

# HALIFAX

## **South Park Street Bicycle Lane Improvement and Extension**

Public Engagement Session  
Halifax Central Library

January 31, 2017

**#hfxbikelanes**

# Agenda

- |                   |   |
|-------------------|---|
| 6:30 pm – 7:00 pm | Browse display boards                       |
| 7:00 pm – 7:30 pm | Presentation                                |
| 7:30 pm – 7:40 pm | Q&A   |
| 7:40 pm – 7:45 pm | Intro to small group discussions            |
| 7:45 pm – 8:20 pm | Small group discussions                     |
| 8:20 pm – 8:30 pm | Highlights from group discussions & wrap up |

# Planning Process to Date

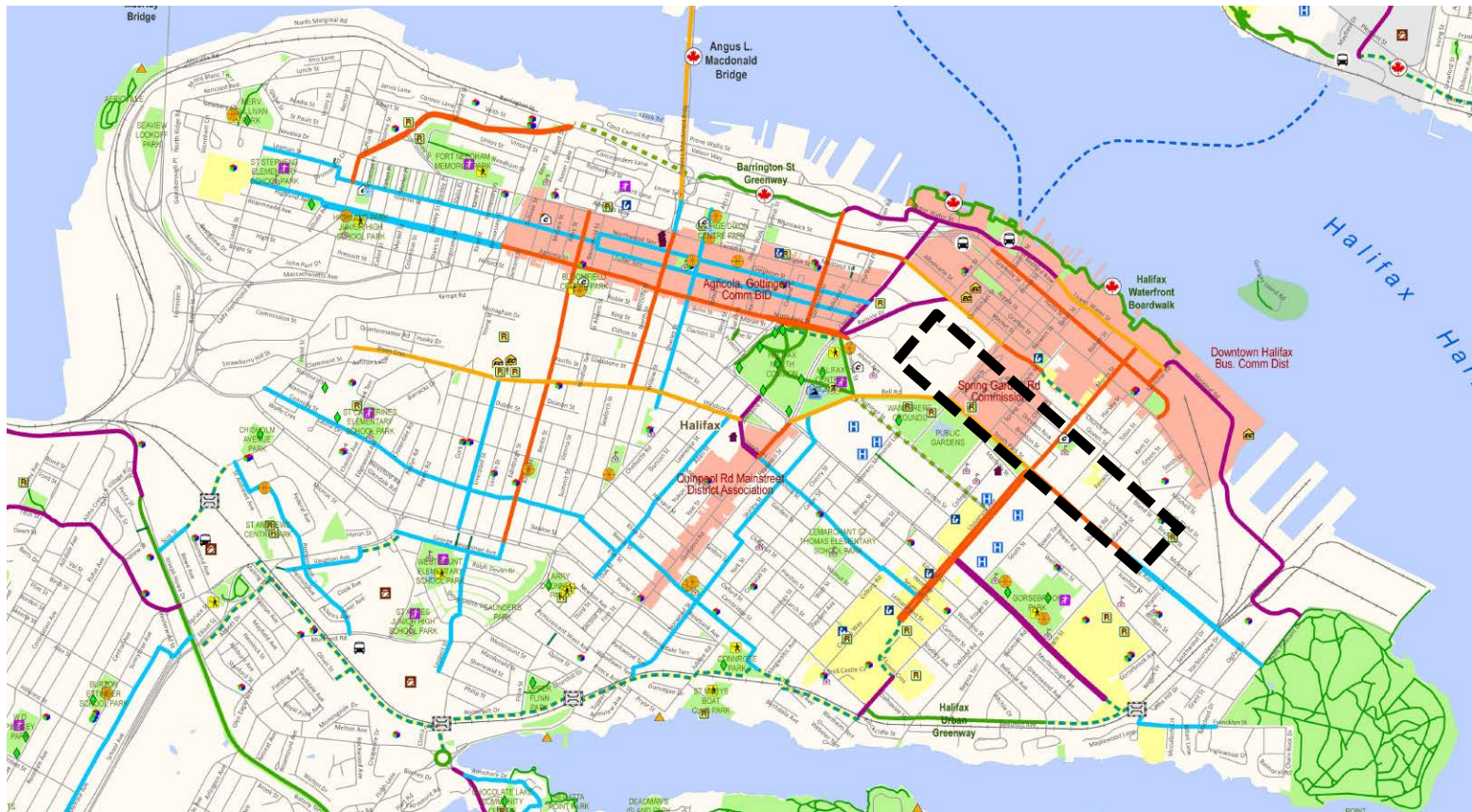
- Presented at Public Open House in April 2016:
  - Enhanced Painted Bicycle Lanes (functional design)
  - Parking Protected Bicycle Lanes (concept)
  - May 2015 parking study
- Since April 2016 Open House:
  - Functional Design of Parking Protected Option
  - Concept for an off-street variation (Sackville Street to University Avenue)
  - October 2016 parking study

# Why this Project Now?

- Halifax's Active Transportation Priorities Plan
  - South Park is a designated bicycle route
  - Focus on “Regional Centre”
  - Bike lanes for “All Ages and Abilities”
- Halifax Regional Plan Policy
  - Objective to “design complete streets for all ages, abilities, and modes of travel.”
- Integrated Mobility Plan
  - South Park part of proposed “minimum grid” bicycle network for all ages & abilities on the Halifax peninsula by 2020
- Street repaving provides opportunity for integration

# AT Priorities Plan Context

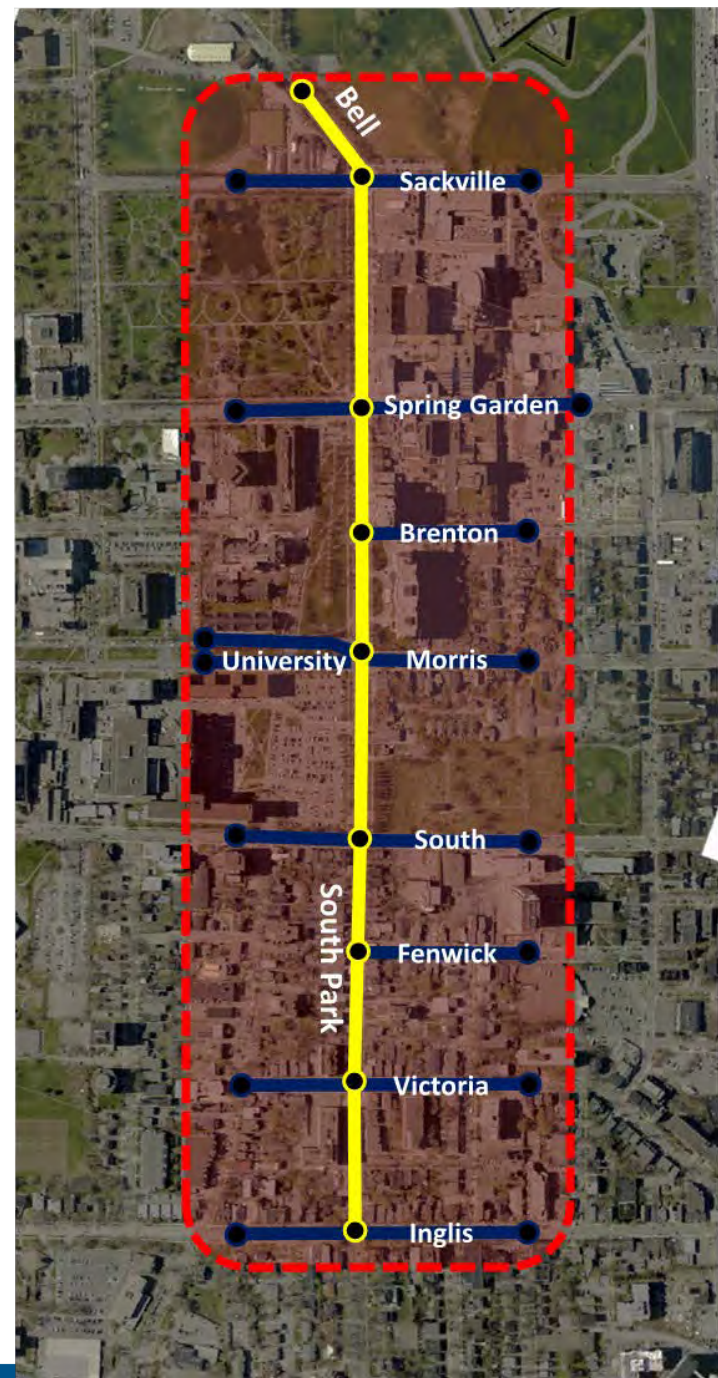
Map 2C: Candidate Bicycle Routes and Greenway Network: Halifax and Area



# Planning Project Objectives

1. Explore opportunities to make bike lanes safer based on “best practice” design guidance
  - Improve continuity at intersections
  - Increase separation from vehicles
2. Extend bike lanes south to Inglis Street
3. Understand the implications to, and continue to accommodate, other street functions
  - i.e., pedestrians, transit, car & truck traffic, on-street parking, loading, trees
4. Submit updated plans to Regional Council for approval (spring 2017)

# Study Area



# Project Objectives

Sackville

Spring Garden

Brenton

University

Morris

South

Fenwick

Victoria

Inglis



Enhance Existing Bike Lanes



Improve Continuity at Intersections

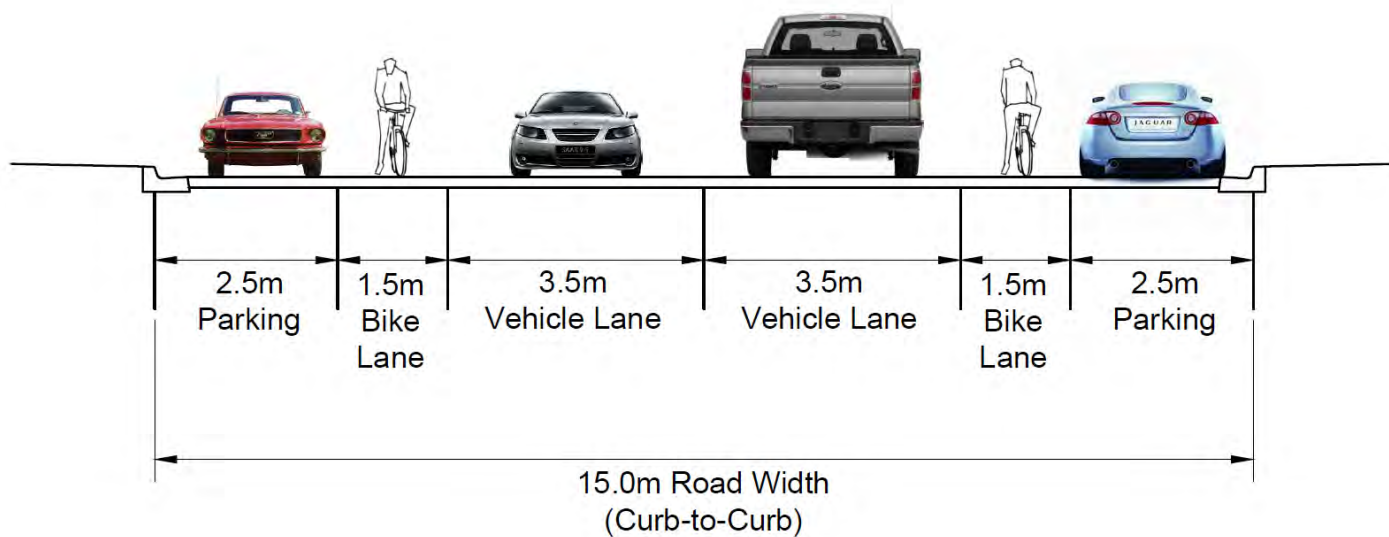
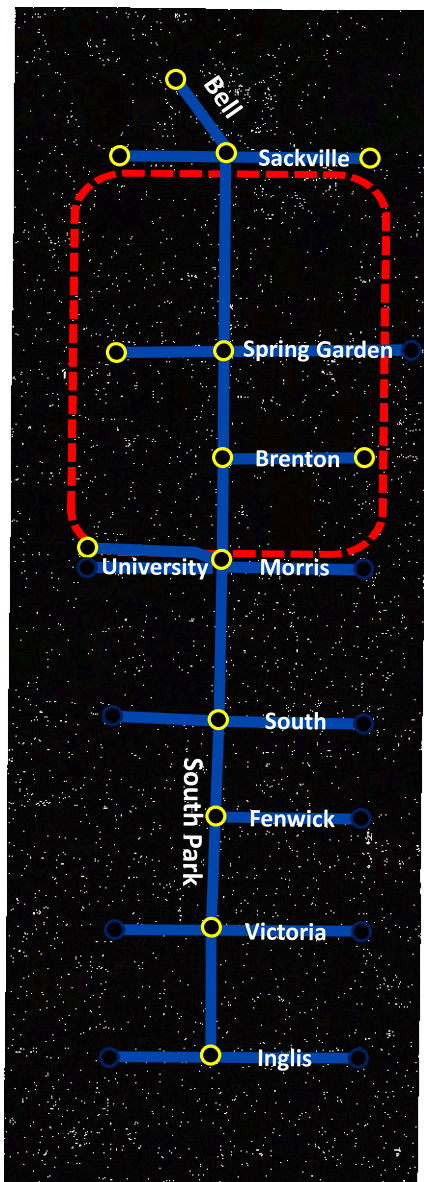


Extension South to Inglis Street

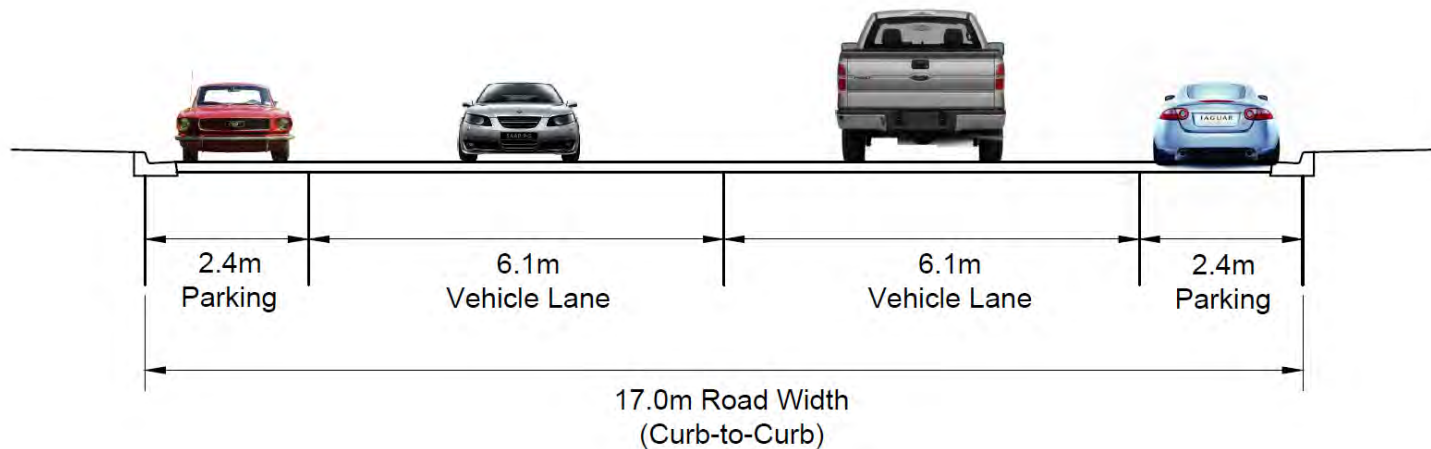
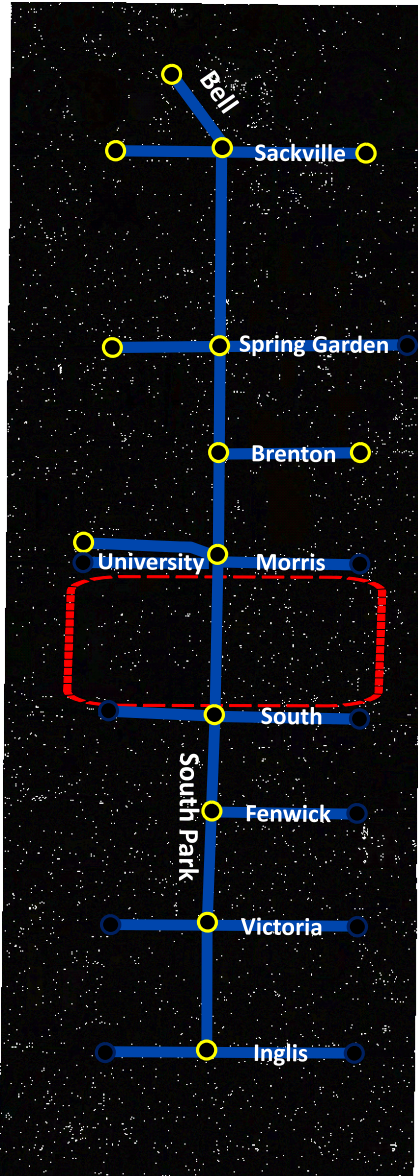


# Existing Conditions

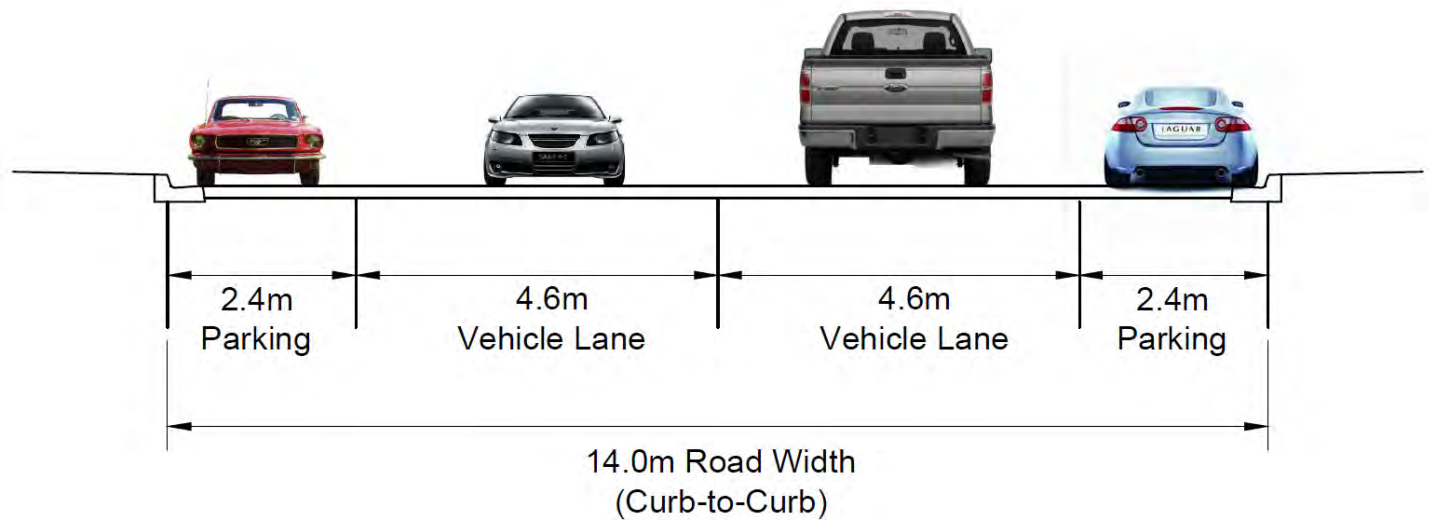
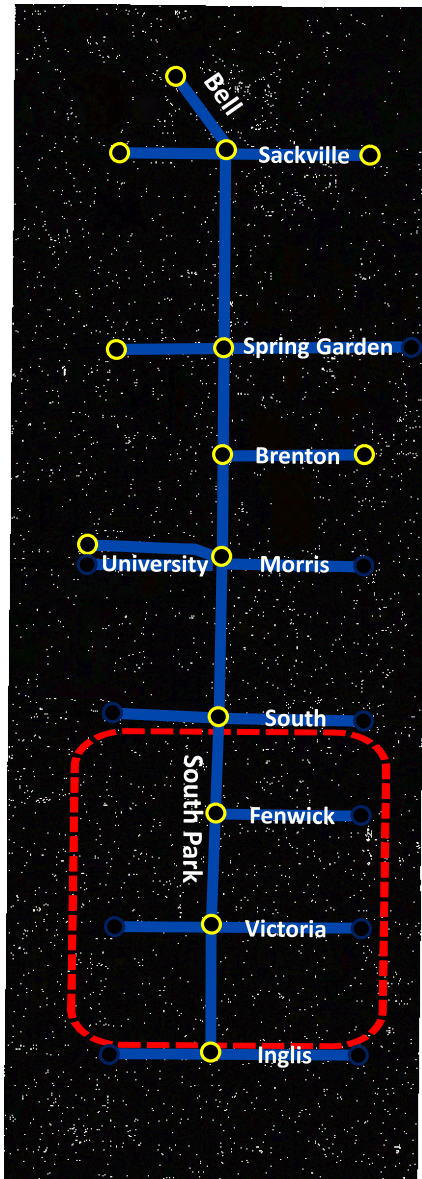
# 1. Sackville Street to University Avenue



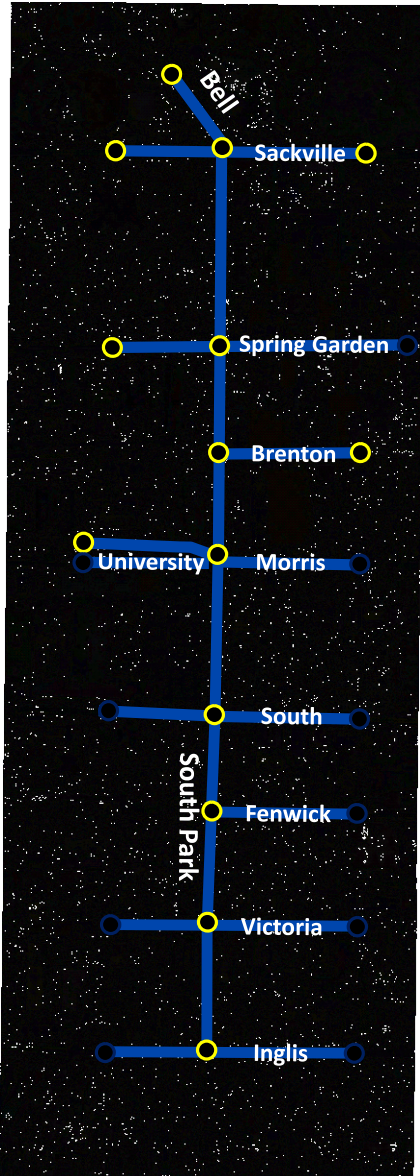
# 2. University Avenue to South Street



# 3. South Street to Inglis Street

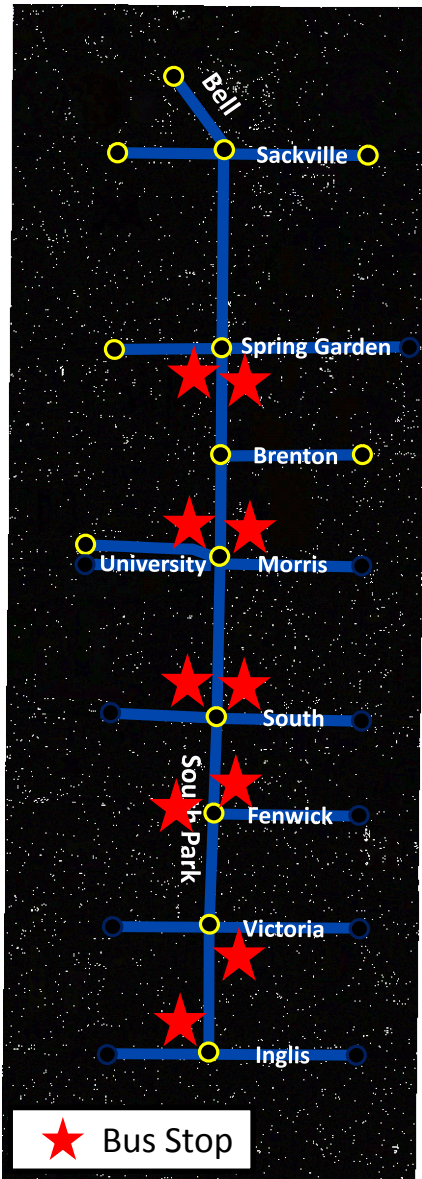


# Existing Conditions



- **Average Daily Traffic Volume**
  - North of South Street: 9,500 vehicles per day
  - South of South Street: 6,500 vehicles per day
- **Traffic Speeds: August 12 – 15, 2016 (near Fenwick Street):**
  - Average Speed: 41km/h
  - 85<sup>th</sup> Percentile Speed: 51km/h
- **Cycling Volumes: South Park Street @ Sackville Street**
  - 2016 AM Peak Hour – 70 Cyclists
  - 2016 PM Peak Hour – 100 Cyclists

# Existing Conditions



- **Halifax Transit**

- **Southbound:**

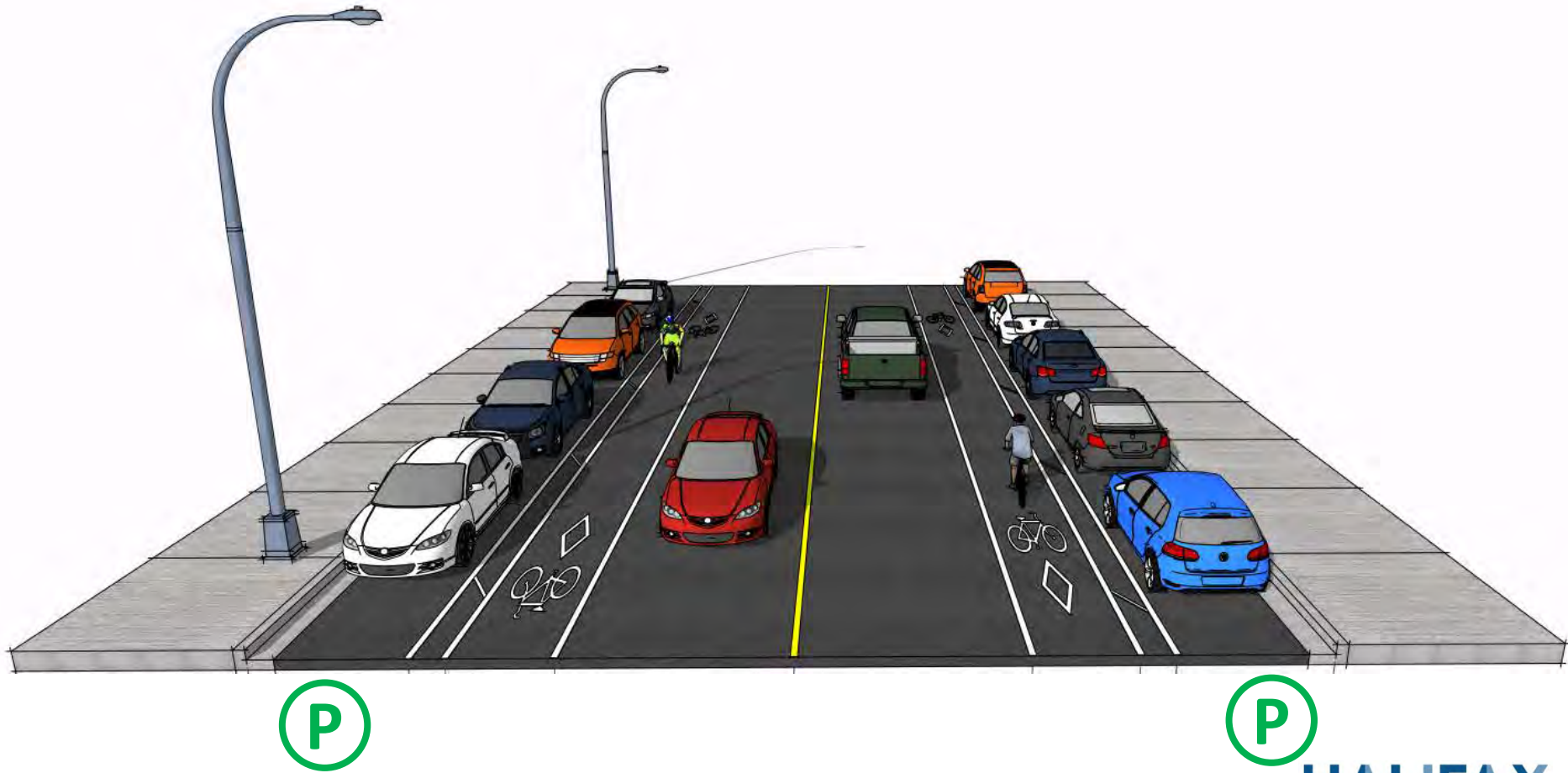
- ❖ 4 Routes (10, 14, 17, 18)
    - ❖ 20 Peak trips per hour
    - ❖ 5 Stops
    - ❖ >1,500 boarding/ alighting per hour

- **Northbound:**

- ❖ 2 Routes (10, 14)
    - ❖ 13 Peak trips per hour
    - ❖ 5 Stops
    - ❖ >1,000 boarding/ alighting per hour

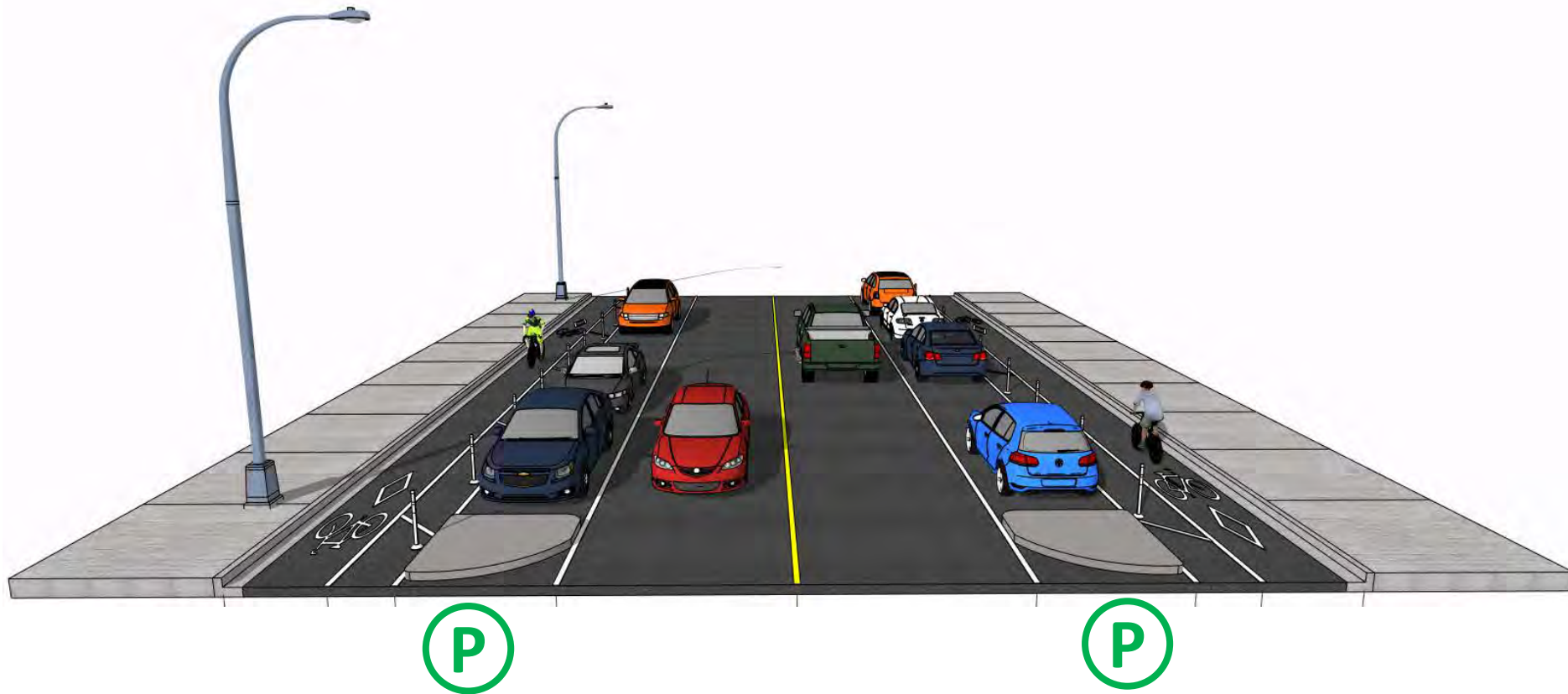
# Design Options

# Option 1: Buffered Bike Lanes



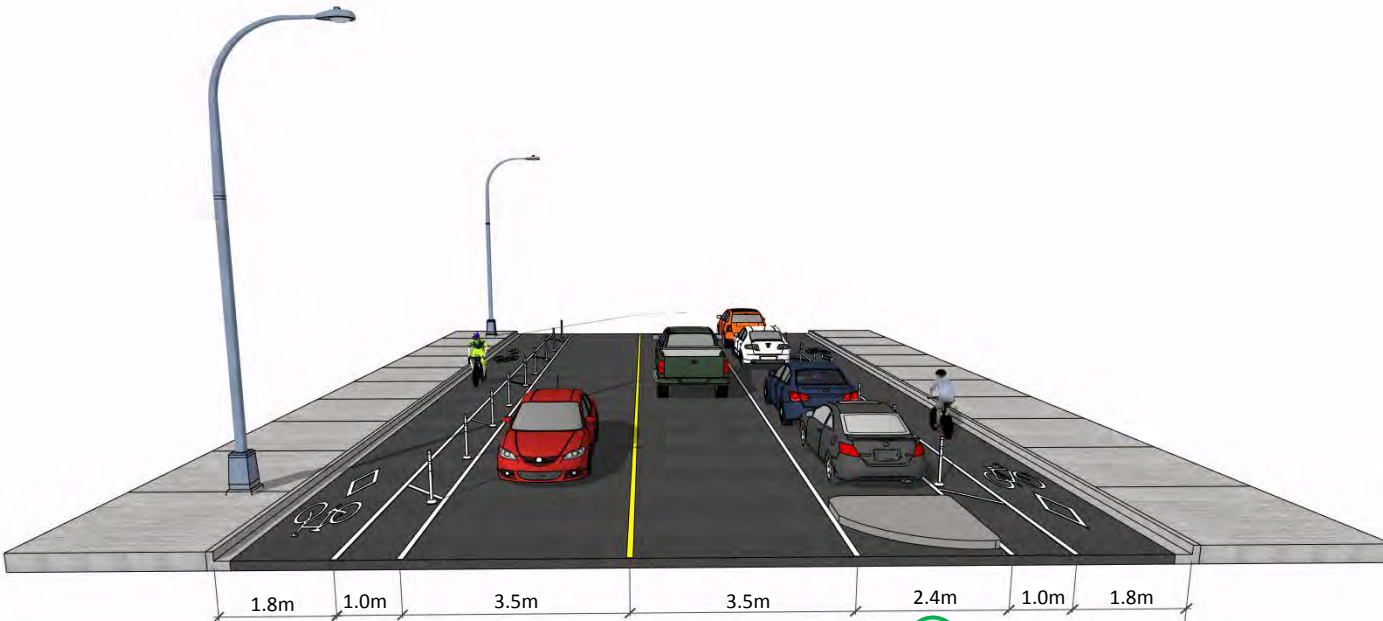
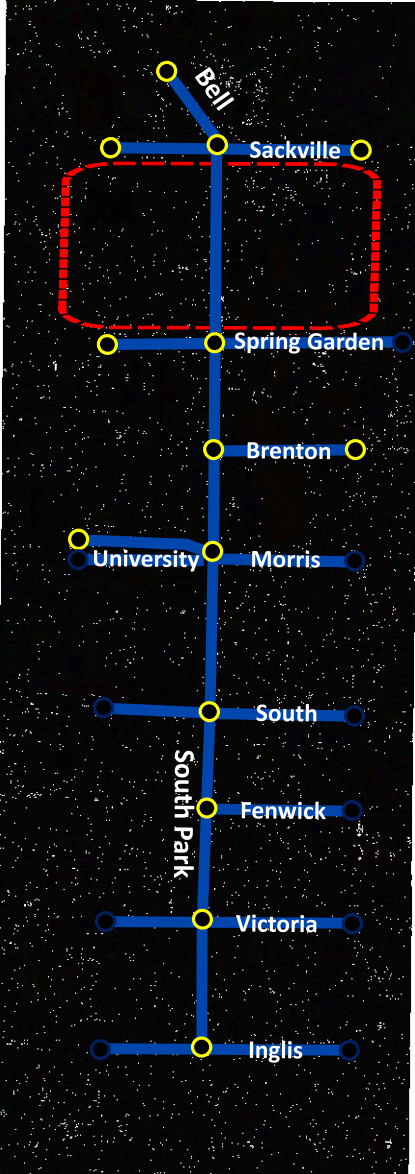


# Option 2: Protected Bike Lanes

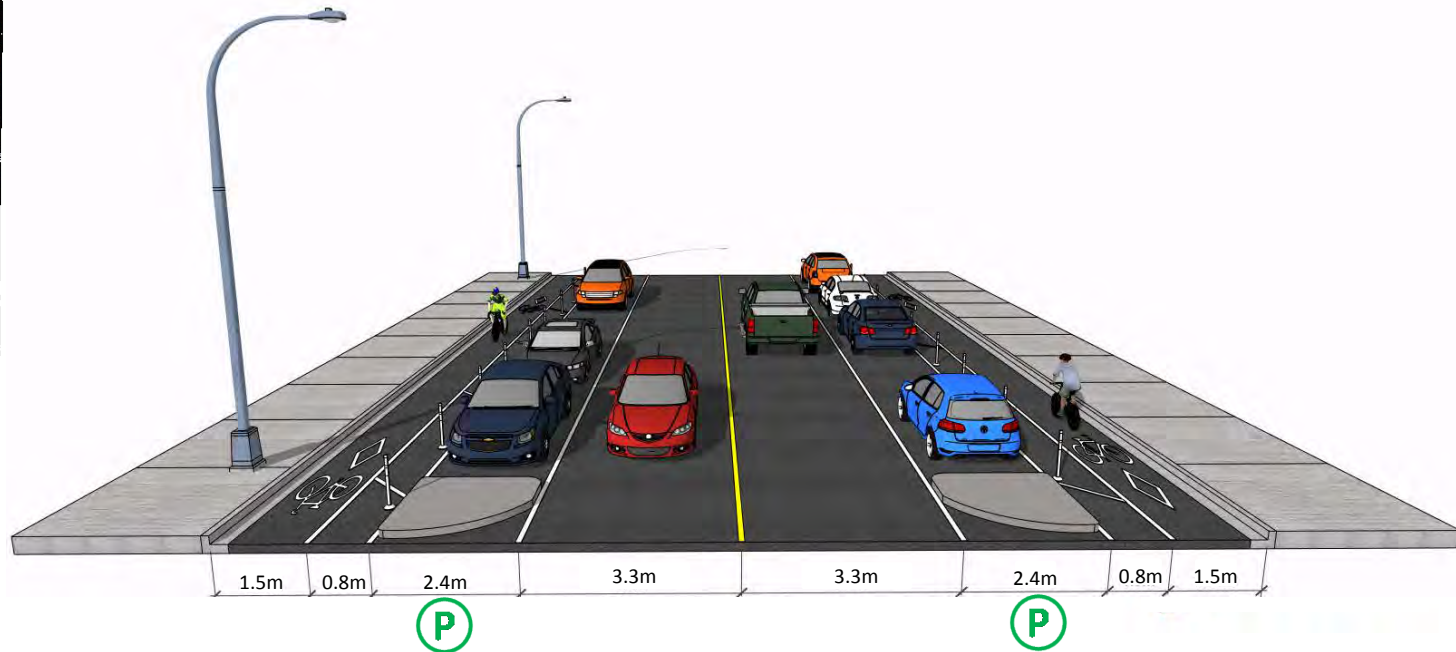
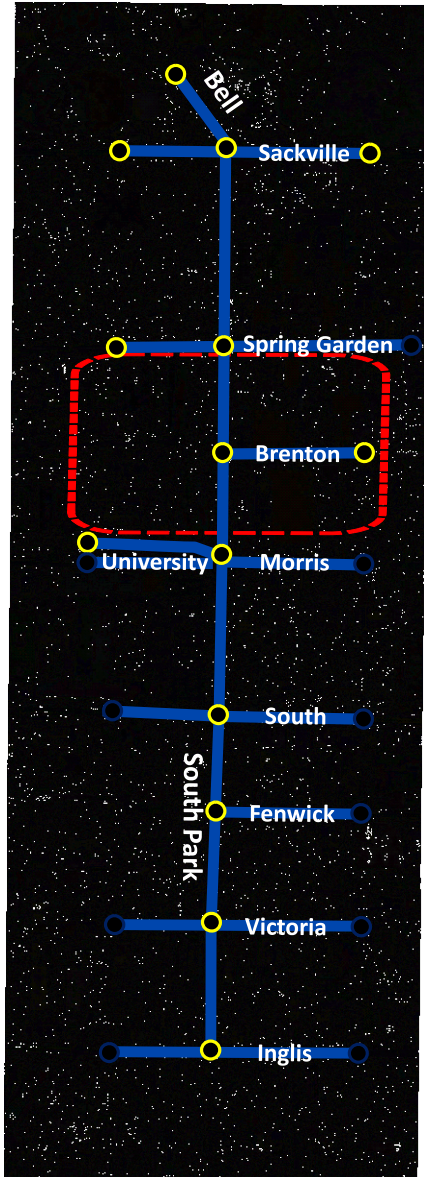


# Option 2: Protected Bike Lanes

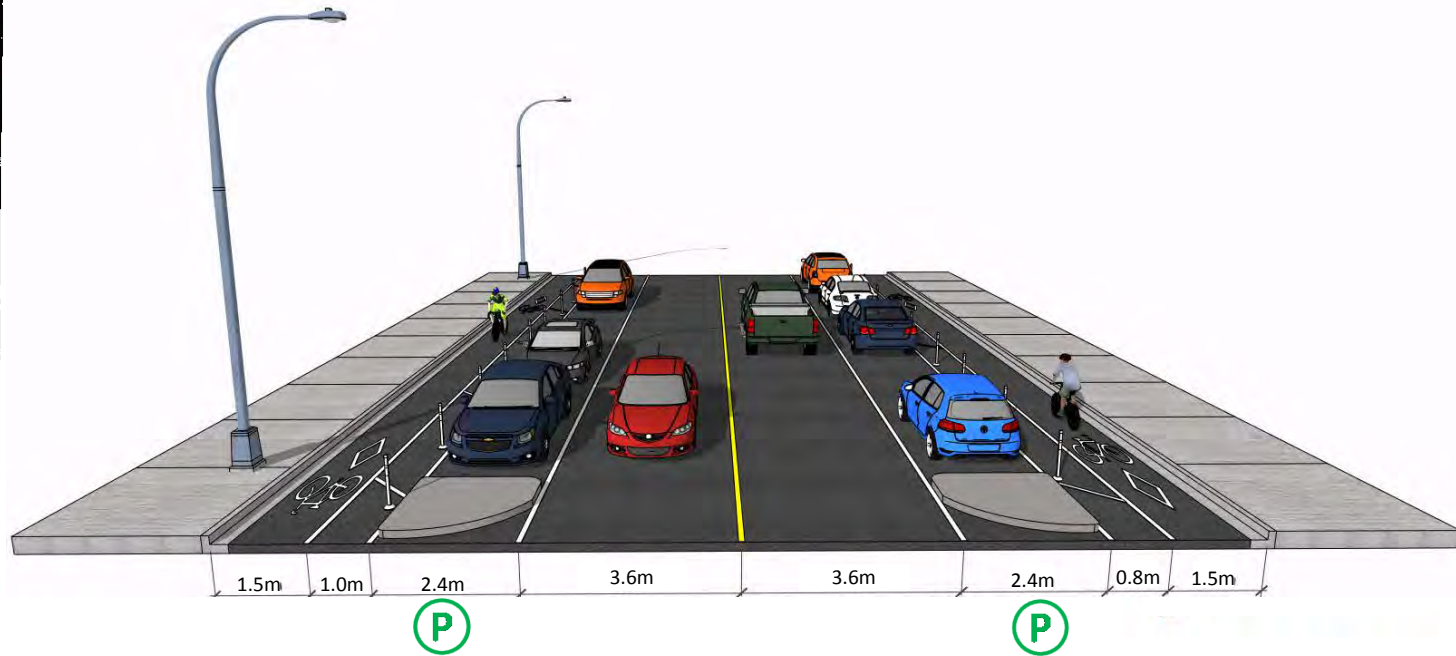
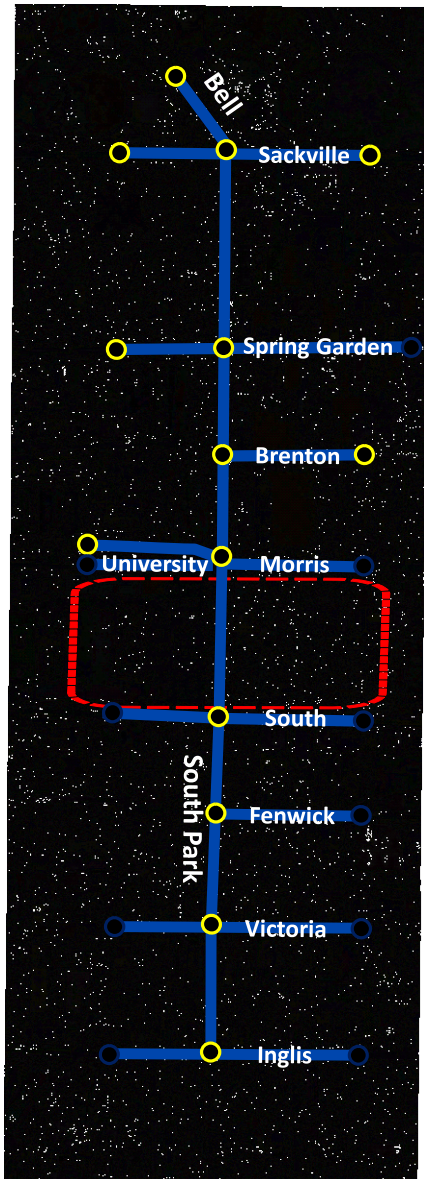
# 1. Sackville Street to Spring Garden Road



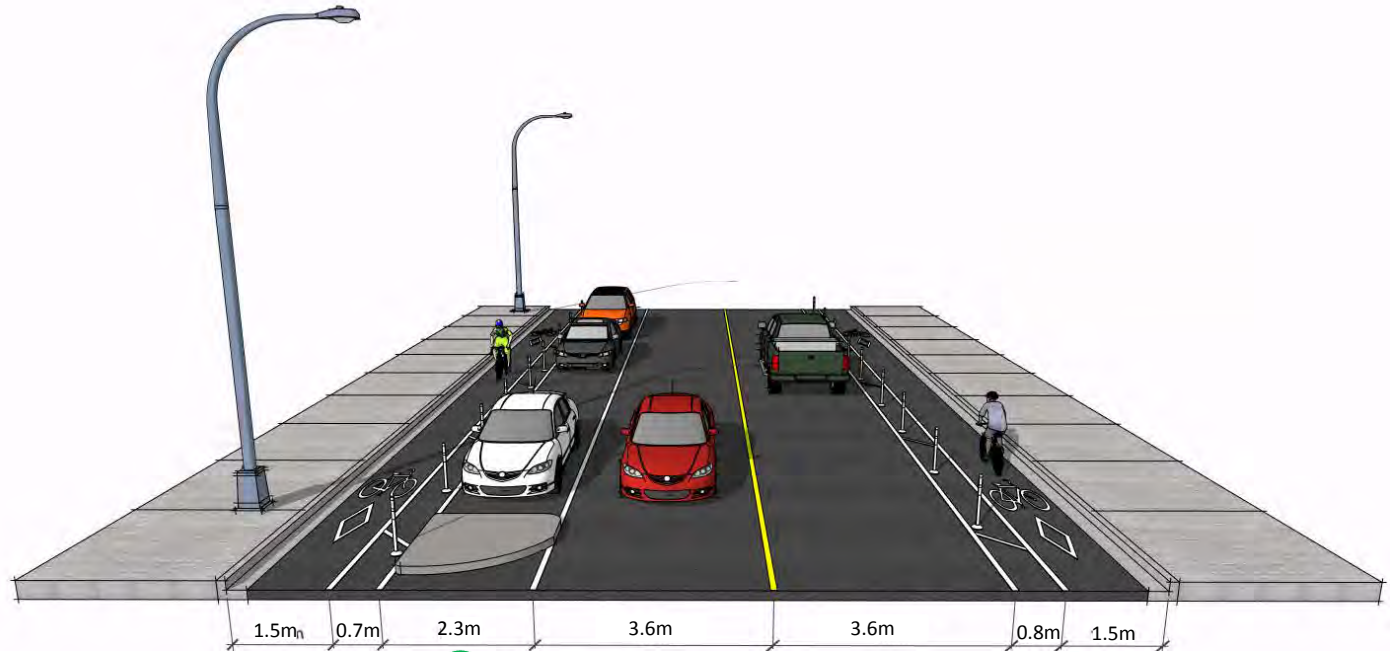
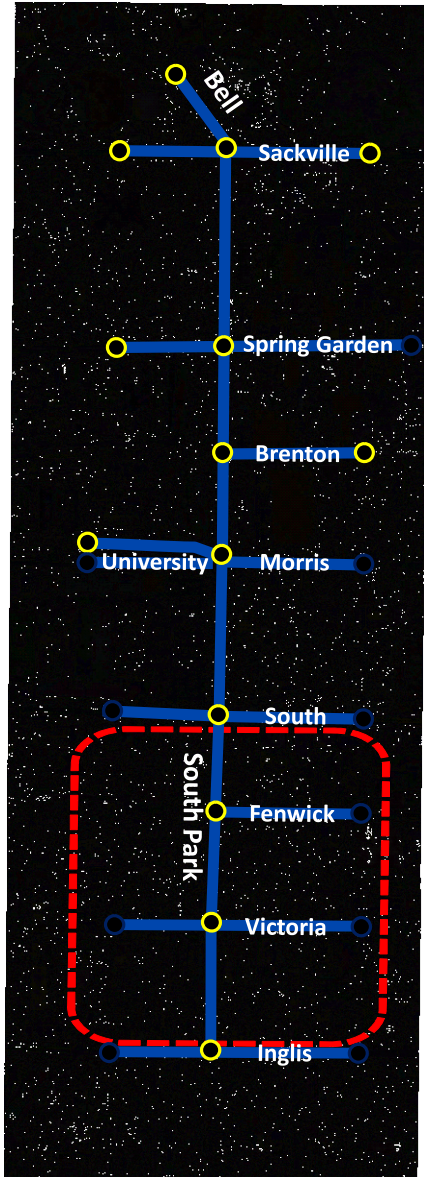
# 2. Spring Garden Road to University Avenue



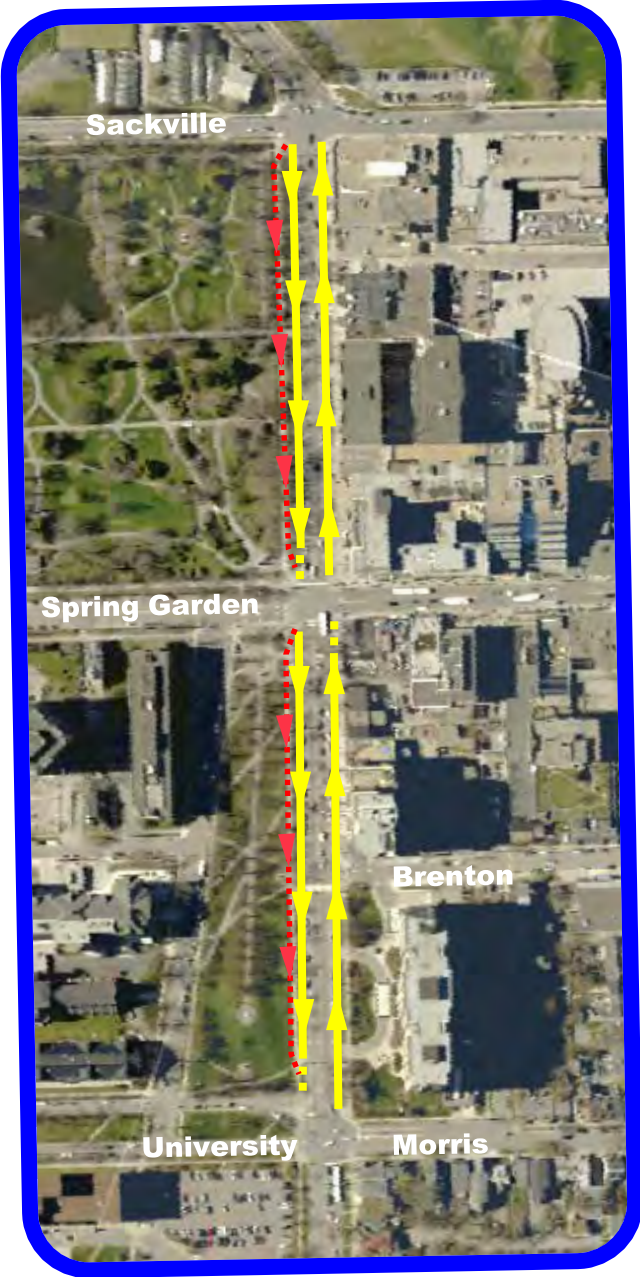
# 3. University Avenue to South Street



# 4. South Street to Inglis Street

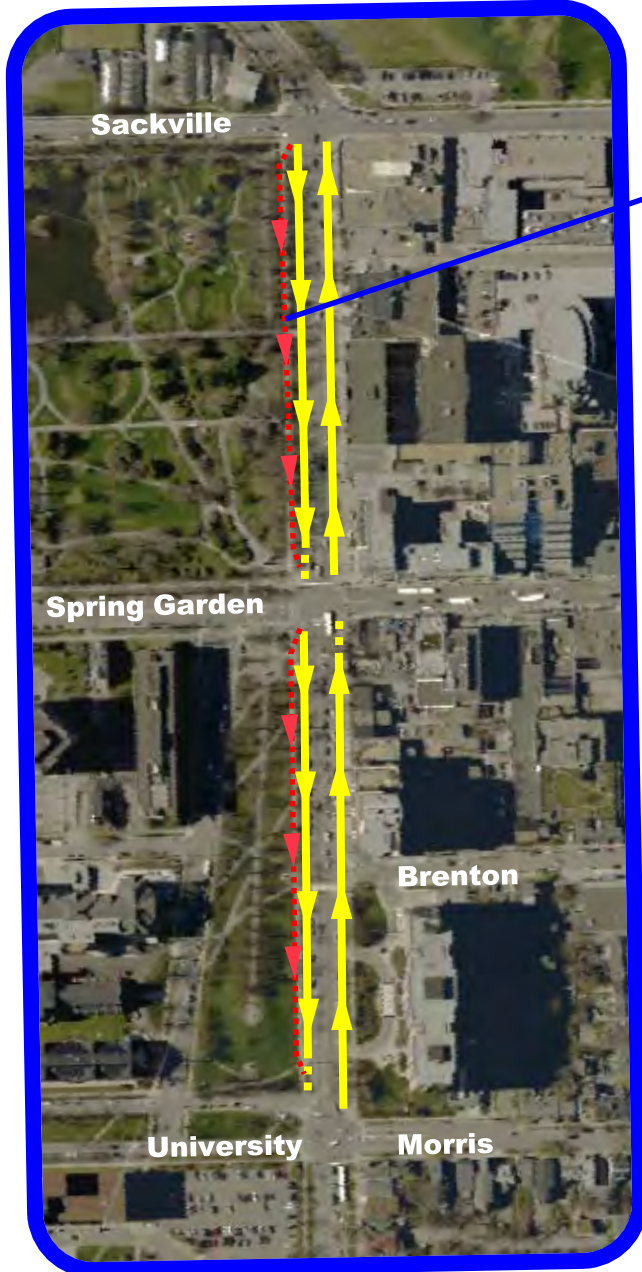


# **Option 2a: Protected Bike Lanes with Off-Street Section(s)**



- Ex. Bike lane
- Prop. Bike lane
- Diverted bike path option

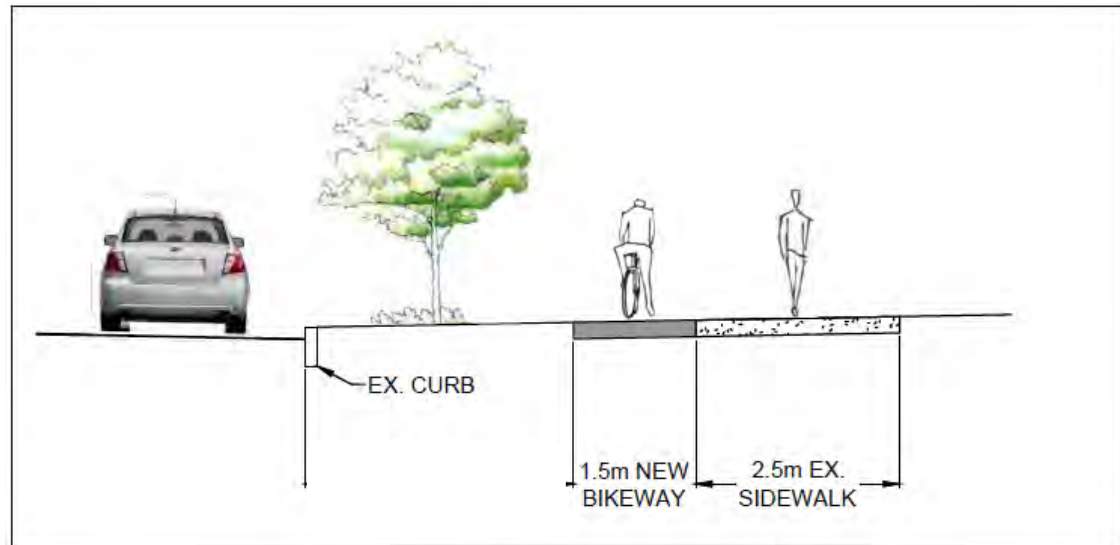




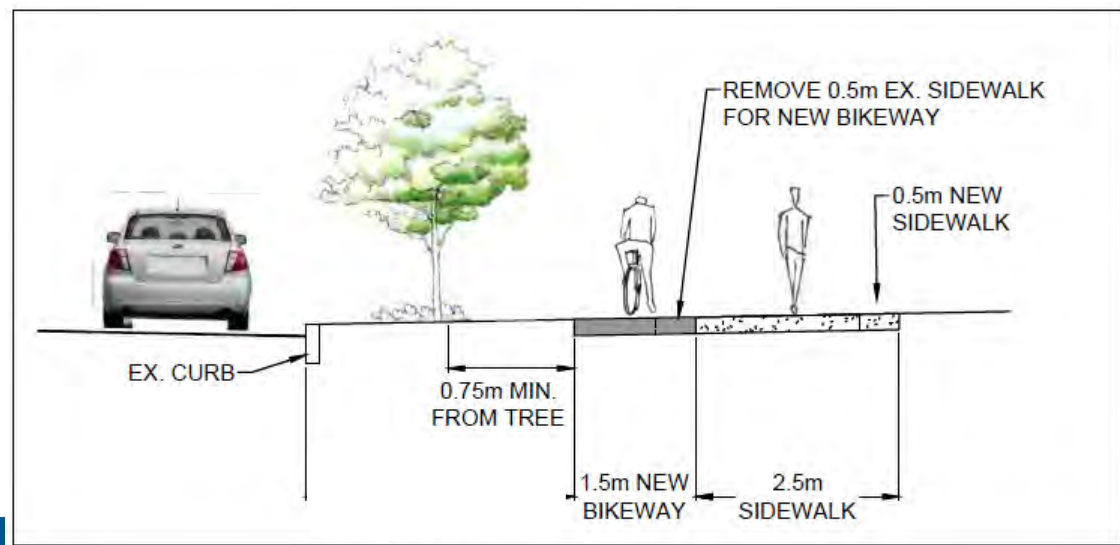
Preferred bike path width = 1.5 - 2.5m

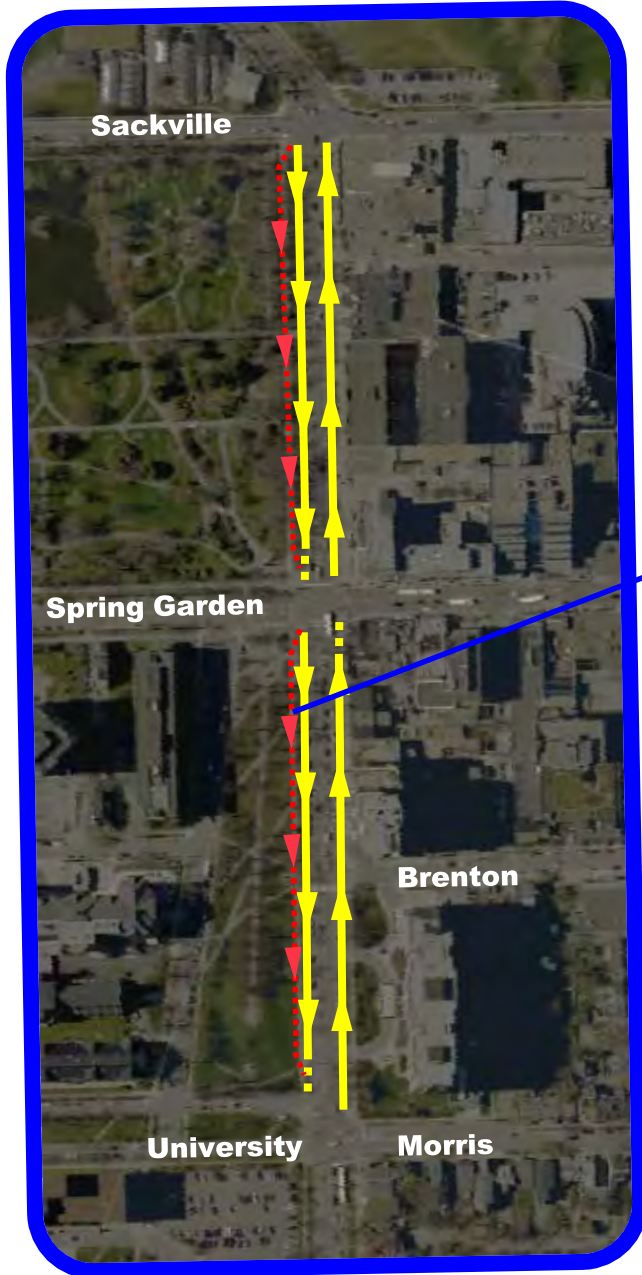
# Off-Street concept option (Option 2a)

Where Available  
width exceeds  
2.3m



Where Available  
width less than  
2.3m





Preferred bike path width = 1.5 - 2.5m

# Key Considerations: Physical Separation

# Physical Separation Options



[Source: City of Boulder, CO - <https://bouldercolorado.gov/goboulder/bike>]



[Source: M. Connors]



[Source: [www.urbantoronto.ca](http://www.urbantoronto.ca)]



[Source: M. Connors]

# Physical Separation



- **Maintenance**
  - Snow clearing
  - Street cleaning
  - Damage
- **Drainage**
- **Aesthetics**

[Source: M. Nener]

# Key Considerations: Bus Stops

# Option: Curbside 'Mixing Zone'



23<sup>rd</sup> St. @ 4<sup>th</sup> Ave (Saskatoon)



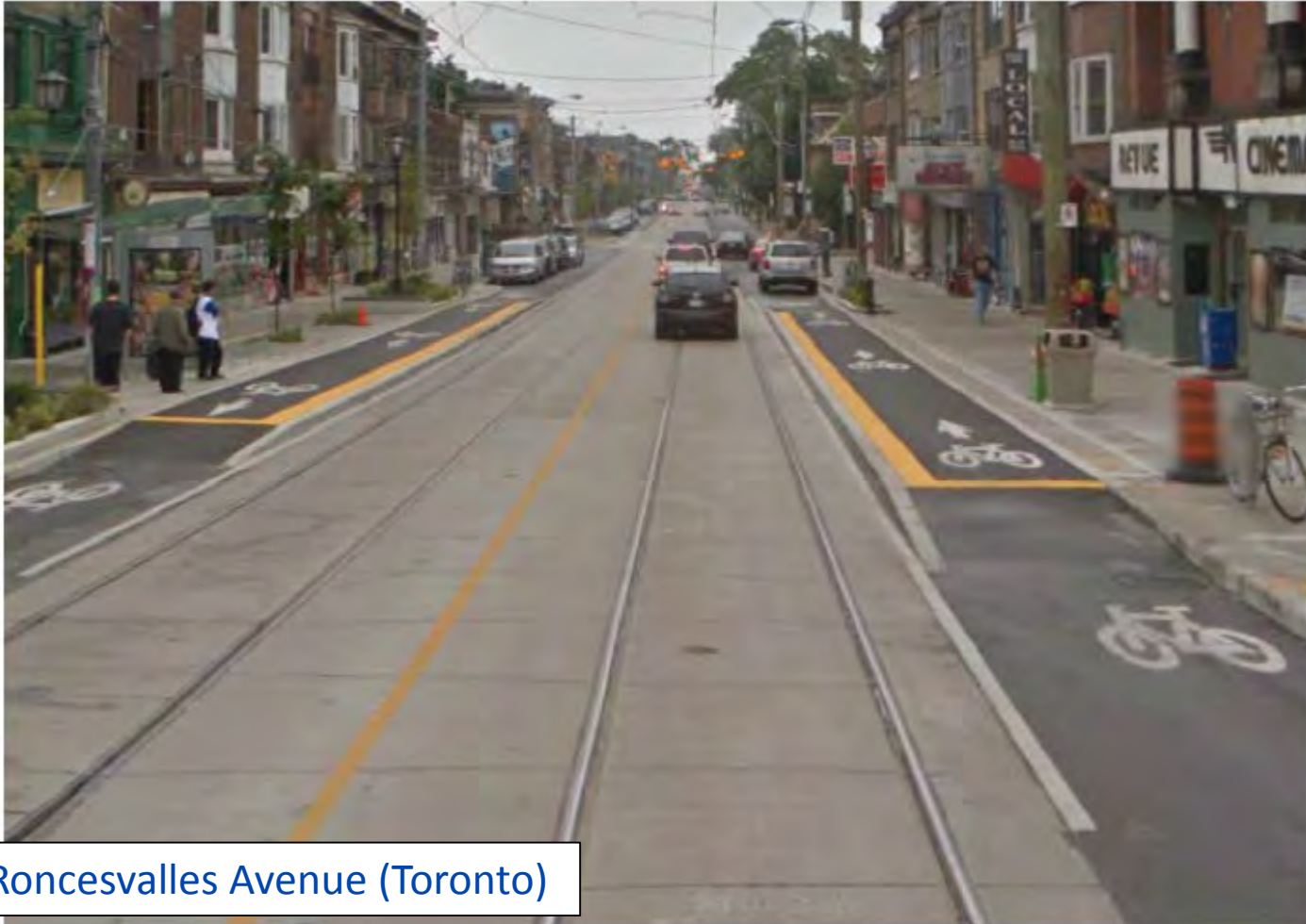
# Option: Island Platform



Sherbrooke @ Westminster (Winnipeg)



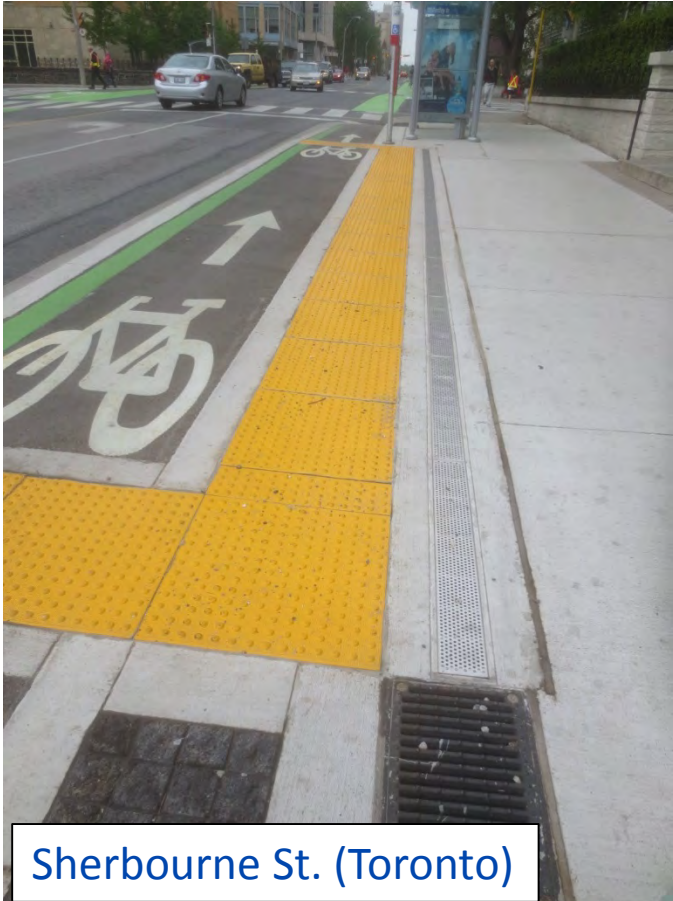
# Option: Raised Cycle Track at Bus Stop



Roncesvalles Avenue (Toronto)

Source: MTO Book 18

# Option: Raised Cycle Track at Bus Stop



Sherbourne St. (Toronto)

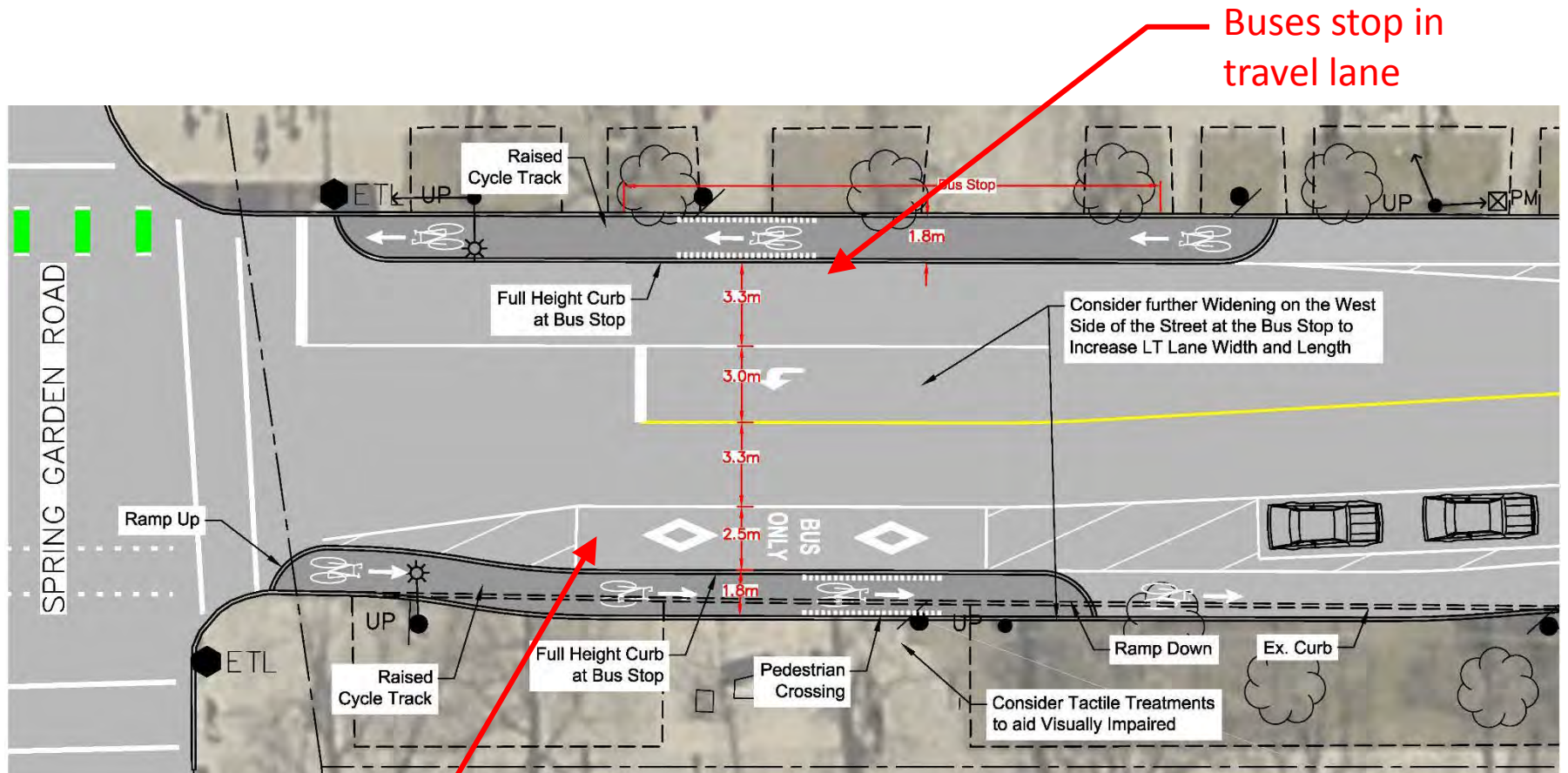
Source: <http://www.westsideaction.com>



Roncesvalles Avenue (Toronto)

Source: MTO Book 18

# Option: Raised Cycle Track at Bus Stop



Buses have dedicated space to pull off

South Park Street @ Spring Garden Road

# Key Considerations: Intersection Treatments

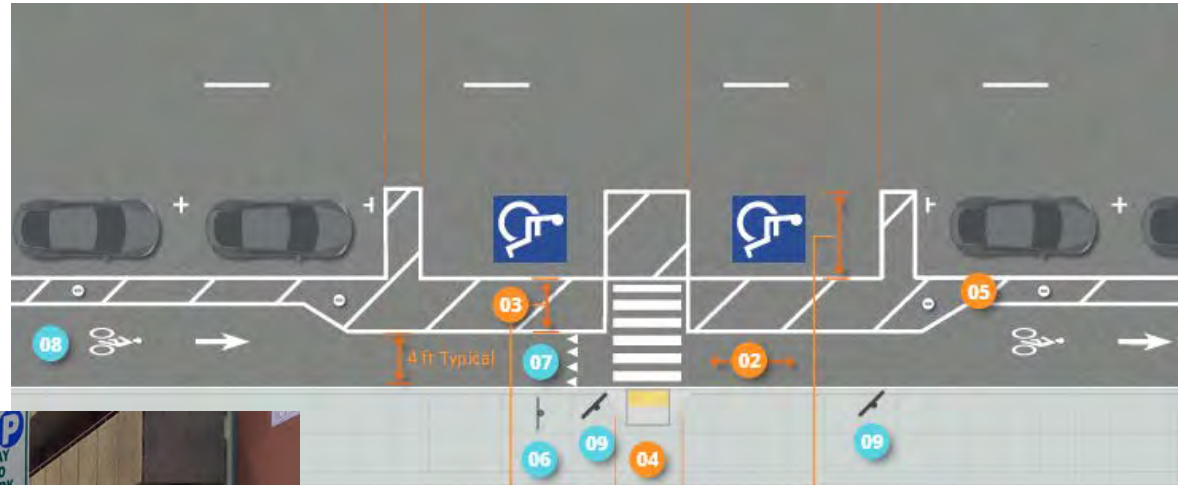
# Intersection Treatments



[Source: NACTO Urban Bikeway Design Guide]

# Key Considerations: Accessible Parking

# Accessible Parking



Source: FHWA Separated Bike Lanes Design Guide

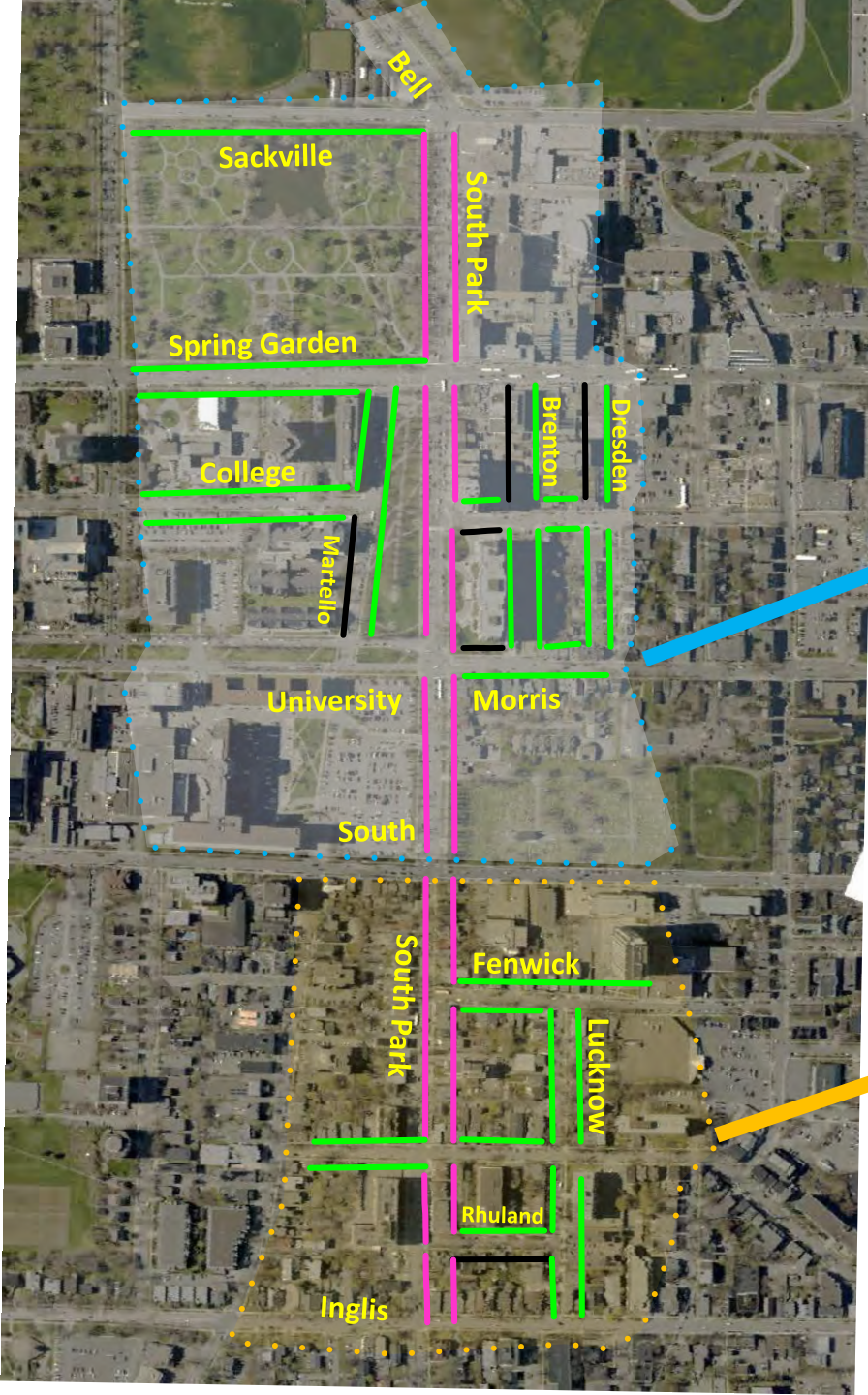


Source: FHWA Separated Bike Lanes Design Guide



# Key Considerations: On-Street Parking

# On-Street Parking Supply



## North of South Street

# Spaces on South Park Street = 105

# Spaces on Adjacent Streets = 167

TOTAL = 272

## South of South Street

# Spaces on South Park Street = 56

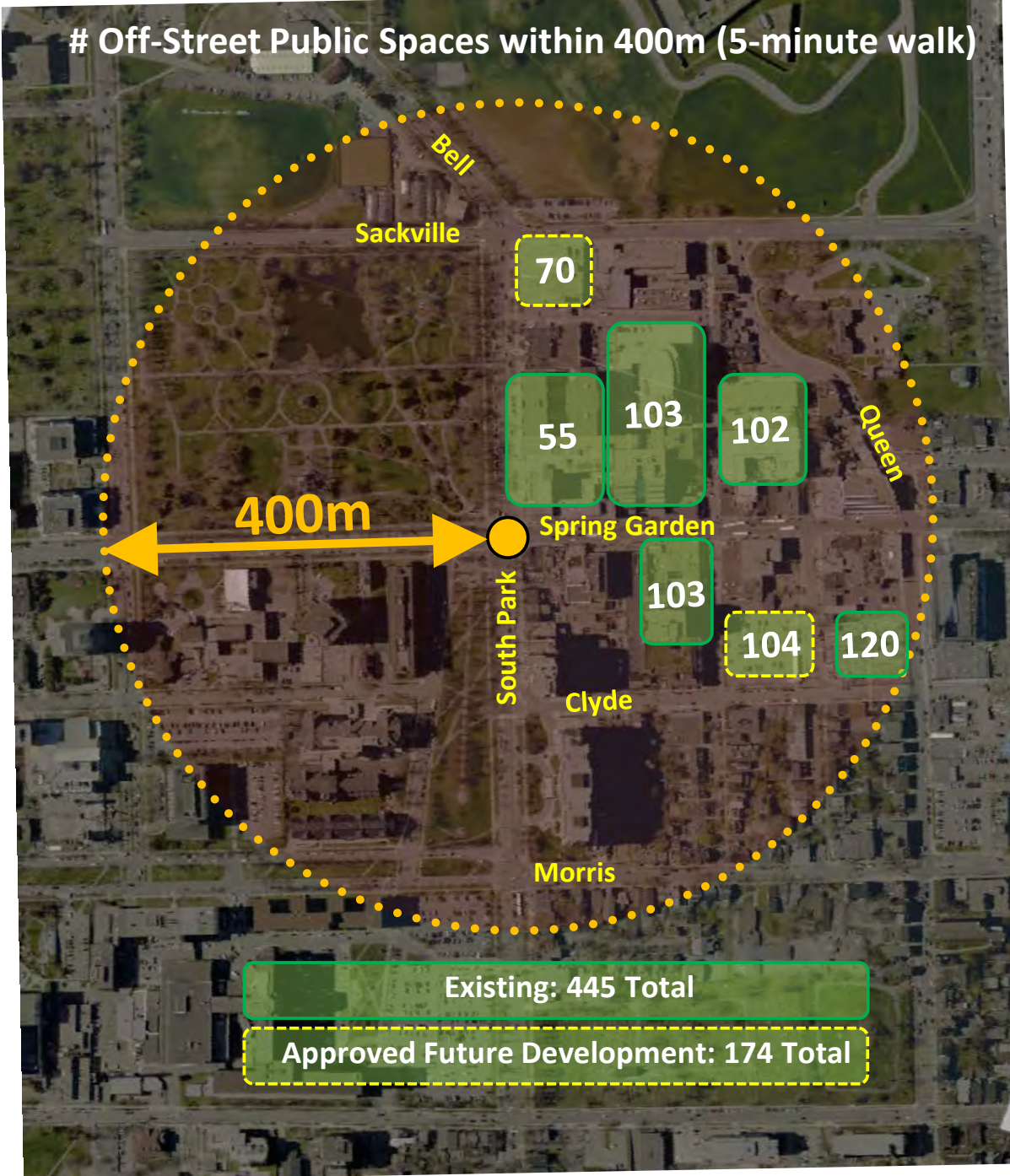
# Spaces on Adjacent Streets = 122

TOTAL = 178

Overall Total = 450 Spaces



# # Off-Street Public Spaces within 400m (5-minute walk)



# Off-Street Public Parking

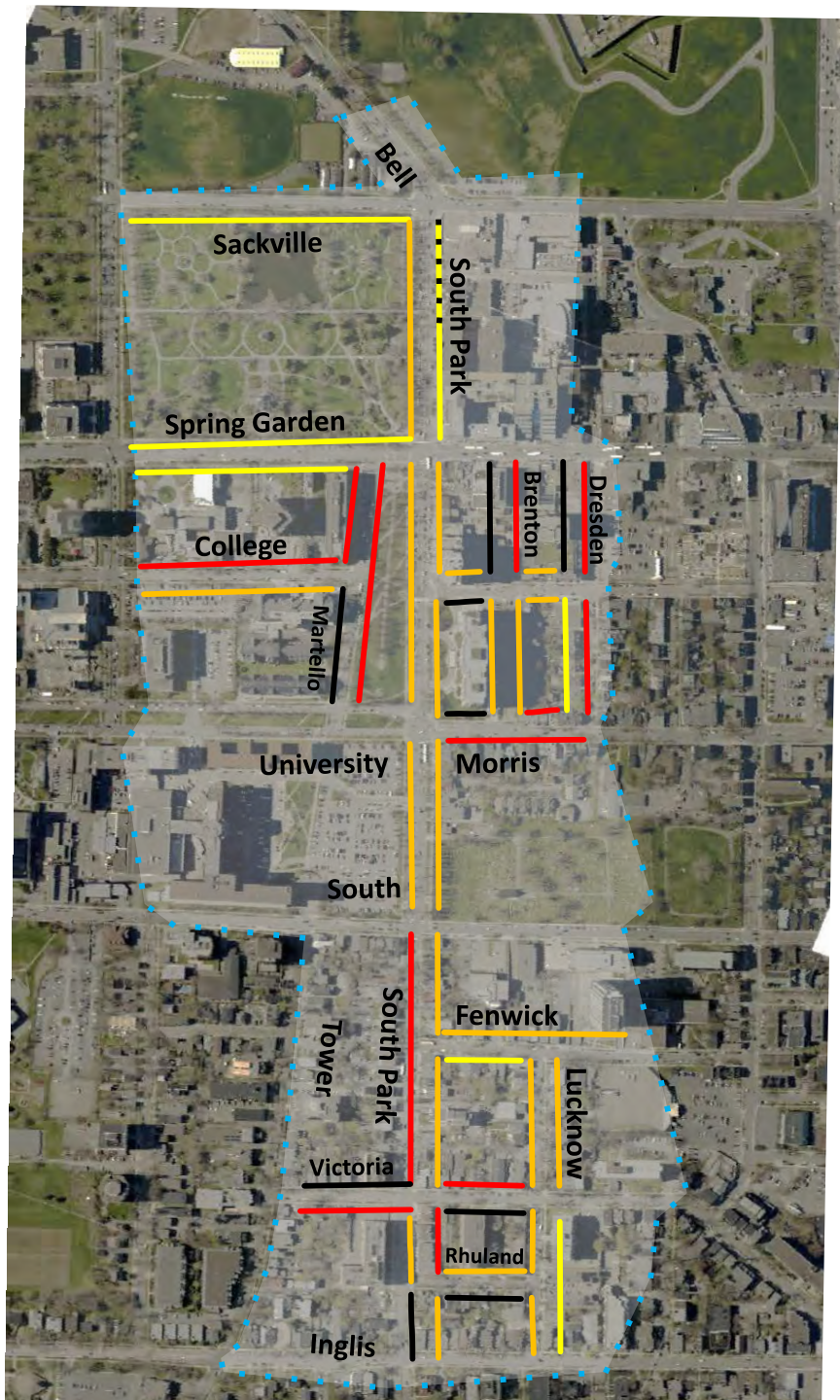
EXISTING OFF STREET PARKING		
	Spaces	Public
Lord Nelson	317	55
Spring Garden Place	310	65
Park Lane	440	103
City Centre Atlantic	193	102
The Mary Ann	179	120
<b>Total</b>		<b>445</b>

APPROVED OFF STREET		
	Spaces	Public
Brenton Place	35	0
The Margareta	260	104
Pavilion & Rental Building	389	70
<b>Total</b>		<b>174</b>

# On-Street Parking Utilization



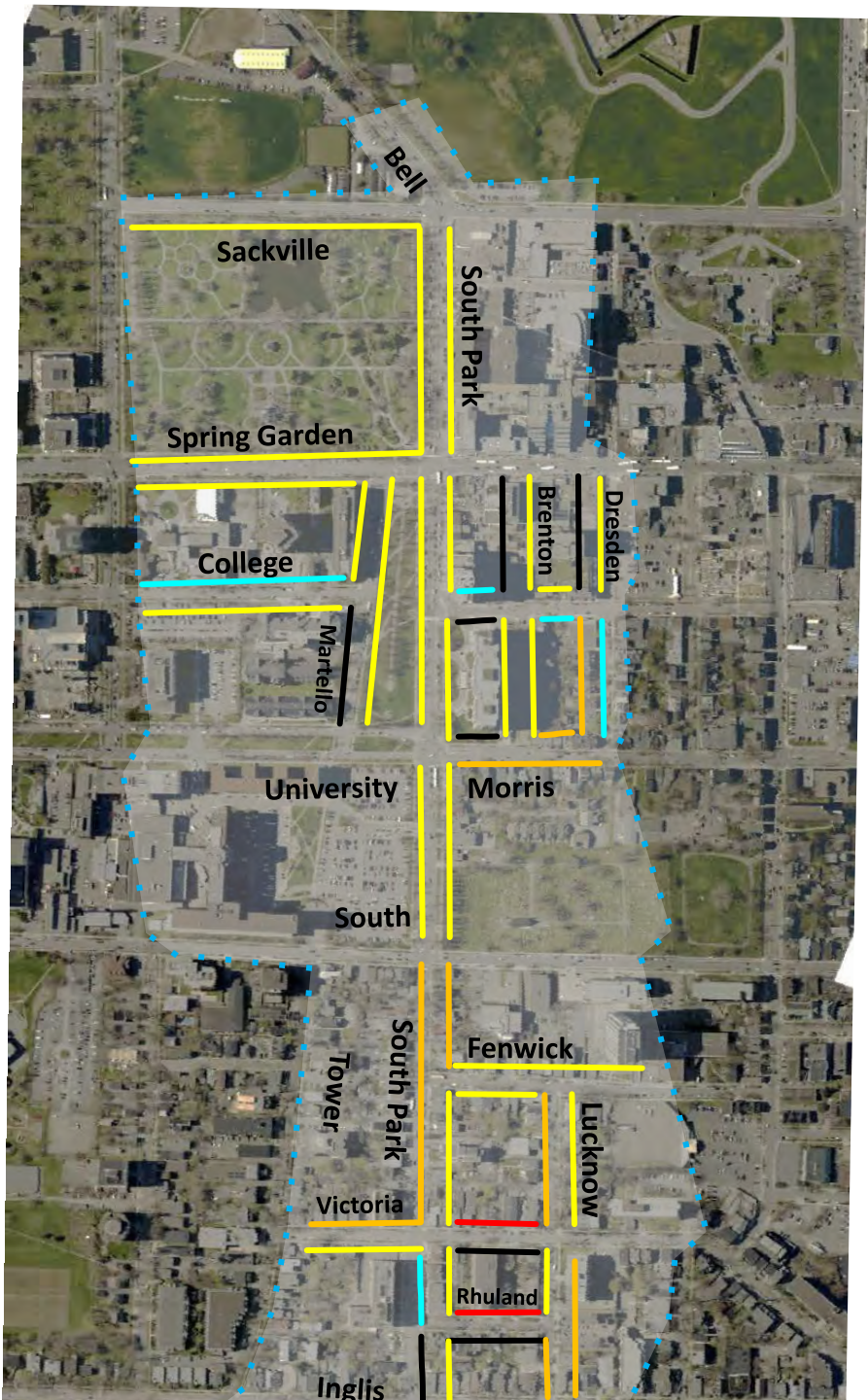
*\*7.5-Hour Average (9AM to 4:30PM)*



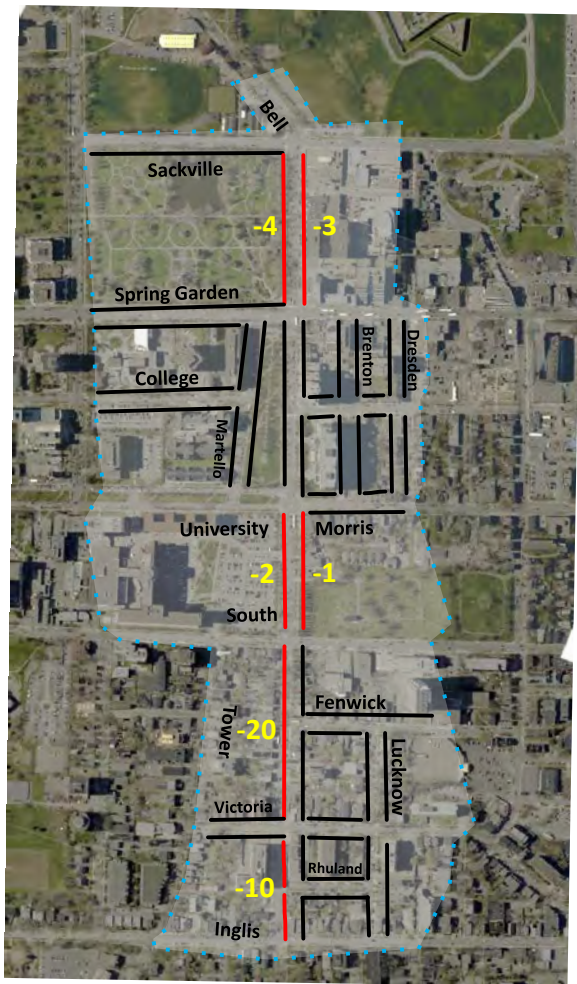
# On-Street Parking Duration



*\*7.5-Hour Average (9AM to 4:30PM)*

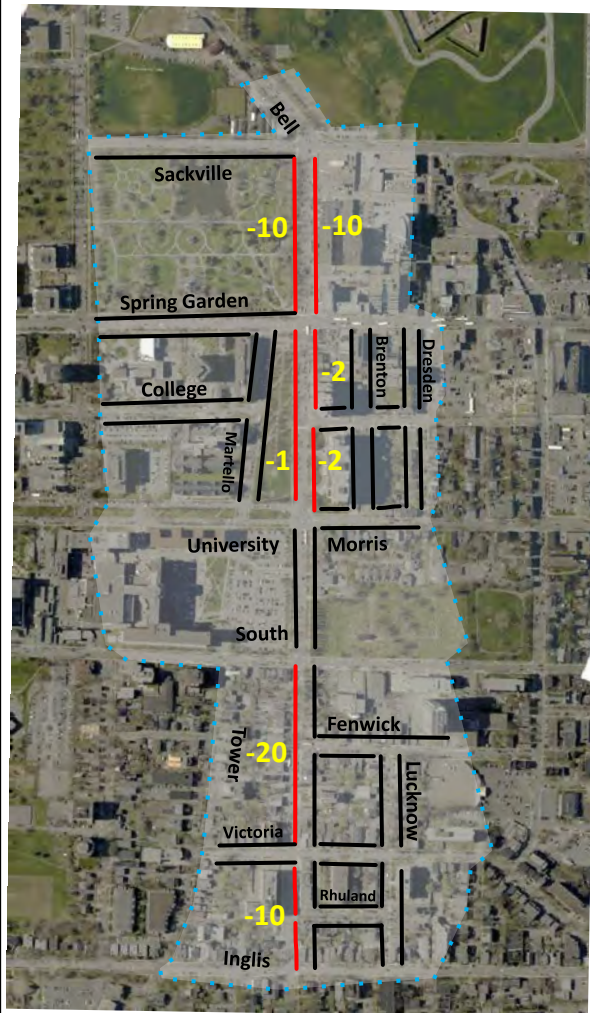


### Option 1: Buffered Bike Lanes



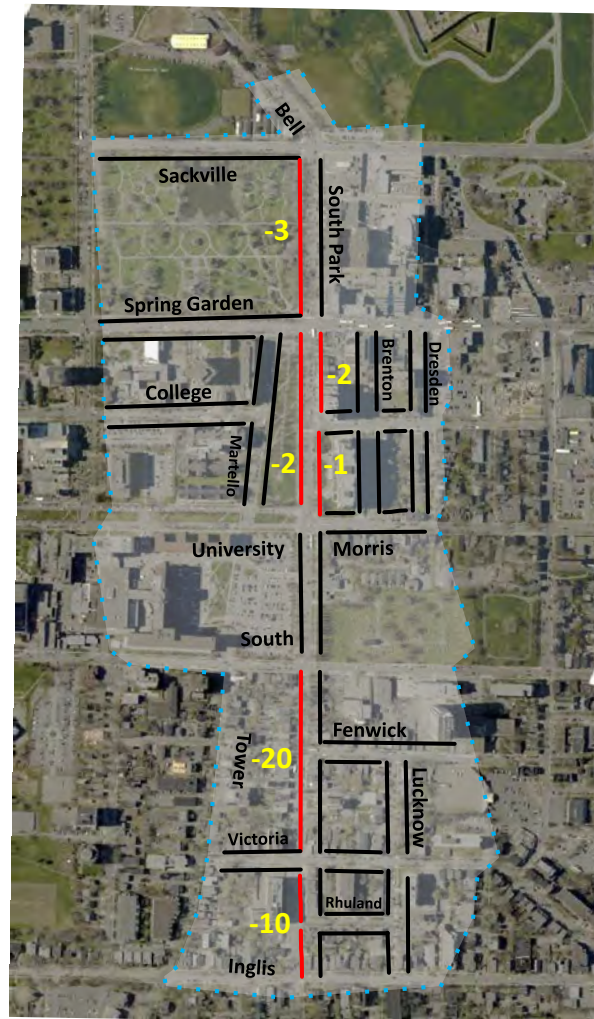
Loss of 40 on-street spaces

### Option 2: Protected Bike Lanes



Loss of 55 on-street spaces

### Option 2a: Protected Bike Lanes With off-street sections



Loss of 38 on-street spaces

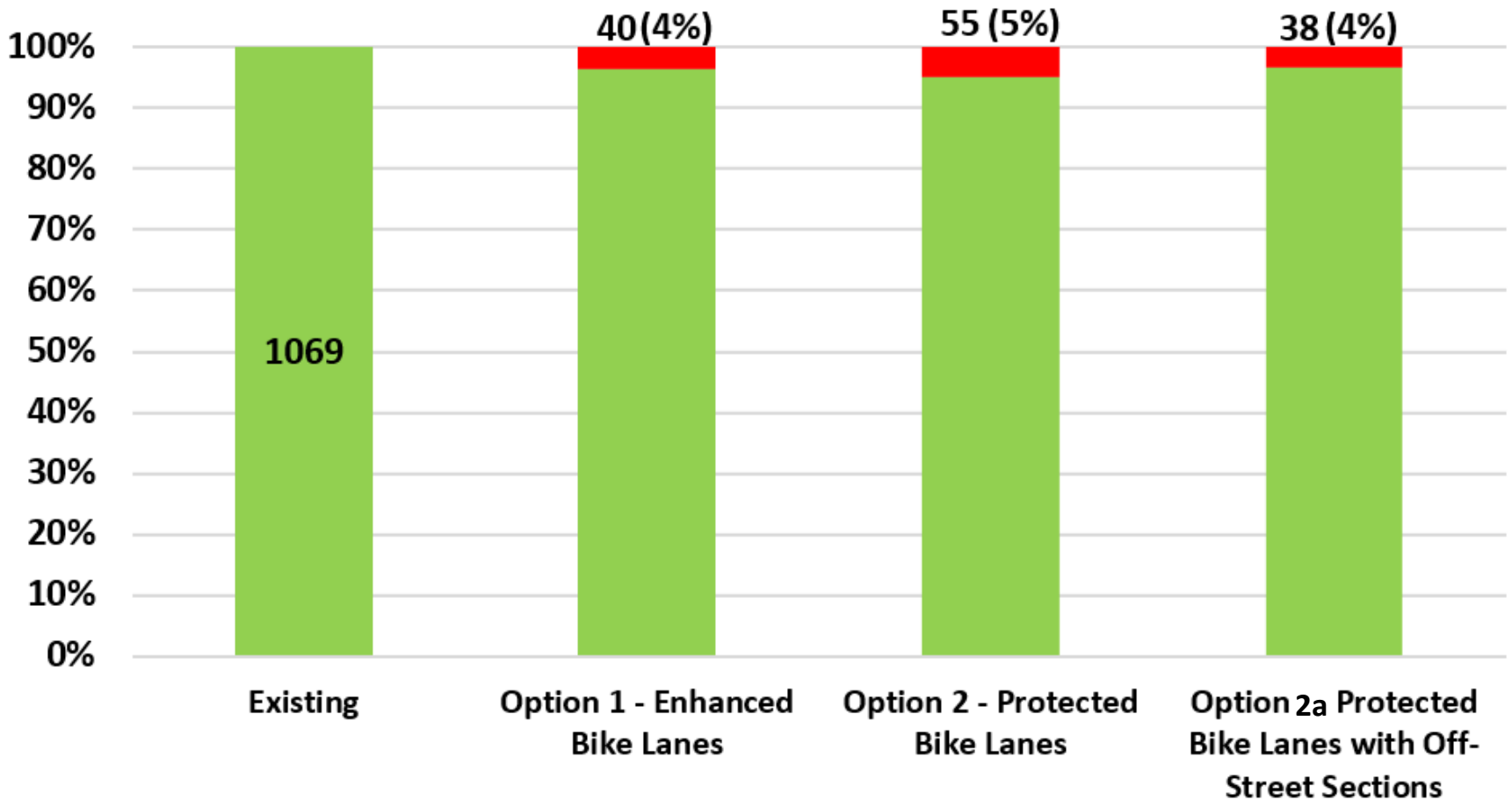
# Potential Changes to On-Street Parking Supply

## Public Parking Loss in the Study Area (On-Street Parking)



# Potential Changes Total Parking Supply

Public Parking Loss in the Study Area (Total of On-Street + Off-Street Parking)





# Options Evaluation

More Desirable /  
Less Difficult

Less Desirable /  
More Difficult

# Options Evaluation

Evaluation Criteria		Bicycle Facility Options			
		Existing Conditions	1. Enhanced Buffered Bike Lanes	2. Protected Bike Lanes	2a. Protected Bike Lanes (with off-street section)
1. Best Practice Design	Cycling safety, comfort and convenience	Light Red	White	Green	Green
	Intersection safety and comfort	Red	White	Green	Light Green
	Bus stop safety and comfort	Red	Light Red	Green	Green
2. Connectivity	Connections to broader cycling network	White	Light Green	Light Green	Light Green
	Continuity of the bike facility to Inglis Street	Red	Green	Green	Green
3. Implications	Impact to Pedestrians	Light Green	Light Green	Green	White
	Impact to Transit	Green	Light Green	Light Green	Light Green
	Impact to Motor Vehicles	Green	White	White	White
	Impact to Commercial or Residential Parking	Green	Light Red	Light Red	Light Red
	Impact to Accessible Parking Spaces	Green	Light Green	Light Green	Light Green
	Impact to Taxi Stands	Green	Green	Light Green	Green
	Impact to Green Space and Urban Forest	Green	Green	Green	Light Red
	Maintenance	Green	Green	Light Red	Light Red
	Capital Cost	Green	Light Green	White	Light Red
4. Public Support	Overall level of public / stakeholder support	White	White	White	White

# Discussion Questions

- Do you have a preferred option that you think achieves the project objectives?
  - Why?
  - What are the strengths and/or challenges of your preferred option?
  - Is there anything missing?

# Thank you!

Mark Nener

Active Transportation Coordinator

[nenerm@halifax.ca](mailto:nenerm@halifax.ca)

Survey will be available online Feb 1 at:

<http://shapeyourcityhalifax.ca/south-park-st-bike>

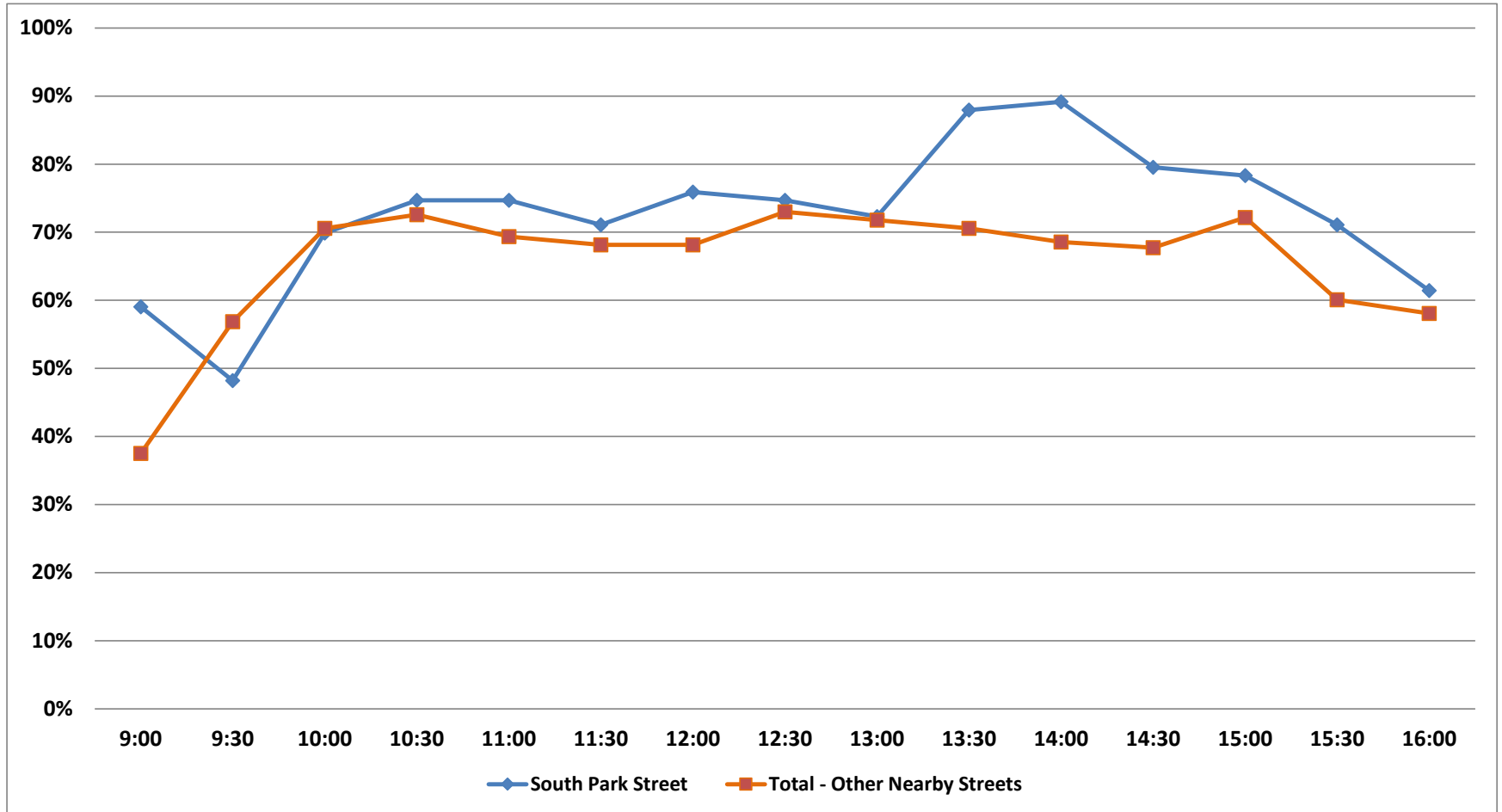
[www.halifax.ca/cycling/bikelanes](http://www.halifax.ca/cycling/bikelanes)

**HALIFAX**

# Additional Slides

**HALIFAX**

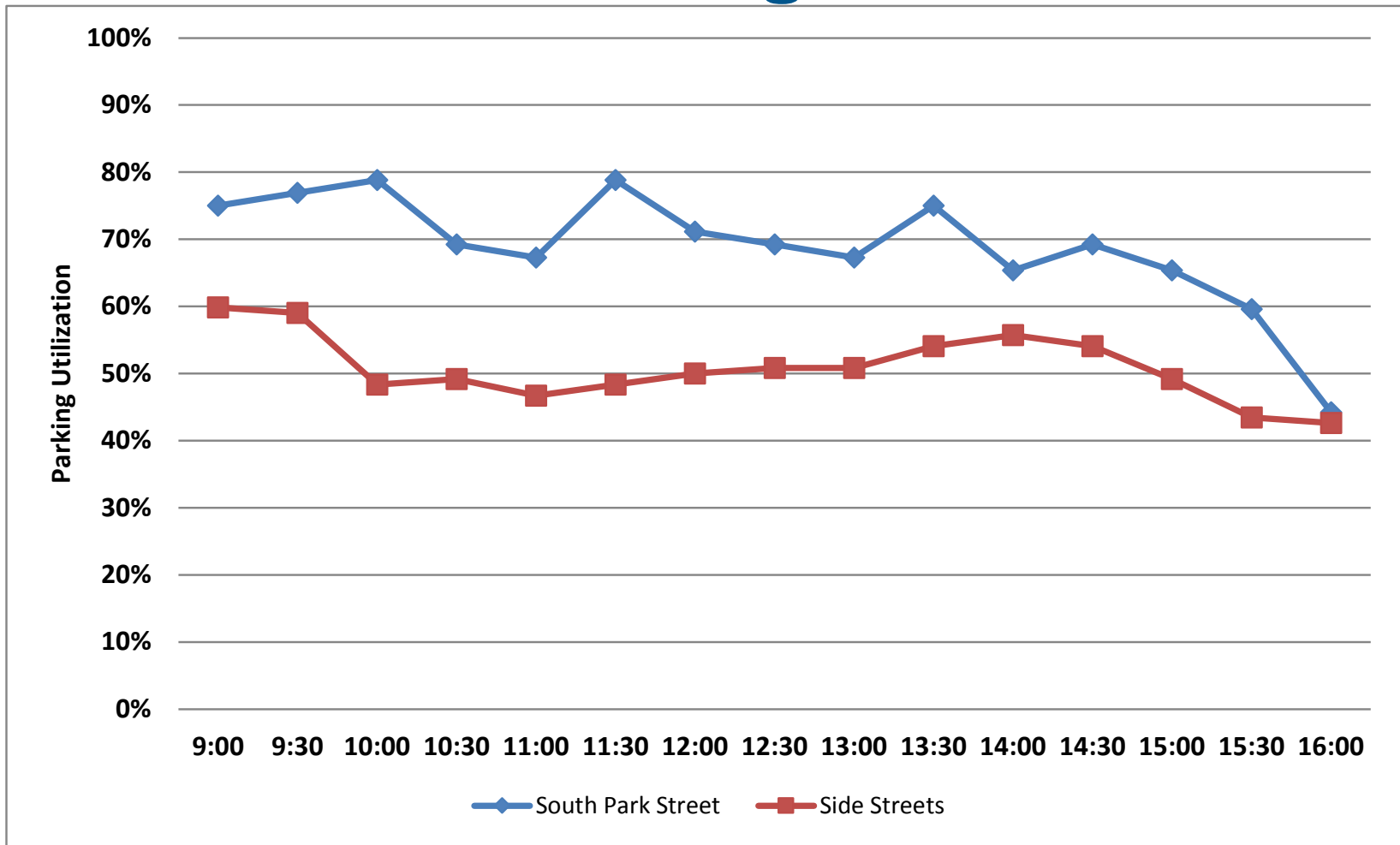
# On-Street Parking Utilization



*\*October 2016 – North of South Street*

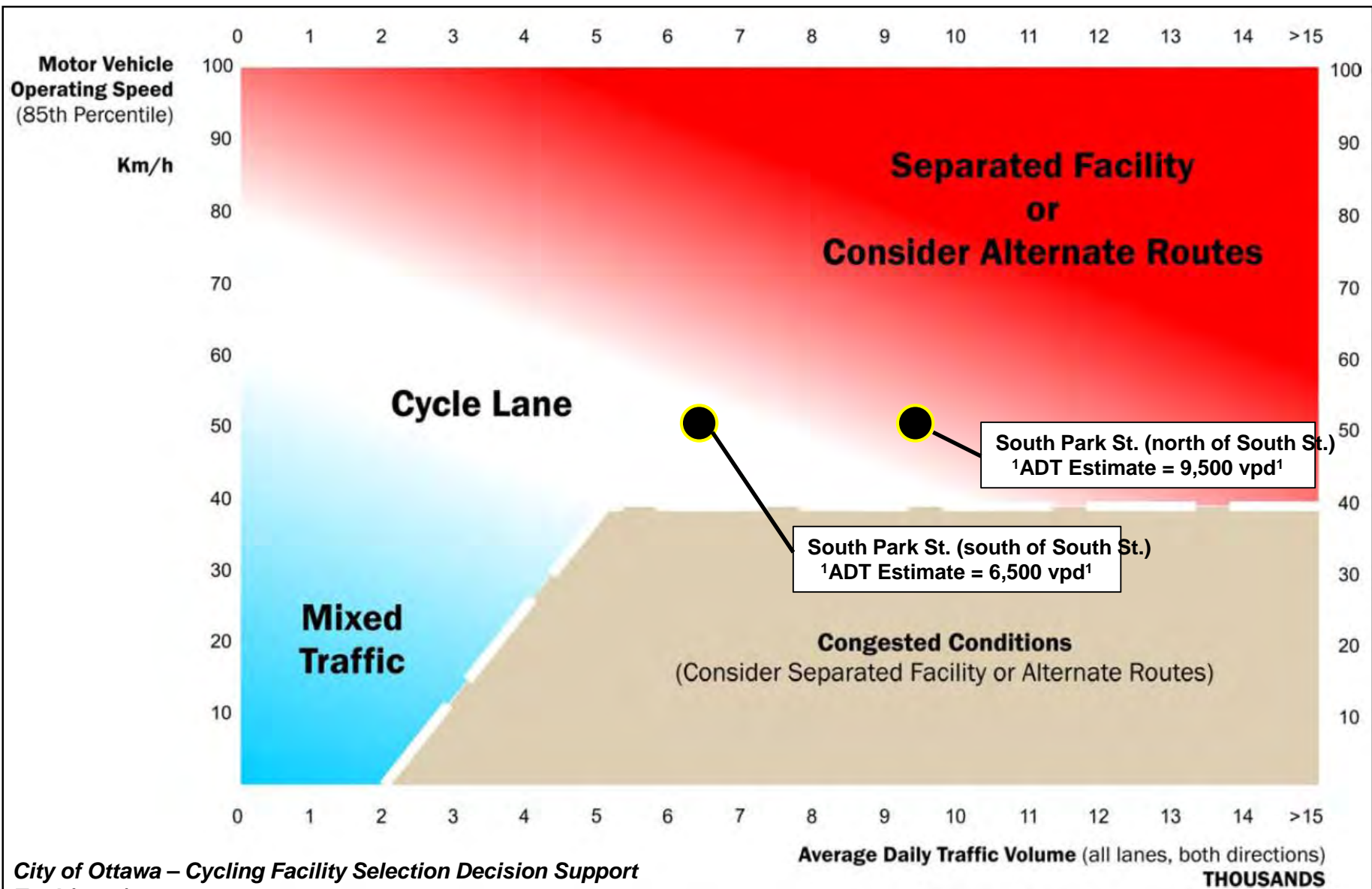
**HALIFAX**

# On-Street Parking Utilization



*\*October 2015 – South of South Street*

**HALIFAX**



Tool (2011)  
Notes:

<sup>1</sup> Daily volumes estimated based on assumption that peak hour traffic volume represents approx. 10% of daily volume.


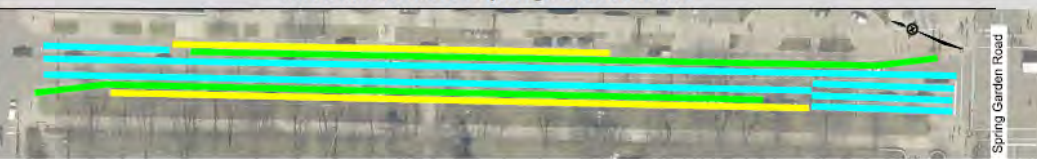





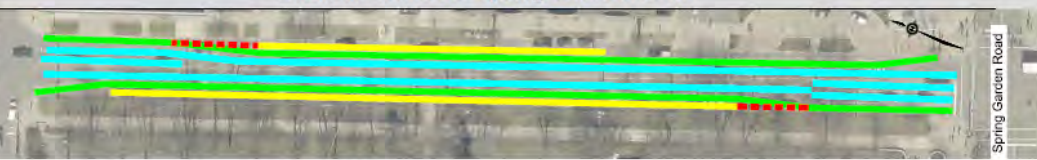
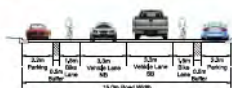
# South Park Street


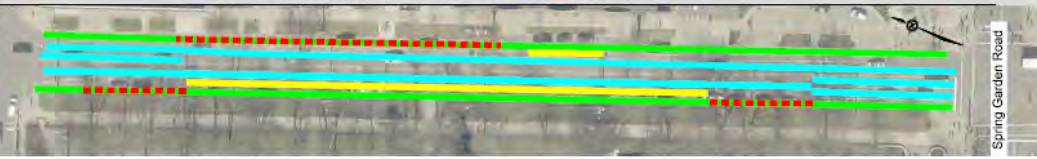
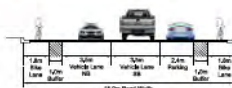
Sackville Street to Spring Garden Road (Page 1/4)


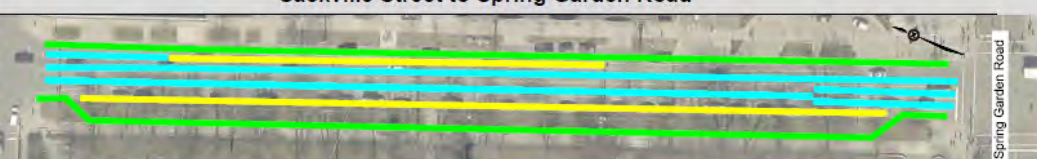

**Legend**

- Parking
- Bike Lane
- - - Added Parking
- Vehicle Lane
- - - Removed Parking / Relocated Taxi Stand
- - - Bus Stop

	North of Sackville Street	Sackville Street to Spring Garden Road
<b>Existing Conditions</b>		
	 <p style="text-align: center;">Typical</p>	 <p style="text-align: center;">Typical</p>
		<p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Existing bicycle lanes do not extend to intersections at Sackville Street or Spring Garden Road</li> <li>Currently no buffer is provided to separate bicycle lanes from parking lane</li> <li>35 existing parking spaces</li> </ul>

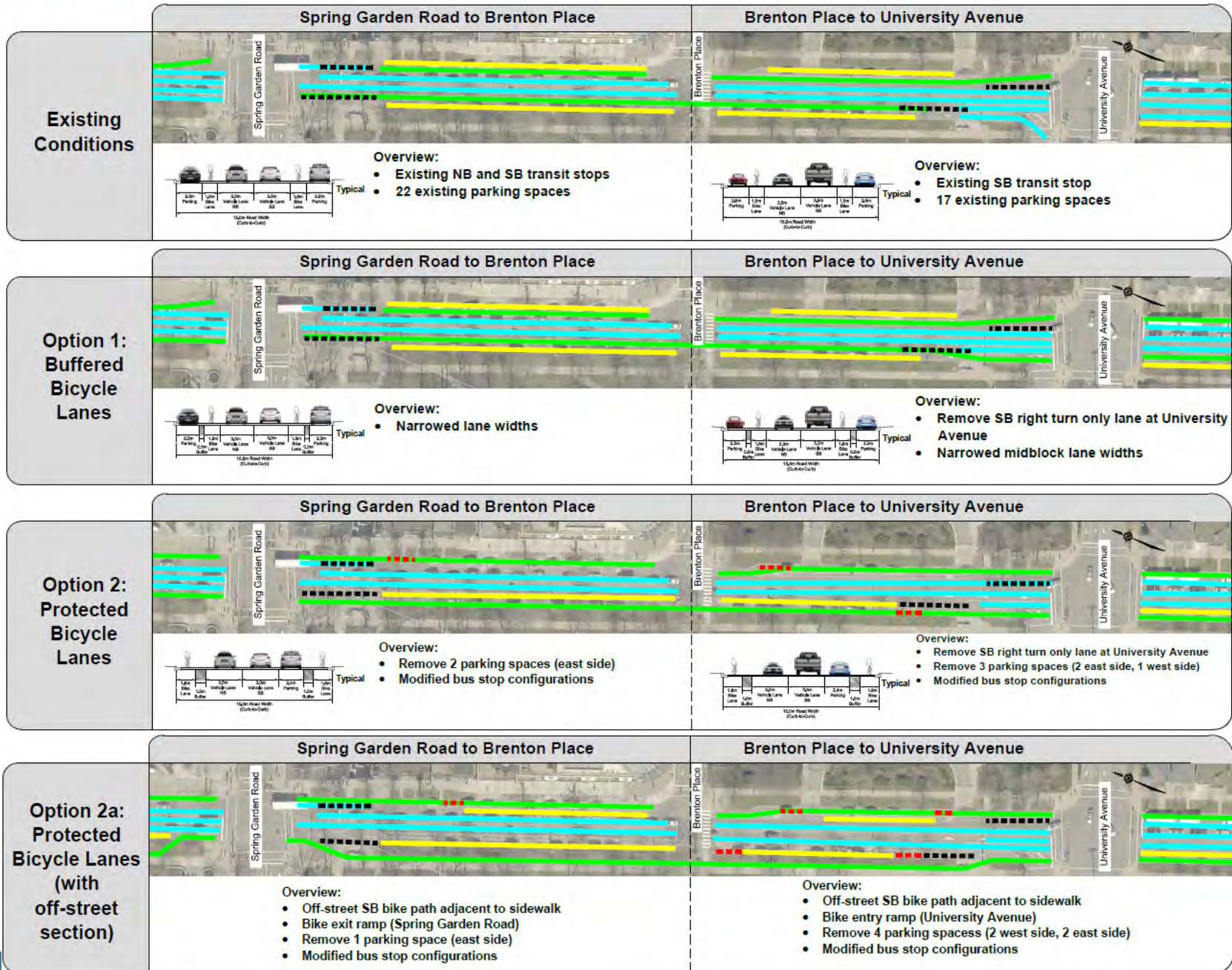
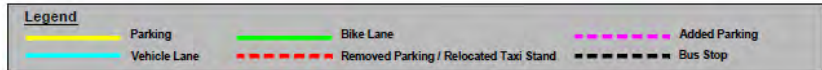
	North of Sackville Street	Sackville Street to Spring Garden Road
<b>Option 1: Buffered Bicycle Lanes</b>		
	<ul style="list-style-type: none"> <li>Added SB bike lane</li> <li>Narrowed lane widths</li> </ul>	 <p style="text-align: center;">Typical</p>
		<p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Remove SB right turn lane at Spring Garden Road intersection</li> <li>Relocate 5 vehicle taxi stand (west side)</li> <li>Remove approximately 3 parking spaces (east side)</li> </ul>

	North of Sackville Street	Sackville Street to Spring Garden Road
<b>Option 2: Protected Bicycle Lanes</b>		
	<ul style="list-style-type: none"> <li>Added SB bike lane</li> <li>Narrowed lane widths</li> </ul>	 <p style="text-align: center;">Typical</p>
		<p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Remove SB right turn lane at Spring Garden Road intersection</li> <li>Relocate 5 vehicle taxi stand (west side)</li> <li>Remove approximately 15 parking spaces (10 east side, 5 west side)</li> </ul>

	North of Sackville Street	Sackville Street to Spring Garden Road
<b>Option 2a: Protected Bicycle Lanes (with off-street section)</b>		
	<ul style="list-style-type: none"> <li>Added SB bike lane</li> <li>Narrowed lane widths</li> </ul>	 <p style="text-align: center;">Typical</p>
		<p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Off-street SB bike lane adjacent to sidewalk</li> <li>Bike exit ramp (Sackville Street) and bike entry ramp (Spring Garden Road)</li> </ul>

# South Park Street

Spring Garden Road to University Avenue (Page 2/4)



# South Park Street

University Avenue to Fenwick Street (Page 3/4)

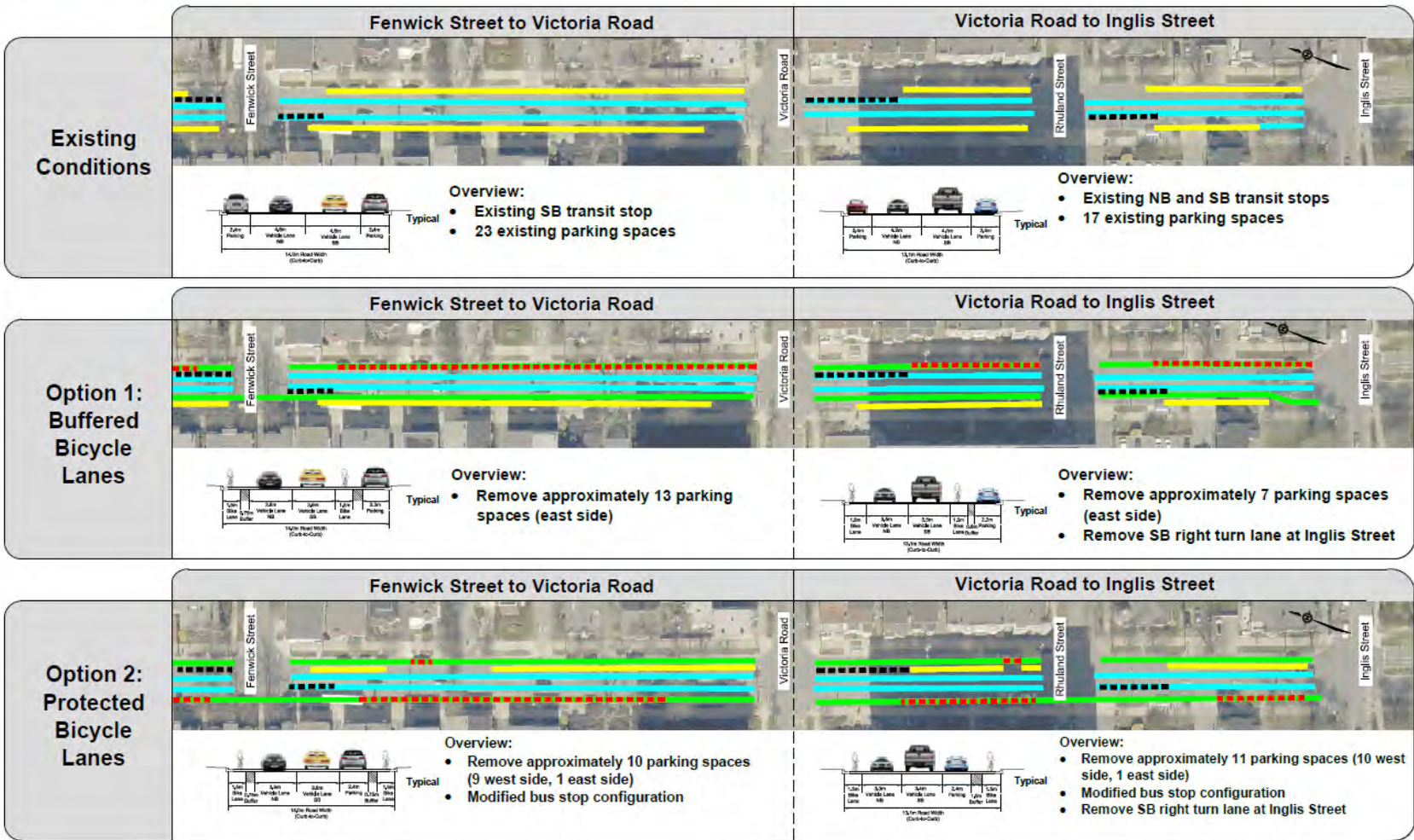
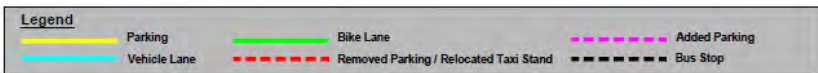
**Legend**

- Parking
- Bike Lane
- Added Parking
- Vehicle Lane
- Removed Parking / Relocated Taxi Stand
- Bus Stop

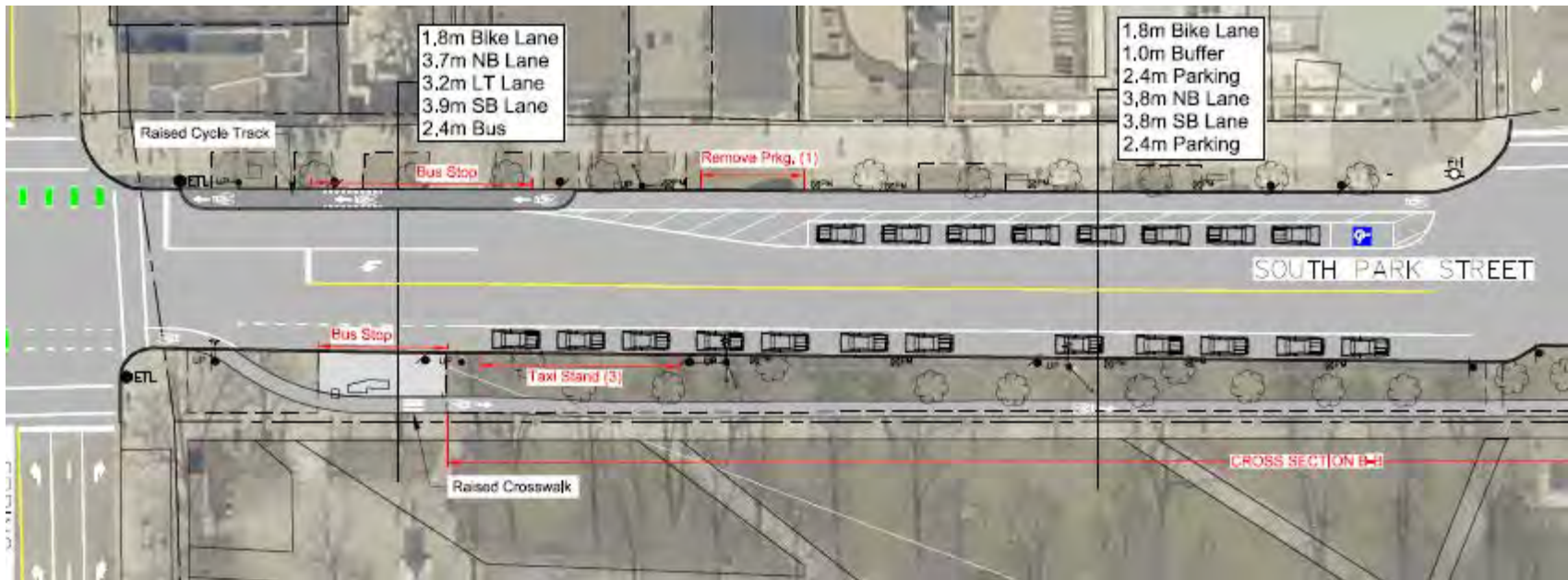
	University Avenue to South Street	South Street to Fenwick Street
<b>Existing Conditions</b>	<p style="text-align: center;">University Avenue</p> <p style="text-align: center;">South Street</p> <p style="text-align: center;">Typical</p> <p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Existing NB and SB transit stops</li> <li>24 existing parking spaces</li> </ul>	<p style="text-align: center;">South Street</p> <p style="text-align: center;">Fenwick Street</p> <p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Existing NB transit stop</li> <li>15 existing parking spaces</li> </ul>
<b>Option 1: Buffered Bicycle Lanes</b>	<p style="text-align: center;">University Avenue</p> <p style="text-align: center;">South Street</p> <p style="text-align: center;">Typical</p> <p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Remove 3 parking spaces (1 east side, 2 west side)</li> </ul>	<p style="text-align: center;">South Street</p> <p style="text-align: center;">Fenwick Street</p> <p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Remove approximately 8 parking spaces (3 west side, 5 east side)</li> </ul>
<b>Option 2: Protected Bicycle Lanes</b>	<p style="text-align: center;">University Avenue</p> <p style="text-align: center;">South Street</p> <p style="text-align: center;">Typical</p> <p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Remove 5 parking spaces (4 east side, 1 west side)</li> <li>Modified bus stop configurations</li> </ul>	<p style="text-align: center;">South Street</p> <p style="text-align: center;">Fenwick Street</p> <p><b>Overview:</b></p> <ul style="list-style-type: none"> <li>Remove 11 parking spaces (10 west side, 1 east side)</li> <li>Modified bus stop configurations</li> </ul>

# South Park Street

## Fenwick Street to Inglis Street (Page 4/4)



# Off-Street concept option (Option 2a)



# Off-Street concept option (Option 2a)

