



SUBJECT: Strathcona Drive Area Proposed Sidewalks

TO: Committee of the Whole

FROM: Transportation Services

Report Number: TS-5-19

Wards Affected: 4

File Numbers: 570.02-746

Date to Committee: April 1, 2019

Date to Council: April 23, 2019

Recommendation:

Approve the construction of sidewalks on the east side of Strathcona Drive, the west and south side of Lorraine Crescent and the north side of Apple Valley Lane; and

Authorize the removal of 9 trees to facilitate the construction of sidewalks; and

Direct that construction of sidewalks on Strathcona Drive, Lorraine Crescent and Apple Valley Lane not be subject to local improvement charges, as per Local Improvement by-law 49-2017.

Purpose:

The purpose of this report is to present Council with the recommended design option for sidewalks within the Strathcona Drive area. Inclusion of sidewalks aligns with the following Strategic Plan objectives:

A City that Grows

- 1.2.d New and transitioning neighbourhoods are being designed to promote easy access to amenities, services, recreation and employment areas with more opportunities for walking, cycling and using public transit.

A City that Moves

- 2.1.c A Complete Streets vision is put in place through a coordinated plan which will include on-road and off-road bike lanes, sidewalks, multi-use paths and trails and a public transit system that are well-connected throughout the city.

- 2.1.g Walkability and cycling has guided the development of new and transitioning neighbourhoods so that people rely less on automobiles.

An Engaging City

- 4.1.e City infrastructure, such as buildings and roads, are in good condition and properly maintained.

Background and Discussion:

Strathcona Drive, Lorraine Crescent, McIntosh Place, Apple Valley Lane and Applevale Court are aging road infrastructure assets that require renewal. The 2019 Capital Budget provides for the rehabilitation of these streets. Rehabilitation includes removal and replacement of asphalt and curbs as well as minor storm sewer repairs. Also included in the project scope is the replacement of existing streetlight poles and underground wiring.

The 2019 Capital Budget currently provides for the construction of new sidewalks on both sides of Strathcona Drive, both sides of Lorraine Crescent and one side of Apple Valley Lane.

In keeping with Strategic Directions 1.2.d, 2.1.c and 2.1.g, inclusion of sidewalks as part of the proposed reconstruction works contributes to the goal of increasing walkability so that people rely less on automobiles. Sidewalks are effectively “pedestrian-only” lanes that provide a safe, comfortable and dedicated space for users to travel within the City’s right-of-way, separate from vehicle traffic.

Expansion of the pedestrian network also serves to create key linkages connecting the residential lands to adjacent parks, schools and community amenities and is critical in providing residents the opportunity to access transit.

Strathcona Drive provides a direct connection between Lakeshore Road and New Street and is in close proximity to several significant pedestrian generators, namely:

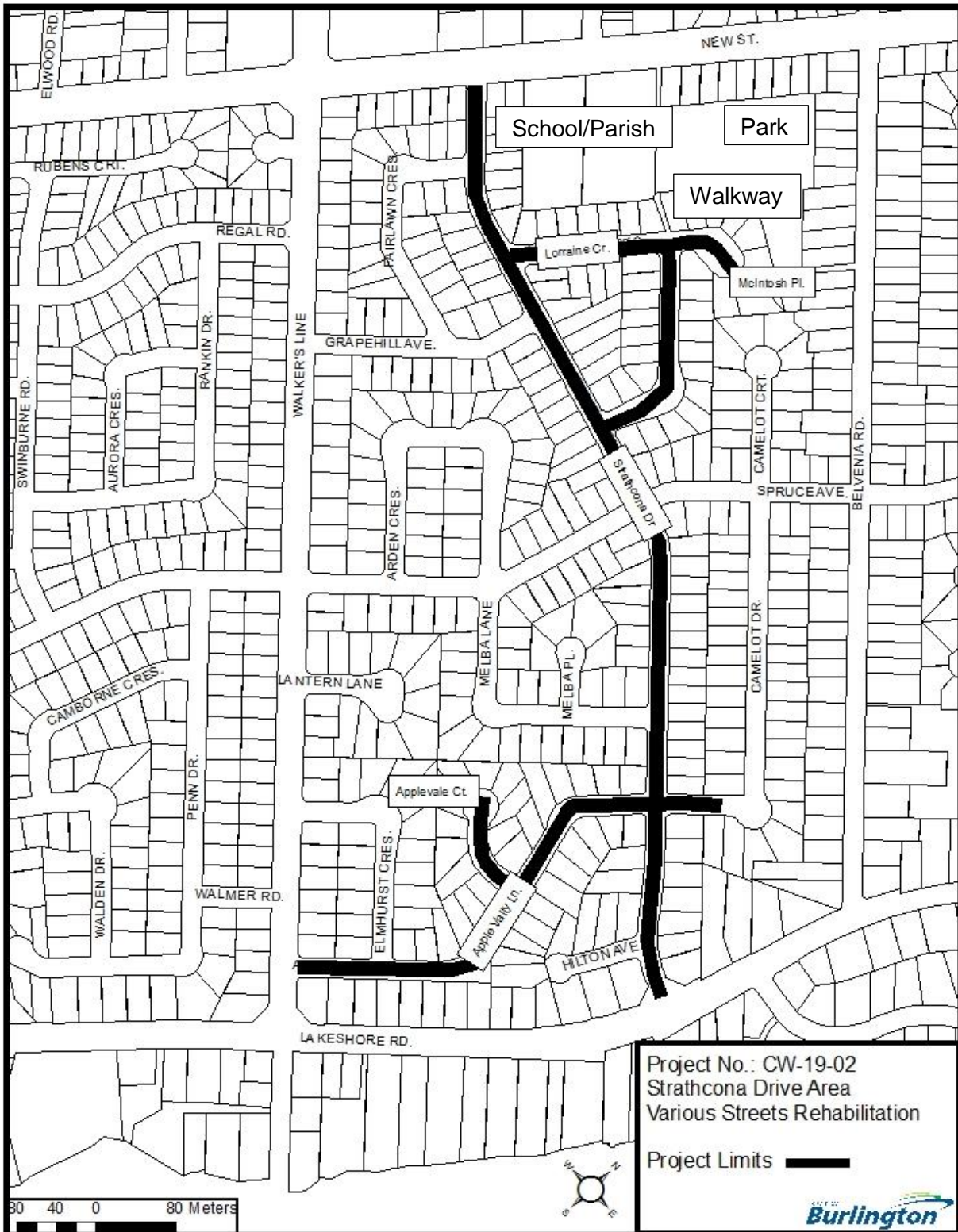
- Strathcona Park;
- St. Raphael Catholic Elementary School;
- St. Raphael Roman Catholic Parish;
- Burlington Transit Routes 4, 10, 50 and 301 via a transit stop located at the intersection of New Street and Strathcona Drive; and
- A local community shopping centre, coffee shops and restaurants.

Lorraine Crescent provides a direct connection to Strathcona Park, St. Raphael Roman Catholic Parish and Elementary School by way of a walkway. Access to local transit is also facilitated by way of Lorraine Crescent.

Apple Valley Lane provides a direct connection between Walker’s Line and Strathcona Drive. Completing the pedestrian connection between the existing sidewalk and the

proposed new sidewalk would create a completed pedestrian network and provide safe and convenient access to the pedestrian generators identified above.

A map of the project area is shown below:



Sidewalk Warrant Process

The city's existing Sidewalk Warrant and Installation Policy (APPENDIX A) has been in place and utilized by Transportation Services and Capital Works staff for over 10 years. Its purpose is to determine the need for sidewalks based on a number of technical factors, then provide a recommendation (sidewalk on one side, both sides or no sidewalk).

Three critical factors are assessed in order to determine if a sidewalk is warranted along a local street:

- Traffic Volume
- Number of Dwellings; and
- Pedestrian Volume

A) Traffic Volume

Traffic volume is presented as Annual Average Daily Traffic (AADT) which represents the average number of trips taken in a day. The AADT values for the streets within the study area are summarized in Table 1 and are noted to fall within expected ranges of traffic volume for a local residential street classification.

Table 1: Traffic Volume Data

Road Segment	Average Annual Daily Traffic (AADT)
Strathcona Drive from Lakeshore Road to Spruce Ave	750 vpd
Strathcona Drive from Spruce Avenue to New Street	828 vpd
Lorraine Crescent from Strathcona Drive to Strathcona Drive	370 vpd
Apple Valley Lane from Walker's Line to Strathcona Drive	400 vpd

Sidewalk Warrant Thresholds

Sidewalk One Side Threshold	250-1000 vpd
Sidewalk Two Side Threshold	>1000 vpd

B) Dwellings within Catchment Area

Dwelling units to be considered within the catchment area are typically limited to the number houses directly fronting the street but may be expanded to include nearby areas that will receive benefit from construction of new sidewalk. For the purposes of this analysis, only houses that directly front the impacted streets have been considered. It is recognized, though, that streets such as McIntosh Place and Applevale Court would also benefit from improved pedestrian connections. The results of this analysis are presented in Table 2.

Table 2: Number of Dwellings/Catchment Data

Road Segment	Number of Dwellings
Strathcona Drive from Lakeshore Road to New Street	67
Lorraine Crescent & McIntosh Place	37
Apple Valley Lane & Applevale Court	42

Sidewalk Warrant Thresholds

Sidewalk No Sides Threshold	<30 or Cul-de-Sac
Sidewalk One Side Threshold	30-100
Sidewalk Two Side Threshold	>100

3) Pedestrian Volume

The volume of pedestrian traffic is determined based upon manual counts that are undertaken during the AM and PM period and represents the total number of pedestrians observed walking along the road during the peak hour. Counts are undertaken during the Spring and Fall months on a “typical” weekday between the hours of 7:30 AM to 9:30 AM and 2:30 PM to 4:30 PM. The resulting pedestrian volumes are summarized in Table 3, and the data sheets are contained in APPENDIX B for further reference.

Table 3: Summarized Pedestrian Counts

Road Segment	AM Count (7:30am-9:30am)	PM Count (2:30am-4:30am)	Date Collected
Strathcona Drive (Lakeshore Road to New Street)	110	65	Wednesday May 16, 2018
Lorraine Crescent (Limits)	65	72	Wednesday May 30, 2018
Apple Valley Lane (Walker’s Line to Strathcona Drive)	5	25	AM – Wednesday June 6, 2018 PM – Tuesday June 5, 2018

Sidewalk Warrant Thresholds

	AM Peak Hour	PM Peak Hour
Sidewalk One Side Threshold	>15 per hour	>15 per hour
Sidewalk Two Side Threshold	>30 per hour	>30 per hour

The initial technical recommendation based upon the warrant criteria, is summarized in Table 4.

Table 4: Initial Warrant Recommendation

Road Segment	Initial Recommendation
Strathcona Drive from Lakeshore Road to New Street	Sidewalk One Side
Lorraine Crescent (Limits)	Sidewalk One Side
Apple Valley Lane from Walker's Line to Strathcona Drive	Sidewalk One Side

In addition to the warrant recommendation, staff take into consideration a number of other land use and transportation factors that can influence the recommendation to provide additional pedestrian infrastructure based upon proximity to significant pedestrian generators such as schools, parks, community centres and transit stops.

For the purposes of this review, a 400 meter radius is considered an acceptable walking distance and is used to quantify the presence of a significant generator. The findings of this review are summarized in Table 5.

Table 5: Pedestrian Generators/Major Pedestrian Destinations

Road Segment	Transit Proximity	School Proximity	Park Proximity	Community Amenity Proximity
Strathcona Drive from Lakeshore Road to New Street	Yes	Yes	Yes	Yes
Lorraine Crescent from Strathcona Drive to Strathcona Drive	Yes	Yes	Yes	Yes
Apple Valley Lane from Walker's Line to Strathcona Drive	No	No	No	No

The study findings suggest that sidewalk on two sides could be considered for Strathcona Drive and Lorraine Crescent given the volume of both pedestrian and vehicular traffic in conjunction with proximity to significant pedestrian generators. The recommendation of staff is summarized in Table 6.

Table 6: Technical Recommendation

Road Segment	Recommendation
Strathcona Drive from Lakeshore Road to New Street	Sidewalk Two Sides
Lorraine Crescent from Strathcona Drive to Strathcona Drive	Sidewalk Two Sides
Apple Valley Lane from Walker's Line to Strathcona Drive	Sidewalk One Side

Proposed Options

Following the sidewalk warrant analysis, the recommendation of Transportation Services is used by Capital Works to prepare a preliminary design. The preliminary design determines the approximate location of the sidewalk and evaluates impact to landscaping, trees, driveways and parking. The design is modified in attempts to mitigate impact and then presented to the public before being finalized. For this project,

four (4) design options were developed and presented to the public (as summarized in Table 7). Option 1 satisfies the final warrant recommendation while Option 2 through 4 mitigate impact, to varying degrees.

Table 7: Options Presented to the Public

	Option 1 O1	Option 2 O2	Option 3 O3	Option 4 O4
Strathcona Drive	Sidewalks both sides	Sidewalks both sides	Sidewalks on east side	No sidewalks
Lorraine Crescent	Sidewalks both sides	Sidewalk west and south side	Sidewalk west and south side	
Apple Valley Lane	Sidewalk north side	Sidewalk north side	Sidewalk north side	
Applevale Court	No sidewalks	No sidewalks	No sidewalks	
McIntosh Place	No sidewalks	No sidewalks	No sidewalks	
Estimated Project Cost	\$3,164,000	\$3,064,600	\$2,874,000	

Boulevard Impacts – Trees, Landscaping, Driveways

Replacing the curb along the length of the entire project would require the roads to be narrowed by approximately 0.25 meters on either side to accommodate the road rehabilitation and curb work. This is required to minimize disturbance to the boulevard and mitigate impacts to adjacent trees, sod and driveways. The proposed cross-section is illustrated in APPENDIX C.

The proposed sidewalks are to be constructed adjacent to the new curb and gutter. This work will impact approximately 2.0 meters of the boulevard, 1.5 meters for the sidewalk and 0.5 meters for construction. In some areas where the boulevard is higher than the road, retaining walls will be installed to reduce boulevard grading. Where sidewalks are being considered, trees within the 2.0 meter impact area will need to be removed. Table 8 identifies the number of trees that may require removal. Staff note that two Ash trees are located within the project limits and will require removal due to the Emerald Ash Borer infestation, irrespective of the proposed sidewalk construction. Although tree removal is unavoidable, there is an opportunity to mitigate impact and preserve trees that are not significantly impacted by construction and root damage.

Table 8: Potential Tree Impacts

	Option 1	Option 2	Option 3	Option 4
Strathcona Drive	Sidewalks both sides	Sidewalks both sides	Sidewalk on east side	No sidewalks
Tree removal	16 13 - West side 3 - East side See note 1 and 2	16 13 - West side 3 - East side See note 1 and 2	4 See note 1 and 2	1 See note 1
Lorraine Crescent	Sidewalks both sides	Sidewalks west and south side	Sidewalks west and south side	No sidewalks
Tree removal	9 3 – West/South 6 – East/North See note 3	3 See note 3	3 See note 3	0
Apple Valley Lane	Sidewalk north side	Sidewalk north side	Sidewalk north side	No sidewalks
Tree removal	2 See note 1	2 See note 1	2 See note 1	1 See note 1
Applevale Court	No sidewalks			
Tree removal	0 Total			
McIntosh Place	No sidewalks			
Tree removal	0 Total			
Tree removal required	27 (see notes)	21 (see notes)	9 (see notes)	2 (see notes)

Notes:

1. Removal of two Ash trees – unrelated to construction (one on the east side of Strathcona Drive and one on the south side of Apple Valley Lane).
2. Possible preservation of three trees – subject to root location and construction impact.
3. Possible preservation of two trees – subject to root location and construction impact.

Local Improvement By-Law

In Burlington, new sidewalks constructed on local streets are subject to local improvement charges in accordance with the Local Improvement By-Law 49-2017 (APPENDIX D) while sidewalks constructed on Collector or Arterial streets are exempt. The premise of Local Improvement Charges is that the municipality has the ability to recover all or part of the costs of capital improvements made on public lands from the property owners who will benefit from the improvement.

However, sidewalks achieve a city-wide benefit and are considered critical pieces of public infrastructure, irrespective of street classification, and as such, should be funded through the general tax base rather than from local improvements. Local streets are no less important or less in need of first mile/last mile pedestrian infrastructure than other streets as most users start and finish their trip as a pedestrian within the local street system. Provision of dedicated pedestrian facilities along Strathcona Drive, Apple Valley Lane and Lorraine Crescent offer community-wide benefit and are recommended to be exempt from local improvement charges.

The local improvement assessment rate as currently applied for sidewalks is \$70.00 per meter of property frontage. If sidewalks are constructed on one side only, both sides are assessed at \$35 per meter of property frontage. The assessment rate is calculated based on 70% of the average actual cost to construct a sidewalk. A property with a 20 meter frontage would be assessed \$1,400.00. The estimated total assessment for the various options is summarized in Table 10. There will be financial impact of removing the local improvement charges from new sidewalk construction as these costs would not be collected from residents, but as noted earlier, the 2019 Capital Budget item for this project provides for the construction of sidewalks at the full value of \$681,000.

Table 9: Local Improvement Charges by Option

	Option 1	Option 2	Option 3	Option 4
Sidewalk Estimate	\$681,000	\$581,600	\$391,000	\$0
Local Improvement Assessment	\$145,000	\$130,000	\$85,000	\$0

Recommended Option

Based on the observed demand (both pedestrian and vehicle volumes) and proximity to significant pedestrian generators, the sidewalk warrant demonstrates the need for sidewalks to be included as part of this Capital project.

Staff have considered the findings of the technical study as well as feedback received by residents and are recommending that sidewalks be included as per Option 3 (sidewalk on the east side of Strathcona Drive, north side of Apple Valley Lane and on the west and south side of Lorraine Crescent). The recommendation balances the need for safe and dedicated pedestrian infrastructure while taking into consideration the needs and concerns of the community while minimizing impact to the tree canopy.

The recommended sidewalk design is presented in APPENDIX E.

Financial Matters:

The Strathcona Drive Area Minor Reconstruction project is presented in the 2019 Capital Budget at an estimated cost of \$3,164,000. This cost assumes no local improvement charges are collected as part of the project. The option that staff recommends is estimated to cost \$2,874,000. This results in a potential savings of \$290,000 subject to the final tender award.

Public Engagement Matters:

A Public Information Center (PIC) was held on Wednesday January 30, 2019 at St. Raphael Catholic Elementary School, 4056 New St, Burlington.

Area residents and business owners were notified by:

- Direct mail, and
- Advertisement in the Burlington Post.

Prior to the meeting, direct mail recipients received a project update containing high-level project details, options proposed, details about the PIC and a comment sheet (APPENDIX F) containing a section where residents can indicate their option preference and have space for comments that would be sent back to staff. All project updates have been made available on the City's website from the dedicated project page (Burlington.ca/strathcona).

The meeting provided:

- Public Process and Important Dates for Committee and Council
- Project Construction Details and Budget

- Four (4) Proposed Construction Options
- Background Information
- Description and justification for the recommendation of including sidewalks along Strathcona Drive, Lorraine Crescent and Apple Valley Lane
- An open forum for residents to ask questions and gain clarity
- Extra comment sheets

Approximately 120 residents attended the meeting, representing 62 of the 453 properties located within the catchment area.

Written feedback was received in the form of comments sheets, emails and petitions. Table 9 presents a summary of the feedback received and preferred sidewalk option. A number of submissions identified a preference for a sidewalk on one side of Strathcona Drive only, with no sidewalks on Apple Valley Lane or Lorraine Crescent. This alternative has been identified as Option 5.

All feedback received has been included with this report as follows:

Appendix G – Comment Sheets (personal information has been redacted)

Appendix H – Emails (personal information has been redacted)

Appendix I – Petitions

Appendix J – Halton Catholic District School Board letter of support

Table 10: Feedback Received

	# of properties	# of responses	Comment Sheet Received					Correspondence Received (email or other)				
			O1	O2	O3	O4	O5	O1	O2	O3	O4	O5
Strathcona Drive	69	29	2		2	19	2 Note 3			1	3	
Lorraine Crescent	30	22				15	5 Note 3				2	
Apple Valley Lane	32	16		1		13	1 Note 3				1	
Applevale Court	9	2			2		 Note 3					
McIntosh Place	8	3		1		2	 Note 3					
Other streets in catchment Area - Note 2	305	39	5	3	6	15	6 Note 3	1	1		2	
Totals	453	111	7	5	10	64	14 Note 3	1	1	1	8	0
			100					11				

Notes:

1. *Where a Comment Sheet and Correspondence was received from the same property, only one was considered in the summary. All comments and correspondence have been provided in the Appendices.*
2. *Catchment area is bounded by Walkers Line, New Street, Belvenia Road and Lakeshore Road.*
3. *Option 5 (O5) represents an option presented by numerous property owners to have sidewalks on one of Strathcona ONLY (no sidewalks on Lorraine, or Apple Valley).*

Staff are also in receipt of several petitions (APPENDIX I) submitted on behalf of the residents of Strathcona Drive, Lorraine Cres and Apple Valley Lane. The primary concerns are summarized as follows:

- Sidewalks are not required
- Destroy the heritage and culture of the street
- Negative impact to the tree canopy
- Negative impact to driveways / parking
- Negative impact to established landscaping
- Negative impact to drainage and flood prevention issues

Included in the feedback are a number of frequently asked questions that were received by staff over the course of the public engagement process. These questions have been summarized, answered and attached at the end of this report (APPENDIX K).

Conclusion:

Staff recommend that sidewalks be constructed on the east side of Strathcona Drive, on the north side of Apple Valley Lane and on the west and south side of Lorraine Crescent; and that the construction of sidewalks on these streets be exempt from local improvement charges.

Respectfully submitted,

Trevor Clark

Transportation Planning Technologist

905-335-7600 Ext 7323

Bob Jurk

Senior Project Manager

905-335-7600 Ext 7682

Appendices:

- A. Sidewalk Warrant and Installation Policy
- B. Pedestrian Sidewalk Study Collection Sheets
- C. Proposed Curb Alterations Cross Section
- D. Local Improvement By-law
- E. Recommended Sidewalk Design Map
- F. Public Input Comment Sheet
- G. Completed Public Comment Sheets
- H. Resident Emails
- I. Petitions Received by Staff
- J. Halton Catholic District School Board Letter
- K. Frequently Asked Questions

Report Approval:

All reports are reviewed and/or approved by Department Director, Director of Finance and Director of Legal. Final approval is by the City Manager.