

BC ACTIVE TRANSPORTATION DESIGN GUIDE UPDATE

Accessible Transportation Advisory
Committee Meeting
Monday, July 15, 2024



Ministry of
Transportation
and Infrastructure



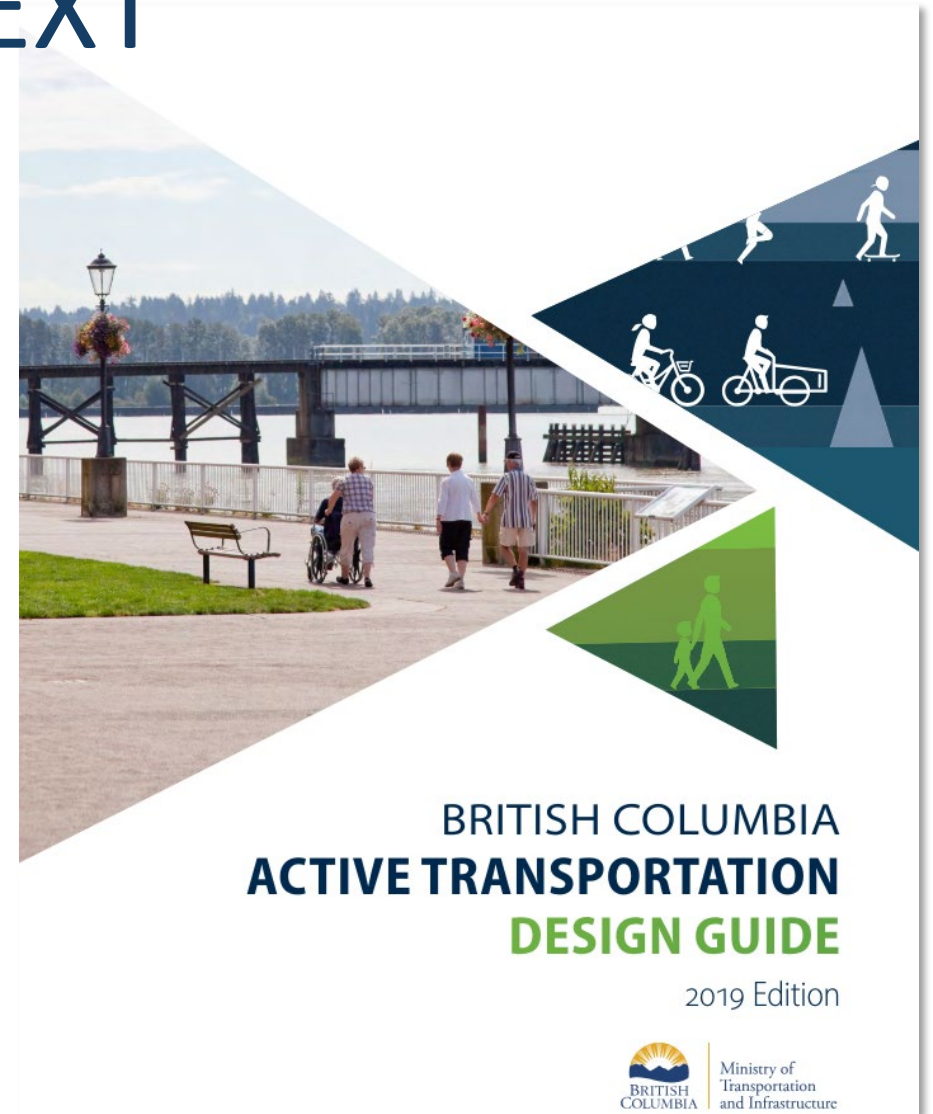
AGENDA

1. BC Active Transportation Design Guide Update
2. Design Guide for Bus Stops Adjacent to Cycling Infrastructure
3. Questions and Discussion
4. Next Steps



BACKGROUND AND CONTEXT

In 2019 BC Active Transportation Summit, the Province released the **BC Active Transportation Design Guide** to provide best practice design guidance for design professionals across BC related to **operations, maintenance, and management** of active transportation infrastructure



ALIGNMENT WITH PROVINCIAL INITIATIVES



- » **SUSTAINABLE TRANSPORTATION**

- » **CLEANER AND MORE EFFICIENT TECHNOLOGY**

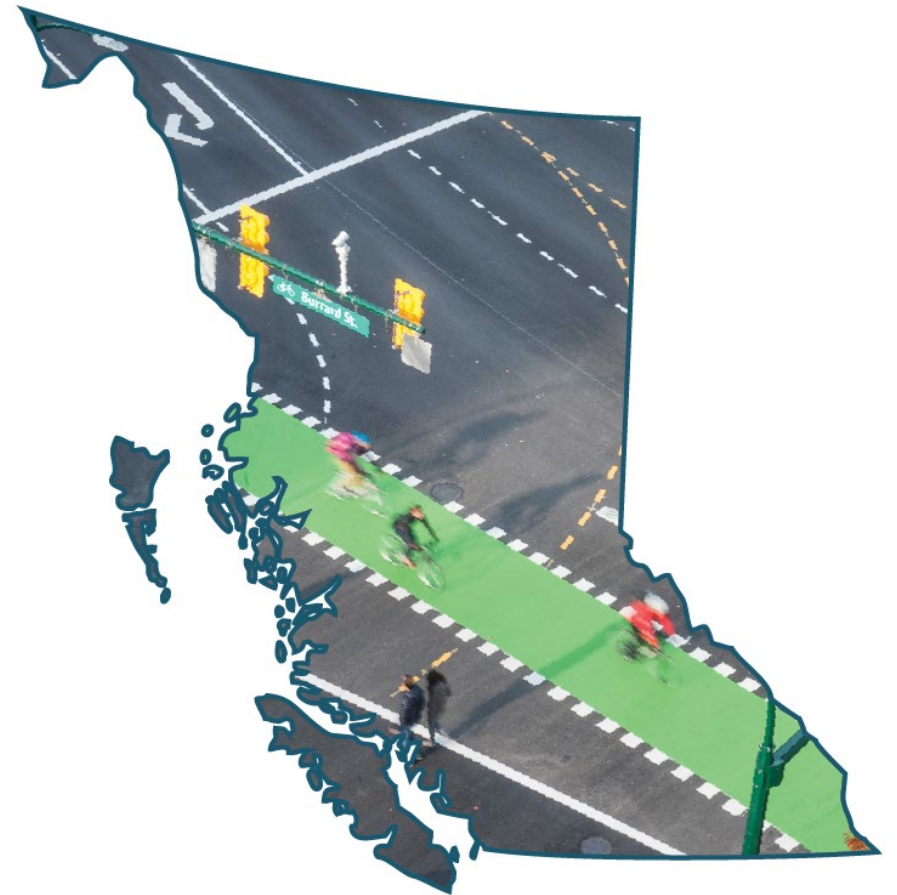
- » **INTRODUCING NEW CLEAN ENERGY OPTIONS**

- » **REDUCING AND MAKING BETTER USE OF WASTE**

- » **SIGNIFICANTLY INCREASING INDUSTRIAL ELECTRIFICATION**

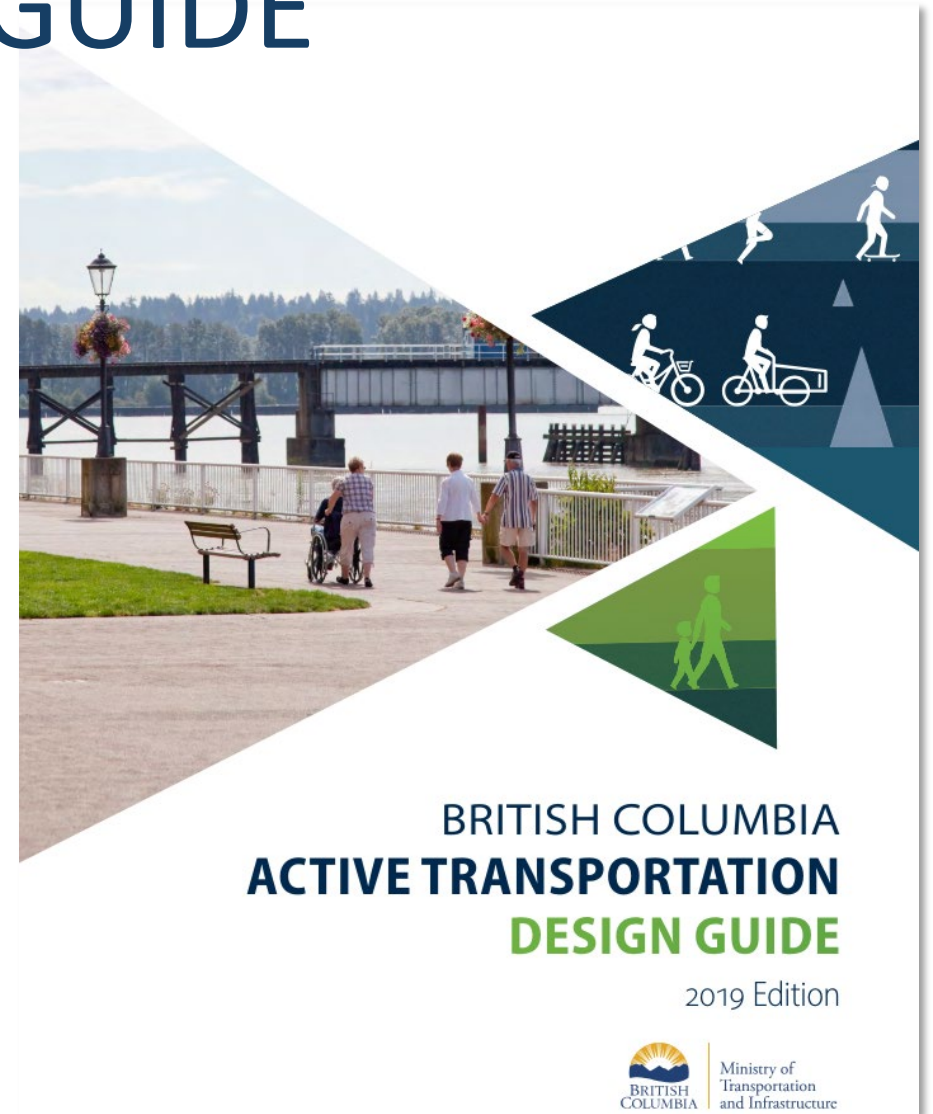
- » **REDUCING EMISSIONS FROM FORESTRY, LAND USE, AND AGRICULTURE**

- » **IMPROVING COMMUNITY DESIGN AND SERVICES**



PURPOSE OF THE DESIGN GUIDE

- Best practice design guidance for design professionals across BC
- Practical guidance related to operations, maintenance, and management of active transportation infrastructure
- BC-specific, context sensitive, and province-wide
- Published for free, online



WHAT THE GUIDE INCLUDES

9 Sections & 39 Chapters

A. OVERVIEW and CONTEXT

B. PLANNING FRAMEWORK

C. PEDESTRIAN FACILITIES

D. CYCLING FACILITIES

E. MULTI-USE FACILITIES

F. CONTEXT SPECIFIC APPLICATIONS

G. INTERSECTIONS + CROSSINGS

H. AMENITIES + INTEGRATION

I. POST IMPLEMENTATION

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A.1 What is the British Columbia Active Transportation Design Guide? A4

B. SETTING THE CONTEXT B1

B.1 What is Active Transportation? B4

B.2 Planning For Active Transportation B12

B.3 Universal Design B32

B.4 Operational and Behavioural Characteristics B42

C. PEDESTRIAN FACILITIES C1

C.1 General Design Guidance C4

C.2 Pedestrian Through Zone C12

C.3 Frontage, Furnishing, and Ancillary Zones C24

C.4 Rural Pedestrian Design Considerations C38

D. CYCLING FACILITIES D1

D.1 General Design Guidance D4

D.2 Neighbourhood Bikeways D12

D.3 Protected Bicycle Lanes D30

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E.3 Separated Bicycle + Pedestrian Pathways E26

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C. Types of Traffic Calming Devices LIV

FIVE YEARS OF CHANGE

Since 2019, there have been significant changes to the provincial context along with emerging trends and directions in active transportation across Canada and internationally that require updated recommendations and guidance



A NEED FOR UPDATED GUIDANCE

The updated Design Guide will better reflect the needs of active transportation users and users of the guide. This review will inform updates to the Design Guide by:

- Reflecting the **evolving landscape of active transportation**, including emerging trends and best practices;
- Highlighting **lessons learned** and recent case studies;
- Identifying and addressing any **gaps** that may have been identified;
- Identifying **what needs to change** to make it as useable and functional a document as possible, including any additional technical details to make it more relevant to practitioners; and
- Ensuring **meaningful input along with buy-in and support** from a broad range of stakeholders

STAKEHOLDER ENGAGEMENT

**Targeted and focused updates
will be made based on what we
learn**

What is working well?

What is missing?

What needs to change?

***What other guidelines should be
consider?***

STAKEHOLDER ENGAGEMENT

Stakeholders:

- Local government staff
- First Nations communities
- Researchers and academics
- Advocacy groups
- Consultants
- Developers
- Professional associations
- Public health professionals
- Others?

Tactics:

- BC AT Summit Workshop
- Online survey
- Workshops, focus groups, and interviews
- Advisory Committees

STAKEHOLDER ENGAGEMENT

Feedback Opportunities:

- | | |
|--|--------------------------------|
| • Online Survey | June 7-25, 196 responses |
| • BC Active Transportation Summit Workshop | June 18, ~80 participants |
| • External Working Group | 5 Meetings at Key Milestones |
| • Stakeholder Discussion Forums | 4-5 Forums at 2 Key Milestones |
| • Targeted Interviews | 3 Group Interviews |

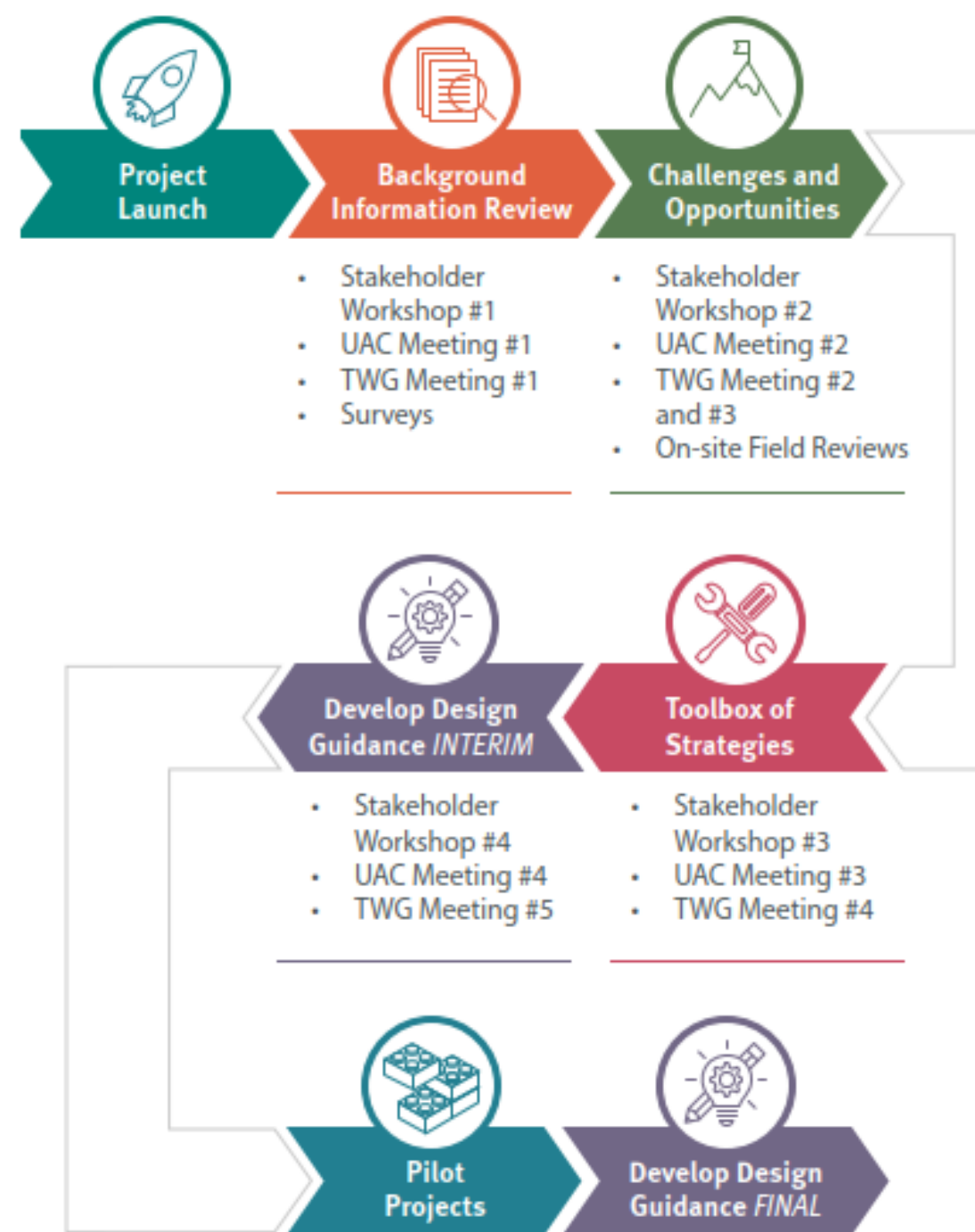
BUS STOPS ADJACENT TO CYCLING INFRASTRUCTURE

- Bus stops adjacent to cycling infrastructure can create barriers, limit access to transit, and create safety concerns for many people.
- There is limited guidance on how to effectively design bus stops adjacent to cycling infrastructure.
- TransLink and the BC Ministry of Transportation & Infrastructure created the **Design Guide for Bus Stops Adjacent to Cycling Infrastructure** to address this gap



HOW THE GUIDE WAS DEVELOPED

- Collaborative, stakeholder-driven process over 18 months with practitioners and people with lived experience
 - Surveys;
 - Stakeholder Workshops;
 - On-site Field Reviews;
 - Case Study Interviews;
 - Pilot Projects
- Informed input received was used to iteratively guide and shape the recommendations at all phases of the process



STAKEHOLDER ENGAGEMENT

People with Lived Experience Stakeholder Group

- Alliance of Equality of Blind Canadians BC
- Alzheimer Society of BC
- Canadian Hard of Hearing Association
- Canadian National Institute of the Blind
- Council of Senior Citizens' Organizations of BC Cycling Without Age
- Disability Alliance BC
- Gateway Navigation CCC Limited
- HUB Cycling
- HUB Cycling Youth Advisory Committee
- Kelowna Area Cycling Coalition
- Inclusion BC
- MOSAIC BC Rick Hansen Foundation
- Spinal Cord Injury BC
- TransLink Access Transit Users Advisory Committee (UAC)
- UBC Faculty of Education
- Wavefront Centre for Communication Accessibility

Technical Working Group

- BC Transit
- Canadian National Institute of the Blind
- City of Abbotsford
- City of Burnaby
- City of Coquitlam
- City of Kamloops
- City of Kelowna
- City of Nanaimo
- City of New Westminster
- City of North Vancouver
- City of Penticton
- City of Richmond
- City of Vancouver
- City of Victoria
- City of Surrey
- City of White Rock
- Coast Mountain Bus Company
- District of Lake Country
- District of North Vancouver
- District of Saanich
- Ministry of Transportation and Infrastructure
- Township of Esquimalt
- Township of Langley
- University of British Columbia

Case Study Interviews

British Columbia

- City of Kelowna
- City of Nanaimo
- City of North Vancouver
- City of Penticton
- City of Vancouver
- City of Victoria
- District of Saanich

Elsewhere in Canada

- City of Calgary
- City of Montreal
- City of Ottawa
- City of Winnipeg

United States

- City of Seattle
- Montgomery County, Maryland
- Massachusetts Bay Transportation Authority
- AC Transit, California

International

- Delft, Netherlands

Pilot Project Communities

- City of Kelowna
- City of Nanaimo
- City of North Vancouver
- District of Saanich
- City of Vancouver

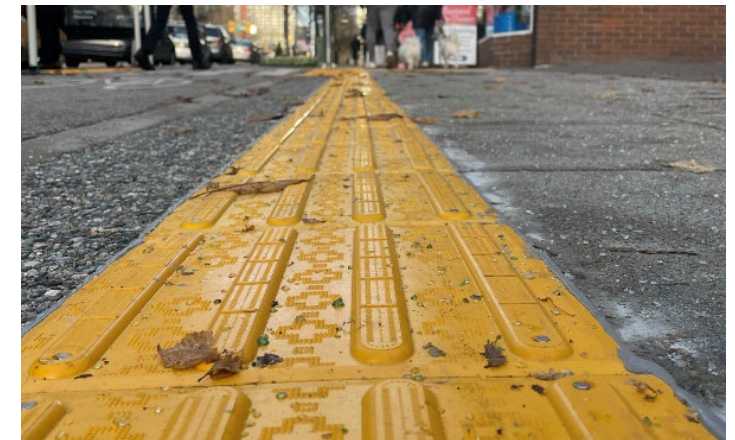
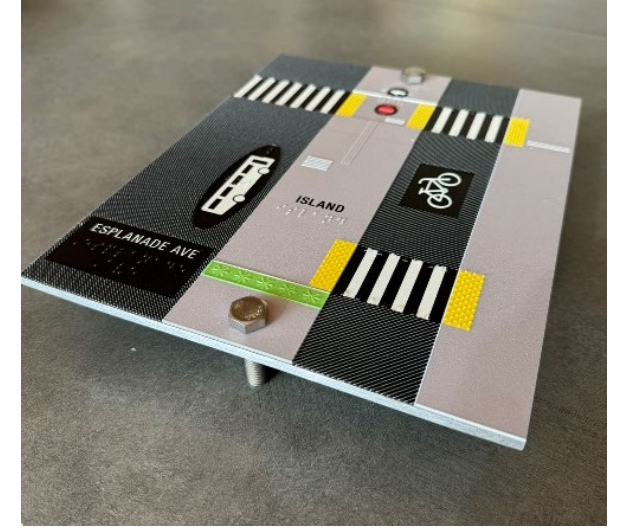
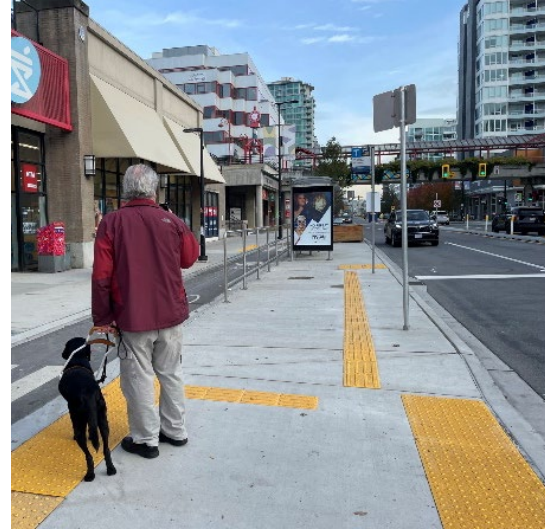
PILOT PROJECTS

- Pilot phase to test various design treatments in the Interim Draft Design Guide
- Structured input obtained using standardized evaluation template
- **11 bus stops** representing a range of contexts and applications in **five municipalities** were included in the pilot project
- Over **80 people participated**, including:
 - 40 with partial or full sight loss
 - 19 with other types of disabilities



PILOT PROJECTS

- A wide range of design treatments were piloted:
 - Tactile Attention Indicators
 - Tactile Directional Indicators
 - Enhanced Signage with Braille, Raised Tactile Letters, and Maps
 - Secondary Bus Stop ID Poles
 - Accessible Pedestrian Signals
 - Actuated Flashing Beacons
 - Raised Thermoplastic 'Rumble Strips'
 - Enhanced Signage and Pavement Markings
- **Results directly informed the final guidance**



STUDY GOALS

Goal 1



Provide **priority to pedestrians** in the vicinity of bus stops adjacent to protected cycling infrastructure, as they are the more vulnerable road user.

Goal 2



Provide an environment that feels **safe and comfortable** for all people needing to access or interact with the bus stop, **whether they have a disability and whether they are walking, biking, or using transit.**

Goal 3



Strive to **maximize accessibility** to accommodate the broadest range of accessibility needs in all designs and contexts.

Goal 4



Promote **respectful behaviour** between people walking, biking, and using transit.

Goal 5



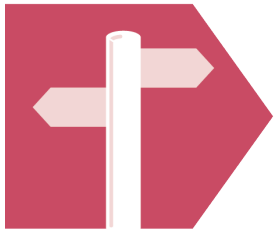
Encourage **consistency in the design and implementation** of bus stops adjacent to protected cycling infrastructure across British Columbia, while recognizing the need for context-sensitive designs depending on site-specific considerations.

Goal 6



Ensure **engagement feedback is meaningfully incorporated** in designs.

ISSUES AND CHALLENGES



**THEME 1:
WAYFINDING AND
LAYOUT**



**THEME 2:
SAFE AND RESPECTFUL
BEHAVIOUR**



**THEME 3:
DESIGN ELEMENTS**



**THEME 4:
OPERATIONS AND
MAINTENANCE**



**THEME 5:
EDUCATION AND
ENGAGEMENT**

PLANNING GUIDELINES

If there are other alternatives available to avoid bus stops adjacent to protected cycling infrastructure, they should be explored to avoid or minimize conflicts between pedestrians, cyclists, and transit users, especially those with disabilities

Can the bikeway and transit route be accommodated on **different corridors**?

Can the bikeway be provided exclusively on the **left side of a one-way street**?

Can the bikeway be accommodated on a different corridor with **less steep slopes**?

CONFIGURATIONS

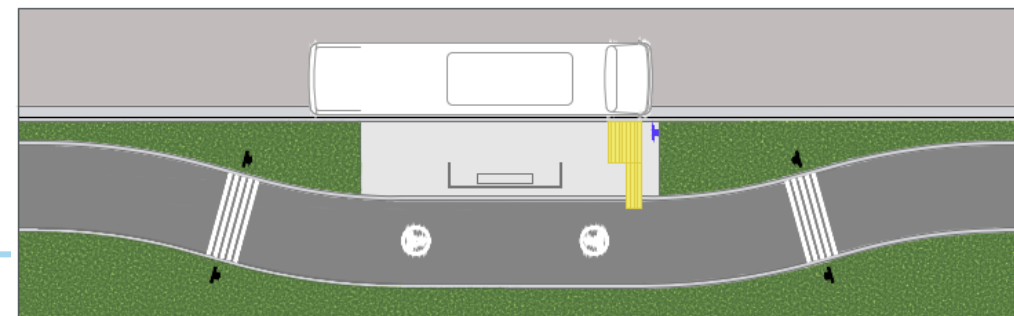
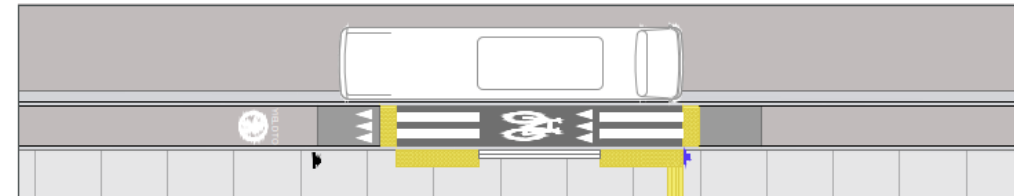
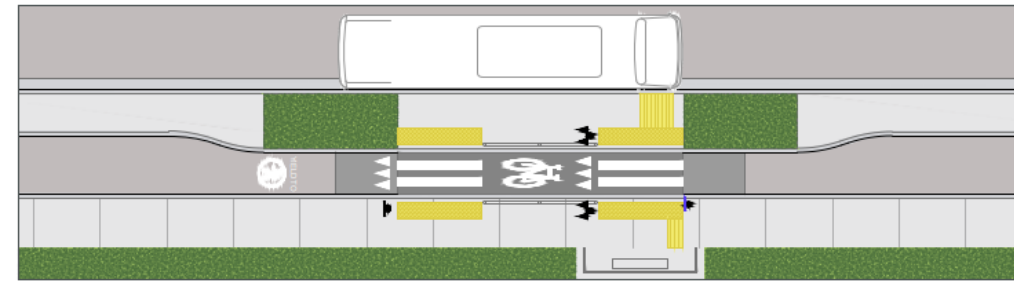
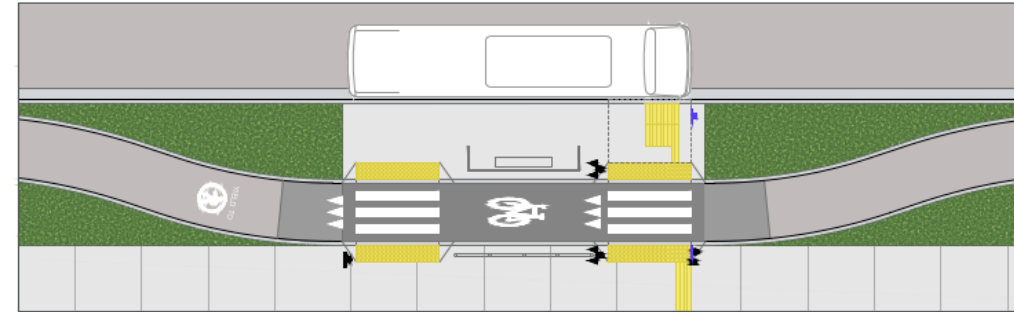
- A hierarchy of configurations was developed with a decision-support framework for most to least preferred configurations
- Most preferred:
 - Conventional island platform
 - Integrated with signalized intersection
 - Uni-directional bikeway
- Other configurations should only be considered under specific circumstances

Order of preference



Preference 1: Eliminate Conflicts

Preference 2: Conventional Island Platform Bus Stop



SUMMARY

- 45 treatments were identified to address the 16 issues and challenges identified
- Together, these treatments can help to remove barriers and improve accessibility if bus stops are required to be provided adjacent to cycling infrastructure
- However, **this study did not fully address all of the issues identified**, particularly related to knowing if cyclists are approaching or if cyclists had stopped
 - Technical reasons
 - Lack of research or precedents examples
 - Legal uncertainty
- This Guide is just a first step and **further research is required**

QUESTIONS AND DISCUSSION