

Part Three: Planning, Design and Supporting Processes



Part Three: Planning, Design and Supporting Processes

8.0 Planning and Design

In 2007 Decima Research was commissioned to conduct a survey on behalf of the City of Ottawa to obtain citizens' views on priorities and satisfaction with City services. (56) Overall satisfaction with land use planning, zoning and permits decreased by 6% as compared with results from the City of Ottawa Citizen Satisfaction Survey 2004. (57) Results from stakeholder group sessions noted that one reason for this response is that the city is not seen as employing a long term strategic approach to land use planning; rather planning is seen as being haphazard and ad hoc despite the best effort of many city departments.

When asked to about the most important issues facing the city, transportation ranked first (32% of the total number of responses) and transit ranked second (24%). The 2007 survey also asked respondents how satisfied they were with the city's progress in reaching each of seven guiding principles being used for goal setting and strategic planning. Respondents were most satisfied with the following four principles:

- A healthy, active city (78% satisfied).
- A creative city rich in heritage and unique in identity (75% satisfied).
- A city of distinct and liveable communities (70% satisfied).
- A green and environmentally sensitive city (64% satisfied).

When asked to rank the same principles in terms of importance, respondents placed "A City that is responsible and responsive to its citizens" first with 30% of the vote, and "Green and environmentally sensitive city" was ranked second with 20% of the vote. Healthy and active, liveable, green and environmentally responsible are all characteristics that can be associated with walkable places, therefore Ottawa's citizens should be generally supportive of efforts made to improve the pedestrian environment in the city. This conclusion is also supported by the findings of the public consultation program discussed in **Chapter 5**.

Walkability is more than just having the "right-of-way" to walk, it is also influenced by an individual's perception of safety, convenience, efficiency, and comfort. Planning and design have a significant influence on these perceptions and most walkable communities have a number of characteristics in common including:

- A compact, lively town centre.
- Residential streets where automobiles travel slowly and traffic is evenly distributed among the streets.
- Connected streets, pathways and transit stops.
- Schools that are easily accessible from within the neighbourhood fabric and not isolated.
- Parks and open space integrated into the neighbourhood fabric.
- Essential shops and services "embedded" within the neighbourhood.

56 Decima Research. *2007 City of Ottawa Citizen Survey Report*. 2007.

57 EKOS Research Associates Inc. *City of Ottawa Citizen Satisfaction Survey*. 2004.

Ottawa Pedestrian Plan (Final Report June 2009)

- Affordable, inspiring and well-maintained streets and homes.
- Public places and spaces with inviting features such as benches, shade, art, fountains and appealing building facades.
- Celebrated public life such as festivals, parades and markets.
- Activity including people of all ages and abilities walking throughout the day.

This chapter discusses planning for pedestrians beginning at the broader policy level and ending with tangible recommendations for pedestrian design at the site design level. **Chapter 9** continues on this theme by discussing a number of pedestrian design issues related to safety and accessibility.

8.1 Planning for Pedestrians

The Ottawa Official Plan and Transportation Master Plan contain policies and directions to support a healthy pedestrian realm. Among those principles and directions the following should be emphasized wherever possible:

*“Make it logical to walk!
That means local
shops, libraries and
schools!”
Ottawa Resident*

- The Official Plan and Transportation Master Plan’s approach to compact, continuous, mixed use land use planning, in particular the building of liveable communities, and the creation of distinct, quality places which appreciate local identity in patterns of development, landscape and culture.
- The Official Plan principle that streets should be thought of as public spaces which are critical to a healthy public realm rather than a corridor which facilitates the movement of cars.
- The Transportation Master Plan’s principles for action, particularly those which support a balanced transportation system of walking, cycling, transit and ride sharing.
- The Transportation Master Plan’s recommendation to implement design guidelines to ensure that all road corridors support adjacent land uses, enhance safety, offer supportive environments for walking, cycling and transit use, and maximize greening opportunities.

These policies and directions can be translated into physical changes on the streets and sidewalks, in buildings, and in new developments through several mechanisms:

- A Pedestrian Charter;
- Community Design Plans;
- Planning Actions;
- Design Guidelines, and;
- Streetscape Design.

8.1.1 A Pedestrian Charter

A Pedestrian Charter represents a commitment at the highest level to create a culture where people choose to walk. It acknowledges the needs of pedestrians and provides a common framework to help municipalities refocus their existing policies, activities and relationships to create a culture where people choose to walk.

An International Charter was developed for the Walk21 conference series through extensive discussions with experts throughout the world. Walk21 evolved in response to a growing demand for partnership between the world’s

Ottawa Pedestrian Plan (Final Report June 2009)

policy makers, researchers, practitioners and promoters who were all working to create walkable, livable communities. Through its annual Walk21 conference, the organization provides an international platform for dialogue and education about best practices in the field of walkable communities, and creates opportunities for networking between governments and other organizations. Municipalities are invited to adopt the International Charter in support of developing a healthy, efficient and sustainable walking community. Many municipalities have signed the Charter including some Ontario municipalities such as the Region of Waterloo. Cites such as Toronto who have adopted their own Pedestrian Charters (refer to Appendix H - under separate cover). The International Charter is based on the following principles and supporting actions: (58)

8.1.1.1 Increased Inclusive Mobility

“People in communities have the right to accessible streets, squares, buildings and public transport systems regardless of their age, ability, gender, income level, language, ethnic, cultural or religious background, strengthening the freedom and autonomy of all people, and contributing to social inclusion, solidarity and democracy.” (59)

Actions

- Ensure safe and convenient independent mobility for all by providing access on foot for as many people as possible to as many places as possible particularly to public transport and public buildings.
- Integrate the needs of people with limited abilities by building and maintaining high-quality services and facilities that are socially inclusive.

8.1.1.2. Well Designed and Managed Spaces and Places for People

“Communities have the right to live in a healthy, convenient and attractive environment tailored to their needs, and to freely enjoy the amenities of public areas in comfort and safety away from intrusive noise and pollution”. (60)

Actions

- Design streets for people and not only for cars, recognizing that streets are a social as well as a transport space and therefore, need a social design as well as engineering measures. This can include reallocating road space, implementing pedestrian priority areas and creating car-free environments to be enjoyed by all, supporting social interaction, play and recreation for both adults and children.
- Provide clean, well-lit streets and paths, free from obstruction, wide enough for their busiest use, and with sufficient opportunities to cross roads safely and directly, without changing levels or diversion.
- Ensure seating and toilets are provided in quantities and locations that meet the needs of all users.
- Address the impact of climate through appropriate design and facilities, for example shade (trees) or shelter.
- Design legible streets with clear signing and on-site information to encourage specific journey planning and exploration on foot.
- Value, develop and maintain high quality and fully accessible urban green spaces and waterways.

“Why do we continue to build business parks that are anti-walking and anti-transit??”

Ottawa Resident

58 <http://www.walk21.com/charter/default.asp>

59 [lbid](#)

60 [lbid](#)

Ottawa Pedestrian Plan (Final Report June 2009)

8.1.1.3. Improved Integration of Networks

“Communities have the right to a network of connected, direct and easy to follow walking routes which are safe, comfortable, attractive and well maintained, linking their homes, shops, schools, parks, public transport interchanges, green spaces and other important destinations.” (61)

Actions

- Build and maintain high-quality networks of connected, functional and safe walking routes between homes and local destinations that meet community needs.
- Provide an integrated, extensive and well-equipped public transport service with vehicles which are fully accessible to all potential users.
- Design public transport stops and interchanges with easy, safe and convenient pedestrian access and supportive information.

“Good design is the footprint of the pedestrian”

Jane Holtz Kay

8.1.1.4. Supportive Land-use and Spatial Planning

“Communities have the right to expect land-use and spatial planning policies which allow them to walk to the majority of everyday services and facilities, maximising the opportunities for walking, reducing car-dependency and contributing to community life.” (62)

Actions

- Put people on foot at the heart of urban planning. Give slow transport modes such as walking and cycling priority over fast modes, and local traffic precedence over long-distance travel.
- Improve land-use and spatial planning, ensuring that new housing, shops, business parks and public transport stops are located and designed so that people can reach them easily on foot.
- Reduce the conditions for car-dependent lifestyles (for example, reduce urban sprawl), re-allocate road space to pedestrians and close the missing links in existing walking routes to create priority networks.

8.1.1.5. Reducing Road Danger

“Communities have the right for their streets to be designed to prevent accidents and to be enjoyable, safe and convenient for people walking - especially children, the elderly and people with limited abilities.” (63)

Actions

- Reduce the danger that vehicles present to pedestrians by managing traffic, (for example, by implementing slower speeds), rather than segregating pedestrians or restricting their movements.
- Encourage a pedestrian-friendly driving culture with targeted campaigns and enforce road traffic laws.
- Reduce vehicle speeds in residential districts, shopping streets and around schools.
- Reduce the impact of busy roads by installing sufficient safe crossing points, ensuring minimal waiting times and enough time to cross for the slowest pedestrians.

61 <http://www.walk21.com/charter/default.asp>

62 <http://www.walk21.com/charter/default.asp>

63 Ibid

Ottawa Pedestrian Plan (Final Report June 2009)

- Ensure that facilities designed for cyclists and other non-motorized modes do not compromise pedestrian safety or convenience.

8.1.1.6. Less Crime and Fear of Crime

“Communities have the right to expect an urban environment designed, maintained and policed to reduce crime and the fear of crime.” (64)

Actions

- Ensure buildings provide views onto and activity at street level to encourage a sense of surveillance and deterrence to crime.
- Conduct pedestrian audits by day and after dark to identify concerns for personal security and then target areas for improvements (for example, with brighter lighting and clearer sightlines).
- Provide training and information for transport professionals to increase awareness of the concerns of pedestrians for their personal security and the impact of such concerns on their decisions to walk.

8.1.1.7. More Supportive Authorities

“Communities have the right to expect authorities to provide for, support and safeguard their ability and choice to walk.” (65)

Actions

- Commit to a clear, concise and comprehensive action plan for walking to set targets, secure stakeholder support and guide investment to include the following actions:
- Involve all relevant agencies (especially transport, planning, health, education and police), at all levels, to recognize the importance of supporting and encouraging walking and to encourage complementary policies and actions.
- Consult, on a regular basis, local organizations representing people on foot and other relevant groups including young people, the elderly and those with limited ability.
- Collect quantitative and qualitative data about walking (including the motivations and purpose of trips, the number of trips, trip stages, time and distance walked, time spent in public spaces and levels of satisfaction).
- Integrate walking into the training and on-going staff professional development for transport and road safety officers, health practitioners, urban planners and designers in particular.
- Provide the necessary ongoing resources to implement the adopted action plan.



Guelph, ON

8.1.1.8. A Culture of Walking

“Communities have a right to up-to-date, good quality, accessible information on where they can walk and the quality of the experience. People should be given opportunities to celebrate and enjoy walking as part of their everyday social, cultural and political life.” (66)

64 <http://www.walk21.com/charter/default.asp>

65 Ibid

66 <http://www.walk21.com/charter/default.asp>

Ottawa Pedestrian Plan (Final Report June 2009)

Actions



Ottawa

- Actively encourage all members of the community to walk whenever and wherever they can as a part of their daily lives by developing regular creative, targeted information, in a way that responds to their personal needs and engages personal support.
- Create a positive image of walking by celebrating walking as part of cultural heritage and as a cultural event, for example, in architecture, art-exhibitions, theatres, literature readings, photography and street animation.
- Provide coherent and consistent information and signage systems to support exploration and discovery on foot including links to public transport.
- Financially reward people who walk more, through local businesses, workplaces and government incentives.

The development of a Pedestrian Charter would demonstrate a visible commitment to the citizens of Ottawa by Council and staff's commitment to improving the pedestrian environment and developing the culture of walking. The Charter would help to engrain the consideration of the pedestrian in the City's day to day business practice.

Recommendation 8.1

It is recommended that the City:

Develop a Pedestrian Charter, for adoption by the City, that represents a commitment to creating a walkable and pedestrian friendly-city. Link the Pedestrian Charter to the City of Ottawa Official Plan and Transportation Master Plan.

*"Streets lined with large, mature trees spaced closely enough to provide shade."
Ottawa Resident*

8.1.2 Community Design Plans

To translate the policies of the Official Plan and Transportation Master Plan to the community scale, the City may undertake concept plans, zoning studies or Community Design Plans. All Community Design Plans are required to conform to the Official Plan and the priority areas for the completion of Community Design Plans across the city are identified in the Official Plan. The Community Design Plan process applies to both new and existing communities and is triggered by any significant change (i.e. major new development or significant infill development). The process is intended to provide an opportunity for the early involvement and discussion by all parties about how future development should occur in a community. A consultative process is used by the City to work with landowners, residents, local businesses, school boards and other interested parties to create a vision for the future community. Once approved by Council the Community Design Plan becomes the guide to the long-term growth and development of the community and provides guidelines for the day-to-day decision-making on land use planning.

Community Design Plans are instrumental in providing for future pedestrian amenities. One of the key first steps in developing the Community Design Plan is the statement of the vision/goals, principles and objectives, and therefore provides the opportunity to ensure that the pedestrian realm is given proper consideration. At this stage it is important for Planners assigned to various Community Design Plans ensure that the goal(s)/principles and objectives related to the pedestrian realm are strong. To facilitate this, planning staff who are assigned to Community Design Plans should have a good understanding of

Ottawa Pedestrian Plan (Final Report June 2009)

the needs of the pedestrian, as well as the planning and design techniques presented in the Ottawa Pedestrian Plan and various City design guidelines.

The following are some sample principles and objectives extracted from Richmond Road/Westboro Community Design Plan(67) that provide a strong foundation for the creation of a well designed pedestrian realm in the community:

Principles

- Compact, well-designed, vibrant, safe and less auto-dependent communities.
- Attractive streetscapes with street trees, accessible open spaces, and other pedestrian amenities.
- Provision of parklands, multi-use pathways and facilities.
- Mainstreets with uninterrupted networks of active, mixed-use, pedestrian-oriented uses.

Objectives

- To ensure that infill development is well-integrated and compatible in scale and character with existing neighbourhoods.
- To create an attractive, pedestrian-friendly built environment.
- To create a well-designed and vital pedestrian streetscape along the designated Traditional Mainstreets (Richmond Road and Scott Street).
- To ensure the provision and preservation of public greenspace and linkages to the Ottawa River to meet community needs through such actions as collaborative efforts with the National Capital Commission (NCC) and the adjacent local communities to create greenspace plans.
- To balance the transportation needs among pedestrians, cyclists, transit and motorists.

To strengthen the pedestrian component of Community Design Plans, particularly in existing communities that are undergoing significant change, a community/pedestrian audit of the existing pedestrian network would be a valuable step to improve the understanding of how the current network is functioning and how it can be adapted and improved to the new changes to the community. A sample walkability audit is presented in (**Appendix G** – under separate cover) and Section 7.72 provides an introduction to potential approaches to evaluating the catchment area of an existing pedestrian network.

Recommendation 8.2

It is recommended that the City:

Integrate pedestrian planning tools and methods, from the Ottawa Pedestrian Plan, particularly the Pedestrian Improvement Process into planning processes (such as the Community Design Plan process), which will then form part of the base pedestrian network. These tools also include walkability audits and the various pedestrian supportive guidelines.

Recommendation 8.3

It is recommended that the City:

Establish a priority list of landscape and streetscape improvements within each Secondary Plan and Community Design Plans to further walkability.



*Niagara-on-the-Lake,
ON*

67

http://ottawa.ca/residents/planning/community_plans/completed/richmond_westboro/index_en.html

8.1.3 Pedestrian Planning and Design Guidelines

Guidelines play an integral role in achieving high quality design throughout the City. They are another tool available to translate the policies of the Official Plan and Transportation Master Plan into principles and specific approaches for aspects of the pedestrian environment development. Guidelines are useful as a resource in preparing of new Community Design Plans or Secondary Plans, providing direction to the planning process for site plan control, rezoning and design review and to complement design and site plan considerations in approved Community Design Plans or existing Secondary Plans.

The experience of the pedestrian is fundamentally shaped by the provision, quality, and continuity of the pedestrian facility (i.e. sidewalk, pathway, crossings) and the level of comfort these provide the pedestrian. An equally important influence on the pedestrian experience is the quality of the built environment which surrounds the pedestrian during their journey. **Figure 8.1** illustrates a supportive pedestrian environment and a hostile pedestrian environment. Streetscapes, the relationship between adjacent buildings and the sidewalk, building massing and placement, layout of streets and blocks, destinations and places, diverse and compact land uses, trees and landscaping, street furniture all contribute to a positive walking experience.

Figure 8.1

Supportive and hostile pedestrian environments.



Supportive

Ottawa Pedestrian Plan (Final Report June 2009)



Hostile

The City of Ottawa understands the importance of good urban design. This is evident in the City's extensive initiative in creating urban design guideline documents pertaining to a variety of development types. A number of user friendly design guideline documents have been prepared and a significant body of information on urban design and its contribution to a strong pedestrian realm is contained within them. Individually and collectively, the guidelines are a resource for land developers and City staff involved in the land use change process including Secondary Plans, Community Design Plans, and development approvals of Site Plan control. To differing degrees, each of the above documents contains information, techniques and guidelines that contribute to strengthening the pedestrian realm. Current guideline documents that have relevance to the pedestrian realm are:

- Downtown Ottawa Urban Design Strategy (March, 2004).
- Transit Oriented Development Guidelines (September, 2007).
- Regional Road Corridor Design Guidelines (2000).
- Street Design Policy Special Streets (Policy Discussion Paper, April 2007).
- Harmonized Sidewalk Technical Design Guidelines (intended as an interim measure for City sidewalk construction, 2002) and "Ramp" Standard (May, 2006)-style amended from the 2002 version.
- Urban Design Guidelines for Low-Medium Density Infill Housing (October 2005).
- Urban Design Guidelines for Development Along Traditional Main Streets (May 2006).
- Urban Design Guidelines for Development Along Arterial Main Streets (May 2006).
- Urban Design Guidelines for Large Format Retail (May 2006).
- Outdoor Patio Design Guidelines (January 2006).



Ottawa Pedestrian Plan (Final Report June 2009)

- Urban Design Guidelines for Greenfield Development (September, 2007).
- Design Guidelines for Urban Collector, Major Collector and Rural Road Corridors (March, 2008).

Table 8.1 compares the degree to which the pedestrian realm is supported by each of the guidelines documents according to the following urban design themes:

- Streetscape;
- Built form;
- Street furniture,
- Amenities and art;
- Land use;
- Development guidelines;
- Pedestrian crossings,
- Intersections,
- Driveways;
- Landscape and environment;
- Vehicles and parking;
- Connectivity;
- Transit considerations and passenger amenities; and
- Signage.

A symbol has been assigned to each theme to indicate whether the level of information in the document is comprehensive, adequate, not applicable, or that additional guidance would contribute to a strong pedestrian realm. The “comments” column provides more specific commentary on the strengths and weakness of each document from a pedestrian perspective.

Collectively the existing guidelines address many aspects of good pedestrian design, however, they are dispersed among a number of documents. Continuing in the tradition of creating design guidelines, a comprehensive set of pedestrian design guidelines should be created and placed within one document. This would enable a level of detail to be reached which is not found in the existing documents and would provide one location for staff, the community, and the development industry to use as a resource in their preparation and review of applications. The starting point for this document would be the consolidation of all applicable guidelines contained within the existing documents and should be supplemented by additional guidelines provided in **Chapter 9** which include:

- Pedestrian crossovers and crosswalks;
- Intersection crossings;
- Curb return radii;
- Curb extensions or bulb outs;
- Channelized right turn lanes;
- Traffic signal phasing;
- Freeway ramps;
- Pedestrian refuge islands;

Table 8.1
Design Guideline Matrix

CITY OF OTTAWA URBAN DESIGN DOCUMENT	STREETSCAPE	BUILT FORM	STREET FURNITURE, AMENITIES, ART, LIGHTING	LAND USE	DEVELOPMENT GUIDELINES (LAYOUT OF STREETS AND BLOCK PATTERNS, MEASUREMENTS OR STANDARDS, LOCATIONS FOR HEIGHT DENSITY AND MIXED USES, BUILDING PROXIMITY, TRANSITION, MATERIALITY)	PEDESTRIAN CROSSINGS, INTERSECTIONS, DRIVEWAYS	LANDSCAPE AND ENVIRONMENT	VEHICLES AND PARKING	CONNECTIVITY	TRANSIT CONSIDERATIONS AND PASSENGER AMENITIES	SIGNAGE	COMMENTS
Urban Design Guidelines for Low-Medium Density Infill Housing	●	●	⊗	○	●	○	●	●	○	⊗	⊗	Generally comprehensive; strong on landscaping and planting trees adjacent to sidewalks; brief mention of pedestrian safety, crosswalks, and continuous sidewalks; Includes guidelines on heritage buildings and alterations.
Urban Design Guidelines for Development Along Traditional Main Streets	○	○	○	○	○	⊗	○	○	○	⊗	○	High level document; minimal discussion about appropriate mix of uses; very user friendly document.
Urban Design Guidelines for Development Along Arterial Main Streets	○	○	○	⊗	○	○	○	○	○	○	○	High level document; minimal discussion about appropriate mix of uses; very user friendly document.
Land Use and Design Guidelines for Transit Oriented Development	●	●	●	●	●	○	●	●	●	●	⊗	Draft document; comprehensive; these guidelines are applicable to all places of high pedestrian traffic and places identified for increased walkability/pedestrian-friendliness; guidelines should not be limited to TOD projects; very user friendly document; could benefit from a more comprehensive section on way-finding and signage.
Urban Design Guidelines for Large Format Retail	○	●	○	⊗	●	●	●	●	●	⊗	●	Comprehensive section on pedestrian connectivity, walkways, and crossings which could be applied to other types of development; comprehensive sections on landscape and parking.
Regional Road Corridor Design Guidelines	●	●	●	●	●	●	●	●	●	●	○	Comprehensive; organization of document makes it challenging to easily find guidelines which relate to the pedestrian environment; suggests the creation of urban districts of mixed land uses and higher densities to promote multimodal 24 hour use of the corridor is an example of place making; includes a section on pedestrian routes which details minimum widths; detailed section on lighting and snow management; includes demonstration plans and sections.
Outdoor Patio Design Guidelines	○	○	⊗	○	●	⊗	○	○	○	⊗	○	A useful guide to patio design guidelines and kiosks which includes an appropriate level of design details.
Harmonized Sidewalk Technical Design Guidelines	⊗	●	⊗	⊗	●	●	⊗	⊗	⊗	⊗	⊗	This document was an interim measure in April 2002 for existing sidewalk / city construction and was geared towards engineering standards and is narrow in scope. It could form the basis for a streetscape manual by expanding the scope: guidelines for pedestrian bulges (bulb-outs) or plazas and bus bulges/plazas, placement of street furniture and pedestrian amenities, and the pedestrian path of travel, crosswalk location and treatments, and other geometric design considerations.
Street Design Policy Special Streets (Discussion Paper)	○	⊗	○	⊗	⊗	⊗	○	○	⊗	⊗	⊗	Limited; this discussion paper is part of a current City initiative to prepare a new Street Design Policy which focuses on setting standards for the design of special streets within the City. It is expected that comprehensive criteria will be established to determine which streets warrant special design treatment, such as, burial of hydro and telecommunication cables, decorative paving, street trees, pedestrian streetlights, benches etc. This initiative could also include improved illustrations and an expanded scope, such as guidelines for pedestrian bulges (bulb-outs) or plazas and bus bulges/plazas, placement of street furniture and pedestrian amenities, and the pedestrian path of travel, crosswalk location and treatments, and other geometric design considerations.
Urban Design Guidelines for Greenfield Development	●	●	●	●	●	●	●	●	●	●	⊗	Draft document; very comprehensive; these guidelines, together with the Transit-oriented Development Guidelines and other recent City guidelines, provide urban design guidance which are extremely supportive of the pedestrian realm.
Design Guidelines for Urban Collector, Major Collector and Rural Road Corridors	●	●	●	●	●	●	●	●	●	●	○	This study is underway; the project is similar to the Regional Road Corridor Design Guidelines.
Downtown Ottawa Urban Design Strategy 20/20	●	●	○	●	●	⊗	●	⊗	○	○	⊗	High level document which applies to Ottawa's downtown precincts: Core Area, Downtown West, Business Precinct, ByWard Market, Retail, Arts and Theatre, University, Central Canal Area, Centretown East and Bank Street Corridor. The strategy includes a comprehensive streetscape matrix (Appendix A) which could be applied by City staff in their review of development applications located within these precincts. The key directions, recommendations and general precinct strategies contained within the report could be translated into targeted design guidelines. To make the document more user friendly to City staff in their review of development applications, a booklet(s) of recommendations by precinct with a detailed table of contents, maps and a map key could be created.
Integrated Street Furniture Program	○	○	○	○	○	○	○	○	○	○	○	This program is currently under development. When completed, it is expected to provide comprehensive information on the design, arrangement and placement of street furniture, including bus shelters, information kiosks and waste receptacles.

LEGEND ● = comprehensive ○ = adequate ⊗ = additional guidance would contribute to a strong pedestrian realm ⊗ = not applicable

Ottawa Pedestrian Plan (Final Report June 2009)

- Pedestrian countdown signals;
- Intersection pedestrian signals;
- Grade separated crossings;
- Roundabouts;
- Accessible pedestrian signals, and;
- Accessible sidewalks.

Recommendation 8.4

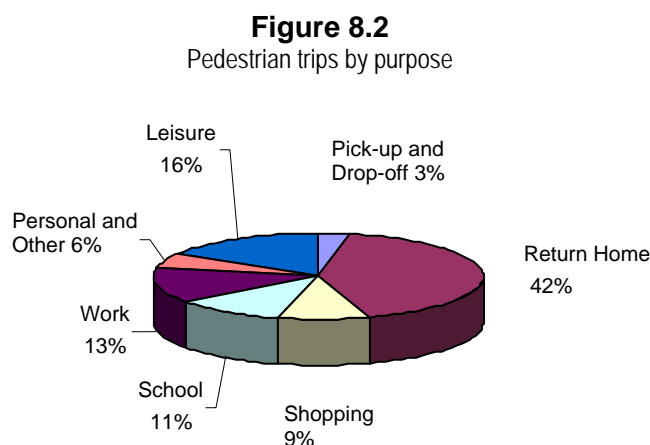
It is recommended that the City:

Create a Pedestrian Facility Planning and Design Guideline document to be used during the development review and capital works processes. Base the guidelines on a consolidation of the pedestrian-supportive recommendations in existing City guideline documents, as well as the safety and accessibility guidelines presented in the Ottawa Pedestrian Plan.

8.1.4 Development Approvals

Planning the pedestrian network requires understanding which destinations pedestrians want to access and the length of trip or time they are willing to expend walking to that destination. These basic parameters can then be used to determine the effectiveness of secondary plans, plans of subdivisions and site plans in meeting pedestrian needs.

People walk for transportation, enjoyment, health, purpose and convenience. The *2005 Origin-Destination Survey for the National Capital Region* reported on the purpose of walking trips over a 24-hour period (**Figure 8.2**):



Source: City of Ottawa 2005 Origin-Destination Survey for the National Capital Region)

Although some people will walk regardless of the trip length or distance, the average walking trip length is 1 km, and most are under 2 km. In Ottawa, children in grades 1 to 8 living more than 1.6 km from school and grades 9 to 12 living

Ottawa Pedestrian Plan (Final Report June 2009)

more than 3.2 km from school are typically bused to school. Children and the elderly can generally be expected to walk at a rate of approximately 1.0m/s and adults can generally be expected to walk at a rate of approximately 1.5m/s. A distance of 1 to 2 km represents a trip time of between 10 and 20 minutes for adults, or 15 to 30 minutes for the elderly and children respectively. In assessing the walkability of a specific route it is important to consider:

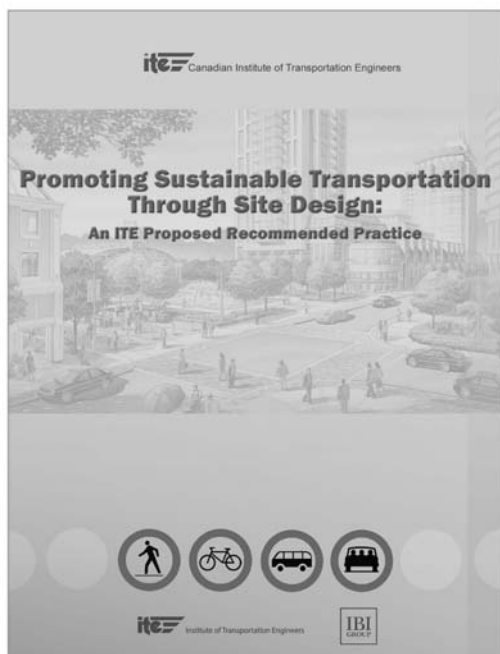
- The walking infrastructure itself (i.e. the sidewalk or pathway). Roadway crossings can, in particular, make a route difficult for walking, so attention should be paid to important roadway crossings along the route, such as the type of traffic control that provides pedestrian right-of-way, traffic speeds and volume, visibility, etc.
- The environment through which the route travels. This includes the built and natural environment, amenities for pedestrians, and specific elements that contribute to the sense of personal security, such as visibility and lighting, the presence of other pedestrians, proximity to inhabited buildings etc.

In **Chapter 7** the concept of the Community Pedestrian Improvement Process was introduced. Research revealed that a number of other jurisdictions have also considered this concept. When planning a new development or redeveloping a site to new land uses, land developers are conscious of the need to provide for pedestrians. This has traditionally meant following a development standard for the provision of sidewalks along streets. However, in order to create a high quality and safe pedestrian experience, designing the pedestrian environment requires an understanding of the routes that pedestrians will use, which leads to the provision of adequate facilities for them.

Through the planning process the City requires proponents of community plans, subdivisions, and site plans to submit documentation evaluating transportation impacts. This same kind of thinking should be applied to include the pedestrian realm. The Canadian Institute of Transportation Engineers developed pedestrian supportive guidelines for creating site designs for non-residential developments that promote sustainable transportation⁽⁶⁸⁾. These guidelines (**Figure 8.3**) are a useful tool and include a site design prompt list as a supplement to the guide to remind site designers and reviewers of the key site design considerations for promoting walking cycling and transit trips to the development.

⁶⁸ IBI Group, *Promoting Sustainable Transportation Through Site Design: An ITE Proposed Recommended Practice*, Institute of Transportation Engineers, 2004.

Figure 8.3
Promoting Sustainable Transportation Through Site Design



An important function of the Ottawa Pedestrian Plan is to ensure that landscapes in each development proposal add to the quality of the pedestrian realm across the city. A landscape that is appropriate in context, in scale to its location and emphasizes walkability can contribute to the pedestrian-friendliness, particularly as it provides visual interest to the pedestrian realm. Planning staff report that it is difficult at times to ensure pedestrian requirements for development applications involving infill development are met, especially in cases where pedestrian infrastructure in the surrounding neighbourhoods is representative of earlier development that would be considered deficient in terms of current guidelines for pedestrians.

Section 37 of the Planning Act enables a municipality to request that a development include local improvements which benefit the larger community and which are identified in Community Design Plans, community improvement plans, capital budgets or other implementation plans or studies. Therefore, the Ottawa Pedestrian Plan and the urban design and land use principles and guidelines which support a strong pedestrian realm should be referenced in all applicable documents, and network priorities as established by the Ottawa Pedestrian Plan should also be referenced to enable the City to request them of the development applicant.

Development applications often come before the Committee of Adjustment for approval, as is often the case when the applicant seeks an increase in height or density. The Committee of Adjustment may be in a position to request that certain design considerations be included in the development as a condition of development approval. For example, the applicant should be required to demonstrate that the principles of good pedestrian design have been addressed in the application.



Ottawa

Ottawa Pedestrian Plan (Final Report June 2009)

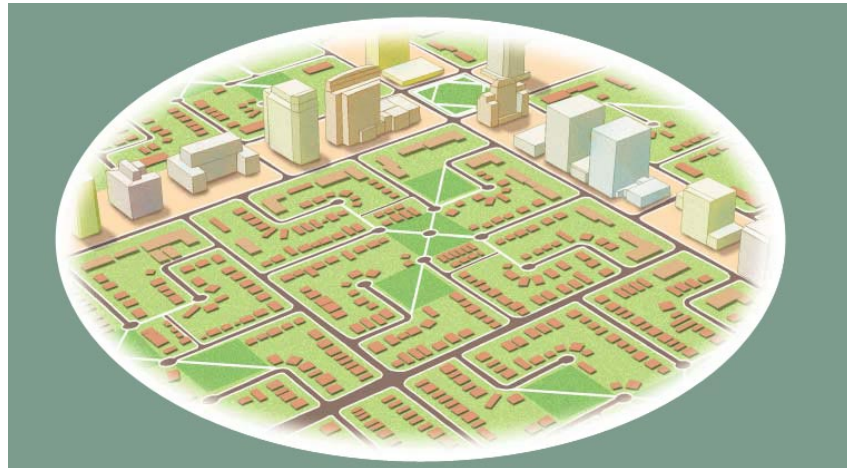
The following are some key site design principles that should be considered during all development applications.

Development Type

- Where applicable (based on type of development), create accessible street level retail development and the development of building facades and entrances as close as possible to the street and align the frontages to create a streetscape/pedestrian strip.
- Encourage the development of mixed use neighbourhoods that include businesses within walking distance of residences.
- Encourage street layout and patterns in the urban fabric that are more conducive to pedestrian activity. This may include the use of traditional grid patterns and/or newer development patterns that are supported by appropriate research such as the “Fused Grid” development pattern illustrated in **Figure 8.4**.

Figure 8.4

Fused Grid development pattern



Source: <http://www.fusedgrid.ca/fusedgrid.php>

Integration with Transit

- Ensure that effective connections are made to transit stops and stations. Every transit trip involves at least some walking.
- Provide pedestrian-friendly transit-oriented development near major public transit nodes and along significant public transit corridors.
- Develop and maintain transit stops as an important component of the pedestrian environment by making pedestrian improvements at bus stops and on pedestrian access routes to transit facilities.
- Create mapping and signage at major public transit nodes and public parking facilities which indicates walking distances to major destinations in the vicinity.

Ottawa Pedestrian Plan (Final Report June 2009)

Pedestrian Network

- Recognize pedestrian movements as a valid part of the transportation system, therefore when improvements are made to facilitate the movement of vehicular traffic, these are balanced with improvements for the pedestrian movement.
- Consider a lower level of service for vehicle traffic in areas where pedestrian volumes are high or where public realm improvements are being made in order to remedy a hostile pedestrian environment.
- Ensure that the pedestrian network connects to existing public walkway network at the limits of the subject development.
- Develop a hierarchy in density of pedestrian facilities depending on proximity to major pedestrian generators and destinations.
- Ensure that pedestrian accesses across major barriers (i.e. railways, major highways, waterways) is maintained and/or enhanced.
- Ensure that pedestrian routes are made as direct as possible and circuitous routes between major destinations are minimized.
- Consider pedestrian travel needs, safety and related improvements as the first priority when dealing with access/egress and travel through the site by various travel modes.
- Large development blocks should provide passageways for pedestrians, especially where new development blocks are in close proximity (i.e. within 800m) of major pedestrian trip generators/destinations such as schools, transit nodes and commercial facilities and major employment areas.
- Where possible and applicable, encourage the retention of important established short cuts (i.e. through easements) on existing private properties when lands are redeveloped (**Figure 8.5**).



Guelph, ON

Figure 8.5

Pedestrian easement through a new site development



An important established short cut was retained after this site was developed. Demonstrating the importance of the connection to the landowner resulted in the retention of a critical pathway link for pedestrian and cyclist commuters to a major employment area. Location: Guelph, ON.

Ottawa Pedestrian Plan (Final Report June 2009)

- Where routes for recreational purposes are being proposed, encourage the development of loops over “out-and-back” type routes.
- Consider /evaluate the need for mid block crossings at either end of cut-throughs/neighbourhood walkway blocks.

Streetscapes

- New rights of way should be designed to accommodate pedestrians. Ensure the city leads by example when developing/redeveloping streetscapes.
- Detail street and streetscape amenities to a high level of quality that is consistent with the class of street upon which the streetscape is located.
- Where appropriate include street furniture, public art, information kiosks to make the streetscape livelier and interesting for pedestrians.
- Encourage a high quality human scale in new commercial development including elements such as landscaping and street trees, pedestrian amenities, ground floor entrances and ground floor windows.
- Establish a pedestrian “clear zone” in the sidewalk that is free from obstructions such as parking meters, light poles, litter receptacles, outdoor patios etc., to allow uninterrupted travel. This is especially important for pedestrians with visual impairments. Obstructions in the clear zone should be minimized. Occasional pinch points are acceptable provided that they do not narrow the clear zone significantly-either in length or width. Refer to Section 9.2 for further discussion.
- Encourage the development of Landscape/Utility strips between the curb and sidewalk clear zone to provide a space for street trees, utility poles, meters, hydrants, signs and street furnishings/amenities.
- Include improvements to the pedestrian realm, such as an increase in pedestrian amenities and facilities like sidewalks, trees and landscaping, street furniture (where appropriate), transit shelters, and appropriate levels of lighting, in plans for road reconstruction.



Milton, ON

Recommendation 8.5

It is recommended that the City:

Require the pedestrian design solutions established by the pedestrian plan be applied to the development application process. (Reference Recommendations 8.1, 8.3, 8.4, 8.5).

Recommendation 8.6

It is recommended that the City:

Amend the Transportation Impact Assessment Guidelines to specifically include the requirement for a description of how the site meets the pedestrian supportive guidelines and Community Pedestrian Improvement Process methodologies (Reference recommendation 8.5).

8.1.5 Streetscapes

A number of cities have created streetscape manuals which direct improvements when streets are reconstructed, and give design direction for the building of new streets. These are an excellent tool, particularly for use by staff responsible for road design as they facilitate decision making for streetscape improvements

Ottawa Pedestrian Plan (Final Report June 2009)

through the use of a street classification system. A streetscape manual contains the appropriate streetscape treatment for each class of street and addresses items such as sidewalk surface treatment and design, lighting, landscape treatments, roadway, sidewalk and boulevard widths, location of street furniture, trees, bicycle parking stands, etc.. As a starting point, the City could consider a street classification that builds on those used in the existing design guideline documents. These include:

- Traditional Main Streets;
- Arterial Main Streets;
- Urban Collector and Rural Road Corridor;
- Major Collector;
- Regional Road Corridors, and
- Harmonized Sidewalk Technical Design Guidelines.

One of the fundamental considerations in the development of appropriate streetscapes for various streets classes is right of way width and potential need for right of way widenings. The road right of way must serve a number of functions, and at times these may be seen as competing for the limited space. Right of way widening to accommodate the needs of pedestrians (and cycling) is supported by this plan, but it is important to note that the need to widen a right of way should be considered along with opportunities to reduce space allocated to motor vehicles (i.e. lane width reductions, reductions in the number of lanes). This may be especially important for roads in the Greenbelt.

8.2 Sidewalk Design

Sidewalks are walkways that are parallel to a street or highway. They have a hard surface, generally concrete. In Ottawa, sidewalks are defined as being within the roadway right-of-way and the standard material is broom-finished concrete.

Properly planned sidewalks are essential in providing for the mobility, safety and accessibility of pedestrians from children to the older adult. Sidewalks can be retrofitted into existing streets, but a more expedient and cost-effective procedure is to plan for the pedestrian as land is planned for development or re-development and roadways are designed for construction or reconstruction.

8.2.1 North American Design Guidelines

A review of North American guidelines for sidewalk design was undertaken and summarized below. Ottawa's current policies and practices exceed some of the minimum guidelines yet are silent on others, and are presented in the subsequent section.

Current North American guidelines recommend sidewalks be provided on both sides for commercial, industrial, and residential areas (more than 10 units per hectare) on arterial, collector and local roadways^{(69),(70)}. The sidewalk needs to be at least 1.2 m wide for people using a guide dog, crutches or walkers, 1.5 m

69 *Guide for the Planning, Design, and Operation of Pedestrian Facilities*, American Association of State Highway and Transportation Officials, July 2004.

70 Traffic Engineering Council, Committee TENC-5A-5, *Design and Safety of Pedestrian Facilities: A Recommended Practice of the Institute of Transportation Engineers*, Institute of Transportation Engineers, March 1998.

Ottawa Pedestrian Plan (Final Report June 2009)

for wheelchair users to turn around and 1.8 m for them to pass other wheelchair users(71), and 1.5m is reported as the minimum width required for a sidewalk to be maintainable by mechanical equipment. Sidewalks are generally recommended to be at least 1.5 m in width, with 1.8 m the desirable minimum.

Wider sidewalks are required to accommodate pedestrian flows in areas where higher volumes of pedestrians are expected. The effective sidewalk width can be determined based on the desirable pedestrian level of service. The *Highway Capacity Manual*(72) presents a methodology for determining pedestrian level of service based on effective sidewalk width to accommodate particular pedestrian volumes, speeds, space, etc. The principle performance measure for sidewalks is space. Level of service (LOS) indicates the area per person and the flow rate. LOS A represents an almost empty sidewalk, LOS C to D usually provide maximum pedestrian flow conditions, while LOS F is total breakdown of the sidewalk with severely restricted walking speeds, unavoidable contact between pedestrians and cross-flow or reverse-flow movements virtually impossible. Graphic illustrations and descriptions of sidewalk LOS are shown in **Figure 8.6**.

71 Federal Highway Administration, *Accessible Sidewalks and Street Crossings—an informational guide*, U.S. Department of Transportation, FHWA-SA-03-019.

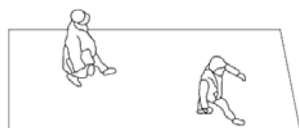
72 US Transportation Research Board, *Highway Capacity Manual*, National Academy of Sciences, 2000.

Figure 8.6

Sidewalk level of service from the *Highway Capacity Manual, 2000*



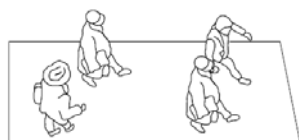
LOS A—Pedestrians move in desired paths without altering their movements in response to others. Walking Speeds are freely selected and conflicts between pedestrians are unlikely.



LOS B—There is sufficient area for pedestrians to select walking speeds freely and bypass others, and avoid crossing conflicts. Pedestrians begin to be aware of other pedestrians and respond to their presence when selecting a walking path.



LOS C—Space is sufficient for normal walking speeds and for bypassing others in unidirectional streams. Reverse-direction or crossing movements can cause minor conflicts. Speeds and flow rate are somewhat lower.



LOS D—Freedom to select walking speeds and to bypass others is restricted. Crossing or reverse-flow movements face a high probability of conflict, requiring frequent changes in speed and position. Reasonably fluid flow is provided but interaction between pedestrians is likely.



LOS E—Virtually all pedestrians restrict their normal walking speed, frequently adjusting their gait. Forward movement is possible by shuffling. Space is not sufficient for passing. Cross or reverse-flow movements are extremely difficult. Design volumes approach the limit of the sidewalk capacity with stoppages and interruptions.



LOS F—All walking speeds are severely restricted and forward progress is made by shuffling. There is frequent, unavoidable contact with other pedestrians. Cross and reverse-flow movements are virtually impossible. Flow is sporadic and unstable, and more characteristic of queued than moving pedestrians.

Sidewalks, particularly in commercial areas, can be obstructed by street furniture such as benches, as well as encroachments such as sandwich board signs, newspaper stands, waste receptacles, mail boxes, private patios, bicycle racks, planters, etc. In addition, the surface of the sidewalk is sometimes constructed of materials and patterns other than broom-finished concrete. These materials can result in rough textures or varying colours that are difficult for pedestrians with disabilities to move along. For example, interlocking brick can be very uncomfortable for or even overturn someone in a wheelchair, and changes in surface colour can appear as a change in level (step) for someone with visual impairments (**Figure 8.7**).

Figure 8.7

Cluttered sidewalk in a commercial area



Location: Cambridge, ON. Source: Stantec

The City of Saskatoon has developed an accessible pedestrian zone in the downtown consisting of a minimum 1.8m clear unencumbered sidewalk width with defined edges generally offset 0.5 m from the front of stores and at least 0.5 m or more from the roadway. A by-law prohibits obstructing this area and local shop owners know that sandwich board signs, patio furniture, etc. are to remain outside the sidewalk. It creates a highly functioning, accessible sidewalk.

Current North American guidelines recommend providing a *buffer between pedestrians and moving traffic*: landscaped boulevard, on-street parking, and bicycle lanes. The buffer can serve to provide for snow storage, splash protection for pedestrians, space for curb ramps, streetlight poles and other utilities, litter receptacle pick-up and traffic signs. The buffer also can provide space for plantings, benches and other pedestrian amenities. The recommended landscaped width is:

- Local and collector streets: 0.6 to 1.2 m
- Arterial streets: 1.5 to 1.8 m

Buffers widths greater than 3 m in residential areas where there are driveways for low-density residential dwellings are not desirable. A car can park on the driveway within this space, sometimes overhanging the sidewalk affecting the function and aesthetics of the sidewalk and buffer system.

8.2.2 Ottawa's Sidewalk Design Guidelines

Ottawa's Official Plan and Transportation Master Plan require sidewalks on both sides of arterials, collectors in urban areas and villages; sidewalk or multi-use path on one side of all roads with transit; and sidewalk or multi-use path on one side of arterials in the greenbelt. The Official Plan and Transportation Master Plan are silent on sidewalks on local streets.

Ottawa Pedestrian Plan (Final Report June 2009)

Council adopted the *Sidewalk Technical Design Guidelines* with amendments as an interim measure for existing sidewalk/city construction in May, 2002. Below is a summary of the recommendations from those guidelines:

- Sidewalk location:
 - Both sides of arterial roads and major collector street.
 - One side of minor collector streets and local streets with right-of-way widths of 20m or more.
 - No sidewalks on minor local streets with right-of-way widths less than 20m (crescents, cul-de-sacs, etc.) unless on a defined route to activity centres (schools, recreational centres, senior residences, etc.).
- Boulevard or buffer: minimum of 1.5m from back of curb, 2.0m preferred (1.0m setback from property line) when there is adequate building setback from the property lines.
- Alignment: parallel to property line or road curb but adjusted where necessary to avoid mature trees, hydro poles and other surface topography that are desirable to preserve. Transitions in alignment to be smooth and long enough to accommodate sidewalk snow-clearing equipment.
- Lateral setback to obstructions: minimum 0.5m for trees, light and sign posts, etc.
- Width:
 - Desirable minimum of 1.8m.
 - Absolute minimum of 1.5m if physical constraints such as poles, retaining walls, rock gardens, fences, hedges, trees, etc. are present.
 - 2.0m along arterials and collectors with right-of-way widths of 26 m or greater.
 - Consider 2.0 to 2.4m near schools, hospitals, offices, commercial and industrial area where large pedestrian volumes occur.
 - Consider 2.4 to 3.6m in shopping areas and entertainment areas.



Ottawa

“Sidewalks needed around all shopping areas to encourage walking between stores.”

Ottawa Resident

8.2.3 Ottawa’s Roadway Cross-section Guidelines

The City of Ottawa’s cross-sections for roadways were reviewed, including:

- **The Right-of-Way Cross-Sections for New Residential Roads** (20 March 2007) provides for sidewalks within new residential, developments as presented in **Table 8.2**.

Ottawa Pedestrian Plan (Final Report June 2009)

Table 8.2			
Sidewalk requirements within new residential street cross-sections			
Right-of-Way Widths	Sidewalk Widths	Sidewalk Locations	Boulevard Widths
24.0m	2.0m (if required)	Both sides	2.0m
22.0m	1.8m (if required)	Both sides	3.0m
20.0m	1.8m (if required)	Both sides	With or without 2.0m wide boulevard
18.0m	1.8m (if required)	One side	No boulevard
16.5m	1.8m (if required)	One side	No boulevard
8.5m (rear lane)	No sidewalk	NA	NA
20.0m (for rural roads)	1.5m wide granular shoulder	NA	NA

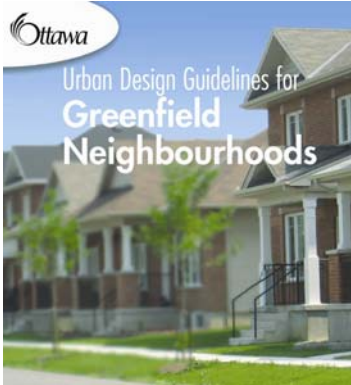
- Design Guidelines for Urban Collector and Rural Road Corridors** is a set of guidelines that respects the City's objectives and policies related to road and streetscape design to facilitate walking, cycling and transit use and to achieve a more balanced transportation system to enhance the livability and health of communities. The guidelines for sidewalks are presented in **Table 8.3**.

Ottawa Pedestrian Plan (Final Report June 2009)

Table 8.3 Sidewalk and right-of-way requirements according to roadway classification				
Roadway Classification	Right-of-Way Widths	Sidewalk Widths	Sidewalk Locations	Boulevard Widths
Urban Residential Collector	20m	2.0m	Both sides	Varies
	24m (standard)	2.0m	Both sides	2.0m
	24m (special districts)	2.0m	Both sides	2.5m
	24m (parking both sides)	2.0m	Both sides	3.0m
	24m (parking on one side)	2.0m	Both sides	2.5 to 3.0m
	26m	2.0m	Both sides	3.0 to 4.0m
Village Residential Collector	30m	3.0m multi-use pathway	One side	± 8.5m ditch
Urban Community Collector	20m	2.0m to 4.0 m (extends to curb between planting beds)	Both sides	2.0m planting bed
	24m	2.0m	Both sides	2.5m
	26m	2.0m	Both sides	3.5m
Urban Employment Area Collector	26m	2.0m	Both sides	3.5m
Rural Collector	26m	None	Not Applicable	Not Applicable
Rural Arterial	30m	None	Not Applicable	Not Applicable

- Regional Road Corridor Design Guidelines** were prepared by the former Regional Municipality of Ottawa-Carleton in collaboration with Canada Mortgage and Housing Corporation and Go for Green and approved for implementation by Council. These published design guidelines for arterial streetscapes are intended to balance the need for urban and rural arterials to function simultaneously as a public space, an access provider, a multi-modal route, and a service and utility route. The guidelines also reinforce a preference for walking, cycling and transit use. With respect to the provision of sidewalks, the guidelines state:
 - Provide barrier free sidewalks along both sides of all arterial roads. In business parks it is acceptable (although not preferred) to have sidewalks along only one side of the road.
 - Provide an effective sidewalk width (clear pedestrian travel zone) of at least 2.0m to allow for the simultaneous passage of a pedestrian and a wheelchair. Before compromising the 2.0m width, consider reduction of medians, boulevards, or lane widths. Under no circumstance should the effective sidewalk width be less than 1.5m.

Ottawa Pedestrian Plan (Final Report June 2009)



*“Encourage canopies
above sidewalk in
public right-of-way.”
Ottawa Resident*

- Provide wider sidewalk widths of 3.0m or greater for locations with high pedestrian volumes such as in core urban areas, along main streets, and in Town Centres.
- **Transit-Oriented Development Guidelines** (September, 2007) provide guidance to assess, promote and achieve appropriate Transit-Oriented Development within the City of Ottawa. They are to be applied throughout the City for all development within 600 metres of a rapid transit stop or station. Specific to walkways, the guidelines require the design of convenient, comfortable, safe, easily navigable, continuous and barrier-free pedestrian connections that lead directly to transit. Pedestrian walkways are to be of adequate width to accommodate anticipated pedestrian volumes, with a minimum width of 2.0m.
- **Urban Design Guidelines for Greenfield Neighbourhoods** (September, 2007) provides direction on the development review process for areas without an approved secondary plan or Community Design Plan, complements any design considerations in approved Community Design Plans or secondary plans, and assists the preparation of future Community Design Plans or secondary plans. The guidelines recommend constructing sidewalks on both sides of streets that serve key destinations, such as transit stops, between green spaces, or to community facilities like schools, and caution that the correct road right-of-way standard must be selected to allow for sufficient space for sidewalks and all streetscape elements.
- **Urban Design Guidelines for Low-Medium In-fill Housing** was approved by City Council for implementation. The guidelines require the design of a quality public space for pedestrians and expansion of the network of public sidewalks for pedestrian safety, including crosswalks to complete the network.
- Urban Design Guidelines for Development along Arterial Mainstreets, Urban Design Guidelines for Large-Format Retail, Urban Design Guidelines for Drive-Through Facilities, and Urban Design Guidelines for Gas Stations were approved by Council on May 24, 2006. These guidelines require providing an unobstructed 2.0 metre wide sidewalk in the public right-of-way, across private access driveways with little or no change in elevation.

8.2.4 Recommended Sidewalk Design Criteria

Generally, for new urban development, sidewalks are recommended on both sides of all industrial, commercial and residential streets including arterials, collectors and locals. For local streets, the residential density would be 10 units/ha or more (typical of urban areas).

For rural residential densities from 2.5 to 10 units/ha, both sides of local streets is also preferred but one side is acceptable if constraints are documented. For less than 2.5 units/ha (rural areas), 1.2 m wide shoulders on both sides of local streets are recommended but a sidewalk on one side is preferred.

8.2.4.1 New Developments and Roadway Reconstruction

The recommended design criteria for the width and location of sidewalks in Ottawa for various adjacent land uses and roadway classifications are presented in **Table 8.4**. The design criteria are intended to be applied to new developments; and roadway reconstruction projects where the roadway classification fits the right-of-way width and is not constrained by adjacent development.



Ottawa

Ottawa Pedestrian Plan (Final Report June 2009)

Recommendations for roads with constrained right-of-ways are presented in the subsequent section on retrofitting sidewalks along existing residential streets.

In areas with high existing or anticipated pedestrian volumes (i.e. core areas, main streets, Town Centres, transit stations, etc.) a LOS analysis is recommended to determine sidewalk width to establish a minimum LOS of at least D.

Table 8.4 provides recommendations for sidewalk width, location and buffer for new developments or roadway reconstruction projects: recommendations that vary from Ottawa's current guidelines are in **bolded and underlined**.

Ottawa Pedestrian Plan (Final Report June 2009)

Table 8.4

Recommended sidewalk and boulevard width and location according to roadway classification.

Roadway Classification	Right-of-Way Widths	Sidewalk Widths (1, 2)	Sidewalk Locations	Buffer (Boulevard) Widths - offset from curb
Urban Residential Local (if required)	24.0 m	2.0 m	Both sides if required	<u>3.0 m</u>
	22.0 m	<u>2.0 m</u>	Both sides if required	3.0 m
	20.0 m	1.8 m	Both sides if required	Without <u>boulevard</u>
	18.0 m	1.8 m	One side if required	Without <u>boulevard</u>
	16.5 m	1.8 m	One side if required	None
Rural Residential Local (if required)	20.0 m	1.5 m wide <u>paved</u> shoulder	Both sides if required	Not Applicable
Urban Residential Collector	20 m	2.0 m	Both sides	<u>With or without 2.0 m wide boulevard</u>
	24 m—standard	2.0 m	Both sides	2.0 m
	24 m—special districts	2.0 m	Both sides	2.5 m
	24 m—parking both sides	2.0 m	Both sides	3.0 m
	24 m—parking on one side	2.0 m	Both sides	2.5 to 3.0 m
	26 m	2.0 m	Both sides	<u>3.0 m (buffer widths greater than 3.0 m in front lotted residential areas not recommended)</u>
Village Residential Collector	30 m	3.0 m multi-use pathway	One side	± 8.5 m ditch (3)
Urban Community Collector	20 m	2.0 m to 4.0 m (extends to curb between planting beds)	Both sides	2.0 m planting bed
	24 m	2.0 m	Both sides	2.5 m
	26 m	2.0 m	Both sides	3.5 m
Urban Employment Area Collector	26 m	2.0 m	Both sides if required	3.5 m
Rural Collector (if required)	26 m	1.5 m wide paved shoulder	Both sides if required	Not Applicable
Rural Arterial (if required)	30 m	1.5 m wide paved shoulder	Both sides if required	Not Applicable
Urban Arterials	varies (20-30m)	2.0 m	Both sides	<u>Min. 2.0 m</u>
Urban Arterials with limited intersections and driveways (fewer than one every 300m)	varies	<u>3.0 m multi-use pathway</u> 2.0 m sidewalk	<u>Multi-use pathway on side with fewer intersections and driveways or with links to other pathways; sidewalk on other side</u>	<u>Min. 2.0 m (3)</u>
Urban Arterials in business commercial areas	varies	2.0 m	<u>Both sides</u>	<u>Min. 2.0 m</u>
Suburban Arterials: All areas with high existing or anticipated pedestrian volumes, such as core urban areas, along main streets and in Town Centres	37.5-44.5m	2.0 m	Both Sides	Min. 2.0 m

Notes:

1. All sidewalk widths are the clear pedestrian zone and do not include the drainage, landscape and frontage zones of the street. See Section 9.2
2. Buffer narrows approaching intersections in order to align multi-use pathway crossing in front of stop bar for side street intersection.
3. If required to support pedestrian need and network connectivity, in accordance with the Ottawa Pedestrian Plan.
4. When sidewalk is immediately adjacent to the curb, that sidewalk width is measured from the curb face.

Ottawa Pedestrian Plan (Final Report June 2009)

Recommendation 8.7

It is recommended that the City:

Use the sidewalk and boulevard guidelines presented in Table 8.4 as a guide for the development or redevelopment of roadways.

8.2.4.2 Retro-fitting Sidewalks along Existing Streets

Minimum sidewalk design width for retrofitting sidewalks in existing neighbourhoods where the roadway will not be reconstructed is an absolute minimum of 1.5m wide, (1.8m preferred, 2.0m desirable) on both sides of the street in urban areas and village core areas. The need to provide the sidewalk is identified either as a requirement of infill development through official plan, zoning or site plan processes; as determined by a Community Pedestrian Improvement Process; or through the City's response to sidewalk requests through the New Sidewalk Links Program. In rehabilitation situations, Infrastructure Services (IS) reinstates the sidewalk to the same standard as the section that was removed unless the current standard exceeds what was removed. Currently there is no provision for additional analysis or planning to determine whether or not a wider sidewalk should be installed to meet current or anticipated pedestrian volumes/demand, but this should be considered. Obviously, there are likely to be areas where the physical constraints, such as the presence of utilities, street trees, buildings, etc. may preclude the provision the minimum sidewalk. The decision-making process should be documented, including cost-benefits.

For streets in areas with less than 2.5 units/ha (rural areas), 1.5 m wide shoulders on both sides of local streets are recommended but a sidewalk on one side is preferred.

Recommendation 8.8

It is recommended that:

On new road construction, road reconstruction and rehabilitation, apply Ottawa's Pedestrian Guidelines and the Community Pedestrian Improvement Process methodology.

8.2.4.3 Accessible Sidewalks

Accessible sidewalk design standards specify materials and textures not only within the path of travel but also to define the edge. A uniform travel surface such as concrete, bordered by another hardscaping material or planting bed, signals to the pedestrian where to walk and helps adjacent property owners and maintenance crews identify the obstruction-free zone. For additional information on accessible sidewalk design please see Section 9.2.

Recommendation 8.9

It is recommended that the City:

The defined sidewalk pedestrian zone meet accessibility guidelines and remain unimpeded.

8.3 Summary of Recommendations

It is recommended that (the City):

8.1 Develop a Pedestrian Charter, for adoption by the City, that represents a commitment to creating a walkable and pedestrian friendly-city. Link the Pedestrian Charter to the City of Ottawa Official Plan and Transportation Master Plan.

8.2 Integrate pedestrian planning tools and methods, from the Ottawa Pedestrian Plan, into planning processes (such as the Community Design Plan process). These tools also include walkability audits and the various pedestrian supportive guidelines.

8.3 Establish a priority list of landscape and streetscape improvements within each Secondary Plan and Community Design Plans to further walkability.

8.4 Create a Pedestrian Facility Planning and Design Guideline document to be used during the development review and capital works processes. Base the guidelines on a consolidation of the pedestrian-supportive recommendations in existing City guideline documents, as well as the safety and accessibility guidelines presented in the Ottawa Pedestrian Plan.

8.5 Require the pedestrian design solutions established by the pedestrian plan be applied to the development application process. (Reference Recommendations 8.1, 8.3, 8.4, 8.5).

8.6 Amend the Transportation Impact Assessment Guidelines to specifically include the requirement for a description of how the site meets the pedestrian supportive guidelines and Community Pedestrian Improvement Process methodologies (Reference recommendation 8.5).

8.7 Use the sidewalk and boulevard guidelines presented in Table 8.4 as a guide for the development or redevelopment of roadways.

8.8 On new road construction, road reconstruction and rehabilitation, apply Ottawa's Pedestrian Guidelines and the Community Pedestrian Improvement Process methodology, as feasible.

8.9 The defined sidewalk pedestrian zone meet accessibility guidelines and remain unimpeded.