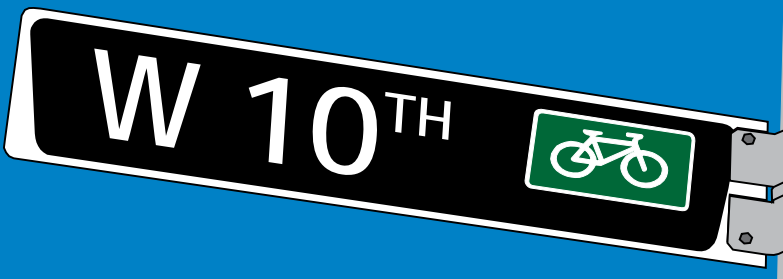


1. WELCOME



10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

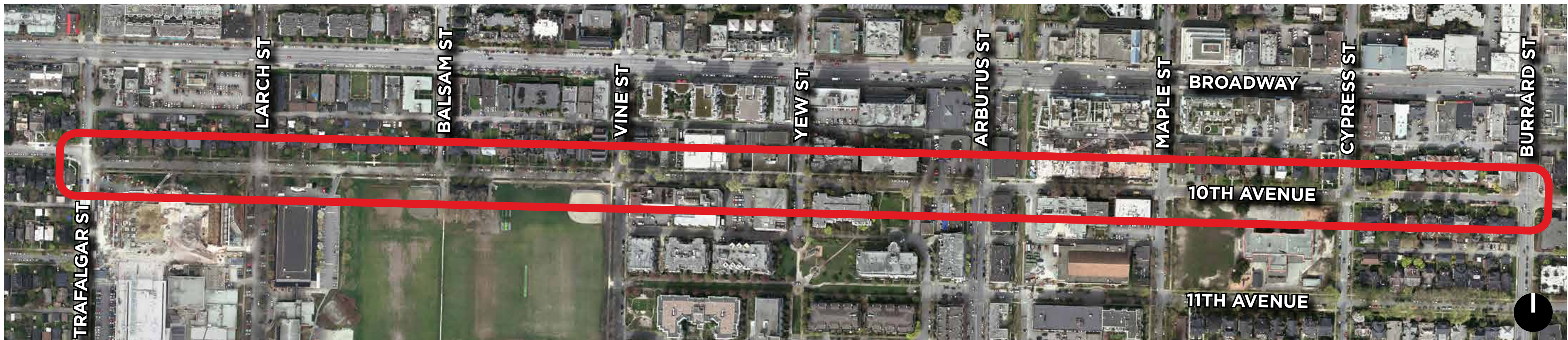
What's happening?

The City of Vancouver is planning to upgrade the segment of 10th Avenue between Trafalgar St and Burrard St. The proposed upgrades will:

- Improve comfort and accessibility for people walking and cycling, especially around busy sections like schools
- Address safety concerns for all road users, especially at key intersections
- Accommodate the vehicle loading and access needs of adjacent schools and businesses
- Protect the street's healthy and mature tree canopy
- Manage on-street parking to support access to homes, schools, businesses and other organizations on 10th Ave

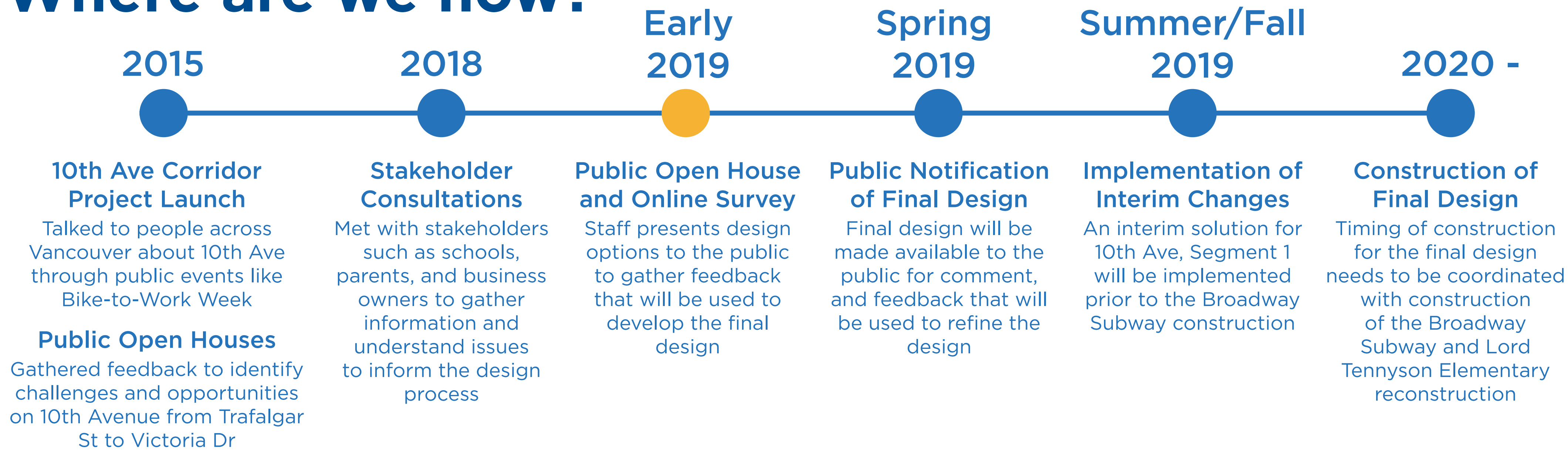


10th Ave and Yew St, looking west



10th Avenue, Segment 1 project area (Trafalgar St to Burrard St)

Where are we now?



Tell us what you think!

- In Person** Complete a survey at today's open house.
- Online** Complete an online survey at vancouver.ca/10th-avenue-segment-1
- Email** Send comments or questions to 10thavenue@vancouver.ca
- Phone** Call 3-1-1 to provide comments or questions

Please submit comments by February 28, 2019

2. INTRODUCTION

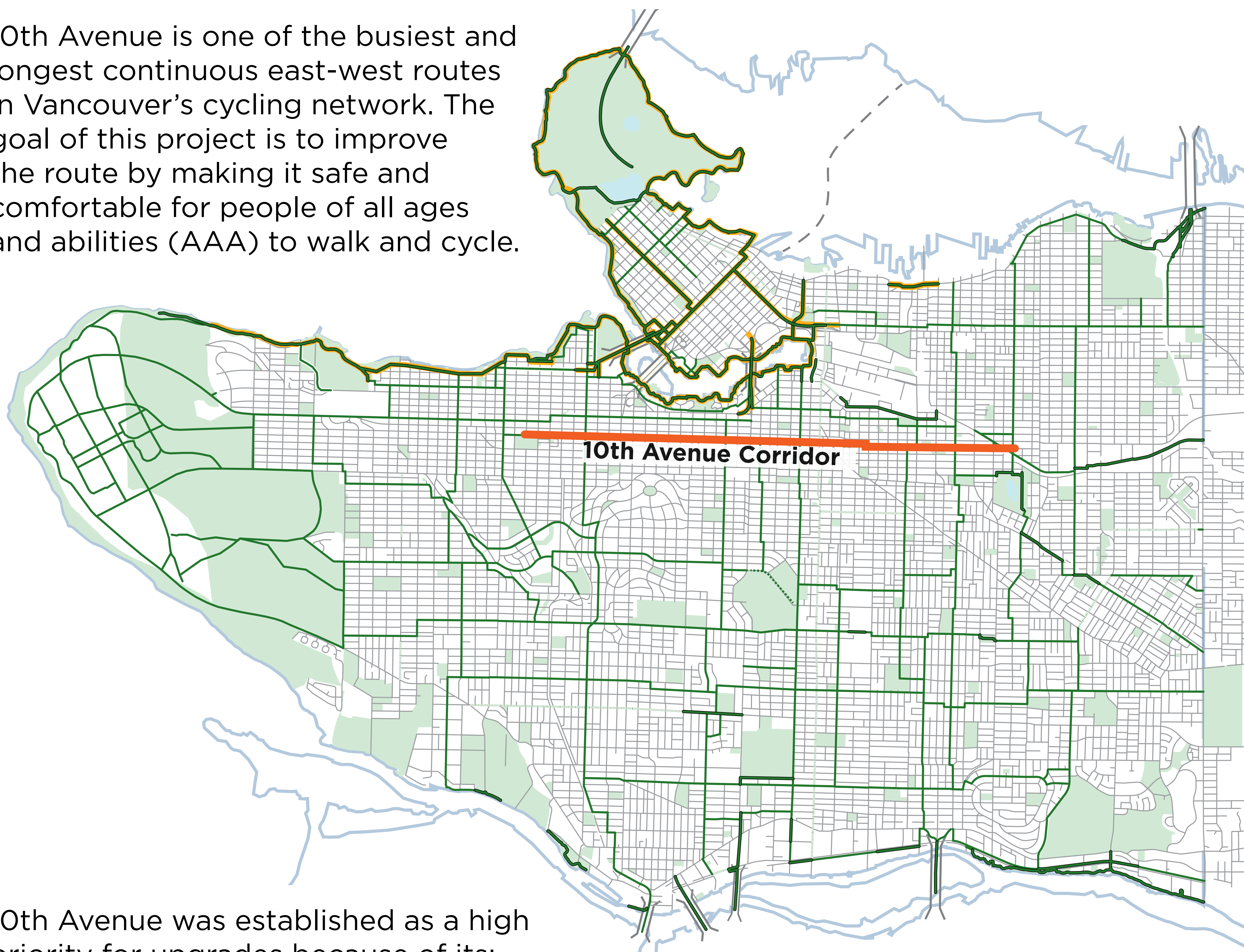
W 10TH



10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

Why 10th Avenue?

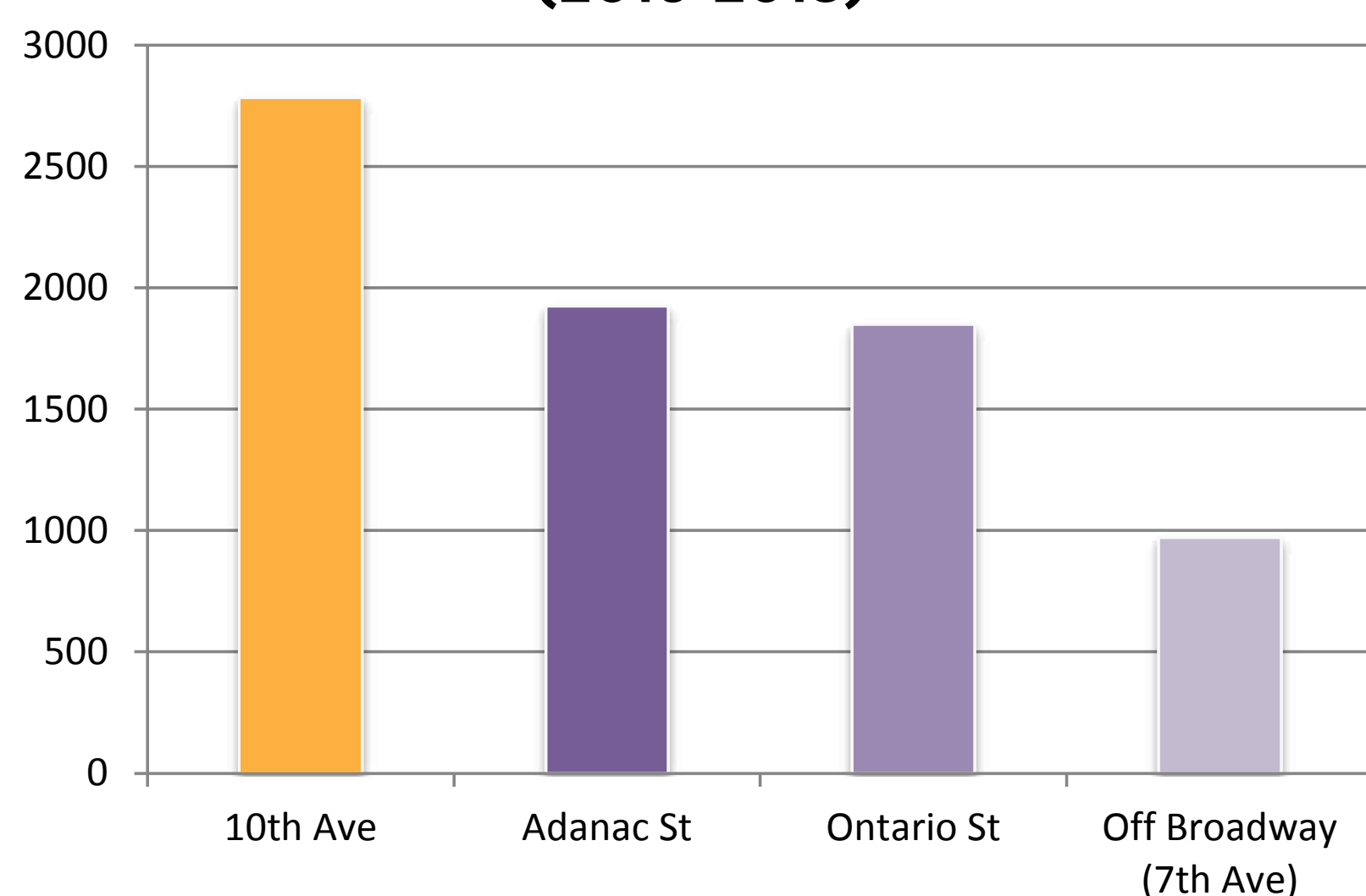
10th Avenue is one of the busiest and longest continuous east-west routes in Vancouver's cycling network. The goal of this project is to improve the route by making it safe and comfortable for people of all ages and abilities (AAA) to walk and cycle.



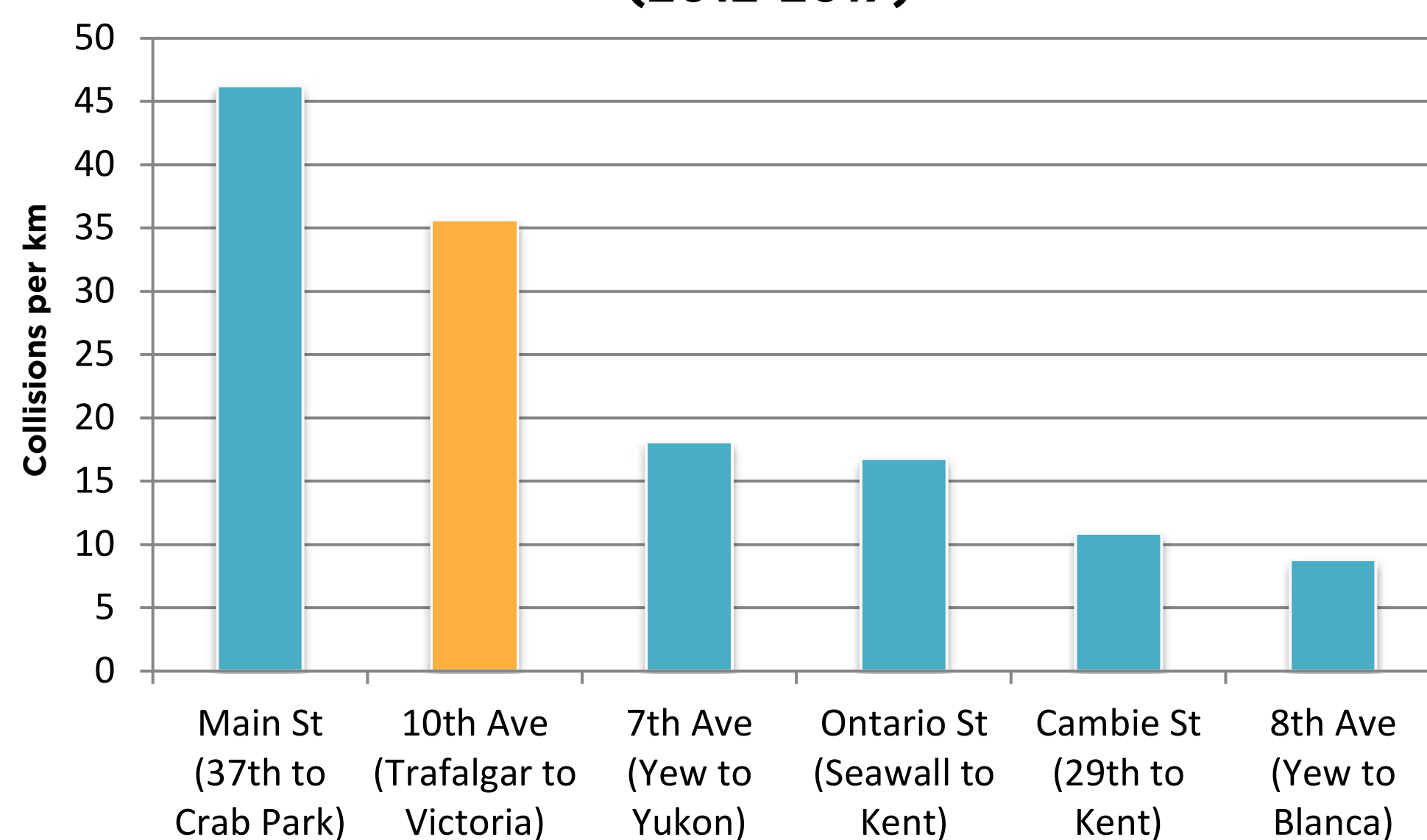
10th Avenue was established as a high priority for upgrades because of its:

- **high cycling volumes** (over 2000 per day on a typical June day)
- **high vehicle volumes** (over 2700 per day)
- **high collision rates** compared to other bike routes
- **connection to key destinations** such as schools, community centres, major transit stations, and commercial high streets, and
- **connection to major north-south bike routes** such as the Arbutus Greenway, Ontario Bikeway and Mosaic Bikeway (Woodland Drive)

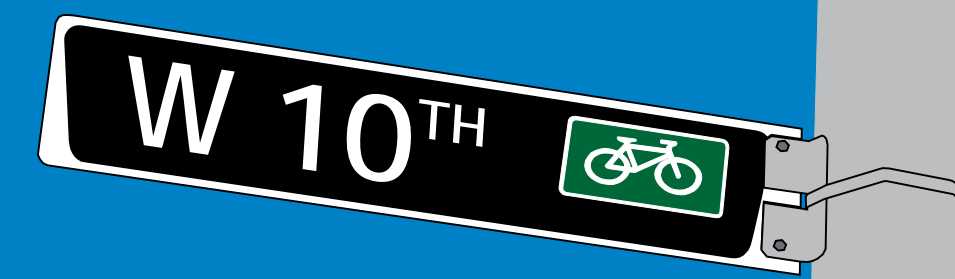
Vehicle Volumes on Major Bike Routes (2016-2018)



Bike Collisions on Comparable Bike Routes (2012-2017)



3. POLICY CONTEXT



10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

Transportation 2040

Transportation 2040 is a long-term strategic vision for the city that will help guide transportation and land use decisions and public investments for the years ahead. The plan identifies the 10th Avenue bikeway as a key route to be upgraded as part of the 'all ages and abilities' network.

Targets:

- By 2040, at least two-thirds of all trips will be made on foot, bike or transit.
- Move toward zero traffic-related fatalities.

Policy directions:

- W 1.1 Make streets safer for walking.
- C 1.1 Build cycling routes that feel comfortable for people of all ages and abilities.
- C 1.2 Upgrade and expand the cycling network to efficiently connect people to destinations.
- M 1.2 Consider impacts to transit, commercial vehicles and general traffic flow prior to reallocating road space.
- M 1.3 Manage traffic to improve safety and neighbourhood livability.
- G 2.2 Provide for efficient loading and unloading.



All Ages and Abilities (AAA) Cycling Network

The plan aims to make cycling safe, convenient, comfortable and fun for people of all ages and abilities (AAA), including families with children, seniors and new riders. This means improving and expanding the existing network with low-stress, high-quality bike routes.

Priority is given to routes with high existing or potential ridership, critical gaps in the network, high collision areas, and connections to key destinations such as schools, community centres, major transit stations and commercial high streets.

2019-2022 Capital Plan

10th Avenue is one of the active transportation corridor upgrades that was approved during the 2015-2018 Capital Plan, and is to be delivered as part of the 2019-2022 Capital Plan.

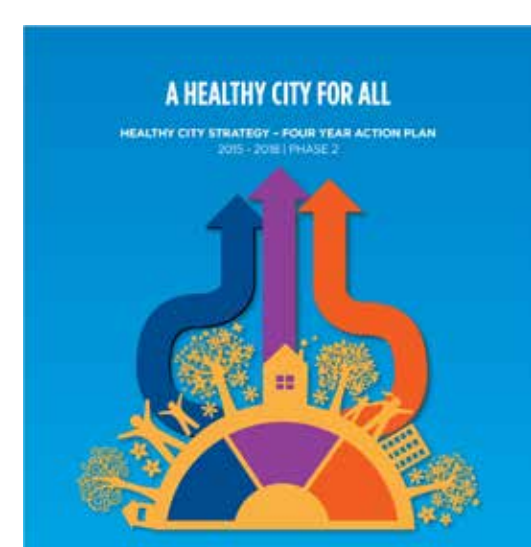
Other supporting policies



Greenest City Action Plan

Targets:

- Make at least two thirds of all trips by foot, bike and public transit by 2040.
- All Vancouver residents live within a 5-minute walk of a park, greenway, or other green space by 2020.

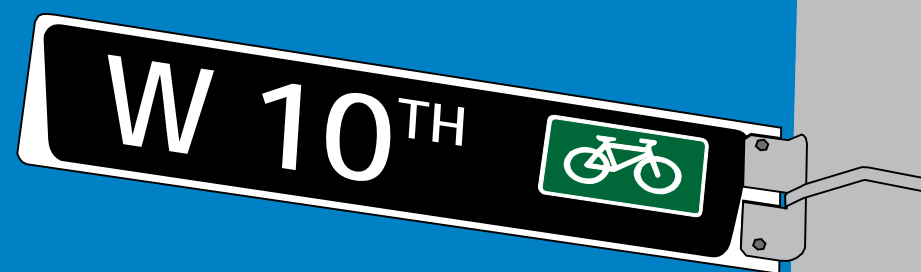


Healthy City Strategy

2025 Target:

- Increase the percentage of Vancouver residents aged 18 and older who meet the Canadian Physical Activity Guidelines by 25% over 2014 levels.

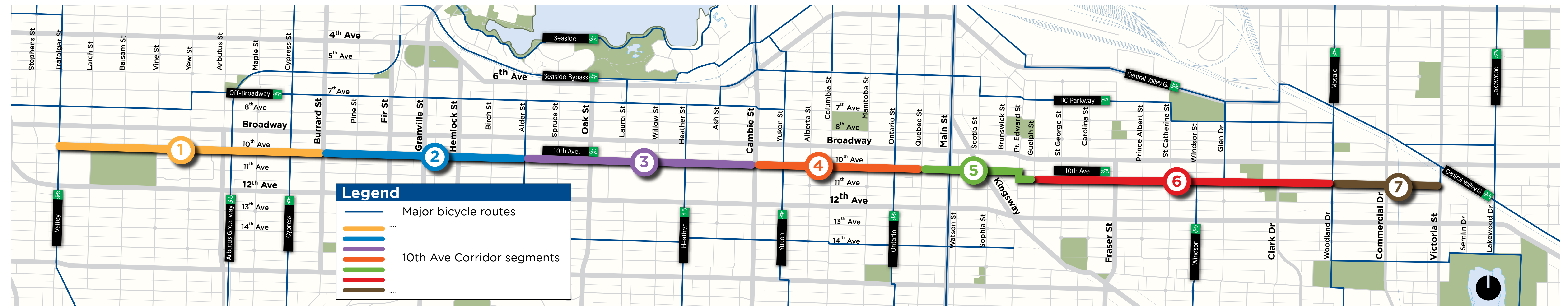
4. UNDERSTANDING 10TH AVE



10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

Overview

Spanning 7.2 km from Trafalgar St to Victoria Dr, the 10th Avenue Corridor project is divided into seven segments, each with its own opportunities, challenges and timeline.



Segment 1

Arbutus Link (Trafalgar to Burrard)

- Characterized by several school pick up/drop off areas
- Near the future Broadway Subway station
- Intersects active transportation corridor Arbutus Greenway
- Link to businesses on & near Arbutus St

Status: Consultation

Segment 2

Granville (Burrard to Alder)

- 10th Ave between Fir St & Granville St is often used to access retail stores on South Granville
- TransLink buses use 10th Ave as layover
- Need to maintain vehicle access to Firehall No. 4
- East of Granville St is quieter

Status: Pending

Segment 3

Hospital Zone (Alder to Cambie)

- Busy regional health care destination (i.e. VGH, BC Cancer)
- Priorities included: patient safety, loading access, access for people with limited mobility or vision, bike access, and preservation of tree canopy
- High vehicle volumes

Status: Phase 2
construction in 2019

Segment 4

City Hall (Cambie to Quebec)

- Fairly low vehicle volumes
- Narrow street width does not meet AAA design guidelines
- Safety concerns about traffic circle at 10th Ave & Ontario St
- Need to maintain vehicle access and improve bike access to north-south routes

Status: Pending

Segment 5

Kingsway (Quebec to Guelph)

- Heavy vehicle traffic near Main St and Kingsgate Mall
- Bikeway jogs at Prince Edward St which caused conflict between vehicle and cycling movement
- Need to maintain delivery access to Kingsgate Mall prior to its redevelopment

Status: Phase 2
construction in 2019

Segment 6

Fraser (Guelph to Woodland)

- Fairly low vehicle volumes
- Narrow street width does not meet AAA design guidelines
- Safety concerns about traffic circles
- Need to improve bicycle access to north-south bike routes on Windsor St and Woodland Dr

Status: Pending

Segment 7

Commercial Drive (Woodland to Victoria)

- Heavy vehicle traffic, especially to and from Safeway
- Challenging to cross Victoria Dr by foot or bike without traffic signal, which is a particular concern for Laura Secord Elementary School

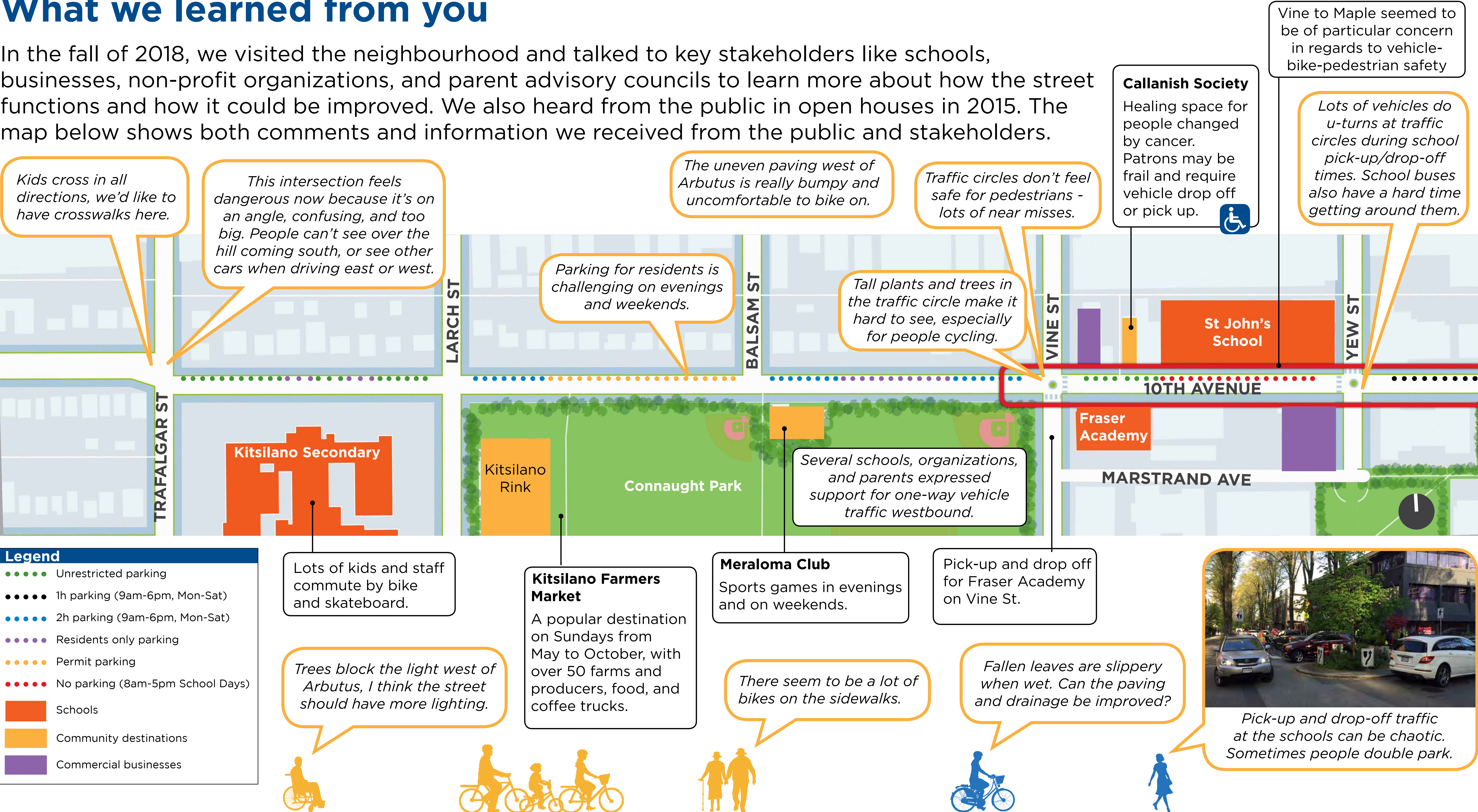
Status: Interim measures
upcoming in 2019

5. EXISTING CONDITIONS (Trafalgar to Yew)

10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

What we learned from you

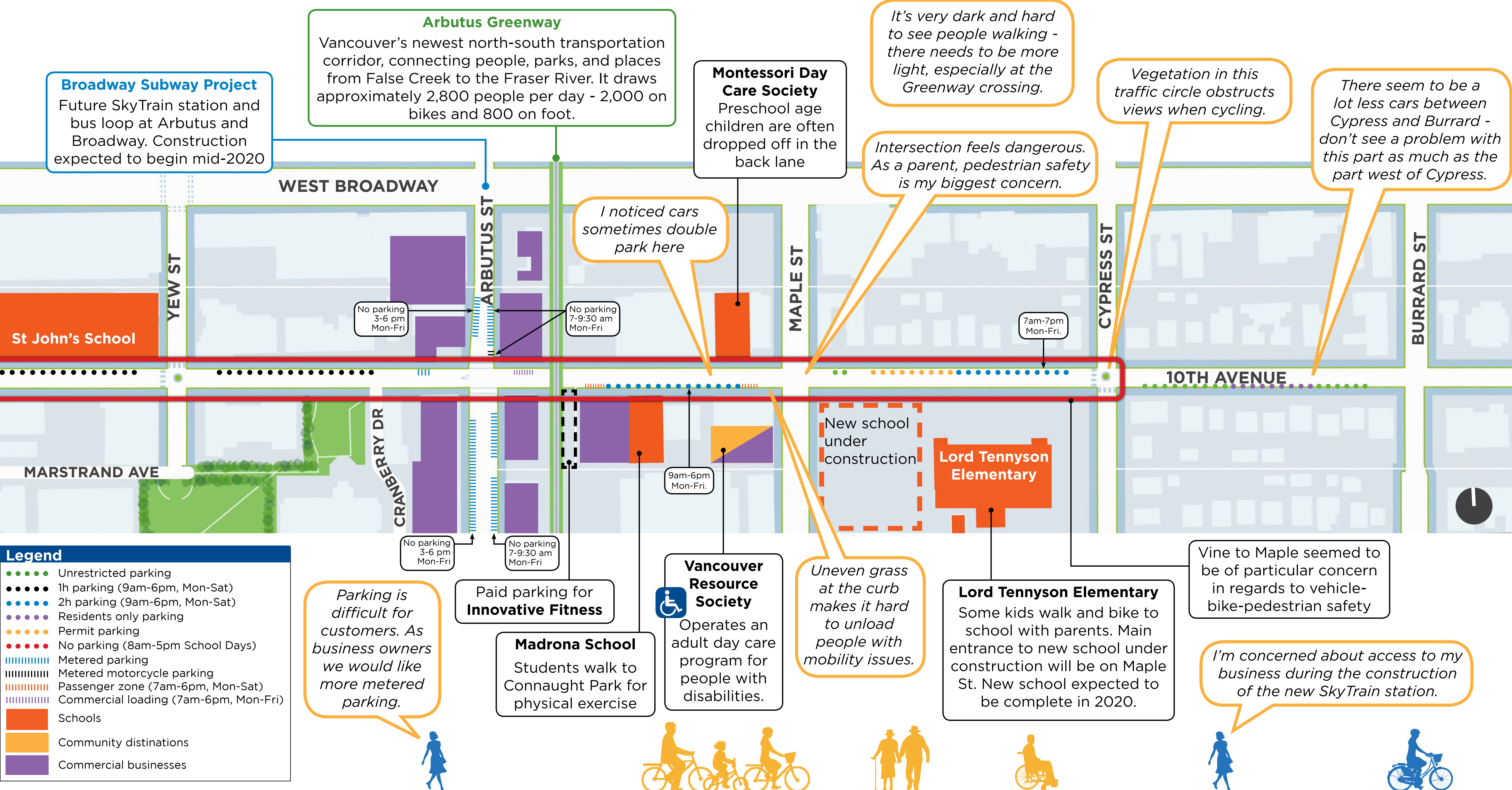
In the fall of 2018, we visited the neighbourhood and talked to key stakeholders like schools, businesses, non-profit organizations, and parent advisory councils to learn more about how the street functions and how it could be improved. We also heard from the public in open houses in 2015. The map below shows both comments and information we received from the public and stakeholders.



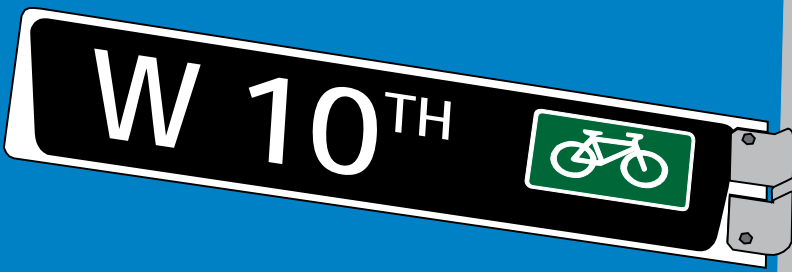
6. EXISTING CONDITIONS (Yew to Burrard)

10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

What we learned from you (continued)



7. DESIGN OPTIONS



10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

Design approach

The section of 10th Ave between Trafalgar St and Burrard St presents a number of challenges and opportunities. In order to improve comfort, safety and accessibility, the design needs to:

- **Accommodate a high volume of pick up, drop off** access to five schools, while reducing the chance of collision between these vehicles and the high volume of bikes on 10th Ave (which means installing infrastructure to separate car traffic from bicycle traffic)
- **Make it easier for people with mobility issues and disabilities** to access services and programs on 10th Ave (this may involve pick up, drop off areas by private vehicle or HandyDART, accessible parking, loading areas or ground surface treatments)
- **Manage loading zones and parking** for residences, businesses and institutions
- **Preserve mature tree canopy**, which means making design choices that can improve comfort and safety for road users within a narrow roadway width
- **Improve wayfinding** by enhancing 10th Avenue aesthetically and functionally so that it becomes a recognizable, preferred detour for the Arbutus Greenway during the construction of the Broadway Subway

Are unidirectional or bidirectional bike lanes better for this segment of 10th Avenue?

Unidirectional (one-way) bike lanes are often preferred when they are designed wide enough to allow people cycling to pass each other in the same direction. They also eliminate conflicts between people cycling in opposite directions and are more intuitive to understand at intersections.

Bidirectional (two-way) bike lanes are designed for people to cycle both ways, which means that they are wide enough for people cycling to pass each other in the same direction when there are no oncoming bikes. They also require less overall street width than unidirectional bike lanes because only one buffer is required to protect it from adjacent vehicles.

10th Avenue between Trafalgar and Burrard is a relatively a narrow street, with large, mature trees that need to be accommodated. If unidirectional bike lanes were installed, parking on both sides of the street would need to be removed and vehicle pick up/drop off would not be possible. Because schools, places with accessibility considerations and parking are such important factors on this segment of 10th Avenue, we recommend bidirectional bike lanes.

How did we evaluate the options?

	Option A (alternating bidirectional)	Option B (south side bidirectional)	Option C (unidirectional)
Number of destinations for children and people with limited mobility with front-door vehicle access	5 ✓	3	0
Arbutus intersection conflicts: cars & pedestrians*	6** ✓	6** ✓	6** ✓
Arbutus intersection conflicts: cars & bikes*	0 ✓	2	2
Effect on parking	Minimal changes (switch parking side between Maple St & Cypress St) ✓	Minimal changes (switch parking side between Maple St & Cypress St) ✓	All parking removed (approximately 95 spaces)
Number of driveways crossed by bike path	5 ✓	5 ✓	10

* Intersection conflicts are measured by counting potential conflict points when modes of travel cross paths during each traffic signal phase, with the assumption that right turns on reds are allowed.

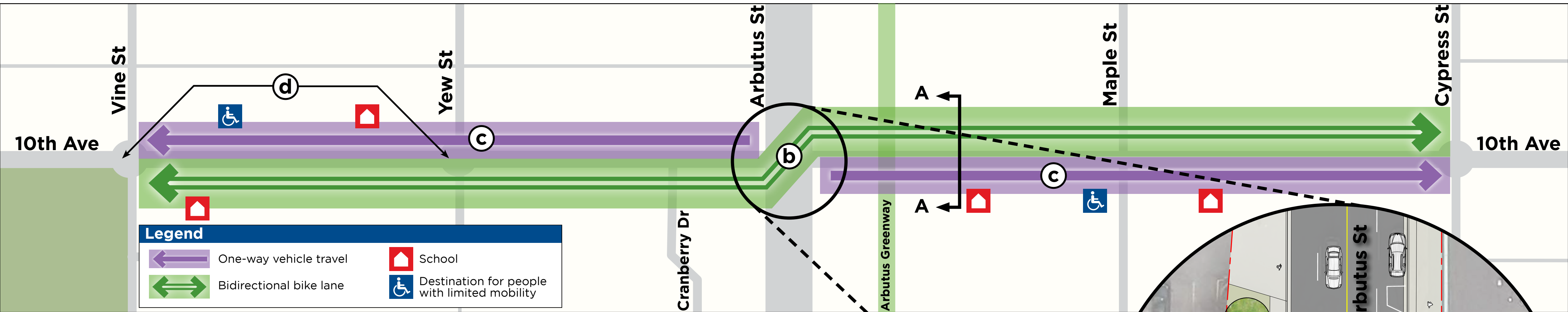
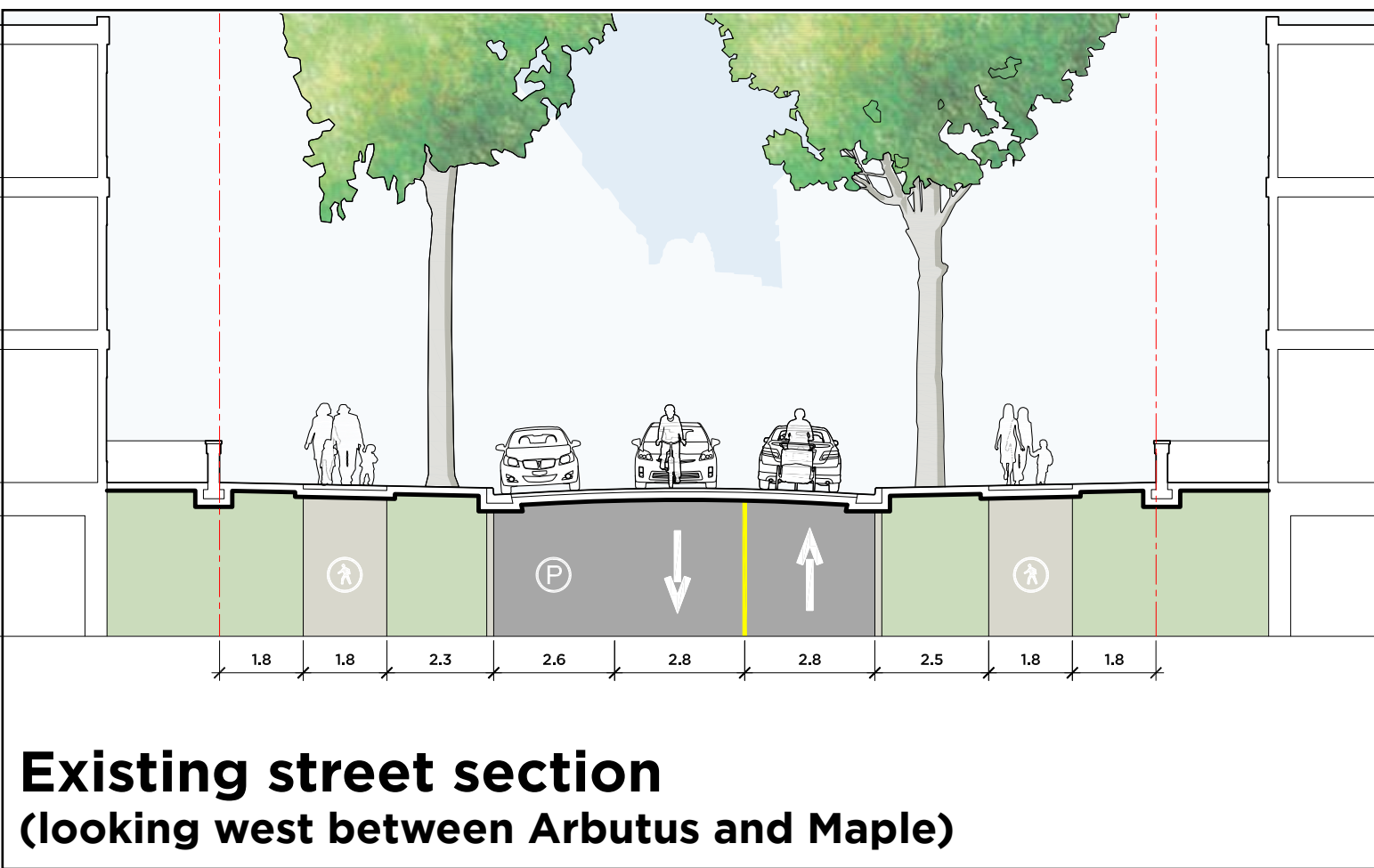
** The existing intersection at Arbutus St and 10th Ave, with no protected bike lanes, has 8 conflict points between cars and pedestrians.

8. DESIGN OPTION 1 (RECOMMENDED)

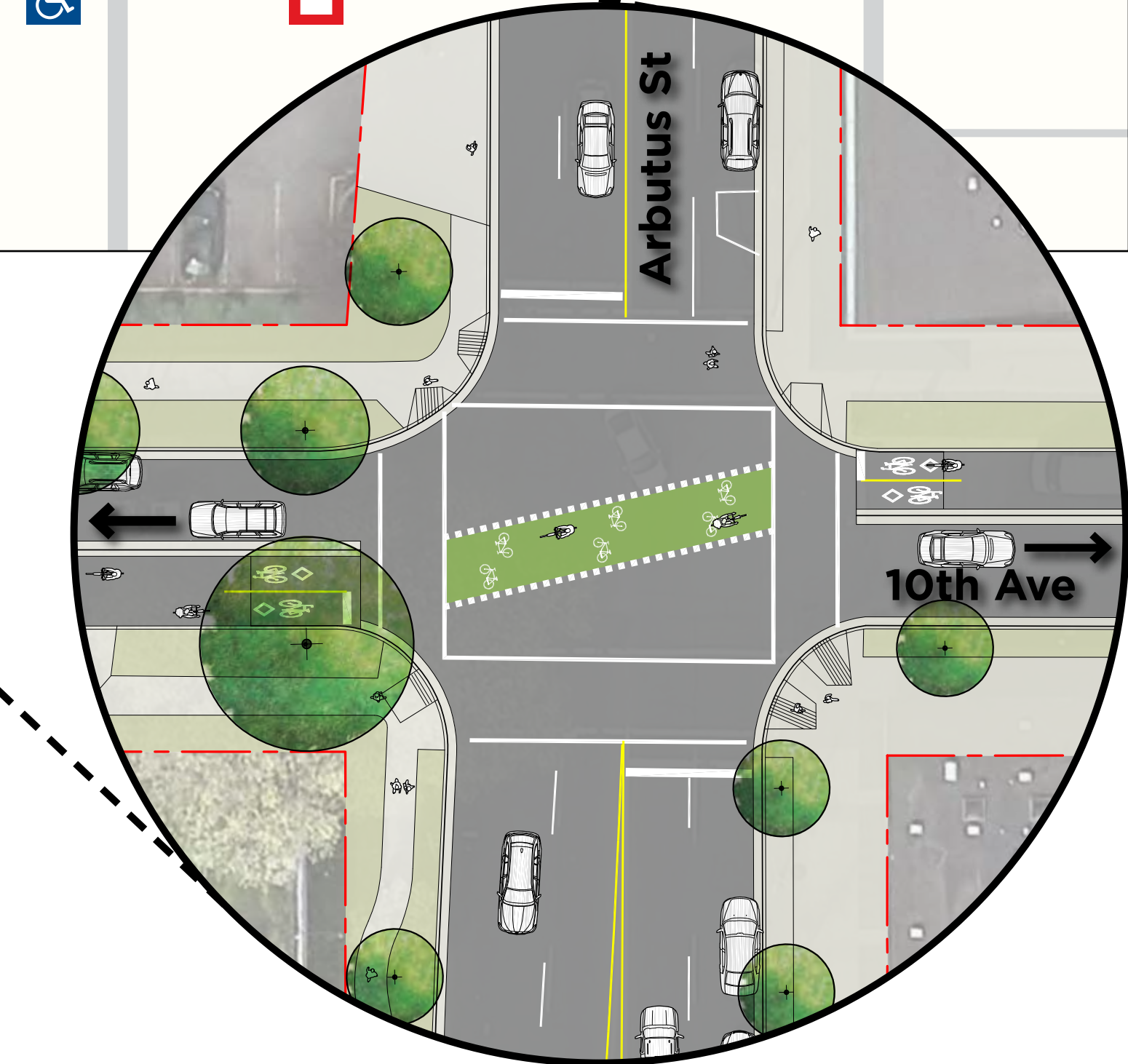


10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

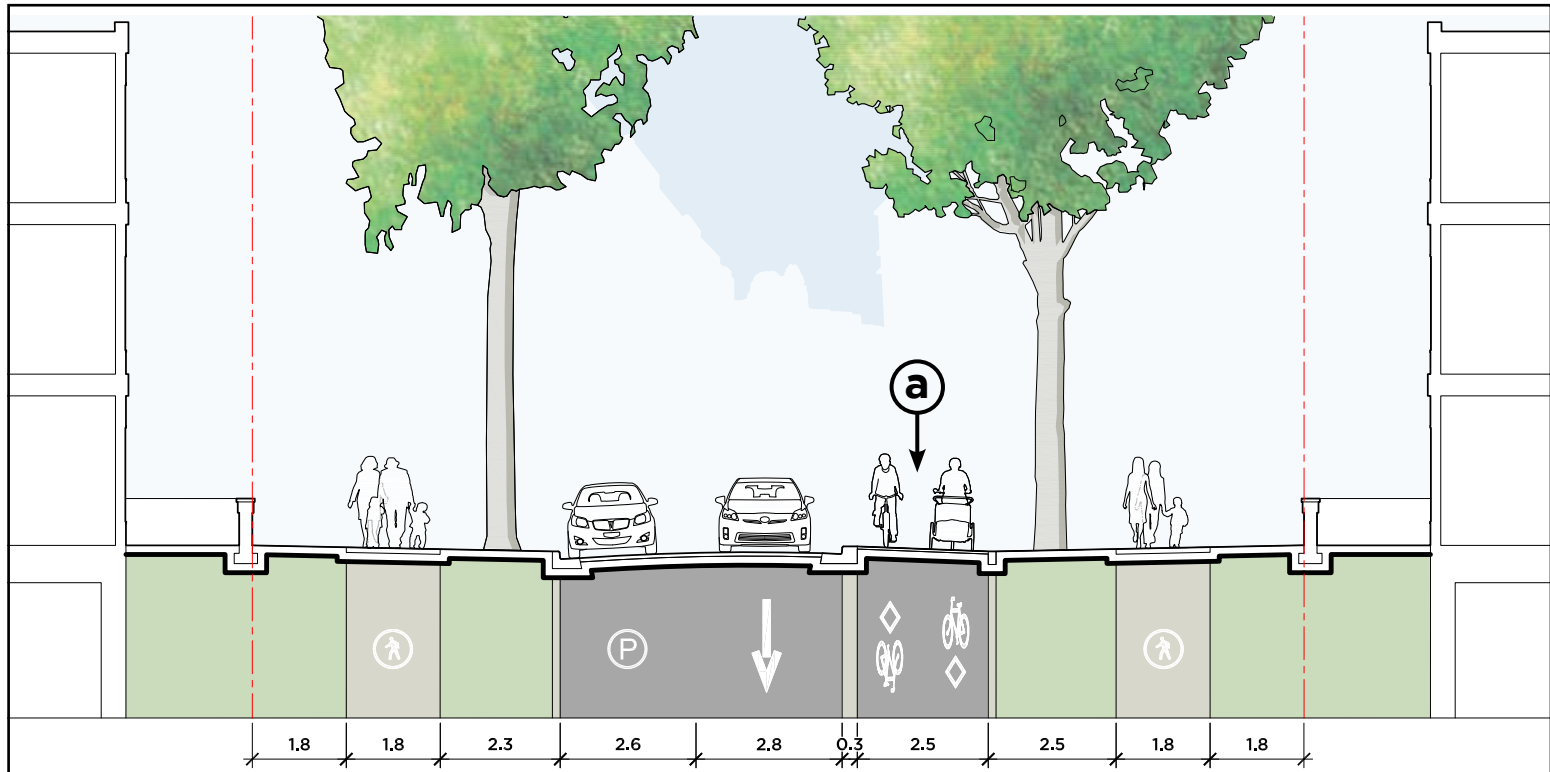
1 Alternating Bidirectional Protected Bike Lanes



Design Feature	Advantages	Disadvantages
(a) Protected bidirectional bike lanes	Efficient use of road width allows for all existing parking to be retained on one side of the road. Bike lanes are wide enough for people cycling in the same direction to pass each other.	Turning movements at intersections are more complex
(b) Switching the bidirectional bike lanes at the Arbutus St intersection - from the south side of the street between Vine and Arbutus to the north side from Arbutus to Maple	Vehicle traffic can access the front door of schools, which account for the majority of pick-up/drop-off activity, as well as some places that people with mobility issues or disabilities may frequent. Reduces potential conflicts between cars and bikes at Arbutus intersection.	N/A
(c) One-way streets going westbound from Arbutus to Vine and eastbound from Arbutus to Cypress	Simplifies turning movements and reduces conflicts at intersections, which makes bidirectional bike lanes safer. Reduces vehicle volumes, which makes the street quieter and safer.	Some people driving will need to take a less direct route to get to certain destinations
(d) Removal of traffic circles at Yew St, and potentially Vine St and Cypress St	Improves safety at intersections by simplifying vehicle, bike, and pedestrian movements and eliminating visual obstructions such as shrubs.	Reduces amount of greenery in the neighbourhood



Plan of proposed Arbutus St & 10th Ave intersection

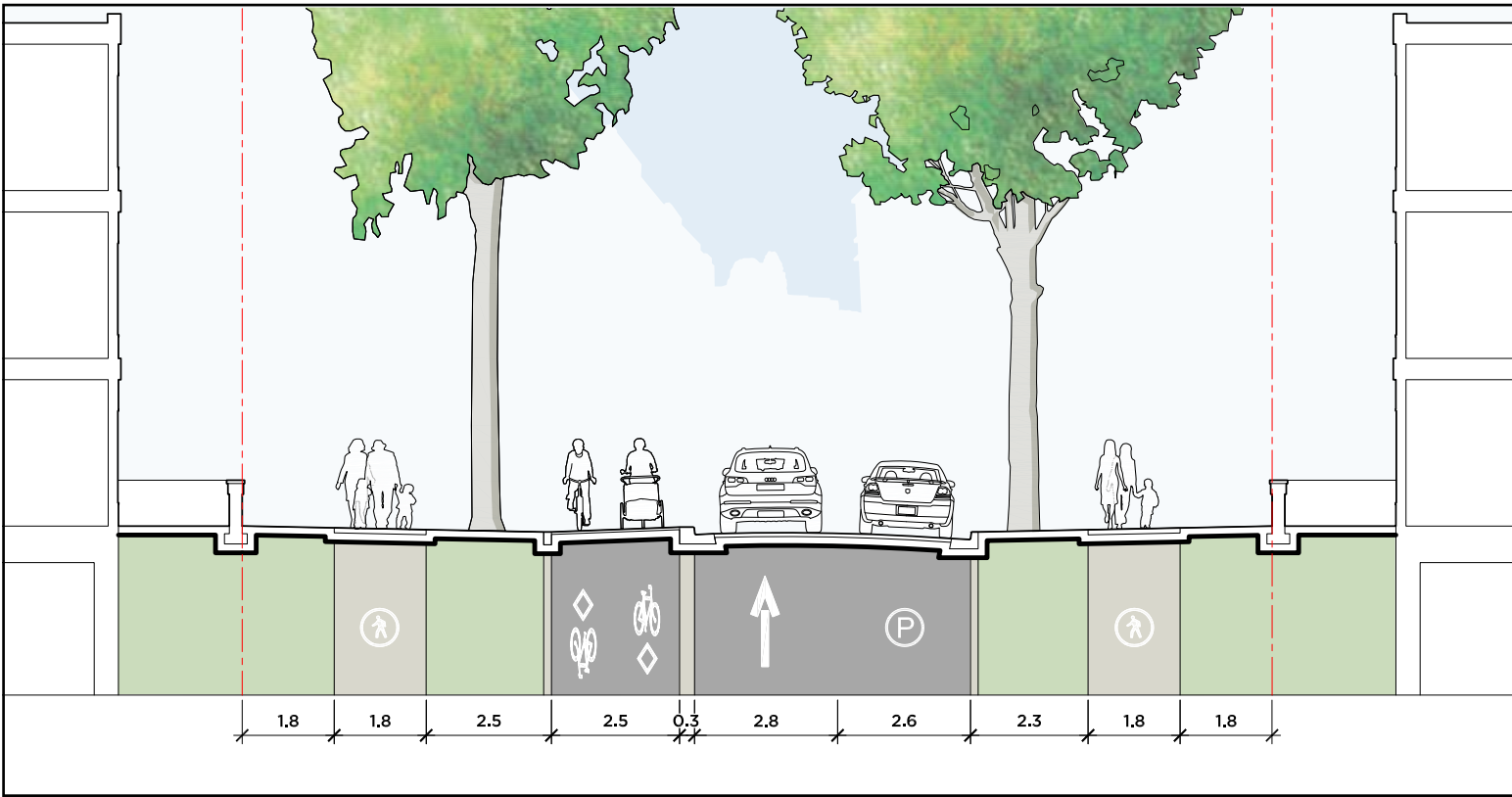
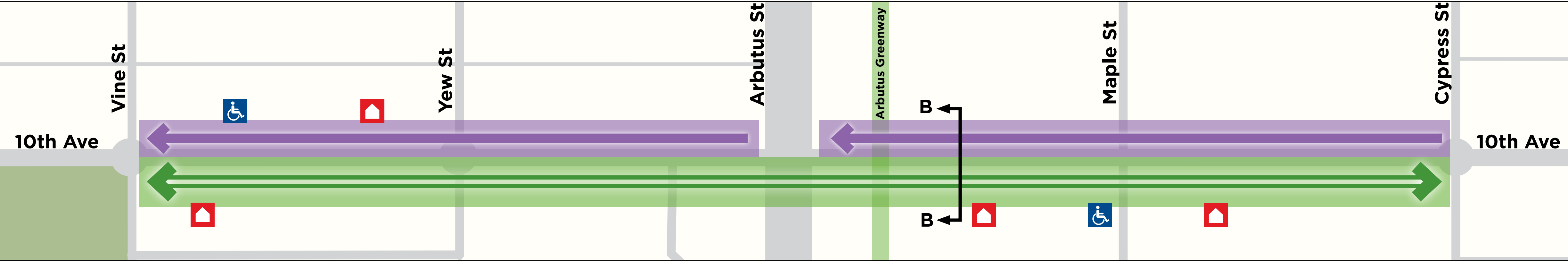


Section A-A: Design Option 1 (looking west between Arbutus and Maple)

9. DESIGN OPTIONS 2 & 3

10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

② South Side Bidirectional Protected Bike Lanes* (considered but not recommended)

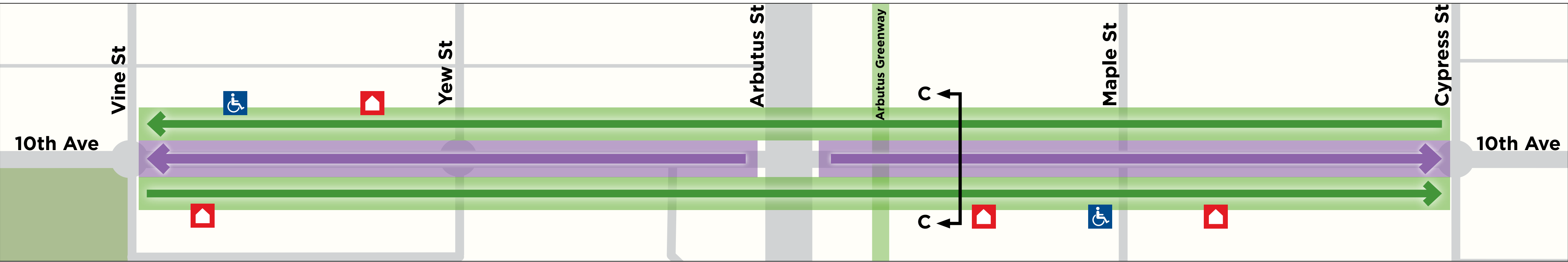


Section B-B: Design Option 2
(looking west between Arbutus and Maple)


*Note: A bidirectional bike lane on the north side of the street would have very similar issues as on the south side.


Design Concept	Advantages	Disadvantages
Bidirectional bike lanes on the south side of the street from Vine to Maple; One-way streets going westbound from Cypress to Arbutus, Arbutus to Vine	Easier for people cycling and driving to understand because it's a commonly seen design. All existing parking can be retained on one side of the road.	Possible intersection conflicts between cars and bikes at Arbutus; Vehicle drop off is across the street from a school and centre for people with disabilities


③ Unidirectional Protected Bike Lanes (considered but not recommended)





Legend

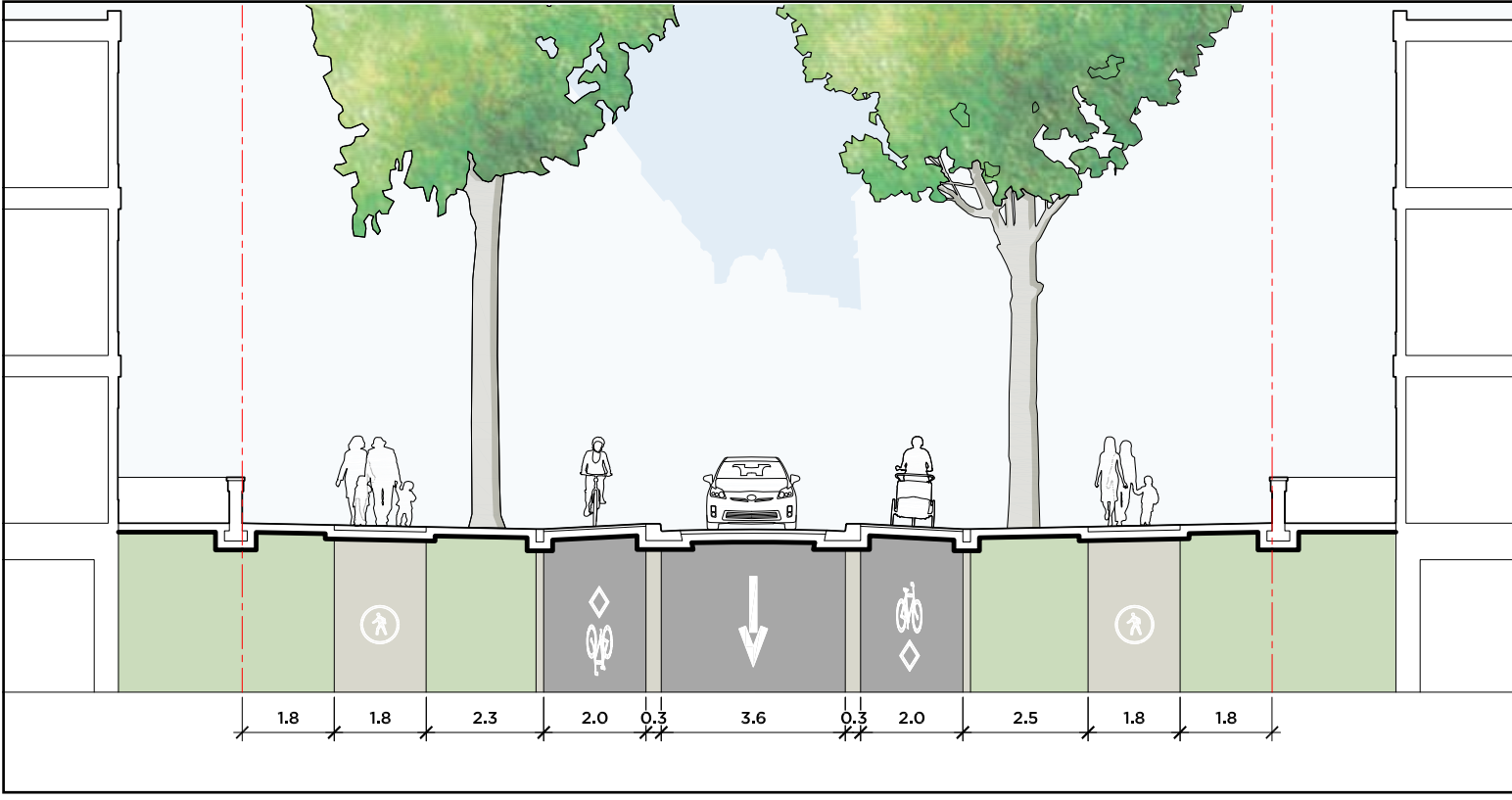
 One-way vehicle travel

 School

 Bidirectional bike lane

 Destination for people with limited mobility

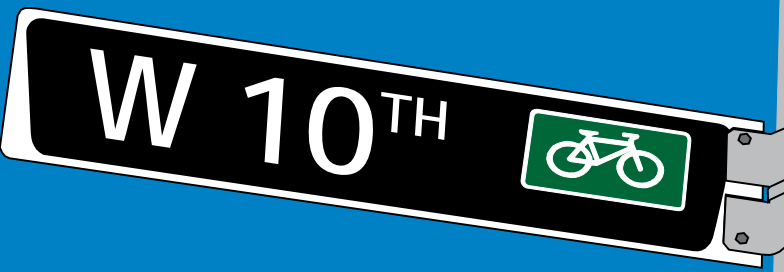
 Unidirectional bike lane



Section C-C: Design Option 3
(looking west between Arbutus and Maple)

Design Concept	Advantages	Disadvantages
Unidirectional bike lanes on both sides of the street from Vine to Maple; One-way streets going westbound from Arbutus to Vine and eastbound from Cypress to Arbutus	Turning movements at intersections are easier for people to understand with unidirectional lanes; People on bicycles have direct access to front doors of schools and businesses.	No vehicles can stop to unload goods or drop off passengers at front doors of schools or businesses; All parking would be removed to make room for bike lanes.

10. OTHER CONSIDERATIONS



10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

School Active Travel Program (vancouver.ca/schoolactivetravel)

The School Active Travel Planning (SATP) team focuses on improving the safety and comfort of walking, cycling and rolling to schools. We work with school communities to:

1. Maintain and improve transportation infrastructure, and
2. Educate and increase awareness around active transportation.

Small-scale improvements

We receive numerous requests for improvements at schools across the city and prioritize them based on safety impacts and other infrastructure work in the area. Examples include:

- Repainting of stop bars and crosswalks
- Reviewing pedestrian crossing time at signals
- Installing school zone and parking signage to improve pick up and drop off experience
- Working with the Parking Enforcement to ensure compliance with parking regulations
- Working with the Vancouver Police Department to discourage unsafe driving behaviours, enforce regulations and provide school safety talks.



School Active Travel Planning (SATP) Program

For more involved or complex infrastructure changes, we facilitate a comprehensive consultation process with four to six school communities each year, which includes:

- A comprehensive assessment to identify transportation challenges and opportunities
- A community walkabout
- Stakeholder engagement, and
- An active travel plan to establish action items for all stakeholders to implement

Infrastructure Toolkit

Below are various types of infrastructure that you might find near schools in Vancouver. Each treatment serves a unique purpose. However, some are no longer recommended near school because they have proven to be difficult for children to navigate.



Painted Crosswalk



Raised Crosswalk



Countdown Timer



Additional Crossing Time



Curb Bulge



Speed Hump



Signage



2-Way Stop



4-Way Stop

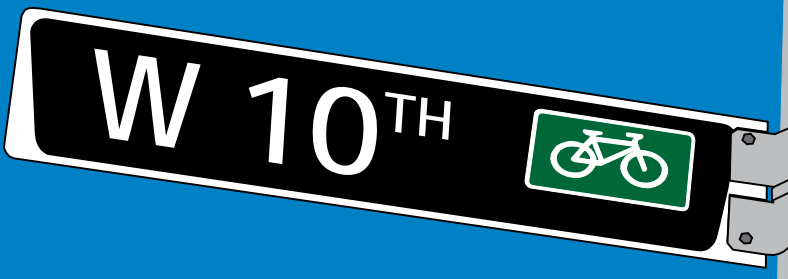


Traffic Circle

Legend

- Recommended near schools
- ⊘ Not recommended near schools
- ✓ Pedestrian crossing safety
- ✓ Traffic calming
- ✓ Prioritizes direction of travel
- ✓ Encourages better behaviour

11. NEXT STEPS



10th Ave Corridor, Segment 1 - Arbutus Link (Trafalgar to Burrard)

What's happening next?

Early
2019

City staff will consider all the feedback received from local businesses, stakeholders, residents and the public to develop a final recommended design in more detail.

Spring
2019

The City will share a final recommended design and collect feedback from the public, which will be used to refine the design prior to construction.

Summer/
Fall 2019

Interim measures will be installed to separate cycling from vehicle traffic.

2020 -

Timing of final design upgrades will be coordinated with construction of Broadway Subway and Lord Tennyson Elementary school.

Tell us what you think!



Fill out a survey at today's open house, and drop it off at the sign-in table or mail it back to us.



Complete an online survey at vancouver.ca/10th-avenue-segment-1



Call 3-1-1



Email us at 10thavenue@vancouver.ca

Please submit comments by February 28, 2019.

Join our mailing list

If you'd like to stay updated on all the developments happening on the 10th Ave Corridor Project, please sign up for our email list online at vancouver.ca/10th-avenue-segment-1.

