

Richmond-Adelaide Cycle Track Study Including Peter Street & Simcoe Street



Information Booklet #2 *DRAFT*
November 5, 2013



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Background

Following a Council Decision in November 2011, the City of Toronto is studying the potential for physically separated bicycle lanes (known as "cycle tracks") between Bathurst Street to Sherbourne Street using Richmond, Adelaide and or Wellington Street.

A north-south cycling connection between the existing Beverly Street bicycle lanes and the waterfront, using Peter and/or Simcoe Street, is also being studied.

Starting in the Spring of 2013 the City has contracted a team of consultants (IBI Group in Association with Toole Design Group and Velo Quebec) to carry out this study as a Municipal Class Environmental Assessment. In June the team presented some preliminary information from the study to stakeholders and the public, including the following:

- What is a cycle track?
- Reasoning for doing this study
- Key issues and opportunities
- Route and bikeway configuration options
- How a cycle track may affect you
- Early decision-making considerations

All materials from the June public consultations are online for review, including a summary of the public feedback received:

www.toronto.ca/cycling/richmond-adelaide

Some of the fundamental points to remember:

- **The downtown core needs more bikeways**
- **City council supports cycle tracks**
- **Cycle tracks make cycling safer & more comfortable:**
 - **Significantly reduce "dooring" collisions**
 - **Fewer sideswipe and rear end collisions**
 - **Reduce motor vehicles stopping in the bike lane**



80 participants representing a range of interests at Stakeholder Workshop #1 in June 2013



Pack of cyclists approaching conflict with open car door ("dooring") on a street with no bikeway



Taxi blocking a bike lane (Photo credit: Christopher Porter)

What's New Since Booklet #1

Since Booklet #1 was published in June 2013, the study team has accomplished several key milestones and made some important recommendations.

Project Goals Have Been Refined

Below are the main goals the team is working to achieve in their cycle track recommendations.

Cycling Needs

Provides connections to the existing cycling network to ensure access to the cycle track and for its potential to attract cyclists

Optimizes the distance between parallel corridors so as not to duplicate other east-west bikeway corridors just beyond the study area, and considers the likelihood for cyclists to travel along off-set routes such as Wellington to Richmond

Provides direct routing and access to corridors in the downtown with street-level activities (i.e. Queen Street and King Street)

High potential cycling demand based on origins of short trips and the destinations near and along the corridors

Improves comfort and safety of cyclists

Mobility Goals

Supports City policies for downtown accessibility and mobility

Takes advantage of any excess capacity where there is more roadway space and less motor vehicle traffic

Minimizes the disruption to the transportation network and downtown traffic operations

Compatible with existing traffic signal phasing and timing to ease implementation and minimize traffic delays

Can be **implemented in the near term** (next couple of years) to deliver a high quality bikeway sooner

Socio-Economic Factors

Supports City planning initiatives such as other planned cycling corridors or development sites / areas rather than serving largely established uses

Enhances existing and future street-level uses to positively impact local businesses

Minimizes the disruption to curbside uses such as passenger loading, deliveries, etc. including TTC, taxi, tour buses, film truck use, delivery vehicles

Wellington (Alternative D) Was Dropped



Wellington Street (Alternative D) was screened out of long list of solutions because it did not sufficiently meet the project goals.

Wellington Street is **too far south** from the activity areas and higher density bicycle trip destinations in the north half of the study area. For

example, anyone travelling from the north and destined to King Street, Adelaide Street, Richmond Street or Queen Street would not benefit from a facility on Wellington Street. Although it provides a shorter connection to the proposed West Toronto Pail Path, other bikeway improvements in the Niagara neighbourhood can address this for the other Richmond-Adelaide alternatives.

Additionally, this alternative must combine with Richmond Street and / or Adelaide Street in order to complete the east-west connection through the study area to Sherbourne Street cycle tracks, providing a **less direct, offset route**.

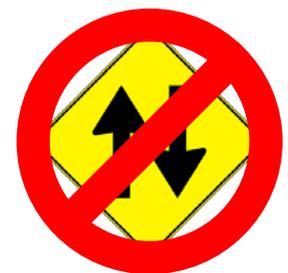
Traffic operations, currently a combination of one-way and two-way traffic operations, would need to be revised, while ensuring Wellington still provides an alternative to a reduced capacity Front Street. The Downtown Transportation Operations Study (DTOS) is currently examining different options for Wellington Street.

Although we are no longer considering Wellington Street for a cycle track, other cycling infrastructure improvements could be made, in the future, such as signage, bike parking, sharrows or possibly even bike lanes.

Two-Way Traffic on Richmond or Adelaide Was Ruled Out

Converting Richmond Street or Adelaide Street to two-way traffic operation would impede our ability to successfully integrate cycle tracks on these corridors, and would cause additional negative impacts:

- Dramatically increase traffic delays and overflow to adjacent streets
- Delays to TTC vehicles
- Require additional turn prohibitions
- Curb-side use (parking, loading, etc) would be very limited – some sections of corridors (e.g., Richmond west of Peter Street) would have all parking removed
- It would be more difficult to accommodate construction hoarding and film truck parking
- Additional conflicts at intersections
- Increased emissions due to stop and go traffic and idling vehicles



Converting Richmond-Adelaide to two-way does not meet the project goals and thus will not be examined any further.

That said, some of the positive aspects of two-way streets, such as slower traffic speeds and improved pedestrian space, can be achieved by designing a high quality cycle track which buffers pedestrians from traffic and provides some space for greening or other streetscape elements.

Adelaide Bi-directional (Alternative C) Does Not Fit

Adelaide Street is too narrow to fit a bi-directional cycle track. The average travel lanes are currently 3.2 m wide and the minimum requirement for a bi-directional cycle track is a 3.5 m width. Between Spadina Avenue and York Street, in particular, the travel lanes are less than 3.1 m wide.

Heavy Left Turns on Richmond Deter Left-side Cycle Track

There are heavy left-turning traffic volumes on Richmond Street, including traffic that is trying to get to the Gardiner Expressway that would come into conflict with cycle track on the left side of the street. A right-side, uni-directional cycle track would work much better, so the left-side option on Richmond Street was dropped from further evaluation.

Now Recommending Bikeways on Both Peter AND Simcoe

How well Peter and Simcoe connect to the overall bikeway network serving the downtown has led to the consideration of bikeways on BOTH streets. A connection from Peter Street to Beverley Street via Soho Street and Phoebe Street is also being reviewed in addition to traffic signal modifications to the Queen Street-Soho Street intersection.

A bikeway on Simcoe Street will connect the cycle tracks on Richmond Street and Adelaide Street via the bike lanes on Lower Simcoe Street to Queens Quay and the waterfront.

Evaluation of Alternatives & Preliminary Solutions Recommended

The remainder of this booklet describes the key considerations that were included in the evaluation and the feasible and recommend bikeway designs that have brought forward for public consideration.



LEGEND

- Study Area boundary
- Existing bike lanes
- - - - Bike lanes being upgraded
- - - - Richmond – Adelaide potential cycle tracks
- ■ ■ ■ North-south network connections

Evaluation Factors

After all reasonable and feasible alternatives have been identified, the Municipal Class EA process requires the alternatives, including the “do nothing” alternative, to be evaluated in detail to determine a preference. The detailed evaluation takes into consideration the impact of the alternatives on the following factors:

Mobility and Safety

- Safety and comfort of cyclists, pedestrians and motorists
- Compatibility with City policies on transportation in the Downtown
- Effect on cycling demand
- Effect on mobility: traffic, TTC, emergency services, cyclists and pedestrians
- Impacts to curb-side users: parking, loading, taxis, tour buses, film trucks
- Ability to accommodate lane or street closures for emergency repairs and construction

Socio-economic

- Compatibility with City vision and policies
 - Compatibility with BIA master plans
 - Ability to enhance street-level uses
 - Noise impacts
 - Impact on archaeological resources
- Impact on built heritage and cultural resources

Natural Environment

- Opportunities to add landscaping
- Air quality impacts

Constructability

- Traffic signal changes required
- Intersections requiring changes to their layout
- Ability to phase in over time
- Ability to co-ordinate with other capital projects in the corridors

Opinion of Costs

- Capital cost to construct
- Long-term asset management costs (maintenance and repairs)
- Winter maintenance costs

Most Influential Factors

While all the factors above were taken into careful consideration in the evaluation, there are a few factors that were more important in making a decision on the best option to meet the study's objectives.

Maintaining Right-Side Bike Lane Operating Convention

On two-way streets, bike lanes and cycle tracks are almost always located on the right side, reflecting the rules of the road with cyclists riding as far right as practicable, with traffic passing on their left. Cyclists are used to shoulder checking over their left shoulder and motorists are more likely to expect cyclists on the right side of the road.

On one-way streets, it is technically possible for a cycle track to be located on either the right or the left, but there needs to be a very compelling reason to locate a cycle track on the left side instead of the right. For example a large number of high frequency transit stops, or a disproportionate volume of vehicle making right turns (at intersections and driveways) might provide cause to consider putting the cycle track on the less conventional left side.



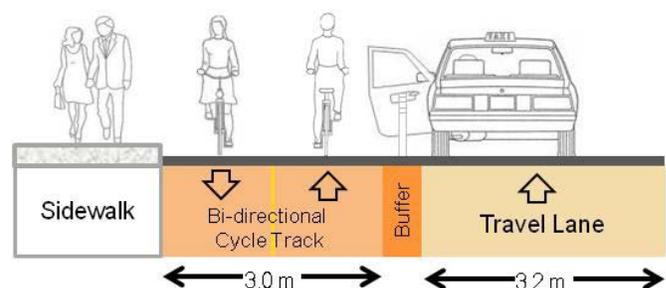
Authoritative bikeway design manuals focus on designing on the right side, recognizing the importance of meeting driver / cyclist expectations. A bikeway on the right, in particular at intersections and driveways where there are many conflicts between road users, results in commonly recognized turns. On the left, some turns would be unusual and the risk of conflicts would be higher.

When considering uni-directional cycle tracks for Richmond and Adelaide Streets, the low TTC bus volumes and the heavy left turning traffic compared to the right turns means that there is not a good compelling reason to favour a cycle track on the left side over the right side.

Disadvantages of Bi-directional Cycle Tracks

Bi-directional cycle tracks have some important drawbacks that do not apply to uni-directional cycle tracks, or at least not to the same severity:

- More expensive and complicated:
 - New traffic signals and changes to intersection layouts are required.
 - The ends of the bi-directional cycle track are difficult to design because cyclists must be transitioned to riding on a conventional bicycle lane, or to riding in mixed traffic on both sides of a street.
 - It is best to be completed in its entirety, and not phase it in over time. For example, it is difficult to undertake a pilot project because of the changes to signalized intersections required and the transitions.



- Increased delay and conflicts at traffic signals: traffic turning across the cycle track and cyclists travelling against traffic through an intersection would need separate signal phases (i.e., green arrows) so they can get through the intersection without risking a collision.
- Two-way cycling makes crossing the cycle track more difficult for everyone:
 - Passenger loading and unloading from transit vehicles, parked cars, taxis, tour buses and film trucks would be more difficult. These people would have only a narrow 0.5 m wide buffer to wait in why checking for cyclists travelling in both directions before crossing
 - For accessible vehicles, passengers ideally should have an area to wait in before or after crossing cyclists travelling in two directions. To accommodate mobility devices (wheelchairs, strollers, etc.) and ramps from the vehicles, wider buffers may be needed.
- Narrow buffer provides fewer opportunities for planters, bike parking or in future wider boulevards.
- Does not easily accommodate lane closures for emergency repairs and construction.

Special Considerations for Peter Street and Simcoe Street

Both Peter and Simcoe are in a phase of change, with unique existing issues and future needs.

Peter Street:

- Planned redevelopments will require curb-side pick-ups / drop-offs to service future street-level retail and restaurants
- Growing pedestrian volumes and street-level activity would benefit from wider sidewalks and other public realm improvements
- Key left-turn lanes need to be maintained at Queen, Richmond, Adelaide, and Wellington Streets.



Simcoe Street:

- Safe and efficient tour buses parking, loading and unloading of passengers in front of Roy Thompson Hall must be provided
- Conversion to two-way traffic south of Wellington (under review by the Downtown Traffic Operations Study)
- Difficult to create a necessary signalized crossing at Richmond and Queen Streets



After careful consideration of all the competing factors, the study team has landed on recommended solutions for each corridor, which are described on the following pages.

Preliminary Recommend Solutions

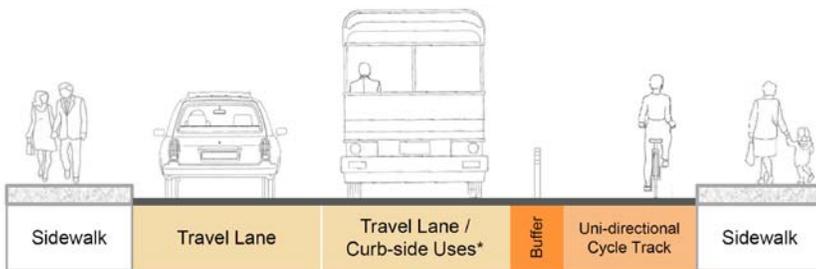


Below are cross-section drawings and sketches of the solutions that are recommended to be applied to each of the described sections of street. Sections are based in part on the available roadway width. Note that the location of the sidewalk curb is not changed from present day in any of these recommend cross-sections except on Peter Street, which is undergoing extensive redevelopment.

Richmond-Adelaide

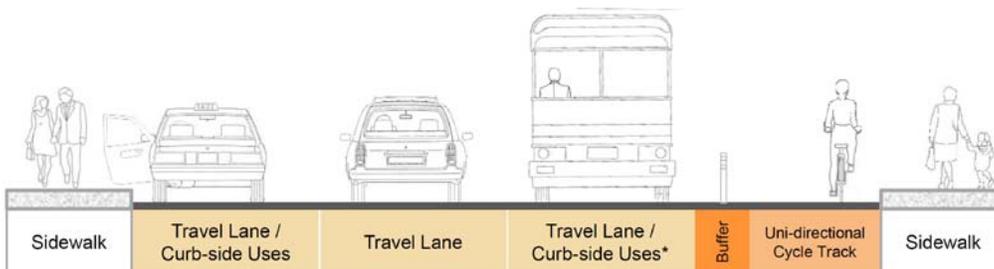
Recommended—Option A1: A uni-directional cycle track located on the right side of both Richmond and Adelaide Street. One travel lane on each street would be removed by the cycle track. Richmond and Adelaide are wide enough east of George Street that a wider boulevard could be provided in the future or a 24 hour parking lane.

Richmond Street west of Peter



* Curb-side Uses include TTC bus stops, off-peak parking, loading, parking and deliveries, garbage pick-up, construction, film truck parking, turn lanes, etc.

Richmond Street Peter to Jarvis, and Adelaide Street, Bathurst to George**



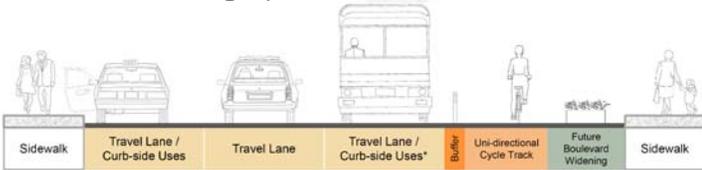
** George Street is the first street east of Jarvis Street

Richmond-Adelaide - Rationale

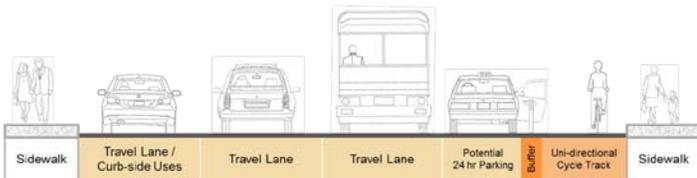
The uni-directional cycle track provides a wider buffer / separator that enhances all road users' safety and comfort more than a bi-directional cycle track (Option B). It is less complex to construct and operates with fewer conflicts than a bi-directional cycle track. People parking or making deliveries permitted during off-peak conditions, in the adjacent lane have a wider buffer to wait in and only have to cross cyclists travelling from one direction. Since most of the off-peak parking on Adelaide is located on the left side of the road, a uni-directional cycle track on the right side will have no impact on them. Fire trucks at Fire Station 382 will not have to cross the cycle track to get in and out of the station. A cycle track on the right side of Richmond Street does not come into conflict with heavy left-turning traffic, especially on streets with access the Gardiner Expressway.

Richmond Street and Adelaide Street, George** to Sherbourne

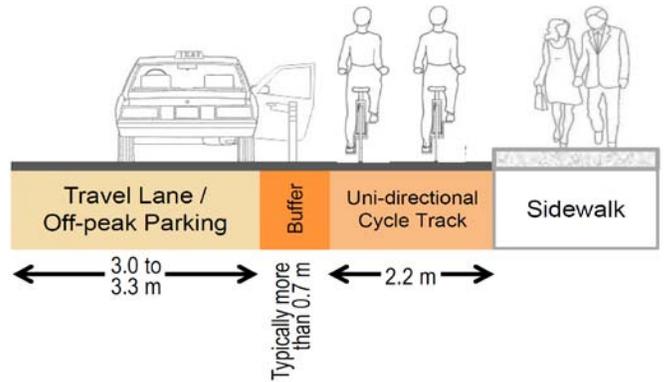
Boulevard Widening Option



24hr Parking Option



Cycle Track and Buffer Widths Provide Room for Cyclist Passing and Open Doors of Parked Vehicles



Generally the buffer will be wider than the minimum of 0.5 m, ranging from 0.7 to 2.0 m on Richmond and 0.7 to 1.5 m wide on Adelaide. Travel lanes will also meet the City's preferred widths of 3.3 m along the curb and 3.0 m for inside lanes.



Sketch of how a bikeway might be continued around a construction site. Also see sketch on booklet cover.

Major Impacts

- Lose one travel lane during peak traffic periods (this lane is used in some locations for parking and loading during off-peak hours). On Richmond from Bathurst to Peter there would be two travel lanes remaining, and on Richmond from Peter to Sherbourne, and Adelaide, Bathurst to Sherbourne there would be three travel lanes remaining during peak periods.
- Active streetcar tracks on Richmond between York and Church Streets would be adjacent the cycle track. Off-peak parking / loading, and film truck parking would not be permitted in this travel lane. Overnight bus parking and two taxi stand spaces on Richmond between York and Yonge Streets would have to be relocated. A bus lay-by could be constructed for a few buses. Twenty-six off-peak parking spaces would be removed or potentially relocated to the other side of the street.
- Three off-peak loading spaces and two off-peak taxi stand spaces on Richmond would be removed or relocated.
- Fifty-eight off-peak parking spaces and 5 off-peak taxi stand spaces on Richmond, and 122 off-peak parking spaces and 11 off-peak loading spaces on Adelaide would remain.
- Forty-six off-peak parking spaces on Adelaide would be removed (20% of the off-peak parking spaces).
- A wide boulevard could be provided on Richmond and Adelaide from George to Sherbourne Streets. It could be a buffer in the roadway with planters and bicycle parking in the short-term, or the sidewalk / boulevard would be reconstructed in the long term and bicycle parking, street trees and planters added. Alternatively this could also be 24 hour parking. If so, it would add 19 new 24-hour parking spaces on Richmond and 22 new 24-hour parking spaces on Adelaide (41 new 24-hour spaces compared to the 46 off-peak spaces that would have to be removed elsewhere on Adelaide).
- Fire Station 382 is located on Adelaide St West opposite the cycle track. The EMS Station 40 is located on Richmond St East on the same side as the cycle track but the driveway exits onto Berti Street. Minimal impacts to EMS / Fire are anticipated.
- Film trucks used for crew will have to be parked on the left side of the street so that the stairs from the trailer do not interfere with the cycle track.
- Parking or making deliveries where permitted, on the right side of Richmond between Yonge and Sherbourne Streets adjacent to the cycle track could use the buffer area to enter / exit the vehicle but will have to cross the cycle track. Parking / loading on Adelaide is permitted generally on the left side opposite the cycle track.
- The cycle track at bus stops will have to be constructed at the same level as the sidewalk. Cyclists will have to stop for passengers crossing the cycle track to get on and off the bus.
- Construction lane closures and film truck permits will have to be co-ordinated so as to leave two travel lanes operational in the corridors.
- A break in the separator for the cycle track will be provided at all laneways, driveways, parking garage driveways and loading docks located on the right side of Richmond and Adelaide Streets (71 locations over the 6 km). Pavement markings and signage will alert cyclists and motorists to look out for each other.



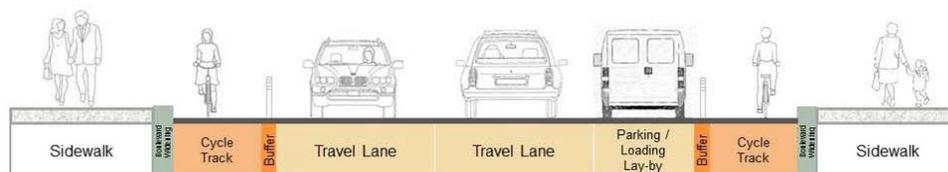
Peter Street

Recommended

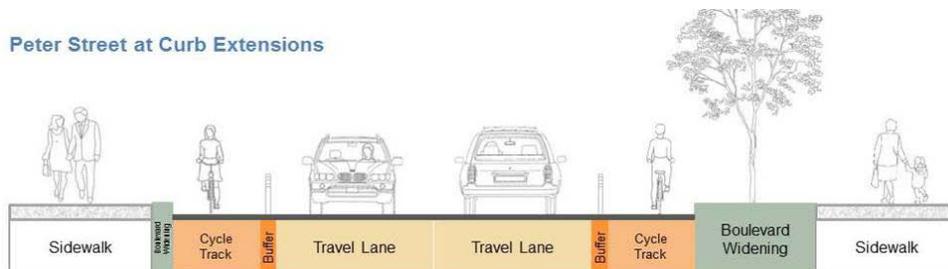
Option P2: A cycle track on each side of the street with one travel lane in each direction, reducing it from two travel lanes in each direction. Left-turn lanes would be provided at Queen, Richmond, Adelaide and Wellington Streets. Parking / loading lay-bys would be provided on one side of the street on the three blocks between Richmond and Wellington. The sidewalk / boulevard would be widened. Street trees and planters would be added at curb extensions on either side of parking lay-bys and near intersections.



Peter Street at Parking / Loading Lay-bys



Peter Street at Curb Extensions



Rationale

Cycle tracks that are safer and more comfortable for all road users can be provided while still providing opportunities for curb extensions with street trees, parking / loading lay-bys and future boulevard widening.

Option P1 (not recommended), bike lanes with wider boulevards and parking / loading lay-bys does not provide the same level of safety and comfort as cycle tracks. Although the wider boulevard would provide more space for street trees, additional street trees can still be provided in curb extensions and near parking lay-bys in Option P2.

Major Impacts

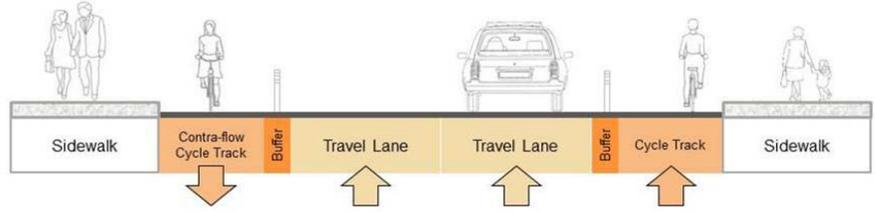
- Lose two travel lanes during peak traffic periods (these lanes are used for parking and loading during off-peak hours)
- Eighteen off-peak parking spaces between Queen and Wellington be removed and replaced by 14 spaces in parking / loading lay-bys
- Street trees could be provided in the nine curb extensions located along the three blocks from Queen to Wellington
- Bike lanes could be striped in the short-term and street trees and somewhat wider sidewalks constructed on a block-by-block basis as development occurs. This would allow development to be phase in over time, with the roadway ultimately being reconstructed with cycle tracks

Simcoe Street

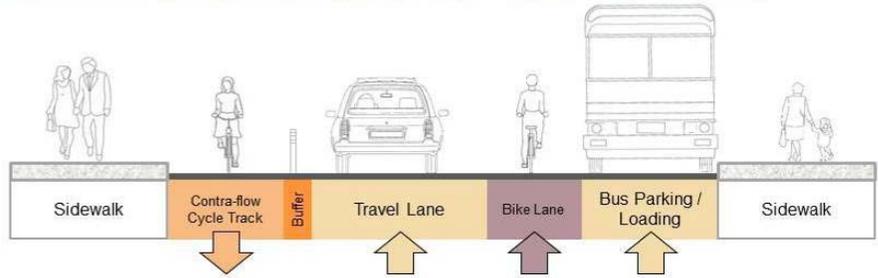
Recommended—Option S2:

Southbound a cycle track from Queen to King Street and a bike lane from King to Front Street, and northbound a contra-flow cycle track from Front to Richmond Street. The four, one-way travel lanes would be reduced to two travel lanes from Queen to King Street. One travel lane and a bus lay-by would be provided in front of Roy Thompson Hall from King to Wellington Street. Simcoe Street would be converted to two-way traffic operations from Wellington to Front Street. A 24 hour parking lane would be provided on Simcoe from Queen to Richmond Street and on half of the block from Wellington to Front Street.

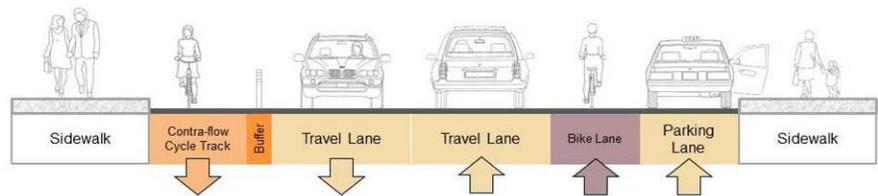
Simcoe Street, Richmond to King (One-Way)



Simcoe Street, King to Wellington (at Roy Thompson Hall – One-way)



Simcoe Street, Wellington to Front (Two-way)



Rationale

It allows a portion of Simcoe Street between Front Street and Wellington Street to be converted to two-way traffic operations, complementing the potential conversion of Wellington Street to two-way to off-load Front Street, under review by the Downtown Traffic Operations Study (DTOS). A cycle track on both sides of the street provides a buffer for pedestrians on both sides. It transitions easily to the bike lanes on Lower Simcoe Street. The southbound cycle track can be connected to Queen Street. A 24 hour bus parking / loading lay-by is provided, instead of bus loading / parking occurring in a travel lane.

Option S1 (not recommended), a bi-directional cycle track on the east side of Simcoe Street, does not fit well with the a portion of Simcoe Street between Front Street and Wellington Street to be converted to two-way traffic operations. Bus parking / loading would occur in a travel lane instead of a 24 hour bus lay-by. The transition to the bike lanes on Lower Simcoe Street would require a special design and a separate traffic signal phase for cyclists, adding delay to all travellers at Simcoe and Front Streets.



Sketch of cycle track on Simcoe Street, looking north, north of King Street

Major Impacts

- Lose two travel lanes during peak traffic periods (these lanes are used for parking and loading during off-peak hours)
- Add a 24 hour bus parking / layby in front of Roy Thompson Hall, but only one travel lane southbound can be provided at this location
- Convert traffic operations from one-way southbound to two-way between Wellington and Front Streets. This fits well with the recommendation from DTOS to convert Wellington Street to two-way traffic operations east of Simcoe Street to complement the changes to Front Street
- The roadway is too narrow to fit a cycle track over its full length. The cycle track that flows with traffic (southbound) would transition to a bike lane from King to Wellington Street
- The northbound, contra-flow cycle track would require new traffic signals and phasing for cyclists that are riding against traffic between Richmond and King
- Seven off-peak parking spaces between Queen and Richmond could become 24 hour parking; seven off-peak parking spaces between Adelaide and King would have to be removed; nine 24 hour parking or taxi spaces would be added south of Wellington

Design Details - Examples

Buffers and Separators

Various materials can be used to separate the cycle track from traffic lanes. Some can be installed easily, like flexible posts; others require the road to be reconstructed, like raised curbs and concrete median islands. A combination can be used along different sections of a cycle track.



Curbs, bollards & planters
(Ottawa ON)



Raised curb
(Sherbourne, North of Gerrard Street)



Mountable curb
(Sherbourne, South of Gerrard Street)



Concrete median islands with trees
(Montreal PQ)



Concrete median islands with trees and light posts
(Syracuse NY)

Buffers and Separators Continued...

Flexible posts



Mountable curb



Concrete median island



Planters



Curbs & bollards



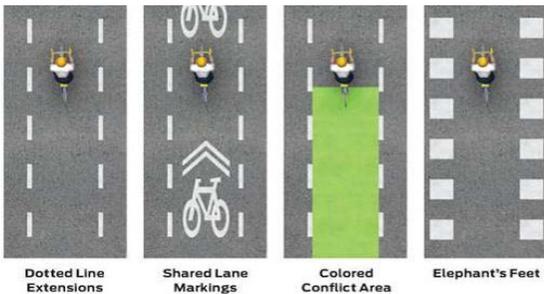
Intersections

Intersection treatments for cycle tracks are intended to lessen turning conflicts, reduce delays for all users of the road, and provide connections to intersecting bikeways. The cycle track provides a sense of comfort and safety segregated from travel lanes between intersections.

At intersections, there is a need to increase the visibility between motorists and cyclists, provide guidance on where they should be on the road to make their intended turn, and highlight areas where they need to watch out for each other.

Intersection treatments can include changes to the cycle track buffer / separator, pavement markings, signs and traffic signals.

Options for intersection crossing markings

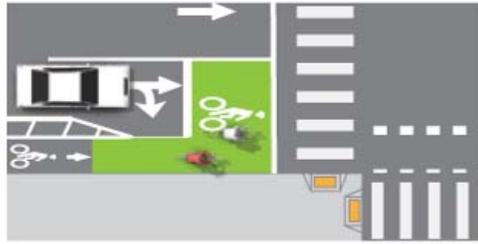


Two-stage turn queue box on Sherbourne helps cyclists make left turns



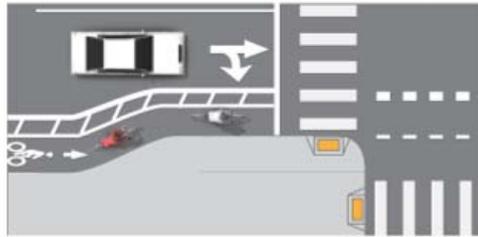
Sherbourne St. looking north at Shuter St.

Adjacent to Through/Right Turn Lane



Bike Lane/Bike Box

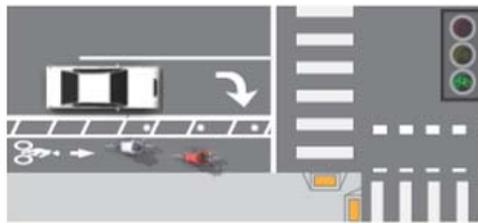
Positioning bicyclists ahead of automobiles helps prevent right-hook conflicts with turning vehicles at the start of the green indication.



"Bend In" Crossing

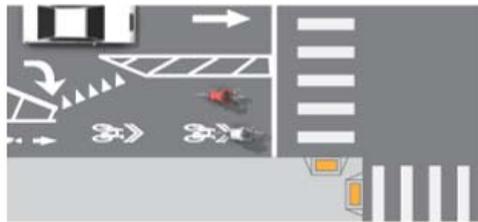
Using a curb extension or painted buffer, the cycle track should be bent-in toward the roadway to promote visibility of bicyclists in advance of the intersection.

Adjacent to Right Turn Only Lane



Bicycle Signal Phase

A dedicated bicycle signal phase can eliminate conflict between turning automobiles and bicyclists.



Mixing Zone

A combined bike lane/turn lane encourages motor vehicles and bicyclists to negotiate the space within the travel lane in advance of the intersection.



Through Bike Lane

Maintaining the bike lane to the left of a right turn-only-lane positions road users to avoid right-hook collisions.

Source: NACTO Urban Bikeway Design Guide at <http://nacto.org/cities-for-cycling/design-guide/>

Driveways

At every laneway, driveway, parking entrance / exit and loading dock along the corridors, breaks in the separator for the cycle track are made so motorists can cross it. Various types of signs and pavement markings are used to catch the attention of motorists and cyclists to look out for each other where their paths cross. This includes truck drivers who are making deliveries throughout the downtown.

The cycle tracks will provide a location where cyclists can be expected, so motorists will know where to look as they turn on and off the road, unlike today's conditions where cyclists ride in shared lanes wherever they can find space.



Sherbourne Street



Vancouver BC



Missoula MT



Cambridge MA

Bus Stops

Buses with low floors and accessibility ramps are designed to pull up to a barrier curb for passengers waiting on the sidewalk to get on and off the bus. The cycle track will be raised to sidewalk level. Cyclists will yield to passengers when the bus is at the stop. Passengers will cross the cycle track to get on and off the bus. This will be easier if the cycle track is uni-directional and has a wider buffer.



Study Process & Contact

This study is following a Municipal Class Environmental Assessment (Class EA) Schedule 'C' process, which includes identifying the problem/opportunity, developing and evaluating a reasonable range of alternative solutions, and providing opportunities for public input.

Schedule		Public and Stakeholder Consultation	
Spring/Summer 2013 Study Phase 1 Public Event #1	Identify the Problem / Opportunity		<p>We recognize and will work to engage with the many people and organizations who rely on these important streets:</p> <ul style="list-style-type: none"> • Cyclists • Pedestrians • Drivers • Local businesses • Residents • Taxi drivers • Delivery companies • Tourism and film industry • Property owners, managers and developers • City services, including TTC, emergency, waste management and road maintenance <p>We invite you to register as a stakeholder on the project web page.</p>
Fall 2013 Public Event #2 Study Phase 2	Recommend a Preferred Alternative (e.g. which streets to use, uni-directional and or bi-directional, which side of the street)		
Winter 2014 Study Phase 3 Public Event #3	Bikeway Design Alternatives (e.g. type of buffer or barrier, intersection treatments, changes to signals, etc.)		
Early 2014	City Council Endorsement of Design Final Report to Ministry of the Environment (30 Day Public Review) Preliminary Design for Construction		
No implementation budget has been approved, nor construction dates scheduled.			

Join the e-updates mailing list and register as a stakeholder at:

www.toronto.ca/cycling/richmond-adelaide

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*Send us your
comments*

