City of Hamilton

Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton
Urban Design Policy Paper

FINAL REPORT
JANUARY 2005
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| Report Title:    | Development of Policy Papers for Phase Two of the Transportation Master Plan for the City of Hamilton  
|                  | Urban Design Policy Paper             |
| IBI Reference:   | TO-1173                               |
| Version:         | 3                                     |
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1. INTRODUCTION

1.1 Study Background and Objectives

The City of Hamilton City-wide Transportation Master Plan will provide inputs to the Growth Related Integrated Development Strategy (GRIDS) and make recommendations to Council on the adoption of a City-wide Transportation Policy that is cognisant of Vision 2020 and other City of Hamilton long-term planning objectives. The project has been divided into three distinct phases. The first phase consisted of the technical calibration of the existing transportation model to reflect current transportation conditions in Hamilton. The second phase, which is the object of this and other policy papers, will focus on the development of 23 policy papers in the following areas: Travel Demand, Urban Development, System Performance, Infrastructure Planning and Infrastructure Financing. Following the completion of the Policy Papers, the City will proceed to develop transportation scenarios (Phase 3 of the project) based upon the results of the policy work performed in Phase 2 and the land use scenarios developed through the broader GRIDS study and will test the efficiency and viability of these scenarios by integrating them into the calibrated model.

This policy paper addresses the issue of the urban design relationship to the street. The remainder of this introduction provides a description of urban design, including benefits and examples. Section 2 provides an overview of the existing policies in Hamilton. Section 3 provides supporting information on recent trends, while Section 4 highlights experience and practices from other jurisdictions. Section 5 and 6 outlines the development and assessment of policy options and potential supporting actions.

1.2 Description of Urban Design in Relation to the Street

The shape of the cities towns and villages we live in bears a tremendous weight on the way we go about our daily lives. As we move from one activity to the next, we must negotiate the path between their respective locations. Levels of comfort, safety, and security are all influenced by the way and the facility with which we are able to engage with our built spaces. Urban design is the management of the interface between our urban and rural built areas, the context in which these built forms are established, and their users – whether regular or incidental, intentional or unwanted. Urban design plays a determinant role in our transportation choices, as it makes a climate more or less amenable to sustainable modes - more or less walkable.

While specific architectural treatment may be best developed at a neighbourhood scale, a specific set of policies developed for urban design requirements would provide the framework to create a consistent and appropriate environment for movement throughout the City. The companion Urban Structure and Land Use Policy Paper describes the impact of urban development at a larger scale, including the advantages of mixed-use and denser development, particularly around transit routes. This paper will concentrate on design at the scale of a site or a street.

The street is more than a conduit for automobiles; it includes the entire width between buildings, including sidewalks, green space, and path systems of the public and publicly-accessible realms. Often the elements with the greatest impact on one’s experience of the public realm belong to the face of the private realm it presents to the street.

The resident of a live-work building, for example, might not even have to grab an umbrella to go downstairs to a ground level cafe before returning to her studio, protected from the rain by store awnings and from splashing cars by the lane of parked cars along the curb. Where a six-foot fence...
hides the houses backing onto an arterial and runs the length of the short path to the grocery store, one might be tempted to drive, even to purchase a litre of milk and a newspaper on a Saturday morning.

These behaviours are directly influenced by a number of urban design elements, each of which plays a part in reducing travel distances, increasing safety of pedestrian travel, and ultimately guiding the modal choices we make. Appropriate urban design will contribute to achieving the goals set out by any transportation master plan, and inclusion of these elements will influence other requirements such as necessary pedestrian widths. Table 1.1 provides examples of urban design elements and their impact on transportation behaviour.

Table 1.1: Examples of Transportation Impacts of Urban Design

<table>
<thead>
<tr>
<th>Urban Design Issue</th>
<th>Transportation Impact</th>
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<tbody>
<tr>
<td>Building Layout and Orientation</td>
<td>Continuous street walls define the street edge, delineate public space, facilitate way-finding and location of specific addresses.</td>
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<tr>
<td></td>
<td>Positioning buildings closer to the street reduces distances for non-motorized modes.</td>
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<td></td>
<td>Shared parking facilities and driveways allow for reduced parking requirements while minimizing conflicts between modes.</td>
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<td></td>
<td>Building shape affects the shape of the street.</td>
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<tr>
<td>Building Entrances</td>
<td>Location of entrances at grade and close to the sidewalk increases accessibility of the building for all users including those with reduced mobility.</td>
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<tr>
<td></td>
<td>Lobbies and overhangs at building entrances can act as waiting areas at transit stops and provide shelter for short term bicycle parking, provided steps are taken to ensure that security issues are addressed.</td>
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<td></td>
<td>Availability of open spaces creates social and pedestrian areas.</td>
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<td>Mixed-use buildings, mix of uses in adjacent buildings</td>
<td>Creates opportunities for a more balanced transportation demand, reduces actual parking requirements, creates opportunities for shorter trips, or more destinations accessed with a single motorized trip.</td>
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<tr>
<td>Building interface with the street</td>
<td>Awnings and arcades can provide sheltered waiting areas for transit passengers and parking areas for cyclists.</td>
</tr>
<tr>
<td></td>
<td>Transparency of walls increases pedestrian safety.</td>
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The extension of building into the street such as patio terrace, vendor display, etc. increase pedestrian interaction.

Provision of tree-cover and plantings

Tree-cover, benches, awnings and litter containers are much appreciated by transit customers and policies that encourage public and private sectors to incorporate these elements into site and street designs are economical approaches to supporting public transit.

Protects pedestrians and cyclists from adverse weather while reducing air pollution.

Provision of rest areas and benches

Improves environment for pedestrians by allowing those with mobility limitations to rest.

Function as waiting areas for transit passengers.

Need to be included in sidewalk width calculations.

Provision of on-street parking

Buffer between pedestrians and moving vehicles.

Creates active environment (busy street life).

Improves accessibility and convenience for motorists.

Sidewalk design

Appropriate sidewalk widths support access and use of adjoining properties, while poor design may discourage use.

Strategic texture and color can increase safety by highlighting potential conflict points.

Placement of street furniture should not detract from width of pedestrian right-of-way.

Pathway disposition, including mid-block connections

Appropriate pathway disposition decreases travel distances.

Strategically placed walkways can make transit use more attractive and should be incorporated to achieve walking distances to transit stops that conform to guidelines.

Lighting

Increases safety
2. REVIEW OF EXISTING CITY OF HAMILTON POLICIES

2.1 Current Roles and Responsibilities

Urban design is primarily the responsibility of the Department of Planning and Development. A number of other departments contribute actively to the creation and maintenance of urban design standards. Primarily, these are Public Works, Economic Development, and Public Health and Community Services.

2.1.1 PLANNING AND DEVELOPMENT

The Planning and Development Department is responsible for planning land development, property management and renewal. Its five divisions are as follows:

**Long Range Planning and Design** – includes the Heritage and Urban Design, and Official Plan subdivisions. The first is responsible for the creation and promotion of Secondary Plans including the Binbrook Village Community Core Urban Design Guidelines and the Hamilton Downtown Street Master Plans. The second is harmonizing the seven existing official plans in order to create a single new official plan. The last creates and monitors implementation of secondary plans and Vision 2020.

**Building and Licensing** – provides approvals for construction and enforces such codes as Zoning By-Laws of all former municipalities, the Property Standards By-Law, and the Mobile Sign By-Law.

**Development** – includes the Zoning By-Law Reform, and Community Planning and Design subdivisions; reviews and approves designs and development plans, as per the regional, official, secondary, and site plans and other municipal controls. This division also promotes and facilitates development through the provision of information regarding the processes involved in plan adherence and variation.

**Downtown Renewal** – motivates and ensures the Downtown Secondary Plan, streetscape plans, and Downtown Transportation Master Plan are applied, by acting as a single portal for all development requests in the downtown.

**Housing** The Housing Division manages the City of Hamilton’s social housing, and facilitates and funds the development of new projects. Appropriate integration of this housing is crucial to protect surrounding areas from blight. Furthermore, as the City has direct control over these properties through City Housing Hamilton, it can ensure their adherence to urban design requirements.

2.1.2 PUBLIC WORKS

The Public Works Department provides a range of services from waste-water treatment to traffic signal installation, administered by divisions including Capital Planning and Implementation (larger municipal projects) and Operations and Maintenance. This department is also responsible for environmental assessment processes.

A number of the divisions contribute to the maintenance of urban design standards through their visible presence on the street. These include Hamilton Street Railway (transit shelters and facilities), Water & Wastewater (drainage systems, stormwater drains), and Waste Management (public waste and recycling receptacles).
The Operations and Maintenance Division is directly involved in urban design initiatives as it is responsible for the creation, installation and maintenance of street amenities including trees and benches. The Division is divided into sections: Roads, Traffic, Parks Maintenance, Forestry, Beautification, and Cemeteries. While it does not plan the installations, and must conform to urban design guidelines established, it is directly responsible for the maintenance and development along city streets. Urban design issues are also sometimes addressed in the EA Master Plan process, for example neighbourhood traffic management plans.

2.1.3 ECONOMIC DEVELOPMENT

Economic development assists businesses with site selection and permit acquisition. It also liaises with Business Improvement Associations. Economic Development jointly oversees the Downtown Renewal Division with the Planning and Development Division.

2.1.4 PUBLIC HEALTH AND COMMUNITY SERVICES

Culture and Recreation is a division of Public Health and Community Services. In association with Public Works, this division oversees parks and associated recreational pathways, and trail systems. A number of the Official Plans of former municipalities, including Hamilton, foresee the planning and development of these systems such that they support pedestrian movements throughout the city. Culture and Recreation could also be responsible for any large public arts campaigns. The department has recently produced a Parks, Culture and Recreation Master Plan.

Public Health and Community Services also shares responsibilities with the Planning and Development Department for the Housing Department.

2.2 Review of Existing City of Hamilton Policies

A number of area specific policy recommendations related to urban design have been adopted since the amalgamation of the new City of Hamilton, including those contained in the streetscape plans for the downtown. Documents previous to the amalgamation also included a number of urban design policies and guidelines. These tend to be neighborhood specific, and address retail areas intended to be a community focal point or areas of particular historical value. More frequent are clauses not listed as urban design policies but have specific impact on urban at the street level. Almost universally for example, loading must be shielded from view.

2.2.1 POLICIES OF THE CITY OF HAMILTON

Binbrook Village.

The Binbrook Village Secondary Plan advocates development of design guidelines such as: “B.2.2.1 (n) The Community Core is to have street-oriented buildings and a pedestrian friendly environment”, as reiterated for residential areas:

B.2.2.3.6 [Binbrook Village] Residential Design Guidelines

d) To ensure ease of access for the pedestrian and the enjoyment of public streets and other outdoor spaces, a consistent level of streetscape design, incorporating such elements as appropriate paving, planting, fencing, lighting and signage shall be encouraged.

e) Buildings should have a strong, pedestrian-friendly street presence.
f) Mitigation of the intrusion or garages and car parking shall be encouraged to foster streets as interactive outdoor space for pedestrians.

k) driveways shall be encouraged to be paired, where appropriate.

l) Direct access to individual dwelling units along arterial or collector roads should be limited by utilizing alternative development designs including common driveways and rear laneways.

m) reverse frontage lotting patterns and the use of acoustical walls adjacent to arterial and collector streets shall be discouraged.

Commercial Pedestrian Circulation opens with the following introduction: “B.2.2.3.7.1.2 Pedestrian activity is an important element of the success of the Community Core. Urban design plays a key role in facilitating and encouraging pedestrian activity”. Specific recommendations are also detailed.

Although the village does not yet have public transit, it is recognized as a central element to the community’s development:

B.2.2.3.12 Public Transportation

Good transportation is an asset to all communities.

a) Council shall encourage the provision of public transportation facilities to service Binbrook Village at such time as the need and economic feasibility is demonstrated.

b) Council shall ensure that the design of Binbrook Village will provide for the ability to accommodate future public transportation within the village.

c) Neighborhood design should minimize pedestrian street walking distance to transit service.

d) The transit system must be integrated into the community design and be a key component of the community centre, neighborhood nodes and other community focal points.

e) The street system within Binbrook Village must provide for the efficient circulation of transit vehicles in a manner that effectively links the activities of residents.

Hamilton Downtown Streetscape Master Plan, New City of Hamilton

The Hamilton Streetscape Master Plan seeks to create a “safe, attractive, pedestrian friendly and green public environment”, which will contribute to the city’s economic and social development. Its specific goals include:

- Enhance the pedestrian amenity and civic image of the downtown core
- Strengthen linkages to the waterfront, the escarpment, to neighbourhoods and other key areas of the city

Streets targeted include Bay Street, James Street, John Street, Cannon Street and Hunter Street (‘mobility streets’ that carry significant through-traffic); and Hughson Street and King William Street (‘traditional streets’ that act as pedestrian connectors). Each type of street will see the inclusion of urban design elements including public art, plantings and streetscape furnishings to “create a new
image and interest in the street life” and “animate and add pedestrian scale to the street as well as providing separation from the busy roadway”. Paving elements highlight the pedestrian areas of the street, and a way-finding system helps pedestrians locate and travel toward their destination in the downtown core, waterfront and escarpment. Sidewalks will be widened, and the spaces will be made fully accessibility for all age and user groups with the implementation of standards such as Urban Braille.

One challenge that has been raised in relation to the streetscaping plans is that some elements that impact the road right-of-way may require a class EA. However, most elements such as textured cross-walks could be done without an EA, or through a schedule ‘A’ EA. Some larger changes that reduce lane widths or change the function of the roadway would fall under Schedule ‘B.”

**Putting People First: The New Land Use Plan for Downtown Hamilton**

This plan contains a section devoted to urban design. Following an explanation of the objectives it sets for harmonious and positive integration of development, it details the following policies:

**2.4.4.3 General Urban Design Policies**

a) New development in the Downtown, and redevelopment, will address the urban design principles in this plan, and particularly, the following:

- Achieving a comfortable and intimate pedestrian environment;
- Ensuring that new development is compatible with existing adjacent structures and streetscapes in terms of design, scale, massing, setbacks, height, integration with the built form, and use;
- Eliminating street level parking lots and vacant properties along major streets;
- Creating a sense of place through the incorporation of public art and interpretive media;
- Providing “eyes on the street” and an interesting pedestrian experience by ensuring that the ground floors of all buildings have windows and doors opening onto the street or public laneways where appropriate. Entrances are to be provided at grade;
- Ensuring barrier-free access from grade level;
- Eliminating expanses of blank walls along street frontages;

Additionally, the plan stipulates that a resource text will illustrate the concepts advocated, and a peer-review committee will be struck to provide guidance and approval to plans brought forward. Location specific concepts are then detailed.

Urban design concepts also percolate throughout the document, in consideration of heritage and a promotion of the urban environment. For example, within the urban commercial policies:

**2.4.5.2 General Commercial Policies**

b) Except where noted in specific policies, all new development will be oriented toward the surrounding streets with at grade pedestrian entrances onto the sidewalks.
c) Vehicle-oriented land uses such as gas stations and other drive-through services or other uses normally classified as highway commercial will not be accommodated.

d) Development in the Central Business District shall be built at an urban form of development and shall include:

- A relationship between the building and the street so that the development contributes to the overall built form in the downtown;

- Creation of positive public space between the building and the street(s) on which the building is located;

- Where retail uses are proposed, direct connection to the street from the retail use in the building;

- A clearly defined entrance to the building from the street.

e) Buildings will endeavor to provide pedestrian access on the ground floor at the street level and will locate loading and service entrances at the rear.

2.2.2 POLICIES OF FORMER MUNICIPALITIES

Official Plan of the Region of Hamilton Wentworth

While this regional plan does not deal with site-level considerations specifically, the ‘Regional Development Pattern’ section regarding urban areas does call for specific forms of urban development and the identification of focal nodes and corridor and encourages the local development of “community design”, measures supportive of livelier streets.

3.1.1 Compact Mixed Use Form

A compact higher density urban form, with mixed use development in identified Regional and Municipal centers and along corridors, best meets the environmental, social and economic principles of sustainable development.

Mixed forms of development within an Urban Area is preferable to widespread, low density residential development and scattered rural development, because:

- efficient an affordable public transit systems can be established;

- effective community design can ensure people are close to recreation, natural areas, shopping and their workplace; and,

- a compact community makes walking and bicycling viable options for movement.

3.1.1.6 Require each Area Municipal Plan to identify one or more Mixed Use Activity Corridor in the Urban Area, […] Targets for the density, intensification and population/employment ratio for each center and corridor and the permitted uses will also be identified. Each center of corridor will:

a) have a range of residential, commercial, retail, institutional, and related employment opportunities which is appropriate for its size and function;
b) be relatively self-contained to reduce the need for commuting;

d) be easily accessible to public transit and provide for good internal pedestrian movements

Town of Ancaster Official Plan

Although the plan has no overall design guidelines, it does indicate that:

4.5.4 The Village Core area shall be one of the focal points for Commercial development and activity. In comparison to other areas designated Commercial by this Plan, it will also constitute the main pedestrian-oriented retail shopping area in the Town.

Policies specific to the Village Core area are dealt with in Subsection 5.4, and concentrate on signage, view planes and corridors, landscaping, and screening of specific uses.

Town of Dundas Official Plan

The official plan includes “Section 2.5 - Urban Design Guidelines”. More specifically, “2.5.4 Streetscapes and the Public Realm”, which suggests the consideration of alternate development standards which would promote a more pedestrian friendly environment.

“Section 3 – Commercial” includes goals of pedestrian supportive design, citing their impact on automobile trip demand:

3.1.5 Neighborhood Commercial Policies

3.1.5.1 To reduce car trips and enhance residential amenities, convenience food stores, variety stores, banks, drug stores, medical offices and other personal services will be permitted to a limited extent in residential neighborhoods to serve the daily retail needs of surrounding residents

3.4 Employment/ Residential Mixed Use

3.4.2 Objective

3.4.2.2 To foster a more compact form of development consisting of street-oriented and pedestrian-supportive building forms

3.7 Residential commercial mixed-use

3.7.2.3 To encourage this area to evolve from its present auto-oriented form into a more pedestrian, street-oriented node.

One of the objectives of the Transportation section is to “promote a more transit supportive urban environment.” The section goes on to detail the inclusion of pedestrian walkways, but defers specific urban design questions to section 2.5 described above.

Flamborough Official Plan

Flamborough specifically anticipates the need for urban design guidelines, and stresses their importance to pedestrian movements:
A.3.7 Both Hamilton Street, and Dundas Street between Hamilton Street and Highway No.6, are anticipated to be reconstructed. In anticipation of this, the Town will prepare Urban Design Guidelines to assist with the Design and implementation of the road reconstruction and with future local initiatives such as Business Improvement Area Projects. Urban design Features will include consideration of street landscaping, shared accesses, pedestrian safety and planted medians.

Under the designation of “Urban Commercial”, a mixed use area, allowing for accessory residential apartments, sensitivity to context, screening of nuisances, grouping of parking, and the minimization of conflicts are addressed. The potential benefits of these forms of development, more specifically economies of space, are not carried through in requirements as shown by the mixed use, indicating that these benefits may not yet be fully understood.

A3.2.3 Wherever possible, regard shall be given to the grouping of permitted uses in malls or plazas so as to achieve the sharing by them of a limited number of access points; mutual driveways and parking; and the co-ordination of landscape design with respect to adjacent properties and development. In such cases, the specifics of driveways and parking are to be addressed in Site Plan Agreements. Parking areas shall be capable of supplying mutual owners of such facilities with parking spaces sufficient to meet the regulations pursuant the zoning By-Law.

A.3.2.9 The design of all Urban Commercial sites shall be in keeping with the character of the surrounding development. The following principles shall apply to all Urban Commercial development and redevelopment:

i) landscaping shall form an integral part of all commercial development and screening and buffering shall be provided between commercial and other adjacent uses, more particularly residential uses and the parking areas of the commercial properties;

iii) loading and unloading areas shall be to the extent possible, located at the rear of all buildings and screened from view;

iv) adequate off-street parking facilities shall be provided for all permitted uses, access points to such parking shall be limited in number and designed in a manner that will minimize the potential conflict between vehicular and pedestrian traffic; and,

(v) encourage the development of rear-block parking areas [i.e. to located parking behind buildings so as to create a more pedestrian friendly street environment].

A3.6 Mixed Use

A3.6.6 Residential and commercial uses may be permitted in the same building in a Mixed Uses Area provided that parking areas shall be calculated separately for both the commercial and residential components of the project in a sufficient number to satisfy the regulations set out in the Zoning By-law. A private use area for the residential component of the project shall also be provided.

Township of Glenbrook

Binbrook Village, for which an urban design plan has been approved by the new City of Hamilton is part of the Township of Glenbrook. Secondary plans of this former municipality include urban design guidelines, generally with the goal of creating a “human-scale” pedestrian environment.
Rymal Road Secondary Plan (Amendment 36, B.3) has similar urban design considerations to Binbrook Village, including streetscaping guidelines.

**City of Hamilton Official Plan**

This plan recognizes the impact of design in creating a space amenable to pedestrians. Prioritizing their movements is undertaken not only by reducing conflicts, but was at one point centered in the creation of an alternate network to the street. Around Jackson Square, a separate pedestrian network was to be located 15 feet above ground. Planning for this network was however discontinued in the Downtown Plan. It was felt that the creation of an alternate network for pedestrians above grade fostered the degradation of the street-level environment, as there were no longer as many “eyes-on-the-street”.

**Subsection A.2.8 Central Policy Area**

2.8.7 To facilitate the function of the primary uses in the CENTRAL POLICY AREA, Council will investigate to determine the most effective means of accommodating pedestrian and vehicular circulation and general accessibility to and within the AREA. In this regard, Council may give preference to pedestrian movement over vehicular circulation in specific areas. Accordingly, the investigation will consider, but not be limited to the following:

i) The segregation of vehicular and pedestrian traffic by such means as grade separation of pedestrian and vehicular traffic along and across major roads;

ii) The feasibility of creating pedestrian malls and a network of walkways between and within Commercial areas of concentration;

viii) The extension of truck loading facilities below grade, and the sharing of common loading facilities for various adjacent developments where loading at street level can be eliminated or limited; and,

**Former policies for Jackson Square, superceded by the Downtown Plan**

**Subsection A2.9.3 – Other Policy Areas**

2.9.3.2 xi “Priority should be given to providing a network of parks and pathways, throughout the AREA and linking the Central Policy Area, to give pedestrians and cyclists a convenient way to move about;”

2.9.3.10 Further to Policy A.2.8.7 i), Council will require provision for an elevated pedestrian walkway system (“+15”) emanating from Lloyd D. Jackson Square, connecting adjacent future development with the Square. To implement the pedestrian system, it is the intent of Council that:

i) Links in the system will be constructed when new development occurs to the north, south and west of Lloyd D. Jackson Square, in the area shown as SPECIAL POLICY AREA 12 on Schedule “B-1”. The system will be integrated with the transit system;

ii) Site Plan control will be employed to implement the “+15” pedestrian system for any development or redevelopment to which the system is intended to connect. Provisions will be made for allowances in building design to facilitate the walkways at upper levels and to ensure the integration of the system with ground level pedestrian
walkways. Appropriate landscaping features and other amenity features will also be incorporated;

iii) The nature of the “+15” pedestrian system will be determined by design guidelines specifying matters to be considered in implementing the system; and,

iv) The City will enter into any agreements, where deemed appropriate, with development or redevelopment proponents to realize the above guidelines.

Official Plan City of Stoney Creek

While Stoney Creek encourages pedestrian amenities in the downtown, it allows the creation of blind walls along arterials, decreasing natural surveillance and the number of opportunities to seek help along the street for pedestrians. The study of crime prevention through environmental design has observed that these walls reduce safety of transit patrons and the users of non-motorized modes.

1.2.19 “Where direct access is not permitted upon arterial roads, residential development may be permitted on reverse frontage lots subject to special building setbacks, landscaping and screening requirements.”

2.2 Downtown Policies

b) promote the amenity of the sidewalk through the uniform design and distribution of street furniture, information kiosks, receptacles, trees and planting boxes and public and private signage lighting;

e) encourage the upgrading of existing pedestrian linkages and/or the implementation of new linkages and/or the implementation of new linkages between the Downtown and nearby residential areas. In this regard, open space areas adjacent to existing water courses shall be utilized wherever feasible.

City of Hamilton Site Plan Guidelines (September 2003)

The City of Hamilton recently produced Site Plan Guidelines that contained a number of directions and principles related to urban design. The Guidelines are intended to encourage a high quality of building and site design across the City and to assist applicants with the site plan approval process. The Guidelines contain a number of recommendations on site design elements that impact transportation and accessibility including; built form, public realm and streetscape, safety and security, barrier-free design and urban Braille, site circulation, landscape design, loading and storage and noise attenuation.
3. SUPPORTING INFORMATION AND ANALYSES

3.1 A Heritage-Rich City

The historic layering of urban design in Hamilton follows patterns similar to those of many other cities of the same age. The downtown core features institutions – public and private – of architectural significance, once oriented toward avenues and linear parks. Overlaid upon this are a number of modern constructions, including the Jackson Square complex, an initiative that tends to segregate pedestrians from the street. The combination of buildings designed to serve pedestrians in a car-free environment and buildings which remove the pedestrian from the street such as those conforming to earlier plans for Jackson Square has created conflicts in the city – something planners are attempting to mitigate through streetscaping initiatives. The presence of historic contrasts is seen as an opportunity to highlight the city’s heritage, and spur its economic revitalization.

The areas immediately adjacent to the central area have often retained their residential flair. Historic neighbourhoods such as Corktown and Durand are of the human scale that supports non-motorized mode and transit, while regulatory frameworks permit the inclusion of commercial or other uses, creating opportunities for destinations within walking distance. More recent developments within these neighbourhoods, particularly of mid and high-rise residential buildings, have not always been successful in contributing to the interface between built form and the street. These neighbourhoods have maintained transit-supportive densities.

A number of other historic and ‘character’ roads have been the object of particular design study and treatment. Residents frequently express concern regarding the effects of automobile use on their particular qualities. The recommended use of these streets by non-motorised modes could therefore not only raise awareness of these areas, but also effectively contribute to the city-wide transportation system while preserving their particular character. Streets with great scenic amenity such as Hess Village already accommodate significant recreational non-motorized traffic, as reduced automobile speeds, appropriate street maintenance and visual amenity create conditions conducive to cycling, walking and transit.

Many of the former municipalities now part of Hamilton, such as Ancaster, feature historic central areas – town centers still compact enough to evoke traditional designs of main streets, and act as focal commercial areas for their communities. Often these areas have also been the focus of urban design regulations, with the goal of preserving their historical integrity. These core areas are increasingly understood as an economic asset.
One of the themes that emerged from the public consultations is that neighbourhoods need to develop identities and become more people-oriented. It is felt that if drivers know they are entering a neighbourhood, they will be more aware of people on the street (i.e. drive safer) and where business are present.

### 3.2 Increasing Development of Suburban Communities

Beyond these historic nodes, development in the latter half of the twentieth century has been characterized by inwardly-facing single-use residential areas, strip commercial developments along broad arterial roads, and more recently large format retail. Circuitous road networks significantly lengthen routes for non-motorised travel, further complicated by the absence of sidewalks or pedestrian amenities in many areas.

This form of development has been prevalent in many of the subdivisions developed over the past two decades. Hamilton’s relative proximity to large employment Centers in the GTA has resulted in an increasing proportion of residents who choose to commute to these areas and live in Hamilton. Hamilton is a net exporter of employees, which is felt to be an unsustainable situation by many people.

Unfortunately, these areas carry with them problems typical to most suburban or single-use urban settings: destinations are distant and dispersed, making transit service difficult and walking unrealistic. Even short trips are often avoided as limited sidewalk activity at times aggravated by large banks of fence or hedge create an environment uncomfortable to the pedestrian or cyclist. The requirement of the automobile for almost any trip purpose in the absence of local services such as dry-cleaning or convenience stores discourages the further development of local services, easily bypassed for larger centers.

In these areas, the public realm is often reduced to functional streets and community institutions such as schools. Urban design has been reduced to merely the provision of safe walking paths to these facilities.

### 3.3 Transit supportive development without transit?

For many areas in the City of Hamilton, transit is not yet a reality. Local transit is limited to the more densely populated areas, usually closer to the downtown core. Intercity transit generally focuses on the larger urban centers, and connections may not be available via transit from the stations to
desired destinations in Hamilton. Areas such as Ancaster and Flamborough have limited or no transit, with even more reduced transit service on week-ends.

Although natural barriers such as the Niagara Escarpment make non-motorized modes impractical for certain longer trips and impossible for those with mobility restrictions, non-motorized mode splits within each of the former municipalities indicate that their populations are not averse to sustainable modes. In 2001, the shares of trips made using these modes within Dundas, Hamilton (outside the central area), and Stoney Creek were at 10%, 10%, and 12% respectively, while in the downtown, these modes captured 34% of all trips. Unfortunately, outside of the downtown core, these shares have fallen considerably since 1986, from 18%, 16% and 20% (Transportation Tomorrow Survey, 2001).

A number of older commercial areas that were once central nodes to smaller communities have witnessed increased delays and pressure on parking supplies, associated with greater traffic and a greater proportion of motorized trips. In order to prevent further reductions in these mode shares, improvements need to be made to foster a return to the use of non-motorized modes to access these areas.

Hamilton’s population is aging. Between 1996 and 2001, the number of persons over 75 years of age increased by 21% (Statistics Canada). Aging local populations will increasingly be reliant upon non-motorised modes and public transit to fulfill their daily needs, and should not be forced to leave their communities because of a lack of access. Their communities must therefore provide the services and amenities necessary to maintain their quality of life.

While certain nodes have often been selected as areas for intensification, implying possible future densities high enough to support inter-node transit, others are simply too removed for transit to become feasible. Never the less, even rural villages will still benefit from pedestrian supportive design because this increases their level of amenity, and will offer local opportunities for social activities. Planning areas so that these modes can easily be integrated or are already available can significantly reduce the capital cost associated with new service demands, as more compact mixed-use areas will allow not only for more efficient service but also increase the likelihood that services are locally available.
4. REVIEW OF PRACTICES IN OTHER JURISDICTIONS

4.1 Ontario

Transit Supportive Land Use Planning Guidelines, Ontario Ministry of Transportation and Ministry of Municipal Affairs

Comprehensively detailing the impact of choices in urban form and building layout as they relate to transit, this guide also presents issues such as the disposition of parking lots and the creation of continuous street frontages in the promotion of transit supportive environments. Some of the major principles of transit oriented urban design, include:

- **A grid network instead of a discontinuous road network.** Roads laid out on a grid with close spacing of arterials and collector roads support the inclusion of uniformly distributed transit routes, servicing a greater proportion of all destinations. Grid networks also disperse automobile traffic and reduce congestion by offering a greater number of possible and more direct routes. The grid can be modified slightly to permit the development of local road patterns, moderating through-traffic flows in residential neighbourhoods without reducing functionality.

- **Street-oriented uses along arterial roads.** Developing street-oriented uses along arterial roads creates a more attractive and safe environment for pedestrians, encouraging walking and transit use. Reverse-lotting and the inclusion of large parking lots in front of buildings that reduce access to and distance activities from the sidewalk should be avoided.

- **A mix of higher density uses along arterial roads,** including retail, residential employment, entertainment and institutional uses. Compact, mixed use development along arterials will encourage walking, cycling, and transit use by reducing trip distances and encourage more balanced use of existing networks in all directions and throughout the day. This development pattern is reminiscent of the commercial “main streets” which developed in both large and small urban areas before the automobile became commonplace.

- **Improved access between arterials and the interior of blocks.** While inward-looking subdivisions with a limited number of entry roads from surrounding arterials discourage through-traffic, their street patterns can make it difficult for transit to provide convenient service or for pedestrians to walk from the interior of a block to bus stops located along arterial and collector roads. Designing a subdivision so that a larger number of local roads intersect directly with the arterial network increases safety, convenience and efficiency. More frequent intersections along arterial roads, coupled with an overall grid system of roads, will allow buses to service a larger area and provide more direct pedestrian access to the transit service. In existing areas, access can be improved by providing mid block pedestrian walkways.

**City of Ottawa Official Plan**

Ottawa has included in the Official Plan a design strategy (2.5.6) that recognises the contribution of the private sector in the creation of attractive city streets. It considers incentives, design guidelines, and zoning specifications as tools to encourage good urban design at the scale of individual developments. Neighborhood specific community design plans will detail specifics along main streets and within recognised “urban villages”.

City of Toronto Official Plan

An entire section in Toronto’s Official Plan is dedicated to “Transportation Change and Urban Design”, including a campaign that promotes land use development and urban form that lead to fewer and shorter trips with streets design to encourage walking and cycling.

Section 3.1 the Built Environment is a detail section that contains urban design driven policies, address treatment of the public realm, built form both at a large and small scale, public art, and heritage conservation. Most notable among the policies is an award for urban design that promotes and recognizes architectural and urban design excellence within its city.

City of Toronto Urban Design Handbook

Complementing the City of Toronto’s Official Plan is an Urban Design Handbook that provides additional guidance and direction for the implementation of policies set out in the Official Plan. The Handbook provides a plethora of physical examples that illustrate directions both in diagrammatic and picture form. Major topics addressed in the Handbook include locations and organization of buildings relative to streets and open spaces; building massing; and comfortable pedestrian environments. Urban Design guidelines related to transit orientated built form include improving pedestrian access and ease of movement in the city, through direct access to public transit, consolidation of parking and loading facilities that support densities that can support public transit, and discourage single-occupancy vehicle use.

Area specific urban design guidelines are also in use throughout the city. Area specific guidelines are generally the result of an in depth urban design charrette. The City, staff from various departments, residents, and area stakeholders work together to develop an overall vision for the area, and guidelines that shape the physical form agreed upon. Both the City of Toronto and the City of Vancouver have had considerable success with this process.

City of Kitchener Urban Design Guidelines and Standards

Kitchener has developed an exhaustive set of Urban Design Guidelines and Standards that range from public realm improvements; to city street improvements; to site design; and heritage conservation districts. In the City’s Site Design section, some of the more notable policies include equal emphasis on pedestrian and vehicular circulation; securing access to light for maximum solar access as well has micro climate issues including wind and sun.

The City of Kitchener has undergone extensive urban design for the redevelopment of its downtown core including a lengthy public participation process that resulted in concrete vision for major arterial streets.

Crime Prevention through Environmental Design, Peel Region CPTED Committee

Crime prevention through environmental design is increasingly advocated within urban design circles. Based in the idea that certain physical arrangements may prevent “anti-social” or even criminal behaviours, this movement advocates the strategic placement of buildings and amenities to reinforce natural surveillance, access control and territorial limitations. These three elements must be balanced – while a storefront window allows for surveillance of the street, the pane of glass clearly denotes the limit of public space and limits access to easily controllable doors. Doors should be visible not only to mark the transition from public and private space, but also to increase the feeling of security related to the availability of places to seek help if needed.
4.2 Rest of Canada

Vancouver

Vancouver has a many urban design policies, often subject or area specific. They range from Drive-In Restaurant and Drive Through Service Guidelines stipulating, “Drive-in restaurant or drive-through service should not be permitted in a pedestrian-oriented commercial area”; to Central Area Pedestrian Weather Protection guidelines that describe how and where awnings should be provided for rest areas. Vancouver is also currently creating both a streetscape design manual, and a public realm plan for the downtown.

Calgary

The Calgary Plan, a Municipal Development Plan, includes consideration for urban design in both the ‘Life in the City’ and ‘Life in the Downtown’ sections. In the former, the role of urban design in the preservation of safety, beyond simple contributions to place-making. In the latter particular attention is paid to problems associated with high-rise office areas, such as sunlight:

One of the most crucial environmental considerations in an area as concentrated and built-up as downtown is the design of public space.

Large building masses and interconnecting +15 bridges have significant effects on the environment. For example, they can reduce sunlight and amplify wind speeds to unacceptable levels. These impacts can be mitigated through sensitive design and choosing appropriate locations. (3-4.2)

This leads to policies focusing mostly on minimum standard of sunlight and required consideration for the pedestrian environment.

Guidelines for the Promotion of Sustainable Modes Through Site Design, Canadian Institute of Transportation Engineers (Publication forthcoming)

Recognizing the great impact of site design on the amenity and perceived availability of sustainable transportation modes, this forthcoming document provides guidelines regarding the design of non-residential sites. Considerations include built form, building location within a site, placement and treatment of paths, treatment of parking areas and the provision of amenities and landscaping. The impact of surface treatments on safety and attractiveness of modes as well as issues of weather protection and changing facilities are also addressed.

4.3 United States

City of Portland, Oregon

The City of Portland has undergone a major change in how it thinks about urban design and city building since the mid 1960’s. Portland residents realize that sprawl had a deleterious effect on their quality of life, that transportation systems and land use shaped their environment dramatically. Considerable changes in how the city is designed and built have led to the creation of a pedestrian-friendly downtown and the prioritization of rapid transit over expressways.

One of Portland’s most notable initiatives was the introduction of an ‘Urban Growth Boundary’. The City of Portland recognized that sprawl was both costly in economic terms of the delivery of both hard and soft services, but also from an environmental aspect. Future urban development must
occur within the Urban Growth Boundary, while development outside the boundary must be for rural use only, creating a belt of greenery around the city.

The city has incorporated urban design within its Office of Transportation, realizing that everyday road construction, repair, and maintenance must reflect the city’s goals in the development of non-motorized transportation. Urban design guidelines for the street are therefore guidelines included in the Pedestrian Master Plan and Bicycling Master Plan, secondary plans to the Transportation Systems Plan. Public involvement is required at all stages of development, implementation, and monitoring of these policies.

The Pedestrian Design Guide, published by the City Engineer and appended to the Pedestrian Master Plan follows these principles for pedestrian design:

The following design principles represent a set of ideals which should be incorporated, to some degree, into every pedestrian improvement. They are ordered roughly in terms of relative importance.

1. The pedestrian environment should be safe. Sidewalks, pathways and crossings should be designed and built to be free of hazards and to minimize conflicts with external factors such as noise, vehicular traffic and protruding architectural elements.

2. The pedestrian network should be accessible to all. Sidewalks, pathways and crosswalks should ensure the mobility of all users by accommodating the needs of people regardless of age or ability.

3. The pedestrian network should connect to places people want to go. The pedestrian network should provide a continuous direct routes and convenient connections between destinations, including homes, schools, shopping areas, public services, recreational opportunities and transit.

4. The pedestrian environment should be easy to use. Sidewalks, pathways and crossings should be designed so people can easily find a direct route to a destination and delays are minimized.

5. The pedestrian environment should provide good places. Good design should enhance the look and feel of the pedestrian environment. The pedestrian environment includes open spaces such as plazas, courtyards, and squares, as well as the building facades that give shape to the space of the street. Amenities such as street furniture, banners, art, plantings and special paving, along with historical elements and cultural references, should promote a sense of place.

6. The pedestrian environment should be used for many things. The pedestrian environment should be a place where public activities are encouraged. Commercial activities such as dining, vending and advertising may be permitted when they do not interfere with safety and accessibility.

7. Pedestrian improvements should be economical. Pedestrian improvements should be designed to achieve the maximum benefit for their cost, including initial cost and maintenance cost as well as reduced reliance on more expensive modes of transportation. Where possible, improvements in the right-of-way should stimulate, reinforce and connect with adjacent private improvements.

Tri-Met, the local transit authority, has also published the Planning and Design for Transit Handbook: Guidelines for implementing Transit Supportive Development. This guide includes a
section on each of land use and transportation plans, site and building design and the design of bus-related facilities, recognizing the importance of each scale in the promotion of their transportation mode.

Smart Growth America

Smart Growth America is a coalition promoting urban growth that protects farmland and open space, revitalizes neighbourhoods, keeps housing affordable, and provides more transportation choices. The coalition defines Smart Growth as urban development that helps achieve goals of “neighborhood livability, better access less traffic, thriving cities suburbs and towns, shared benefits, lower cost and less taxes, and keeping open space open”.

The coalition has 10 strategies to achieve smart growth, including the following:

- **Mix land uses.** New, clustered development works best if it includes a mix of stores, jobs and homes. Single-use districts make life less convenient and require more driving.

- **Take advantage of existing community assets.** From local parks to neighborhood schools to transit systems, public investments should focus on getting the most out of what we’ve already built.

- **Foster “walkable,” close-knit neighborhoods.** These places offer not just the opportunity to walk—sidewalks are a necessity—but something to walk to, whether it’s the corner store, the transit stop or a school. A compact, walkable neighborhood contributes to peoples’ sense of community because neighbors get to know each other, not just each other’s cars.

- **Strengthen and encourage growth in existing communities.** Before we plow up more forests and farms, we should look for opportunities to grow in already built-up areas.

- **Provide a variety of transportation choices.** People can’t get out of their cars unless we provide them with another way to get where they’re going. More communities need safe and reliable public transportation, sidewalks and bike paths.

- **Encourage Citizen and Stakeholder Participation in Development Decisions.** Plans developed without strong citizen involvement don’t have staying power. When people feel left out of important decisions, they won’t be there to help out when tough choices have to be made.
5. POLICY OPTION ISSUES

5.1 Elements of Urban Design

Choice of path to reach a bus stop, access to vehicle parking, or walking to a park are affected by the functional relationship of buildings to their environment not only at the scale of the building itself, but also at the scale of an entire site, or an entire segment of the street, and must be considered at each of these scales.

Different types of land-uses will take different forms and have different transportation requirements. While the shape of buildings and activities within them vary, overall characteristics of the modes that allow transportation do not. This means that increasing amenity for Despite these differences in application, overall principles and objectives guiding urban design should remain constant. All modes should be considered on a level footing, access should be guaranteed for all users and safety and security should always be a priority.

Urban design can be understood as framed by built form, context, circulation, and interaction. These four elements are interrelated, and should be mutually supportive.

5.1.1 BUILT FORM

Size, scale, and massing of the buildings that line a street all contribute to the experience of someone travelling along it. Building location, alignment, and entrance treatment affects the distance to be travelled, and the choice of travel path. Urban design principles relating to built form that have been put forward elsewhere as a means of promoting a more balanced transportation system include the following:

- Orient buildings toward street to enhance the public realm. Do not create long stretches of wall without access and visual amenity such as window and door openings, and pedestrian scale details, banners, and designs.
- Ensure that main entrances are immediately identifiable and located on the street. Each building has a clear and identifiable street address. This reduces travel distances for pedestrians.
- Encourage mixed-use development at the street level, activity, time of day of use, and economic appeal. Locate uses with highest level of activity at major transit nodes, locate complementary uses next to each other.
- Consolidate and minimize conflict points such as driveways and loading zones along the street.
- Limit surface parking in front of buildings, instead locating parking to the rear where feasible;
- Consolidate parking, preferably in structured or underground lots that allow other ground-level uses.
- Consolidate parking meters and other signage to reduce visual clutter.
- Include provisions for major transit stops (e.g. Gore Park) to act as meeting and congregation points
• Provide weather protection such as canopies, awnings or colonnades along the outer edges of the building for pedestrians, transit users and cyclist parking.

• Ensure that buildings do not shade the street at all hours of the day.

5.1.2 CONTEXT/INTEGRATION

New buildings should be designed to fit their context, by respecting the scale of adjacent buildings. As well as reinforcing the consistency of the street edge, patterns in building types along the street facilitate the creation of a local identity both among an area’s users and for its visitors.

Consistency of certain predominant characteristics such as pitched roofs with dormer windows, brightly coloured architectural elements, or the use of a certain building material, for example, will allow the creation of recognisable neighbourhoods character. In already built areas, new construction may be able to recall these thematic elements without having to copy them identically.

Harmonious integration of new and old buildings in their built environment and the preservation of neighbourhood character can be promoted by the implementation of the following policies:

• Create continuous, well-defined street edges, to better enclose travel paths and demarcate private space. These can be regulated by the use of setbacks and build-to lines.

• Recognise architectural or land-use patterns central to the area’s character. Require their inclusion in new construction through guideline development and enforcement in the building permit process, as is the case for most urban cities.

• Provide, when appropriate, landscaped area and other street edge treatment at the interface of buildings and streets.

5.1.3 CIRCULATION

The street is the link between many destinations, shared by many users, using a variety of modes. These users should all be able to coexist with a minimal level of conflict. It should also be noted that policies that seek to put pedestrians and cars on a level laying field also supports transit use where service is available. Issues to be considered include the following:

• Plan all circulation networks concurrently, including pedestrian, cyclist and transit modes. Minimizing driveway widths to that which is required for turning only, curb cuts, conflict points. Design roadways to be safe for all modes by including sidewalks, bike lanes and turning facilities, lane widths appropriate for transit vehicles.

• Universal accessibility for pedestrians.

• Design new street and transportation networks to be geometric patterns, facilitating orientation and minimizing un-necessary travel distances. Re-establish geometric patterns through the inclusion of mid-block connections for pedestrians and cyclists.

• Minimize the length of travel paths for active transportation modes; encourage mid-block crossings and through-block connections where warranted. Provide signalised pedestrian crossings at as many transit stops as feasible and required.
• Provide appropriate lighting and visibility along active transportation routes. Avoid locating paths in areas that have no natural surveillance. Lighting for sidewalks, pedestrian areas and parking lots should be placed so that it is not shaded by trees or awnings.

• Maintain a clear and safe surface along paths for active transportation modes. Hard surfaces with appropriate drainage will allow, kept clear of debris such as leaves, ice and snow will extend the time when active modes are feasible. An appropriate width of the travel path should also be kept clear of furniture, street activities or other elements such as sandwich board advertisement.

• Consider a policy of selected winter maintenance, prioritized by pedestrian needs. For example, clear sidewalks in front of transit stops and through key public pedestrian paths/sidewalks. It has been suggested that clearing of snow from sidewalks on secondary roads that carry a significant number of pedestrians, in advance of clearing the vehicle lanes, would be a clear demonstration of the community's commitment to modes other than the private auto.

• Provide visual cues regarding user priority at conflict points, such as the continuation of walkway pavement across driveways. Use texture and color to highlight conflict points.

• Frontages and main entrances should be directly accessible from pedestrian walkways or sidewalks: ideally, pedestrians should not be required to cross a driveway or parking lot to access a building.

• Provide parking for all modes of transportation. Spots for persons with mobility restrictions, cyclists, and high occupancy vehicles should be located closest to the building entrance. Short-term parking should also be located more conveniently than long-term parking. Include short-term cyclist parking at each building entrance.

• Provide protected pedestrian walkways through parking facilities; orient aisles to minimize the number of automobile lanes to be crossed by pedestrians.

• Plant trees to provide shade along active transportation routes. Provide weather protected rest areas with drinking fountains for active modes.

5.1.4 INTERACTION

The street is the focus of many activities that may directly or indirectly foster interaction. These may include food vendors, children playing, or people waiting in line at a box-office. These activities are not necessarily the components of a trip, but need to be planned for so that the transportation function of the street is neither hindered by nor interfered with the other activities of the street. The active street life these interactions foster are quite desirable – not only surveillance and services available to those travelling are increasing; the resulting vibrancy contributes to a better quality of the urban environment. Policies to guarantee that the social interaction and transportation functions of a street are mutually beneficial include:

• Promote appropriate pairing of facilities and services to reduce the number of trips needed to meet daily needs.

• Locate parking facilities centrally to uses that occur at different time periods (cinema and office buildings for example).

• Encourage structured parking with a variety of ground level services to maintain street activity.
• Encourage on-street parallel parking or cycling lanes adjacent to the curb to create a buffer between travelling cars and pedestrians. These facilities should however take into consideration transit operations, in order to avoid additional conflicts.

• Provide congregation points and rest areas adjacent to and in clear view of the walkway, to encourage stopped pedestrians to leave the path while maintaining natural surveillance.

• Encourage street vendors to provide services that animate the street, but locate outside of the main area of the travel paths. Vendors can also provide animation and services along mid-block throughways.

• Encourage visual and physical permeability of the street wall to pedestrians, to increase safety and opportunities for surveillance, and provide an interesting street landscape.

• Discourage drive-through vending, as it creates pollution, is land inefficient and increases the number of conflict points between pedestrians and vehicles.

• Include landmarks and focal points as meeting places and contributors to location identification.

• Highlight transition points between networks of different scales (trail system to local streets) with special treatment. Provide nodes of interest.
6. **RECOMMENDED POLICIES**

Based on the above review, the following policies are recommended for consideration in the Transportation Master Plan. These will frame the initiatives set out in the Plan.

<table>
<thead>
<tr>
<th><strong>Recommended Policy</strong></th>
<th>Create a continuous grid road network that allows pedestrian, cyclists and transit vehicles to move efficiently through communities.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implementation</strong></td>
<td>• All new developments should be laid out on a grid network with efficient spacing of arterials and collector roads (e.g. maximum 1 kilometre)</td>
</tr>
<tr>
<td></td>
<td>• Guarantee pedestrian, cyclist and transit movements through sites, even where motor vehicle movement is restricted.</td>
</tr>
<tr>
<td></td>
<td>• In existing developments, encourage creation of mid-block connections for pedestrians, transit, and active transportation modes, healing discontinuities in the grid</td>
</tr>
<tr>
<td></td>
<td>• Build new development so that it takes advantage of existing infrastructure and minimizes the need for new infrastructure investment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Recommended Policy</strong></th>
<th>Develop key nodes and links as higher-density, transit-supportive and pedestrian-friendly areas and corridors.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implementation</strong></td>
<td>• Encourage mixed-use, pedestrian-oriented intensification around transit nodes including intercity transit.</td>
</tr>
<tr>
<td></td>
<td>• Create specific urban design guidelines for each node and/or corridor.</td>
</tr>
<tr>
<td></td>
<td>• Facilitate multi-modal integration through the provision of storage facilities for bicycles at transit stations.</td>
</tr>
<tr>
<td></td>
<td>• Consider the use of incentives to foster higher density and street level activity in these corridors (e.g. reduced taxes on extra density for a period of time)</td>
</tr>
<tr>
<td></td>
<td>• Encourage the use of integrated urban design and transportation charrettes to create a unified vision for neighbourhoods, and determine particular street amenities to be provided.</td>
</tr>
</tbody>
</table>
**Recommended Policy**
Design streets to create a pedestrian and transit supportive environment. Streets should provide mobility to all modes concurrently, with emphasis on active transportation modes and transit.

**Implementation**
- Provide amenities to support established and future pedestrian, cyclist and transit networks.
- Design streets and sidewalks to provide a buffer between vehicular and pedestrian flow. Sidewalks should be a minimum of 1.5 metres in width, but preferably at least 2 metres, which is generally possible within current roadway right-of-way standards.
- Ensure contextual harmony of new buildings with existing structures and streetscape in terms of scale, massing, setbacks, and height, material, entrance and forecourt treatment.
- Encourage new street level parking, where required, to be provided behind buildings on major streets and transit corridors.
- Foster street activity by supporting a stimulating pedestrian experience: ensure that the ground floors of all buildings have windows and doors opening onto the street and eliminate blank walls and large opaque fences.
- Protect views and require minimum levels of sunshine and lighting.
- Include local and regional transit authorities in the development of urban design guidelines.
- Provide appropriate rights-of-way to support walking, cycling and transit.
- Include spaces within the sidewalk for the inclusion of transit and waiting areas.
- Provide clear signage for both vehicular and pedestrian navigation.

---

**Recommended Policy**
Require that all new developments to conform to established local (Secondary Plan) pedestrian-supportive urban design guidelines.

**Implementation**
- Reaffirm commitment to guidelines where they already exist.
- Endeavour to create neighbourhood/area urban design guidelines.
- Educate city staff and members of the development community regarding the existence of urban design guidelines.
- Create city-wide urban design guidelines to be applied in areas where local design guidelines have not been set, including resource text (such as a handbook) to illustrate and explain the guidelines.
| • Establish a design review process for major developments, prior to formal submission for zoning amendments or site plan approval, including a staff/council peer review committee and information clearinghouse to facilitate the inclusion of pedestrian-supportive design elements. |
7. IMPACTS OF POLICY OPTIONS

7.1 Assessment Factors

Assessment of policy options is based on factors for achieving sustainable growth and development across all of the policy papers developed in this project. They fall under the three major categories of social, economic and environmental impacts, and they are described briefly below.

Exhibit 7.1: Assessment Factors

<table>
<thead>
<tr>
<th>Impact</th>
<th>Acts on</th>
<th>Description (or examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>Residential communities</td>
<td>Improves quality of life in neighbourhoods</td>
</tr>
<tr>
<td></td>
<td>Safety and security</td>
<td>Reduces collisions; improves personal safety and security</td>
</tr>
<tr>
<td></td>
<td>Ease of implementation &amp; governance</td>
<td>Provides clarity, measurability, accountability</td>
</tr>
<tr>
<td>Economic</td>
<td>Development</td>
<td>Attracts employment, capital, optimal use of transportation infrastructure capacity, and future land use</td>
</tr>
<tr>
<td></td>
<td>Land value</td>
<td>Increases land value, or does not decrease land values</td>
</tr>
<tr>
<td></td>
<td>Operating and capital costs</td>
<td>Reduces or defers public and private costs of transportation capital (construction or acquisition of fixed infrastructure and rolling stock) and operations (maintenance, enforcement, delay, fuel, etc.)</td>
</tr>
<tr>
<td></td>
<td>Congestion</td>
<td>Maintains traffic flow at acceptable level</td>
</tr>
<tr>
<td>Environmental</td>
<td>Air quality</td>
<td>Reduction of Criteria Air Contaminants</td>
</tr>
<tr>
<td></td>
<td>Noise and vibration</td>
<td>Minimizes noise impacts</td>
</tr>
<tr>
<td></td>
<td>Natural environment</td>
<td>Improves water quality, green spaces, flora and fauna etc.</td>
</tr>
</tbody>
</table>

The rating system that will be used to apply these criteria is a visual five-point scale, to reflect a range from strong positive impact to strong negative impact. (++, +, o, --, --)

+ Represents the strong positive impact, o represents absence of significant impact either way, and -- represents strong negative impact.

7.2 Summary of Evaluation

The factors described in Section 7.1 are applied to the policy options described in Section 6. The results of a preliminary qualitative assessment using the rating scheme described previously are provided in Exhibit 7.2.
### Exhibit 7.2: Impacts of Policy Options

<table>
<thead>
<tr>
<th>Policy Option</th>
<th>Social</th>
<th>Economic</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Residential Communities</td>
<td>Safety and Security</td>
<td>Ease of Implementation and Governance</td>
</tr>
<tr>
<td>Create a continuous grid road network that allows pedestrian, cyclists and transit vehicles to move efficiently through communities.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Develop key nodes and links as higher-density, transit-supportive and pedestrian-friendly areas and corridors.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Design streets to create a pedestrian and transit supportive environment. Streets should provide mobility to all modes concurrently, with emphasis on active transportation modes and transit.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Require that all new developments to conform to established local (Secondary Plan) pedestrian-supportive urban design guidelines.</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>