7.0 The Pedestrian Network

7.1 What is a Pedestrian Network?

For walking to become an attractive and feasible alternative to travel by other modes, the provision of a high quality and comfortable walking experience is essential. A significant component of the walking experience is a pedestrian network. This chapter outlines the network development process and network recommendations.

When thinking about moving people by various modes of transportation, planners often think about networks. Although pedestrian movement also relies on a network, there are some key differences between pedestrian and other modes of travel, and these present both challenges and opportunities as suggested by the following:

- Pedestrian travel is very "portable" meaning that pedestrians can make the transition to other modes of travel with relative ease. For example, unlike automobile or bicycle travel storage facilities such as parking areas for vehicles are not needed
- 2. As illustrated by the following statistics from various sources, the majority of pedestrian trips are short. So too are a number of automobile trips, thus the opportunity to replace short automobile trips with pedestrian trips is significant. For example:
- 95% of all pedestrian trips are less than 2.5km in length (Transportation Tomorrow Survey, in Hamilton Cycling Master Plan 1996). (46)
- 39.6% of all automobile trips are less than 3.2km (National Bicycling and Walking Study: Transportation Choices for a Changing America, USDOT, 1994). (47)
- 27% of automobile trips are less than 2.5km (Transportation Tomorrow Survey, 1996). (48)
- 7% of trips to work are made by walking (Statistics Canada, 2001 Census). (49)
- 25% of trips to work are less than 3.2km in length (Statistics Canada, 2001 Census). (50)
- Many trips to school in urban areas are short, yet many students drive or are driven to school.
- 3. Pedestrians tend to seek the most direct routes. Because the rate of travel is much slower than other self-propelled and motorized modes of travel and only short distances can be covered in a "20 minute walk" as illustrated in Figure 7.1, barriers and indirect routes can be significant



50 Ibid.

⁴⁶ http://www.myhamilton.ca/NR/rdonlyres/3654FE08-9A49-4D7D-9595-23D3557BB77A/0/ShiftingGears.pdf

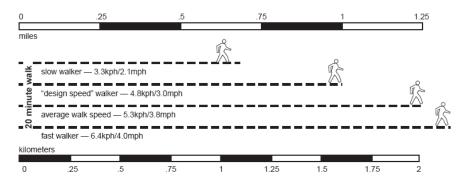
⁴⁷ Federal Highway Administration. *The National Bicycling and Walking Study Final Report*, *Transportation Choices for a Changing America* (Federal Highway Administration Publication No. FHWA-PD-94-023), 1994

⁴⁸ http://www.myhamilton.ca/NR/rdonlyres/3654FE08-9A49-4D7D-9595-23D3557BB77A/0/ShiftingGears.pdf

⁴⁹ http://www12.statcan.ca/english/census01/home/index.cfm

and may discourage pedestrian travel. A motorist or cyclist (to a lesser degree) on the other hand will often tolerate a less direct route.

Figure 7.1
20 minute walking, distances, times and speeds
3.3kph=0.9m/s, 4.8kph=1.3m/s, 5.3kph = 1.5m/s, 6.4kph = 1.8m/s



Source: http://www.pednet.org/

- 4. Pedestrians can travel many places that don't require formalized routes. In comparison to automobiles and bicycles that require roads and pathways, pedestrians can and often do use short cuts/informal routes, alleyways, public plazas, go through buildings and malls to get to their destination and direct routes and short cuts are an important part of the pedestrian trip.
- Pedestrian travel tends to be more geographically contained in some areas than others. In Ottawa for example large numbers of pedestrians are more likely to be encountered in the Byward Market than on the multi-use pathway along Woodroffe Avenue between Hunt Club Road and Fallowfield Road.
- 6. **Origins and destinations are unique and many**, they are unique to each pedestrian and the same pedestrian may take different routes between the same origin and destination on any given day, therefore pedestrian travel could be considered **organic**.

These unique aspects of pedestrian travel influence network planning in some fundamental ways. For example, short trip lengths and the organic form of travel may imply that the "corridor" concept is less significant for pedestrians than when planning for automobiles, transit vehicles and bicycles. Secondly, a wide variation in the density of pedestrians encountered in different parts of the city may imply that the range, density and type of pedestrian infrastructure should vary geographically depending on the characteristics of the location.

7.2 Data Sources and Analysis

Information and data from a number of sources was assembled, consolidated and analyzed in the development of the proposed network for Ottawa. These included the:

City of Ottawa's MAP GIS database.

- Stand-alone data layers owned by various business units such as Infrastructure Services' Sidewalk Condition Database.
- Results from the 2005 Origin-Destination Survey for the National Capital Region (OD Survey) (51), including statistics related to percentage walking trips and trip purpose from each of the districts defined in the survey.
- A data layer created from the current Candidate Project List for the New Sidewalk Links program.
- City of Ottawa aerial imagery (2006).

As a starting point, aerial imagery was overlaid with data layers from the MAP GIS application, several stand-alone layers, the Candidate Project List generated by the *New Sidewalk Links Program*. All of this information was considered in the context of results from the OD Survey and comments received from staff, stakeholders and the public.

The following is a brief description of these data sources, some of the pertinent information that was extracted from each and how it was used in the development of recommendations for the pedestrian network recommendations.



The data is owned and managed by the City Information Technology Department and is accessible to various city departments. As planning, design and construction projects are completed by the City and/or on behalf of the City, data needs to be generated in the appropriate format to add to the database. For the Ottawa Pedestrian Plan a number of layers were studied. These included:

- General Landscape classifications and Planning/Zoning designations including the Forest, Lakes and Rivers, Urban Area, Rural Area, Greenbelt, Parks and Open Space, Urban Employment Areas, Mixed Use Centres, Enterprise Areas, Main Streets and the Central Area.
- Transportation corridors and facilities such as the roadway network, railways, transit corridors and transit stations.
- Signalized intersections, including those with audible signals.
- Pedestrian bridges.
- Pedestrian facilities including sidewalks, multi-use pathways (City), paved road shoulders and NCC pathways.
- Major pedestrian destinations such as community centres, park buildings and pools, libraries and museums, senior's centres and schools.

The corporate MAP GIS database does not currently contain a layer(s) depicting the comprehensive pedestrian network or the basic sidewalk network. As the primary corporate desktop mapping tool it should contain basic pedestrian inventory information. As part of the development of the pedestrian network for the Ottawa Pedestrian Plan, a series of layers were created that depict the pedestrian network. This process and the results are further discussed in Sections 7.4 to 7.8.

7.2.2 Other GIS Databases

Some City Branches have developed and maintain databases specific to their area of work. This data is owned by the Branch it was created by and is not



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⁵¹ TRANS Committee. *Origin Destination 2005 National Capital Region Travel Survey*. (http://www.ncr-trans-rcn.ca/index.php?toc=content&ID=208). 2005.

generally available to other Branches within the city. During consultation, the study team was made aware of a couple of databases that included valuable information for the development of the pedestrian network in the Ottawa Pedestrian Plan, yet these are not currently part of the main corporate MAP GIS database.

Infrastructure Services has developed a Sidewalk Condition Database which contains an array of detailed information regarding the physical statistics (dimensions, slope etc), age (where available) and condition of sidewalks in many parts of the City. Although much of the data contained in this database is too detailed for the master plan level of study, the information would be invaluable for future sidewalk planning at the more detailed level.

Surface Operations has developed a Winter Sidewalk Maintenance database which is used to track winter maintenance, assign priorities and ploughing beats. As part of the pedestrian network analysis, this information was overlaid on the MAP GIS data.

At the outset of the Pedestrian Master Plan study it was revealed that these two related databases were being used exclusively of one another, yet both are potentially invaluable for future pedestrian network planning and priority setting. For example, some of this data may aid in decision-making related to the City's *New Sidewalk Links Program* (refer to Section 7.6), Community Design Plans (refer to Section 8.1.2) and Community Pedestrian Improvement Process (refer to Section 7.7). It is also possible that there may be additional databases developed and maintained by various city Branches that were not considered during the development of the Ottawa Pedestrian Plan, but that may be valuable resources for network planning.

sidewalks (and narrow the street) on Main Street in Ottawa East (dangerous to walk now!) Ottawa resident

Need to widen

Recommendation 7.1

It is recommended that the City:

Form an interdepartmental working group comprised of staff involved in planning, design, maintenance and rehabilitation of sidewalks and pathways, to coordinate efforts in pedestrian network management.

7.2.3 Origin-Destination Survey

The 2005 Origin-Destination Survey (OD Survey) (52) was completed as a joint project of the TRANS Committee, the National Capital Commission, the City of Ottawa, the City of Gatineau, the Ontario and Quebec Ministries of Transportation and the transit agencies of Ottawa and Gatineau, STO and OC Transpo. A random survey consisting of 23,912 telephone interviews represented 5.1% of all households in the City. The data was collected for each of 17 districts throughout the city and key findings for each district was developed. Where possible, comparisons were made to similar data collected in 1986 and 1995. For the Ottawa Pedestrian Plan, the analysis of data from the OD Survey focused on pedestrian travel to and from each of the districts, as well as within each of the districts.

Table 7.1 provides a summary of percent walking trips **within** each district expressed as a total of all trips by different modes, over the 24 hour period, the morning (AM) and afternoon (PM) peak periods, regardless of whether or not the subject stayed within the specified zone and/or the subject arrived into the

⁵² TRANS Committee. Origin Destination 2005 National Capital Region Travel Survey. (http://www.ncr-trans-rcn.ca/index.php?toc=content&ID=208). 2005.

specified zone by another mode of travel (i.e. the subject may have traveled by bus or car to get to the district, then traveled as a pedestrian once inside the district.) In the Ottawa Centre OD district for example during the survey period, 20,070 of the total 24,980 trips over the 24 hour period were made by walking.

Table 7.1					
Percent walking trip					
2005 Origin-	Walking	Walking	Walking	Vehicle	
Destination Survey	Trips	Trips AM	Trips PM	ownership	
District	Over	Peak (%)	Peak (%)	per	
	24hr			household	
	Period			(# of	
	(%)			vehicles)	
Ottawa Centre	80	74	75	0.67	
Ottawa Inner	53	49	54	0.82	
Ottawa West	35	35	34	1.14	
Ottawa East	29	31	28	1.04	
South	23	24	15	1.89	
Gloucester/Leitrim					
Beacon Hill	22	26	20	1.29	
Hunt Club	22	28	21	1.45	
Alta Vista	21	24	20	1.17	
Bayshore/Cedarview	21	20	20	1.37	
Rural East	20	10	10	2.19	
Merivale	17	21	18	1.32	
Orleans	15	19	13	1.66	
Rural Southeast	8	10	9	2.13	
South Nepean	16	20	17	1.76	
Rural Southwest	9	6	8	2.16	
Kanata/Stittsville	12	15	11	1.71	
Rural West	8	6	10	2.15	
AM Peak = 6:30-9:00AM PM Peak = 3:30-6:00PM					



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Over the 24hr period, the AM and PM peak periods, a wide range of values was recorded among the different districts, with the highest rate of pedestrian travel in the Ottawa Centre and Inner Districts (Downtown/Centretown), followed generally by the Middle Urban Area, the suburban area, then the rural areas. In addition, the results showed that the number of vehicles owned per household generally decreases as the percentage of walking trips increase.

The OD Survey provides an excellent baseline for walking/pedestrian participation across the entire city and future editions of the survey should be used as a benchmark to measure the success of city initiatives to increase pedestrian participation.

Recommendation 7.2

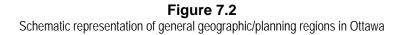
It is recommended that the City:

Use walking participation results from the 2005 Origin Destination Survey, and future updates to this survey as a source indicator of possible trends.

7.2.4 New Sidewalk Links Program Candidate Database

The City of Ottawa New Sidewalk Policy Study was completed in 2002. It recommended a technical evaluation method for a comparative ranking of requests to complete missing links in the sidewalk system across the City. Requests are organized/sorted according to electoral wards. Based on a report generated in June 2007, approximately 280 requests have been recorded and ranked according to the evaluation criteria set out in the document. These current requests amount to approximately 127,000m of sidewalk, and are estimated to cost approximately \$47M to implement. Section 7.6.2 provides further discussion on the details of the program and potential recommendations for its refinement.

When the geographic distribution of current requests (June 2007 data) was examined, it was noted that it varied widely across the city. **Figure 7.2** is an illustration of general geographic/planning regions in the city that correspond roughly with the era when the most significant part of the community's development took place.



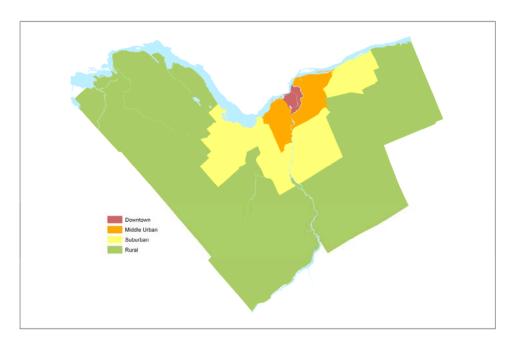


Table 7.2 compares the number and total length of current sidewalk requests from the *New Sidewalk Links Program* with the general geographic/planning region in the city. A significantly higher number of requests are found in the Middle Urban and Suburban regions. The greatest number of sidewalk requests, and the greatest total length of requests came from the Middle-Urban region.

Table 7.2 New Sidewalk Links Program-Requests by general geographic region.							
General Geographic Region	Number	Length of	Percent of Total				
	of	Segments	Length				
	Segments	(m)					
Sub Urban	125	62,529	49%				
Middle Urban	106	44,765	35%				
Rural	23	17,582	14%				
Downtown/Centretown	9	2,712	2%				
Total	232	127,588	100				

Table 7.3 compares the number of requests and total length of requests with the OD survey districts. Of the top ten, five are located in the Middle Urban area and three are in the Sub Urban area. Although ward 15 (Centretown/Downtown geographic region) ranks seventh for number of requests, it ranks fourteenth in total length of requests. Other Centretown/Downtown wards tended to be in the bottom third for both number of requests and total length of requests, which may suggest a higher degree of completion of the sidewalk network. Requests in the Rural Region tended toward the lower half of the ranking for number of segments, yet within the top 3 for total length of segments (i.e. Rural Southeast).

			Table 7.	.3			
Sidewalk requests from New Sidewalk Links Candidate Database according to 2005 OD Survey District.							
Location	n	N	umber of Segme	nts	Le	ength of Segments	
OD Survey District	General Geographic Region	Number of Segments Requested	% of Total Number of Requests f or Entire City	Rank - Number of Segments Requested	Total Length (m) of Requests	% of Total Length of Requests f or Entire City	Rank - Length of Segments Requested
Kanata/ Stittsville	S	35	15.1	1	20,137	15.8	1
Merivale	M	28	12.1	2	19,578	15.3	2
Alta Vista	М	25	10.8	3	12,563	9.8	3
Bayshore/Cedarview	S	19	8.2	5	11,777	9.2	4
Rural Southeast	R	9	3.9	10	11,387	8.9	5
Orleans	S	21	9.1	4	11,399	8.9	5
South Nepean	S	12	5.2	8	9,746	7.6	6
Hunt Club	S	19	8.2	5	9,439	7.4	7
Ottawa West	M	18	7.8	6	5,739	4.5	8
Rural Southwest	R	10	4.3	9	3,790	3.0	9
Ottawa East	М	17	7.3	7	3,606	2.8	10
Beacon Hill	М	5	2.2	12	3,279	2.6	11
Ottawa Inner Area	D	8	3.4	11	2,550	2.0	12
Rural East	R	4	1.7	13	2,405	1.9	13
Ottawa Centre	D	1	0.4	14	162	0.1	14
South Gloucester/Leitrim	S	1	0.4	14	30	0.02	15
Rural West	R	0	0	15	0	0	16
Total		232	100		127,588	100	
D = Downtown, M = Middle U	rban, S= Suburban, R =	Rural					

7.2.5 Aerial Photography and Field Interpretation

The City of Ottawa 2006 Ortho imagery was used to better understand how background GIS information translated to facilities and features on the ground. Specifically it was used to confirm the location and extent of existing sidewalks and pathways, understand the nature of sidewalks and pathways planned through other studies, and finally to develop the pedestrian network that is presented in this plan. This was complemented by scoped field work where required.

7.2.6 Public Input

As discussed in **Chapter 5**, valuable input was received from stakeholders and the public throughout the study. Input related to network connections and links was considered during the development of the proposed pedestrian network as described in Sections 7.4 and 7.9. Comments received were not equally distributed geographically throughout the city. Many comments were received for some geographic areas, and few or no comments were received regarding others.

7.3 Development Patterns and Walkability

Like other cities, development patterns in Ottawa have changed since the city was settled over 150 years ago, and to some extent the walkability of different communities zones may be mirrored by the different percentage of pedestrian trips for different parts of the city reported in the OD Survey.

Figure 7.2 in Section 7.2.4 provided an image of different geographic planning regions in the city, and generally speaking, these relate to different development eras. When the development patterns in the different geographic regions are compared some distinct characteristics are evident.

General characteristics of neighbourhoods within the **Centretown/Downtown** communities include:

- The oldest neighbourhoods.
- A grid pattern of streets, and generally narrower streets.
- Short street blocks and a more compact, mixed use development with multiple destinations within a short distance of one another.
- Schools, public open space and recreational facilities are integrated or "embedded" in individual neighbourhoods.
- · Generally high development densities.
- Sidewalks along virtually all streets.
- Small public parks within neighbourhoods, and larger connected public open spaces along rivers and canals.
- Generally, small off-street parking lots and parking lot structures complemented by extensive on-street parking.



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General characteristics of neighbourhoods in the **Middle Urban** communities include:

- Generally newer neighbourhoods.
- Street pattern is less grid-like, transitioning to curvilinear in the newest neighbourhoods, and includes numerous cul-de-sacs.
- Generally wider streets.
- Longer street blocks, more segregation of land uses, and larger scale commercial and industrial developments.
- Greater separation between major physical barriers.
- Generally medium development densities.
- Generally fewer sidewalks overall, and inconsistency in the location of sidewalks, with some neighbourhoods having sidewalks on both sides of streets, some with sidewalks on one side, and some with no sidewalks at all.
- Evenly distributed and similarly sized public open/park spaces.
- Multi-use pathways in public open/park spaces.
- Large off-street parking lots associated with large scale commercial, industrial and institutional land uses.

General characteristics of neighbourhoods in the **Suburban** communities include:

- Some of the newest neighbourhoods in the city.
- Curvilinear street patterns and numerous cul-de-sacs. A recent emergence of more grid like street patterns in some of the newest neighbourhoods.
- Generally wider streets, with narrower streets being introduced into some of the newest neighbourhoods.
- Longer street blocks and more segregation of land uses, and larger scale commercial and industrial developments in most neighbourhoods.
- Mixed land uses being reintroduced in some of the newest neighbourhoods.
- Greater separation between neighbourhoods and more segregation of neighbourhoods by major physical barriers.
- Medium and low development densities, with some higher densities being introduced in some of the newest neighbourhoods.
- Generally fewer sidewalks overall, and inconsistency in the location of sidewalks, with some neighbourhoods having sidewalks on both sides of streets, some with sidewalks on one side, and some with no sidewalks at all.
- Evenly distributed and similarly sized public open/park spaces.
- Multi-use pathways in public open/park spaces.
- Large off-street parking lots associated with large scale commercial, industrial and institutional land uses.



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Characteristics of the Rural area include:

- A mix of older and newer development patterns in the hamlets and villages with similar characteristics of the Downtown, Middle Urban and Sub Urban areas. The degree to which each of the development patterns is represented depends on the amount and age of developments in the hamlets and villages.
- Large residential estate lots on the edges of hamlets and villages, often without public open space, pathways or sidewalks.
- Pedestrian destinations in core areas (i.e. schools, community centres and retail along traditional main streets).
- Often larger scale commercial developments on the edges of hamlets and villages.
- Sidewalks along some streets in older neighbourhoods, fewer in newer neighbourhoods.
- Large separation distances between hamlets and villages, with few or no pedestrian facilities between them in many cases. Pedestrians generally use asphalt or granular road shoulders.
- Multiuse pathways and trail networks generally associated with linear features such as watercourses and abandoned railway corridors, and public lands such as conservation areas and agreement forests.



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Figures 7.3 and **7.4** illustrate the contrasting nature of two of these patterns: the Downtown/Centretown and Suburban (Kanata)

Downtown-Features compared to Sub Urban (north Kanata): Legend Sidewalks on most streets, grid street layout, short blocks and Sidewalks compact development form less public open/park space within neighbourhoods, public open space concentrated along waterways Winter Maintained Sidewalks with connected pathway system. Pathways Pedestrian trips over the 24hr period are as high as 80% for the core Parks and Open Space

Figure 7.3Patterns of development: Downtown/Centretown

downtown area (53).

⁵³ TRANS Committee. *Origin Destination 2005 National Capital Region Travel Survey*. (http://www.ncr-trans-rcn.ca/index.php?toc=content&ID=208). 2005.

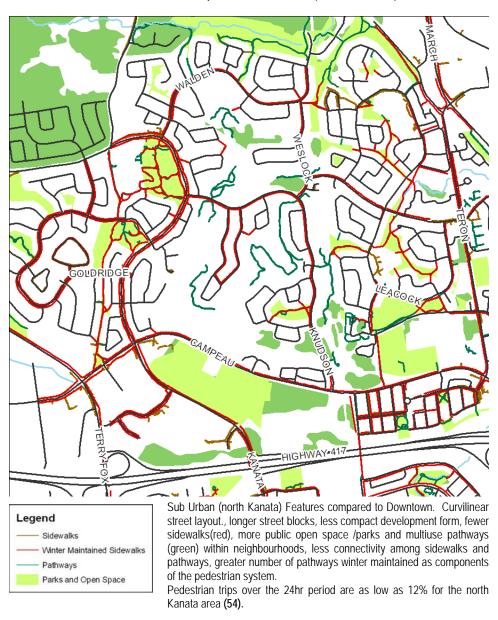


Figure 7.4
Patterns of development: Suburban (north Kanata)

⁵⁴ TRANS Committee. *Origin Destination 2005 National Capital Region Travel Survey*. (http://www.ncr-trans-rcn.ca/index.php?toc=content&ID=208). 2005.

In concert with the physical characteristics of each of these zones, a number of observations were made from the data sources described in Section 7.2.

- Percentage of pedestrian trips are not equally distributed throughout the city (OD Survey (55). They tend to be significantly higher in the Centretown/Downtown geographic region, followed by the Middle Urban geographic region, the Sub Urban then the Rural geographic regions, respectively.
- Average automobile ownership per household is higher in the Rural and Sub Urban geographic regions as compared to the Middle Urban geographic region. Lowest automobile ownership occurs in the Centretown/Downtown geographic region.
- Walking trips to work and school tend to be higher in the urban area (Centretown/Downtown, Middle Urban and Sub Urban) as compared to the rural area. Walking trips in the rural areas tend to be more recreation focused.
- Requests for new sidewalks (New Sidewalk Links Program) tend to be higher in the Middle Urban geographic region followed by the Sub Urban geographic regions, and a higher percentage of the requests are for shorter segments.
- 5. Although two of the rural wards ranked highly for length of requests, the actual number of requests was low (i.e. requests for fewer but longer segments).
- 6. The general public sentiment that neighbourhoods in the Middle Urban and Sub Urban geographic regions are less connected to one another was confirmed through the examination of the GIS MAP data, aerial photography and field observations. Significant physical barriers such as major transportation corridors, large scale industrial and commercial development and separation of land uses, result in more dispersal of pedestrian destinations, thus the need for longer pedestrian trips.



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7.4 Developing the Pedestrian Network

The Pedestrian network concept is founded on some of the key observations made in Section 7.3, including:

- The current level of pedestrian activity is not, and may never be equally distributed across the entire city.
- Individual neighbourhoods differ in their character, and there is an interest respecting and responding to these differences (a "one size does not fit all" approach).

Therefore, the resulting network should be based on a hierarchy of pedestrian facilities both in terms of facility density and design standard of those facilities. For example, the density and design of pedestrian facilities should be different in the Byward Market as compared to pedestrian connections between Bell's Corners and Kanata.

⁵⁵ TRANS Committee. *Origin Destination 2005 National Capital Region Travel Survey*. (http://www.ncr-trans-rcn.ca/index.php?toc=content&ID=208). 2005.

7.4.1 Network Objectives

The challenge is to get more people walking more often. Since the average pedestrian trip does not cover long distances, it is reasonable to assume that a priority focus should be locations where the highest volumes of short pedestrian trips are presently occurring or are likely to occur.

The development of the pedestrian network and the establishment of priorities is based on the following objectives developed from themes that emerged through the public consultation program, input by staff and expertise of the study team:

- Develop an improved pedestrian system building on existing infrastructure.
- 2. Proactively identify missing links in the pedestrian system and recommend strategies to improve connectivity.
- 3. Connect to off-road pathways.
- 4. Create viable connections or links across major physical barriers.
- 5. Develop methods/processes that enable pedestrian design to become an integral part of the design process and not an "afterthought".
- 6. Focus on improving the pedestrian infrastructure in existing and potentially heavily used pedestrian zones when determining top priorities for new or improved infrastructure.

The process for developing the pedestrian network is a four part approach consisting of:

- 1. Appropriately addressing and prioritizing missing sidewalk links identified through the New Sidewalk Links program(refer to Section 7.6), and developing or reinstating a parallel approach for missing pathway links (refer to Section 7.7).
- 2. **Proactively planning for appropriate improvements in existing neighbourhoods** through the Community Design Plan process (refer to Section 8.1.2) and Community Pedestrian Improvement Process (a new tool introduced through the Ottawa Pedestrian Plan-refer to Section 7.7).
- 3. **Proactively planning and designing the pedestrian realm in new neighbourhoods** using tools such as Community Design Plans and development approvals (refer to Section 8.1.4).
- Addressing infill development both on a small scale (i.e. individual lot) and larger scale (i.e. commercial node or new residential neighbourhood).

7.4.2 Types of Pedestrian Facilities

The pedestrian network is composed of an array of facilities, both formal and informal. These include:

Sidewalks within the road right-of-way. Typically constructed of concrete, their width and separation/buffer from vehicular traffic is different depending on the class of road they are associated with and the character of surrounding land use(s).

Formal Pathways such as:

 City owned and/or maintained multi-use pathways in parks and open public open space. "In Orleans, a very poor connection to "new form" big box retails steps away from residential area. Why?"
Ottawa Resident

- Multi-use pathways situated in boulevards within the road right of way or within transitway corridors.
- Pathways associated with natural heritage features such as rivers, wetlands and woodlots.
- Easements and pathways connecting one street block to the next.
- Pathway routes in or along linear corridors such as abandoned railway lines and hydro transmission lines.
- The Capital Pathway System, located on lands owned and/or managed by the National Capital Commission.

Informal paths or routes on public lands such as urban plazas, pedestrian malls, civic buildings, recreation centres, and including walkways, alleys, parking lots, beaten paths (desire lines) and trails etc.

Informal paths or routes on private lands such as shopping malls and university campuses, and including walkways, alleys, through-ways, parking lots, beaten paths and trails etc.

Low volume streets without sidewalks in urban and rural settings.

Granular or asphalt **road shoulders** in urban and rural areas.

All of these facilities combined, are important parts of a connected, continuous network.

7.5 Responsibility for Ottawa's Sidewalks and Pathways

The planning, approval, construction and maintenance of sidewalks and pathways is the responsibility of several different city branches depending on the nature and location of the project (within road rights of way vs. outside of road rights of way) as well as the stage in the life cycle of the asset (new vs. rehabilitation or replacement of existing). The shared responsibility helps provides the benefit of a number of different disciplines and areas of expertise with a role in the design, operations, rehabilitation and maintenance of the pedestrian network. The disadvantage, however, is that some parts of the pedestrian system are overlooked, especially once they have been installed, and this was revealed as a significant concern in the public consultation process for the Ottawa Pedestrian Plan.

For example, the Official Plan and the Transportation Master Plan require that pedestrian facilities be provided as part of the construction of new, and reconstruction of arterial and collector roads. However, there have been instances where budget constraints have resulted in the deferral or elimination of pedestrian facilities from the project. Therefore scoping and budgeting for these projects needs to be carefully reviewed to ensure that pedestrian facilities are properly accounted and included with all projects. Ensuring that pedestrian facilities are included along arterials and collectors at this stage is not only cost effective, it also avoids the potential pitfall of these same pedestrian links later being referred (requested) to the *New Sidewalk Links Program* which is typically not equipped to deal with some of these large projects. The *New Sidewalk Links* Program is further discussed in Section 7.6.

Tables 7.4 and 7.5 provide an overview of responsibilities for various aspects of planning, approval, construction, maintenance of sidewalks and pathways. The tables also provide a cross reference to various section(s) of the report where additional details can be found.



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	Table 7.4 Sidewalk planning, approvals, construction, maintenance and rehabilitation.								
Facility Ty	/pe:Sidewa	lks	Infrastruc	ture Services a	nd Community	Sustainabil	ity	City Operations	Comments
			Planning	and Growth Ma	nagement	Transit Services	IS ¹	SOP ²	
Location	Lifecycle Stage	Task	Planning	Development Approvals	Mobility and Area Traffic Management				
Within Road Right of Way	New Facility	Master Planning	✓						Refer also to report Section 8.1.2
or way		New Development		✓					Refer also to report Section 8.1.4
		With Road Reconstruction					✓		Refer also to report Section 8.2
		Missing Links			✓				Refer also to report Section 7.6.
					·				Note also that construction of curb ramps occurs through the Strategic Initiatives- Sidewalk and Sidewalk/Pathway Links Program, and the Renewal of City Assets - Pedestrian Accessibility
	Existing Facility	Maintenance						✓	Refer also to report Section 10.1 to 10.4
	_	Lifecycle Replacement					✓		Refer also to report Section 10.1 to 10.4

✓ = Responsible for task

IS= Infrastructure Services
 SOP= Surface Operations

	Table 7.5 Multi-use pathway planning, approvals, construction, maintenance and rehabilitation.														
Facility T	ype: Multi-us	se Pathways	Infrastru	cture Services	and Communit	v Sustainab	ilitv	City O	perations	<u> </u>	Others				
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Infrastructure Services and Community Sustainability Planning and Growth Management Transit IS1								NCC ⁵ MTO ⁶ MTQ ⁷ Private				
Location	Lifecycle Stage	Task	Planning	Development Approvals	Mobility and Area Traffic Management	Transit Services	15	SOP	RCS	RPAIVI	NCC	MIO	IVITQ	Private	Comments
Within Road	New Facility	Master Planning	✓							✓					Refer also to report Section 8.1.2
Right of Way		New Development		✓											Refer also to report Section 8.1.4
		With Road Reconstruction					✓								Refer also to report Section 8.2
		Missing Links			•										Program cancelled in 2005. Refer also to report Section 7.6
	Existing Facilities	Maintenance													Refer also to report Section 10.5
		Lifecycle Replacement					√								Responsibility not currently allocated to any Branch. Refer also to report Section 10.5
Outside of Road	New Facility	Master Planning	✓												Refer also to report Section 8.1.2 to 8.1.4
Right of Way		Federal Property									✓				Refer also to report Section 8.1.2
		Parkland							✓						Refer also to report Section 8.1.2 to 8.1.4
		New Development		✓											Refer also to report Section 8.1.2 to 8.1.4
		Missing Links			•										Program cancelled in 2005.
		Transit Pathways				✓									Refer also to report Section 8.1.2 to 8.1.4
		Pathways in Utility Corridors													Responsibility requires clarification

Facility Tv	/pe: Multi-us	e Pathways	Infrastruc	ture Services ar	hway planning nd Community S	Sustainability			erations		Others				
Location	Lifecycle Stage	Task		and Growth Ma Development Approvals	nagement Mobility and Area Traffic	- Transit Services	IS ¹	SOP ²	RCS	RPAM⁴	NCC⁵	MTO ⁶	MTQ ⁷	Private	Comments
	Existing Facilities	Maintenance of Pathways Parkland			Management			✓							Refer also to report Section 10.5
		Lifecycle Replacement of Pathways in Parkland								√					Refer also to report Section 10 5
		Maintenance of Pathways on Federal Land									✓				Refer also to report Section 10.5
		Lifecycle Replacement of Pathways on Federal Land									✓				Refer also to report Section 10.5
		Pathways in Utility Corridors													
		Pathways in Utility Corridor Lifecycle Reconstruction													
		Transit Pathway Maintenance						✓							SOP on behalf of Transit Refer also to report Section 10.5

- 1. IS= Infrastructure Services
- 2. SOP= Surface Operations
- 3. RCS= Recreation and Community Services
- 4. RPAM = Real Property and Asset Management
- 5. NCC= National Capital Commission
- 6. MTO= Ministry of Transportation (Ontario)
- 7. MTQ= Ministry of Transportation (Quebec)
- = Responsible for task
- ◆ = Was responsible for task, program was cancelled (see comments)

Recommendation 7.3

It is recommended that the City:

Undertake a comprehensive review of roles and responsibilities for all aspects of sidewalk and pathway planning design, operation, rehabilitation and maintenance to ensure that responsibility for all aspects of the pedestrian network infrastructure have been accounted for and properly assigned to the appropriate Branch or Department.

Recommendation 7.4

It is recommended that:

The scope and budget for new and reconstructed roads are to include the provision of sidewalks and/or multi-use pathways as prescribed by the Pedestrian Plan, the Official Plan and the Transportation Master Plan.

7.6 Addressing and Prioritizing Missing Links

Construction of missing sidewalk links and curb ramps is implemented through the *Strategic Initiatives- Sidewalk and Sidewalk/Pathway Links Program (New Sidewalk Links Program)*, and the *Renewal of City Assets - Pedestrian Accessibility*. Under these programs, requests are received from staff and the public and prioritized for implementation.

An interim process has been in place since 2002 to determine the allocation of City budget for the provision of missing sidewalk links in the existing sidewalk network in developed communities. Numerically weighted criteria are used to determine if a request is an actual candidate for a new sidewalk. Once on the candidate list, a feasibility review is undertaken to determine if there are constraints that preclude constructing a sidewalk, such as mature trees, road width, property issues, cost limitations, other construction obstacles, etc. The priority rating is undertaken a full year before construction takes place to provide opportunities for Council approval, data collection, detailed design preparation, public notification and tendering.

The recommended criteria for determining sidewalk and pathway eligibility for consideration as a candidate under the New Sidewalks and Sidewalk/Pathway Links Program:

- The requested sidewalk or pathway is situated on City of Ottawa property or if non-city owned, a legal agreement exists between the property owner and the City; and
- The requested sidewalk or pathway is necessary to complete a discontinuous section in an existing sidewalk or pathway; or
- The requested sidewalk or pathway extends from the existing sidewalk or pathway network along city property toward an established public pedestrian destination; and
- The requested sidewalk or pathway does not constitute an isolated segment disconnected from the existing sidewalk or pathway network; and
- The requested sidewalk or pathway does not create an alternate route to an existing City-maintained sidewalk or pathway (400m threshold); and



- The requested sidewalk or pathway is not situated in a developing area whereby the infrastructure will be implemented through the development process; and
- The requested sidewalk or pathway is not situated in an area subject to road construction or reconstruction whereby the infrastructure will be implemented through the construction process; and
- There exists the infrastructure or geometric configuration to support implementation of the requested sidewalk or pathway.

Sidewalks and pathways that will <u>not</u> be eligible for consideration as a candidate under the New Sidewalk and Sidewalk/Pathways Links Program:

 Sidewalks and pathways required through growth that represent missed opportunities whereby the methodologies of the Pedestrian Improvement Process as established by the Ottawa Pedestrian Plan have not been applied to the development process.

The recommended criteria for determining priority ranking of sidewalks and pathways under the New Sidewalks and Sidewalk/Pathways Links Program:

Pedestrian Destinations/Generators

•	Rapid Transit (transitway 400m)	10 points
•	Transit Route (bus route 400m)	7 points
•	Primary and Intermediate School	10 points
•	Secondary High School	7 points
•	University	7 points
•	Registered Daycare Facility	5 points
•	Park (including greenspace 400m)	7 points
•	Adult school	2 points
•	Community Centre	5 points
•	Library	5 points
•	Seniors' Residence or Care Centre	5 points
•	Long Term Care (Nursing Home)	5 points
•	Impaired Persons	5 points
•	Retail/Commercial Centres	5 points
•	Business/Industrial Areas	5 points
•	Employment Centres	5 points
•	Church	2 points
•	Other Public Institution	2 points

Traffic and Roadway Characteristics

•	Posted Speed greater than 80kph	4 points
•	Posted Speed 50-70kph	2 points
•	Posted Speed greater than 40kph	0 points
•	Peak Hour Traffic Volume greater than 500	4 points
•	Peak Hour Traffic Volume 250 to 500	3 points
•	Peak Hour Traffic Volume 100 to 250	2 points
•	Peak Hour Traffic Volume 50 to 100	1 point

•	Peak Hour Traffic Volume less than 50	0 points
•	Curvilinear Geometry	2 points
•	Linear Geometry	0 points
•	2 Lane	0 points
•	4 Lane divided (with median greater than 6m	2 points
•	4 Lanes plus, undivided (median less than 6m)	5 points
•	Significant Grade (6% or greater)	2 points
•	Sightline Challenges (6 m)	2 points
•	Arterial Road Classification	5 points
•	Collector Road Classification	5 points
•	Identified Line (OP, TMP or other City policy	5 points

Adjacent Land Use

•	High Density Residential	4 points
•	Medium Density Residential	3 points
•	Low Density Residential	2 points
•	Commercial	4 points
•	Business/Industrial Areas	4 points
•	Employment Centres	4 points

General Considerations

•	Pedestrian connections between separated communitie	s 10 points
•	Desire Line (beaten path)	5 points
•	No existing parallel pedestrian facility	3 points
•	Crosses significant barrier (reasonable application)	5 points
•	Primary Connector (dead end, cul-de-sac, local street)	5 points
•	Years on Candidate List (per year)	1 point
•	Other relevant factors	1-5 points

Recommendation 7.5

It is recommended that the City:

Modify the New Sidewalk Links program using the criteria and weighting system for assessing candidates identified in the Ottawa Pedestrian Plan, so that eligibility is established and a clearer separation of priorities is achieved. This may include recommendations for the development or reinstatement of parallel program(s) for pedestrian facilities, other than sidewalks such as pathways.

Recommendation 7.6

It is recommended that

Consolidate pedestrian master data, currently managed independently by various branches, utilizing the corporate GIS tool. This would require processes to ensure data is continually updated and refined by the various data "owners".

7.7 Community Pedestrian Improvement Process

Another potential pitfall of the *New Sidewalk Links Program* is that it is a reactive rather than a proactive planning tool. As such, the second component of developing the pedestrian network within the existing urban fabric is the Community Pedestrian Improvement Process. Ultimately, all neighbourhoods throughout the city should have a Community Pedestrian Improvement Process prepared. Priority neighbourhoods identified in this study for Community Pedestrian Improvement Process correspond with are those that have a number of requests (*New Sidewalk Links Program*) for sidewalk improvements within a small geographic area.

7.7.1 Why Undertake Community Pedestrian Improvement Process?

Ottawa is a large city with numerous neighbourhoods, each with their own unique aspects, opportunities and constraints for walking. As described in earlier sections of this report, there are universal aspects to a walkable community that will be evident and can be applied in each community, but they will be expressed in different ways that are unique to each community. The Community Pedestrian Improvement Process approach breaks the city down into more manageable pieces and may provide a better opportunity to reach the stakeholders within a smaller, more defined geographic area. Stakeholders within a defined community area are likely to be passionate about their own neighbourhood, are likely to have a much more intimate understanding of the issues and opportunities, and be able to translate their ideas into recommendations for concrete action plans at this more defined scale.

Note: Guidelines attached to any of the City's Heritage Conservation Districts (HCD's) will determine priorities for pedestrian improvements in those areas.

7.7.2 Community Pedestrian Improvement Process Methodology

A process is required to assess the walkability of a community, subdivision or specific site, based on simple analysis of pedestrian origins, routes and attractions.

The purpose of a Community Pedestrian Improvement Process is to examine the pedestrian network and determine the pedestrian facilities that will be necessary or desirable to create a walkable neighbourhood or development. In order to prepare such a plan, the following methodology is proposed. It can be applied to both existing and planned neighbourhoods and developments.

- 1. Gather and map information about the proposed development or redevelopment and adjacent areas (see Note 1) such as:
 - Existing and proposed land uses.
 - Existing and proposed street and sidewalk infrastructure.
 - Geographical barriers to pedestrian movement.



Guelph

- 2. Identify features that provide opportunities for walking (streets, walkways, pathways, laneways, parks, utility corridors, sidewalks etc.).
- 3. Select the major pedestrian attractions (schools, transit stations and transit stops, recreation centres, commercial/retail sites, employment centres, public greenspace —see Note 2).
- 4. Select a target user and therefore the typical pedestrian trip characteristics for each major pedestrian attraction (see Note 3).
- 5. Plot the appropriate minimum and maximum desirable pedestrian capture radii for each attraction (see Note 4).
- Plot all pedestrian routes from the attraction to the households within the capture radii.
- 7. Where applicable, recognizing that this may be limited in existing development, examine alternate land-use plans, pedestrian or street network layouts, pedestrian routing plans with and without major pedestrian infrastructure as necessary to achieve goals.
- Finalize the pedestrian catchment areas and routing plans for each attractor, stating the number of households within the catchment area, and identifying pedestrian infrastructure requirements (additional walkways, pathways, intersections, mid-block and grade-separated crossings, etc. – see Note 5)
- 9. If the plan is connected to existing development, undertake a walkability audit (See **Appendix G** under separate cover).
- 10. Assemble and map the results of the walkability audit, catchment plan and background information review.
- 11. Consult with the public within the target district (i.e. Open House, Workshop etc.) to review and discuss assembled materials. The goal of the workshop is to identify the ultimate pedestrian network and the priorities for implementation.
- 12. Finalize the Community Pedestrian Improvement Process with recommendations for action plans and funding/implementation strategies.

Note 1: The boundaries of the area to be reviewed should encompass existing development adjacent the site, subdivision or community plans that fall within the pedestrian catchment areas for attractors within the proposed development as described in Notes 2 and 4.

Note 2: Attractions should be limited to the key pedestrian trip generators including schools, transit stations and transit stops, recreation centres, neighbourhood and regional commercial/retail centres, employment centres and public greenspace. By selecting the major attractions and determining the pedestrian facilities that are necessary for those trips, facilities that are desirable for minor attractions can be appended to the core facilities. For example, within a neighborhood, the major attractions could be limited to the school and the neighborhood commercial site.

The City of Ottawa Official Plan sets a target for residential areas, that all homes will be within 400m of a greenspace or roughly a 5-minute walk. Similarly, the City of Ottawa Transit Service and Fare Policy (2005) stipulates that transit service will be provided within a 400m walk of 95% of the population of the urban transit area in peak periods, and that transit service will be provided within an 800m walk of 95% of the population 7 days a week. Physical constraints and intervening barriers such as major roads can hinder access. Access can be enhanced through pedestrian friendly design.

"Bells Corners has the elements for a walkable community – except promotion and linkages especially in Lynwood." Ottawa Resident

Note 3: For each attraction, the specific characteristics of the main type of pedestrian type needs to be considered. For example, children generally walk at a rate of approximately 1.0 metres per second (m/s) and are willing to walk for 15 minutes to school (900m). A neighborhood commercial site will attract adult pedestrians that walk at 1.5 m/s and are willing to walk for 15 minutes to reach their destination (1,350m). Regional retail and employment sites will attract adult pedestrians that are willing to walk 30 minutes (2,700m) to reach their employer or to shop. This is not to say that adults do not walk to schools or that children do not walk to their neighborhood store. The purpose of identifying the user and their characteristics is to define the catchment area, and thus, the facilities needed to support the trips.

Note 4: In order to maximize the walkability of a community, the goal is to create a pedestrian network that captures every household within a maximum distance of the attractor, and also capture as many households as possible within the minimum desirable walking distance. Assuming that pedestrians do not want to walk more than 50% out of their way to reach their destination, a 900m walk trip to a school, for example, would have a minimum capture radius of 600m and a maximum desirable capture radius of 900m. Every household within the 600m radius should be on a pedestrian route that measures no more than 900m in length. Also, as many households as possible within the 900m maximum desirable radius should be connected by a pedestrian route. For neighbourhood commercial areas, the minimum capture radius would be 900m and the maximum desirable capture radius would be 1,350m. For regional retail and employment centres, the minimum capture radius would be 1,800m and the maximum desirable capture radius would be 2,700m.

Note 5: Key pedestrian connections between communities should also be inventoried and evaluated. The significance of these connections becomes even greater when pedestrian connection(s) to surrounding communities are limited (i.e. gated communities) and/or significant physical barriers need to be overcome (i.e. active railway or major provincial highway).

Unlike vehicular traffic plans, in Community Pedestrian Improvement Process there is little need to quantify the number of pedestrians projected to use a facility. This planning framework is used to determine where facilities should be placed rather than the facility capacity. In many cases, pedestrian facility sizing is not based on capacity, but rather, minimum standards. The decision is whether or not to provide a facility rather than how wide the sidewalk should be.

As a result, for the purpose of Community Pedestrian Improvement Process, pedestrian catchment areas are expressed in terms of the number of households within a specified walking distance rather than pedestrians per hour or day. The stability of this measure is also important. Consider pedestrian trips to a neighborhood school as an example. As a neighborhood ages and school populations rise and fall, so do pedestrian trips. The measure of households in a catchment area does not change appreciably with time. It is also a non-judgmental measure that does not suggest that walking or driving is good or bad; it is simply a quantifiable measure that is difficult to dispute.

It would be possible to convert households in the catchment area to a projected number of pedestrian trips by applying a series of assumptions such as the number of people who live in each household, the number of pedestrians that would be attracted to the destination, and the pedestrian share of the trips generated. This exercise does not provide additional value in making decisions about the types of facilities that should be provided and introduces a significant number of assumptions that need to be defined and supported. Simply put, at the Community Pedestrian Improvement Process decision-making level,

"Actually the shops on Bank Street South are interesting – they are just set in a wasteland" Ottawa Resident

quantifying the number of pedestrian trips is unnecessary. The argument that "No one will ever walk there." is completely unfounded in cities. The designer should really consider the question: "How can we best accommodate the pedestrians that will be there?"

Plotting pedestrian routes is the most labor intensive task in the methodology. Starting at the attractor, plot the pedestrian routes to the households within each capture radius. This method provides the shortest walking distance from each origin and defines the points where pedestrians will be concentrated. Working through this process will also illuminate the critical pedestrian areas and potential facilities required. For example, if all of the pedestrian trips need routing to a signalized intersection to cross a four-lane road, an alternate pedestrian routing plan could be developed that incorporates a mid-block crossing. This alternate plan would illustrate the reduced walking distance for pedestrians to reach their destination as well as the increase in the number of households that are now within the minimum desirable capture area.

This analysis results in the creation of a pedestrian routing and catchment area plan as depicted in **Figure 7.5**. This plan illustrates the main pedestrian routes, street crossing points, and special facilities necessary to serve pedestrians, such as walkways that provide short-cuts and street crossings. As well, the catchment area illustrates the number of households within walking range of the attraction and the proximity of the attraction to pedestrians.

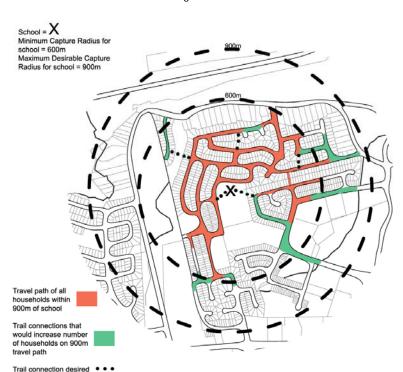


Figure 7.5Pedestrian routing and Catchment Area Plan

With the school as the major destination and by plotting a 600m and 900m radius, it is possible to determine how may households are captured within each radius. It is also possible to demonstrate the effect of adding different pedestrian linkages (i.e. pathways) on the number of total number of households that can be included or added to the catchment area. In the example above the addition of certain pathway links results in the inclusion of a greater number of households.

It is important that the fundamentals of the Community Pedestrian Improvement Process process be applied to projects at all levels in the city, with the objective of improving the quality of pedestrian environment in a comprehensive manner and that projects do not occur in isolation of it. As previously noted in Section 7.5, this will help to avoid the pitfall of these projects later being referred (requested) to the *New Sidewalk Links Program*. Therefore, the principles of this process should be applied to the following range of project types throughout the city:

- Community Design Plans;
- Development Plans and Plans of Subdivision:
- Infill development;
- Special project areas selected for pilot Community Pedestrian Plan improvement projects, and;
- Road reconstruction and new road construction projects.

Recommendation 7.7

It is recommended that the City:

Refine and adopt the Community Pedestrian Improvement Process methodology and process to assess the walkability of a community, subdivision or specific site. This methodology proactively improves pedestrian facilities by analyzing pedestrian origins, routes and attractions.

7.8 The Proposed Pedestrian Network

The proposed network is based on stakeholder and public comments, the analysis of data described in Section 7.2, and the network objectives listed in Section 7.4.1.

The proposed pedestrian network is composed of:

Sidewalks, consisting of:

- Existing Sidewalks;
- Requests from the New Sidewalk Links Program Candidate Database, and;
- New Sidewalks proposed in the Ottawa Pedestrian Plan (refer to section 7.8.1)

Pathways, consisting of:

- Existing Pathways;
- Proposed pathways such as the major multi-use pathways identified in the Transportation Master Plan and Greenspace Master Plan, and further refinements thereof as identified in other city studies such as the Ottawa Cycling Plan, the NCC's Capital Pathways 2006 Strategic Plan, and:
- New Pathways proposed in the Ottawa Pedestrian Master Plan (refer to section 7.8.1).

Paved Roadway Shoulders which includes Existing Paved Shoulders in rural areas documented in the Ottawa Cycling Plan.

7.8.1 Recommended Sidewalk and Pathway Links

The character of the recommended Pedestrian Network varies in different locations throughout the city, in response to the variety of communities and neighbourhoods. In Ottawa's newest neighbourhoods for example (i.e. currently being constructed) the network is illustrated differently than in existing neighbourhoods.

New Neighbourhoods

In areas of new and active development, recommendations in the Ottawa Pedestrian Plan follow key corridors, therefore new and active development areas may appear to lack sidewalk/pathway recommendations at a finer level. It is assumed that approved development plans and prevailing standards will apply to these areas and that from this point forward the development approval process will enable the creation of more continuous pedestrian networks. This is evidenced in some of the newest development areas such as Orleans and Barrhaven. Refer to **Figure 7.6.** Following the adoption of the Ottawa Pedestrian Plan, planning and designing pedestrian networks in new development areas will be articulated through the Community Pedestrian Improvement Process process.

Figure 7.6

Pedestrian network concepts in Ottawa's newest neighbourhoods

Example 1: Orleans (south)

Character: A grid or modified grid street network or with short blocks. Sidewalks and pathways are shown on key corridors only, assuming that a higher standard for pedestrian facilities is part of the condition of approval for Ottawa's newest neighbourhoods. Refer to approved plans for details.

Strategy: For future communities, the Community Design Plan process, principles of the Community Network Improvement Plan process, and other tools such as the Pedestrian Plan Guidelines will be applied to ensure a high standard for the pedestrian network (Refer to section 8.x for network planning tools)



Legend



Existing Neighbourhoods

In existing communities and neighbourhoods, recommendations for pedestrian network links were based on a number of strategies including those listed below. **Figure 7.7** illustrates some typical examples.

- Evaluate requests from the New Sidewalk Links Program Candidate
 Database and perform an initial pass/fail screening such that those
 remaining in the recommended network form legitimate network
 connections and fit within the scope of the New Sidewalk Links program.
 Requests that should be addressed by another program such as a
 pathway links program were not included, or were illustrated as proposed
 pathway connections.
- Close gaps in the existing sidewalk network, especially where short gaps occur in an otherwise continuous network of sidewalks and pathways.

- Provide access to key destinations such as schools and major commercial areas.
- Provide sidewalks along school frontages.
- Select routes that provide direct access to crossing points of key barriers, and those that cross arterial roads at signalized intersections wherever possible.
- To the extent that it is possible, follow existing patterns and respect the style of pedestrian facilities in those neighbourhoods.

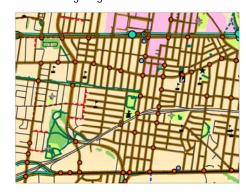
Figure 7.7

Pedestrian network concepts in Ottawa's existing neighbourhoods

Example 1: Ottawa West

Character: A grid street network with short blocks and sidewalks on most streets. Pathways are generally limited, including scattered parks and occasional open space/utility corridors.

Strategy: Focus on completing minor missing sidewalk links and improving on the quality of pedestrian facilities as they are scheduled for repair, rehabilitation or reconstruction. See Figure 7.6 for legend.



Example 2: Orleans

Character: A curvilinear street network with sidewalks on most arterials and collectors, few or no sidewalks on residential (local) streets. An extensive pathway network in linear park/open space creates strong spines through neighbourhoods and connections across arterials.

Strategy: Focus on completing missing pathway connections and ensure that pathways are well linked to existing sidewalk system. Provide critical sidewalk links between extensive pathway networks. The presence of sidewalks also assists with wayfinding as all existing sidewalks are spines or lead directly to pathway spines. See Figure 7.6 for legend.



Example 3: Merivale

Character: A grid street network with long blocks in one direction, shorter blocks in other. Sidewalks along arterials and very few/none along residential (local) streets. Existing pathways are limited. The potential for future pathways is generally limited to linear corridors such as transit.

Strategy: Focus on creating sidewalk connections along spines at regular intervals and key corridors that provide connections to destinations such as schools, commercial and employment areas and community centres. Develop key connections to offroad pathway corridors. See Figure 7.6 for legend.



There is a finer level of detail in the pedestrian network on some lands that are not city owned and not illustrated in the Ottawa Pedestrian Plan network, yet these play an important role in the connectivity of a network. Specifically, walkways and pathways exist on privately owned lands such as elementary, secondary and post secondary schools, major institutions, townhouse and condominium lands, large commercial sites such as shopping centres and malls.

How the Recommended Pedestrian Network Should Be Used

When viewed together, these layers form a comprehensive pedestrian network that will serve as the starting point for the future development of the network on the ground. For the purposes of the network the city is divided into 17 districts that align with the OD survey and is presented in **Schedules 1 through 17** should be considered as the basis for the completion of a pedestrian network for Ottawa. As part of the network implementation process, the pedestrian network proposed in the Ottawa Pedestrian Plan should be refined through application of the Community Pedestrian Improvement Process methodology during various development planning processes and infrastructure planning processes including road construction and rehabilitation programs. The Community Pedestrian Improvement Process methodology is described in Section 7.7. **Table 7.6** provides a summary of facility length according to type.

The proposed network focuses on sidewalks and pathways only as these are explicit pedestrian facilities; paved shoulders provide an opportunity for pedestrian travel but are not themselves a pedestrian facility. In some rural areas roadway shoulders may present the only direct and continuous corridor for pedestrian travel. A policy is required to support the provision of paved shoulders in rural areas to improve the pedestrian environment. Refer also to **Table 8.4** for recommendations regarding pedestrian facilities and paved shoulders.

	Table 7.6							
Pedestrian facility length by type								
Facility Type		Facility Length (km)						
Sidewalks	Existing	1,650						
	Requests (New Sidewalk Links	105						
	Program)							
	Proposed in Pedestrian Master	265						
	Plan							
	Subtotal	2030						
Pathways	City Existing	490						
	City Planned (through other	380						
	studies)							
	Proposed in Pedestrian Master	45						
	Plan							
	NCC Existing	140						
	NCC Planned (through other	60						
	studies)							
	Subtotal	1,115						
	Grand Total	3145						

Note that the length of facilities reported for the New Sidewalk Links Program includes only the current requests that were considered a "pass" according to a preliminary screening. A number of requested links were "failed" as they did not fit with the intent of the New Sidewalk Links Program. Refer to Sections 7.2.4 and 7.6 for further details.

Recommendation 7.8

It is recommended that the City:

Establish a Pedestrian Network for Ottawa based on: a) The proposed pedestrian network presented in Schedules 1 through 17; b) Refinements to the network through the application of the Community Pedestrian Improvement Process (as established in recommendation 7.7); c) The consistent application of the Community Pedestrian Improvement Process methodology to all planning and development process, undertaken by all City Branches.

7.8.1 City-wide Pedestrian Network Strategies

The following schedules (schedules 1-17) and associated tables (Tables 7.8-7.23) provide some potential strategies for network improvements across different areas of the city. Areas are grouped according to the four geographic planning regions: Centretown/Downtown, Middle Urban, Sub Urban and Rural. Each of the schedules and related table forms a set and corresponds with an individual OD Survey District as noted earlier in this chapter. Each set illustrates the existing and proposed pedestrian network, a brief description of the existing pedestrian environment and strategies to improve to the network. The strategies and schedules should be considered together as a starting point for the development of individual Community Pedestrian Improvement Process.

Strategies include both those that are general for the entire area and specific strategies for key locations. A high, medium or low priority rating is suggested for the implementation of a Community Pedestrian Improvement Process. This rating is based on several factors including:

- The number of sidewalk requests in a small geographic area (from the New Sidewalk Links Program Candidate Database).
- A combination of significant physical barriers to pedestrian travel, and a diversity of development patterns in a small geographic area.
- Public and stakeholder input.
- Proximity to transit routes and stops.
- Observations by the study team regarding existing pedestrian networks in, and around key destinations such as schools, community centres and commercial centres.

Figure 7.8 is a key plan that provides the reference number for the schedules that follow.

7.8.2 Priority Areas for Community Pedestrian Improvement Process

Table 7.7 summarizes the priority for development of Community Pedestrian Improvement Process according to high/short term, moderate/medium term and low/long term. Refer to **Chapter 12** for further discussion implementation priorities for the entire breadth of the Ottawa Pedestrian Plan.

Table 7.7 Recommended priority areas for Community Pedestrian Improvement Process		
Priority	OD Survey District	Notes (Where Applicable)
High /	Kanata/Stittsville	, , ,
Short	Merivale	
Term	Alta Vista	
	Bayshore/Cedarview	Area bounded by the Ottawa River to the north, Highway 416 to the west, the railway corridor to the south, and Greenbank to the east.
	Hunt Club	Area bounded by railway switchyard to the north, Airport Parkway to the west, Lester to the south and Conroy to the east.
	Rural Southeast	Villages of Metcalfe and Greely
	Rural Southwest	Village of Manotick
	Orleans	
	Beacon Hill	
	Ottawa East	
	Ottawa Inner	
	Ottawa Centre	
Moderate	South Nepean	
/ Medium	Hunt Club	All areas other than identified as high (see above)
Term	Ottawa West	Area west of Island Park
	Rural West	Hamlets and Villages
	Rural Southwest	Hamlets and Villages unless identified as high (see above)
	Rural Southeast	Hamlets and Villages unless identified as high (see above)
	Rural East	Hamlets and Villages
Low /	Ottawa West	Area east of Island Park
Long	Rural Southeast	Rural Areas
Term	Rural Southwest	Rural Areas
	Rural East	Rural Areas
	Rural West	Rural Areas

Implementation of a Pilot Community Pedestrian Improvement Process in two high priority and significantly different communities will provide the opportunity to test and refine the process prior to embarking on it in other communities across the city and applying the principles to other planning and design initiatives including Community Design Plans, Development Plans and Plans of Subdivision, infill development and road reconstruction and new road construction projects.

An estimated cost to undertake a Pilot project is \$35,000, which includes staff time and resources. The following 2 locations should be considered for the Pilot projects:

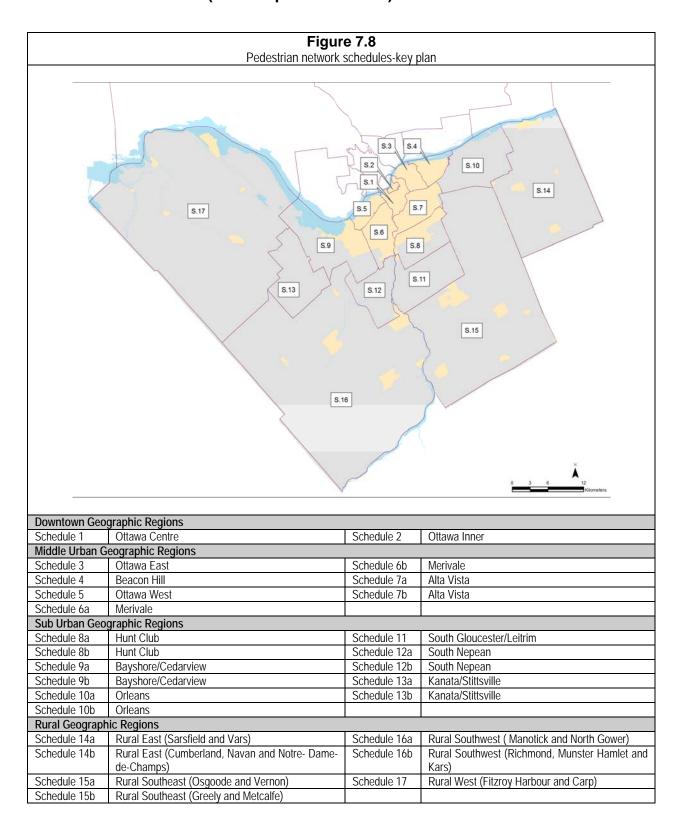
1. The area bounded by the Ottawa River to the north, Highway 416 to the west, the railway corridor to the south, and Greenbank to the east.

2. The area bounded by railway switchyard to the north, Airport Parkway to the west, Lester to the south and Conroy to the east.

Recommendation 7.9

It is recommended that the City:

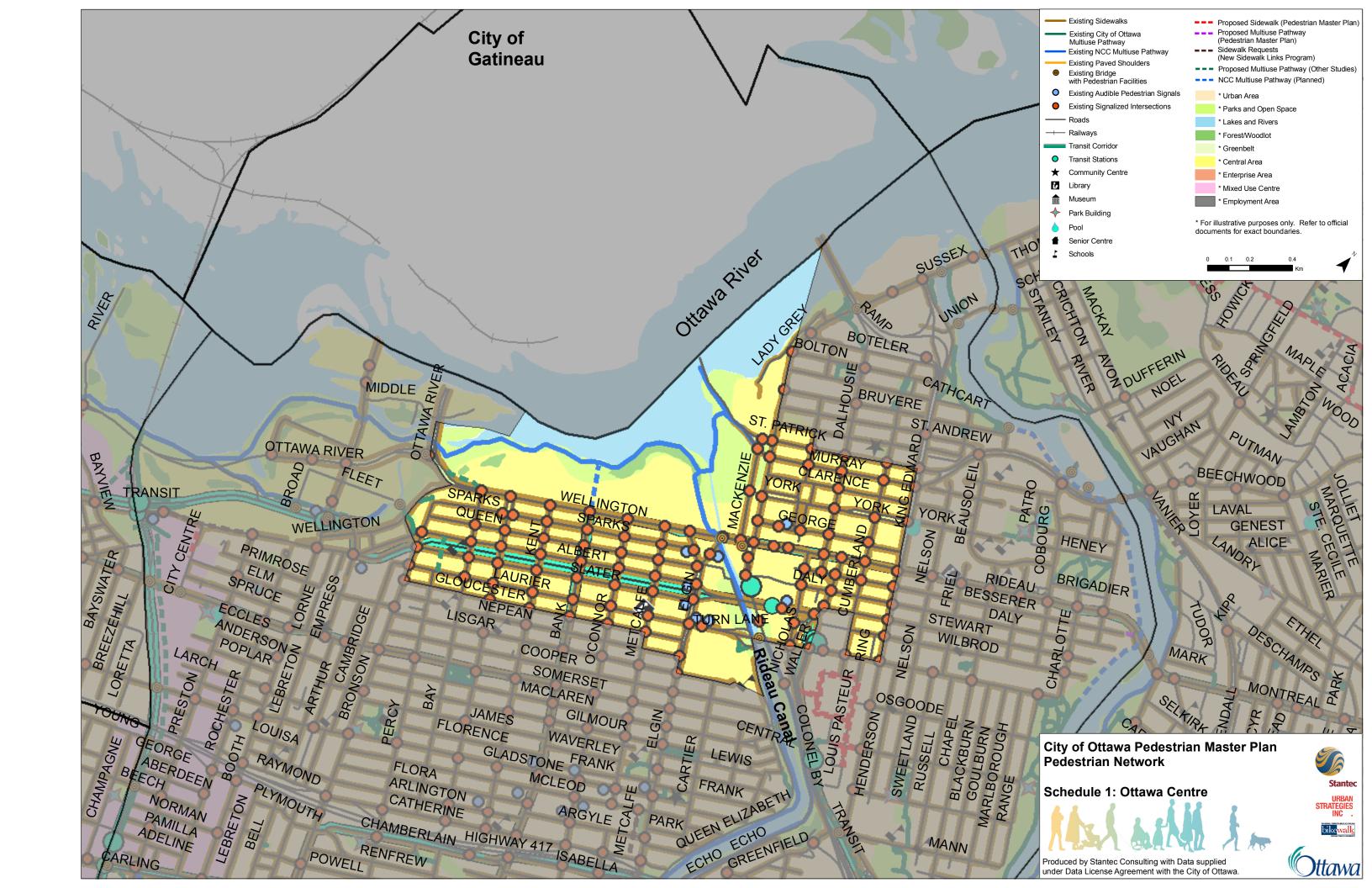
Launch the Ottawa Pedestrian Plan by selecting a community for a pilot Community Pedestrian Improvement Process from one of the priority communities identified in Table 7.7 of this Plan. Establish an appropriate study budget and review and report on the outcomes of the pilot including any recommendations and future capital funding allocation request.

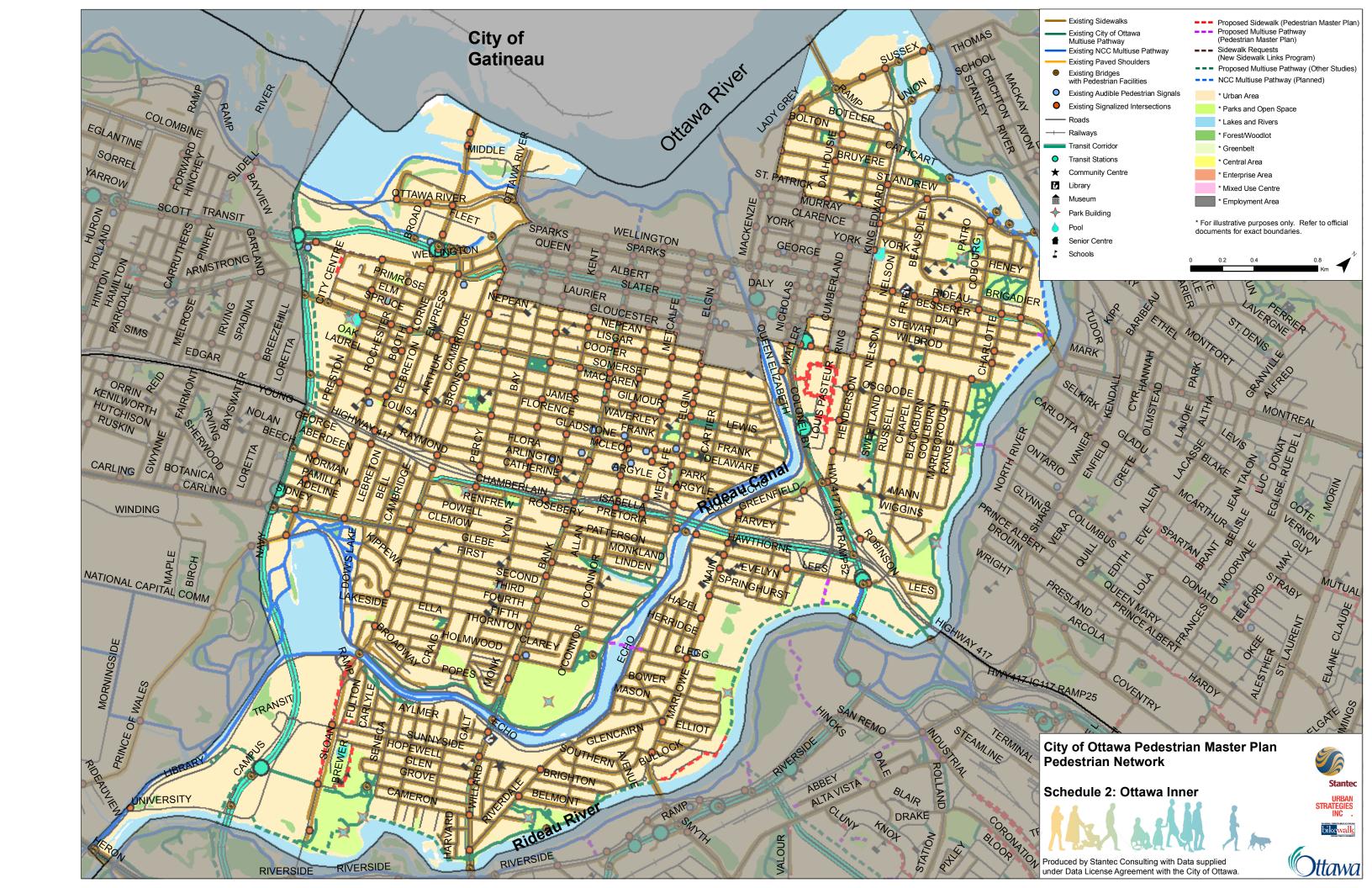


7.8.1.1 Strategies for the Downtown Geographic Region

Table 7.8	Ottawa Centre				
Schedule Number	Schedule Number(s) 1				
	of Sidewalk Requests (New am Candidate Database)	1	Overall Rank: Number of Requests	14	
	netres) of Sidewalk Requests Program Candidate Database)	162	Overall Rank: Total Length of Requests	14	
General Comments on	Grid network of streets with short blocks, with the sidewalk network along all streets virtually complete. Destinations are well connected by sidewalks			complete.	
Current Pedestrian Network	Primarily business, tourist and capital district. Parliament Hill, galleries, museums, capital district parks and Byward Market are significant attractors and well served by sidewalks and multi-use pathways				
Network	Rideau Canal is both an attraction a	nd barrier. Cros	sings are restricted to 3 main bridges.		
	Key pedestrian generators include C	Ottawa Universit	y (just to south of district) and the transit cor	ridor.	
	Significant redevelopment in Lebreto	on Flats area.			
Key	Network is virtually complete, focus	on improving the	e quality of the pedestrian environment.		
Considerations for Network Improvements	along the Rideau Canal.				
improvements					
Priority for Comr	munity Pedestrian Improvement	Process	Low		

Table 7.9	Ottawa Inner				
Schedule Number	` '				
Sidewalk Links Progra	of Sidewalk Requests (New nm Candidate Database)	8	Overall Rank: Number of Requests	11	
	netres) of Sidewalk Requests Program Candidate Database)	2,550	Overall Rank: Total Length of Requests	12	
General Comments on	Primarily a grid network of streets w almost all residential streets is virtua		. The sidewalk network along arterials, coll	ectors and	
Current Pedestrian	Significant tourist destinations exist i	n Sandy Hill, By	yward Market, Lowertown.		
Network		of pedestrian tri	ions on the south side of Rideau River ips. The University of Ottawa and Carleton		
		use pathways.	ractor. Rideau Canal and Dow's Lake are Additional pathways are planned by the NC		
	Schools, community centres and oth	er key destinati	ons are well connected by sidewalks.		
	Highway 417/Queensway and the R barrier between Ottawa Inner, Ottaw		e major barriers. The Rideau River creates Vista.	significant	
	The recently completed Corkstown community and Centretown.	Footbridge pr	ovides excellent connection between the	Sandy Hill	
	Significant employment area on sout	h side of Ridea	u River in Alta Vista district.		
Key	Network is virtually complete, focus of	on improving the	e quality of the pedestrian environment.		
Considerations for Network Improvements	Focus on improving pedestrian connections between neighbourhoods on the north side and south sides of the Queensway and south of the Rideau Canal. Examine opportunities for a pedestrian connection across Rideau Canal in reach between Bank and Hawthorne (i.e. at Fifth and Clegg).				
	Continue to improve pedestrian connections to existing and planned multi-use pathways along Rider Canal and Rideau River.				
	Continue to improve access to transit stations.				
Priority for Comr	nunity Pedestrian Improvement	Process	Low		

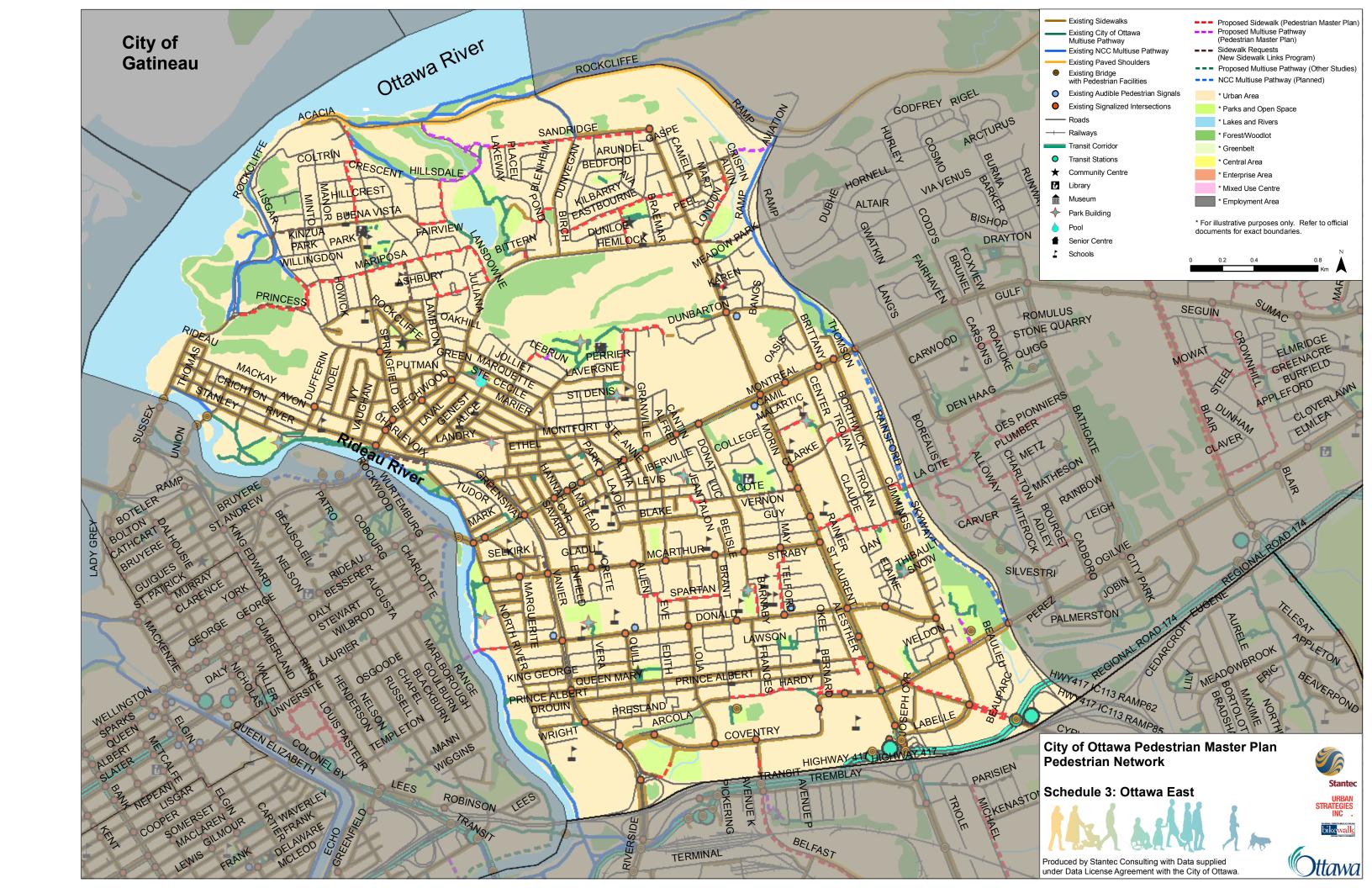




7.8.1.2 Strategies for the Middle Urban Geographic Region

Table 7.10	Ottawa East				
Schedule Number					
Sidewalk Links Progra	of Sidewalk Requests (/ am Candidate Database)	17	Overall Rank: Number of Requests	7	
	netres) of Sidewalk Request Program Candidate Database)	3,000	Overall Rank: Total Length of Requests	10	
General	Several very distinct neighbourh	oods including Ove	erbrook/Castle Heights, Lindenlea and Rock	cliffe.	
Comments on Current Pedestrian Network	Primarily a grid network of streets with short blocks in Vanier. Overbrook, New Edinburgh and Cas Heights neighbourhoods are a grid network with fairly complete pedestrian network along arteria collectors is virtually complete, and sidewalks along most residential streets. Rockcliffe neighbourhoods very few sidewalks.				
	Most schools and community Pedestrian connections lacking		key destinations are well connected by e. Rockliffe).	sidewalks.	
	The Rideau River creates sign crossings using major arterial ro		veen neighbourhoods on east and west si	ide, only 3	
	Pathways along the Rideau Riv	er and Ottawa Rive	r are also a major attractor.		
	Aviation Parkway is a significan	pedestrian barrier	to pedestrian linkages with Beacon Hill.		
	Federal lands west of Aviation F however lands are currently par		mit pedestrian connections with Beacon Hill esign Plan process.	to the east,	
	Highway 417/Queensway and neighbourhoods in Alta Vista.	the industrial ar	ea to the south limit potential for conr	nections to	
Key Considerations for Network			onnections between neighbourhoods on eas for pedestrian bridge between Vanier and		
Improvements			n Overbrook, Castle Heights and New rove pedestrian connections to schools in		
	Provide pedestrian spine (sidev to Capital pathway along the Ot		nrough Rockcliffe and enhance pedestrian c	connections	
	Improve the quality of the pedestrian environment, in particular in commercial/retail areas and larg Work with/encourage owners of major commercial shopping centres to improve pedestrian environment, including access from street, through parking lots and to mall doors.				
	connections across Federal lan	ls when they are re	oss major barriers and plan for strong edeveloped. Seek opportunities to improve of h side of Highway 417/Queensway.		
	Apply strong pedestrian design existing/surrounding neighbourh		fill development areas, including strong con	nections to	
Priority for Comr	munity Pedestrian Improvem	ent Process	Low		

Table 7.11 Beacon Hill				
Schedule Number				
Sidewalk Links Progra	of Sidewalk Requests (New am Candidate Database)	5	Overall Rank: Number of Requests	12
Total Length (m (New Sidewalk Links	netres) of Sidewalk Requests Program Candidate Database)	3,279	Overall Rank: Total Length of Requests	11
General Comments on	(residential) streets. Long street bloc	ks in residentia		
Current Pedestrian Network		e residential ar	ome valleys have pathway systems whereas eas, and neighbourhoods in the north are way system along the Ottawa River.	
	Significant barriers include the major	arterials, High	way 417/Queensway and Aviation Parkway.	
	Significant employment and comme ward.	rcial zones in t	ne central, along the south and east bound	aries of the
	Federal lands west of Aviation Parkv currently part of a Community Design		ctions with communities to the west, however	er lands are
	Several very distinct neighbourhood Rothwell Heights.	ls including Ca	rson Grove, Viscount Alexander and Beac	on Hill and
Key	Continue to develop and improve pe	destrian conne	ctions to transit nodes, schools.	
Considerations for Network	Seek and improve pedestrian connections across major barriers, and plan for improved pedestrian connections to the west when Federal Lands are redeveloped.			
Improvements	Provide additional pedestrian connections along a number of residential collectors and several local streets to create some spine pedestrian routes and improve connections to the NCC pathway system along Ottawa River.			
	Continue to improve pedestrian connections to, and the quality of the pedestrian environment in major commercial areas.			
	Improve pedestrian access to and within major employment zones, in particular seek opportunities to improve connections to employment areas and transit nodes on the south side of Highway 417/Queensway.			
	Improve the quality of the pedestrian environment, in particular in commercial/retail areas and large malls. Work with/encourage owners of major commercial shopping centres to improve pedestrian environment, including access from street, through parking lots and to mall doors.			
	Apply strong pedestrian design prince existing/surrounding neighbourhoods		ill development areas, including strong con	nections to
Priority for Comr	munity Pedestrian Improvement	Process	High	



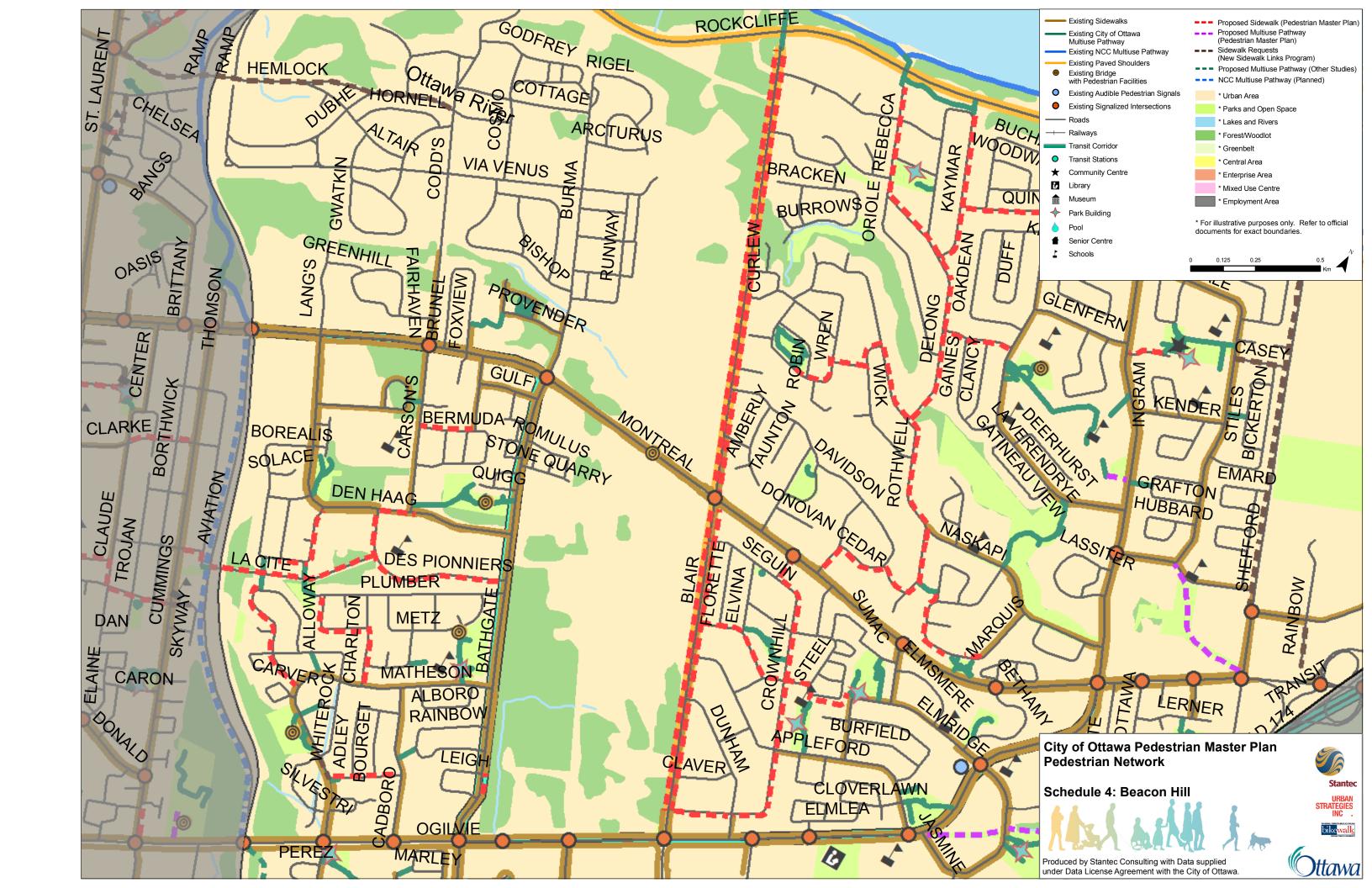
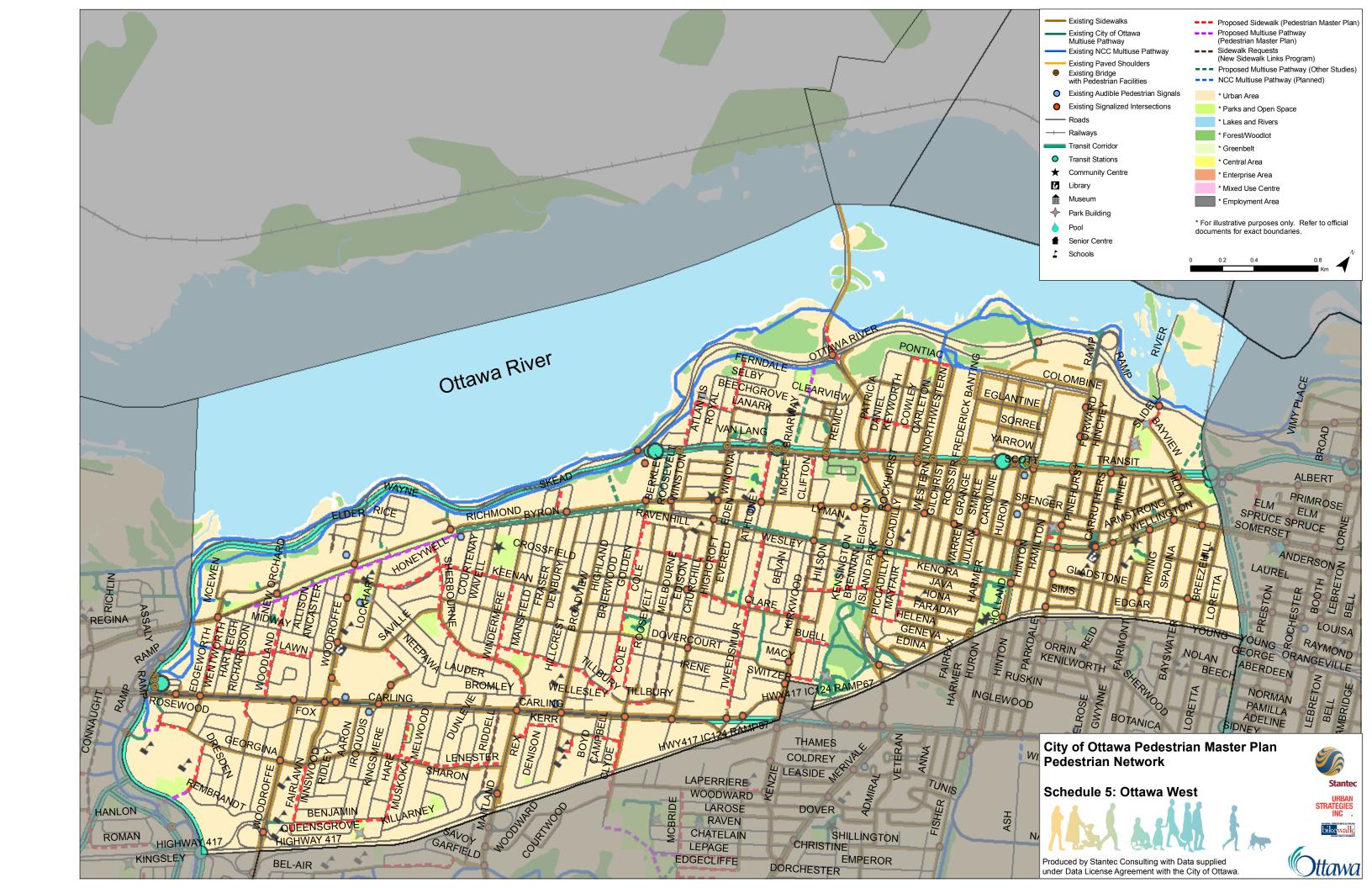
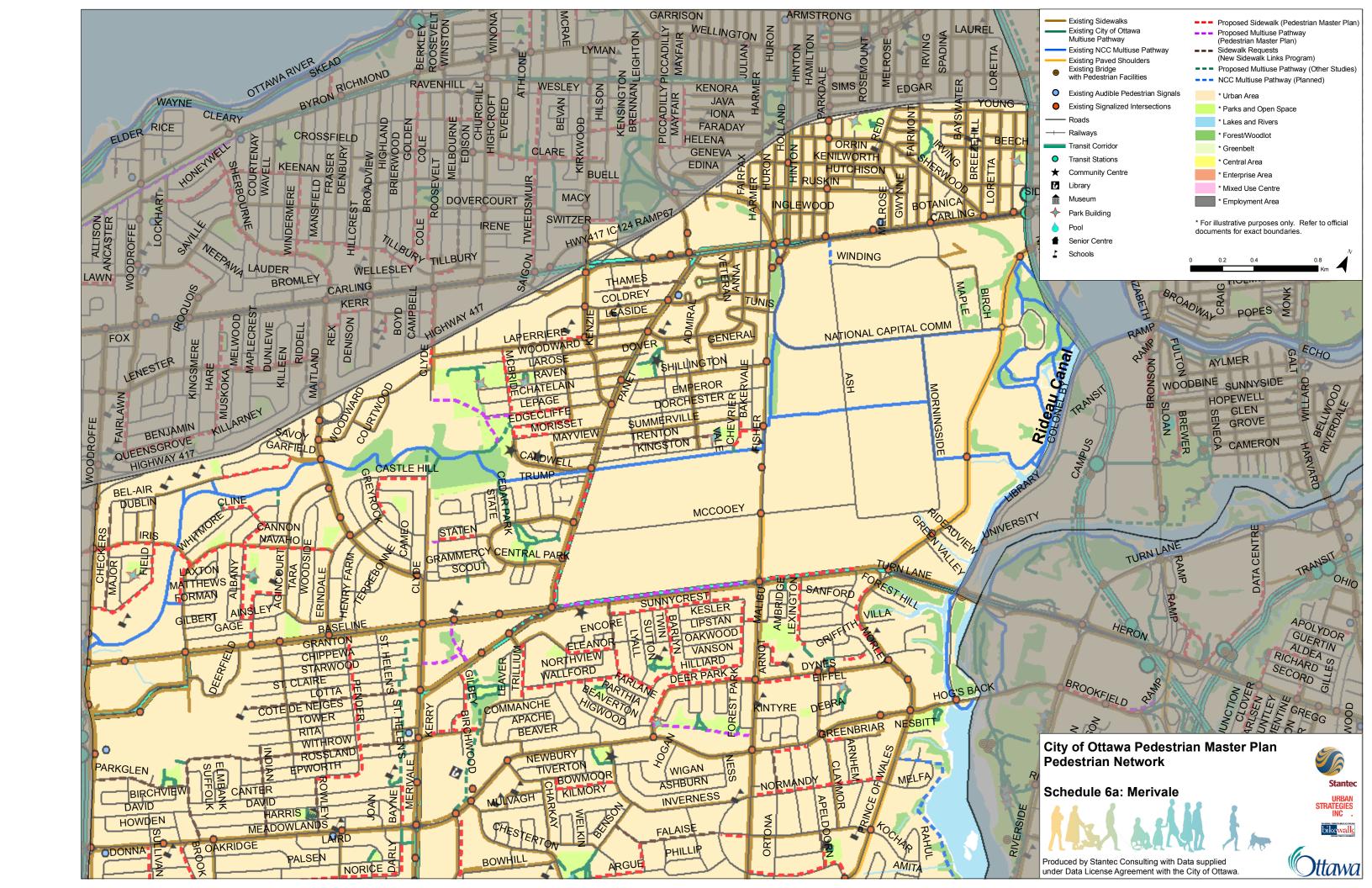


Table 7.12 Ottawa West					
Schedule Number	• • •				
Sidewalk Links Progra	of Sidewalk Requests (New am Candidate Database)	18	Overall Rank: Number of Requests	6	
	netres) of Sidewalk Requests Program Candidate Database)	5,739	Overall Rank: Total Length of Requests	8	
General Comments on Current	Primarily a grid network, short blocks on east side of Island Park with complete sidewalk n Primarily a grid network on west side of Island Park, but street blocks are longer and fewer streets sidewalks.				
Pedestrian Network	Most schools, community centres, of fabric.	commercial dis	tricts and tourist attractions well integrated	into urban	
		ortunities to nei	rn edge of the ward boundary is a significal ghbourhoods on the south side. Scott and barrier.		
	The north part of Holland, Richmond mixed use centres with high potentia		d Preston (just outside of Ottawa West) are bedestrian areas.	significant	
	Pathways generally limited to park Ottawa River	areas, with the	major pathway focus/attractor being those	along the	
	Tunney's Pasture is a significant em	ployment area.			
	Pedestrian bridge over the Queensw	ay at Harmer is	s a significant asset.		
	Missing links on several residential of	collectors and lo	ocal streets west of Sherbourne.		
	Good access provided to extensive I	inear pathway :	system along Ottawa River and in the Green	belt.	
Key	Continue to improve the pedestrian	environment ald	ong corridors such as Richmond/Wellington.		
Considerations	Continue to develop and improve pedestrian connection to transit nodes, schools and community centres.				
for Network Improvements	Continue to develop and improve connections to pathways in the Central Experimental Farm to the south of the district.				
	Provide additional pedestrian connections along a number of residential collectors and several local streets to create some spine pedestrian routes (particularly west of Island Park) and improve connection to the NCC pathway system along Ottawa River. Note that north-south blocks which tend to be long than east-west blocks, therefore north-south spines should be a priority.				
	Develop and strengthen pedestrian	connections to t	ransit nodes (i.e. along Scott).		
	Improve quality of pedestrian environments Carling.	onment in Main	Street/ Commercial corridors such as Rich	nmond and	
	Work with/encourage owners of major commercial shopping areas to improve pedestrian environment including access from street, through parking lots and to mall doors				
Priority for Comr	nunity Pedestrian Improvement	Process	Low (east of Island Park), Moderate (west of Island Park	()	

Table 7.13	Merivale				
Schedule Numbe	er(s) 6a and 6b				
	of Sidewalk Requests (New am Candidate Database)	28	Overall Rank: Number of Requests	2	
	netres) of Sidewalk Requests Program Candidate Database)	19,578	Overall Rank: Total Length of Requests	2	
General Comments on Current	part of the district. Sidewalks/multi-	rimarily a grid network in north and west parts of district, tending toward curvilinear in the south and east art of the district. Sidewalks/multi-use pathways along most arterials, some collectors. Very few local residential) streets with sidewalks, particularly in the south part of the district.			
Pedestrian Network			ricts in the north part of the district are well f the district some require strengthening of		
	Highway 417/Queensway and some	arterials (i.e. C	arling, Merivale, Baseline and Woodroffe are	e barriers).	
	of district and provides strong conn	ections to the ys in the	nway forms a strong east-west spine across pathways along the Rideau Canal and aro al part of the district (i.e. north of Colonnado	und Dow's	
	Existing multi-use pathways are generally well connected to the sidewalk system. Pathway system in the Central Experimental Farm is a significant pedestrian attractor.				
	Major commercial and employment a	areas along son	ne arterials (i.e. Merivale, Woodroffe and Ba	iseline).	
	Fairly continuous multi-use pathways provide excellent opportunity to connect neighbourhoods.				
	Major employment area in southern part of the district is divided by 2 railway lines, and 2 major arterials, and it is isolated and not well connected surrounding neighbourhoods.				
Key	Continue to develop and improve pe	destrian conne	ction to transit nodes, schools and communi	ty centres.	
Considerations for Network	Continue to develop and improve connections to pathways and focus on the development of strong east – west pathway spines.				
Improvements	Provide additional pedestrian connections along a number of residential collectors and several local streets to create some spine pedestrian routes.				
	Continue to improve pedestrian connections across the Queensway.				
	Improve the quality of the pedestrian environment, in particular in commercial/retail areas and large malls. Work with/encourage owners of major commercial shopping centres to improve pedestrian environment, including access from street, through parking lots and to mall doors.				
	Apply strong pedestrian design principles to new/infill development areas, including strong connections to existing/surrounding neighbourhoods.				
	Strengthening pedestrian connections from neighbouring residential areas to the major employment district in the south part of the district will be difficult. Distance and barriers may also discourage significant pedestrian travel to and from the area, therefore strong connections to transit is a priority.				
	Work proactively to develop strong p	edestrian acce	ss to future transit corridors/nodes.		
Priority for Comr	munity Pedestrian Improvement	Process	High		





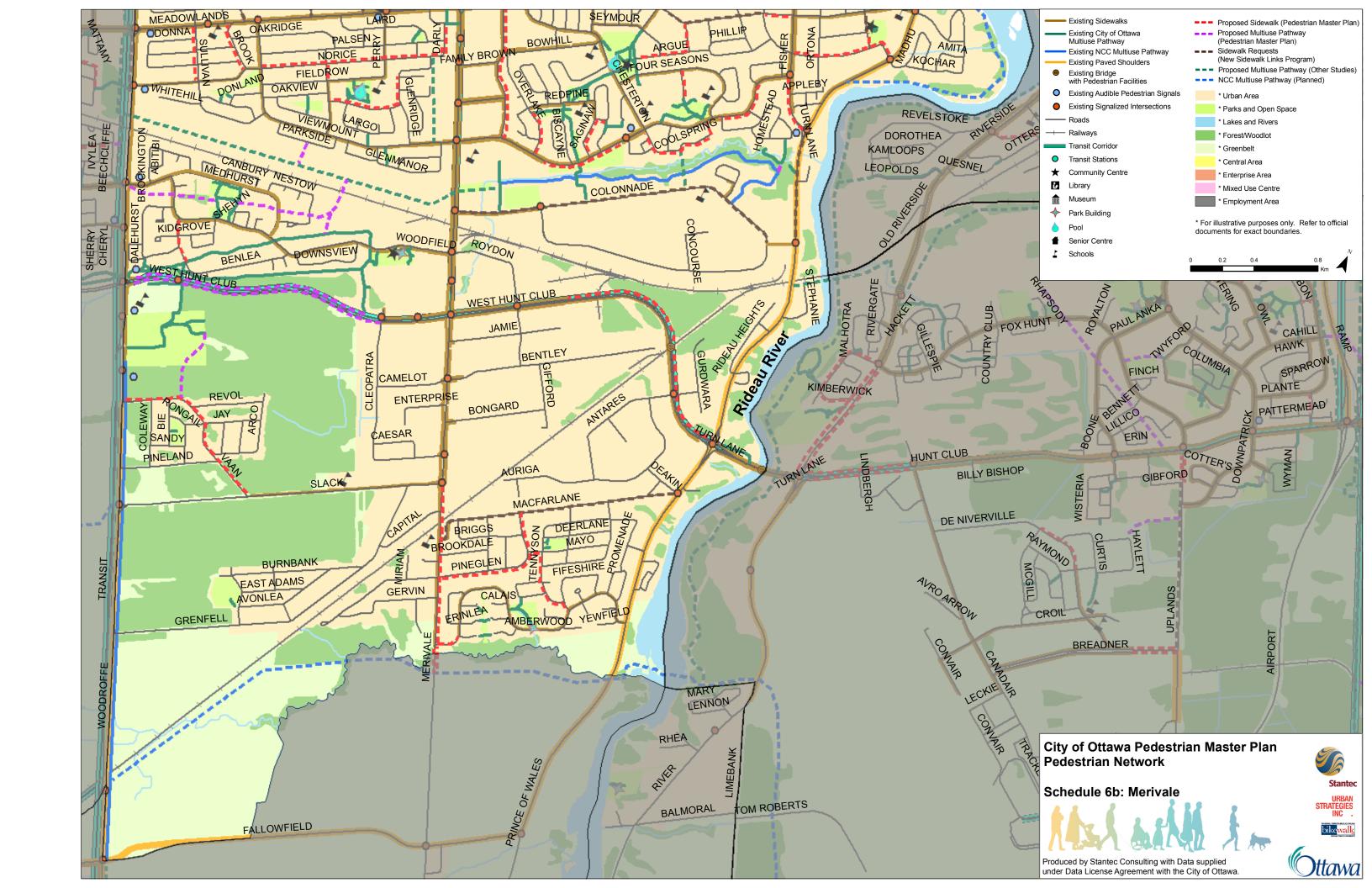
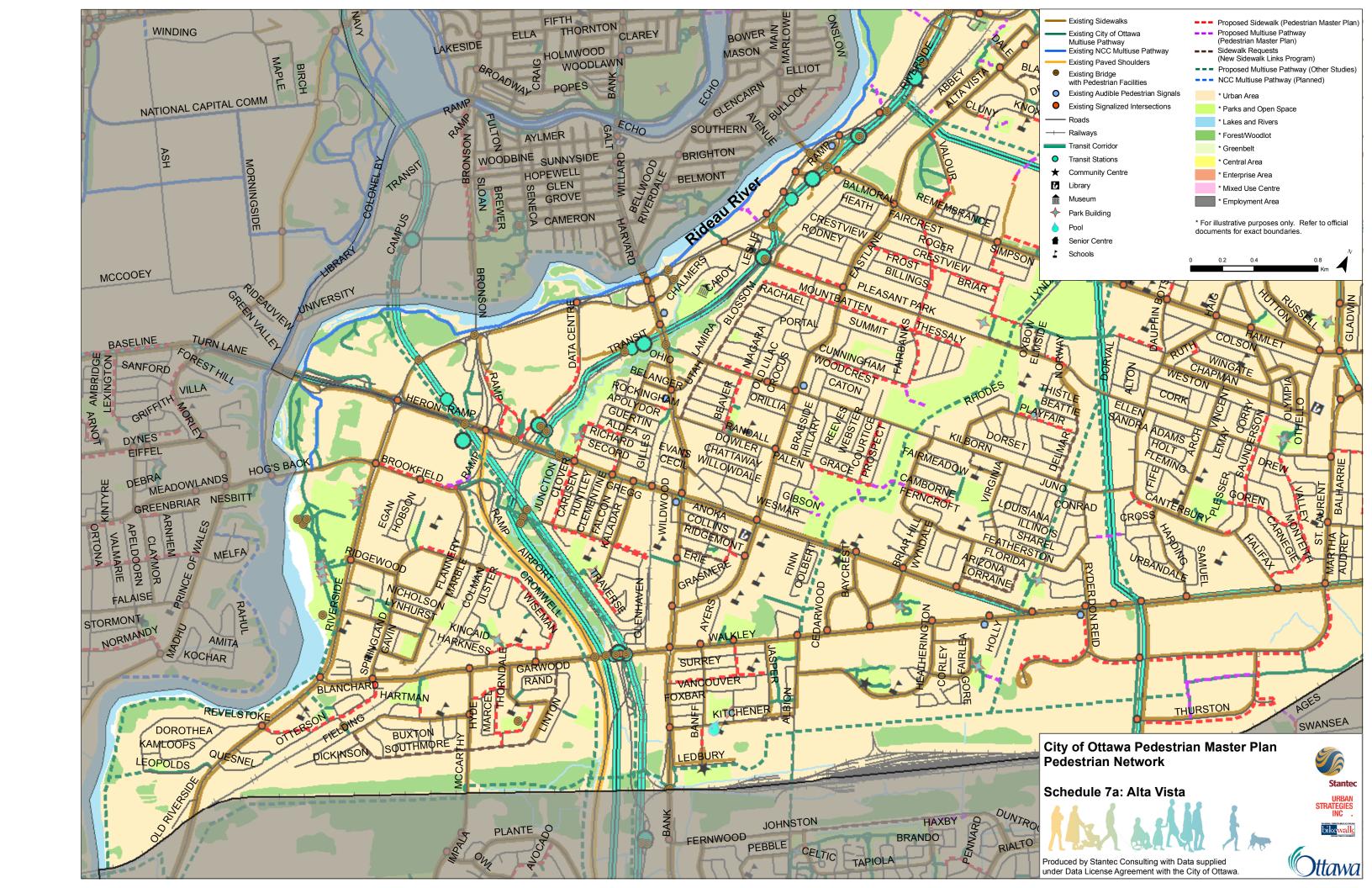
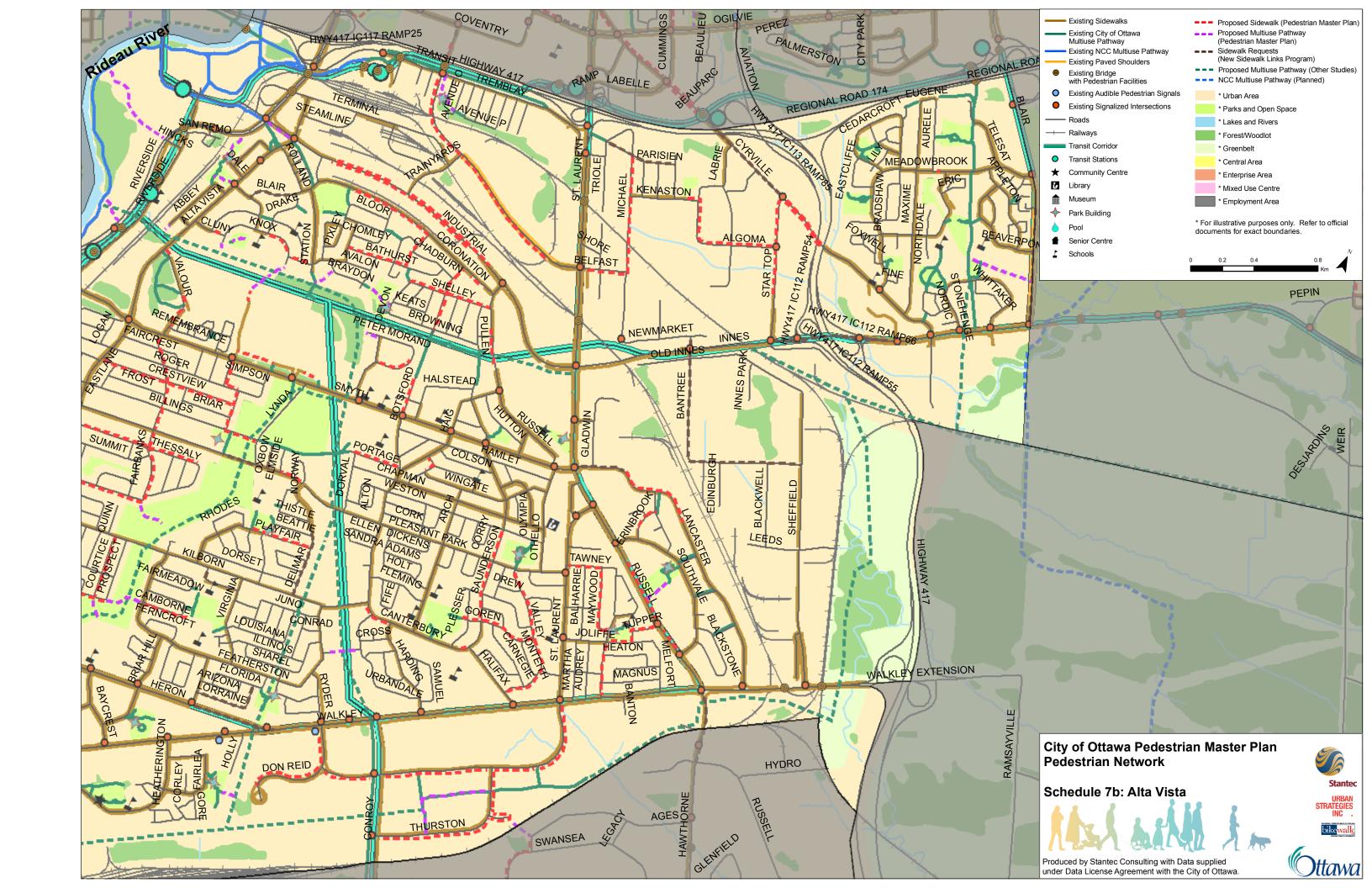


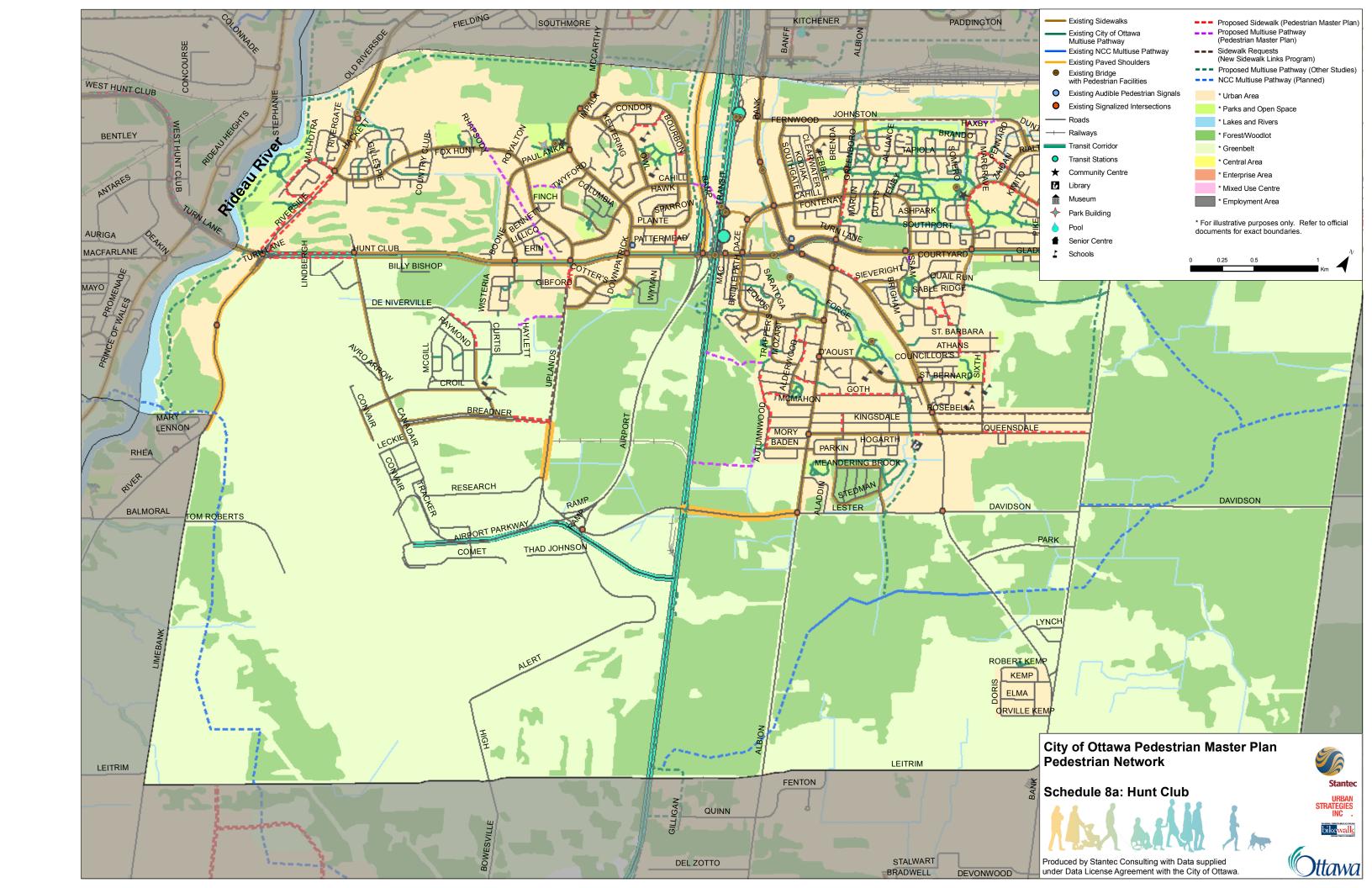
Table 7.14	Alta Vista					
Schedule Number	` '					
Sidewalk Links Progra	of Sidewalk Requests (New am Candidate Database)	25	Overall Rank: Number of Requests	3		
	netres) of Sidewalk Requests Program Candidate Database)	12,563	Overall Rank: Total Length of Requests	3		
General	Two distinct neighbourhoods separa	Two distinct neighbourhoods separated by major commercial area along Bank Street.				
Comments on Current Pedestrian Network	surrounding areas and major barrie	ers. Sidewalk n	within an arterial network dictated by con- letwork fairly complete on arterials. Sidew n local (residential) streets, complemented	alks along		
	Key transit corridors with significant	nodes in west a	and north area of district.			
	Most community centres and so strengthening of pedestrian connections		egrated into urban fabric, however son	ne require		
		nities. However,	loyment and industrial areas that limit mix of residential, commercial and employ an district.			
	Highway 417 is a significant barrier. Other significant barriers include railways and major arterials such as Bank, Walkley and Heron. Area around intersection of Rideau River, Highway 417/Queensway, railway and transitway in north part of district contribute to a disconnected pedestrian network.					
	Transit corridor and major arterial (Riverside) on west side of district limit pedestrian access to pathways along the Rideau River.					
	Rideau River is also a significant attr	ractor and well:	served by multi-use pathways along its lengt	th.		
	Significant pathway corridors being p	olanned (i.e. Alt	a Vista Transit Corridor).			
Key	Improve pedestrian connections to, a	and within majo	r employment and industrial areas.			
Considerations for Network	Strengthen pedestrian connections to transit nodes, particularly in the northwest area of the district. Plan proactively to integrate any new transit nodes into urban fabric of communities/neighbourhoods.					
Improvements	Continue to develop pedestrian connections to schools and community centres.					
	Continue to improve connections and continuity of multi-use pathway system and develop strong pedestrian connections to future NCC pathways along Rideau River. Develop strong pedestrian connections to new internal pathways being planned (i.e. Alta Vista Transit Corridor).					
	Strengthen pedestrian connections to neighbourhoods south of major rail yard paralleling Walkley.					
	Improve connectivity of sidewalk network in neighbourhoods by adding key sidewalk links.					
	Improve the quality of the pedestrian environment, in particular in commercial/retail areas and large malls. Work with/encourage owners of major commercial shopping centres to improve pedestrian environment, including access from street, through parking lots and to mall doors.					
	Apply strong pedestrian design prince existing/surrounding neighbourhoods		fill development areas, including strong con	nections to		
Priority for Comr	munity Pedestrian Improvement	Process	High			

7.8.1.3 Strategies for the Suburban Geographic Region

Table 7.15		Hunt Club				
Schedule Number		8a and 8b				
Current Number Sidewalk Links Progra		ewalk Requests (New te Database)	19	Overall Rank: Number of Requests	5	
	netres) o	f Sidewalk Requests	9,439	Overall Rank: Total Length of Requests	7	
General Comments on		curvilinear street networs. Very few local (residentia		lks/multi-use pathways along most arteri dewalks.	als, some	
Current Pedestrian		an network (including acces Club relies heavily on pathw		nmunity centres and schools) in neighbourho	oods north	
Network		ools, community centres, a Juire strengthening of pedes		districts are well integrated into urban fabrions.	c, however	
		Significant barriers include the industrial and rail yards south of Walkley, the rail line and Airport Parkway, and arterials such as Bank and Hunt Club.				
	Major co	mmercial zones along arteri	ials (i.e. Hunt C	lub and Bank).		
	Significar	nt employment north of, and	I in the northea	st corner of the district.		
	Connecti	ons with neighbourhoods to	the north of the	e district are very limited.		
		cess for planned pathways rallel to Albion.	in the Greenbe	lt and along abandoned railway corridor runi	ning north-	
Key Considerations	Continue schools.	to develop and improve p	edestrian conr	ections to commercial areas, community co	entres and	
for Network Improvements		pedestrian network and p		sidential collectors and some local residentia tions between extensive multi-use pathway		
		good connections to future of multi-use pathway system		e Greenbelt and continue to improve conne	ctions and	
				ng transit (i.e. South Keys from Cahill) uture transit nodes being planned.	and work	
		pedestrian environment alons along Bank south of Hu		nercial corridors such as Bank. Complete	e sidewalk	
				s south of Hunt Club (i.e on long street block g Uplands south of Hunt Club.	ks such as	
		d improve pedestrian conn th side district.	ections across	major barriers, most notably rail and indus	strial lands	
	Improve the quality of the pedestrian environment, in particular in commercial/retail areas and large mal Work with/encourage owners of major commercial shopping centres to improve pedestrian environment including access from street, through parking lots and to mall doors.					
	Apply strong pedestrian design principles to new/infill development areas, including strong connections to existing/surrounding neighbourhoods.				nections to	
Priority for Comr	Priority for Community Pedestrian Improvement Process High (area bounded by Airport Parkway, railway switchyard, Lester and Conroy), Moderate (other areas)					







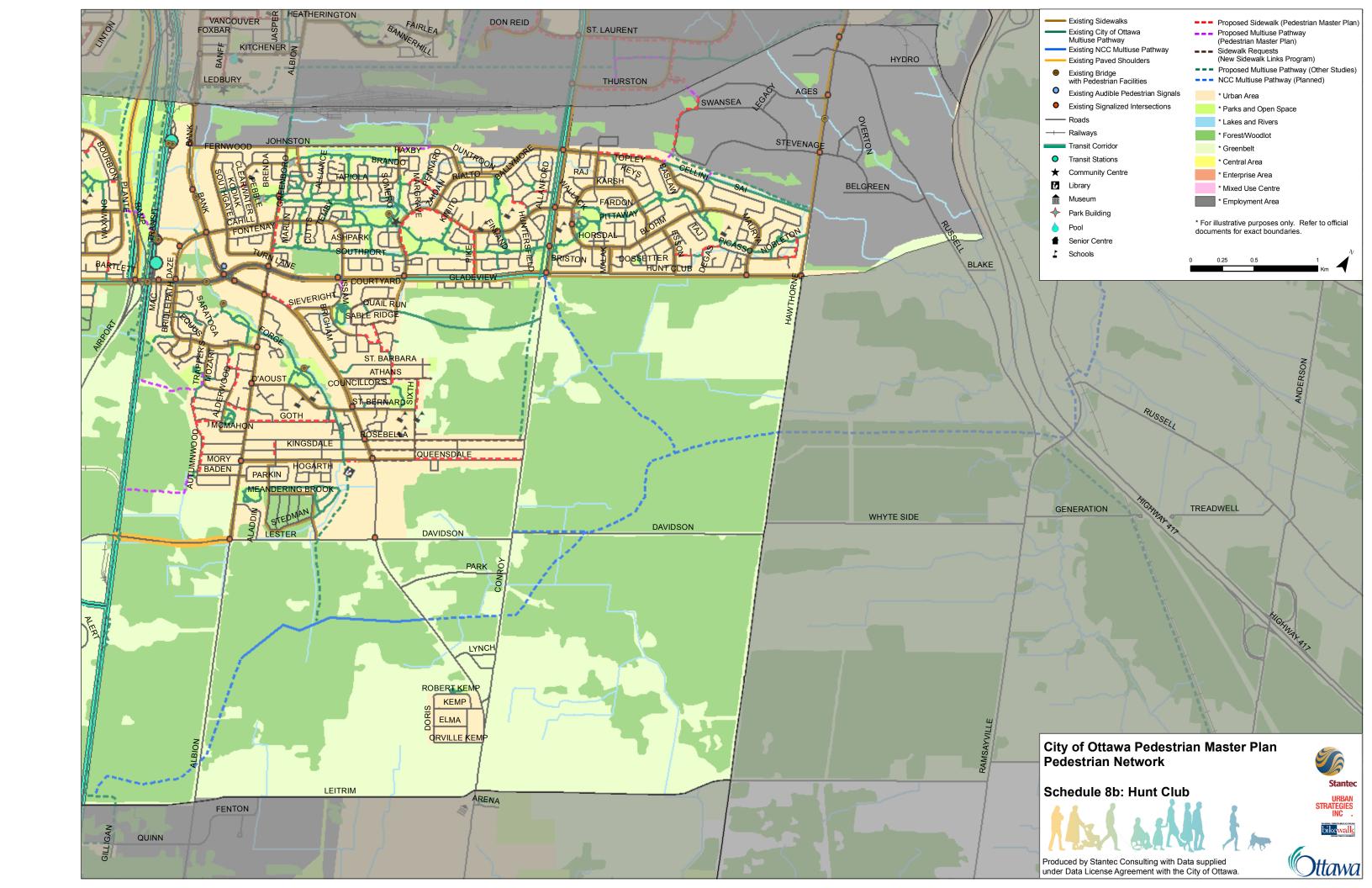
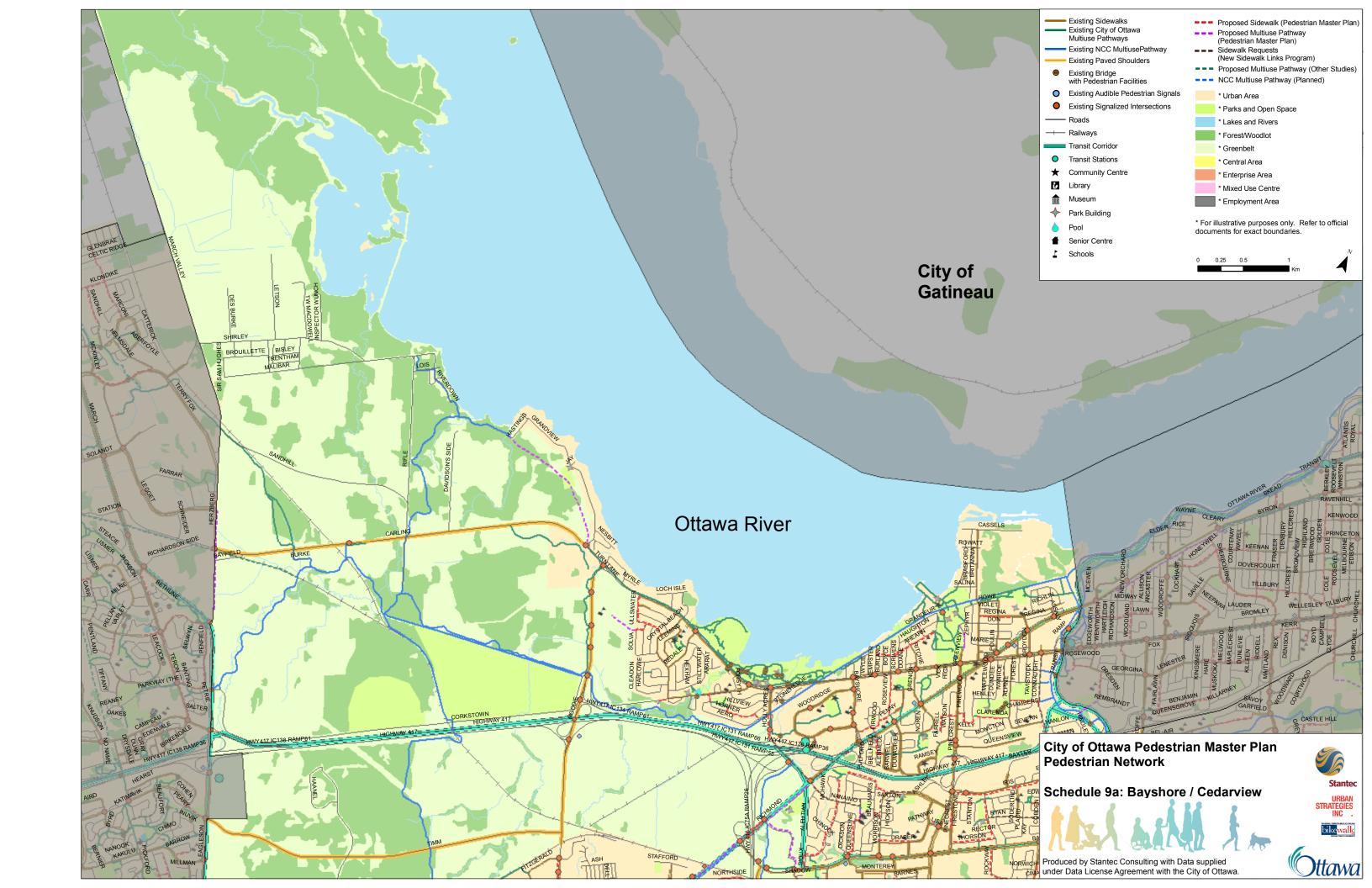
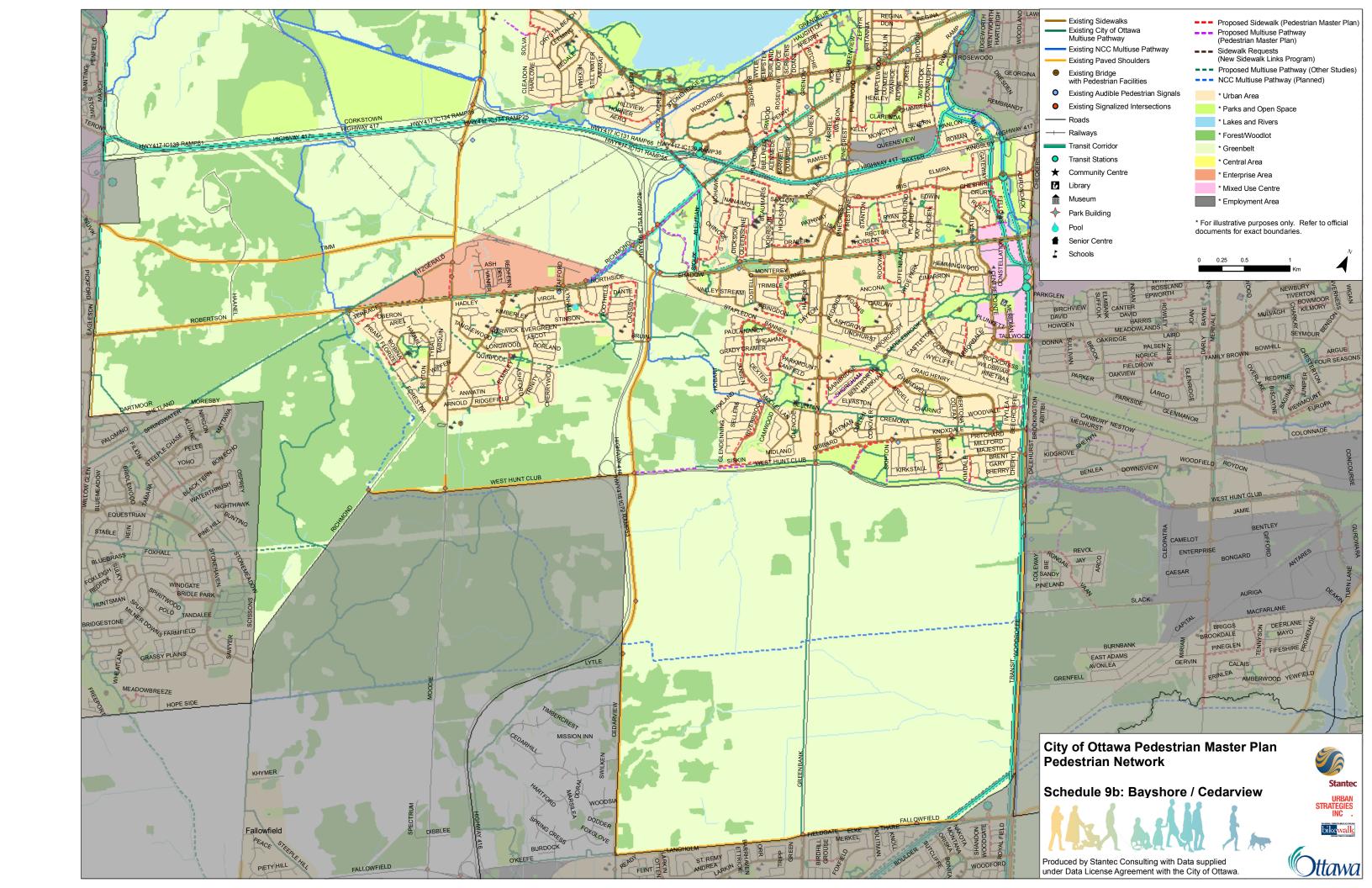
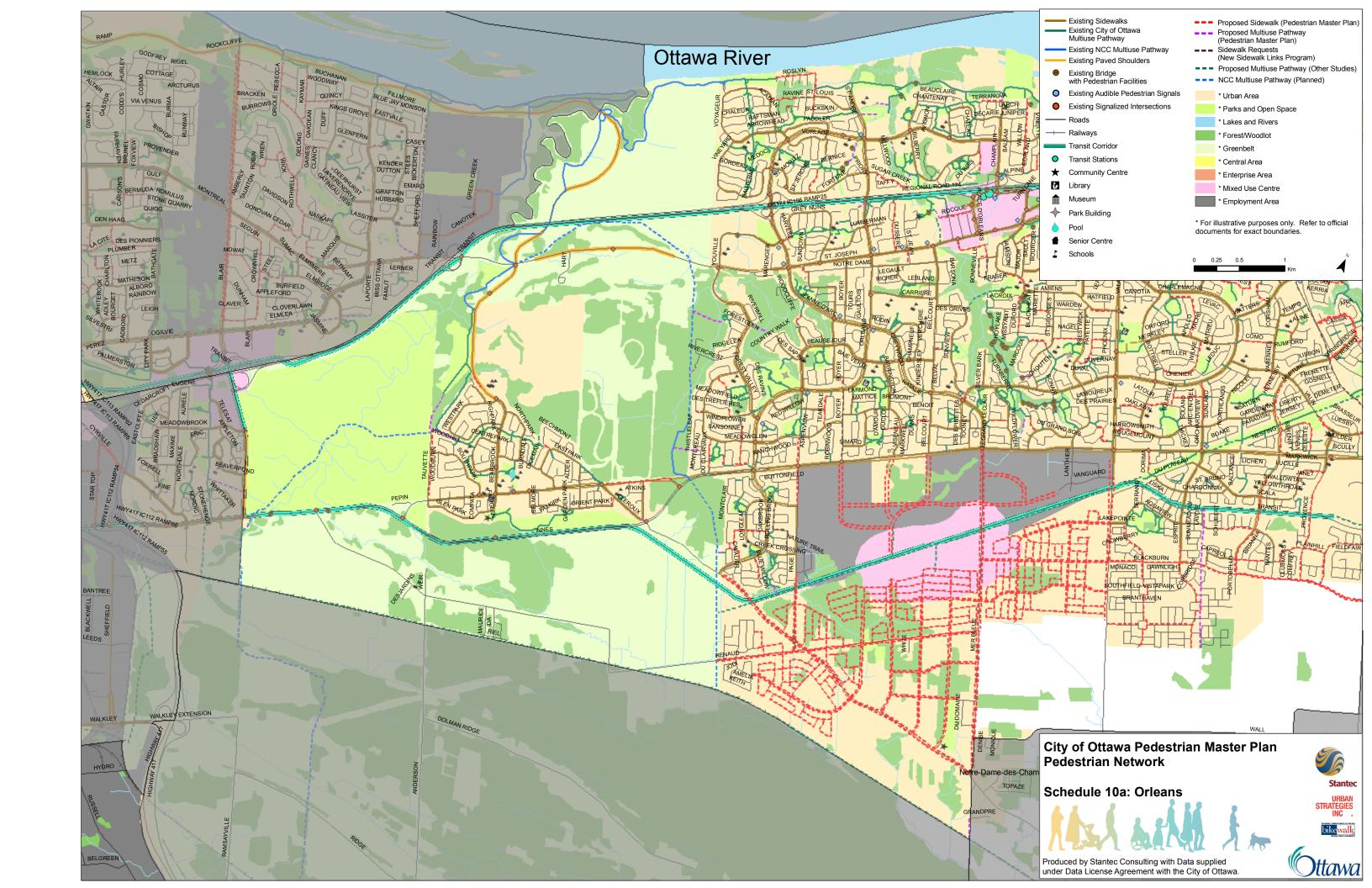


Table 7.16	Table 7.16 Bayshore/Cedarview				
Schedule Number					
	of Sidewalk Requests (New am Candidate Database)	19	Overall Rank: Number of Requests	5	
	netres) of Sidewalk Requests Program Candidate Database)	11,777	Overall Rank: Total Length of Requests	4	
General Comments on Current Pedestrian Network	Primarily curvilinear street network with sidewalks/multi-use pathways along most arterials, so				
	Major commercial zones along arteri	als (i.e. Richmo	ond, Baseline, Carling, Greenbank and Woo	droffe).	
Key Considerations for Network	Complete sidewalk connections along arterial roads such as Richmond. Provide additional pedestrian connections along residential collectors and some local residential streets to complete pedestrian network and provide connections between multi-use pathways.				
Improvements	Improve quality of pedestrian environment in Main Street/ Commercial corridors such as Richmond and Carling.				
	Continue to develop and improve perintegrate any new transit nodes into		ection to transit nodes and schools. Plan procommunities/neighbourhoods.	pactively to	
	Continue to develop and improve connections to linear pathway systems in Greenbelt and alon River. Continue to improve connections and continuity of multi-use pathway system neighbourhoods.				
	Seek and improve pedestrian conne	ctions across H	ighway 417/Queensway and 416.		
Work with/encourage owners of major commercial shopping centres to improve pedestrian environr including access from street, through parking lots and to mall doors.				nvironment,	
Priority for Comm	munity Pedestrian Improvement	Process	High		

Table 7.17	Orleans					
Schedule Number	er(s) 10a and 10b					
	of Sidewalk Requests (New Candidate Database)	21	Overall Rank: Number of Requests	4		
	netres) of Sidewalk Requests Program Candidate Database)	11,399	Overall Rank: Total Length of Requests	5		
General Comments on	Primarily curvilinear street networ collectors. Very few local (residential		lks/multi-use pathways along most arteridewalks.	als, some		
Current Pedestrian Network			utility corridors generally well connected to sellent opportunity to improve pedestrian r			
	Planned pathways (NCC) along wes to the Ottawa River.	t side of Orlear	s will provide links in future to the southwes	t and north		
	Schools and most community centre	s connected by	sidewalks and/or pathways.			
	Montreal/St. Joseph and Highway 17	4 are significar	nt pedestrian barriers.			
	Schools and community centres con	nected by side	valks and/or pathways.			
	Deep ravine lands separate some ne	eighbourhoods.				
	Significant new development area or	n south side of	Orleans.			
Key Considerations for Network	Complete missing links between existing sidewalks on some arterials and collectors. Provide additional pedestrian connections along residential collectors and some local residential streets to complete pedestrian network and provide connections between multi-use pathways.					
Improvements	Improve connections to multi-use pathways in valleys and the NCC pathway system (existing and planned). Connect neighbourhoods west of Belcourt to neighbourhoods on east side of valley lands via multi-use pathways. Maximize opportunity to utilize linear hydro corridor south of Innes for a pathway spine.					
	Develop/improve pedestrian connect	tions to commu	nity centres and schools.			
	Examine existing pedestrian connections over Highway 174 and make improvements where possible. Seek opportunities to develop for future pedestrian connections over Highway 174.					
	Improve pedestrian access to, and pedestrian environment in major commercial retail areas (i.e. St. Joseph, Innes). Work with/encourage owners of major commercial shopping centres to improve pedestrian environment, including access from street, through parking lots and to mall doors.					
	Develop/improve pedestrian connections to existing transit facilities. Plan proactively to integrate any new transit nodes into urban fabric of communities/neighbourhoods.					
	Apply strong pedestrian design principles to new/infill development areas, including strong connections to existing/surrounding neighbourhoods. Plan proactively to develop strong pedestrian connections within and to new community development south of Innes.					
	Maximize opportunities to create pe Tenth Line and Innes.	destrian links b	etween local (residential) streets and arteria	als such as		
	Apply strong pedestrian design prince existing/surrounding neighbourhoods		fill development areas, including strong con	nections to		
Priority for Comr	Priority for Community Pedestrian Improvement Process High					







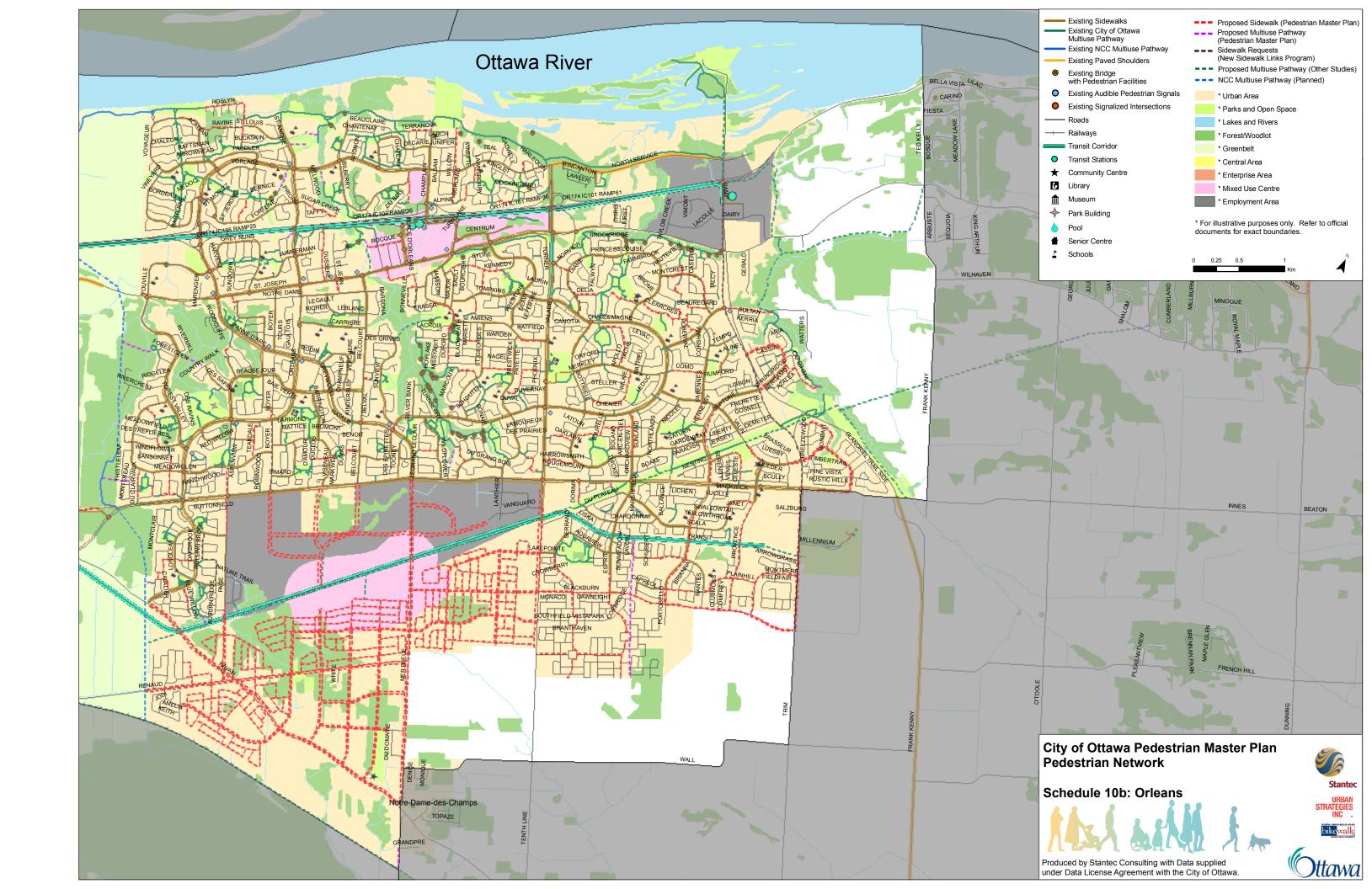
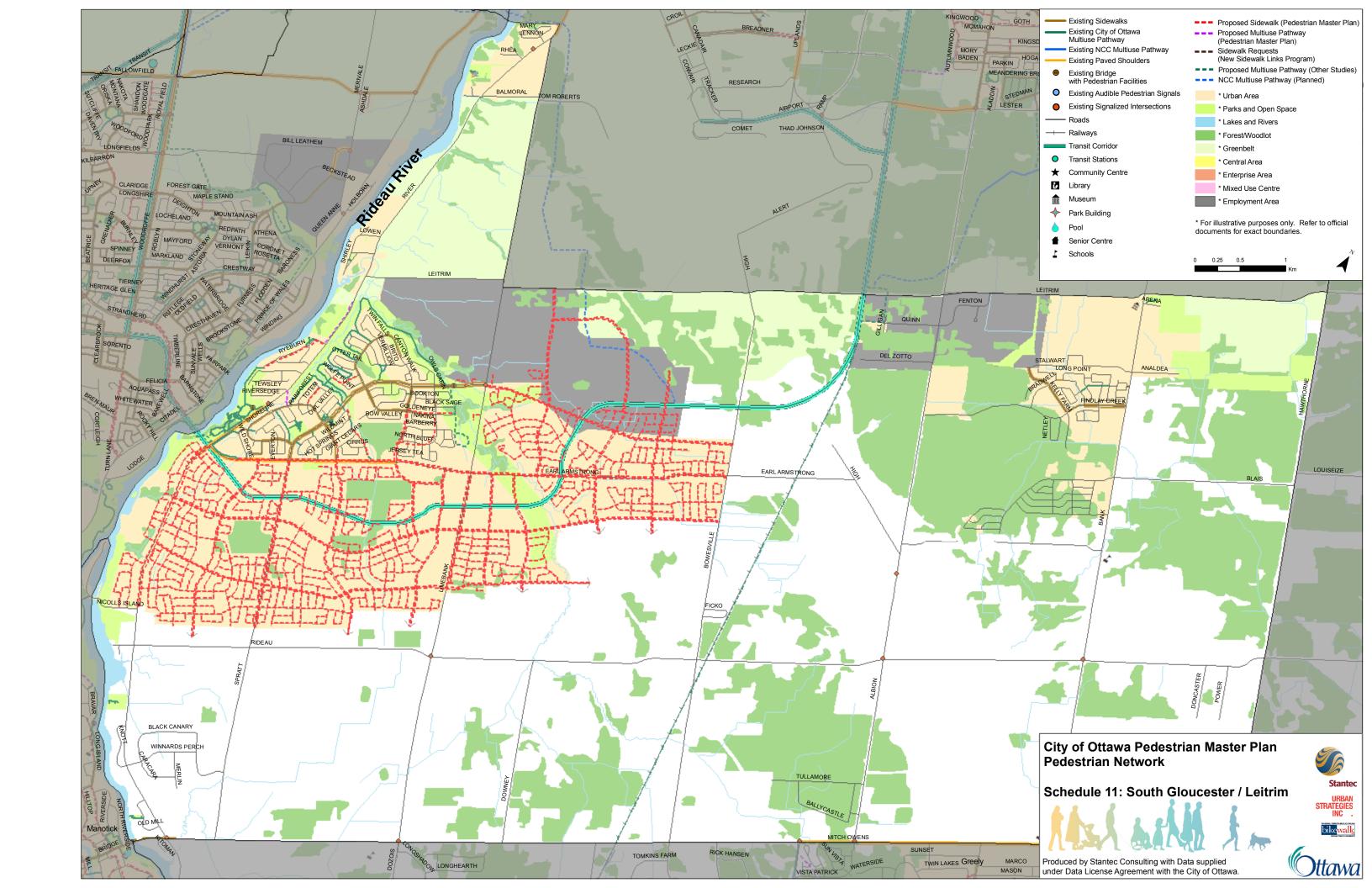
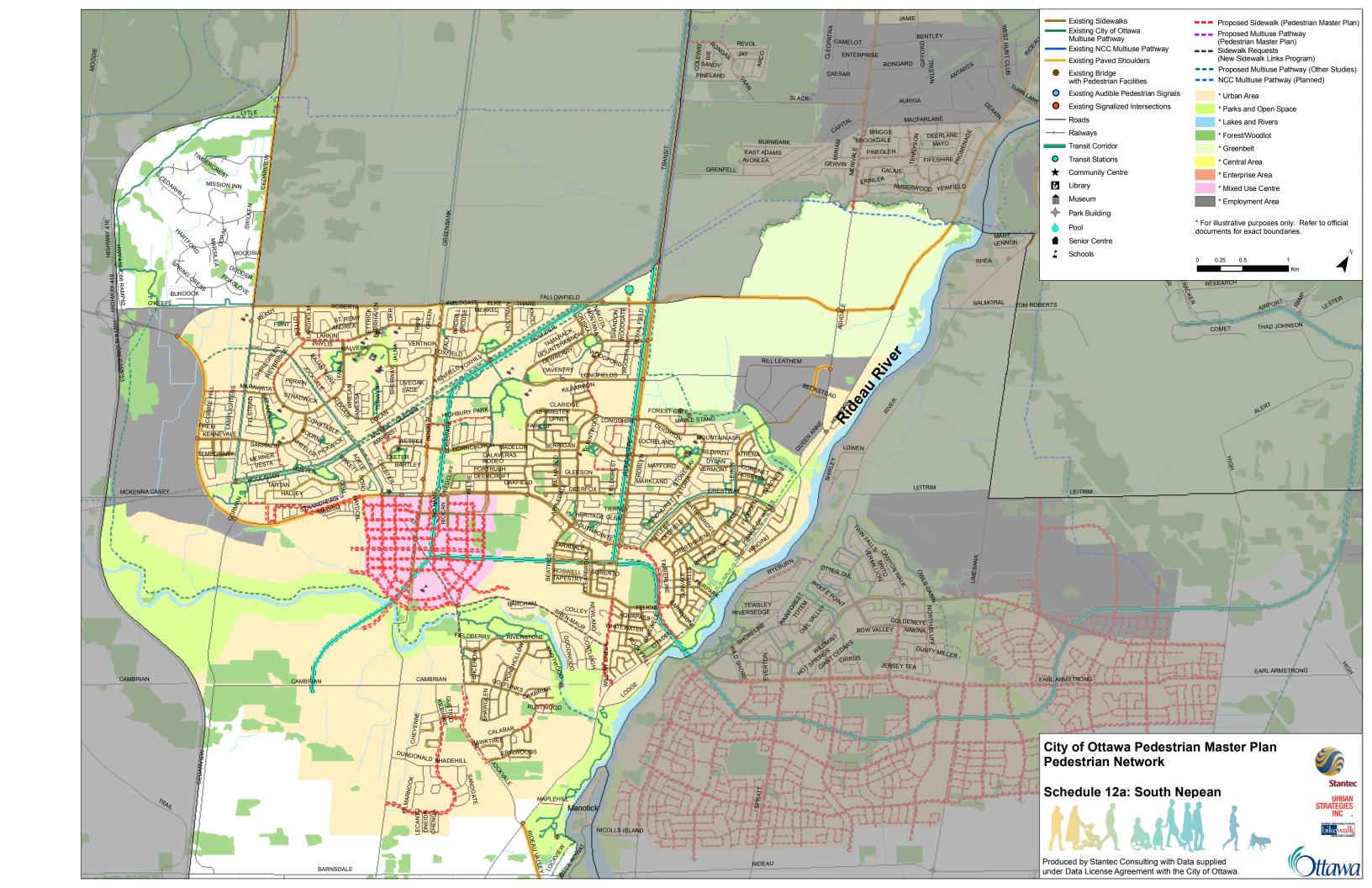


Table 7.18 South Gloucester/Leitrim				
Schedule Number	er(s) 11			
	of Sidewalk Requests (New am Candidate Database)	1	Overall Rank: Number of Requests	14
	netres) of Sidewalk Requests Program Candidate Database)	30	Overall Rank: Total Length of Requests	15
General	Primarily a new development area	in the city, o	currently focused on the residential area	along Earl
Comments on	Armstrong.			
Current	New crossing of Rideau River being	designed for St	randherd.	
Pedestrian Network	Pathway network linked to existing pathways planned for Greenbelt and		nerally well connected to sidewalk network.	k. Future
Key	Connect neighbourhoods across bar	riers such as R	ideau River, and major arterials.	
Considerations for Network	Complete connections along arterial and some collector roads.			
Improvements	Plan proactively to develop strong pedestrian connections to future schools, commercial areas and community centres.			
	Plan proactively to integrate future tr	ansit facilities ir	nto urban fabric of communities/neighbourho	ods.
	Improve pedestrian connections between communities/ neighbourhoods on east and west side of Rideau River by designing good pedestrian connections to, and facilities on future road bridge at Strandherd.			
	Develop strong connections to plann	ned pathways in	the Greenbelt.	
	Apply strong pedestrian design principles to new/infill development areas, including strong connection existing/surrounding neighbourhoods			
Priority for Comr	munity Pedestrian Improvement	Process	Low	

Table 7.19	South Nepean						
Schedule Number(s) 12a and 12b							
Sidewalk Links Progra	of Sidewalk Requests (New nm Candidate Database)	12	Overall Rank: Number of Requests	8			
	netres) of Sidewalk Requests Program Candidate Database)	9,746	Overall Rank: Total Length of Requests	6			
General Comments on Current	Sidewalks on most residential collectors and most new/ recently reconstructed arterials. Fevolucial (residential) streets in older neighbourhoods. Some of the newest neighbourhoods with street network and shorter street blocks (southeast Barrhaven) have a more complete sidew						
Pedestrian Network	Significant commercial area along arterials including Woodroffe, Fallowfield, Strandherd and Greenban Major arterials are also a barrier to pedestrian travel.						
	Significant transit nodes in north area	a of the district.					
	Pathway network in parklands, ger currently rely on local street connect		ed to sidewalk network, though some impolewalks.	ortant links			
	Schools and most community centres connected by sidewalks and/or pathways.						
	Significant new development area in	the city.					
	New crossing of Rideau River being	designed for St	tranherd.				
Key Considerations	Connect neighbourhoods across barriers such as rail lines, maximize opportunities on potential crossings of barriers.						
for Network Improvements	Complete sidewalk connections along arterial roads such as Woodroffe, Greenbank and Strandherd. Provide additional pedestrian connections along residential collectors and some local residential streets to complete pedestrian network and provide connections between multi-use pathways.						
	Evaluate pedestrian connections to existing schools and improve where necessary. Plan proactively to develop strong pedestrian connections to new schools.						
	Connect neighbourhoods across barriers such as Rideau River, and major arterials.						
	Develop/improve pedestrian connections to existing and new transit facilities. Plan proactive any new transit nodes into urban fabric of communities/neighbourhoods. Improve pedestrian connections between communities/ neighbourhoods on east and west s River by designing good pedestrian connections to, and facilities on future road bridge at Stra						
	Develop strong connections to plann	ed pathways (i	e. along Jock River).				
	Apply strong pedestrian design principles to new/infill development areas, including strong connections to existing/surrounding neighbourhoods.						
	Plan for strong pedestrian connections to Manotick as area continues to grow.						
	Work with/encourage owners of major commercial shopping centres to improve pedestrian environment, including access from street, through parking lots and to mall doors. Ensure that new commercial/mixed use centre south of Strandherd has a strong pedestrian network.						
Priority for Comr	nunity Pedestrian Improvement	Process	Moderate				





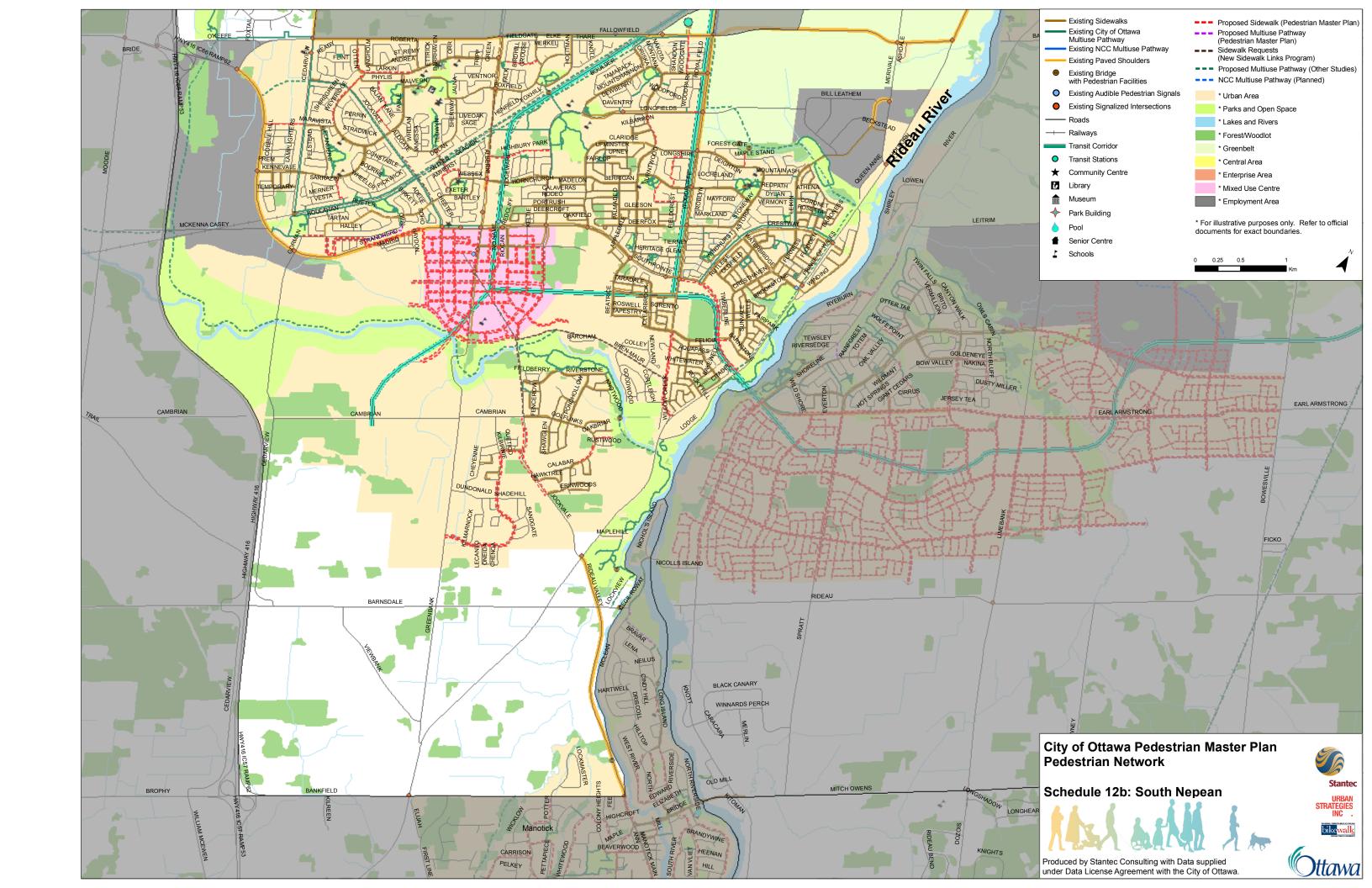
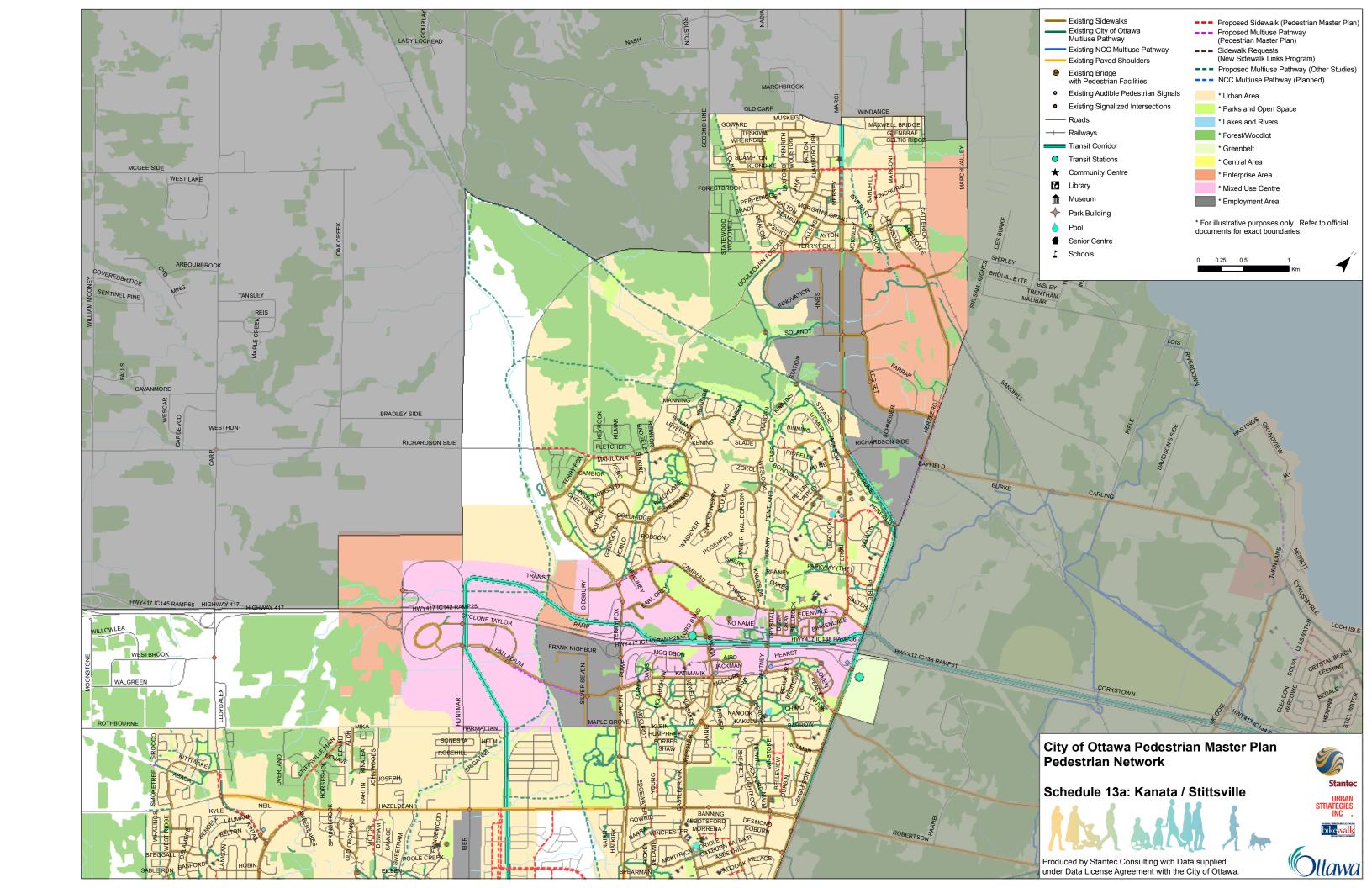
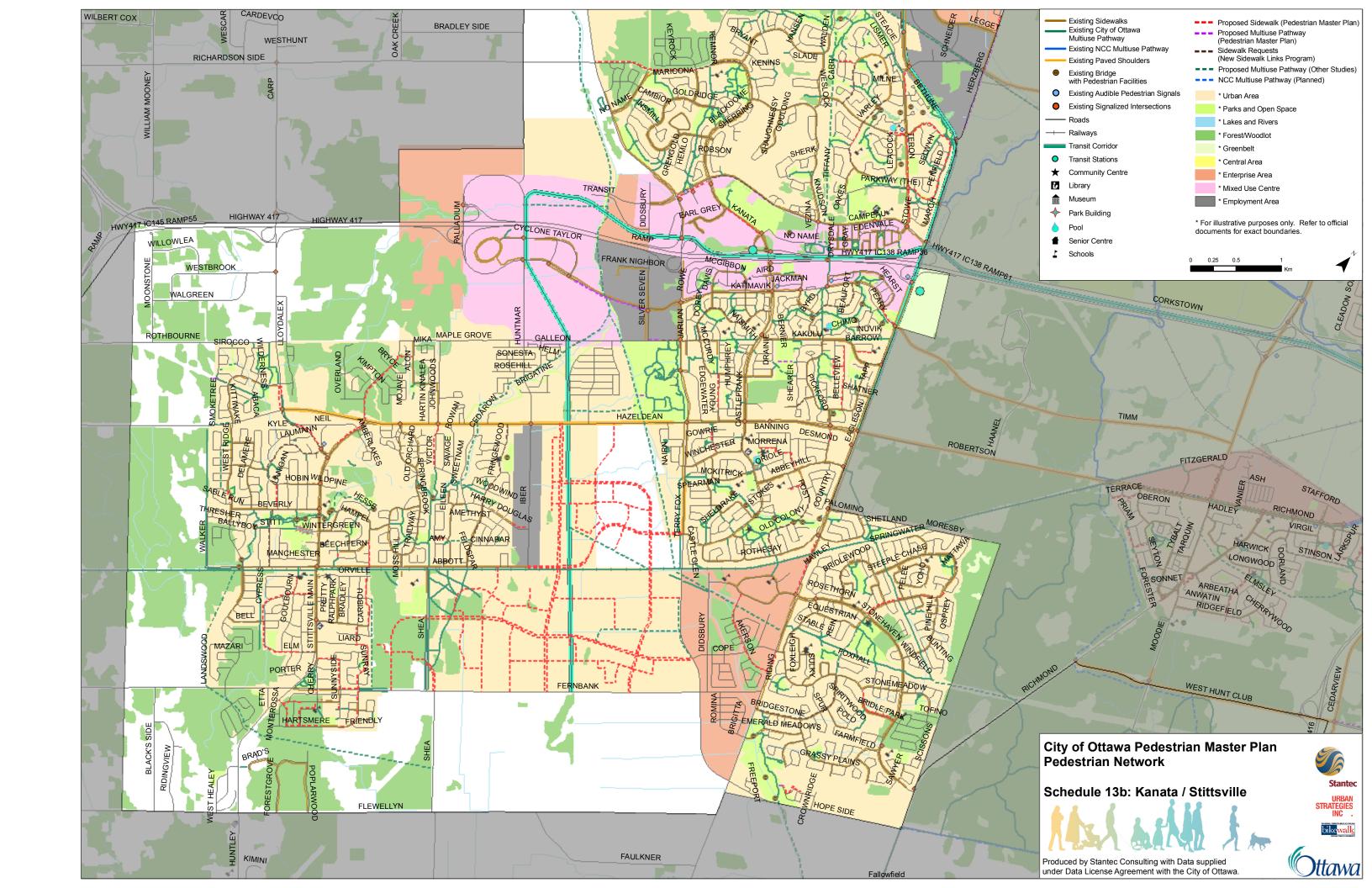


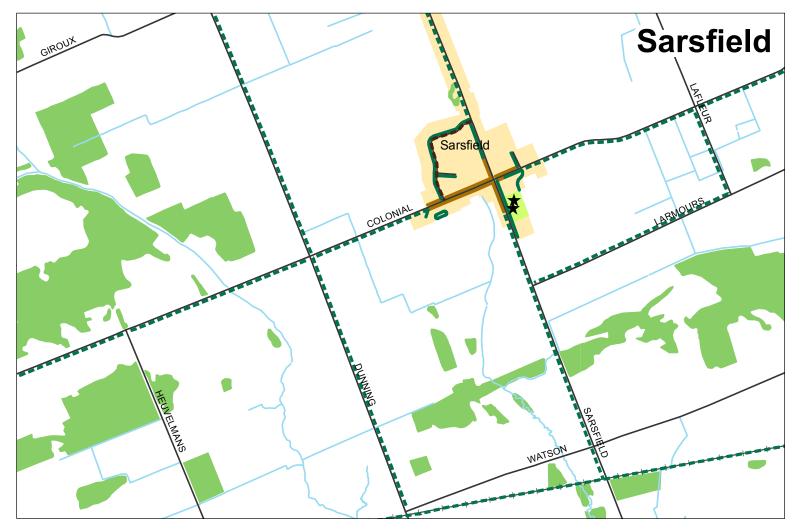
Table 7.20 Kanata/Stittsville							
Schedule Number(s) 13a and 13b							
	of Sidewalk Requests (New name Candidate Database)	35	Overall Rank: Number of Requests	1			
	netres) of Sidewalk Requests Program Candidate Database)	20,137	Overall Rank: Total Length of Requests	1			
General Comments on Current		ays along mos	nore grid-like in Stiittsville, especially olde st arterials, some collectors. Very few local (neighbourhoods.				
Pedestrian Network	Pathway network in parklands generally well connected to sidewalk network, and linked to significant multi-use pathways heading east into the city core. Neighbourhoods in Kanata generally rely heavily on pathways to form the pedestrian network.						
	Schools and most community centre	s connected by	sidewalks and/or pathways.				
	Highway 417 creates a significant barrier with limited opportunities for connections between neighbourhoods on north and south sides. Existing pedestrian bridge over 417 east of Castlefrank is a significant asset.						
	Major commercial zones along arterials and Highway 417 corridor.						
	Significant new development area in the city.						
	Significant employment area in north Kanata, generally well connected to residential areas and Greenbelt via the pathway system.						
	Significant pathway spines being planned along creek corridors between Kanata and Stittsville.						
	Significant future commercial area at Huntmar and 417.						
Key Considerations for Network	Complete sidewalk connections along arterial roads such as Eagleson and Hazeldean. Provide additional pedestrian connections along residential collectors and some local residential streets to complete pedestrian network and provide connections between multi-use pathways.						
Improvements	Continue to improve pedestrian connections to major employment areas, transit nodes and major commercial zones. Work with/encourage owners of major commercial shopping centres to improve pedestrian environment, including access from street, through parking lots and to mall doors.						
	Continue to improve connections between communities on either side of Highway 417/Queensway. Examine existing crossings and make improvements where necessary. Seek opportunities to create strong pedestrian connections (i.e. new road overpasses, upgrades of existing overpasses, pedestrian bridges).						
	Evaluate pedestrian connections to existing schools and improve where necessary. Plan proactively to develop strong pedestrian connections to new schools.						
	Apply strong pedestrian design principles to new/infill development areas, including strong connections to existing/surrounding neighbourhoods.						
	Continue to improve connections to multi-use pathways in neighbourhoods and main pathways heading east towards downtown.						
	Develop strong connections to future planned pathways along watercourses and other open space lands.						
	Develop strong pedestrian connections within and to new major commercial areas.						
Priority for Comm	nunity Pedestrian Improvement	Process	High				

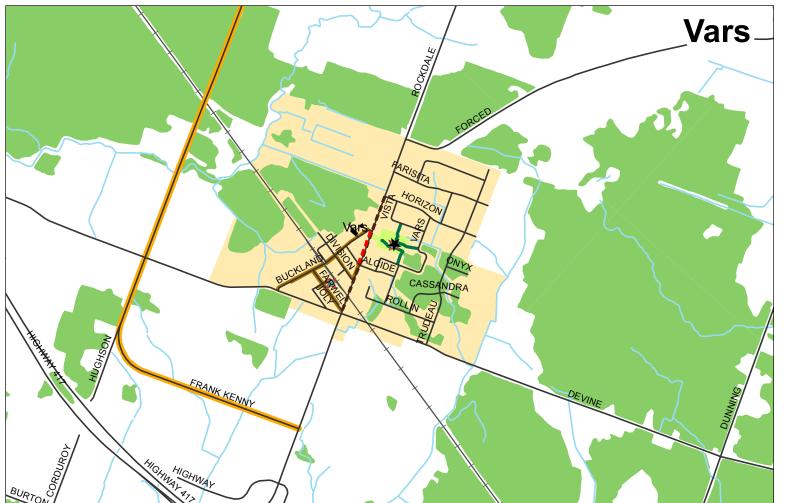
7.8.1.4 Strategies for the Rural Geographic Region

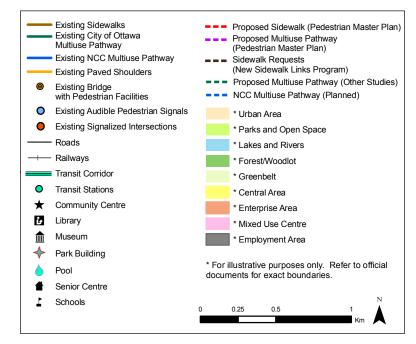
Table 7.21	Rural East					
Schedule Number(s) 14a and 14b						
Sidewalk Links Progra	of Sidewalk Requests (New nam Candidate Database)	4	Overall Rank: Number of Requests	13		
	netres) of Sidewalk Requests Program Candidate Database)	2,405	Overall Rank: Total Length of Requests	13		
General	Rural area includes Villages and Ha	mlets of Cumbe	erland, Navan, Sarsfield, Carlsbad Springs a	nd Vars.		
Comments on	Most schools and community centre	s connected by	sidewalks and/or pathways.			
Current Pedestrian Network	Paved shoulders on some rural roads and along some roads in urban areas can function as multi-modal pedestrian facilities.					
	Significant new development area or	n south side of	Orleans with potential to create connections	to Navan.		
	Linear corridors (hydro, abandoned railways) are excellent opportunity to improve pedestrian network for recreation and utilitarian purposes.					
Key	Urban (Primarily Hamlets and Villa	ages)				
Considerations for Network Improvements	etwork south of Innes. Apply strong pedestrian design principles to new/infill development areas an					
	Low volume streets can be designed directional signage to create designate		dal facilities for pedestrians. Consider the ops or routes.	addition of		
	In Cumberland, seek opportunities to connect the main village area to the museum/parkland using an off- road route by protecting a corridor along the creek paralleling the southern limit of the village.					
	Build on existing pedestrian network to include connections to key destinations such as schools, parand community centres. Pedestrian facilities include sidewalks or pathways, depending on location. Develop pedestrian connections among existing and future pathways to provide active transportation recreational opportunities for residents. Where recreational routes are identified as priorities consider development of loops.					
	Provide/improve pedestrian environment along main/commercial street(s).					
	Rural					
	Where feasible, strive for connections between villages and hamlets using multi-use pathway corrid the spine (i.e. abandoned railway lines, river and stream corridors, unopened road allowances, corridors).					
Priority for Comr	nunity Pedestrian Improvement	Process	Moderate (in villages and hamle Low (in rural surrounding area			













Schedule 14a: Rural East (Sarsfield & Vars)



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bike<mark>walk</mark>

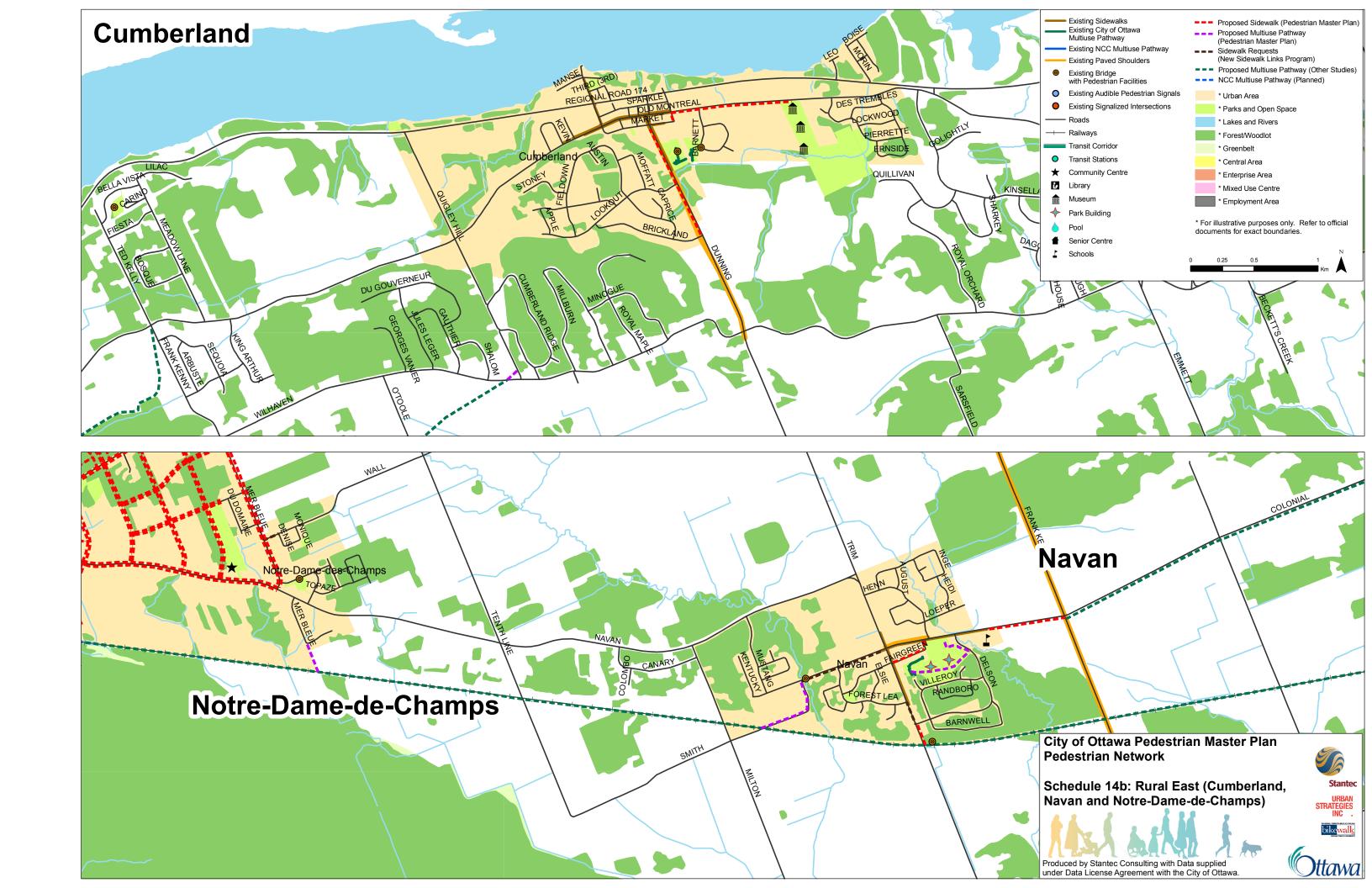
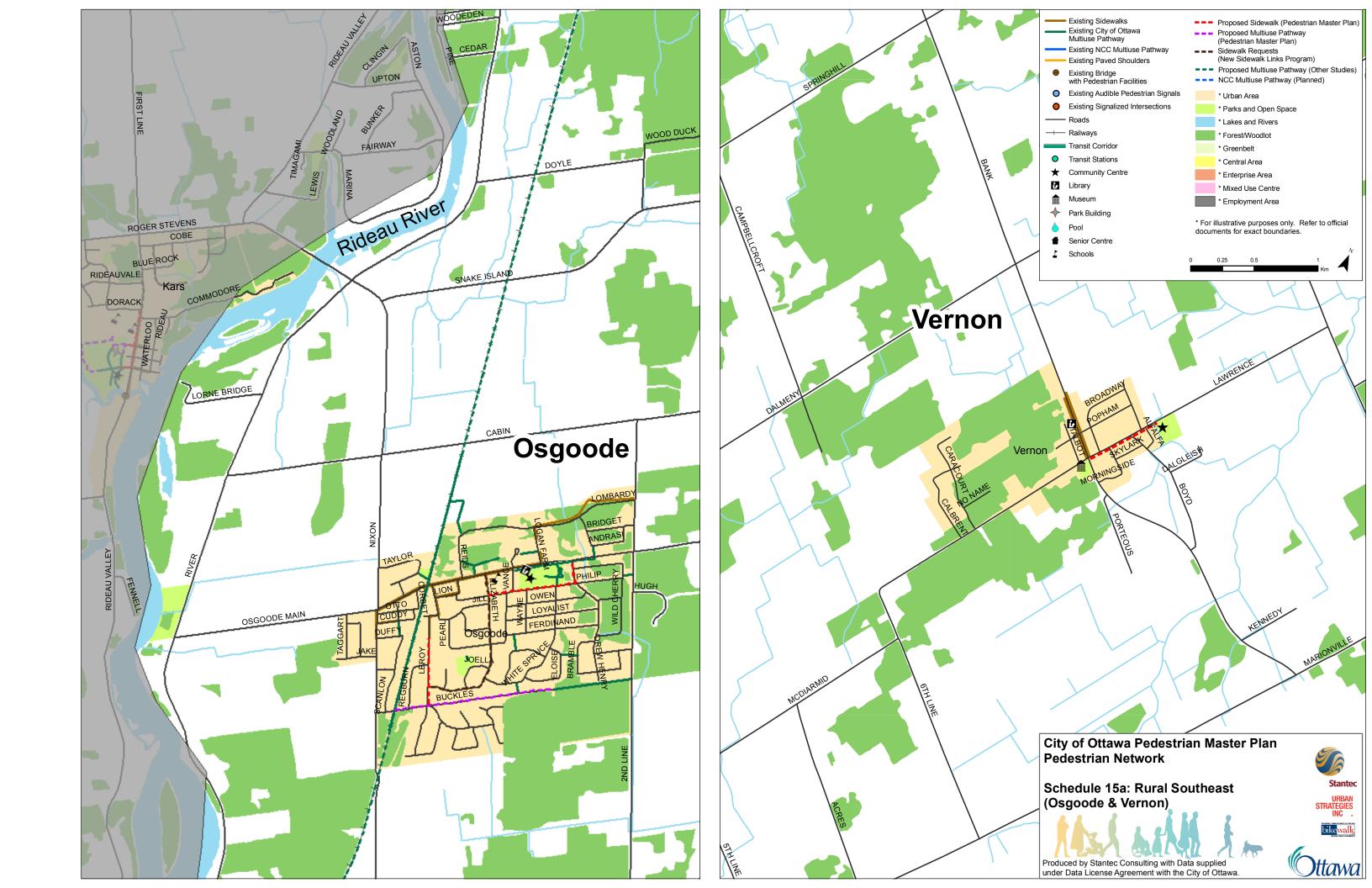
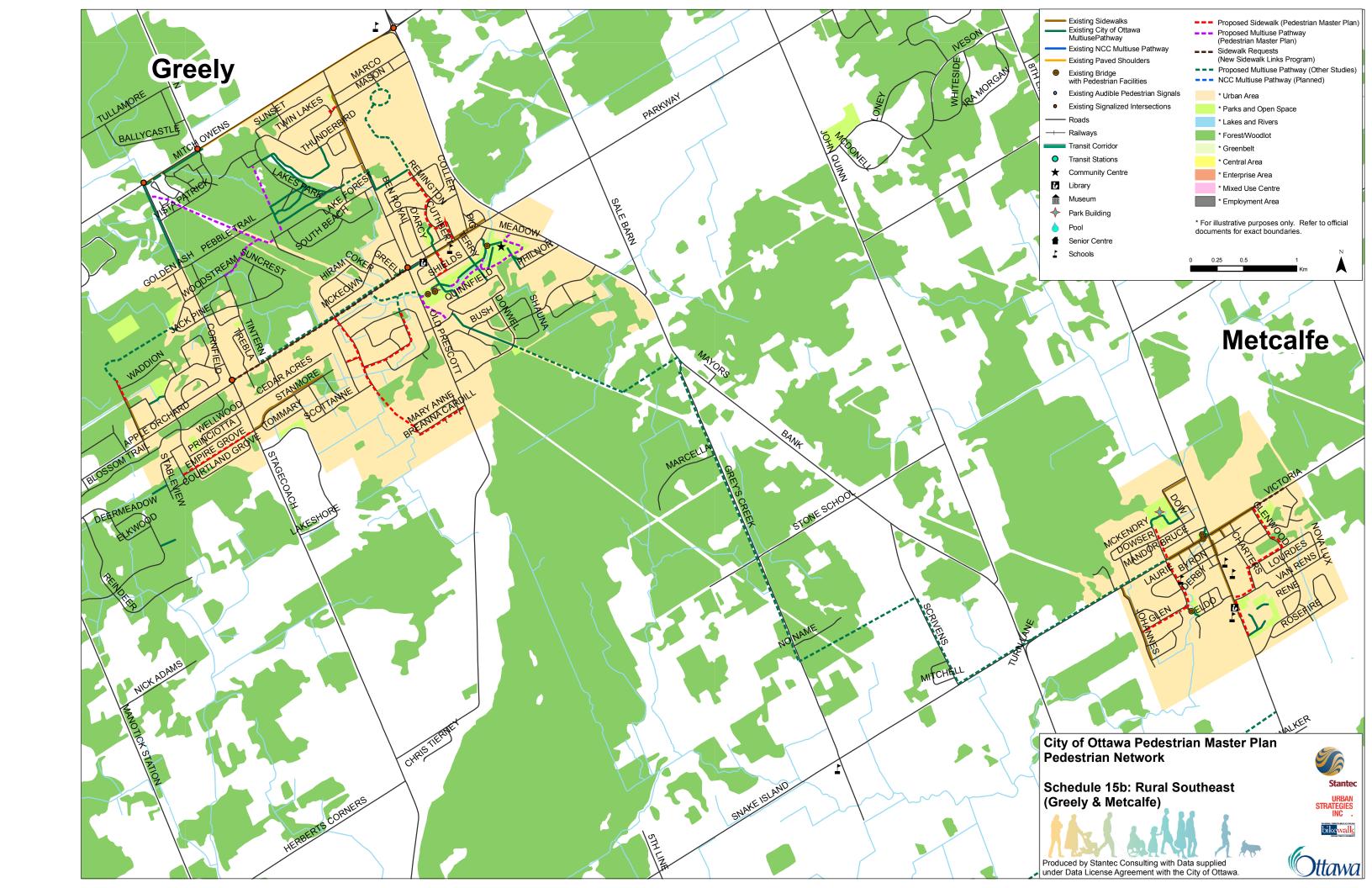
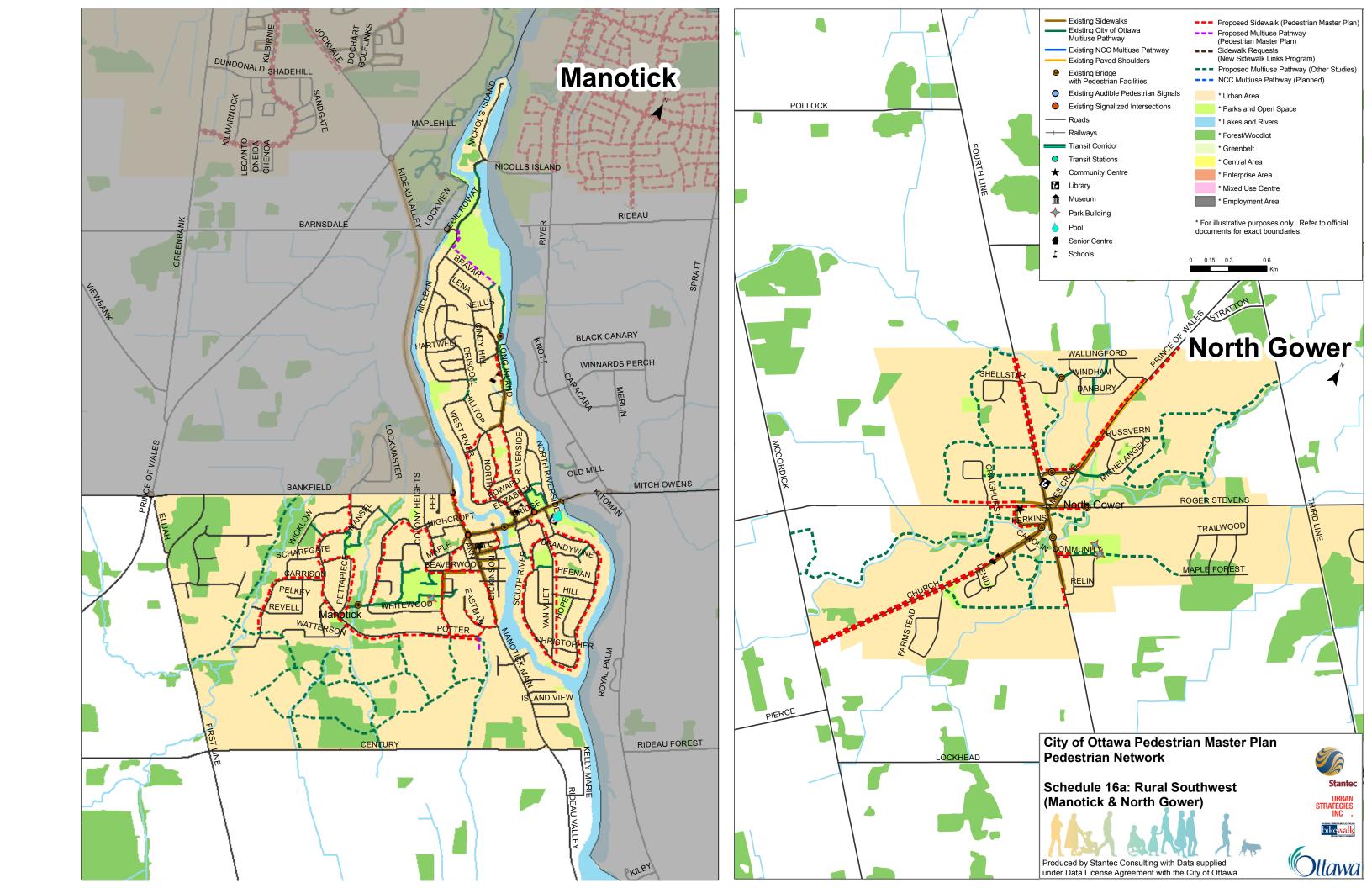


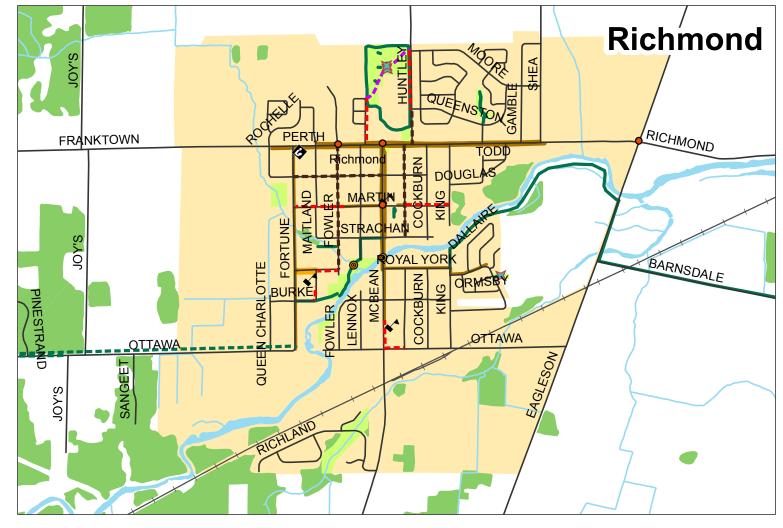
Table 7.22	Rura	Southeast				
Schedule Number(s) 15a and 15b						
Current Number Sidewalk Links Progra	am Candidate Databas	e) •	9	Overall Rank: Number of Requests	10	
Total Length (m (New Sidewalk Links	<i>Program</i> Candidate Da	itabase)	11,387	Overall Rank: Total Length of Requests	5	
General Comments on	Includes Villages and Hamlets of Greely, Metcalfe, Osgoode, Vernon, Kenmore and Marionville with limited sidewalk/pathway networks.					
Current	Significant new de	velopment area c	entred around (Greely and Metcalfe.		
Pedestrian Network	Linear corridors (h recreation and utili		railways) are e	xcellent opportunity to improve pedestrian	network for	
	Paved shoulders on some rural roads and along some roads in urban areas can function as multi-modal pedestrian facilities.					
Key	Urban (Primarily	Hamlets and Vill	ages)			
Considerations for Network	Build on existing pedestrian network to include connections to key destinations such as schools, parks and community centres. Pedestrian facilities include sidewalks or pathways, depending on location.					
Improvements	Develop pedestrian connections among existing and future pathways to provide active transportation and recreational opportunities for residents. Where recreational routes are identified as priorities consider the development of loops. Ensure that the newer estate style developments in north Greely are well connected by a pathway network utilizing woodlots, creek/drain corridors and buffers. Develop a strong pathway network west of Stagecoach and connect to abandoned railway corridor as part of future spine pathway.					
	Provide/improve pedestrian environment along main/commercial street(s).					
	Low volume streets can be designed as multi-modal facilities for pedestrians. Consider the addition of directional signage to create designated walking loops or routes.					
	Apply strong pedestrian design principles to new development areas on the edges of Hamlets and Villages, including strong connections to existing/surrounding neighbourhoods.					
	Rural					
	Where feasible, strive for connections between villages and hamlets using multi-use pathway corridors as the spine (i.e. abandoned railway lines, river and stream corridors, unopened road allowances, hydro corridors).					
Priority for Comr	nunity Pedestriai	Improvement	Process	High (in Greely and Metcalfe Moderate (in other villages and ha Low (in rural surrounding area	mlets)	

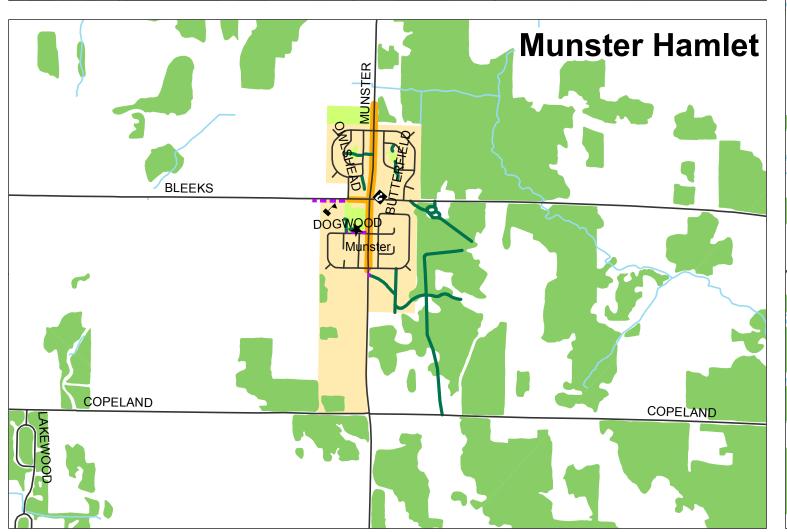
Table 7.23	Rural Southwest			_		
Schedule Number(s) 16a and 16b						
Sidewalk Links Progra	of Sidewalk Requests (New am Candidate Database)	10	Overall Rank: Number of Requests	9		
	netres) of Sidewalk Requests Program Candidate Database)	3,790	Overall Rank: Total Length of Requests	9		
General Comments on	Includes Villages and Hamlets of M with limited sidewalk/pathway netwo		North Gower, Burritt's Rapids, Richmond ar	nd Munster		
Current	Significant new development area co	entred around N	Manotick and Richmond to a lesser extent.			
Pedestrian Network	Paved shoulders on some rural road pedestrian facilities.	ds and along so	ome roads in urban areas can function as r	nulti-modal		
	The Trans Canada Trail creates a strong east-west spine across the north part of the district.					
Key	Urban (Primarily Hamlets and Villa	ages)				
Considerations for Network Improvements	Build on existing pedestrian network to include connections to key destinations such as schools, parks and community centres. Pedestrian facilities include sidewalks or pathways, depending on location.					
improvements	Develop pedestrian connections among existing and future pathways to provide active transportation and recreational opportunities for residents. Where recreational routes are identified as priorities consider the development of loops.					
	Provide/improve pedestrian environment along main/commercial street(s).					
	Low volume streets can be designed as multi-modal facilities for pedestrians. Consider the directional signage to create designated walking loops or routes.					
	Seek opportunities to create or improve connections with communities on the east side of the Rideau River through any bridge construction/reconstruction.					
	Develop strong pedestrian connections between Manotick and South Nepean as the area between the two centres continues to develop.					
	Apply strong pedestrian design principles to new development areas on the edges of Hamlets and Villages, including strong connections to existing/surrounding neighbourhoods.					
	<u>Rural</u>					
	Where feasible, strive for connections between villages and hamlets using multi-use pathway corridors as the spine (i.e. abandoned railway lines, river and stream corridors, unopened road allowances, hydro corridors).					
Priority for Comr	munity Pedestrian Improvement	Process	High (in Manotick) Moderate (in other villages and ha Low (in rural surrounding area	,		











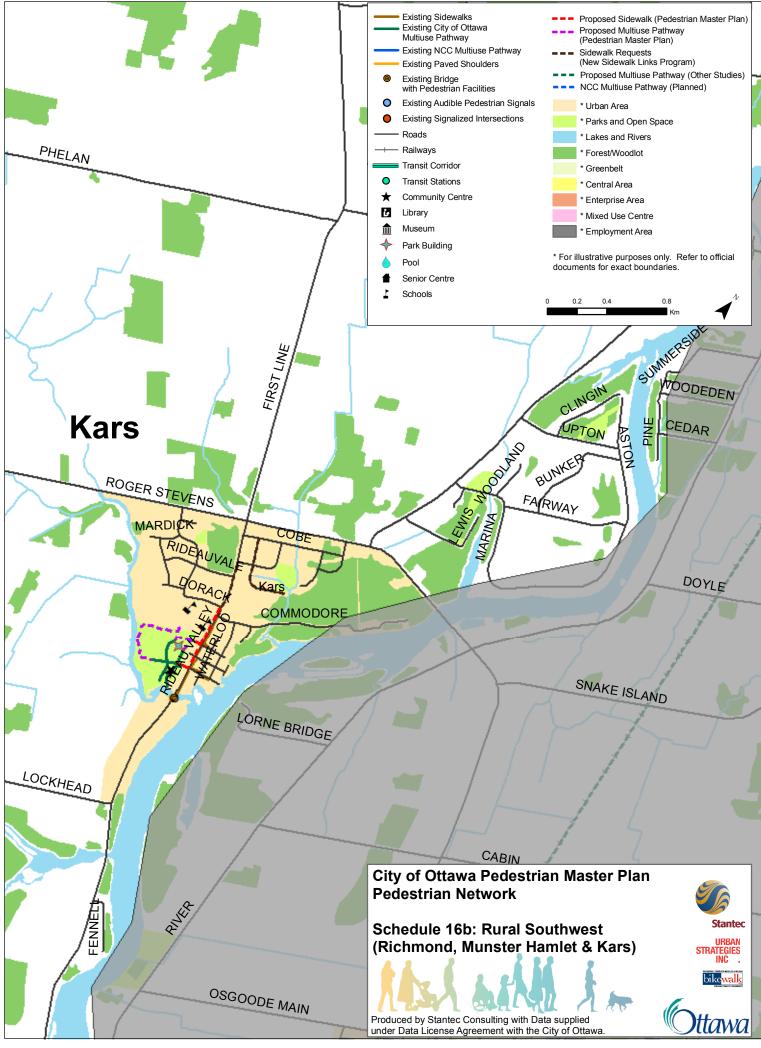
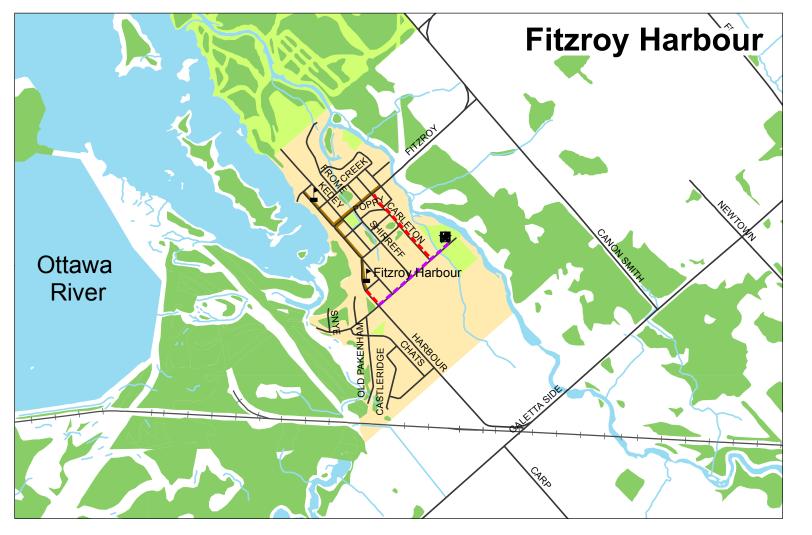


Table 7.24	R	Rural West				
Schedule Number		•				
Current Number of Sidewalk Requests (New Sidewalk Links Program Candidate Database)			0	Overall Rank: Number of Requests	15	
Total Length (n (New Sidewalk Links	<i>Program</i> Candid		0	Overall Rank: Total Length of Requests	16	
General Comments on		lages and Hamlets of hway networks.	Fitzroy Harbou	ur, Constance Bay, Dunrobin and Carp v	vith limited	
Current Pedestrian	Paved shoulders on some rural roads and along some roads in urban areas can function as multi-modal pedestrian facilities.					
Network	The Trans Canada Trail creates a strong east-west spine in south end of district and towards Stittsville and Kanata.					
Key	Urban (Villa	ges and Hamlets)				
Considerations for Network	Build on existing pedestrian network to include connections to key destinations such as schools, parks and community centres. Pedestrian facilities include sidewalks or pathways, depending on location.					
Improvements	Develop pedestrian connections among existing and future pathways to provide active transportation and recreational opportunities for residents.					
	Low volume streets can be designed as multi-modal facilities for pedestrians. Consider the addition directional signage to create designated walking loops or routes. Where recreational routes are ident as priorities consider the development of loops.					
	Provide/improve pedestrian environment along main/commercial street(s).					
	Apply strong pedestrian design principles to new/infill development areas, including strong connections to existing/surrounding neighbourhoods.					
	<u>Rural</u>					
		Where feasible, strive for connections between villages and hamlets using multi-use pathway corridors as the spine (i.e. abandoned railway lines, river and stream corridors, unopened road allowances, hydro corridors).				
Priority for Com	nunity Pede	strian Improvement	Process	Moderate (in villages and hamle Low (in rural surrounding area		

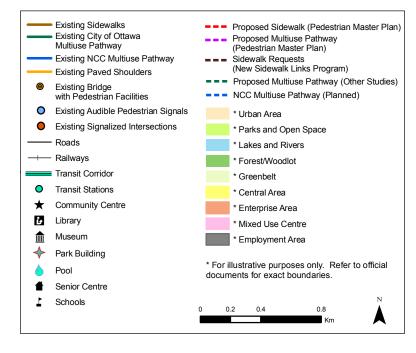
7.9 Summary of Recommendations

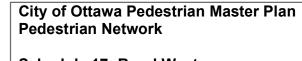
It is recommended that (the City):

- 7.1 Form an interdepartmental working group comprised of staff involved in planning, design, maintenance and rehabilitation of sidewalks and pathways, to coordinate efforts in pedestrian network management.
- 7.2 Use walking participation results from the 2005 Origin Destination Survey, and future updates to this survey as a source indicator of possible trends.
- 7.3 Undertake a comprehensive review of roles and responsibilities for all aspects of sidewalk and pathway planning design, operation, rehabilitation and maintenance to ensure that responsibility for all aspects of the pedestrian network infrastructure have been accounted for and properly assigned to the appropriate Branch or Department.
- 7.4 The scope and budget for new and reconstructed roads are to include the provision of sidewalks and/or multi-use pathways as prescribed by the Pedestrian Plan, the Official Plan and the Transportation Master Plan.
- 7.5 Modify the New Sidewalk Links program using the criteria and weighting system for assessing candidates identified in the Ottawa Pedestrian Plan, so that eligibility is established and a clearer separation of priorities is achieved. This may include recommendations for the development or reinstatement of parallel program(s) for pedestrian facilities, other than sidewalks such as pathways.
- 7.6 Consolidate pedestrian master data, currently managed independently by various branches, utilizing the corporate GIS tool. This would require processes to ensure data is continually updated and refined by the various data "owners".
- 7.7 Refine and adopt the Community Pedestrian Improvement Process methodology and process to assess the walkability of a community, subdivision or specific site. This methodology proactively improves pedestrian facilities by analyzing pedestrian origins, routes and attractions.
- 7.8 Establish a Pedestrian Network for Ottawa based on:
- a) The proposed pedestrian network presented in Schedules 1 through 17;
- b) Refinements to the network through the application of the Community Pedestrian Improvement Process (as established in recommendation 7.7);
- c) The consistent application of the Community Pedestrian Improvement Process methodology to all planning and development process, undertaken by all City Branches.
- 7.9 Launch the Ottawa Pedestrian Plan by selecting a community for a pilot Community Pedestrian Improvement Process from one of the priority communities identified in Table 7.7 of this Plan. Establish an appropriate study budget and review and report on the outcomes of the pilot including any recommendations and future capital funding allocation request.









Schedule 17: Rural West



