduced rates obesity and asthma. Complete communities contribute to the achievement of these health outcomes by making walking, cycling and public transit feasible and attractive modes of transportation, which makes it easier for people to reduce their automobile dependence and associated emissions that contribute to poor air quality and smog. Active and complete communities also provide opportunities for social interaction, which can reduce rates of mental illness, particularly among seniors and other groups who are susceptible to social isolation.

Complete communities also produce a more compact urban form that makes more efficient use of natural resources and supports sustainable initiatives related to health promotion, such as reduced greenhouse gas emissions, preservation of local agricultural land, and protection of source water. Undoubtedly, a healthy environment can better support a healthy population.

Compact, complete communities are good for public health and the environment, and they make economic sense, too. Building complete communities that support a range of transportation options and are inherently more compact leads to cost savings in at least three areas:

- infrastructure (sewers, roads)
- health care (obesity, diabetes), and
- traffic congestion.

The financial burden of all three are carried by government and tax payers - which means everyone can benefit from cost reductions. And the potential savings are substantial. The Organization for Economic Cooperation and Development (OECD) estimated in 2010 that traffic congestion costs the Toronto region $3.3 billion annually in lost productivity. Meanwhile, the Ontario Medical Association estimated in 2003 that short-term exposure to smog-related air pollution cost the province $465.2 million in direct hospital costs for that year alone. The health care costs only rise when diabetes and other illness related to obesity are factored into the equation. Given the economic and non-economic costs of un-healthy development, the need for healthy development is clear and urgent.
2

The Core Elements

- Density
- Service Proximity
- Land Use Mix
- Street Connectivity
- Streetscape Characteristics
- Parking
Density

What is density?
Development density refers to the number of people, dwelling units, and/or jobs that will be accommodated in a specific area (e.g. 50 people and jobs combined per hectare).

Density can be calculated on either a gross or net basis. Gross density includes infrastructure, such as streets and parks, in the overall density measurement, whereas net density only includes the land area within a development parcel (e.g. the land directly occupied by the structure and its private outdoor amenities). Gross density provides a more complete measure of how efficiently land is used across an entire community or urban area.

In some instances, the density of mixed-use and non-residential uses is measured by the Floor Area Ratio (FAR) or Floor Space Index (FSI), where the gross area of a building is divided by the area of its development lot.

Why does density matter?
Higher development densities create demand and support for a broader variety of services, employment opportunities, transit and other community destinations/facilities within a closer distance. Increasing the number of destinations in a community creates opportunities for active transportation (walking, bicycling, etc.), which is a key component of creating healthier places to live. Higher densities also allow for a more efficient use of resources, which supports sustainable initiatives related to health promotion, such as reduced emissions from buildings and cars.

What does density look like?
Higher density development can take on a variety of forms depending on the context, and is achieved using a number of approaches that all result in a more compact use of land, including:

- Reduced lot sizes, frontages and setbacks
- Efficient lot configuration
- Increased site coverage of buildings
- A mix of higher-density structure types (stacked row houses, multi-plexes, apartment buildings, etc.)
- Reduced parking supply and the introduction of structured and/or on-street parking
- A compact street network, achieved through layout and reduced right-of-way dimensions (in terms of the number of traffic lanes, the width of traffic lanes and/or the boulevard).

The images above show how density can be increased through infill in a suburban "megablock" and "slab and tower block". (Image credit: Sprawl Repair Manual, by Galina Tachieva.)

Shown here are attractive building types that achieve higher densities than traditional single-family homes, including (from left to right) apartments in Port Credit, townhomes near Mavis and Dundas, and stacked townhomes near Lakeshore in Mississauga.
Greenfield development provides ample opportunity to achieve higher densities because the developer is starting with a clean slate. In this context, there is more flexibility for determining the location and form of hierarchical density distribution. Development in greenfield areas should always recognize and promote patterns that encourage complete communities, and support for transit.

The density of existing neighbourhoods can be increased through infill developments on vacant or underutilized sites, and through the adaptive reuse of, and/or additions to existing buildings. Infill development is generally greater in scale and density than existing development, while maintaining compatibility with existing adjacent conditions, and ideally enhancing the streetscape and other public realm elements.

Density Standards
The density standards articulated in the Terms of Reference are derived from the density targets established by Places to Grow: The Growth Plan for the Greater Golden Horseshoe, 2006 (The Growth Plan). The Growth Plan establishes overall density targets for Designated Greenfield Areas and Urban Growth Centres (intended as high density, mixed use, transit supportive nodes).

In accordance with The Growth Plan, density shall be calculated on a gross basis, but may net out environmental features, where specified in municipal and provincial planning policy.

1. All development on Designated Greenfield Areas shall achieve a minimum overall density target of 50 people and jobs per hectare.

2. All development in designated Urban Growth Centres in the Region of Peel (including Downtown Brampton and Mississauga City Centre) shall achieve a minimum overall density target of 200 people and jobs per hectare.

3. Notwithstanding the above standards, where the local municipality has established higher density targets than those established by The Growth Plan, the higher density target should apply.

Resources


Ontario Ministry of Infrastructure. Intensification Visualizations. Available online at: https://www.placestogrow.ca

What is service proximity?
Service proximity refers to the distance between where people live and where they can access three types of services: public transit, neighbourhood community and retail services, and employment.

Public transit includes low-order transit (which operates in mixed traffic), and high-order transit (that is separated from other traffic). Neighbourhood community and retail uses include facilities for childcare, long-term care, social services, community gardens, hospitals or health clinics, public libraries, places of worship, cultural spaces, post offices, and park or recreation centres. Employment refers to employment areas, characterized by a concentration of jobs.

Service Proximity Standards
The goal of the standards for service proximity is to achieve a reasonable cluster of key services and employment opportunities to residences and transport nodes, based on walking distance. While some people are willing to walk long distances, setting maximum distances ensures that a high incentive to walk is maintained through all seasons and weather conditions, and across a reasonable range of physical abilities. Distances are to be calculated based on the shortest potential walking path of a pedestrian (network distance), as opposed to a straight line (Euclidean distance or ‘as the crow flies’).

The applicability of the following standards varies for greenfield versus infill development. All greenfield development should meet these standards, while infill development should strive to contribute to the achievement of these standards in existing communities (e.g. by incorporating services into the redevelopment), or by locating in proximity to existing services/residences, as applicable, to enhance service proximity.

Why does service proximity matter?
Service and employment proximity affect the travel distance between daily destinations (such as home and work) – and travel distance has a strong influence on whether people choose to walk or bicycle, rather than drive a car. Like other elements that encourage people to replace car trips with walking and bicycling, service proximity provides the benefits of increased physical activity, improved mental health through greater community interaction, and reduced greenhouse gas emissions. Service proximity also makes the community more equitable and inclusive for those who cannot drive (especially children and seniors).
Transit

4. The distance between at least 50% of the projected population of the development and a low-order transit stop shall be no more than 200 m. The transit service proposed should provide a direct route to a Regional Urban Node, Intensification Corridor, or smaller higher-density, mixed-use transit supportive activity centre with a maximum transit trip of 30 minutes.

5. Where a high-order transit route bisects the development area, 75% of the projected population should be within 400 m of it.

6. Ensure design quality of both transit stops and the journey to the stop. Transit stops should, where appropriate, provide shelter from the sun and inclement weather and seating. High-order transit stops/stations should also include secure bicycle parking facilities.

Neighbourhood Community and Retail Services

7. The distance between at least 75% of the projected population and three or more of the following amenities and services must be no more than 800 m:

- Childcare facility
- Community garden
- Park
- Hospital or health clinic
- Public library
- Places of worship
- Adult/senior care facility
- Social service facility
- Performance or cultural space
- Post office
- Recreation centre

8. The distance between at least 25% of the projected population and a minimum of 5,000 m² of mixed service commercial and retail space shall be no more than 800 m.

9. The distance between at least 75% of the projected population and a minimum of 150 m² of mixed service commercial retail space shall be no more than 800 m.

10. The distance between at least 90% of the projected population and a playing field, park, square or natural open space should be no more than 400 m.

11. The distance between 100% of the projected population and a planned elementary school shall be no more than 1.2 km.

12. The distance between 100% of the projected population and a planned secondary school shall be no more than 2.4 km.

13. Where appropriate, a new community should provide service, commercial and retail facilities that can be used by adjacent communities.

14. Access to drug and grocery stores should be encouraged.

15. In key locations convenience commercial uses are permitted throughout residential designations.

Employment

16. The development should be within reasonable proximity to an existing or planned employment centre or urban centre. Specifically, the distance should be no more than 10 km.

Resources


Locating neighbourhood community and retail services in close proximity to where people live provides opportunities for walking.
Land Use Mix

What is land use mix?
Land use mix refers to the composition of housing types, services, and employment in an area. Housing types include single-detached, semi-detached and duplex homes; town houses and multiplexes; and higher-density structures such as apartment buildings and condominiums. Common non-residential land uses provide services and employment in a community, and include commercial, institutional, parks/open space, and “mixed use” (where both non-residential and residential uses are included in an area or on a site).

Why does land use mix matter?
Providing a range of housing options creates more equitable communities and allows residents to remain within their community regardless of their changing needs, whether they live alone, as a couple, a family, with or without children, or as seniors. Proximity of housing options allows extended families of all kinds to remain close, which can improve mental health outcomes and prevent social isolation, especially for seniors.

Providing a range and mix of land uses (such as employment, institutional, residential, etc.) within a community, as well as within buildings themselves, also facilitates walking and cycling as viable modes of transportation, supports a more compact and efficient urban form, and creates the necessary demand to support public transit. In contrast, vast tracts of segregated land uses (such as single-family homes) create obstacles to walking, cycling and public transit, and can negatively affect the affordability and inclusiveness of a community.

Land Use Mix Standards
There is no “ideal” proportion for each type of land use for health. Recognizing that land use mix is closely associated with service proximity and density, the standards here are meant to complement the standards assigned to the former elements. In general, the objective of the land use mix element and standards is to promote a broad mix of land uses that are conveniently sited and connected by safe and comfortable routes to residential areas that provide a variety of housing options. These standards apply uniformly to greenfield and infill development.
17. Where the scale of the residential community is large enough, a range of uses should be provided, as follows:

- for communities of 5,000 people or more, provide neighbourhood-scale retail and services (such as corner stores, elementary school, library, etc.)

- for communities of 10,000 people or more, provide a full-range of uses, including larger-scale retail, services, and employment opportunities.

18. Where the scale of employment lands is large enough, small scale commercial retail and services should be encouraged, where appropriate.

19. Where the scale of the community permits, it should include dwelling structures from all three of the following housing type groups, with no group making up more than 50% or fewer than 10% of total units:

i. Single detached, semi-detached, and duplex

ii. Townhouses and multiplex

iii. Apartment building

20. Special housing types, such as group homes or seniors’ residences, should be encouraged.

21. Secondary suites should be encouraged where appropriate.

22. Live-work units should be encouraged where appropriate.

23. Site design of auto-oriented developments, such as uses which include drive through facilities, gas bars and related uses shall make pedestrian access a priority and contribute to high quality public realm and streetscapes.

24. The location of retail uses on the ground floor of multi-unit and mixed use buildings should be encouraged.

Resources


City of Surrey. (2009). Housing Types and Land Use: Handout.
Street Connectivity

What is street connectivity?
Street connectivity refers to the directness of travel and the number of route options between any two destinations.

Different street patterns (such as grid, loop, cul-de-sac, and innovative patterns such as the fused grid concept) provide varying levels of street connectivity, depending on the size of blocks and the connection of the street network to green spaces and multi-use paths. Street connectivity is particularly relevant for active modes of transportation, which are more sensitive to route distance and directness.

Why does street connectivity matter?
Creating communities with high street connectivity reduces route distances, promotes active transportation by increasing route options and convenience, and dissipates vehicular traffic throughout the network. When a dense grid/connector network is achieved, pedestrians in particular have access to the greatest freedom of movement and the most direct routes to their destinations. Conversely, a lack of street connectivity can significantly increase walking and cycling distance, which decreases the likelihood of residents choosing these active modes of travel over the car.

What does street connectivity look like?
Because every site is different there is no standard formula for achieving high street connectivity, although it is characterized by smaller block sizes and the avoidance of certain street types (i.e. cul-de-sacs). In general, the street network should, wherever practicable, make it as easy and attractive to walk, cycle or take the bus, as it is to travel by car.

Both greenfield and infill development can provide good access and connections through higher levels of street connectivity. Intensification projects can considerably improve street connectivity by eliminating superblocks and enhancing permeability with new roads, small laneways, pedestrian cut-throughs, or indoor arcades. Where the ability of an infill development to influence street connectivity is limited, the development should still strive to improve the street environment for pedestrians through design details.

Greenfield development has the benefit of working without the constraints of an existing street network to achieve a high-level of street connectivity. This type of development provides the opportunity to implement street patterns that are recognized for their high level of street connectivity, or experiment with emerging street patterns that achieve the same goals.

**Street Connectivity Standards**
The objective of the following minimum standards is to promote a highly connected network of streets and active transit nodes to support opportunities for walking and cycling.

1. **Infill development** should identify opportunities to increase street connectivity.

2. Street networks and off-road paths in greenfields should always:
   - provide the maximum choice for how people will make trips;
   - take full account of the kinds of movement a development will generate; and
   - make clear connections to existing routes and facilities.

3. Cul-de-sacs are not permitted unless required for technical reasons.

4. Crescent streets, reverse frontage lots, and loop roads must not constitute more than 20% of total street frontage and should be discouraged.

5. Blocks in the proposed development must not exceed 80 m x 150 m in size. Exceptions are made for blocks consisting solely of Parkland or of Employment uses.

6. Intersections should be frequent, with street blocks decreasing in size as density increases.

7. Sidewalks, bike lanes and multi-use paths should connect to street networks, major destinations and transport nodes.

**Resources**


Streetscape Characteristics

What are streetscape characteristics?
Streetscape characteristics include facilities for pedestrians, cyclists, and transit users along the public right of way. These characteristics include the sidewalk, bikeways, street furniture, intersection treatments, shading, lighting, wayfinding, and traffic calming measures. While walking and cycling may be possible without these specific amenities, a certain level of comfort and prioritization through design will create inviting public spaces and prevent injuries.

Why does streetscape matter?
A well-designed streetscape improves the safety, comfort and convenience of traveling by foot or bike and makes public spaces more inviting. Like other elements that promote walking and cycling, the streetscape can promote increased physical activity, community interaction and accessibility, while reducing the incidence of crime and traffic-related pedestrian and cycling injuries and fatalities.

Streetscape Standards
The following streetscape standards apply to street, intersection and sidewalk design and are intended to promote active transportation, prevent traffic-related injuries, and make communities more attractive and accessible to people of all ages and abilities. These standards apply uniformly to greenfield and infill development where the scale of the development permits.

Sidewalk Amenities

32. All streets must have sidewalks on each side that are at least 1.5 m wide in low-density residential areas, and at least 2 m wide in medium-density residential neighbourhoods, high-density residential neighbourhoods, mixed use areas, and commercial areas.

33. A variety of street trees that are hardy, resilient, and low maintenance should be planted at regular intervals (as specified by the municipality) adjacent to all streets.

34. Transit shelters and other street furniture should be provided, especially on major pedestrian routes. Other street furniture may include benches, waste receptacles, newspaper outlets, community information boards, water fountains, public washrooms, bicycle parking, and bicycle sharing system components.
Cycling Amenities

35. A connected and destination-oriented bikeway network should be provided throughout the community, including a variety of on- and off-street bikeway facilities that provide an appropriate degree of separation from motorized traffic, given the speed and volume of traffic on the street. These on-street bikeway facilities may include (but are not limited to) bicycle lanes, cycle tracks, sharrows, signed routes, bicycle boulevards, and multi-use paths on the boulevard.

Where there is a local Bicycle Plan, the bikeway network proposed in the Plan should be implemented in the development area, and opportunities to enhance or connect to the proposed bikeway network should be identified.

36. At a minimum, 100% of the population shall be within 150 m of a continuous and connected bikeway facility.

Intersections

37. All intersections should be designed to increase the visibility of cyclists and pedestrians, give them priority, reduce crossing distance, and provide adequate crossing time. Intersection design elements may include, but are not limited to:

- Pavement treatments and markings for pedestrian crossings (e.g. brick paving, zebra/ladder markings)
- Curb cuts/ramps
- Raised crosswalk
- Curb extension/bulb out
- Centre Median or refuge island
- Pedestrian scramble (a.k.a. Barnes dance)
- Bicycle box
- Conflict zone markings for bicycles (e.g. coloured lane, skip lines, chevrons, sharrows)
- Audible pedestrian crossing signals
- Countdown signals
- Leading pedestrian and/or bicycle signals (advance walk/bike signal)
- Pedestrian and/or bicycle actuated signals
- Right-turn on red light prohibitions
- Mid-block signalized crossings

Traffic Calming

38. In greenfield development, or where new streets are introduced through infill development, traffic calming will be achieved on neighbourhood streets by using:

- Minimum traffic lane widths
- Minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, woonerfs or home-zones (speed limit under 15 km/hr, vehicles must yield to pedestrians and cyclists)

39. Through infill development, traffic calming should be achieved on existing neighbourhood streets by using any of, but not limited to, the following elements:

- Reduced/minimum traffic lane width
- Reduced/minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, woonerfs or home-zones (speed limit under 15 km/hr, vehicles must yield to pedestrians and cyclists)
- Speed humps
- Bollards (short vertical posts)
- Channelization islands (raised islands that force traffic to turn in a particular direction)
- Chicane (curb bulges or planters or alternating sides, forcing motorists to slow down)
- Choker (raised islands in parking zones that narrow a roadway)
- Curb extension, planter, or centerline traffic island that narrows traffic lanes
- Horizontal shift (a lane centerline that curves or shifts)
- Rumble or warning strip
- Semi-diverter or partial closure (restricts entry and limits traffic flow at intersections)
- Signal timing to reduce traffic speeds
- Radar trailer that shows drivers their current speed and the posted speed limit
- Traffic circles or roundabouts
- Speed table

40. While increasing comfort and safety for pedestrians, the design of traffic calming elements should not create undue hazards or obstacles for cyclists.
Lighting

41. All mixed-use streets must have an average luminance of 10 lux, with a minimum of 5 lux.

42. Pedestrian-level street lamps of 4.6 m in height or less, spaced apart no more than 30 m, must be provided on all streets.

Wayfinding

43. A wayfinding system should be implemented on a community-wide basis to allow residents and visitors to determine their location; identify key destinations (parks, transit stations, community and cultural facilities, shopping centres, off road trails); and develop a plan to take them from their location to desired destination by walking or cycling. The wayfinding system may include maps, directional signs or other elements, and should be useful and easy to understand.

Resources


City of Brampton. (2002). Brampton’s Pathways Master Plan.
What is parking?
Parking includes on and off-street storage for automobiles and bicycles. **Automobile parking** may be provided in the right of way (full-time or part-time), in surface lots or structures. **Bicycle parking** includes two categories of facilities: a) short-term facilities for visitors (such as outdoor bicycle racks), and b) secure long-term facilities for occupants (such as bicycle lockers or indoor bicycle rooms).

Parking requirements are generally expressed as the number of parking spaces per dwelling unit, number of employees, or GFA.

Why does parking matter?
**Automobile parking** is an important amenity to residents and businesses, but it can have a negative effect on proximity, density, and the aesthetic of the public realm. Abundant low-cost parking also provides little incentive for residents, employees and shoppers to use other means of transportation. Additionally, impermeable surface parking lots negatively impact water and air quality by contributing to stormwater runoff and the urban heat island effect.

**Bicycle parking** is also an important amenity to residents and businesses – but one that supports healthy communities. Unlike with **car parking** where there can be a problem with over-supply, **bicycle parking** is often in short supply, which creates a barrier to cycling for transportation. Logically, if there is nowhere to park your bicycle at work, school or the store, you are much less likely to travel there by bike. Providing **bicycle parking** with an appropriate level of weather-protection and security is a key part of promoting cycling for transportation.

Parking Standards
The objective of the parking standards is to discourage private automobile use and promote active modes of transportation, including walking, cycling and public transit. The standards seek to reduce the supply of **car parking** while increasing the supply of **bicycle parking**, to make more efficient use of **car parking**, and reduce its environmental and aesthetic impacts. These standards apply uniformly to **greenfield** and **infill development**.
Automobile Parking

44. Reductions in parking requirements should be given to:
   - buildings and other facilities within 400 m of a transit stop; and
   - apartments/condominiums offering car share parking spaces (with each car share space equivalent to 10 regular spaces).

45. On-street parking should be included on all streets except where inappropriate for technical or safety reasons.

46. Efficient use of parking should be promoted by identifying systems for sharing parking spaces by two or more user groups at different times of the day or week (for example, office staff during weekdays and restaurant clientele in the evenings and on weekends), and by providing preferential parking for carpool vehicles.

47. Where available, economic incentives should be identified and utilized to provide structured parking, rather than surface parking.

48. Where surface parking is provided, it should be designed to minimize negative aesthetic and environmental impacts. This can be achieved by locating the parking lot away from the street frontage and by incorporating the following into the parking lot design:
   - Tree planting
   - Landscaping
   - Stormwater management
   - Porous/permeable surfaces
   - Light-coloured materials (rather than black asphalt)
   - Pedestrian access and circulation

Bicycle Parking

49. All new developments should meet or exceed the higher of:
   a) Local bicycle parking requirements (provided in local zoning by-laws, Bicycle Master Plans); or
   b) The minimum bicycle parking standards outlined in Table 1.

<table>
<thead>
<tr>
<th>Use</th>
<th>Minimum Spaces by Bicycle Parking Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Occupant/Employee*</td>
</tr>
<tr>
<td>Multi-unit Residential</td>
<td>0.7/unit</td>
</tr>
<tr>
<td>Retail, Services, &amp; Community Facilities</td>
<td>0.1/100 m²</td>
</tr>
<tr>
<td>General Office</td>
<td>0.15/100 m²</td>
</tr>
<tr>
<td>Medical Office</td>
<td>0.15/100 m²</td>
</tr>
<tr>
<td>Hospital</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Elementary/Secondary School</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Post-Secondary School</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Other non-residential (e.g. Industrial)</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>High-order Transit Station</td>
<td>Complete a bicycle parking demand estimate for the station, for example using boardings, alightings and local bicycle mode share data.</td>
</tr>
</tbody>
</table>

*Occupant/Employee (a.k.a “long-term”) parking refers to secure, enclosed bicycle storage that is locked, weather protected and easily accessible to residents and/or workers. Signage indicating the location and information on use of these parking facilities should be provided.
**Visitor (a.k.a “short-term”) parking refers to outdoor, covered/uncovered bicycle racks.

Resources


All applicants should consider the following Key Questions in the planning and preparation of their proposed development. These questions are intended to initiate dialogue within the development team and within the municipality on strategies/approaches to meet desired built form and health outcomes.

The key questions are grouped according the Key Element they address. In addition, applicants and all members of the development team should ask one other question that applies to all Elements, that is, “Have the specific additional needs of vulnerable groups (i.e. the elderly, disabled and children) been considered”. The needs of vulnerable groups require special consideration to ensure communities are accessible and safe for everyone, regardless of their ability, income, or age. Special considerations will vary by Element, and may be related to improving accessibility, visibility, or the inclusiveness of local housing stock and services.

**Density**

1. What are the current density permissions for the subject lands?

2. Does the surrounding context reflect high quality and context-appropriate density? Should this context be emulated?

3. Is the density of the proposed development compatible with the surrounding context?

4. What areas of the site have the opportunity to increase density?

5. What are the current and projected number of residents and jobs, and how will this influence future transit and service provision?

6. Based on the proximity of employment opportunities, transit and community services and facilities, will the development support walkability and cycling access?

**Land Use Mix**

1. What are the current zoning permissions and land use designations (Official Plan and Secondary Plan) for the subject lands?

2. Is there sufficient diversity of housing and unit types in the community to accommodate households of varying income, size and needs? Can the community accommodate a full life-cycle of housing needs for persons with varying physical abilities?

3. How can infill development contribute to ensuring a diversity of housing types?

4. How can a mix of uses be integrated into the development/redevelopment?

**Service Proximity**

1. What are the current zoning permissions, and land use designations (Secondary Plan and Official Plan) for the subject lands and their surroundings?

2. What is the existing service context of the subject lands? Are sufficient transit, employment and public and retail servicing available or planned?

3. Based on the proximity of employment opportunities, transit and community services and facilities, will the development support walkability and cycling access?

**Street Connectivity**

1. Does the proposed development have a sufficient density of intersections and sufficiently small block size to encourage active transportation?
2. How can infill development contribute to a higher level of street connectivity on the site and beyond?

3. How is the layout of parks and open spaces used to improve the directness and freedom of pedestrian and bicycle travel?

4. Has the proposed plan set out direct routes through a permeable and linked road and pedestrian network including trails, to ensure that short walking distances can be achieved?

Streetscape Characteristics

1. What are the municipally-designated standards for sidewalk and bicycle lane dimensions and design? What are the standards for other amenities?

2. Is there a local Bicycle/Walking/Active Transportation Plan? If yes, what bicycle or pedestrian facilities are designated or recommended within the development site?

3. Does the proposed community provide sufficient pedestrian and bicycle amenities to encourage active transportation?

4. How can intersections been designed to increase safety and comfort for pedestrians and cyclists?

5. Which neighbourhood streets should be targeted for traffic calming? How will traffic calming be achieved on these streets?

Parking

1. Is infrastructure for transit in place, and what is the level of transit service currently provided?

2. Is the automobile parking for the proposed development sufficient, or excessive, given the planned level of transit service, and pedestrian and cycling facilities?

3. Can automobile parking be provided more efficiently through an unbundled or shared system?

4. Has paid parking been considered to reflect the cost of providing parking?

5. How are the environmental and aesthetic impacts of surface parking being minimized or mitigated?

6. Is there sufficient visitor and occupant bicycle parking provided in the proposed development?
The following Reporting Requirements are to be fulfilled by the applicant in a way that demonstrates how the proposed development complies with the minimum standards established for each of the six elements.

**Density**
- **Greenfield Development** – Density calculations that demonstrate unit counts, the type of units and unit size (residential), gross floor area (non-residential), land area and achieved density in relation to Provincial policy.
- Redevelopment – Density calculations that demonstrate unit counts, the type of units and unit size (residential), gross floor area (non-residential), land area and achieved density in relation to existing development on the subject site or lands.
- A short written description of achieved density and how it complies with objectives and minimum standards.

**Service Proximity**
- Site plans demonstrating the location of residential units within the surrounding context, including: transit stops (indicating higher or lower order), community and retail services (indicating types and Gross Floor Area, respectively), parks, schools (indicating elementary or secondary), and employment or urban centres.
- A short written description of the achieved proximity, and how the development complies with the objectives and minimum standards.

**Land Use Mix**
- A count of proposed units and their types. A short written description of achieved mix and how the development complies with objectives and minimum standards.

**Street Connectivity**
- Site plans demonstrating the number of intersections and block sizes within the proposed development, and a brief summary showing how it complies with the requirements.

**Streetscape Characteristics**
- A detailed and integrated plan of the entire proposed community, demonstrating widths of sidewalks, bikeways, street tree planting, intersection treatments, traffic calming measures, pedestrian priority streets, bicycle amenities and pedestrian lighting fixtures (including illuminance level).
- A short written description of road and sidewalk characteristics and how the development complies with objectives and minimum standards.

**Parking**
- A plan showing the number and distribution of bicycle (visitor and occupant) and automobile parking (private and on-street), along with the proposed uses and Gross Floor Area (for industrial and commercial buildings) or number of residential units.
- The location of transit stops, to give context to numbers of bicycle and automobile parking spaces.
- A short written description explaining how the automobile parking supply is being minimized and used more efficiently.
Affordable Housing
A) In the case of ownership housing, the least expensive of:

1. housing for which the purchase price results in annual accommodation costs which do not exceed 30 percent of gross annual household income for low and moderate income households; or
2. housing for which the purchase price is at least 10 percent below the average purchase price of a resale unit in the regional market area;

B) In the case of rental housing, the least expensive of:

1. a unit for which the rent does not exceed 30 percent of gross annual household income for low and moderate income households; or
2. a unit for which the rent is at or below the average market rent of a unit in the regional market area.

(Provincial Policy Statement, 2005)

Automobile Parking
Storage for cars on and off the street, including parking that is provided in the right of way (full-time or part-time), in surface lots or structures (above- or below-grade).

Bicycle Lane
A designated space in the roadway that is marked with a solid white line and a bicycle stencil. Bicycle lanes are a minimum of 1.5 metres wide and motorized vehicles are not permitted to stand, park or drive in bicycle lanes.

Bicycle Parking
Storage facilities for bicycles, which fall into two categories: visitor (a.k.a short-term) and occupant (a.k.a long-term) bicycle parking.

Visitor bicycle parking includes bicycle racks in an easily accessible location that are available for public use and may either be sheltered or unsheltered. Visitor parking is meant for bicycles that will be parked for about two to three hours at a time, and can be provided on public or private land, along building frontages, on the sidewalk and in the street.

Occupant bicycle parking is meant for occupants (residents, employees) and provides a higher level of security and weather protection for bicycles that are left for longer than two or three hours at a time. Occupant bicycle parking is secure and enclosed, with controlled access. Examples include bicycle lockers, bicycle cages, and indoor bicycle rooms.

Bicycle Sharing
Bicycle sharing is an extension of the public transit system, and refers to an organized system of providing a network of bicycles throughout an urban area to the public for rental for short periods of time (e.g. half an hour). Although bicycle sharing systems vary in size, there are minimum thresholds for success in terms of network density and coverage. Bicycle sharing may also be referred to as “public bikes”.

Small “employee bike share” programs also exist, but these differ in that they are not network-based, and are provided for free to a specified group of users.

Bicycle Box
An intersection safety device that uses pavement markings to designate a space for cyclists to wait in front of cars at a red light, and to proceed first when the light turns green. The purpose of a bike box is to increase the visibility of cyclists at signalized intersections, help cyclists complete left turns, and reduce conflicts between right-turning motorists and cyclists traveling straight through an intersection.

Bicycle Boulevards
Designated cycling routes on streets with low volumes and speeds that have been optimized for bicycle travel through treatments such as traffic calming and traffic reduction, signage and pavement markings, and intersection crossing treatments. These treatments allow through movements for cyclists while discouraging similar through trips by non-local motorized traffic. Motor vehicle access to properties along the route is maintained.1

Bikeway Facility

Bikeway facility refers to designated bicycle lanes, cycle tracks, bicycle boulevards, sharrows, signed routes, off-road trails/multi-use paths, or other types of infrastructure designed for the movement of cyclists. (A local road may be considered a bikeway facility if it is continuous, with protected crossings at higher-order roadway intersections, and if it connects to other bikeway facilities or destinations.)

Bikeway Network

A Bikeway Network consists of on and off-street bicycle facilities (bicycle lanes, signed routes, off-road trails, etc.) that are connected, continuous, direct, comfortable and destination-oriented. The on-street component of the bicycle network provides hierarchical separation from motorized vehicles, based on the volume and speed of traffic on the street. Bikeway Networks are typically designated in a Bicycle Plan.

Car Sharing

A car rental system where the automobiles are available for rent to members for short periods of time (often by the hour). Car sharing is intended to offset the need for private automobile ownership by people who do not require a car on a daily basis. Car sharing can also offset the need for families to purchase a second or third private automobile.

Complete Communities

Complete communities meet people’s needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided (Places to Grow, 2006).

Cycle Track

A designated space for cyclists in the roadway that is delineated from motorized traffic by a barrier, such as curb, median, planting strip, hatched buffer, or bollards. Cycle tracks are sometimes referred to as physically separated or protected bicycle lanes, and may be one or two-way. Some cycle tracks are multi-use (i.e. shared by cyclists, pedestrians, rollerbladers, etc.).

Employment Area

Areas designated in an official plan for clusters of business and economic activities including, but not limited to, manufacturing, warehousing, offices, and associated retail and ancillary facilities (Provincial Policy Statement, 2005).

Floor Area Ratio/Floor Space Index

The gross area of all buildings on a lot divided by the lot area.

Greenfield Development

The creation of new development on previously undeveloped land located outside or on the edge of an urban area. Places to Grow established the term “Designated Greenfield Area” which it defines as the area within a settlement area that is not a built-up area.

Gross Density

The ratio of dwelling units/floor space/people/jobs to the overall area of a development. Depending on the jurisdiction, some land area exclusions may be factored into the calculation of gross density.

High-Order Transit

Transit modes (including bus, streetcar, light rail or subway) that operate in their own dedicated right-of-way or given priority at intersections or on roadways.

Infill Development

The development of vacant or underutilized parcels in urban areas.

Live-work Units

Purpose-built units that can serve as both residential dwellings and commercial space.

Low-Order Transit

Transit modes (including bus or streetcar) that operate within existing right-of-ways without dedicated priority over other transportation modes.

Mixed-use Development

A form of development that contains a mix of residential and non-residential uses within an individual building or development area.

Multi-use Path

Off-road, paved facilities that are shared by cyclists, pedestrians, rollerbladers and other non-motorized users. Multi-use paths are generally a minimum of 3 metres wide and provide lighting.

Net Density

The ratio of dwelling units/floor space/people/jobs to the overall area of a development, excluding certain features such as infrastructure and environmental features. The determination of applicable exclusions varies between jurisdictions.

Pedestrian Scramble (a.k.a. Barnes Dance)

A signal phase at intersections that gives the walk signal to pedestrians in all directions at the same time, while drivers are stopped on a red light in all directions. Pedestrian scrambles are intended for use at intersections with heavy pedestrian volumes, and their purpose is to allow
pedestrians to cross in any direction (including diagonally) without any interference from motorized traffic.

**Permeable**
Referring to the street network, the degree to which an area has a variety of pleasant, convenient and safe routes through it.

**Public Realm**
The parts of an urban place whether publicly or privately owned that are available for everyone to see, use and enjoy, including streets, squares and parks; all land to which everyone has ready, free and legal access at all times. It includes the features and amenity within those lands, such as benches, lights, sidewalks, etc. Also commonly referred to as “public domain” and “public space”.

**Right-of-Way (ROW)**
A strip of land, including the space above and below the surface, that is platted, dedicated, condemned, established by prescription or otherwise legally established for the use of pedestrians, vehicles, or utilities. It usually includes the road surface for vehicles, sidewalks, and may include boulevards with trees.

**Secondary Suites**
A self-contained separate dwelling unit as part of an existing dwelling unit with full kitchen and bath facilities as well as a separate entrance.

**Shared Parking**
Parking spaces that are shared by multiple users who require parking at different times of the day, week or year (for example, office workers and theatre patrons). The purpose of shared parking is to use parking more efficiently by optimizing the use of each spot.

**Sharrows**
Shared-lane pavement markings that are intended to indicate the ideal cyclist position in the lane (away from the curb and parked cars) and to remind drivers to share the road.

**Signed routes**
Signed routes are found on streets that have been identified as preferred routes for bicycle travel because of their lower traffic volumes and speeds, and connectedness to other bikeway facilities or destinations. The route is designated on the street with signage only (no pavement markings or other physical changes are made to the roadway).

**Street Connectivity**
Referring to the directness of travel and the number of route options available between any two destinations, using the street network and/or off-street paths. Street connectivity can be measured by the frequency of links between streets, paths and/or other types of on- and off-street routes on which people can travel. Street connectivity affects permeability of a neighbourhood.

**Street furniture**
Objects in the street, such as bus shelters, litter bins, seating, lighting, benches, signs, and bollards, among others. Well designed, integrated and carefully sited, they contribute to the amenity and attractiveness of a street.

**Streetscape**
The elements within and along the street that define its appearance and street scenery (overall appearance of the street), identity, and functionality, including adjacent buildings and land uses, street furniture, landscaping, trees, sidewalks, and pavement treatments, among others.

**Traffic calming**
Physical design strategies implemented on neighbourhood streets in an effort to reduce the speed and/or volume of motorized traffic. Traffic calming strategies make use of a variety of design treatments that narrow the roadway, discourage excessive through traffic and force motorists to slow down, including, speed humps, bollards, chicanes, curb extensions, reductions in the number and width of traffic lanes, etc.

**Walkable**
Refers to a single route, or a system of routes, between points that is relatively short, barrier free, interesting, safe, well-lighted, comfortable and inviting to pedestrian travel.

**Wayfinding**
A planned system for helping people identify their location in an area and navigate towards destinations by means such as signs, landmarks and a clear urban structure.
Appendix
### Health Background Study Standard

#### Density

1. All development on Designated Greenfield Areas shall achieve a minimum overall density target of 50 people and jobs per hectare.

2. All development in Designated Urban Growth Centres in the Region of Peel (including Downtown Brampton and Mississauga City Centre) shall achieve a minimum overall density target of 200 people and jobs per hectare.

3. Notwithstanding the above standards, where the local municipality has established higher density targets than those established by The Growth Plan, the higher density target should apply.

#### Service Proximity

##### Transit

4. The distance between at least 50% of the projected population of the development and a low-order transit stop shall be no more than 200 m. The transit service proposed should provide a direct route to a Regional Urban Node, Intensification Corridor, or smaller higher-density, mixed-use transit supportive activity centre with a maximum transit trip of 30 minutes.

5. Where a high-order transit route bisects the development area, 75% of the projected population should be within 400 m of it.

6. Ensure design quality of both transit stops and the journey to the stop. Transit stops should, where appropriate, provide shelter from the sun and inclement weather and seating. High-order transit stops/stations should also include secure bicycle parking facilities.

##### Neighbourhood Community and Retail Services

7. The distance between at least 75% of the projected population and three or more of the following services and amenities must be no more than 800 m: Childcare facility, community garden, park, hospital or health clinic, public library, places of worship, adult/senior care facility, social service facility, performance or cultural space, post office or recreation centre. (Multiple services of the same type may be counted.)

8. The distance between at least 25% of the projected population and a minimum of 5,000 m2 of mixed service commercial retail space shall be no more than 800 m.

9. The distance between at least 75% of the projected population and a minimum of 150 m2 of mixed service commercial retail space shall be no more than 800 m.

10. The distance between at least 90% of the projected population and a playing field, park, square or natural open space should be no more than 400 m.

11. The distance between 100% of the projected population and a planned elementary school shall be no more than 1.2 km.

12. The distance between 100% of the projected population and a planned secondary school shall be no more than 2.4 km.

13. Where appropriate, a new community should provide mixed service commercial retail facilities that can be used by adjacent communities.
## Health Background Study Standard

### Service Proximity continued

14. Access to drug and grocery stores should be encouraged.

15. In key locations convenience commercial uses are permitted throughout residential designations.

### Employment

16. The development should be within reasonable proximity to an existing or planned employment centre or urban centre. Specifically, the distance should be no more than 10 km.

### Land Use Mix

17. Where the scale of the residential community is large enough, a range of uses should be provided, as follows:
   - for communities of 5,000 people or more, provide neighbourhood-scale retail and services (such as corner stores, elementary school, library, etc.)
   - for communities of 10,000 people or more, provide a full-range of uses, including larger-scale retail, services, and employment opportunities.

18. Where the scale of employment lands is large enough, small scale commercial retail and services should be encouraged, where appropriate.

19. Where the scale of the community permits, it should include dwelling structures from all three of the following housing type groups, with no group making up more than 50% or fewer than 10% of total units:
   - Single detached, semi-detached, and duplex
   - Townhouses and multiplex
   - Apartment building

20. Special housing types, such as group homes or seniors’ residences, should be encouraged.

21. *Secondary suites* should be encouraged where appropriate.

22. *Live-work units* should be encouraged where appropriate.

23. Site design of auto-oriented developments, such as uses which include drive through facilities, gas bars and related uses shall make pedestrian access a priority and contribute to high quality public realm and streetscapes.

24. The location of retail uses on the ground floor of multi-unit and mixed use buildings should be encouraged.

### Street Connectivity

25. *Infill development* should identify opportunities to increase street connectivity.

26. Street networks and off-road paths in greenfields should always:
   - provide the maximum choice for how people will make trips;
   - take full account of the kinds of movement a development will generate; and
   - make clear connections to existing routes and facilities.
<table>
<thead>
<tr>
<th>Health Background Study Standard</th>
<th>Planning Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Street Connectivity continued</strong></td>
<td><strong>Greenfield/Infill</strong></td>
</tr>
<tr>
<td>27. Cul-de-sacs are not permitted unless required for technical reasons.</td>
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<tr>
<td>28. Crescent streets, reverse frontage lots and loop roads must not constitute more than 20% of total street frontage and should be discouraged.</td>
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</tr>
<tr>
<td>29. Blocks in the proposed development must not exceed 80 m x 150 m in size. Exceptions are made for blocks consisting solely of Parkland or of Employment uses.</td>
<td>G-I</td>
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<tr>
<td>30. Intersections should be frequent, with street blocks decreasing in size as density increases.</td>
<td>G-I</td>
</tr>
<tr>
<td>31. Sidewalks, bike lanes and <em>multi-use paths</em> should connect to street networks, major destinations and transport nodes.</td>
<td>G-I</td>
</tr>
<tr>
<td><strong>Streetscape Characteristics</strong></td>
<td><strong>Greenfield/Infill</strong></td>
</tr>
<tr>
<td><strong>Sidewalk Amenities</strong></td>
<td><strong>Secondary Plan</strong></td>
</tr>
<tr>
<td>32. All streets must have sidewalks on each side that are at least 1.5 m wide in low-density residential areas, and at least 2 m wide in medium-density residential neighbourhoods, high-density residential neighbourhoods, mixed use areas, and commercial areas.</td>
<td>G-I</td>
</tr>
<tr>
<td>33. A variety of street trees that are hardy, resilient, and low maintenance should be planted at regular intervals (as specified by the municipality) adjacent to all streets.</td>
<td>G-I</td>
</tr>
<tr>
<td>34. Transit shelters and other <em>street furniture</em> should be provided, especially on major pedestrian routes. Other <em>street furniture</em> may include benches, waste receptacles, newspaper outlets, community information boards, water fountains, public washrooms, <em>bicycle parking</em>, and <em>bicycle sharing</em> system components.</td>
<td>G-I</td>
</tr>
<tr>
<td><strong>Cycling Amenities</strong></td>
<td><strong>Greenfield/Infill</strong></td>
</tr>
<tr>
<td>35. A connected and destination-oriented <em>bikeway network</em> should be provided throughout the community, including a variety of on- and off-street <em>bikeway facilities</em> that provide an appropriate degree of separation from motorized traffic, given the speed and volume of traffic on the street. These on-street <em>bikeway facilities</em> may include (but are not limited to) <em>bicycle lanes</em>, <em>cycle tracks</em>, <em>sharrows</em>, <em>signed routes</em>, <em>bicycle boulevards</em>, and <em>multi-use paths</em> on the boulevard.</td>
<td>G-I</td>
</tr>
</tbody>
</table>

Where there is a local Bicycle Plan, the *bikeway network* proposed in the Plan should be implemented in the development area, and opportunities to enhance or connect to the proposed *bikeway network* should be identified.

36. At a minimum, 100% of the population shall be within 150 m of a continuous and connected *bikeway facility*. | G-I | . . . |
Health Background Study Standard

Streetscape Characteristics continued

Intersections

37. All intersections should be designed to increase the visibility of cyclists and pedestrians, give them priority, reduce crossing distance, and provide adequate crossing time. Intersection design elements may include, but are not limited to:

- Pavement treatments and markings for pedestrian crossings (e.g. brick paving, zebra/ladder markings)
- Curb cuts/ramps
- Raised crosswalk
- Curb extension/bulb out
- Centre Median or refuge island
- *Pedestrian scramble* (a.k.a. Barnes dance)
- *Bicycle box*
- Conflict zone markings for bicycles (e.g. coloured lane, skip lines, chevrons, *sharrows*)
- Audible pedestrian crossing signals
- Countdown signals
- Leading pedestrian and/or bicycle signals (advance walk/bike signal)
- Pedestrian and/or bicycle actuated signals
- Right-turn on red light prohibitions
- Mid-block signalized crossings

Lighting

38. All *mixed-use* streets must have an average luminance of 10 lux, with a minimum of 5 lux.

39. Pedestrian-level street lamps of 4.6 m in height or less, spaced apart no more than 30 m, must be provided on all streets.

Wayfinding

40. A *wayfinding* system should be implemented on a community-wide basis to allow residents and visitors to determine their location; identify key destinations (parks, transit stations, community and cultural facilities, shopping centres, off road trails); and develop a plan to take them from their location to desired destination by walking or cycling. The *wayfinding* system may include maps, directional signs or other elements, and should be useful and easy to understand.

Traffic Calming

41. In *greenfield development*, or where new streets are introduced through *infill development*, traffic calming will be achieved on neighbourhood streets by using:

- Minimum traffic lane widths
- Minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, wooners or home-zones (speed limit under 15 km/hr, vehicles must yield to pedestrians and cyclists)
### Streetscape Characteristics continued

42. For infill development, traffic calming should be achieved on existing neighbourhood streets by using any of, but not limited to, the following elements:

- Reduced/minimum traffic lane width
- Reduced/minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, woonerfs or home-zones (speed limit under 15 km/hr; vehicles must yield to pedestrians and cyclists)
- Speed humps
- Bollards (short vertical posts)
- Channelization islands (raised islands that force traffic to turn in a particular direction)
- Chicane (curb bulges or planters or alternating sides, forcing motorists to slow down)
- Choker (raised islands in parking zones that narrow a roadway)
- Curb extension, planter, or centerline traffic island that narrows traffic lanes
- Horizontal shift (a lane centerline that curves or shifts)
- Rumble or warning strip
- Semi-diverter or partial closure (restricts entry and limits traffic flow at intersections)
- Signal timing to reduce traffic speeds
- Radar trailer that shows drivers their current speed and the posted speed limit
- Traffic circles or roundabouts
- Speed table

43. While increasing comfort and safety for pedestrians, the design of traffic calming elements should not create undue hazards or obstacles for cyclists.

### Parking

#### Automobile Parking

44. Reductions in parking requirements should be given to:

- buildings and other facilities within 400 m of a transit stop; and
- apartments/condominiums offering car share parking spaces (with each car share space equivalent to 10 regular spaces).

45. On-street parking should be included on all streets except where inappropriate for technical or safety reasons.

46. Efficient use of parking should be promoted by identifying systems for sharing parking spaces by two or more user groups at different times of the day or week (for example, office staff during weekdays and restaurant clientele in the evenings and on weekends), and by providing preferential parking for carpool vehicles.

47. Where available, economic incentives should be identified and utilized to provide structured parking, rather than surface parking.
48. Where surface parking is provided, it should be designed to minimize negative aesthetic and environmental impacts. This can be achieved by locating the parking lot away from the street frontage and by incorporating the following into the parking lot design:

- Tree planting
- Landscaping
- Stormwater management
- Porous/permeable surfaces
- Light-coloured materials (rather than black asphalt)
- Pedestrian access and circulation

49. All new developments should meet or exceed the higher of:

a) Local bicycle parking requirements (provided in local zoning by-laws, Bicycle Master Plans); or

b) The minimum bicycle parking standards outlined in Table 1.

<table>
<thead>
<tr>
<th>Use</th>
<th>Minimum Spaces by Bicycle Parking Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Occupant/Employee</td>
</tr>
<tr>
<td>Multi-unit Residential</td>
<td>0.7/unit</td>
</tr>
<tr>
<td>Retail, Services, &amp; Community Facilities</td>
<td>0.1/100 m²</td>
</tr>
<tr>
<td>General Office</td>
<td>0.15/100 m²</td>
</tr>
<tr>
<td>Medical Office</td>
<td>0.15/100 m²</td>
</tr>
<tr>
<td>Hospital</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Elementary/Secondary School</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Post-Secondary School</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Other non-residential (e.g. Industrial)</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>High-order Transit Station</td>
<td>Complete a bicycle parking demand estimate for the station, for example using boardings, alightings and local bicycle mode share data.</td>
</tr>
</tbody>
</table>
Region of Peel

Health Background Study

EVALUATION REPORT

May 27, 2011
Prepared by The Planning Partnership

In Association With:
1.0 Background

A stakeholder workshop was held on March 4, 2011 in Mississauga to evaluate the usability of the new Health Background Study (HBS) User Guide, which builds on the HBS Terms of Reference (TOR). The HBS is intended to ensure new development promotes and supports healthy and active communities, and to provide a mechanism for municipalities to evaluate development proposals on that basis.

Approximately 50 people participated in the workshop, including staff from the local and regional municipal departments of planning policy, development planning, urban design, traffic planning and engineering, environmental health, chronic disease and injury prevention, and recreation and parks. Representatives of private developers, special interest groups, planning consultants, a school board and a conservation authority also participated in the workshop.

2.0 Workshop Format

The workshop was based around three case examples, which were used by participants to test the usability and applicability of the new HBS User Guide. Participants were organized into six groups and given mapping, measurement tools, and data, and asked to go through the User Guide and apply selected Standards for five of the six Core Elements (Density, Service Proximity, Land Use Mix, Street Connectivity, and Streetscape Characteristics). The sixth Core Element (Parking) was excluded due to the specificity of the Standards. The three case examples were selected to represent infill and greenfield developments, and included:

- Aurora 2C Secondary Plan (Greenfield)
- Oakville Uptown Core (Phased Greenfield-Infill)
- Toronto Infill

Based on their experience applying the User Guide and HBS Standards to their case example, the participant groups were asked to answer the following three questions:

1. Was the User Guide useful and easy to follow?
   - Was the information provided about each of the six core elements useful and complete?
   - Was it clear how each of the core elements relate to healthy community development in practice?

2. How applicable were the HBS Standards to your test case?
   - Discuss the applicability of the HBS in terms of your test case’s location (greenfield/infill) and scale.

3. Based on your experience, where in the planning process does the HBS fit best and why?

The participants’ feedback is summarized below, with TPP’s response provided in italics.

3.0 Feedback

3.1 Usability

In general, the stakeholder participants gave the User Guide a favourable review in terms of its usability. Several groups commented the document was clearly written, logically formatted, concise and made good use of illustrations.

There was some disagreement over the Standards among the six stakeholder groups. Some groups felt the Standards were too prescriptive, and wanted to see more flexibility in applying the Standards, for example by:

- using words like “should” instead of “shall” or “must”;
- providing ranges for the targets; or
- framing the Standards more as “Guidelines”.

Other groups appreciated the provision of minimum targets, and some wanted the Standards to be more specifically defined by clearing up language, such as “where applicable/appropriate”. It was also suggested that where possible, it would be useful to draw a connection between the Standards and the Provincial Policy Statement and
Places to Grow, as a way to further legitimize the Standards.

The degree of flexibility or specificity will, and should, vary by Standard depending on its content, so an overarching revision of all Standards to make them either more flexible or specific is not being considered. However, where clarification is needed, the Standards will be updated with definitions, numbers and/or expanded Glossary terms. In addition, the Introduction to the User Guide stresses the role of local municipalities in implementing the HBS and provides room for discretion to mould the Standards to the local context. Finally, the connection between the HBS Standards and provincial planning policies has been outlined in the Situational Analysis, and will not be repeated in the User Guide for the sake of brevity.

Several groups also noted that some Standards are applicable to areas of regional jurisdiction, while other Standards apply to areas under local jurisdiction. These groups suggested the two-tiered nature of planning in the Region of Peel be reflected in the Standards.

Most commonly, the issue of regional/local jurisdiction arises with regard to Streetscape Characteristics and this is because there are local and regional roads in Peel. The HBS Standards as a whole apply regardless of jurisdiction, and their applicability should be determined by the existing distribution of roles and responsibilities between the region and local municipalities – not by the HBS.

All groups identified certain terms and Standards that needed further definition (to be done in the Glossary), and made suggestions for minor changes to the content of specific Standards. In addition, one group suggested compiling the Standards into one checklist to ease usability. Another group recommended a final component be added to the User Guide to evaluate how the six core elements have been integrated, which is an important measure of whether the development lives up to the healthy communities vision.

Where further clarification is needed the Standard will be updated with definitions and/or expanded Glossary terms. Specific requests for changes to the Standards have been compiled for review and the Standards will be updated, where appropriate. A response matrix will be provided before the completion of this project. With regard to compiling the Standards into one checklist, a new Matrix will be developed that lists all of the Standards and where they fit in the planning and development approvals process, as described below. The existing Key Questions and Reporting Requirements are intended to encourage the consideration of Standards for all six Core Elements as a whole.

3.2 Applicability

All stakeholder groups agreed that the HBS Standards were easier to apply to greenfield development than infill, and suggested that more guidance is needed in the User Guide to differentiate how to apply the various Standards depending on the location and type of development. The particular challenge of applying the HBS and Standards to a development application for a single building was noted by one group looking at the Toronto Infill case example.

Icons have been added to each Standard to indicate whether it applies to greenfield development, infill development or both. The icons are introduced at the beginning of the document with some explanatory text that addresses the distinction in applicability. In addition, an effort has been made throughout the User Guide to provide direction on how the Standards apply in greenfield or infill development, or both. As stated in the User Guide, every Standard is not meant to apply to every development – staff and proponents should assess the applicability of the Standards to a specific development during the pre-application stage, based on the location and scale of development, and other relevant factors.

3.3 Planning Process

All groups reported back that the HBS is applicable throughout various stages of the planning process, depending on the specific Standards being applied. Some Standards/Core Elements can be assessed at a higher level of planning (e.g. Density, Service Proximity, Street Connectivity), while others are more applicable at a more detailed design level (e.g. Land Use Mix, Streetscape Characteristics, Parking).

The most common steps in the planning process where participants felt the HBS fit best were the Secondary Plan and Block Plan. Other steps in the planning process that were identified as relevant to the HBS were the Draft Plan, Site Plan, Area Study, and the Community Design process. Several participant groups noted the need to differentiate where in the planning process each Standard may best be evaluated, as well as the need for general awareness of the HBS at the pre-application stage.

A new matrix will be added as an Appendix to the User Guide. The matrix will list each Standard and note where it applies during the planning and development approval process, including the Secondary Plan, Draft Plan, Block Plan, and/or Site Plan. This matrix will also be included in the Implementation Strategy.

In considering who should be responsible for reviewing the HBS, most groups identified the need for an interdisciplinary team (to include planners, urban designers, engineers, public health staff, etc.), and highlighted a special role for public health staff, as guardians of the HBS. The specific functioning and implementation of this interdisciplinary team was not dealt with in detail, other than suggestions that development applications be circulated to the team, or that the team meet physically as a committee to review
applications.

*We will consider this feedback and make recommendations regarding “who does what” in the Implementation Strategy.*

Finally, the question was raised how to proceed when there is a conflict between an HBS Standard and another existing standard (e.g. engineering standard) – a common challenge when implementing emerging standards that may not yet be incorporated into technical manuals, and with which technical staff may have less familiarity.

*Conflicting standards will be addressed in the Implementation Strategy.*

### 3.4 Other Feedback

In addition to the questions posed to the workshop participants, most groups also provided suggestions on how to improve the introductory section of the User Guide. For example, one group wanted to see greater consideration and discussion of air quality and mental health issues in relation to healthy development. Other groups wanted the introduction to clearly outline the economic imperatives for healthy development using public health research and statistics.

In terms of the introductory discussion of scope and applicability, workshop participants suggested the User Guide needs to more clearly define the intended audience, and the roles and responsibilities of the end user. They also noted that the User Guide should acknowledge the need for balance between economic considerations, logistics and timing in achieving the various standards. Finally, the workshop participants communicated a general sense of urgency “to get on with it” – that is the business of building healthier communities.

*The Introduction of the User Guide will be updated to address all of these comments.*

### 4.0 Next Steps

In finalizing our work on the HBS TOR and User Guide, The Planning Partnership will work with the Region of Peel staff to:

- finalize the Standards;
- improve the Glossary;
- develop greenfield/infill “menu” icons to clarify the applicability of HBS Standards;
- prepare a matrix that identifies where in the planning process each HBS Standard is applicable; and,
- submit final recommendations for how the HBS should be implemented by the Region of Peel.

It is expected that this work will be completed by the end of March, 2011.
Region of Peel

Health Background Study

IMPLEMENTATION STRATEGY

May 27, 2011
Prepared by The Planning Partnership

In Association With:
1.0 Introduction

1.1 Project Overview

The Peel Health Background Study project was initiated to explore the possibility of establishing a context-sensitive system for requiring the consideration of health impacts during the land use development approvals process. This project builds on the Peel Healthy Development Index, which identified core elements of the built environment that impact health, such as density, land use mix, and street design. The Index itself supports the establishment of a Health Background Study by presenting an evidence-based assessment of the connection between health and the built environment.

1.2 Developing the Health Background Study Terms of Reference and User Guide

Since the project’s initiation, The Planning Partnership has undertaken an in-depth study of what a Health Background Study Framework could look like in terms of:

- Core Elements,
- performance standards, and
- implementation frameworks.

This study has included literature, policy and program reviews (through the Situational Assessment), and much consultation with stakeholders through workshops, targeted interviews, and the on-going review of our work in progress. Throughout this process we have received feedback from a diversity of professionals from the Region of Peel, City of Mississauga, City of Brampton, Town of Caledon, and the City of Toronto – including staff from planning, urban design, transportation, public health, and parks and recreation.

The products of this research and consultation include the Terms of Reference and User Guide for a Health Background Study, which are based on six Core Elements:

- Density
- Service Proximity
- Land Use Mix
- Street Connectivity
- Streetscape Characteristics, and
- Parking.

The implementation framework for the Terms of Reference is established in the User Guide, which reiterates the standards associated with each Core Element, and highlights how each standard applies to greenfield or infill development, or both, using menu icons. The User Guide also includes an Application Matrix, which identifies the stage(s) in the planning process (e.g. Secondary Plan, Block Plan) where the achievement of each standard can be assessed.

The Terms of Reference and User Guide incorporate the extensive feedback received from stakeholders regarding the content and applicability of a Health Background Study. All of our research and the feedback collected for this study is further reflected within this Implementation Strategy.

2.0 The Implementation Strategy

The Implementation Strategy outlined in the following sections builds on the User Guide by providing the Region of Peel, its local municipalities and other municipalities, a game plan and for implementing the Health Background Study, should they choose to do so.

The Implementation Strategy presents the requirements for a supportive legislative environment for the Health Background Study, and provides specific procedural details such as who does what and when. The Implementation Strategy also includes a plan for monitoring the implementation and success of the Health Background Study by the Region of Peel and its local municipalities, as well as a broader discussion of how to promote health through planning. The Implementation Strategy concludes with Key Priority Actions the Region of Peel should take to implement the Health Background Study.
The general approach to implementing the Health Background Study is outlined here, however, it will and should vary according to the local context. Additionally, single- and two-tier municipalities will necessarily differ in their approach to implementing the Health Background Study, based on the jurisdiction and available tools for each player in the process.

Unlike a single-tier municipality (such as Toronto) where one government is responsible for the planning and development application process, responsibility for implementing the Health Background Study in the Region of Peel will be shared by planning and public health staff at the Region and the three local municipalities. The implementation of the Health Background Study will need to work within existing jurisdiction - where local municipalities are the primary approval authority for most development applications, which are circulated to the Region for commentary prior to approval.

This process will pose certain challenges that need to be addressed prior to implementing the Health Background Study. For instance:

- How can the Region consistently apply a Health Background Study Terms of Reference across the three municipalities in a way that reflects unique local circumstances?
- Is there a need for a Regional Terms of Reference? If yes, how will it differ from local Terms of References?
- What role should the Region play in formulating local Terms of References?
- With regard to the day-to-day application of the Health Background Study, how can Regional staff be brought into the pre-application process to ensure healthy development criteria are addressed comprehensively, early on?

The answers to these questions and others must be negotiated among the Region and local municipalities, and cannot be prescribed from the upper-tier downward. That said, open communication and a focus on collaboration will likely be the key to success.

Within this context, the upper-tier municipality can undoubtedly make a significant contribution to implementing a Health Background Study. First and foremost, the Region can play a leadership role in implementing the five priority actions outlined in this Implementation Strategy - each of which lay the groundwork for ensuring the uptake and success of the Health Background Study. These priority actions focus on reviewing local applicability of the Health Background Study, educating stakeholders, applying the Study to public pilot projects, recognizing innovation, and monitoring the application and outcomes of the Study. Taking the lead on implementation is a natural role for the Region, which has already taken a leadership role by initiating this project.

### 2.1 Key Principles

The following is a summary of the fundamental principles that should underpin the implementation of the Health Background Study.

#### 2.1.1 Establish a Supportive Policy Framework

Through their Official Plans, local municipalities and the Region should establish a strong policy framework that:

- makes the connection between development and health outcomes;
- establishes corresponding policy objectives/targets for public health; and,
- enables the requirement for a Health Background Study as part of the development approvals process.

**Region of Peel**

The Region of Peel has been a leader in emphasizing healthy communities as a fundamental concept and objective through amendments to the Regional Official Plan, local Official Plans in Brampton and Caledon, and through Mississauga’s new draft Official Plan. In particular, Mississauga’s, Caledon’s and the Region’s Official Plans now include the Health Background Study in the list of studies that may be required as part of a “complete application”. To allow for the implementation of a Health Background Study in all areas, Brampton should adopt a similar enabling policy through an amendment to its own Official Plan.

**City of Toronto**

The City of Toronto has also taken significant strides to make the link between planning decisions and health outcomes through broadly supportive Official Plan policies and specific requirements under the Toronto Green Development Standard. In this context, there has been debate whether a Health Background Study would be redundant, however, there are significant opportunities for Toronto to further promote healthier communities, especially through the rehabilitation of its “stable neighbourhoods”.

Toronto’s Official Plan identifies large swaths of residential neighbourhoods as “stable” in its Official Plan, and in doing so fails to articulate a plan for the long-term evolution of these neighbourhoods. Many of these stable neighbourhoods, particularly further away from Downtown, reflect the least healthy forms of planning and development, as is characteristic of traditional suburbs.
As it is about to embark on its 5-year Official Plan Review process, the City of Toronto should look at ways to influence and support the rehabilitation of its stable neighbourhoods to make them more active, vibrant and less auto-reliant over the long-term. The usefulness of a Health Background Study should be considered in this context.

2.1.2 Do Not Impede the Approvals Process
As expressed by numerous stakeholders consulted for this study, timing and efficiency are important considerations in the development approvals process. Timing in particular has a direct impact on development costs, and can have significant impacts on the viability of a development project, particularly in tenuous economic circumstances. In fact, one of the stated purposes of the Planning Act is to ensure the planning processes are fair, by making them open, accessible, timely and efficient (S1.1).

The implementation of a Health Background Study requirement in the planning process should, therefore, have a clear role and not impede or add unwarranted amounts of time to the development process. Assurances that the new Health Background Study requirements will not have a significant impact on application review and processing times will go a long way to alleviate concerns from development interests. Such assurances may even build a certain level of acceptance from the development industry.

As such, it is recommended the Region and local municipalities develop supportive policies that provide some level of certainty around approvals timing, and clearly articulate expectations throughout the development approvals process. For example, such policies may specify how health impacts will be considered early on in the development application process to avoid back-tracking and unnecessary delays.

Such policies will benefit development proponents and municipalities, since additional lag in the approvals process could expose municipalities to costly litigation through the Ontario Municipal Board, subject to the type of application and associated decision time frames established by the Planning Act.

2.1.3 Lead by Example
In order to generate support for the implementation of the Health Background Study, municipalities must lead by example – meaning they must demonstrate that their own developments and planning initiatives comply with the Health Background Study requirement and achieve its Standards.

Recognizing that there may be growing pains associated with the initial implementation of the Health Background Study, municipalities should plan to provide an extra level of assistance to the first affected applicants. Staff must be prepared to instruct development applicants on how to proceed, they must communicate expectations, and deal with early interpretation issues. This extra level of service will go a long way to demonstrate the municipality’s commitment to the Study requirements, and help to identify potential deficiencies in the Standards and/or their implementation.

2.2 The Health Background Study’s Place in the Planning Process
The HBS and its Standards are applicable throughout the various stages of the planning and development approvals process, including the Secondary Plan, Draft Plan, Block Plan and/or Site Plan. The achievement of some Standards can be assessed at a higher level of planning, such as in the Secondary Plan, while others will be assessed at more detailed approval stages, such as Draft Plan, Block Plan and/or Site Plan.

In general, the Secondary Plan will establish the policies for Standards that will be further outlined and evaluated at subsequent levels of approval. As such, (and as recommended by our interview subjects), the Secondary Plan level is the most conducive to enabling broad change in the development approvals process. We recommend the Secondary Plan should set out the healthy development policies and guidelines against which development proposals will be assessed throughout the approvals process. Notwithstanding that, the achievement of Standards may be evaluated for areas where there is no Secondary Plan, during the Draft Plan, Block Plan or Site Plan approval.

A table indicating where in the planning and development approval process each HBS Standard can apply is provided as an Appendix to this Implementation Strategy. This table has been developed to assist developers, municipal staff, and others involved in the planning and development process in completing the HBS.

It is at the discretion of the local municipality to determine the applicability of each HBS Standard and the precise evaluation parameters for a specific development proposal. Evaluation parameters will recognize challenges and opportunities posed by the natural environment, economics, and logistics. Every Standard will not necessarily apply to every development project. During the pre-application stage, staff and proponents should assess the applicability of the Standards to a specific development, based on the location and scale of development, and other relevant factors.

2.3 Who Does What?

The responsibility for completing and reviewing the Health Background Study will fall on development proponents, planning staff and public health staff. As stewards of the
development application process, planning staff will need to take a lead role, with substantial involvement and support from public health.

2.3.1 Development Proponents
Development proponents will be responsible for demonstrating how their proposal achieves the Standards for healthy development, as outlined in the Terms of Reference and Health Background Study. Applicable Standards will be identified in consultation with planning staff during the pre-application stage.

To demonstrate the achievement of applicable Standards, development proponents will need to complete the Reporting Requirements outlined in the Terms of Reference and User Guide, and submit these items as the Health Background Study to planning staff for review.

2.3.2 Planning Staff
Municipal planning departments and their staff will be expected to integrate the requirements of the Health Background Study with the review of development applications. Specific responsibilities are likely to include:

- planning, organizing and coordinating the application process;
- reviewing the Health Background Study documents
- providing information and communicating;
- motivating a wide range of people;
- managing conflict;
- facilitating events;
- negotiating; and
- monitoring and reviewing the process.

Planning departments will also be required to help applicants find their way through the process, through pre-consultation meetings, continuing support and access to public health officials to provide additional expertise. The aim should be to resolve as much as possible of the potential conflict arising from a development proposal.

2.3.3 Public Health and Other Municipal Staff
The proactive organization of the planning and development process will involve multi-disciplinary cooperation among various departmental staff to foster an approach where planners, designers, engineers and development interests work closely together. Most importantly, it will be essential to integrate public health officials into this process to increase the credibility of the Health Background Study, and incorporate their expertise in the review of development applications.

Incorporating public health officials, specifically during the beginning of the process, will also reduce the risk of a lengthy review. By working together to implement the Health Background Study and to review development applications, planning and public health staff will jointly contribute to each other’s development as Health Background Study reviewers. Planners will become increasingly knowledgeable of health concerns, while public health staff will gain a better understanding of the planning process and the design of the built environment.

Ultimately the outcome of the planning process depends on how effectively people work together: those who initiate and implement development; those who guide and control design; and the planners, designers, public health officials, and engineers who manage the process.

2.4 Key Priority Actions
The following are key recommendations and priority actions that the Region of Peel, its local municipalities and the City of Toronto should undertake, should they choose to implement the Health Background Study. These priority actions reflect the input and concerns expressed by workshop and interview participants. We heard from them concerns about timing and delays in the development application process, costs to developers, the availability of expertise and resources, and the feasibility of achieving higher standards. They also expressed the need to engage stakeholders and build political support by involving developers and the public in the process, receiving clear direction from City Council, and promoting the Study through education and marketing. Finally, we heard that to gain buy in from stakeholders, it is imperative that the Study result in improved development outcomes.

In response to this input, we recommend five key actions each municipality should take towards implementing a Health Background Study. These are outlined in detail in this section, and include:

- Commit Staff Resources to Review Local Applicability of the Health Background Study
- Promote Education
- Initiate Pilot Projects
- Recognize Innovation
- Establish a Monitoring Program

Combined, these five actions seek to address the concerns expressed by stakeholders, and to ensure the success of the Health Background Study, no matter where it is adopted.

2.4.1 Commit Staff Resources to Review Local Applicability
The Health Background Study Terms of Reference are based on current best practices in planning and urban design, and the Standards have been designed to be broadly applicable to most development contexts. Given the broad applicability of the Health Background Study, it is recommended that municipalities commit staff and resources to customize the Terms of Reference to suit local circumstances.
Prior to implementing the Health Background Study as a requirement in the local planning approvals process, a municipality may assign an interdepartmental team of staff to review the Terms of Reference in the context of the local planning policy and development regulation regime. This internal review would help the implementing municipality to identify:

- potential conflicts between the Terms of Reference and local regulations,
- where local regulations exceed the standards within the Terms of Reference, or
- where local standards may need enhancements, and
- where other local planning initiatives may be cross-referenced or integrated into local Health Background Study requirements.

In municipalities with a two-tier governance structure, both the upper and lower-tiers would likely need to go through this exercise cooperatively.

Following this review, the implementing municipality would be in a position adopt a revised Terms of Reference to suit their local circumstances, and amend other local policies/standards as needed to avoid duplication or conflicts.

2.4.2 Promote Education
The extent to which the planning process facilitates high quality development that is based on key healthy development principles and standards, depends on developing the right skills, knowledge and attitudes among those responsible for reviewing and approving development applications.

As part of their implementation of the Health Background Study, municipalities should facilitate internal learning modules on the linkage between planning and health outcomes, and how the Health Background Study requirement will be applied within the local development approvals processes. Such learning modules may be provided for relevant departmental staff, regional and local public health staff, and Council members. Planning staff will also require detailed training on the use of the Health Background Study, including the Standards, and its role within the development application review process.

2.4.3 Initiate Pilot Projects
In advance of wider local implementation of a Health Background Study requirement, each implementing municipality should pilot test the Health Background Study as part of an actual planning initiative such as a Secondary Plan.

Pilot testing the Health Background Study as part of an actual planning initiative will provide an opportunity for the municipality, as well as local development interests, to analyze and fine-tune the applicability of the standards and associated reporting requirements, as well as understand the costs and timing associated with fulfilling the reporting requirements.

2.4.4 Recognize Innovation
As part of their effort to promote healthy community development, implementing municipalities should make a concerted effort to formally recognize local achievement, uptake and innovation in healthy development. This recognition may take the form of an awards program – either stand-alone awards program or integrated into already established local urban design awards program – that celebrates creativity and success in the completion of healthy development projects.

2.4.5 Establish a Monitoring Program
Evaluation and monitoring is important to ensure that the local regulatory mechanisms are effective in achieving fundamental healthy development goals. Monitoring will also help to ensure that the Health Background Study continues to meet the need of those who use it.

As a new and relatively untested regulatory tool, implementing municipalities should establish a monitoring program to evaluate how the Health Background Study is being implemented, how applicants are responding to it and whether desired results are being achieved. Monitoring efforts may, at minimum, include:

- short questionnaires to applicants on their experience completing the Health Background Study requirements;
- internal tracking of approvals timing; and
- follow-up reviews of completed developments that went through the Health Background Study.

All components of the monitoring program should be established as part of the implementation framework for the Health Background Study. This will help to ensure that data collection begins as soon as the Health Background Study requirement is initiated, so lessons can be learned that much sooner.

3.0 Conclusion
The outcomes of the Health Background Study project indicate there is a substantial role for municipalities to play in creating healthy communities through the development application process. The need for action has been clearly expressed, and a plan for action outlined through this Implementation Strategy. It will be, however, each municipality’s discretion to implement a Health Background Study, balancing their local needs, desires, resources and authority with the approach outlined in the Terms of Reference, User Guide and this Implementation Strategy.
Appendix
### Health Background Study Standard

#### Density
1. All development on Designated Greenfield Areas shall achieve a minimum overall density target of 50 people and jobs per hectare.

2. All development in Designated Urban Growth Centres in the Region of Peel (including Downtown Brampton and Mississauga City Centre) shall achieve a minimum overall density target of 200 people and jobs per hectare.

3. Notwithstanding the above standards, where the local municipality has established higher density targets than those established by The Growth Plan, the higher density target should apply.

#### Service Proximity

#### Transit
4. The distance between at least 50% of the projected population of the development and a low-order transit stop shall be no more than 200 m. The transit service proposed should provide a direct route to a Regional Urban Node, Intensification Corridor, or smaller higher-density, mixed-use transit supportive activity centre with a maximum transit trip of 30 minutes.

5. Where a high-order transit route bisects the development area, 75% of the projected population should be within 400 m of it.

6. Ensure design quality of both transit stops and the journey to the stop. Transit stops should, where appropriate, provide shelter from the sun and inclement weather and seating. High-order transit stops/stations should also include secure bicycle parking facilities.

#### Neighbourhood Community and Retail Services
7. The distance between at least 75% of the projected population and three or more of the following services and amenities must be no more than 800 m: Childcare facility, community garden, park, hospital or health clinic, public library, places of worship, adult/senior care facility, social service facility, performance or cultural space, post office or recreation centre. (Multiple services of the same type may be counted.)

8. The distance between at least 25% of the projected population and a minimum of 5,000 m2 of mixed service commercial retail space shall be no more than 800 m.

9. The distance between at least 75% of the projected population and a minimum of 150 m2 of mixed service commercial retail space shall be no more than 800 m.

10. The distance between at least 90% of the projected population and a playing field, park, square or natural open space should be no more than 400 m.

11. The distance between 100% of the projected population and a planned elementary school shall be no more than 1.2 km.

12. The distance between 100% of the projected population and a planned secondary school shall be no more than 2.4 km.

13. Where appropriate, a new community should provide mixed service commercial retail facilities that can be used by adjacent communities.
### Health Background Study Standard

#### Service Proximity continued

14. Access to drug and grocery stores should be encouraged.  

15. In key locations convenience commercial uses are permitted throughout residential designations.  

#### Employment

16. The development should be within reasonable proximity to an existing or planned employment centre or urban centre. Specifically, the distance should be no more than 10 km.  

#### Land Use Mix

17. Where the scale of the residential community is large enough, a range of uses should be provided, as follows:  

- for communities of 5,000 people or more, provide neighbourhood-scale retail and services (such as corner stores, elementary school, library, etc.)  
- for communities of 10,000 people or more, provide a full-range of uses, including larger-scale retail, services, and employment opportunities.  

18. Where the scale of employment lands is large enough, small scale commercial retail and services should be encouraged, where appropriate.  

19. Where the scale of the community permits, it should include dwelling structures from all three of the following housing type groups, with no group making up more than 50% or fewer than 10% of total units:  

- Single detached, semi-detached, and duplex  
- Townhouses and multiplex  
- Apartment building  

20. Special housing types, such as group homes or seniors’ residences, should be encouraged.  

21. **Secondary suites** should be encouraged where appropriate.  

22. **Live-work units** should be encouraged where appropriate.  

23. Site design of auto-oriented developments, such as uses which include drive through facilities, gas bars and related uses shall make pedestrian access a priority and contribute to high quality public realm and streetscapes.  

24. The location of retail uses on the ground floor of multi-unit and mixed use buildings should be encouraged.  

#### Street Connectivity

25. **Infill development** should identify opportunities to increase street connectivity.  

26. Street networks and off-road paths in greenfields should always:  

- provide the maximum choice for how people will make trips;  
- take full account of the kinds of movement a development will generate; and  
- make clear connections to existing routes and facilities.
### Health Background Study Standard

#### Street Connectivity continued

27. Cul-de-sacs are not permitted unless required for technical reasons.

28. Crescent streets, reverse frontage lots and loop roads must not constitute more than 20% of total street frontage and should be discouraged.

29. Blocks in the proposed development must not exceed 80 m x 150 m in size. Exceptions are made for blocks consisting solely of Parkland or of Employment uses.

30. Intersections should be frequent, with street blocks decreasing in size as density increases.

31. Sidewalks, bike lanes and *multi-use paths* should connect to street networks, major destinations and transport nodes.

#### Streetscape Characteristics

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<thead>
<tr>
<th>Sidewalk Amenities</th>
<th>Planning Approval</th>
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<tbody>
<tr>
<td>32. All streets must have sidewalks on each side that are at least 1.5 m wide in low-density residential areas, and at least 2 m wide in medium-density residential neighbourhoods, high-density residential neighbourhoods, mixed use areas, and commercial areas.</td>
<td>G-I ● ● ●</td>
</tr>
<tr>
<td>33. A variety of street trees that are hardy, resilient, and low maintenance should be planted at regular intervals (as specified by the municipality) adjacent to all streets.</td>
<td>G-I ● ● ● ●</td>
</tr>
<tr>
<td>34. Transit shelters and other <em>street furniture</em> should be provided, especially on major pedestrian routes. Other <em>street furniture</em> may include benches, waste receptacles, newspaper outlets, community information boards, water fountains, public washrooms, <em>bicycle parking</em>, and <em>bicycle sharing</em> system components.</td>
<td>G-I ● ● ● ●</td>
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<th>Cycling Amenities</th>
<th>Planning Approval</th>
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<tr>
<td>35. A connected and destination-oriented <em>bikeway network</em> should be provided throughout the community, including a variety of on- and off-street <em>bikeway facilities</em> that provide an appropriate degree of separation from motorized traffic, given the speed and volume of traffic on the street. These on-street <em>bikeway facilities</em> may include (but are not limited to) <em>bicycle lanes</em>, <em>cycle tracks</em>, <em>sharrows</em>, <em>signed routes</em>, <em>bicycle boulevards</em>, and <em>multi-use paths</em> on the boulevard. Where there is a local Bicycle Plan, the <em>bikeway network</em> proposed in the Plan should be implemented in the development area, and opportunities to enhance or connect to the proposed <em>bikeway network</em> should be identified.</td>
<td>G-I ● ● ●</td>
</tr>
<tr>
<td>36. At a minimum, 100% of the population shall be within 150 m of a continuous and connected <em>bikeway facility</em>.</td>
<td>G-I ● ● ●</td>
</tr>
</tbody>
</table>
# Streetscape Characteristics continued

## Intersections
37. All intersections should be designed to increase the visibility of cyclists and pedestrians, give them priority, reduce crossing distance, and provide adequate crossing time. Intersection design elements may include, but are not limited to:

- Pavement treatments and markings for pedestrian crossings (e.g. brick paving, zebra/ladder markings)
- Curb cuts/ramps
- Raised crosswalk
- Curb extension/bulb out
- Centre Median or refuge island
- *Pedestrian scramble* (a.k.a. Barnes dance)
- *Bicycle box*
- Conflict zone markings for bicycles (e.g. coloured lane, skip lines, chevrons, *sharrows*)
- Audible pedestrian crossing signals
- Countdown signals
- Leading pedestrian and/or bicycle signals (advance walk/bike signal)
- Pedestrian and/or bicycle actuated signals
- Right-turn on red light prohibitions
- Mid-block signalized crossings

## Lighting
38. All *mixed-use* streets must have an average luminance of 10 lux, with a minimum of 5 lux.

39. Pedestrian-level street lamps of 4.6 m in height or less, spaced apart no more than 30 m, must be provided on all streets.

## Wayfinding
40. A *wayfinding* system should be implemented on a community-wide basis to allow residents and visitors to determine their location; identify key destinations (parks, transit stations, community and cultural facilities, shopping centres, off road trails); and develop a plan to take them from their location to desired destination by walking or cycling. The *wayfinding* system may include maps, directional signs or other elements, and should be useful and easy to understand.

## Traffic Calming
41. In *greenfield development*, or where new streets are introduced through *infill development*, *traffic calming* will be achieved on neighbourhood streets by using:

- Minimum traffic lane widths
- Minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, woonerfs or home-zones (speed limit under 15 km/hr, vehicles must yield to pedestrians and cyclists)
### Streetscape Characteristics continued

42. For infill development, traffic calming should be achieved on existing neighbourhood streets by using any of, but not limited to, the following elements:

- Reduced/minimum traffic lane width
- Reduced/minimum number of traffic lanes in the roadway
- Pedestrian-priority streets, woonerfs or home-zones (speed limit under 15 km/hr, vehicles must yield to pedestrians and cyclists)
- Speed humps
- Bollards (short vertical posts)
- Channelization islands (raised islands that force traffic to turn in a particular direction)
- Chicane (curb bulges or planters or alternating sides, forcing motorists to slow down)
- Choker (raised islands in parking zones that narrow a roadway)
- Curb extension, planter, or centerline traffic island that narrows traffic lanes
- Horizontal shift (a lane centerline that curves or shifts)
- Rumble or warning strip
- Semi-diverter or partial closure (restricts entry and limits traffic flow at intersections)
- Signal timing to reduce traffic speeds
- Radar trailer that shows drivers their current speed and the posted speed limit
- Traffic circles or roundabouts
- Speed table

43. While increasing comfort and safety for pedestrians, the design of traffic calming elements should not create undue hazards or obstacles for cyclists.

### Parking

#### Automobile Parking

44. Reductions in parking requirements should be given to:

- buildings and other facilities within 400 m of a transit stop; and
- apartments/condominiums offering car share parking spaces (with each car share space equivalent to 10 regular spaces).

45. On-street parking should be included on all streets except where inappropriate for technical or safety reasons.

46. Efficient use of parking should be promoted by identifying systems for sharing parking spaces by two or more user groups at different times of the day or week (for example, office staff during weekdays and restaurant clientele in the evenings and on weekends), and by providing preferential parking for carpool vehicles.

47. Where available, economic incentives should be identified and utilized to provide structured parking, rather than surface parking.
Health Background Study Standard

Parking continued

48. Where surface parking is provided, it should be designed to minimize negative aesthetic and environmental impacts. This can be achieved by locating the parking lot away from the street frontage and by incorporating the following into the parking lot design:

- Tree planting
- Landscaping
- Stormwater management
- Porous/permeable surfaces
- Light-coloured materials (rather than black asphalt)
- Pedestrian access and circulation

Bicycle Parking

49. All new developments should meet or exceed the higher of:

a) Local bicycle parking requirements (provided in local zoning by-laws, Bicycle Master Plans); or
b) The minimum bicycle parking standards outlined in Table 1.

Table 1. Minimum Bicycle Parking Standards, by Use and Type

<table>
<thead>
<tr>
<th>Use</th>
<th>Minimum Spaces by Bicycle Parking Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Occupant/Employee</td>
</tr>
<tr>
<td>Multi-unit Residential</td>
<td>0.7/unit</td>
</tr>
<tr>
<td>Retail, Services, &amp;</td>
<td>0.1/100 m²</td>
</tr>
<tr>
<td>Community Facilities</td>
<td>0.15/100 m²</td>
</tr>
<tr>
<td>General Office</td>
<td>0.15/100 m²</td>
</tr>
<tr>
<td>Medical Office</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Hospital</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Elementary/Secondary School</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Post-Secondary School</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>Other non-residential (e.g. Industrial)</td>
<td>0.06/100 m²</td>
</tr>
<tr>
<td>High-order Transit Station</td>
<td>Complete a bicycle parking demand estimate for the station, for example using boardings, alightings and local bicycle mode share data.</td>
</tr>
</tbody>
</table>
The following resources have been used in the development of the Healthy Background Study Framework.


Canadian Partnership Against Cancer (2010). Canadian Priorities for Addressing Obesity as a Cancer and Chronic Disease Risk Factor.


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City of Toronto (December 2007). The Toronto Green Development Standard.


City of Surrey. (2009). Housing Types and Land Use: Handout.


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