

City of Barrie  
Class Environmental Assessment for:  
**Bradford Street Corridor**

**Active Transportation Facility  
Planning Approach**



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# Study Introduction

- > This is a **long-range corridor planning** study to confirm future multi-modal needs on Bradford Street, including:
  - > Overall corridor operations for 2031, 2041 and 2051 for all road users (pedestrians, cyclists, transit and vehicles)
  - > Opportunities to improve traffic operations and pedestrian safety at the intersections of Tiffin Street / Bradford Street and Tiffin Street / Lakeshore Drive
  - > Streetscape improvements and guidance for developments
  - > Property needs to accommodate future improvements

Currently, **no immediate capital works** are planned.

The study may identify opportunities for short-term or accelerate capital improvements, as well as potential need for additional studies.



# Study Process & Schedule

- > The **Municipal Class Environmental Assessment (Class EA)** is a planning and approval process for municipal infrastructure that follows Ontario's Environmental Assessment Act. This study follows a '**Schedule C**' Class EA process:



- > The City's Transportation Master Plan (TMP) (2019) proposed cycle tracks on Bradford Street.
- > Ontario Traffic Manual (OTM) Book 18 Cycling Facilities has been updated as of June 2021 to reflect current design guidelines and best practices.
- > We are now confirming the original TMP recommendation against the current OTM Book 18, with respect to cycling facility type on Bradford Street.



- > All ages and abilities design requires low stress facilities with research showing that the **majority of participants would be more comfortable in physically separated bikeways**

## How Do We Select a Cycling Facility...

### Step 1

- Pre-select facility type options

### Step 2

- Detailed & contextual evaluation

### Step 3

- Document & justify rationale

OTM Book 18; June 2021 . Adapted from Figure 5.1  
Three Step Facility Selection Flow Chart

## Who Will be Using the Facility...

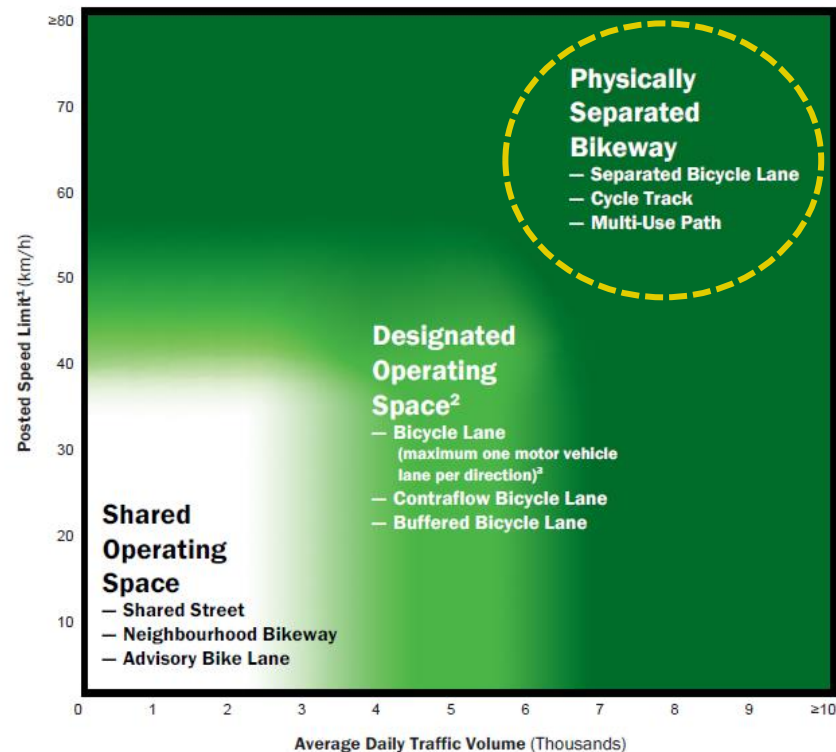
DESIGN CYCLIST		
Interested but Concerned	Somewhat Confident	Highly Confident
<ul style="list-style-type: none"> <li>• Strong preference for separated cycling facilities or very low-volume and low-speed streets</li> <li>• Cycling frequency depends heavily on having a network of low-stress facilities</li> <li>• Can generally negotiate simple low-speed interactions with motor vehicles at intersections</li> </ul>	<ul style="list-style-type: none"> <li>• Comfortable cycling on-street and interacting with moderate-speed traffic</li> <li>• Preference for separated cycling facilities or low-volume and low-speed streets</li> <li>• Cycling frequency increases as network of low-stress facilities expands</li> </ul>	<ul style="list-style-type: none"> <li>• Comfortable cycling on-street and interacting with higher-speed traffic</li> <li>• Preference for cycling facilities that allow for easy overtaking and efficient movement</li> <li>• Cycling frequency not necessarily affected by network</li> </ul>
<div>Lower stress tolerance</div> <div>Higher stress tolerance</div>		
% of population	• 51–56%	• 5–9%
		• 4–7%

OTM Book 18; June 2021 . Excerpt from Table 2.1  
Types of Cyclists

- > **Step 1: Pre-select Facility Type Options**  
(OTM Book 18 Section 5.2.3)
- > **Streets with two or more through lanes in each direction** should at a minimum have a buffered bike lane or buffered paved shoulder, with **physical separation being preferred**

**Recommendation:**  
Physically Separated Bikeway

OTM Book 18; June 2021 . Figure 5.5 Desirable Cycling Facility Pre-Selection Nomograph Urban / Suburban Context (Step 1)





Physically Separated Bikeways		
<b>Physically Separated Cycling Lanes</b> (Section 4.3.2)		A portion of a roadway which has been designated for the exclusive use of cyclists, and which is separated from adjacent motor vehicle lanes by a <b>horizontal buffer and separation elements</b> that restrict encroachment of traffic. Separation techniques are detailed in <b>Section 4.3.1</b> .
<b>Cycle Tracks</b> (Section 4.3.3)		A physically separated bikeway that is <b>horizontally and vertically separated</b> from the travelled portion of the roadway by a curb and buffer. Cycle tracks are designated exclusively for use by people riding bikes, and often travel parallel to a sidewalk.
<b>In-Boulevard Multi-Use Paths</b> (Section 4.3.4)		A two-way path that is <b>horizontally and vertically separated</b> from the travelled portion of the roadway by a curb and buffer. Multi-use paths are <b>shared by cyclists and pedestrians</b> . In-boulevard multi-use paths are distinct from multi-use trails, which run in a dedicated corridor separate from the road right-of-way.



- > Cycle track proposed on Bradford Street in TMP
- > North of Bradford Street:
  - > **Transition from cycle track to signed bike route north of Dunlop Street**
  - > The Great Trail is part of Trans Canada Trail connecting Essa Township in the south to Springwater Township in the north. Trail connects to the waterfront multi-use trail and off-road trail at South Shore Park.
- > South of Bradford Street
  - > In-boulevard pathway on Essa Road & bike lane on Tiffin Street
  - > **Consider continuation of cycle track on Essa Road south of intersection at Tiffin Street or alternate access to GO Station**

*Excerpt from TMP Map ES1 –  
Draft Cycling and Multi-use  
Trail Network (2019)*

#### Existing Facilities

- Waterfront Multi-use Trail
- In-Boulevard Pathway
- Buffered Bike Lane
- Bike Lane
- Paved Shoulder
- Signed Bike Route
- Off-road Trail

#### Proposed Facilities

- In-Boulevard Pathway
- Cycle Track
- Buffered Bike Lane
- Bike Lane
- Paved Shoulder
- Urban Shoulder
- Signed Bike Route
- Off-road Trail

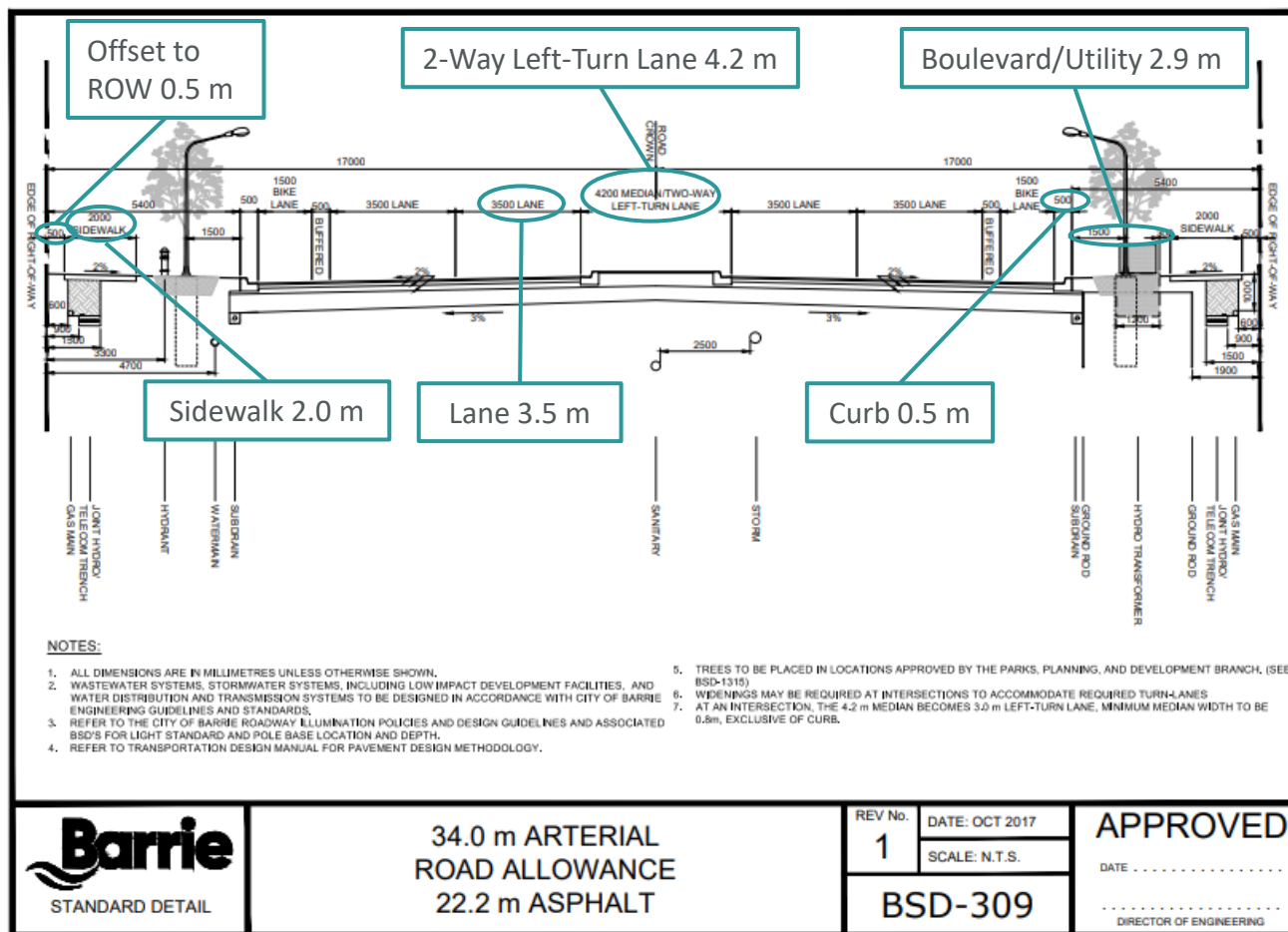
#### Trail Systems

- Province-Wide Cycling Network
- The Great Trail

#### Transportation Features

- GO Station
- Barrie Bus Terminal

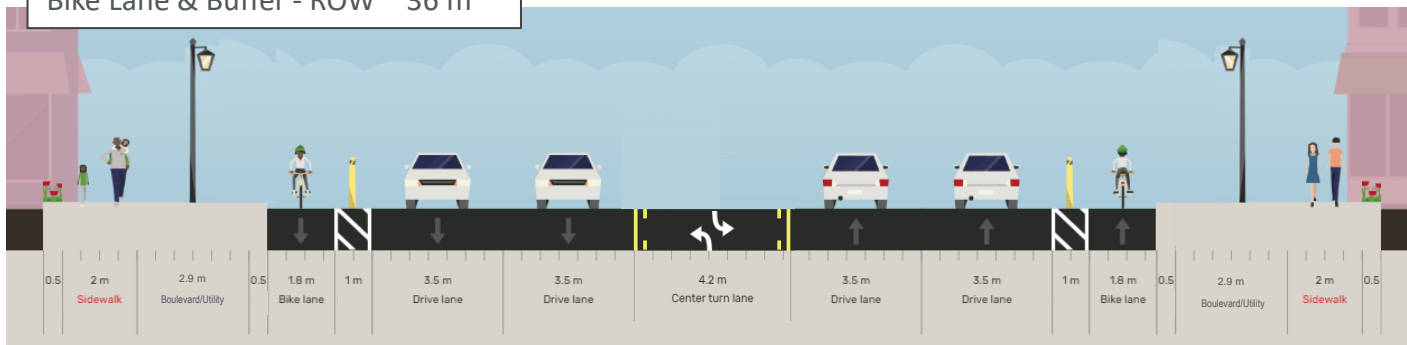




# Physically Separated Bicycle Lane Options

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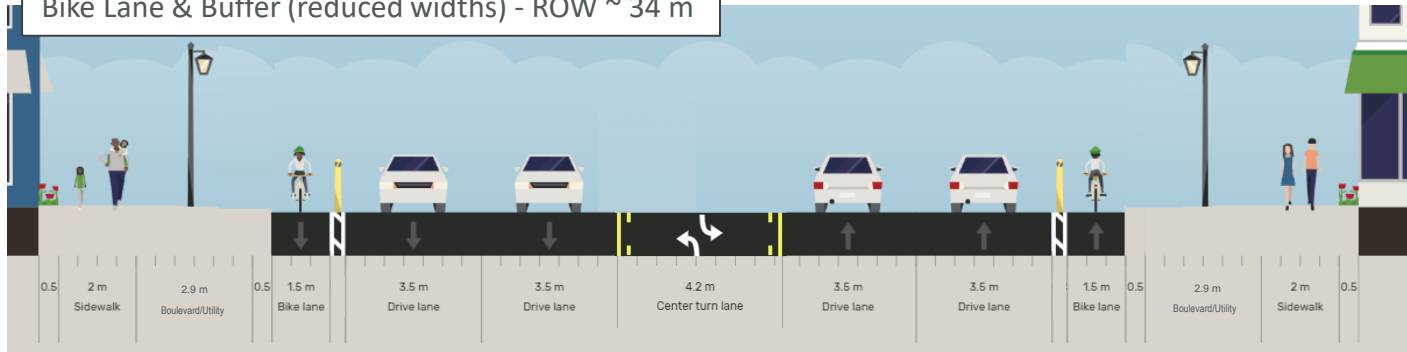
Bike Lane & Buffer - ROW ~ 36 m



Bicycle Lane Physically Separated by Bollards and Planters, Toronto



Bike Lane & Buffer (reduced widths) - ROW ~ 34 m



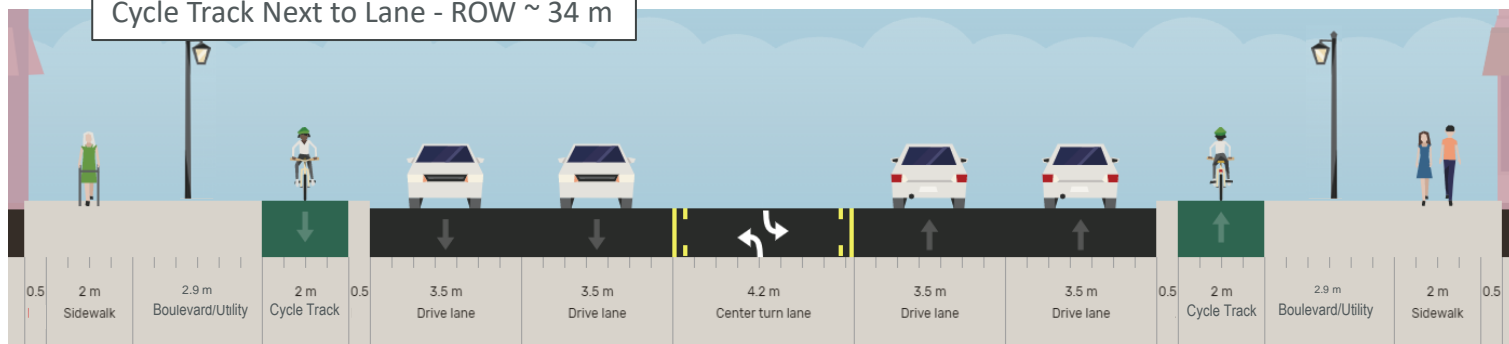
Bicycle Lane Physically Separated by Bollards, Markham



# Cycle Track Options

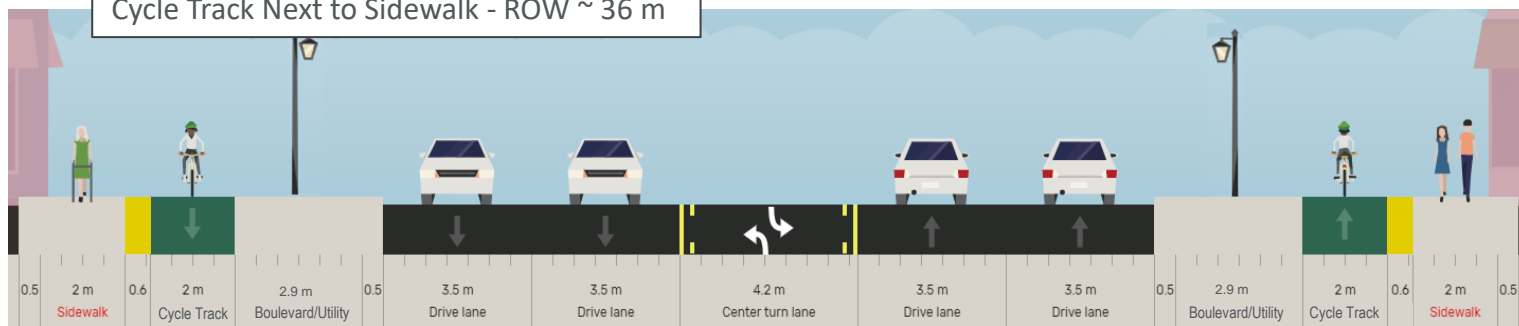
12

Cycle Track Next to Lane - ROW ~ 34 m

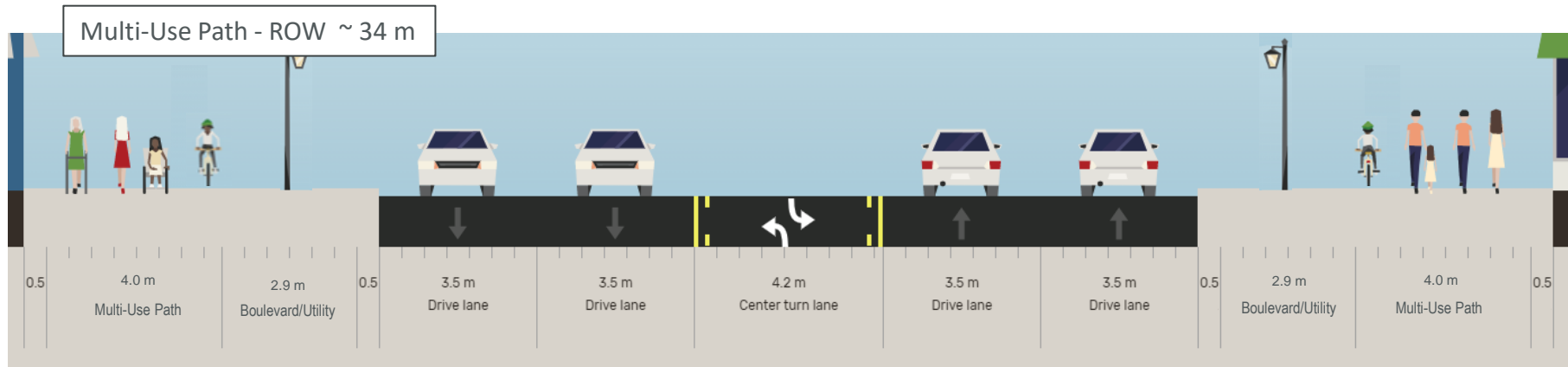


Cycle Track Separated by Mountable Curb, Waterloo

Cycle Track Next to Sidewalk - ROW ~ 36 m



Cycle Track Separated by Barrier Curb and Buffer, Ottawa



**Multi-Use Path Separated by Grassy Boulevard, Waterloo**

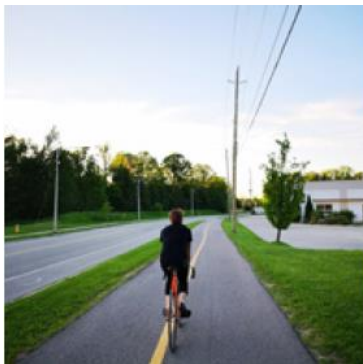


Image from OTM Book 18; June 2021

**Multi-Use Path Separated by Grassy Boulevard, Richmond Hill**



Image from richmondhill.ca

**Multi-Use Path Separated by Grassy Boulevard, Newmarket**

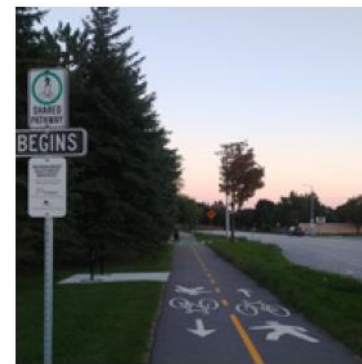
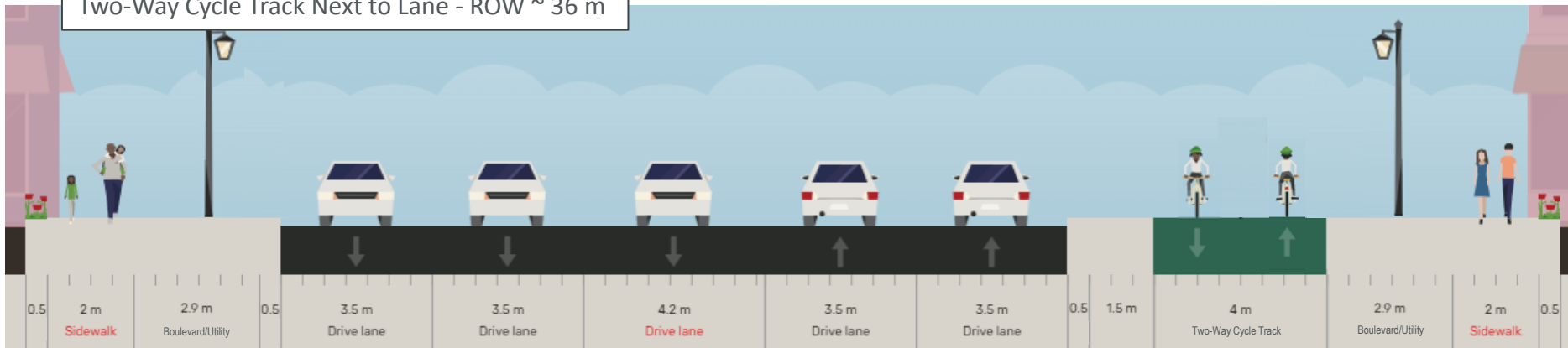


Image from OTM Book 18; June 2021

# Two-Way Cycle Track Option

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Two-Way Cycle Track Next to Lane - ROW ~ 36 m



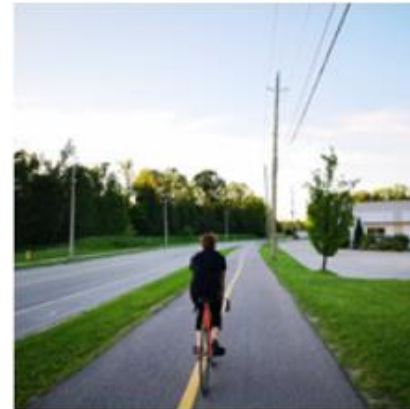
Two-Way Cycle Track Separated by Grassy Boulevard, York Region



Image from OTM Book 18; June 2021



- > Gather your feedback on cycling facility options
- > Present cycling facility options to the public at Public Information Centre #1 (to be scheduled shortly)
- > Investigate cycling facility option in more detail considering specific site conditions on Bradford Street, at intersections, and access to the Allandale Waterfront GO Station
- > Recommend a preferred cycling facility type
- > Review / confirm recommendation with stakeholders and the public at Public Information Centre #2





# DISCUSSION