





Report to Infrastructure, Investment and Development Services Committee

TO: INFRASTRUCTURE, INVESTMENT AND DEVELOPMENT SERVICES COMMITTEE

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DATE: JANUARY 20, 2015

SUBJECT: INFILL SIDEWALK POLICY

RECOMMENDED MOTION

1. That the policy for the inclusion of infill sidewalks as a component of a road reconstruction project as detailed in this report and the criteria identified in Appendix "B" be approved.
2. That the policy for prioritization of stand-alone infill sidewalk projects as detailed in this report and the criteria identified in Appendix "C" be approved.

PURPOSE & BACKGROUND

3. The purpose of this report is to present the recommendations on the updated infill sidewalk policy criteria that would be used to guide City staff in the development of the capital program associated with infill sidewalks throughout the City.
4. As a result of the significant growth that has occurred in the City over the past twenty years and the advancement of such elements as growth and development principals to support active transportation, the understanding of environmental concerns such as the impact of greenhouse gases and the benefits of promoting and supporting a healthy community, City staff are recommending an update to the infill sidewalk policy to better reflect these important elements.
5. Pedestrian safety has always been a key element in any policy that the City has had related to sidewalks. Off-road facilities such as sidewalks or pathways separated by a curb and gutter or some other form of physical barrier are always considered the safest form of pedestrian infrastructure.
6. The existing Sidewalk policy approved through Motion 94-G-141 is attached as Appendix "A".
7. Active Transportation is any form of human-powered transportation. It is any trip made for the purpose of getting yourself, or others, to a particular destination - to work, to school, to the store or to visit friends, and is more than simply using these modes for recreational purposes. As long as it is "active," someone can choose the mode - walking, cycling, wheeling, in-line skating, skateboarding, etc. Walking and cycling are the most popular forms of active transportation. It can also involve combining modes such as walking/cycling with public transit. Council has

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adopted Active Transportation principles through Motion 08-G-472 with the intention for staff to work towards an increased awareness and participation in Active Transportation in the community.

8. On December 2nd, 2013 Council approved Motion 13-G-289 that approved the six Infrastructure Master Plans (Water Supply, Water Storage and Distribution, Wastewater Treatment, Wastewater Collection, Drainage and Stormwater Management, and Multi-Modal Active Transportation (MMAT)) related to growth from 2012-2031.

9. The MMAT Master Plan was developed using several criteria but the two most related to non-automobile trips are as follows:

Safe, connected and accessible walking environment - "Presence of enhancements to pedestrian infrastructure on Barrie's streets. Continuity of walking routes. Pedestrian share of modal share during peak hours."

Meet travel needs of all Barrie residents - "Extent to which all areas of the City are served by all transportation modes: walking, cycling, transit and private vehicles."

10. The recommended Active Transportation Measures out of the MMAT Master Plan are as follows:

Area	Sidewalks
Annexed Lands	New streets (except for short cul-de-sacs) to have sidewalks on both sides
Pre-2010 City Boundary	<p>Arterials and collectors to have sidewalks on both sides</p> <p>Local streets to have at least one sidewalk. Areas within 250m of schools to have sidewalks on both sides</p> <p>An infill sidewalk program is recommended to implement additional sidewalks where other road construction is not planned</p>

In the MMAT Master Plan the general premise for the Pre-2010 City boundary, in order to develop the concept of a City with a higher level of Active Transportation, is that all roadways are to have sidewalks. The Master Plan recommended the development of an implementation plan to ensure that this vision can be achieved in a cost-effective and sustainable fashion.

ANALYSIS

11. To address the factors noted above, City staff have reviewed existing policies and the sidewalk recommendations out of the MMAT Master Plan, and have developed new criteria to ensure that any new sidewalks are implemented in a priority sequence and in the most cost effective way possible to provide Barrie residents with a comprehensive sidewalk network.

12. A review of the infill sidewalk policies of other municipalities was conducted as part of the development of the proposed infill sidewalk policy. This included municipalities such as Burlington, Waterloo, Oakville, London and Hamilton. The criteria that are being proposed are similar to those that were reviewed and reflective of similar development planning.

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13. The Simcoe Muskoka District Health Unit supports community design that promotes healthy living. Daily physical activity is vital to the health and quality of life of the citizens of Barrie. A comprehensive sidewalk network within the City is one way to support this goal. The presence of a well-designed pedestrian network augmented by policy considerations which prioritize safety, connectivity, aesthetics and convenient access to common destinations such as school, employment and commercial areas will encourage residents to choose active transportation and transit more often.
14. The goals of the Barrie Active Transportation Working Group include the support and increase of active transportation as a more routine component of the work/school commute, shopping, socializing and entertainment endeavours and advocate for the development of a built environment that supports an active transportation network. Recent work by the Working Group includes School Travel Planning to explore ways to increase student travel to and from school through walking, cycling, skateboarding, etc. rather than by car. The proposed criteria used to support future capital project recommendations would support the goals of the Working Group. The draft criteria were presented to the Barrie Active Transportation Working Group and comments received were considered in the finalization of the criteria.
15. The need for sidewalks is proposed to be refined from the MMAT Master Plan recommendations as follows:
 - a) Annexed Lands
 - i) All roads (except for short cul-de-sacs of less than approximately 14 homes) to have sidewalks on both sides
 - b) Pre-2010 City Boundary
 - i) Arterial and collector roads to have sidewalks on both sides
 - ii) Local roads (except for short cul-de-sacs of less than approximately 14 homes) to have at least one sidewalk
 - iii) Local roads that function as arterial or collector roads to have sidewalks on both sides
 - iv) Roads fronting schools to have sidewalks on both sides from the school property to a logical termination point to maintain network connectivity and maintainability (approximately 250 m).
 - v) Sidewalk construction to terminate at logical locations to ensure network connectivity and maintainability.
16. Two project criteria are included in the Infill Sidewalk Policy being proposed. The criteria in Appendix "B" will be used to determine whether or not a sidewalk will be included as part of a road reconstruction project depending on whether or not there are determined to be unacceptable financial, environmental or social impacts through the design stage of the project. The criteria shown in Appendix "C" will be used to prioritize sidewalks for implementation through a stand-alone infill sidewalk project (not associated with construction of other infrastructure).

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Infill Sidewalks Completed with Road Reconstruction Projects (Appendix “B”)

17. From a cost efficiency and effectiveness perspective, the best time to construct sidewalks is in coordination with a road reconstruction project. These efficiencies are realized in the fact that all of the infrastructure needs can be addressed under the same project design elements (including survey, utility identification, etc.), a common tender and common construction administration.
18. Therefore, required infill sidewalks will be included in the scope of related road reconstruction projects. During the design phase, the criteria in Appendix “B” will be used to review the financial, environmental and social impacts of the sidewalk. As long as the criteria are met, then the sidewalk will be implemented as part of the project. If there are significant impacts that cannot be mitigated, then the sidewalk will be removed from the scope of the project.
19. Residents and businesses will be consulted at the design stage of the project so that any concerns and impacts can be mitigated through the design process.

Stand-alone Infill Sidewalk Projects (Appendix “C”)

20. Stand-alone infill sidewalk projects will be prioritized using the criteria in Appendix “C”. The projects would be considered in future Business Plans with those projects scoring the highest using the criteria being the ones most likely to be included in the Plan when compared with other Corporate priorities.

Criteria Details

21. Cost of infill sidewalk construction is to be evaluated as part of the policy. As part of infill sidewalk construction there can often be a number of factors impacting the overall costs. This can include such items as additional property requirements beyond the existing right-of-way, grading requirements (including the potential need for retaining walls, etc.) and the need for utility relocations to accommodate the sidewalk. For infill sidewalks to be completed in association with road reconstruction, the sidewalk will be included in the project as long as the sidewalk and associated costs are equal to or less than three times the typical sidewalk cost. Stand-alone infill sidewalk projects would be prioritized more favourably in instances where the sidewalk and associated costs are equal to or less than three times the typical sidewalk cost.
22. In many of the areas where infill sidewalks would be considered, there will be trees or other forms of vegetation that exist. City staff would evaluate each project for the impact on mature trees and other impacts that could result from vegetation removal such as increased erosion. For infill sidewalks to be completed in association with road reconstruction, the sidewalk will be included in the project as long as these impacts can be mitigated. Stand-alone infill sidewalk projects would be prioritized more favourably in instances with no or little impacts on trees and vegetation.
23. A destination is an important factor for sidewalk network connectivity. This component was considered in the criteria development to ensure that the comprehensive network to all key pedestrian destinations (schools, parks, transit, etc.) could be implemented as effectively as possible. The destination draw rather than the road classification or the actual pedestrian count was felt to be a better indicator for the criteria proposed for the sidewalk project. For infill sidewalks completed in association with road reconstruction to proceed, there will need to be a destination element associated with it for the project to proceed. Stand-alone infill sidewalk projects would be prioritized more favourably in instances where there are a greater number of destination elements.

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- 24. Network continuity is considered an important factor in planning for sidewalk implementation. Through the MMAT Master Plan, the existing sidewalk and pathway network was reviewed and areas where there are missing links were identified. Stand-alone infill sidewalk projects would be prioritized more favourably in instances where the project addresses a missing link in the network.

ENVIRONMENTAL MATTERS

- 25. Sidewalks are a key component of a complete and liveable community while providing options for transportation that do not contribute to greenhouse gas emissions and promoting healthy living. The proposed policy would allow the City to strengthen the sidewalk network through an efficient and prioritized process in association with the annual Business Plan. The quality of the City's pedestrian realm impacts the physical and mental health and well-being of residents in terms of air quality, daily physical activity and interaction with others in the community etc. There are even greater health impacts on vulnerable populations including residents with lower socioeconomic status, children, youth, the elderly, and people living with disabilities when access to active transportation networks and transit are insufficient.

ALTERNATIVES

- 26. There is one alternative available for consideration by the Infrastructure, Investment and Development Committee:

Alternative #1

The Committee could choose to modify the proposed policy.

This alternative is not recommended as the proposed policy has been developed to achieve the ultimate infrastructure needs of the City in a fiscally responsible and sustainable manner.

FINANCIAL

- 27. If the proposed policy is approved, then infill sidewalks that are part of road reconstruction projects will be reviewed at the design stage with the criteria in Appendix "B" to confirm that the sidewalk will be included with the project, or if there are unacceptable costs or impacts that cannot be mitigated. Also, staff will prioritize the infill sidewalk projects in accordance with the criteria in Appendix "C" and prepare a multi-year design and construction program for consideration through the annual Business Plan process.
- 28. The estimated capital cost of the stand-alone infill sidewalk program over the 20 year capital forecast as presented in the Development Charges Background Study was \$17.4 million. Of this total, \$16.5 million is to be paid from Development Charges due to the integrated nature of the City's transportation system.
- 29. Operating/maintenance costs associated with sidewalks are estimated at approximately \$2.50 per linear metre per year. The operating impacts of each project and its impact on the overall budget would be evaluated on a project by project basis each year as the projects are considered as part of the annual Business Plan.

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LINKAGE TO 2010-2014 COUNCIL STRATEGIC PLAN

30. The recommendations included in this report support the following goals identified in the 2010-2014 City Council Strategic Plan:
 - Manage Growth and Protect the Environment
31. The proposed recommendations in the report would be used by staff to ensure that the construction of infill sidewalks is implemented as efficiently and cost-effectively as possible while minimizing impacts on the environment.

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Appendix “A”

Sidewalk Warrants Approved Through Motion 94-G-141

Priority criteria for construction of sidewalks are as follows:

Item	Rating Points
Low Pedestrian Use (no worn paths typically less than 25 pedestrians during peak hour)	4
Medium Pedestrian Use (worn pathway typically 25 - 27 pedestrians during peak hour)	10
High Pedestrian Use (well-worn path typically more than 75 pedestrians during peak hour)	13
Low Vehicle Volume (30 - 100 vehicles during peak pedestrian hour)	1
Medium Vehicle Volume (100 – 300 vehicles during peak pedestrian hour)	7
High Vehicle Volume (more than 300 vehicles during peak pedestrian hour)	11
One or more pedestrian accidents susceptible to correction by construction of a sidewalk (last three years)	12
Will access a pedestrian crossing or proposed pedestrian crossing or will eliminate the need for a pedestrian crossing	11
Provides a route to a major pedestrian generator (school, shopping mall or plaza, park, church, apartments, recreation centre, etc.)	10
Lack of susceptible boulevard or shoulder for pedestrian use	8
Traffic speed greater than 50 kilometres per hour (posted or average)	5
Provide a connection to an existing sidewalks	4
Construction is in coordination with other proposed projects	4
	Total - 100

Note: Point ratings over two years old will be abandoned and a new rating calculated.

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Appendix "B"

Criteria for Infill Sidewalks Included With Road Reconstruction Projects

The Director of Engineering will approve the inclusion of infill sidewalks associated with road reconstruction projects in accordance with the following criteria if all the criteria can be met:

CRITERIA	VALUES
The sidewalk meets one or more of the following: <ul style="list-style-type: none"> • School proximity within 3.2 km • Park proximity within 500 m • Transit Route within 500 m • Local Pedestrian Draw (i.e. Church/Recreation Centre/Commercial Development/ Major Employment Location, etc.) within 1.6km 	Yes
The capital cost of the sidewalk is more than 3 times typical costs (including related costs such as property, grading, retaining walls, utility relocations, etc.)	No
The sidewalk can be constructed with connectivity such that it can be efficiently maintained	Yes
There are significant environmental impacts that cannot be mitigated (such as large tree removals or significant vegetation removal that could result in increased erosion, etc.)	No
There are other site specific impacts (such as driveway impacts) that cannot be mitigated	No

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Appendix "C"

Criteria for Stand-alone Infill Sidewalk Projects

Infill sidewalk projects will be prioritized according to the following criteria:

CRITERIA	VALUES	SCORE (n/a=0)
Project provides a missing link in network	Yes	30
	No	0
School Proximity (Score per school in the area)	<250 m	20
	250m - 900 m	10
	900 m – 3.2 km	5
Park Proximity within 500m	Yes	20
Transit Route within 500m	Yes	5
Local Pedestrian Draw (i.e. Church/Recreation Centre/Commercial Development/ Major Employment Location)	<500 m	20
	500m - 900 m	10
	900 m - 1.6 km	5
Existing Pedestrian Route (worn foot paths, etc.)	Yes	5
The capital cost of the sidewalk is more than 3 times typical costs (including related costs such as property, grading, retaining walls, utility relocations, etc.)	No	20
	Yes	0
There are significant environmental impacts that cannot be mitigated (such as large tree removals or significant vegetation removal that could result in increased erosion, etc.)	No	20
	Yes	0