



City of
Peterborough

To: Members of the Committee of the Whole

From: W.H. Jackson, Director of Utility Services

Meeting Date: May 30, 2016

Subject: Report USTR16-005
Cycling Lanes on George Street, Water Street and Sherbrooke Street

Purpose

A report to recommend cycling lanes on George Street, Water Street and Sherbrooke Street in the downtown.

Recommendations

That Council approve the recommendations outlined in Report USTR16-005 dated May 30, 2016, of the Director of Utility Services, as follows:

- a. That the cycling lanes on George Street and Water Street be extended from Hunter Street to Sherbrooke Street with the cycling lane being provided between the right-hand vehicle and parking lane;
- b. That Sherbrooke Street between George and Street Water Street be reconfigured to provide cycling lanes and parking, including a commercial loading zone, as per the concept shown in Appendix C of Report USTR16-005;
- c. That a pedestrian crossover be installed at the Sherbrooke Street and Water Street intersection, providing access to the entrance to Millenium Park; and
- d. That a new 2016 Capital Project of \$370,000 be created for the implementation of Recommendations a), b) and c) with funding as described in Table 2 of Report USTR16-005.

Budget and Financial Implications

The implementation of the cycling lane extensions on George Street (Hunter Street to Sherbrooke Street), Water Street (Hunter Street to Sherbrooke Street) and Sherbrooke Street (George Street to Water Street) is estimated to cost \$347,000, including \$42,600 for engineering design, contract administration and inspection and an \$80,000 contingency.

The improvements on the north side of Sherbrooke Street, including the new sidewalk and curb bulb-outs, will be funded from Planning and Development as part of a \$72,000 developer contribution to sidewalk and streetscaping agreed to as part of the Site Plan Agreement for the property at 246 George Street. This missing sidewalk along this section of Sherbrooke Street is a Priority 1 in the Sidewalk Strategic Plan.

The total project costs are estimated as set out in the following table and can be accommodated within the uncommitted balance of the approved 2016 capital budget and various funding sources.

Table 1: Costs

Line	Description	Amount
1	Traffic Signs and Road Markings	\$ 91,400
2	Sherbrooke Street Modifications and Landscaping	\$108,000
3	Roadway Lighting and Traffic Signal Modifications	\$ 25,000
4	Sub-total	\$224,400
5	Engineering and Contract Administration	\$ 42,600
6	Contingency	\$ 80,000
7	Total Estimated Project Cost	\$347,000

Funding for the project will come from the sources shown in Table 2.

Table 2: Funding Sources

Line	Description	Amount
1	2016 Budget - Multi-use Trail and Bicycle Lane Improvements (Capital Budget Item 5-13.02)	\$230,000
2	Developer Streetscaping Contribution (Planning and Development)	\$ 72,000
3	Provincial Cycling Grant (portion for George Street from Hunter Street to Sherbrooke Street)	\$ 45,000
4	Total	\$347,000

Construction of the planned improvements on Sherbrooke Street, including the intersection improvements at George Street and Sherbrooke Street, will be tendered in conjunction with the George Street Improvement Project in 2017.

Background

1.0 Cycling Network Implementation in the Downtown

The overall City Cycling Network recommended in the 2012 Comprehensive Transportation Plan, illustrated in Appendix A, includes a tripling of the current trail and on-road cycling facilities by the year 2031. The density of cycling infrastructure identified for the downtown is relatively high, reflecting the demand for cycling in the downtown.

The multi-use trails that lead into the downtown make it easy for people to cycle to the downtown and residents of the downtown and its surrounding neighbourhoods have the highest rates of active transportation use in the City (based on data from the Active Transportation Indicators Report). Cycling counts taken between 2012 and 2015 on George Street at McDonnell Street show an average of 353 cyclists per day in September. The average cycling count on George Street at the Holiday Inn was 355 cyclists per day over the same period. As a comparator, the Rotary Greenway Trail at Parkhill Road averaged 540 cyclists per day.

In terms of overall progress towards implementation of the Cycling Network, 8 km of the recommended 130 km of new infrastructure approved in the Transportation Plan have been constructed since 2012 when the plan was approved. Another 5 km are expected to be implemented this year. Appendix B lists the projects that have been completed and are underway.

Report USTR15-009, approved by Council on May 19, 2015, recommended the upgrading and extension of the George and Water Street cycling lanes south to Hunter Street, as well as the extension of the McDonnell Street cycling lanes east to Water Street. The implementation of the extension of the McDonnell Street cycling lanes is completed. The upgrading of the cycling lanes on George Street and Water Street north of McDonnell Street was initiated in 2015, with changes to signing and parking restrictions implemented. The updated line marking and extension of the cycling lanes from McDonnell Street to Hunter Street is scheduled for completion this spring.

2.0 Provincial Cycling Infrastructure Funding

In 2015, the Province announced cycling infrastructure funding for municipalities. The application process was competitive, with projects evaluated on a set of criteria, including potential to increase cycling and cycling infrastructure connectivity. The George Street Improvement Project (Perry Street to Sherbrooke Street) was selected as the local candidate project because of its potential to increase local cycling rates,

project readiness and the amount of funding available. Council at their meeting of September 29, 2014 approved USTR 14-011 directing staff to finalize and file the Environmental Assessment Report for this project. The necessary Ministry of Environment and Climate Change (MOECC) approvals were received in November 2014.

In the provincial funding application, it was clear that connectivity of the cycling network was a key aspect of project evaluation. To strengthen the application, staff included the section of George Street between Hunter Street and Sherbooke Street. There is sufficient road width in this section to apply the same cycling lane concept as Council approved in 2015 for the section north of Hunter Street. The concept includes retention of parking on both sides of the street.

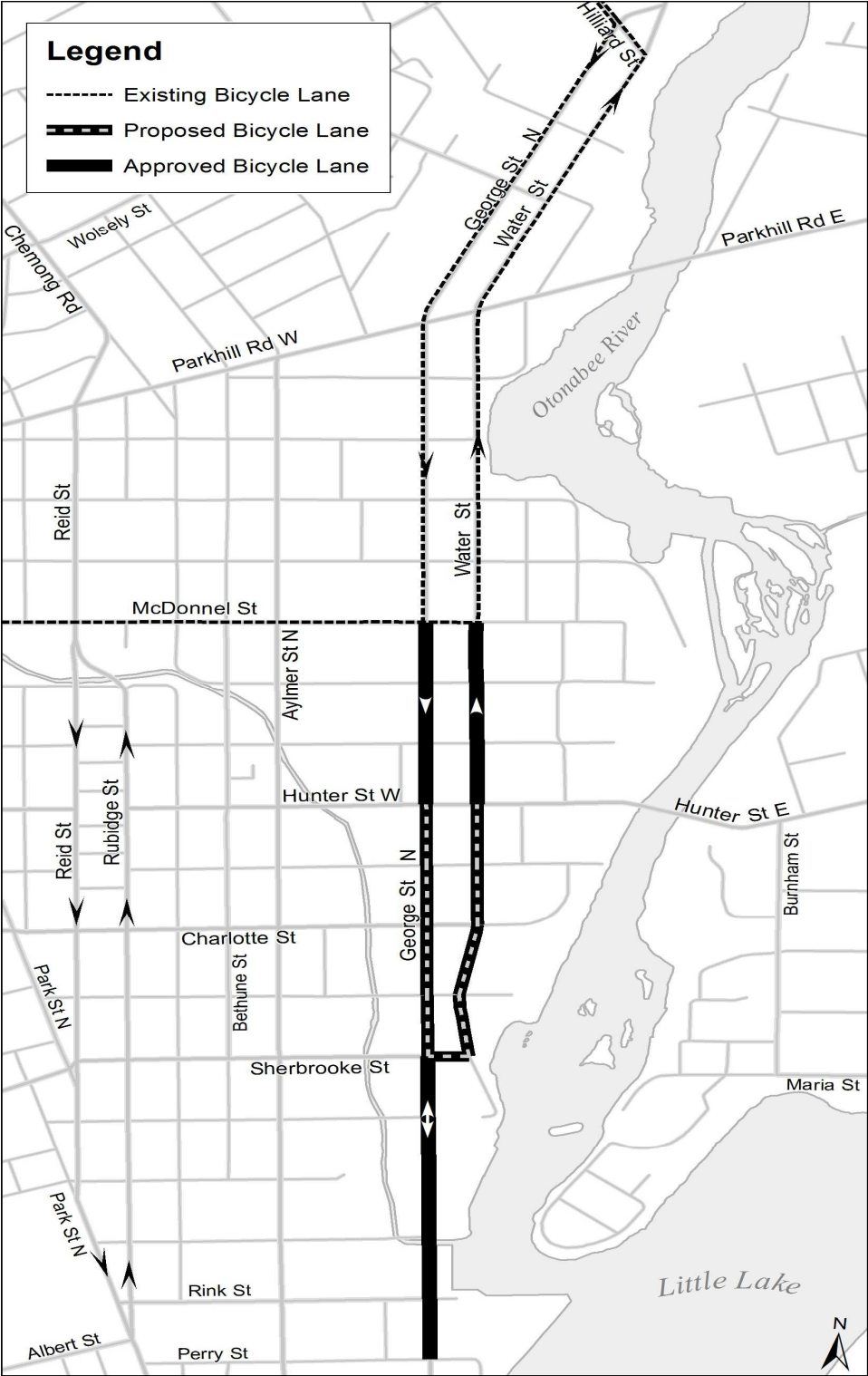
With a view to completing the cycling lanes on George Street and Water Street in the downtown, staff also evaluated the potential to add cycling lanes on:

- Water Street between Sherbrooke Street and Hunter Street; and,
- Sherbrooke Street between George Street and Water Street.

The provincial funding was for a single linear corridor, so these additional sections could not be included in the provincial funding application, but completing the network is a logical next step and ensures that a connected cycling network would be available for both directions of travel through the downtown. Figure 2.1 shows the location of the approved and proposed cycling lanes on George Street, Water Street and Sherbrooke Street.

The application for funding of cycling lanes on George Street between Hunter Street and Perry Street was successful with this being one of 37 projects funded by the province from a total of 150 applications submitted. From the total provincial grant amount of \$325,000, approximately \$280,000, will be used to implement the George Street Improvement Project (Perry Street to Sherbrooke Street), with the remaining \$45,000 allocated to the extension of bicycle lanes on George Street between Hunter Street and Sherbrooke Street.

Figure 2.1: Approved and Proposed Cycling Lanes

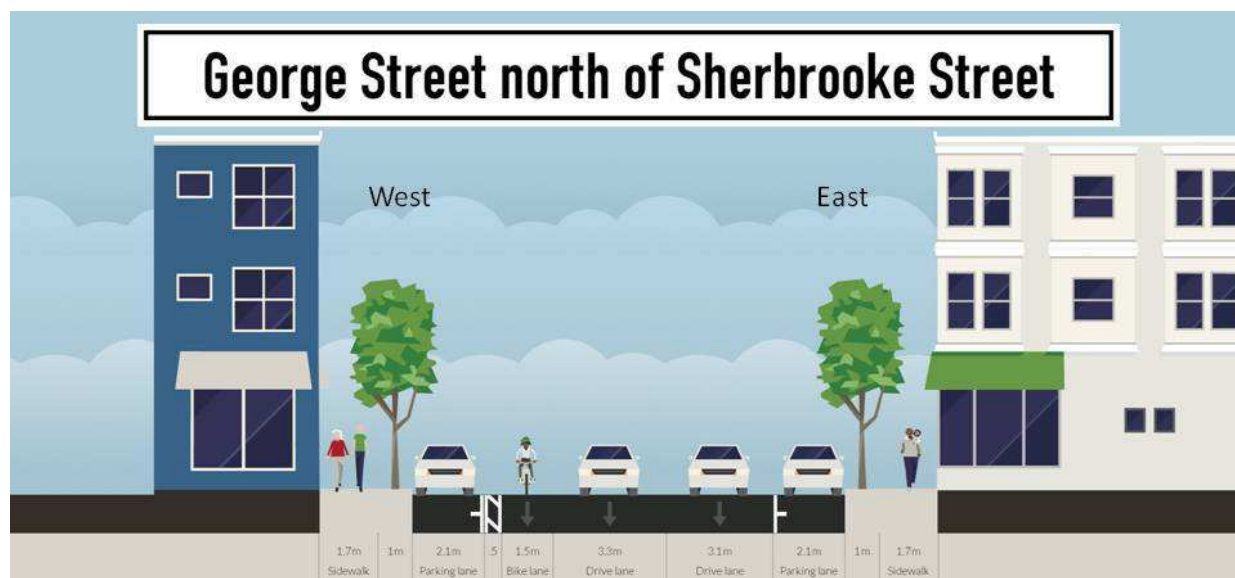


3.0 Recommended Cycling Lane Configuration

3.1 George Street and Water Street – Hunter Street to Sherbrooke Street

The George Street and Water Street corridors will feature a consistent cycling lane through the downtown. The cycling lane will be painted between the right-most vehicle lane and the parking lane and a 0.3m to 0.5m painted buffer will be provided where space permits to provide a buffer between cyclists and parked cars. Generally, on-street parking will be retained on both sides of the street as shown in Figure 3.1. About three parking spaces will be lost on the west side of George Street just north of Sherbrooke Street to shift the lane alignment at this intersection.

Figure 3.1 – Proposed Cycling Lane Configuration – George Street from Hunter Street to Sherbrooke Street



Green pavement markings will be provided to facilitate two-stage left turns for cyclists at some intersections and to bring attention to some high conflict zones. Two-stage left turn queue boxes allow bicyclists to make left turns at multilane intersections from a right-side bike lane. On a green light, cyclists travel into the intersection and pull into the two-stage turn queue box, away from through-moving bicycles and in front of cross street traffic waiting at the red light.

When the light turns green on the cross street, the cyclist proceeds. Many cyclists are more comfortable making a left turn in this way because they can stay in the cycling lane to make a left turn rather than merging across multiple lanes of traffic. This style of left turn mimics how pedestrians cross at intersections and is used extensively in northern Europe. Where left turn bike boxes are provided right turns on the red signal is often prohibited to avoid conflicts between waiting cyclists and right turning vehicles. This option will be evaluated at the detailed design stage. Figure 3.2 illustrates an example of a left turn box for cyclists.

Figure 3.2 – Left Turn Box for Cyclists

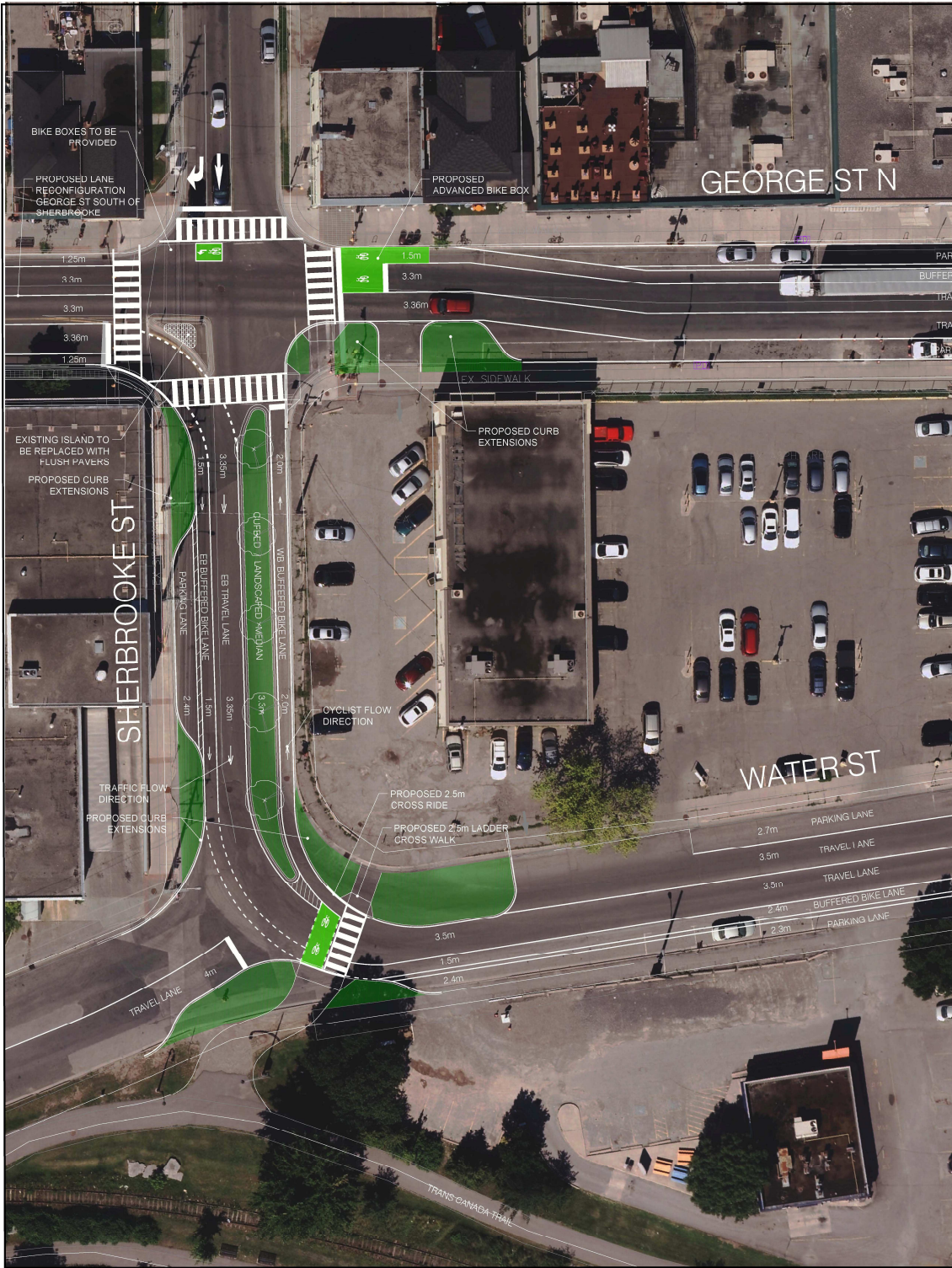


3.2 Sherbrooke Street – George Street to Water Street

Sherbrooke Street between George Street and Water Street is the transition zone between two-way traffic to the south and one-way traffic to the north. It is a wide section of road that is actually wide enough for three traffic lanes but this width is rarely used since it is fed by two single lane approach roads. This roadway can be reconfigured to create an impressive entrance into the downtown, serve cyclists and pedestrians better all the while maintaining vehicle flow.

On Sherbrooke Street, the recommended street design, shown in Figure 3.3, includes cycling lanes in both directions, with the west-bound cycling lane protected by a planted median. The planted median would also serve to enhance this gateway into the downtown and a pedestrian crosswalk would be provided from/to Millennium Park. In the public consultation, 70% of people preferred this option, including businesses and residents.

Figure 3.3 – Concept for Sherbrooke Street with Cycling Lanes and Planted Median

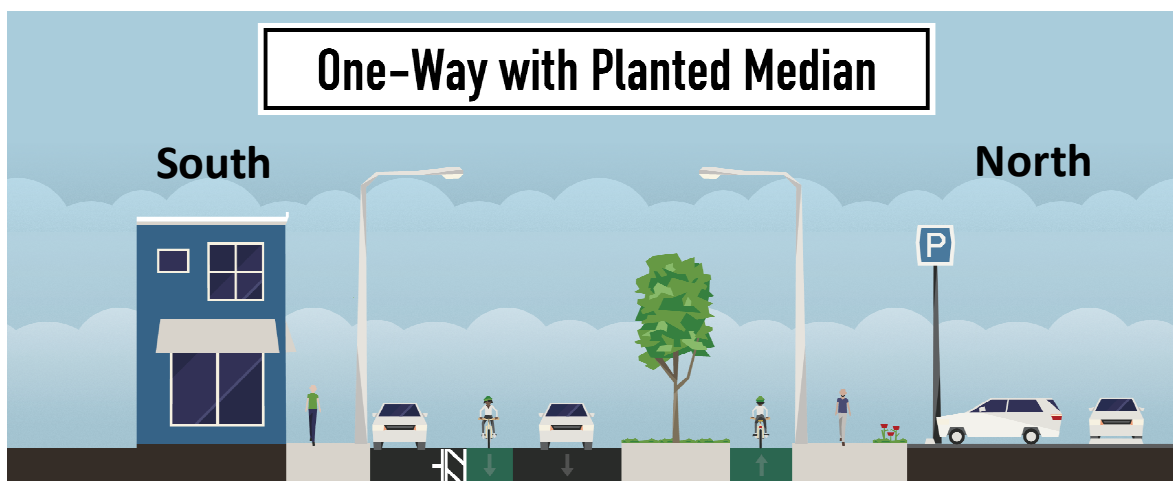


With the potential for future enhancements to Millennium Park resulting from the recent purchase of the Harvey’s property, the new pedestrian crossing treatment at the Sherbrooke Street / Water Street intersection will enhance the accessibility to this park area from the Sherbrooke Street corridor. The protected crossing will also provide an opportunity for cyclists to cross between the park and the protected bicycle lane on Sherbrooke Street. With the recent changes to the Highway Traffic Act enacted in January of 2016, pedestrian crossovers will provide a safer crossing treatment for pedestrians, as vehicles are legally required to stop when a pedestrian is crossing the roadway at one of these locations. Reducing this section of Sherbrooke Street to a single through lane will also enhance the safety of this pedestrian crossing by improving the visibility of the crossing for approaching vehicles.

Some people suggested providing some parking in the area where the planted median would be provided. Based on feedback from the public meeting, the majority of people preferred adding greenery to the downtown and limiting the parking to the south side of the street. If parking were provided in this median area, the length of the parking bay would only accommodate about two vehicles because of the need to maintain adequate sight lines for the new pedestrian crosswalk at Sherbrooke Street and Water Street and to provide a setback from the intersection of Sherbrooke Street and George Street. Given the constraints, this idea was dropped from further consideration.

As illustrated in Figure 3.4, below, this section of Sherbrooke Street would continue to operate as a one-way street, although it would be reduced to a single lane with a parking lane provided on the south side of the road. The eastbound cycling lane would be located beside through traffic and a painted buffer would separate the cycling lane from the parking lane.

Figure 3.4 – Sherbrooke Street with Planted Median



Some members of the public suggested that a protected cycling lane could be provided on the south side of the street as well, by moving the east-bound cycling lane to the curb and using the parking lane to provide a physical separation between the cycling

lane and the travelled lane. This will be investigated at the detailed design stage and implemented if it is feasible.

Implementation would require some changes to the George Street / Sherbrooke Street intersection. There is currently a traffic island on George Street at Sherbrooke Street to introduce the one-way street system and prohibit wrong way through movements and left turns from northbound George Street to westbound Sherbrooke Street. To allow for the traffic and bicycle lanes to line up through the intersection, this traffic island will be reconfigured and a bulb-out will be added on the north-east corner of the intersection.

Providing the bulb-out will eliminate the short informal left turn lane that current exists on George Street. This change will improve the turning radius for vehicles turning into the newly configured single lane on eastbound Sherbrooke Street; will improve the pedestrian crossings at this intersection by decreasing the crossing distance; and will allow for larger vehicles to make this turn without impacting the median treatment on Sherbrooke Street.

The operation of this revised road and intersection concept was modeled using traffic simulation software to confirm that sufficient capacity can be maintained on George Street and Sherbrooke Street in light of the proposed changes. The simulation results confirm that the intersection will continue to operate well during peak periods under the revised configuration and there is sufficient capacity to accommodate future growth in traffic that may be generated by future growth in the downtown.

The other options considered for this section of Sherbrooke Street are described in Appendix C.

4.0 Public Consultation

The cycling lane concepts were presented through a public consultation process in April 2015 that included face to face meetings with businesses along the corridors, on-line information and survey, a public meeting, information in the local e-newsletter for cyclists, dissemination of information through the DBIA and an information session at B!KE. The public meeting was advertised in both local newspapers. The Open House was held April 5, 2015 at the Public Library and was attended by approximately 40 people.

Of the comments received in the public consultation, there was only one person who was opposed to the project. The vast majority were in favour of the proposal to upgrade and extend the cycling lanes as described in this report. As previously noted, 70% of respondents favoured the Sherbrooke Street option that included one-way vehicle traffic, a planted median, cycling lanes in each direction and parking on the south side of the street.

5.0 Implementation

If approved, the cycling lanes on George Street and Water Street will be implemented in 2016. The Sherbrooke Street section will be constructed in conjunction with the George Street Improvement project in 2017 to allow time for detailed design and economies of scale for construction pricing. With the opening of the new development at 246 George Street, a limestone screening treatment is anticipated to be provided in 2016 as an interim measure to provide a temporary walkable surface on the north side of Sherbrooke Street until the full sidewalks can be provided in 2017.

Summary

Implementation of the Cycling Network in the 2012 Comprehensive Transportation Plan is underway with several projects being completed and several others in the implementation and design phases. Extending the cycling lanes on George Street, Water Street and Sherbrooke Street will increase the network by adding 1.2 km of new cycling lanes. These cycling lanes are on some of the streets most heavily used by cyclists. The recommended reconfiguration of Sherbrooke Street with the introduction of east and west-bound cycling lanes, a median island to protect cyclists, and an enhanced pedestrian crossing treatment at the Millennium Park entrance will enhance safety and improve accessibility for pedestrians and cyclists wishing to access the park. Traffic simulation modelling confirmed that the proposed reconfiguration of the traffic lanes will provide sufficient capacity to accommodate current volumes and future growth in the downtown.

Submitted by,

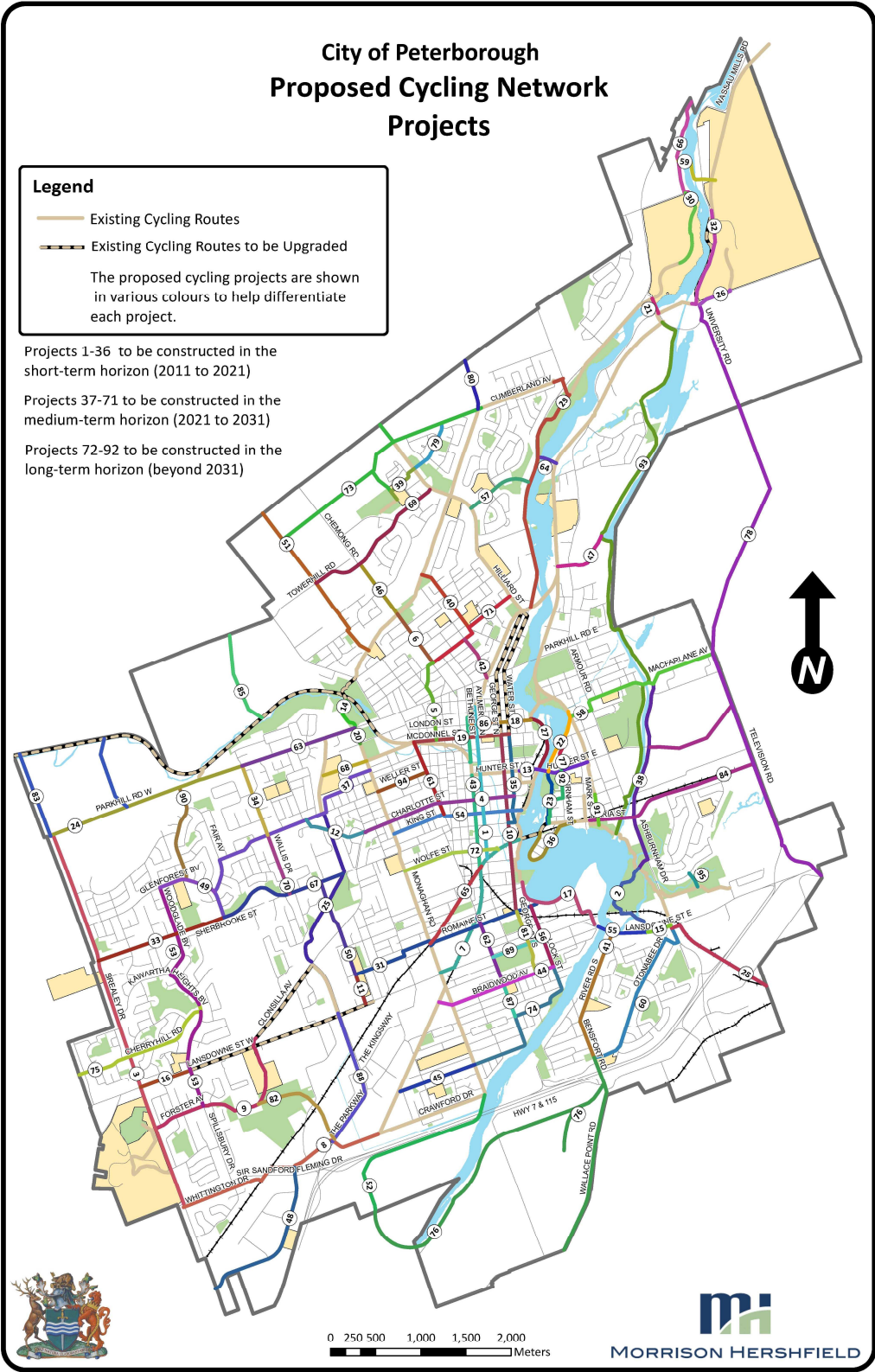
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Attachments:

Appendix A: 2012 Transportation Plan Cycling Network Map
Appendix B: Bikeway Implementation Since 2012
Appendix C: Other Cycling Lane Options Reviewed for Sherbrooke Street

Appendix A: 2012 Transportation Plan Cycling Network



Appendix B: Bikeway Implementation Since 2012

Project	Description	Length (m)	Status
Brealey Drive – Lansdowne Street to Sir Sandford Fleming Drive	Two-way cycling lanes being built into boulevard when road is reconstructed	1175	Completed
Hunter Street Bridge	Cycling lanes incorporated into rehabilitation	600	Completed
Lansdowne Street – Brealey Drive to Spillsbury Drive	Cycling lanes added when road reconstructed	1200	Completed
McDonnel Street – Park Street to Water Street	Extension of existing cycling lanes on McDonnel Street	2000	Completed
Trans-Canada Trail – Lansdowne Street to City limits	Multi-use trail being built on newly acquired rail line	1200	Completed
Airport Road – Spillsbury Drive to Sir Sandford Fleming Parkway	Multi-use trail being built on east side	380	2016
Ashburnham Drive	Multi-use trail being built on west side of street and cycling lanes on-street for faster cyclists	1175 cycling lanes; 875 trail	2016
George Street – Hilliard Street to Hunter Street	Upgrade and extension of cycling lanes, approved in 2015	1400 upgraded; 410 new	2016
Lansdowne Street – Ashburnham Drive to Consumers Place	Multi-use trail on south side	670	2016
Lansdowne Street – River Road to Ashburnham Drive	Multi-use trail on south side	690	2016-17
Parkhill Road – Wallis Drive to Ravenwood Drive	Combination of cycling lanes and a multi-use trail	1430 cycling lanes; 115 trail	2016
Rotary Greenway Trail – Rowing Club to East Bank Drive	Multi-use trail being built on east side of Nassau Mills Road	740 completed; 240 new	Completed except between Gzoski College and East Bank Drive, scheduled for 2016

Project	Description	Length (m)	Status
Trans-Canada Trail – Rogers Cove Park to Edgewater Boulevard	Multi-use trail being built on south side of Maria Street	360	2016, except railway crossing
Water Street – Hilliard Street to Hunter Street	Upgrade and extension of cycling lanes, approved in 2015	950 upgraded; 810 new	2016
Bethune Street – Townsend Street to Edinburgh Street	Part of road and diversion sewer reconstruction	1450	Planning and design underway, construction in 2017
Charlotte Street – Park Street to Water Street	Facility provision to be considered	815	Design underway in 2016
George Street – Sherbrooke Street to Perry Street	Road diet recommended, bringing road to two lanes with left turn lanes and cycling lanes, provincial funding awarded	675	EA completed, design in 2016, construction in 2017
Otonabee River Trail – Marina to Haggart Street	Extension of trail further around Little Lake	1000	EA completed, detailed design in 2016
Parkway – Clonsilla Avenue to Cumberland Avenue	Provision of multi-use trail along new road recommended in Environmental Assessment	1870	Awaiting approval of Environmental Assessment

Appendix C: Other Cycling Lane Options Reviewed for Sherbrooke Street

The following summarizes the concepts that were evaluated for this project.

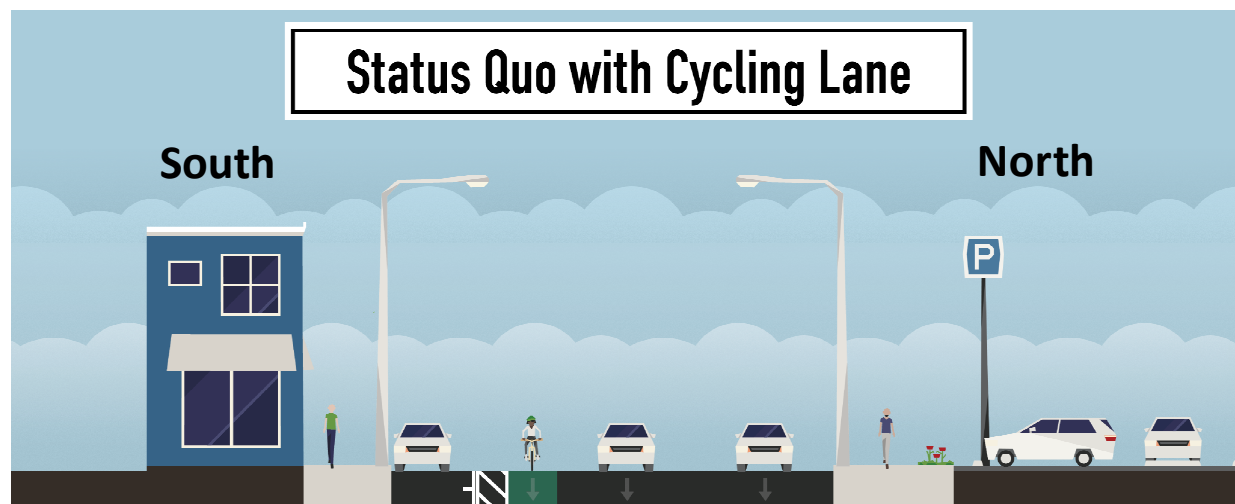
Sherbrooke Street – George Street to Water Street

Several options were developed for providing cycling lanes on Sherbrooke Street, including the recommended option described in the main body of the report and the two described in this Appendix.

C1: Status Quo with Cycling Lane and Formalized Parking Lane

In this option, illustrated in Figure C-1, a commercial loading zone would be provided on the east end of the parking lane for commercial vehicles delivering to No Frills. An eastbound cycling lane would be provided along with two vehicle lanes as exists today, which would transition to a northbound cycling lane on Water Street. While the parking lane on the south side of the street is not currently formalized, the curb lane is currently used for deliveries to No Frills. There is adequate road width to provide this parking.

Figure C-1 – Sherbrooke Street – Cycling Lane and Parking Lane



C2: Two Way Traffic and Cycling Lanes

In this option, illustrated in Figure C-2, Sherbrooke Street would be converted to a two way street, with a single vehicle lane plus a cycling lane in each direction. Vehicles exiting from the No Frills driveway could turn left onto Sherbrooke Street or continue straight north on Water Street. During the public consultation, there was some interest in this option, but there was also concern that people may have difficulty adjusting to the change. A concern was also raised that vehicles may cut through the No Frills parking lot as a way to turn left to travel west on Sherbrooke Street from George Street. Left turns onto Sherbrooke Street from the north-bound George Street vehicle lane are prohibited.

Figure C-2 – Sherbrooke Street – Two Way Traffic and Cycling Lanes

