



City of  
**Peterborough**

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**To:** **Members of the Committee of the Whole**

**From:** **Blair Nelson, Acting Director of Utility Services**

**Meeting Date:** **May 11, 2015**

**Subject:** **Report USTR15-009  
Cycling Lane Upgrades and Extensions on George Street,  
Water Street and McDonnell Street**

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## **Purpose**

A report to recommend the upgrading of cycling lanes on George Street and Water Street and the addition of 2.3 km of new cycling lanes on George Street, Water Street and McDonnell Street.

## **Recommendations**

That Council approve the recommendations outlined in Report USTR15-009 dated May 11, 2015, of the Acting Director of Utility Services, as follows:

- a) That the presentation of cycling lane upgrades and extensions on George Street, Water Street and McDonnell Street be received for information;
- b) That the existing cycling lanes on George Street between Hilliard Street and McDonnell Street be upgraded by:
  - i. Prohibiting parking on the west side of George Street, except for a 15 minute commercial loading zone for the convenience store on the west side of George Street just south of Dublin Street;
  - ii. Creating a painted buffer between the cycling lane and the most westerly vehicle travel lane where space permits.

- c) That the existing cycling lanes on Water Street between Edinburgh Street and Hilliard Street be upgraded by:
  - i. Prohibiting parking on the east side of Water Street;
  - ii. Creating a painted buffer between the cycling lane and the most easterly vehicle travel lane where space permits.
- d) That new cycling lanes be provided on the west side of George Street between McDonnell Street and Hunter Street with no changes to existing parking, by restriping existing lanes and including a painted buffer between the parking lane and the cycling lane where space permits.
- e) That new cycling lanes be provided on the east side of Water Street between Hunter Street and Edinburgh Street by restriping existing lanes, providing a painted buffer between the parking lane and the cycling lane (where space permits), and including:
  - i. Prohibiting parking in the cycling lanes, except for 30 minute parking from Monday to Saturday from 8 a.m. – 5:00 p.m. in the cycling lane for 40 metres north of Dublin Street;
  - ii. Closing the most southerly access driveway from the City Hall parking lot to Water Street;
  - iii. Permitting parking between Murray Street and McDonnell Street on the west side of the street;
  - iv. Permitting parking on the south side of Murray Street between Water Street and 35 m to the east of Water Street; and
  - v. Working with St. Paul's Presbyterian Church representatives to relocate the accessible parking space on Water Street to the north side of Murray Street.

## **Budget and Financial Implications**

The implementation of the cycling lane upgrades and extensions is estimated to cost \$170,000. This cost includes necessary survey work, detailed design and implementation. Sufficient budget is provided in the capital budget account for Multi-use Trail and Bicycle Lane Improvements Ref# 5-13.01.

## **Background**

### **1.0 Cycling Network Implementation**

The 2012 Comprehensive Transportation Plan includes a recommended Cycling Network. The network, illustrated in Appendix A, includes a tripling of the current trail and on-road cycling facilities by the year 2031. Since 2012, implementation of the cycling network has progressed as shown on the map and table in Appendix B.

The upgrading of the cycling lanes on George Street and Water Street has been identified as a high priority in the Transportation Plan and by cyclists at the annual Cycling Summits held by the Peterborough Bicycle Advisory Committee. Staff receive many requests annually to bring these cycling lanes up to current standards by prohibiting parking in them so they can be used during all periods of the day.

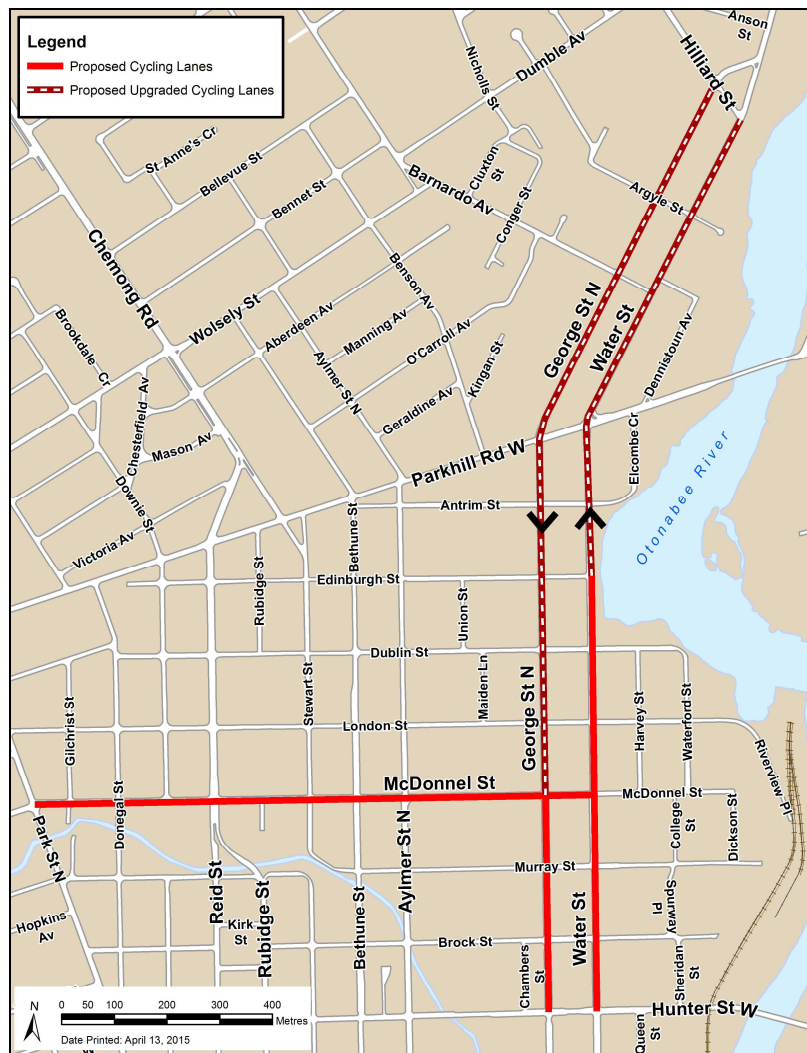
Connectivity within the cycling network is important for providing a high quality cycling experience, one where people of all ages and levels of experience are comfortable and have infrastructure that links to places they want to go. By extending the McDonnel Street cycling lanes from Park Street to Water Street and extending the George and Water Street cycling lanes south to Hunter Street, improved connectivity will be achieved into the downtown. These on road facilities are identified in the Cycling Network that was approved in the 2012 Transportation Plan.

The cycling lanes considered in this report are shown in Map 1 on the following page.

### **2.0 Need to Improve Existing Cycling Lanes on George Street and Water Street**

The existing cycling lanes on George and Water Street were implemented as a pilot in 1995. Parking is currently permitted in these cycling lanes except during peak periods, Monday to Friday from 7:30 – 9:30 am and from 4:30 - 6:30 pm. This creates confusion for people in vehicles who expect cyclists to be in the cycling lanes and concerns for people on bicycles who must merge with traffic to go around the parked vehicles. Some vehicle lanes along these corridors are unusually wide and in some sections, the cycling lanes are narrow by today's standards. Vehicles tend to be driven faster when travel lanes are wider and fast moving vehicles can create safety concerns, particularly where a cyclist has to merge into the through lane because of a parked car. These corridors have relatively high numbers of cyclists using them with approximately 360 cyclists per day on McDonnel Street at Bethune Street and 375 cyclists per day on George Street at McDonnel Street. Over the past few years as cycling volumes have grown, more cyclists have been voicing concerns with the operation and safety of the existing lanes on George and Water Streets, prompting the need for safety and operational improvements.

**Map 1: Proposed New and Upgraded Cycling Lanes**



### 3.0 Options Evaluated

To determine the recommended types of cycling infrastructure for George Street, Water Street and McDonnell Street, several options were explored, including:

- Provide physical buffer between travel lanes and bicycle lanes where space is available;
- Providing the cycling lanes on the left side of George Street and/or Water Street instead of on the right;
- Providing the cycling facilities between the parked cars and the curb south of McDonnell Street where there is parking permitted on both sides of the street; and



- Eliminating parking on McDonnell Street between Gilchrist Street and Donegal Street.

A description of the options considered and the rationale for not carrying them forward is included in Appendix C. The recommended plan provides the most comfort and protection for cyclists while maintaining reasonable parking provision for businesses and residents based on current parking occupancy patterns.

## **4.0 Recommended Cycling Lane Improvements**

The following summarizes the concepts for the recommended cycling lane upgrades and expansions, showing where the lanes will be and where parking is proposed to be permitted. The following sections provide an overview of the changes and recommended upgrades for each section of roadway.

### **4.1 George Street**

The George Street corridor will feature an upgraded cycling lane on the west side of the roadway, where the existing lane is now. This lane will also be extended south from McDonnell Street to Hunter Street. The travelled lanes will be narrowed to promote slower operating speeds and a 0.5 metre buffer will be provided between the cycling lane and the vehicle lane to improve safety, where space permits. To the north of McDonnell Street, parking will be prohibited in the cycling lane at all times. To the south of McDonnell Street the cycling lane can be implemented with no loss of on-street parking. The implications of the proposed changes differ in each section of George Street, as discussed below.

#### **4.1.1 Hilliard Street to Parkhill Road**

Between Hilliard Street and Parkhill Road there is insufficient road width to provide on-street parking, two lanes of traffic and a separate bicycle lane. The recommendation will remove off peak period parking from the west side of the road to permit full time use of the bicycle lane. A parking occupancy study (described in Appendix D) found that there is virtually no parking taking place on the street north of Parkhill Road, except in the vicinity of Sadleir House on evenings and Sundays.

Similar to the existing situation, the cycling lane will be terminated in advance of the Parkhill Road intersection to allow for turning lanes at this busy intersection. Cyclists will be forced to share the through lane with southbound traffic until the separated cycling lane begins again on the south side of the intersection.

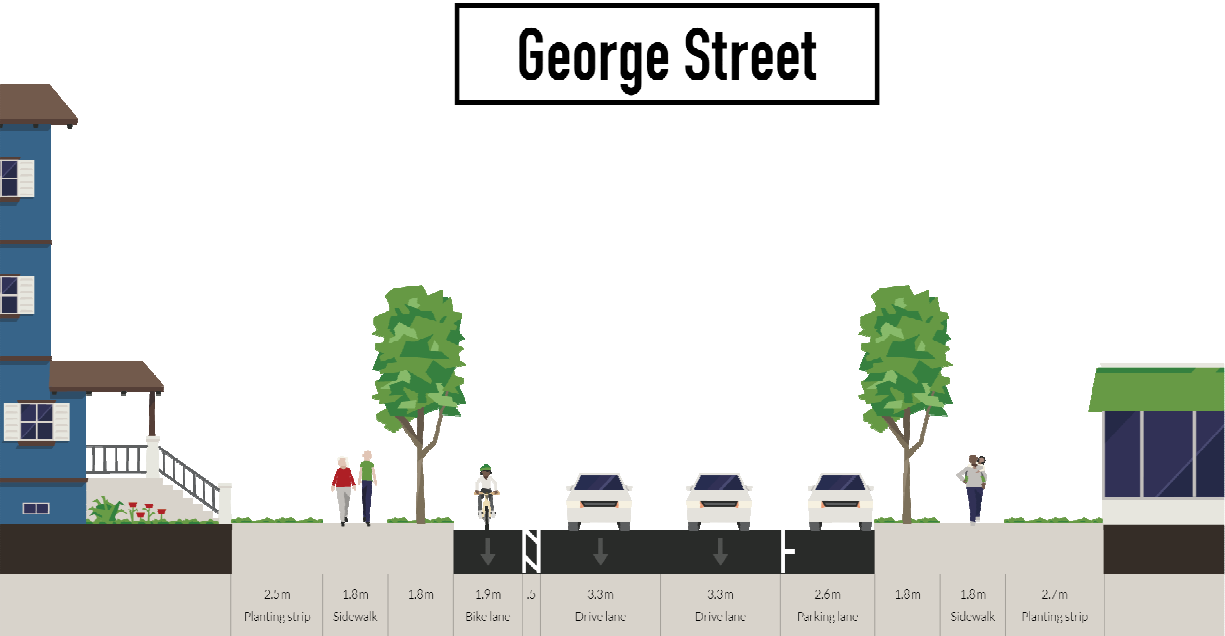
4.1.2 Parkhill Road to McDonnell Street

Between Parkhill Road and McDonnell Street there is on-street parking on the east side of the road and this can continue with the reconfiguration of the bicycle lane. The highest demand for parking was observed between Parkhill Road and Antrim Street and between London Street and McDonnell Street.

Between Parkhill Road and Antrim Street, the busiest parking activity is in front of the hair salon on the east side of George Street. The parking occupancy study results show that there is sufficient capacity on the east side of George Street on this block and the block to the south of Antrim Street to accommodate current parking demands, albeit staff and customers of the hair salon may have to walk a little further. There is also calendar parking on Antrim Street itself, which can provide some additional opportunity for customer parking.

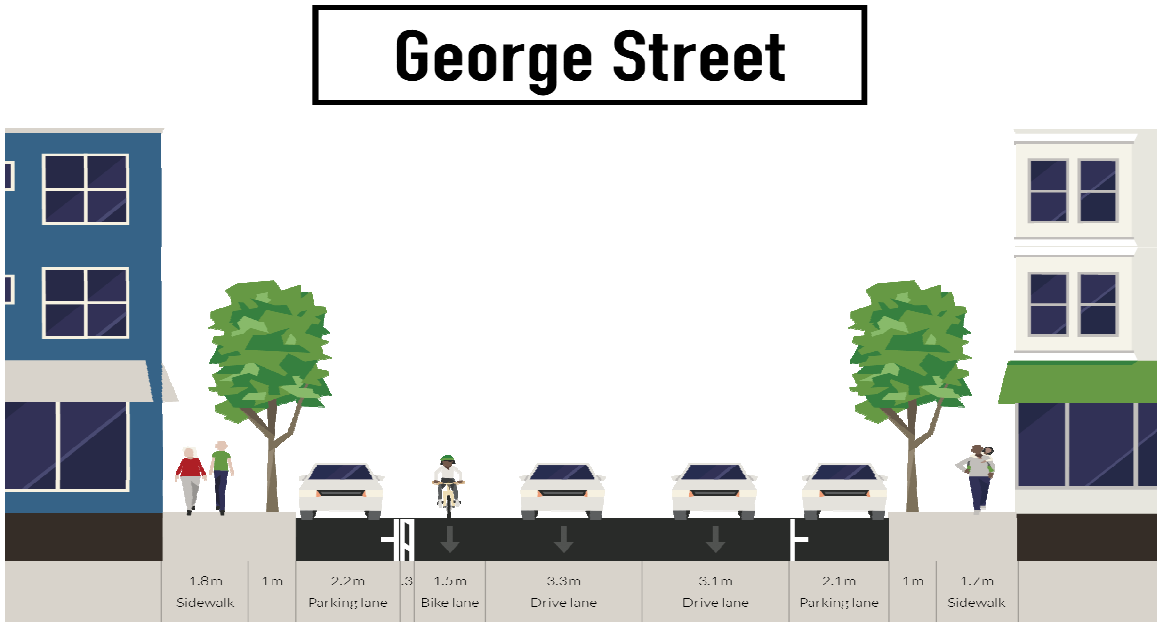
There is a variety store on the south-west corner of Dublin Street and George Street which relies on the existing on street parking on George Street to accommodate deliveries. To address this, a commercial loading zone is proposed in front of the store which will permit commercial vehicle parking in the bicycle lane for deliveries to and from the store.

In the block between London Street and McDonnell Street, most of the parking activity occurs on the east side of George Street and there is currently very little parking taking place on the west side of the street. The new parking restrictions will not change the current situation significantly. The image below shows how the cycling lanes would be integrated into the street layout between Parkhill Road and McDonnell Street.



4.1.3 McDonnell Street to Hunter Street

Between McDonnell Street and Hunter Street there is currently vehicle parking on both sides of George Street. A new bicycle lane is proposed to be implemented on the west side of the road, by slightly narrowing the travelled lanes and parking lanes. The cycling lane will be painted between the most westerly vehicle lane and the parking lane and a 0.3m to 0.5m buffer will be provided where space permits. On-street parking will be retained as shown in the image below.



4.2 Water Street

The Water Street corridor will include a new bicycle lane on the east side of the roadway between Hunter Street and Edinburgh Street, to join the existing bicycle lane that begins at this location. The new bicycle lane will be implemented by narrowing the existing wide travel lanes and providing a 0.5 m buffer to separate cyclists from vehicle traffic. To the north of Edinburgh Street, the existing bicycle lane will be upgraded by narrowing the lanes to create a 0.5m buffer, where space permits, and by removing off peak period parking. In this section, the travelled lanes will be narrowed to promote slower operating speeds and provide the buffer space between the cycling lane and the vehicle lane to improve safety. Parking will be prohibited in the cycling lane at all times. The implications of the proposed changes on parking differ in each section of Water Street, as discussed below.

#### **4.2.1 Hunter Street to London Street**

Between Hunter Street and Brock Street, parking will remain unchanged and the cycling lane will be added between the parking lane and the travel lane. On the section between Brock Street and Murray Street, there is no parking on either side of the road under current conditions.

Between Murray Street and McDonnell Street, parking will move from the east side of the road to the west side of the road. The most southerly driveway exit from City Hall will be closed and removed to maximize the number of parking spaces along the west side of Water Street. This is consistent with the planned reconfiguration of the City Hall parking lot that is being planned as part of another project. The accessible parking space adjacent St. Paul's Presbyterian Church is proposed to be moved to the north side of Murray Street in front of the church entrance, and new on-street parking is proposed to be provided on the south side of Murray Street between Water Street and the base of the hill to the east, to replace parking moved from Water Street. The left turn lane at McDonnell Street will be introduced just north of the new parking zone.

For the segment between McDonnell Street and London Street, the existing parking on the east side of the road will shift over to the west side of the road, and will begin just north of McDonnell Street in the vicinity of the Pearson Daycare. This will provide sufficient parking capacity to replace the parking lost on the east side of Water Street.

#### **4.2.2 London Street to Parkhill Road**

On Water Street, there is virtually no parking taking place on the east side of the street north of Edinburgh Street, even though it is permitted in off peak periods. There is also very little observed parking activity occurring on the west side of Water Street in this segment. Between London Street and Parkhill Road no on-street parking can be provided because the street is not wide enough for two travel lanes, a cycling lane and a parking lane. The parking survey showed limited parking activity in these blocks.

Just to the north of Dublin Street, Peterborough Battery currently uses the existing on-street parking for customer pick up and drop off of batteries. This long standing business has very little off-street parking and the weight of the batteries requires customers to park close to the building. Battery servicing is also provided for customers parked on the street as necessary. To address concerns raised by Peterborough Battery a 30 minute parking limit is proposed to allow customer parking in the cycling lane in front of the store, Monday to Saturday from 8 am – 5 pm.

#### **4.2.3 Parkhill Road to Hilliard Street**

Parking is currently permitted on the west side of Water Street and off-peak parking is permitted on the east side of the road. The proposed upgrades to the cycling lane on this stretch of road will eliminate the parking on the east side of the road. Based on the parking occupancy study there is very little parking activity occurring on this stretch of

Water Street, and most of the parking that does occur is on the west side of the road. There is sufficient capacity on the west side of the road to accommodate the typical parking demand in this section. The bicycle lane will terminate at Hilliard Street, where it will transition to a wide shared lane until the Rotary Trail crossing just north of Hilliard Street. There is not sufficient width to continue the on-street bike lane north of Hilliard Street without extensive reconstruction of existing curbs and the divider island that forms the split between the George Street and Water Street one way streets.

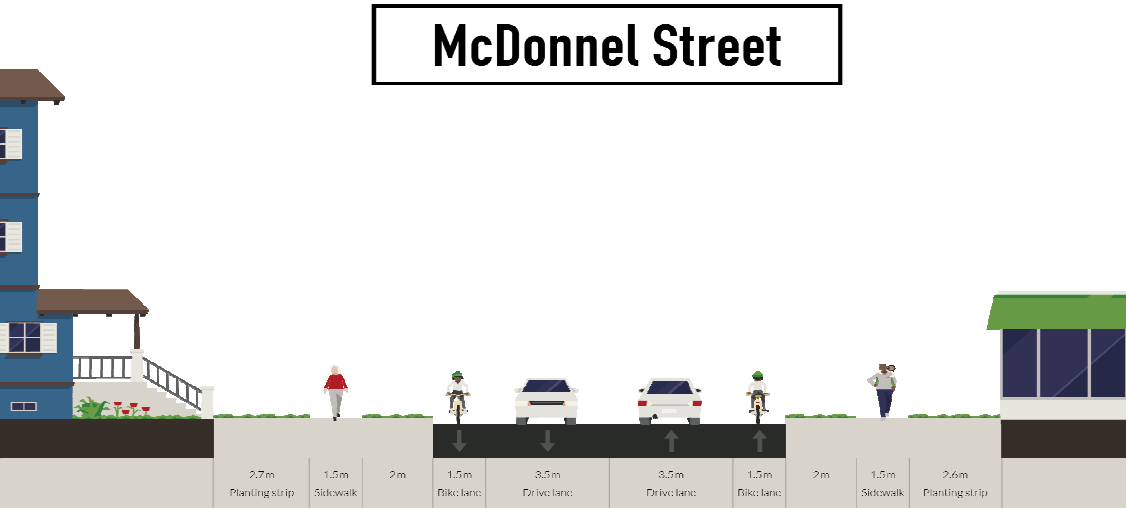
4.3 McDonnell Street

The pavement width is wide enough on McDonnell Street to introduce cycling lanes on both sides of the street. Parking would be prohibited in the cycling lanes at all times.

There is virtually no parking taking place on either side of McDonnell Street today, except for the short section between Gilchrist Street and Donegal Street, where there are a number of local businesses that rely on the parking currently occurring on street. The parking on the north side of this block is taking place informally in the boulevard, and a cycling lane can be provided adjacent to the curb without changing this in the interim. On the south side there is not sufficient space to accommodate a traffic lane, parking lane and on street bicycle lane. In this segment, the cycling lane will be discontinued in the interim and cycling symbols will be provided on the road to indicate the shared use of the lane. Parking will continue to be allowed on the south side of McDonnell Street.

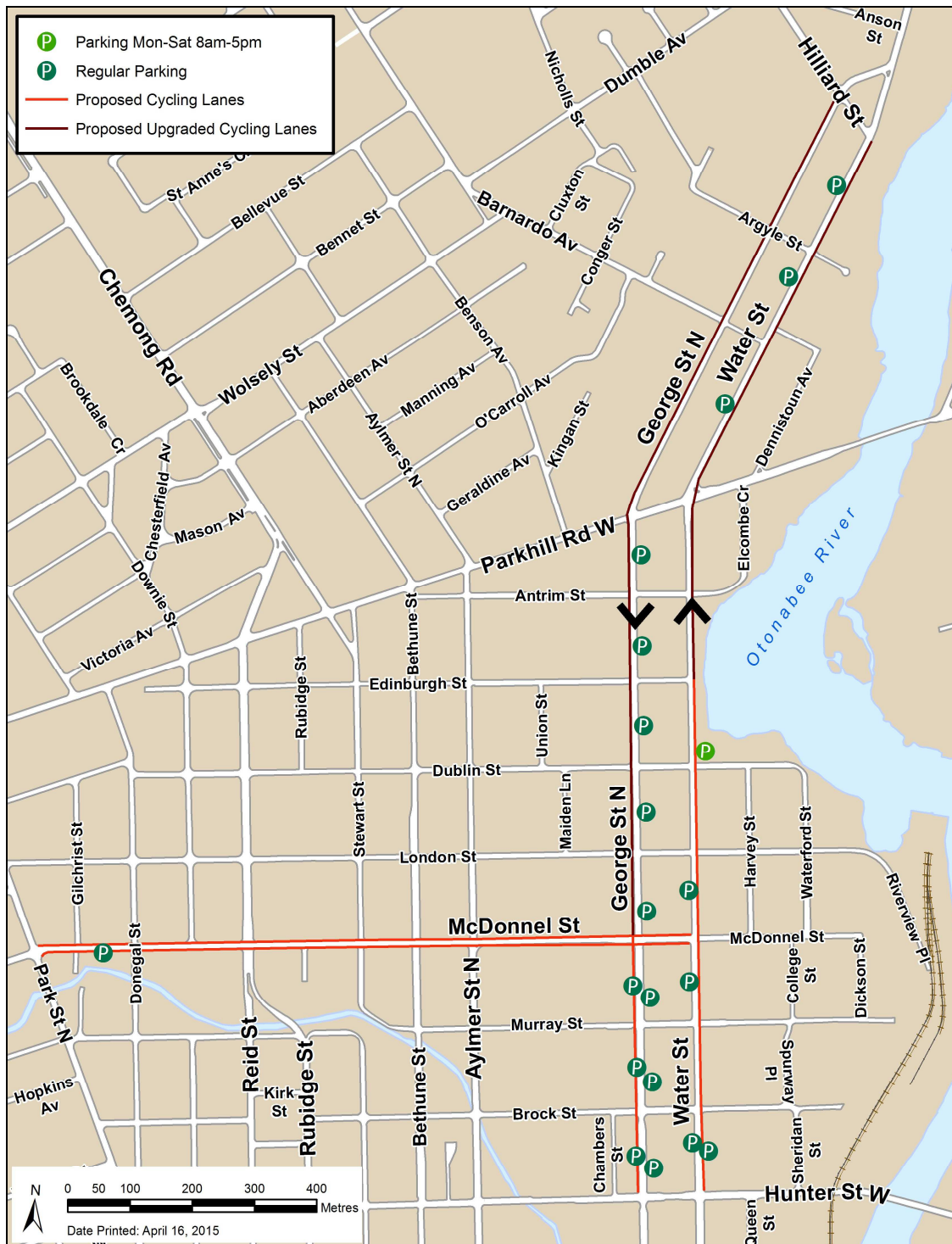
This section of McDonnell Street has been identified for future reconstruction to address underground infrastructure improvement needs and at that time, staff will investigate widening the pavement surface in this block to provide parking bays which would allow for both parking and cycling lanes.

The following cross-section illustrates how the cycling lanes will be incorporated into the street layout.



Map #2, below, illustrates the proposed bicycle lanes and the proposed on-street parking locations that are recommended on George Street, Water Street, and McDonnell Street.

**Map 2: Location of Proposed Cycling Lanes and Parking**



## 5.0 Public Consultation

The cycling lane concepts were presented through a public consultation process in March and April 2015 that included face to face meetings with property owners / tenants and a Public Open House. Information was also made available on the City website and advertised in both local newspapers. The Open House was held April 9, 2015 at the Public Library and was attended by approximately 70 people (66 signed in). The following table provides a summary of the main concerns expressed with respect to the projects and provides a response from staff.

Concerns Expressed	Staff Response
Proposal would eliminate on-street parking near home on George Street near Hilliard Street.	There was very little parking observed on George Street between Hilliard Street and Parkhill Road when the Parking Occupancy Study was conducted. While it is not directly adjacent, there is a surplus of parking available on this section of Water Street.
Concern about impact to business due to restricted parking at Peterborough Battery.	Recognizing the special parking and loading requirement for customers of Peterborough Battery, a 30-minute customer parking limit is recommended in the cycling lane on Water Street in front of the store, Monday to Saturday from 8 am – 5 pm.
Members of St. Paul's Presbyterian Church are concerned changing parking from east side of Water Street to west side of Water Street (between Murray Street and McDonnell Street) will impact the ability of older people to access the church.	Parking is proposed to be provided on the west side of Water Street on this block. An accessible parking space can be provided on Murray Street in close proximity to the church to replace the one that will be removed if the cycling lanes are implemented. In addition, a few parking spaces can be provided on Murray Street in front of the Church, where the pavement has been widened on both sides of the street. Murray Street is a much quieter street for getting in and out of a parked car and access to the church will not require crossing a busy road.
The cycling lanes do not address primary concern with safety and vehicle speeds.	The proposed changes to lane markings will result in narrower travel lanes on many sections of George Street and Water Street, which should assist in calming traffic on these two arterial roads.
Two hair salons on George Street in the vicinity of Antrim Street are concerned about reducing parking during the day.	There is calendar parking available on Antrim Street and the blocks south of Antrim Street have surplus parking available.

Of the comments received, the vast majority (89%) were in favour of the proposal to upgrade and extend the cycling lanes as described in this report. In addition to the cycling lanes recommended in this report, there was a lot of interest expressed for providing new cycling infrastructure between Hilliard Street and the zoo and south of Hunter Street on George Street and Water Street.

## Summary

Implementation of the Cycling Network in the 2012 Comprehensive Transportation Plan is underway with two projects being completed already and several others in the implementation phase. Upgrading and extending the cycling lanes on George Street, Water Street and McDonnell Street will increase the network by adding 2.3 km of new cycling lanes and upgrading 2.8 km of existing cycling lanes. These cycling lanes are on some of the streets most heavily used by cyclists. The extension of the George Street and Water Street cycling lanes into the downtown represents the City's first foray into providing on-road cycling infrastructure in the downtown. This will provide valuable insight as staff begin work on a Downtown Cycling Master Plan that will look at how to comprehensively improve cycling access in the downtown.

Submitted by,

Blair Nelson,  
Acting Director of Utility Services

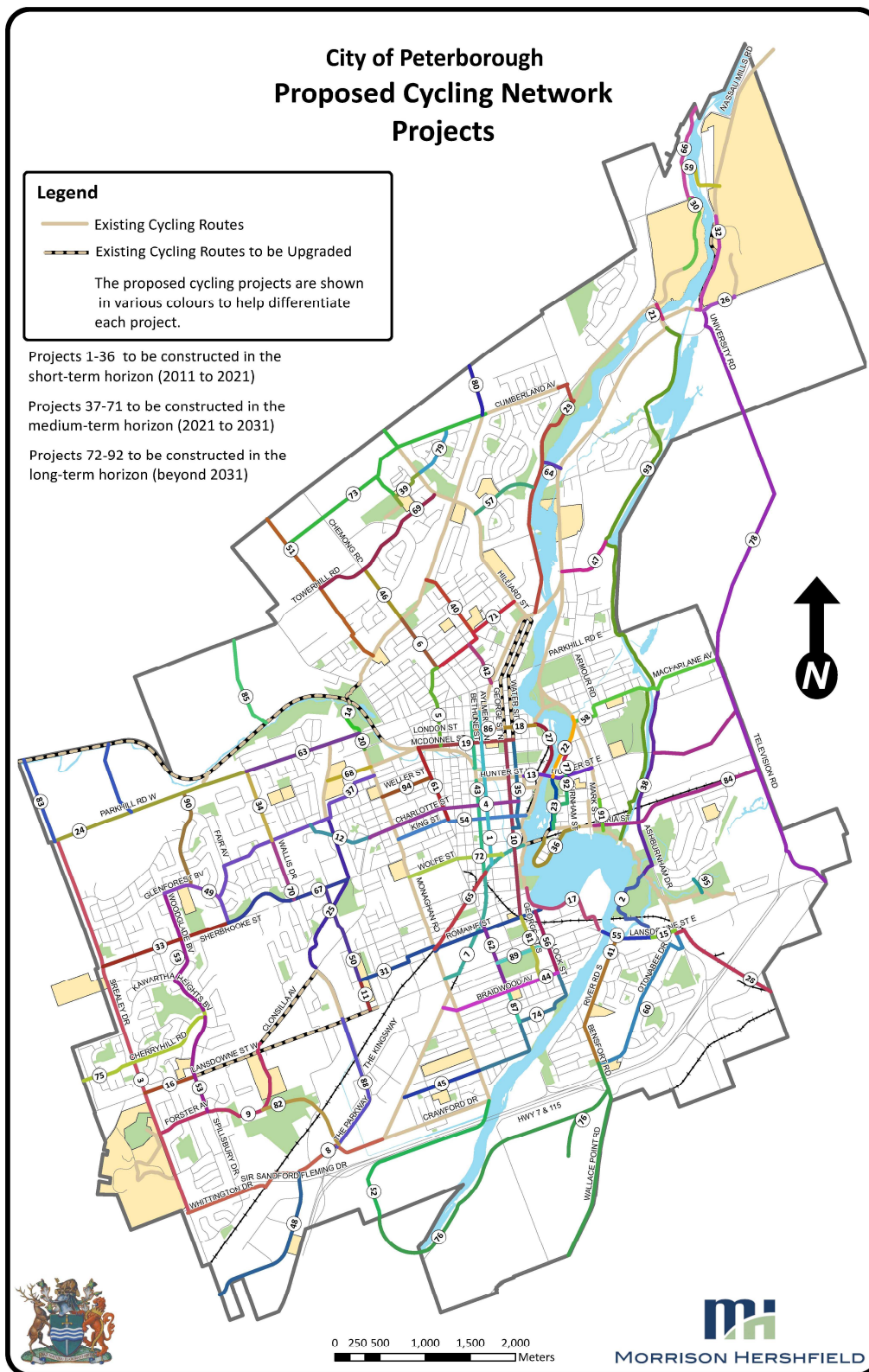
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### Attachments:

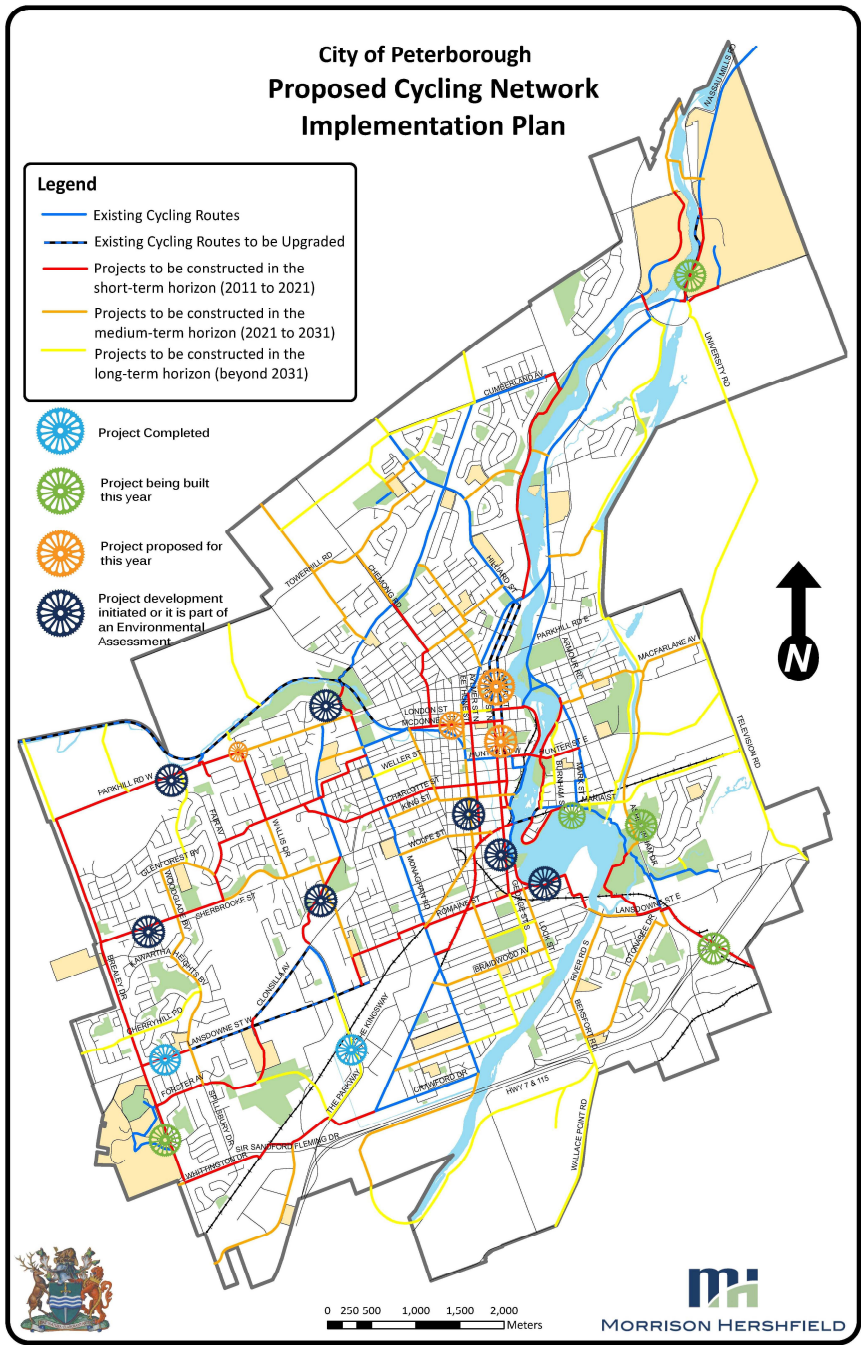
Appendix A: 2012 Transportation Plan Cycling Network Map  
Appendix B: Progress Towards Cycling Network Implementation  
Appendix C: Options Considered and Not Carried Forward  
Appendix D: Parking Occupancy Study Results  
Appendix E: Cycling Lane Concept Drawings



## Appendix A: 2012 Transportation Plan Cycling Network



Appendix B: Progress Towards Cycling Network Implementation



## Appendix B (continued)

### Bikeway Implementation Since 2012

Project	Description	Status
Hunter Street Bridge	Cycling lanes incorporated into rehabilitation	Completed
Lansdowne Street – Brealey Drive to Spillsbury Drive	Cycling lanes added when road reconstructed	Completed
Brealey Drive – Lansdowne Street to Sir Sandford Fleming Drive	Two-way cycling lanes being built into boulevard when road is reconstructed	Underway in 2015
Ashburnham Drive	Multi-use trail being built on west side of street and cycling lanes on-street for faster cyclists	Underway in 2015
Rotary Greenway Trail – Rowing Club to East Bank Drive	Multi-use trail being built on east side of Nassau Mills Road	Underway in 2015
Trans-Canada Trail – Rogers Cove Park to Edgewater Boulevard	Multi-use trail being built on south side of Maria Street	Underway since 2013, completion expected in 2015
Trans-Canada Trail – Lansdowne Street to city limits	Multi-use trail being built on newly acquired rail line	Underway in 2015
George Street – Hilliard Street to Hunter Street	These lanes are the subject of this report.	Recommended for 2015
Water Street – Hilliard Street to Hunter Street	These lanes are the subject of this report	Recommended for 2015
McDonnel Street – Park Street to Water Street	Extension of existing cycling lanes on McDonnel Street – the subject of this report	Recommended for 2015
Otonabee River Trail – Marina to Haggard Street	Extension of trail further around Little Lake	Environmental Assessment underway
Parkway – Clonsilla Avenue to Cumberland Street	Provision of multi-use trail along new road recommended in Environmental Assessment	Environmental Assessment underway
Charlotte Street – Park Street to Water Street	Facility provision to be considered	Design underway in 2015
Bethune Street	Being recommended as a Bicycle Priority Street	Design underway in 2015
George Street – Sherbrooke Street to Perry Street	Road diet recommended, bringing road to two lanes with left turn lanes and cycling lanes	Environmental Assessment almost completed, design in 2015

## Appendix C: Options Considered and Not Carried Forward

Option Considered	Rationale for Not Including in Recommended Concepts
Provide physical buffer between travel lanes and bicycle lanes on George and Water Streets where space is available	While a physical buffer, such as flexi-posts, may be preferred by cyclists there is a cost involved in reinstalling the buffer each spring and taking it out in the winter. The maintenance costs are also much higher for sweeping and winter maintenance in a physically separated facility due to the need for specialized equipment. Providing a painted buffer at this time does not preclude introducing a physical barrier in the future if warranted.
Eliminating parking on McDonnell Street between Gilchrist Street and Donegal Street	While there is sufficient off-street parking for the businesses on the north side of the street (all buildings on this block are owned by Peterborough Transmission and there are two parking lots), the businesses on the south side of the street fully utilize their off-street parking and rely on the on-street parking as well. This section of McDonnell Street is planned for reconstruction to address sewer work, and at that time options for this block can be investigated.
Providing the cycling lanes on the left side of George Street and/or Water Street	Cyclists expressed concern about not being expected on the left side of the street, potential conflicts with heavy left turning traffic (particularly on Water Street), and being adjacent to the faster moving traffic. This option would only be viable if there were enough space on these streets south of McDonnell Street for a separated cycling facility between the parking lane and the curb and there is not enough road space for this.
Providing the cycling facilities between the parked cars and the curb south of McDonnell Street where there is parking permitted on both sides of the street	According to current standards, a cycling lane provided in this location needs to have a 1 m buffer beside the parked vehicles and 1.5 – 2.4 metre cycling lane. There is not enough road space to provide this type of facility at this time.

## **Appendix D: Parking Occupancy Study**

A parking occupancy study was completed by staff in November 2014 to evaluate the impact of removing parking for cycling lanes on one side of George Street and Water Street between McDonnell Street and Hilliard Street and on McDonnell Street between Park Street and Water Street. For most of these blocks, the parking is currently limited to off-peak times. From 7:30 – 9:30 am and from 4:30-6:30 pm, parking is prohibited and cycling is the only permitted activity in the lanes.

The study took place from November 5-23 as follows:

- Wednesday, November 5 beginning at 10:30 am
- Friday, November 7 beginning at 8:40 am
- Friday, November 7 beginning at 1:00 pm
- Saturday, November 8 beginning at 10:30 am
- Sunday, November 9 beginning at 9:45 am
- Wednesday, November 12 beginning at 7:45 am
- Thursday, November 13 beginning at 3:15 pm
- Friday, November 14 beginning at 8:30 am
- Friday, November 14 beginning at 12:10 pm
- Friday, November 14 beginning at 4:45 pm
- Monday, November 17 beginning at 6:40 am
- Sunday, November 23 beginning at 9:55 am

## Parking Occupancy Study Results George and Water Streets

Street	From	To	Range of No. of Vehicles Parked on Both Sides	Current Capacity Both Sides (off-peak times)	Parking Capacity with Cycling Lanes as Proposed	Frequency capacity exceeded with proposed parking restrictions
George	Hilliard	Argyle	0-2	12	0	1
George	Argyle	Barnardo	0	7	0	0
George	Barnardo	Parkhill	0-10	17	0	1
George	Parkhill	Antrim	0-9	16	10	0
George	Antrim	Edinburgh	2-14	27	14	0
George	Edinburgh	Dublin	1-6	18	10	0
George	Dublin	London	0-6	19	8	0
George	London	McDonnell	2-10	19	10	0
Water	McDonnell	London	0-6	7	7	0
Water	London	Dublin	0-1	8	0	1
Water	Dublin	Edinburgh	0-3	8	0	1
Water	Edinburgh	Antrim	0-2	8	0	0
Water	Antrim	Parkhill	0	4	0	0
Water	Parkhill	Barnardo	0-5	36	18	0
Water	Barnardo	Argyle	0-1	26	13	0
Water	Argyle	Hilliard	0-4	38	16	0

## McDonnell Street

Street	From	To	North Side		South Side		Parking Capacity with Cycling Lanes as Proposed
			Vehicles Parked	Current Capacity	Vehicles Parked	Current Capacity	
McDonnell	Water	George	0	0	0	0	0
McDonnell	George	Aylmer	1	0	0	0	0
McDonnell	Aylmer	Bethune	0	0	0	5	0
McDonnell	Bethune	Stewart	0	0	0-1	6	0
McDonnell	Stewart	Reid	0	0	0	0	0
McDonnell	Reid	Downie	0	0	0-2	6	0
McDonnell	Downie	Donegal	0	0	0	2	0
McDonnell	Donegal	Gilchrist	0-5*	5*	0-5	5	10
McDonnell	Gilchrist	Park	0	0	0	0	0

## **Appendix E: Cycling Lane Concept Drawings**





**McDonnell Street**





**George and Water Street  
from  
Hunter Street to McDonnell Street**





George and Water Street  
from  
McDonnel Street to Dublin Street





George and Water Street  
from  
Dublin Street to Parkhill Road





George and Water Street  
from  
Parkhill Road to Barnardo Street



