

Bloor Street Bike Lane
Design Feasibility Study and Pilot Project
Shaw Street to Avenue Road

Public Drop-in Event

Welcome

December 2, 2015
4 p.m. to 8 p.m.

These panels can be viewed online at
toronto.ca/bloorbikelanes



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BLOOR STREET BIKE LANE PILOT PROJECT (SHAW STREET – AVENUE ROAD)

DECEMBER 2, 2015

#1

Project Context, Goal and Scope

The City of Toronto is proposing a pilot project to install bike lanes on Bloor Street West between Shaw Street (east of Ossington Avenue) and Avenue Road.

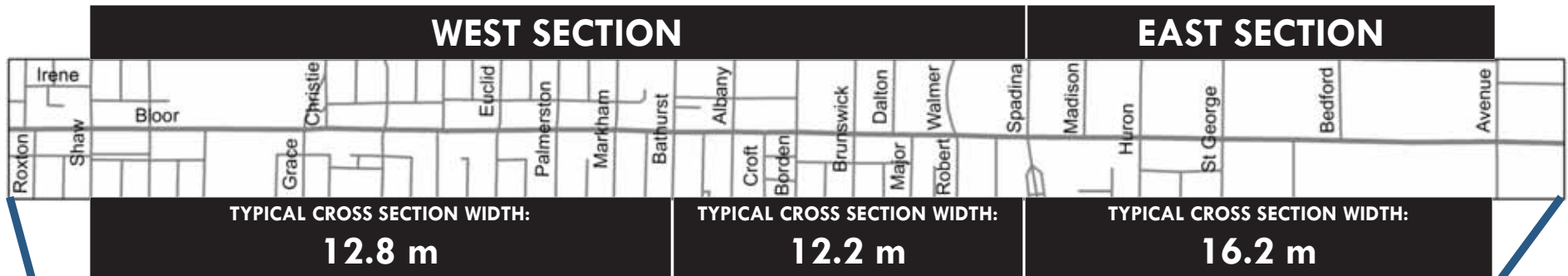
A pilot project will allow the City to demonstrate and study the impacts and benefits of bike lanes on Bloor Street. Various design options are being considered.

The outcomes of this project are intended to help guide the City with future projects along Bloor Street such as planned roadwork and a Major Corridor Study for bike lanes along a longer segment of Bloor Street.

The proposed pilot project would only involve the roadway area between the existing curbs and assumes that installation would not involve any significant reconstruction (i.e. temporary materials such as paint would be used).



Study Area Map



Source: City of Toronto 2014 Cycling Map

Project History – Council Decisions

As far back as 1992 the City has commissioned multiple studies that have reviewed the opportunity of bike lanes on Bloor Street.

In November 2013, City Council adopted recommendation PW26.5, directing Transportation Services to undertake a combined Bloor Street – Dupont Street Bikeway Environmental Assessment (E.A.) Study. That study was not initiated in 2014 as work was focused on other Council directed priorities for bikeway network development.

Due to recent changes by the Province to the Municipal Class E.A. process, implementing bicycle lanes on Bloor Street or Dupont Street would be considered a pre-approved project, therefore not subject to an E.A. Study.

In 2015, Transportation Services initiated this Bloor Street Bike Lane Design Feasibility Study currently underway. This study proposes the installation of a pilot project in the summer of 2016, subject to Council approval.



Why Bike Lanes on Bloor?

The City of Toronto Ten Year Cycling Network Plan currently under development has identified Bloor Street as a high priority through both cycling impact analysis and public consultation rankings.

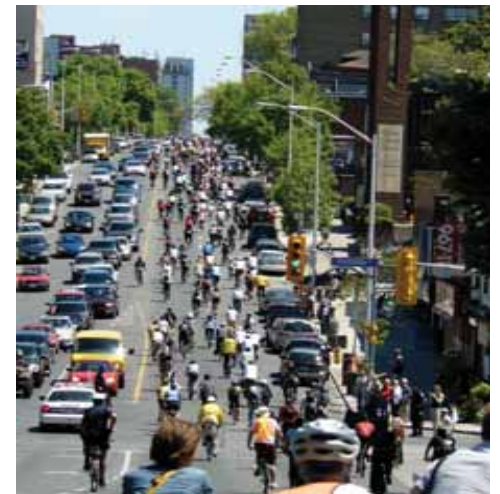
For many years there has been popular advocacy for bike lanes on Bloor Street from cyclists. More recently a growing number of local businesses have also shown support for these bike lanes.

A cycling facility on Bloor Street could be one of most significant bikeways in Toronto, given the length of the continuous corridor, relatively flat topography and absence of streetcar tracks.

The segment of Bloor Street between Shaw Street and Avenue Road includes important cycling network connectivity at Shaw Street, Montrose Avenue, Grace Street and St George Street.

With vibrant retail and commercial activity and constrained road width, this section will serve as an excellent case study for demonstrating the effects of bike lanes on Bloor Street where some parking and motor vehicle travel lanes will need to be removed.

Over **3,000**
cyclists per day use
Bloor Street between
Bathurst Street and
Spadina Avenue
(City of Toronto count:
August, 2015)



Bike Lane Advocacy Parade

Opportunities

Public Engagement: Develop and implement a pilot bike lane project that engages residents, businesses and other stakeholders in the design and evaluation process.

Improve Safety: Reduce risk for all road users by providing designated space for cyclists.

Encourage Cycling: Making cycling a more comfortable experience in order to encourage more people to travel by bicycle and reduce long term city traffic congestion and transportation related emissions.

Inform Future Projects: Measure outcomes of the project to help guide the City with future projects along Bloor Street including:

- Planned roadwork; and
- A Major Corridor Study to be initiated in 2016 for bike lanes between Keele Street and Sherbourne Street along sections of Bloor Street and/or Dupont Street.



Constraints

Limited Space and Competing Uses: The roadway width is very limited given the pedestrian, cycling, transit, motor vehicle, road operations, emergency services and commercial demands along the corridor.

Reduced Parking: Any option for bike lanes on Bloor Street will have some impact on vehicle parking supply. Some options would maintain parking on one side of the street.

Motor Vehicle Traffic Delay: Any option to introduce bike lanes on Bloor Street will involve a reduction in the number of motor vehicle travel lanes during the peak periods and will likely result in travel time delay during the morning and evening "rush hour". Providing dedicated turn lanes at intersections and changes to traffic signal timing could help to reduce these impacts.



Parking Considerations

Changes to Parking from the Pilot Project

Reduction in the number of on-street parking spaces.

Added pressure to the off-street parking lots and surrounding on-street parking.

Increased hours of operation of on-street parking spaces (currently, parking is only permitted outside of the weekday morning and afternoon peak periods).



Opportunities for Reducing Impacts on Parking

SHORT TERM:

Explore additional on-street parking opportunities on side streets.

Optimize usage & rates at current Green P lots.

MEDIUM TERM:

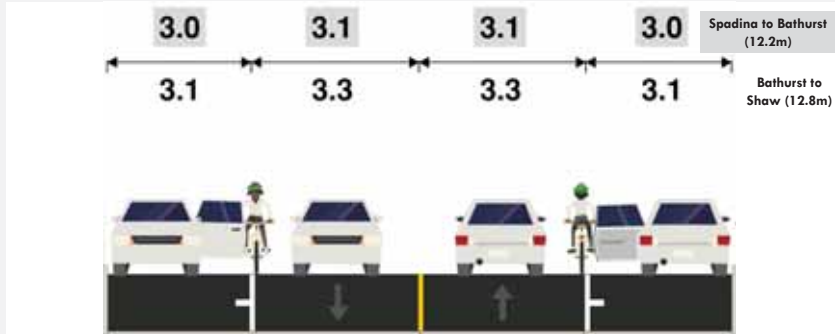
The Toronto Parking Authority would review opportunities to enter into off-street management contracts for additional short-term parking spaces.

LONG TERM:

Create more off-street parking opportunities in new developments in partnership with the Toronto Parking Authority.

Existing Roadway

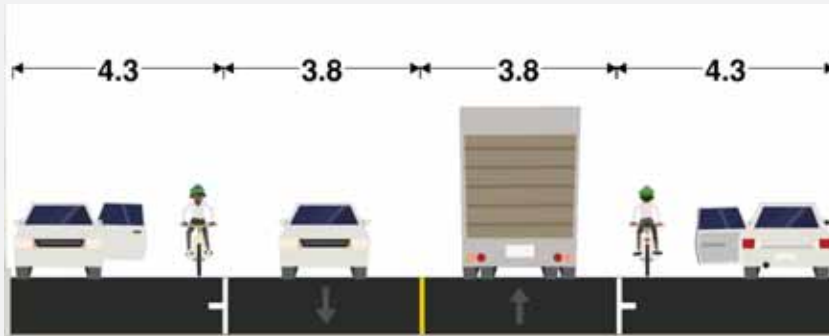
WEST of Spadina



- Roadway is between 12.2–12.8m wide
- 2 combined through / parking lanes
- No dedicated turn lanes
- No dedicated bicycle lanes



EAST of Spadina

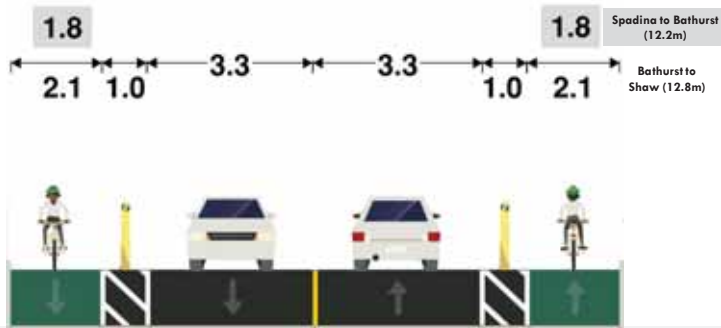


- Roadway is 16.2m wide
- Existing 2 combined through / parking lanes
- Left turn lanes at intersections
- No dedicated bicycle lanes



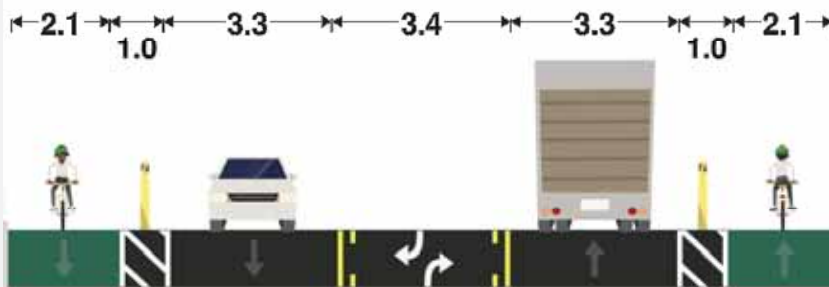
Option A – No Parking

WEST of Spadina



- No parking lanes
- 1.8–2.1 m buffered bicycle lanes in both directions
- Wide 1.0m buffer (bollards where feasible)

EAST of Spadina

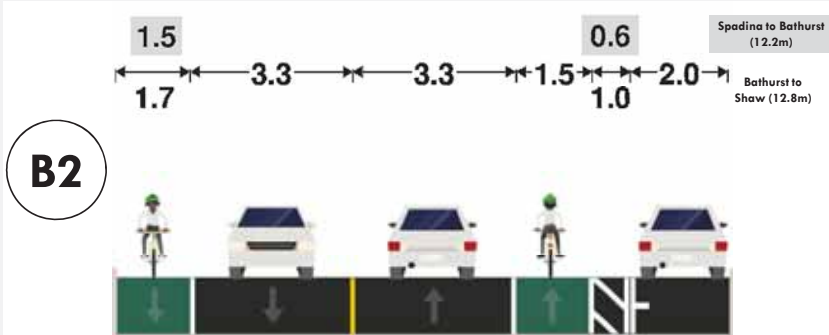
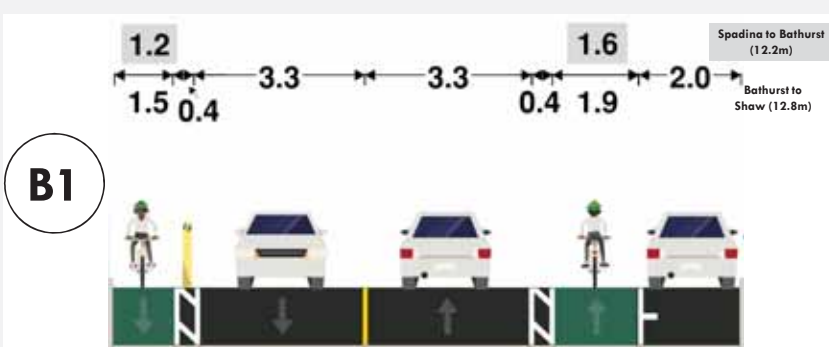


- No parking lanes
- Continuous centre left turn lanes
- Buffered bicycle lanes in both directions
- Wide 1.0m buffer (bollards where feasible)

Design not carried forward due to lack of parking and loading

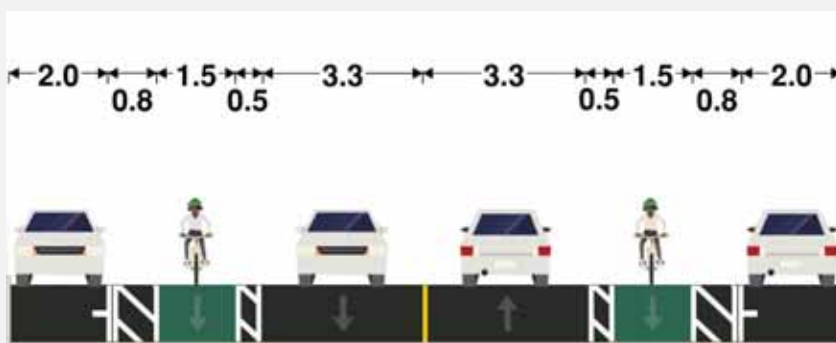
Option B – Parking Curbside

WEST of Spadina



- 1 parking lane, which could be located on the same side of the street for the entire corridor or alternate between both sides of the street
- **B1** – Bicycle lanes with a narrow buffer in both directions (may include bollards in one direction where feasible); no buffer located in door zone
- **B2** – Conventional bicycle lanes in both directions with a buffer in the door zone

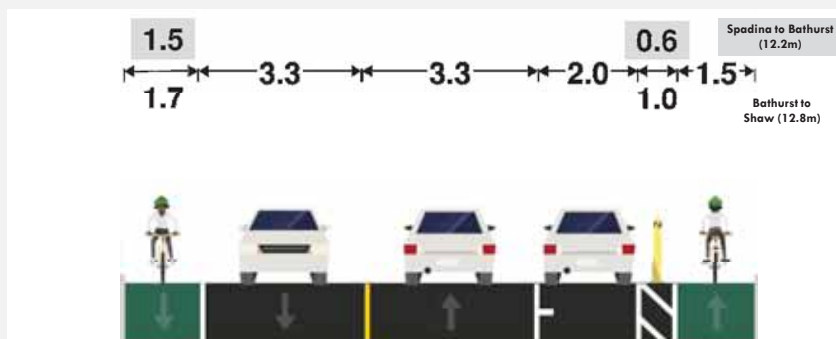
EAST of Spadina



- 2 parking lanes (one on each side of the street)
- Buffered bicycle lanes in both directions (buffered from traffic lanes and door zone)

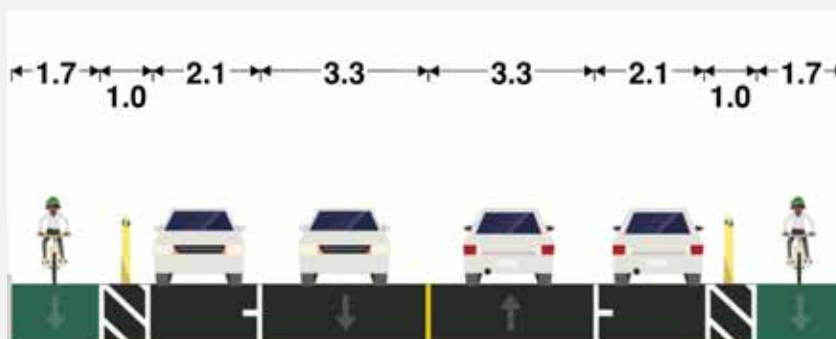
Option C – Bike Lane Curbside

WEST of Spadina



- 1 parking lane, which could be located on the same side of the street for the entire corridor or alternate between both sides of the street
- Conventional bicycle lane in one direction with a bicycle lane buffered by a parking lane in the other direction
- Buffer in the door zone (bollards where feasible)

EAST of Spadina



- 2 parking lanes
- Bicycle lanes buffered by parking in both directions
- Buffer in the door zone (bollards where feasible)

Option – Alternate Parking by Side of Street

Locating parking on alternating sides of the street is a more equitable approach to businesses and residents and provides drivers with potential parking in either direction.



Locating parking on the same side of the street provides for motor vehicle traffic lanes and bike lanes that are as straight as possible which improves road user expectations.



Design Evaluation Criteria (1/3)

Separation between cyclists and motor vehicle traffic lane

- Relative degree of separation based on the existence and location of a buffer zone
- Separation techniques under consideration include pavement markings, flex bollards, pre-cast concrete curbs and planters

Separation between cyclists and parked vehicles (dooring)

- Existence, location and width of buffer in relation to parking

Level of interaction between parking motorists and cyclists

- Location of bike lane and buffer in relation to parking

Reduce conflicts between turning motorists and cyclists

- Awareness and visibility of cyclists approaching intersections; visibility for motorists entering from side streets

Opportunities to improve the pedestrian environment

- Greater separation of sidewalk zone from active traffic; pedestrian crossing risks

Opportunities to improve the streetscape

- Opportunities to implement parklets or bike corrals; use of planters in the buffer zone



Design Evaluation Criteria (2/3)

Impact to vehicle parking supply

- Based on analysis of inventory of on-street parking, Green P lots, private lots, and parking on side streets

Impact to vehicle parking times

- Based on analysis of duration of on-street parking, Green P lots, private lots, and parking on side streets

Accommodation of loading and deliveries

- Flexibility of the pilot to provide for loading zones

Impact to transit operations

- Potential access for night time buses to curbside bus stop locations, primarily at key intersections



Design Evaluation Criteria (3/3)

Accommodation of waste / recycling collection

- Anticipated road space available for normal waste operations, and conflicts with parked vehicles

Accommodation of Wheel-Trans boarding

- Compatibility of road side design and operation with Wheel-Trans access to curbside or parking area

Impact on snow clearing / street sweeping

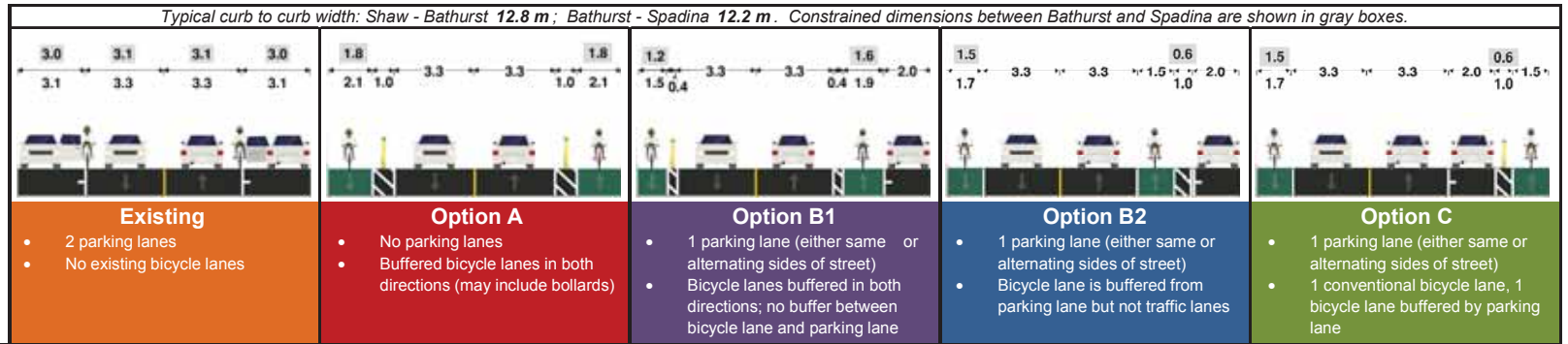
- Level of effort associated with maintenance (e.g. required equipment, available space for snow storage)

Impact to emergency services

- Width of road available for general traffic to pull to the side; access to curbs for emergency vehicles



Draft Evaluation (WEST of Spadina)

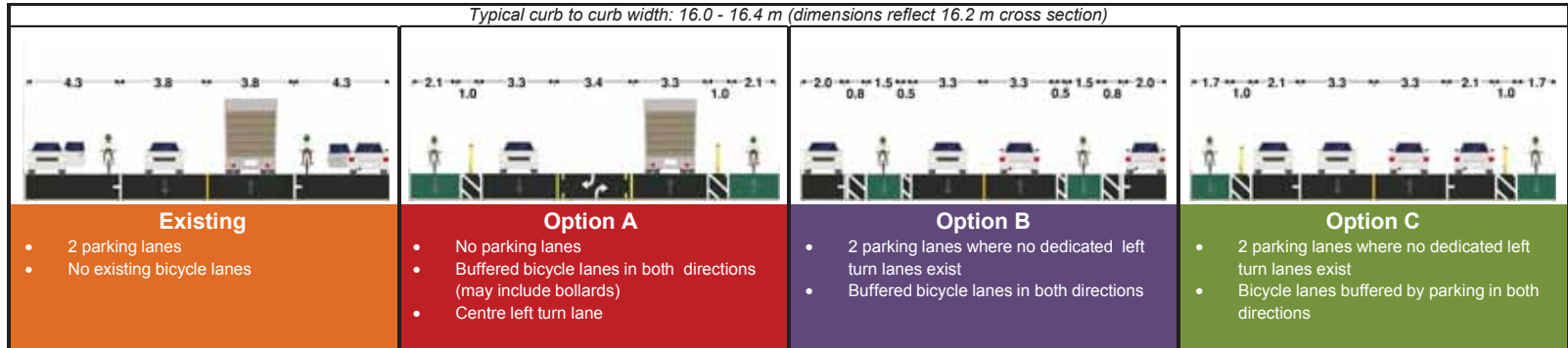


Criteria		Comments	Draft Evaluation	Comments	Draft Evaluation	Comments	Draft Evaluation	Comments	Draft Evaluation	Comments
Safety: Reduce Risk Exposure to All Road Users	Separation between cyclists and motor vehicle traffic lane	None	●	Wide buffer both sides	◐	Buffers both sides	◑	No buffer	◒	Full separation one side
	Separation between cyclists and parked vehicles (dooing)	None	●	No parking	◐	No buffer on one side	◑	Wide buffer on driver side	◒	Wide buffer on passenger side
	Level of interaction between parking motorists and cyclists	Motorists must cross cyclist path to park	●	No friction	◐	Bike lane makes motorists aware of crossing cyclists path	◑	Bike lane makes motorists aware of crossing cyclists path	◒	No interaction
	Reduce conflicts between turning motorists and cyclists	Parking reduces sightlines on both sides; no guidance for turning manoeuvres	◐	Full visibility of cyclists; opportunity to guide turning motorists (signage)	◑	Improved visibility of cyclists on one side; opportunity to guide turning motorists (signage)	◒	Improved visibility of cyclists on one side; opportunity to guide turning motorists (signage)	◓	Side st. motorists edge into bike lane for sight line; cyclists not visible behind parking
	Opportunities to improve pedestrian environment	During peak hours not buffered from traffic	●	Sidewalk buffered from traffic. Buffers provide landing areas for pedestrians crossing	◐	Sidewalk buffered from traffic. Buffers provide landing areas for pedestrians crossing	◑	Sidewalk buffered from traffic	◒	Sidewalk buffered from traffic
	Opportunities to improve streetscape	Rush hour restrictions limits opportunities to use parking zone	◐	Potential use of planters in buffer zone	◑	Potential use parking zone on one side	◒	Potential use parking zone on one side	◓	Potential use of planters in buffer zone
Road Operations / Parking	Impact to vehicle parking supply	127 spaces north side 91 spaces south side. Rush hour restrictions	◓	No parking on Bloor	◑	Parking on one side of Bloor	◒	Parking on one side of Bloor	◓	Parking on one side of Bloor
	Impact to vehicle parking times	Rush hour parking restrictions	◓	No parking on Bloor	●	Parking available all day	●	Parking available all day	●	Parking available all day
	Accommodation of loading and deliveries	Some loading via laneways. No current loading zones on Bloor	◓	No on-street loading zones	◑	Loading could be accommodated on one side	◒	Loading could be accommodated on one side	◓	Loading could be accommodated one side, have to cross bike lane
	Impact to transit operations	Night time bus stops at key intersections. Shuttle bus service during subway closures	◑	Night time bus stops at key intersections	◑	Night time bus stops at key intersections	◒	Night time bus stops at key intersections	◒	Night time bus stops at key intersections
	Accommodation of waste / recycling collection	Bins collected weekly (8:45pm-6:45am). Need to work around parked vehicles	◑	Access to curb over the bollards	◑	Access to curb on one side	◒	Access to curb on one side	◓	Access to curb on one side, block traffic for service next to parking
	Accommodation of Wheel-Trans boarding	Parking can limit boarding opportunities	◑	Stopping for boarding permitted in bike lane - curbside loading	◑	Stopping permitted in bike lane - curbside loading one side only	◒	Stopping permitted in bike lane - curbside loading one side only	◓	Stopping for boarding out of traffic flow one side only
	Impact on snow clearing / street sweeping	Need to work around parked vehicles	◑	Separate schedule for both sides with bike lanes with bollards	◑	Separate schedule for bike lane with bollards	◒	Cleared with rest of roadway	◒	Separate schedule for protected bike lane
	Impact to emergency services	Parked cars limit width of road for passing and obstruct access to curb	●	Motorists can pull to the side; clear access to curb	◑	More width of road for passing; access to one side	◒	More width of road for passing; access to one side	◓	Reduced road width; curbside access on one side
Carried Forward			NO	YES (see aerial view plan)	YES	YES (see aerial view plan)				



Draft Evaluation (EAST of Spadina)

Typical curb to curb width: 16.0 - 16.4 m (dimensions reflect 16.2 m cross section)



Criteria		Comments	Draft Evaluation	Comments	Draft Evaluation	Comments	Draft Evaluation	Comments
Safety: Reduce Risk Exposure to All Road Users	Separation between cyclists and motor vehicle traffic lane	None	☐	Wide buffer both sides	☐	Buffers both sides	●	Full separation both sides
	Separation between cyclists and parked vehicles (dooring)	None	●	No parking	☐	Wide buffer on both sides	●	Full separation both sides
	Level of interaction between parking motorists and cyclists	Motorists must cross cyclist path to park	●	No friction	☐	Bike lane makes motorists aware of crossing cyclists path	●	No interaction
	Reduce conflicts between turning motorists and cyclists	Parking reduces sightlines on both sides; no guidance for turning manoeuvres	☐	Full visibility of cyclists on both sides; opportunity to guide turning motorists	☐	Improved visibility of cyclists on both sides; opportunity to guide turning motorists	☐	Side st. motorists edge into bike lane for sight line; cyclists not visible behind parking
	Opportunities to improve pedestrian environment	During peak hours not buffered from traffic	●	Sidewalk buffered from traffic. Buffers provide landing areas for pedestrians crossing	☐	Sidewalk buffered from traffic. Buffers provide landing areas for pedestrians crossing	☐	Sidewalk buffered from traffic. Buffers provide landing areas for pedestrians crossing
	Opportunities to improve streetscape	Rush hour restrictions limits opportunities to use parking zone	☐	Potential use of planters in buffer zones	●	Potential use parking zone on both sides	☐	Sidewalk zone buffered; potential use of buffer
Road Operations / Parking	Impact to vehicle parking supply	34 spaces north side 25 spaces south side. Rush hour restrictions	○	No parking on Bloor	●	No impact	●	No impact
	Impact to vehicle parking times	Rush hour parking restrictions	○	No parking on Bloor	●	Parking available all day	●	Parking available all day
	Accommodation of loading and deliveries	Some loading via laneways. No current loading zones on Bloor	○	No on-street loading zones	☐	Loading could be accommodated on both sides	☐	Loading could be accommodated both sides, have to cross bike lane
	Impact to transit operations	Night time bus stops at key intersections. Shuttle bus service during subway closures	☐	Night time bus stops at key intersections	☐	Night time bus stops at key intersections	☐	Night time bus stops at key intersections
	Accommodation of waste / recycling collection	Bins collected weekly (8:45pm-6:45am). Need to work around parked vehicles	☐	Access to curb over the bollards	☐	Need to work around parked vehicles	☐	Conflict with parked vehicles, block traffic for service next to parking
	Accommodation of Wheel-Trans boarding	Parking can limit boarding opportunities	☐	Stopping for boarding permitted in bike lane	☐	Stopping for boarding permitted in bike lane but parking limits boarding opportunities	☐	Parking can limit boarding opportunities - would block travel lane when boarding
	Impact on snow clearing / street sweeping	Need to work around parked vehicles	☐	Separate schedule for both sides with bike lanes with bollards	☐	Cleared with rest of roadway	☐	Separate schedule for both sides with bike lanes with bollards
	Impact to emergency services	Reasonable road width for passing	●	Motorists can pull to the side; clear access to curbs	☐	Reasonable road width for passing, no curbside access	○	Insufficient width for emergency vehicles to pass (will require hybrid design)
Carried Forward				NO		YES (see aerial view plan)		YES (see aerial view plan)

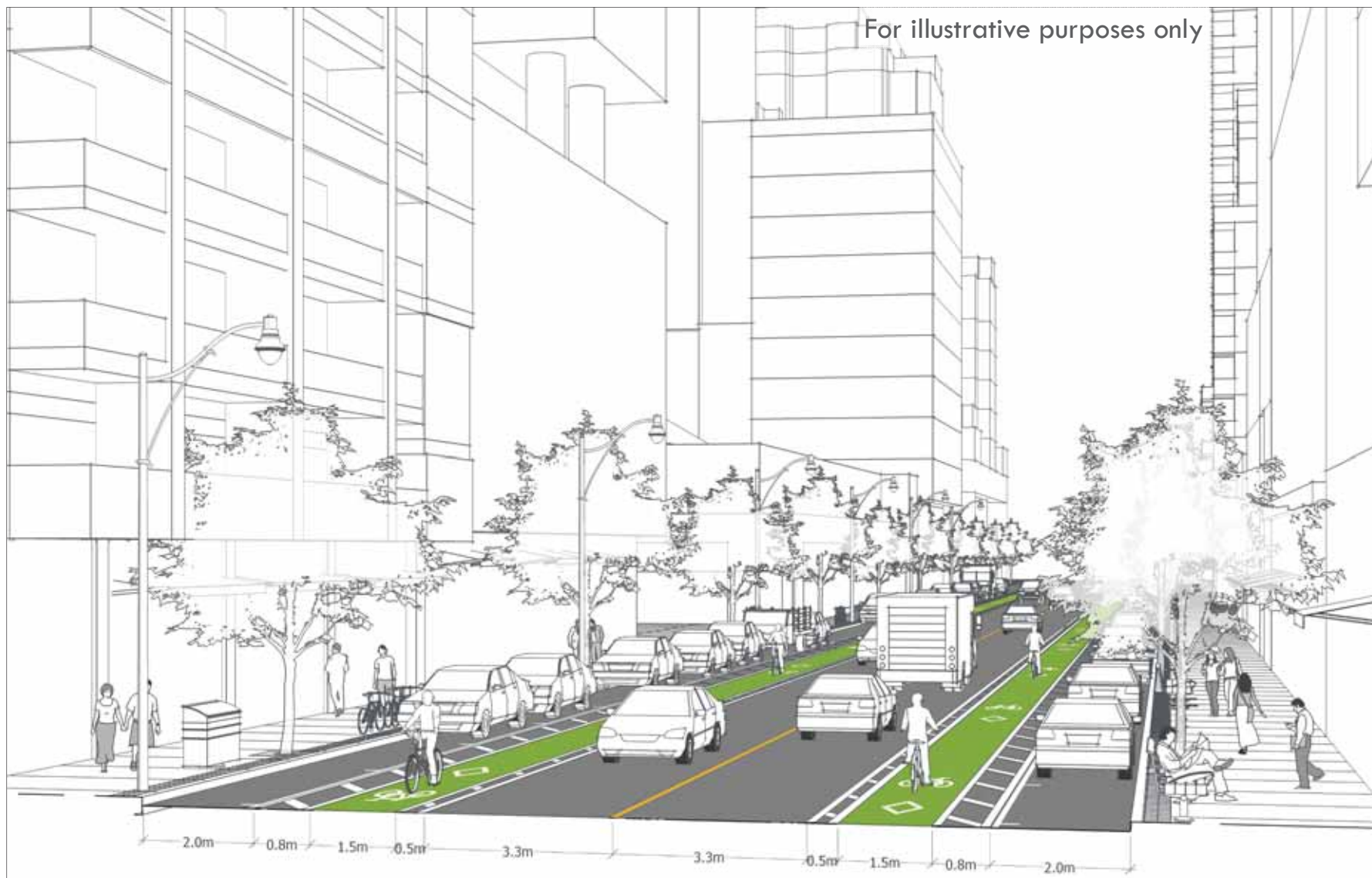


West - Option B1 Parking Curbside

For illustrative purposes only

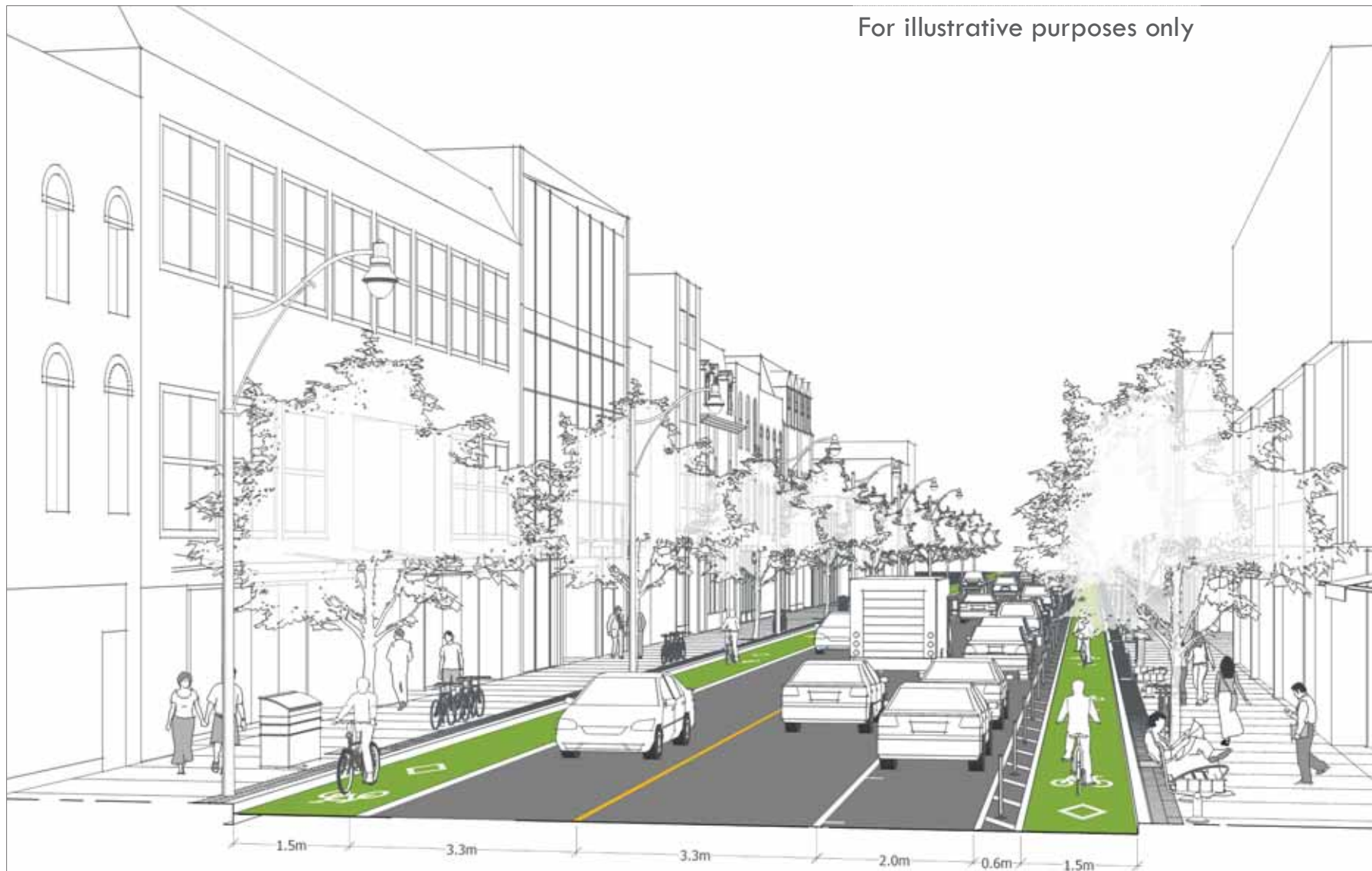


East - Option B Parking Curbside

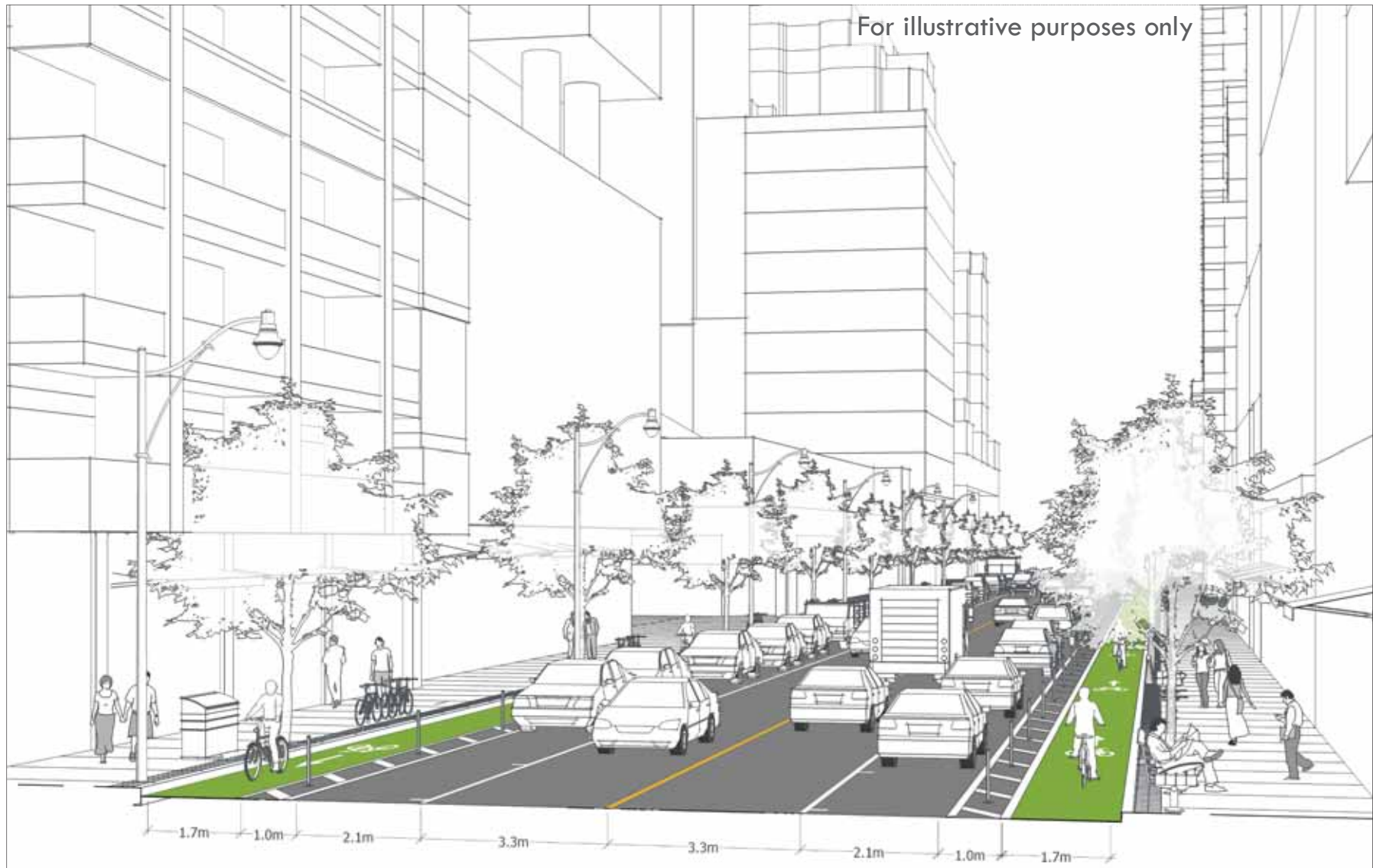


West - Option C Bike Lane Curbside

For illustrative purposes only



East - Option C Bike Lane Curbside



Pilot Project Evaluation

Performance of the pilot project would be evaluated in the following areas:

Effect on the cycling environment

- Cyclist volume counts
- Stated preference survey ratings on safety and comfort

Effect on the motoring environment

- Motor vehicle volume, travel time / delay
- Motorized and non-motorized traffic mode share

Public Consultation

- Level of support and feedback from the public and businesses through online surveys and engagement with key stakeholders



Results of the performance evaluation would be included in a report to Council recommending if the pilot bike lanes should be maintained, modified, or removed.

Next Steps & How to Get Involved

Next Steps

- Ongoing: Consultation with local businesses and resident associations
- Winter 2015/2016: Determine a preferred design option, develop detailed design and costing
- Spring 2016: Second public consultation event and online survey
- Spring 2016: Report to Council on proposed pilot project design and timing
- Summer 2016: Installation of pilot project, subject to Council approval

Provide Your Feedback Now!

Complete the online survey by December 17 (mobile friendly). Paper versions available at the registration table. Subscribe to the email list for project updates.

toronto.ca/bloorbikelanes

Contact

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