

# Review of the Port Alberni Active Transportation Plan

## Full Report for City of Port Alberni Staff

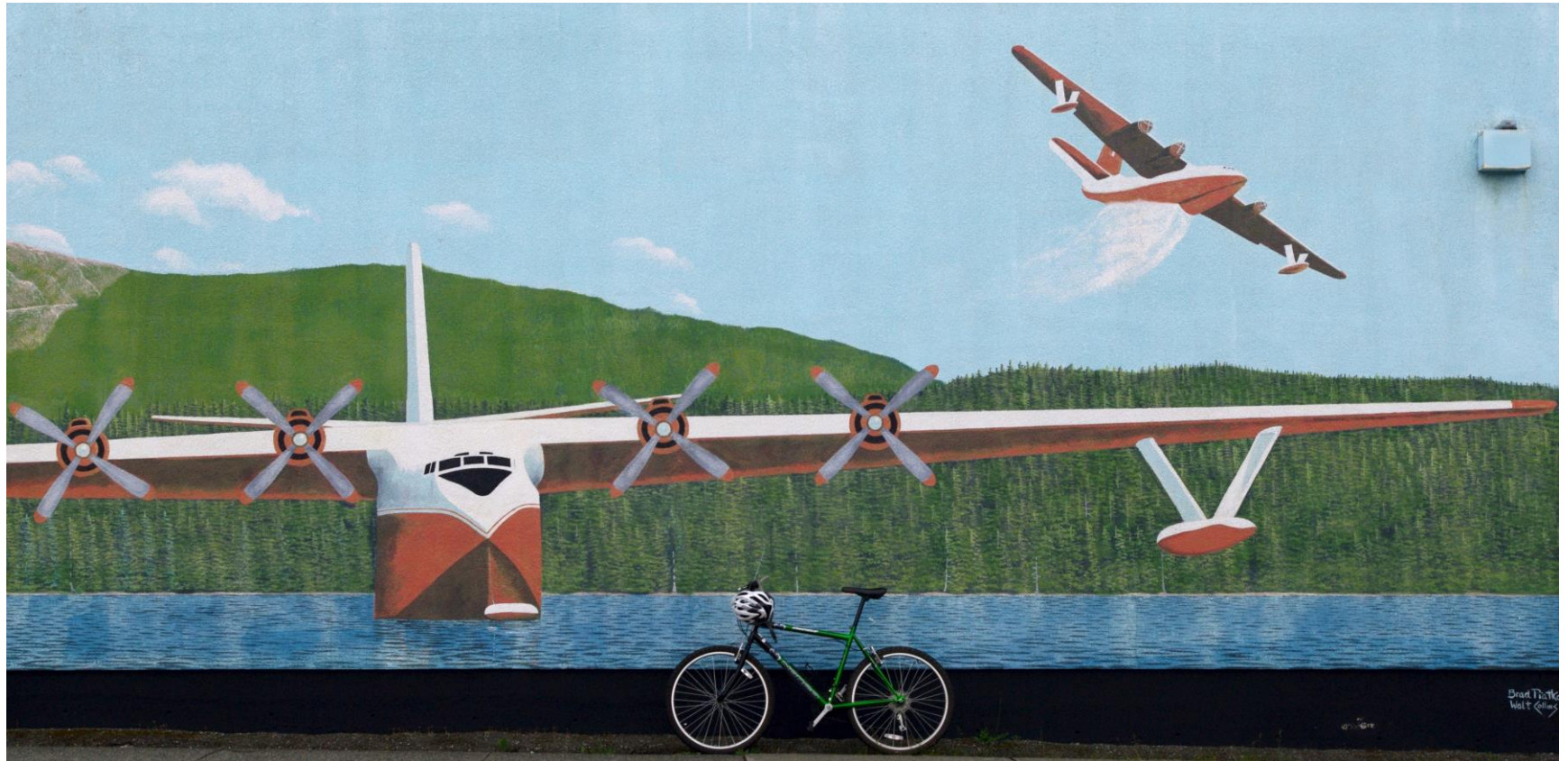
October 20, 2017

**Sarah Thomas**

Principal, ECOllaborate Now

**John Mayba**

Chair, Cycle Alberni



# Presentation Overview

- ATP goals & action areas
- Review ATP strategies
  - Successes
  - Gaps
  - Recommendations & Best Practices



*PJ Bell*



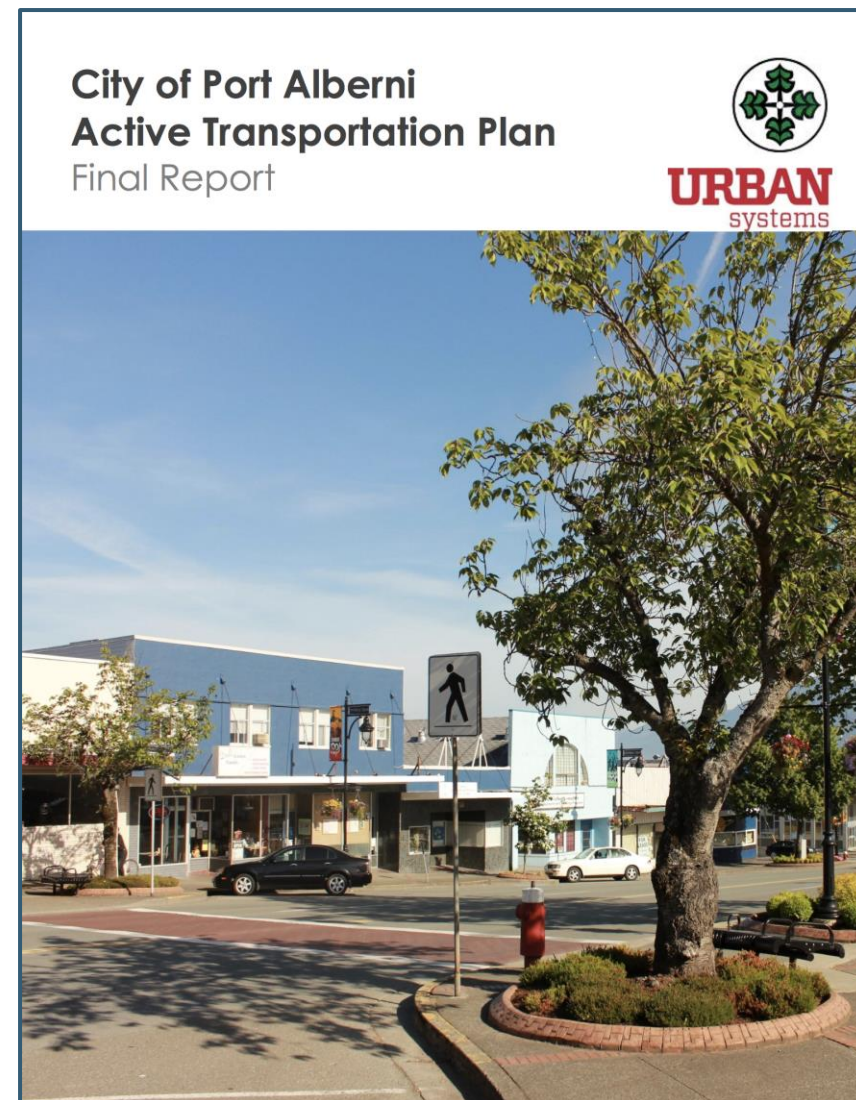
# Active Transportation Plan (2014)

- **Goals**

1. More walking and cycling trips
2. Better connected and efficient network
3. Provide better access to regional trails
4. Safer walking and cycling

- **Action Areas**

1. Network Development and Connectivity
2. Safety and Education
3. Accessibility and Design



# Network Development and Connectivity

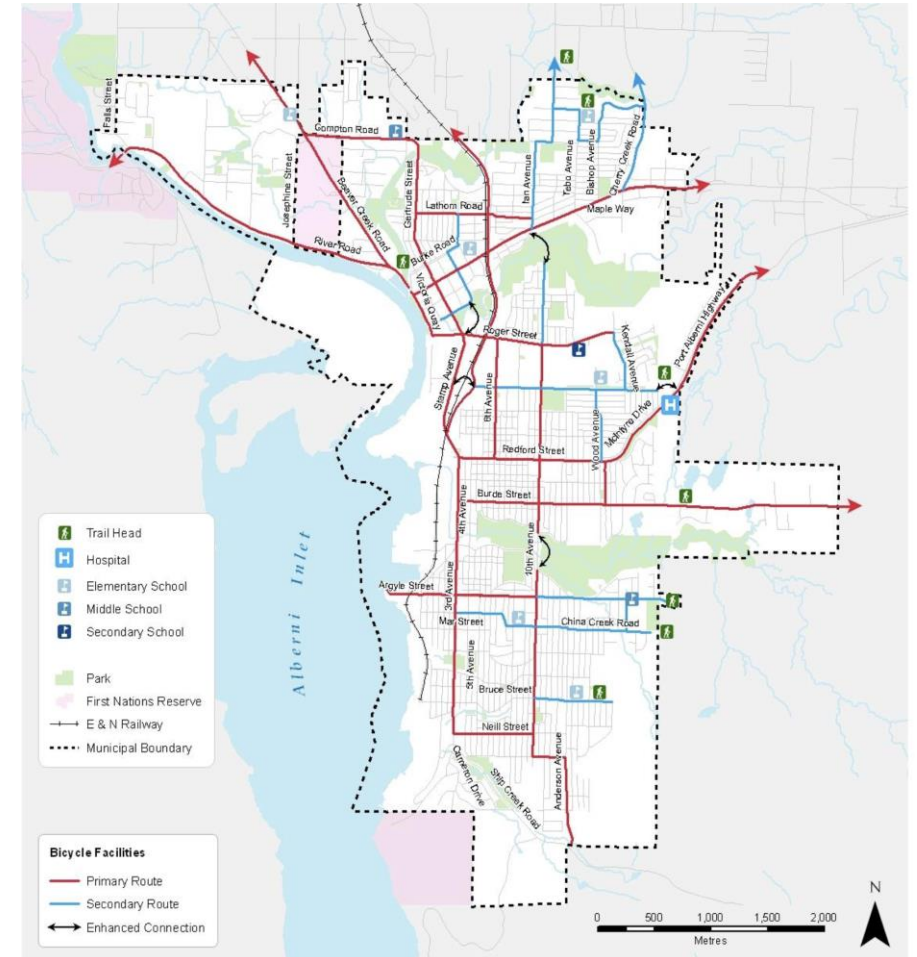
- **Strategy 1.1**
  - Develop an On-Street Bicycle Network
- **Strategy 1.2**
  - Increase Sidewalk Connectivity
- **Strategy 1.3**
  - Regional Trail Connections



# Strategy 1.1 Develop an On-Street Bicycle Network

## • ATP Actions

- The City of Port Alberni should plan the bicycle network and target infrastructure where there is the greatest opportunity to provide facilities that will produce safe, direct, and comfortable routes and conditions for all cyclists not dependent on skill or ability level.
- For the purposes of the City of Port Alberni's plan, four types of on-street and off-street bicycle facilities can be considered:
  - **Primary Route Facilities:** off-street pathways, cycle tracks, and bicycle lanes
  - **Secondary Route Facilities:** neighbourhood bikeways
- Proposed on-street bicycle network map has been developed based on destinations, direct routes, connecting key parts of the city and ease of travel. It will be built out over a 10-year period (by 2024).



# Strategy 1.1 Develop an On-Street Bicycle Network

- **Successes**

- Bicycle network growing, with a number of routes fully or partially completed
- \$100,000 in BikeBC funding confirmed for Stamp Ave. multi-use pathway

- **Gaps**

- Many routes incomplete, including “short-term priority” routes
- In some locations, bike routes were completed as “secondary route facilities” (sharrows) whereas ATP called for “primary route facilities” (bike lanes, cycle tracks, or off-street pathways)



*Sarah Thomas*

# Strategy 1.1 Develop an On-Street Bicycle Network

- **Recommendations**

1. Undertake public consultation regarding existing cycling infrastructure to assess strengths, weaknesses, and opportunities for future investment
2. Continue adding cycling facilities as funding becomes available, following best practices and prioritizing the short- and medium-term routes identified in the ATP



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# Strategy 1.1 Develop an On-Street Bicycle Network

## Existing Cycling Network



## Short-term Additions



# Strategy 1.1 Develop an On-Street Bicycle Network

## Existing Cycling Network



## Medium-term Additions



# Strategy 1.1 Develop an On-Street Bicycle Network

## Existing Cycling Network



## Long-term Additions





# Strategy 1.1 Develop an On-Street Bicycle Network

## Existing Cycling Network



## Completed Cycling Network



# Strategy 1.1 Develop an On-Street Bicycle Network

## Existing Cycling Network



## All Additions Required for Completion



# Strategy 1.1 Develop an On-Street Bicycle Network

- **Recommendation**

3. All bike routes designated as “primary route facilities” in the ATP that are currently marked only with sharrows should be upgraded to bike lanes, cycle tracks, or off-street pathways.
  - *“The shared lane marking is not a facility type, it is a pavement marking with a variety of uses to support a complete bikeway network...Shared lane markings should not be considered a substitute for bike lanes, cycle tracks, or other separation treatments where these types of facilities are otherwise warranted or space permits.”*
    - Source: NACTO Urban Bikeway Design Guide

## Comfortable Sharrow:



*Calm neighbourhood bikeway with narrow streets, low traffic volumes, and slower speeds.*

## Uncomfortable Sharrow:



*Busy collector or arterial street with high traffic volumes and consistent speeds of 50km/h.*

*NACTO Urban Bikeway Design Guide*



# Strategy 1.1 Develop an On-Street Bicycle Network

## • Recommendation

4. As budgeted for in the *2017 Capital Projects Budget*, create a phased implementation plan for installing All Ages and Abilities (AAA) cycling facilities. This implementation plan should be tied in with the ATP in order to maximize each plan's benefit.


- *Food Security and Climate Disruption Committee – 2016 Annual Report to Mayor and Council:*
  - **Recommendation 1b:**  
A phased implementation plan of All Ages and Abilities bike facilities in partnership with neighbouring ACRD districts and First Nations Governments
- *City of Port Alberni 5 Year Financial Plan 2017-2021:*
  - **Capital Projects Budget (Page 30, Line 941):**  
All Abilities Cycle Tracks Consulting Plan (incl trees/garden) – FSCDC
  - **Budgeted Cost:** \$10,000



Vancity Buzz

# Strategy 1.1 Develop an On-Street Bicycle Network

- **Best Practice Guides for AAA Design**
  - City of Vancouver's *Transportation Design Guidelines: All Ages and Abilities Cycling Routes*
  - NACTO's *Urban Bikeway Design Guide*
  - Vélo Québec's *Planning and design for pedestrians and cyclists*
  - Many others available!




**Transportation Design Guidelines:**  
**All Ages and Abilities Cycling Routes**

Version 1.1  
March, 2017







**Overview:** The City of Vancouver has a vision to make cycling safe, convenient, comfortable and fun for all ages and abilities (AAA), including families with children, seniors, and new riders. An inviting and connected network of low stress "AAA" routes will provide a wide spectrum of the population the option to cycle for most short trips.

This guideline provides 10 "general rules"™ to consider when designing or designating a route "AAA". It is intended as a living document that will be updated and supplemented periodically as we learn from local projects, research, and other leading cities.



**Rule #1:** Build the types of cycling facilities that feel comfortable for all

Less  Level of Comfort  More

					
Unsuitable for AAA facility			Suitable for AAA facility		

Many types of traditional bike facilities only appeal to people who are comfortable riding in traffic. However, bikeways on quiet streets, protected bike lanes, and off-street pathways appeal to people who are interested in cycling but concerned for their safety.<sup>2</sup>

The general approaches to creating AAA cycling routes on city streets are:

- Ensuring low motor vehicle speeds and volumes on local streets, or
- Providing physical separation on busy streets

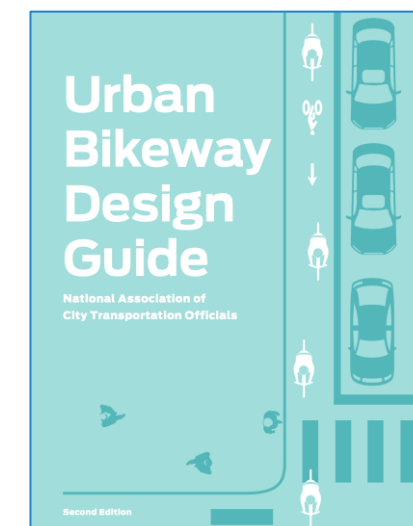
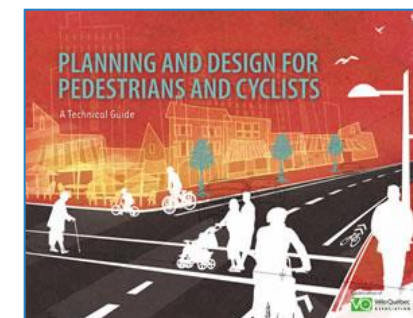
**Rule #2:** Target motor vehicle volume below 500/day (below 50/peak hour)

Local Street Bikeway

Reducing the number of interactions between motor vehicles and people cycling can improve safety and comfort. At a volume below 500 vehicles per day, most people cycling will encounter less than one motor vehicle per block in the peak hour.

**Considerations:**

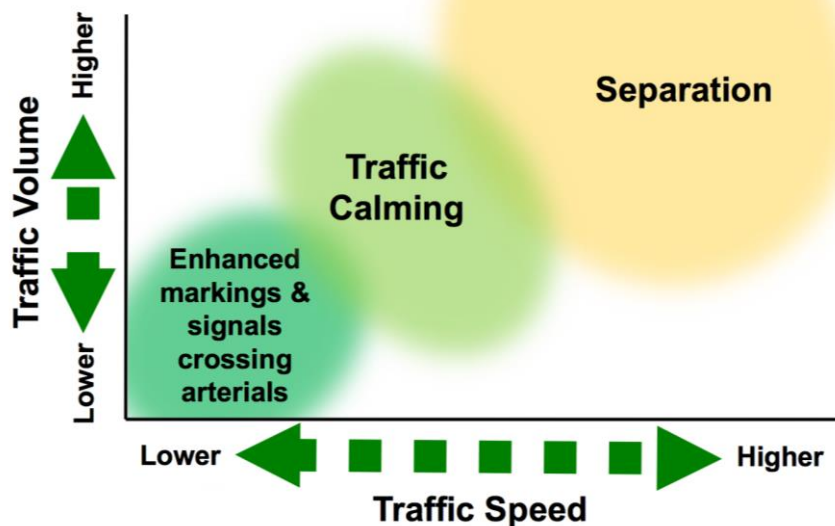
- On routes with more than 500 vehicles/day (more than 50/hr), consider additional traffic calming or diversion to bring volumes down to the target value.
- Routes with up to 1,000 vehicles/day (100/hr) may be considered AAA after carefully considering speed, parking turnover, and passing opportunities.
- On routes where low motor vehicle volumes are not possible to achieve, separation of bikes from vehicles is needed.





# Strategy 1.1 Develop an On-Street Bicycle Network

## Designing for AAA Cycling Facilities





# Strategy 1.1 Develop an On-Street Bicycle Network

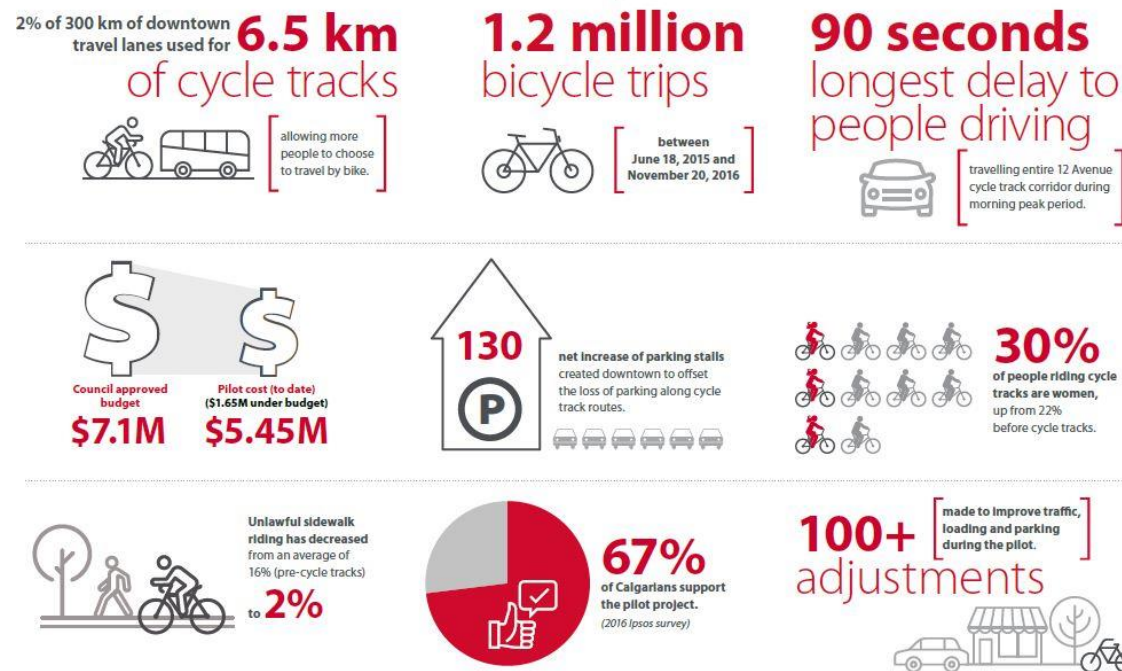
## • Recommendation

5. Conduct pilot projects to test AAA facility types and locations, following the example of successful pilot projects in other municipalities

- *E.g. City of Calgary ran a successful pilot between 2015 and 2016:*
  - [tinyurl.com/CalgaryPilotCycleTracks](http://tinyurl.com/CalgaryPilotCycleTracks)
- *Suggested pilot project for Port Alberni:*
  - Install temporary AAA protected bike lane along Roger St. from Gertrude St. to North Island College during Bike to Work Week in 2018
  - Conduct public engagement sessions and before/after studies to assess the pilot's impact
  - If successful, make the bike facility permanent

## City of Calgary Cycle Track Pilot Project

### Fast facts about the cycle track pilot



City of Calgary Cycle Track Pilot Project

# Strategy 1.1 Develop an On-Street Bicycle Network

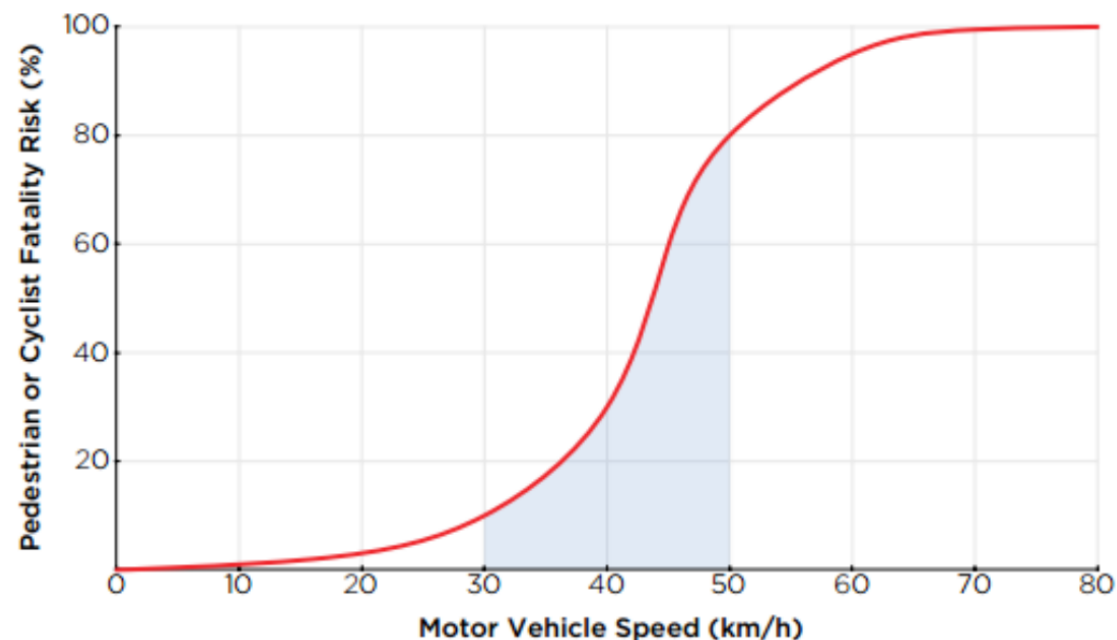
- **Recommendation**

6. Decrease speed limit to 30km/h along designated cycling routes and in areas of heavy or at-risk pedestrian traffic

- *“Slower vehicle speeds reduce the likelihood of a collision by making it easier for drivers to see people cycling and by shortening the distance needed to stop. Slower speeds also reduce the severity and fatality risk in the event of a collision.”*

- Source: City of Vancouver  
Transportation Design Guidelines: All Ages and Abilities Cycling Routes

## Lower Speeds Reduce Risk



Source: Based on data from VicRoads, Australia.  
Found in Victorian Auditor-General's Office

City of Vancouver Transportation Design Guidelines: All Ages and Abilities Cycling Routes

# Strategy 1.1 Develop an On-Street Bicycle Network

## 10–15 MPH (16–24 KM/HR)

Driver's peripheral vision



Stopping distance



Crash risk

## 20–25 MPH (32–40 KM/HR)

Driver's peripheral vision



Stopping distance



Crash risk

## 30–35 MPH (48–56 KM/HR)

Driver's peripheral vision



Stopping distance



Crash risk

## 40+ MPH (64+ KM/HR)



Driver's peripheral vision



Stopping distance



Crash risk



As a driver's speed increases, his peripheral vision narrows severely.<sup>2</sup>

*NACTO Urban Street Design  
Guide*

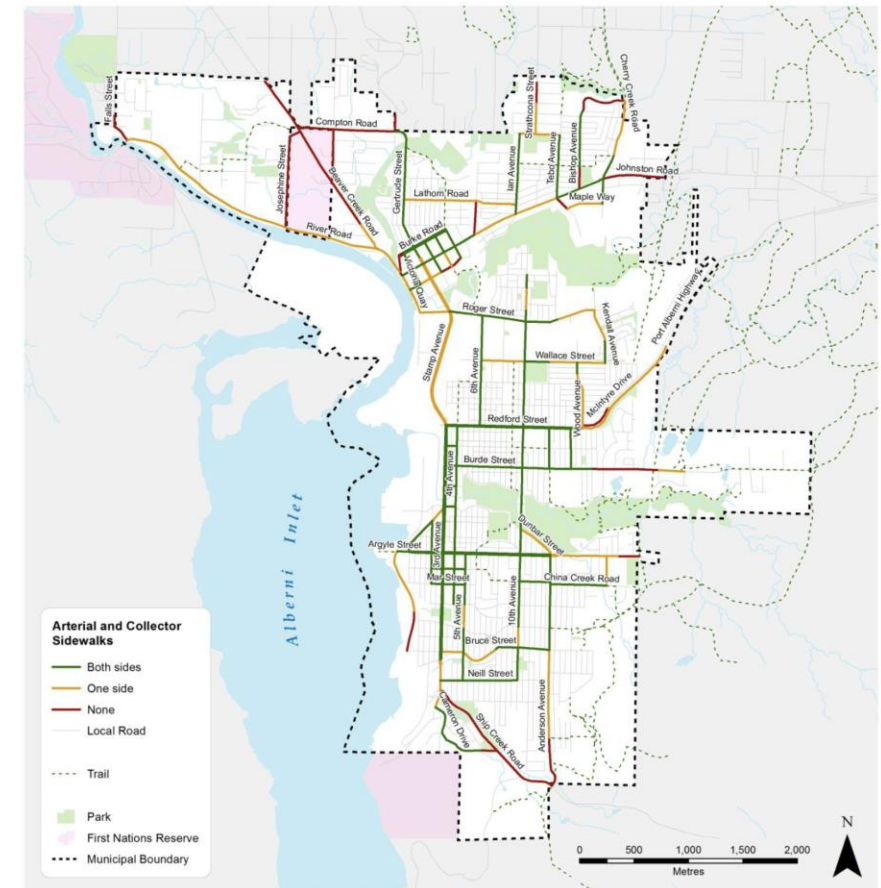


# Strategy 1.2 Increase Sidewalk Connectivity

## • ATP Actions

- Port Alberni will work to ensure full sidewalk coverage based on the following criteria:
  - *Sidewalks on both sides of all urban collector and arterial roads*
  - *Sidewalks on both sides of urban local roads that are on routes to schools, parks, commercial areas, regional trails, other community facilities, and bus stops*

Figure 6  
Sidewalks Deficiencies (Arterial and Collector Roads Only)



# Strategy 1.2 Increase Sidewalk Connectivity

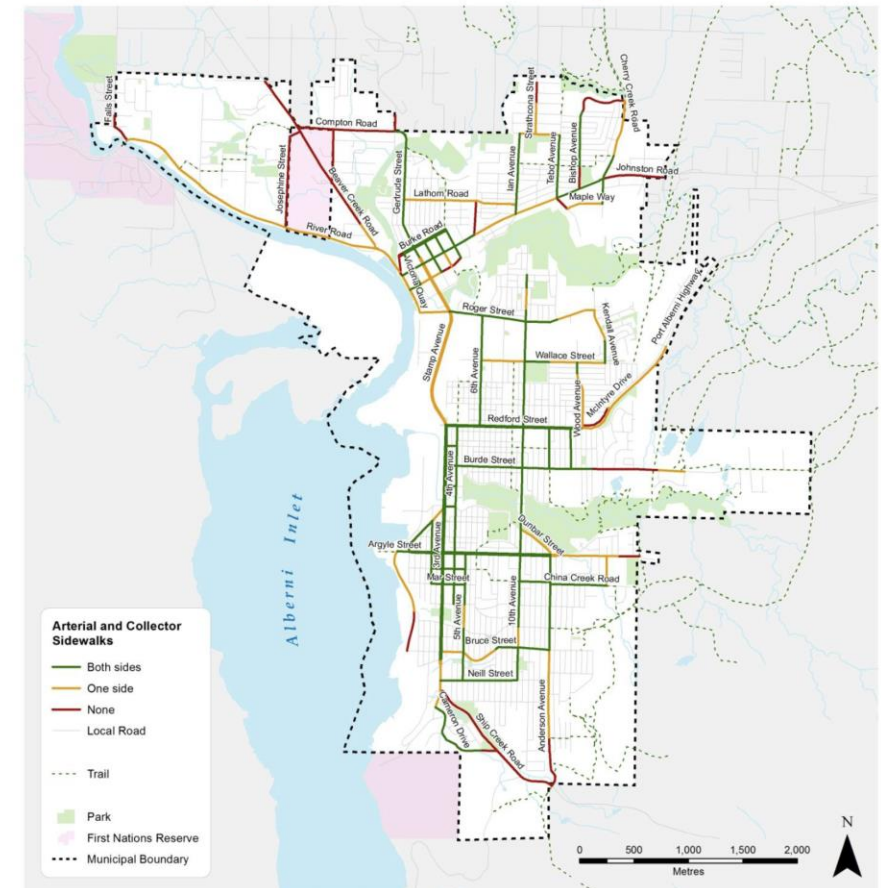
- **Successes & Gaps**

- The current status of this strategy is outside the scope of this analysis

- **Recommendation**

1. The ATP plan calls for full sidewalk coverage and connectivity. This should continue to be addressed moving forward.

**Figure 6**  
Sidewalks Deficiencies (Arterial and Collector Roads Only)



# Strategy 1.2 Increase Sidewalk Connectivity

- **Sidewalks play vital role in city life**
  - Movement & connectivity
  - Public space & social capital
  - Public health
  - Positive impact on land values
    - *Source: NACTO Urban Street Design Guide*

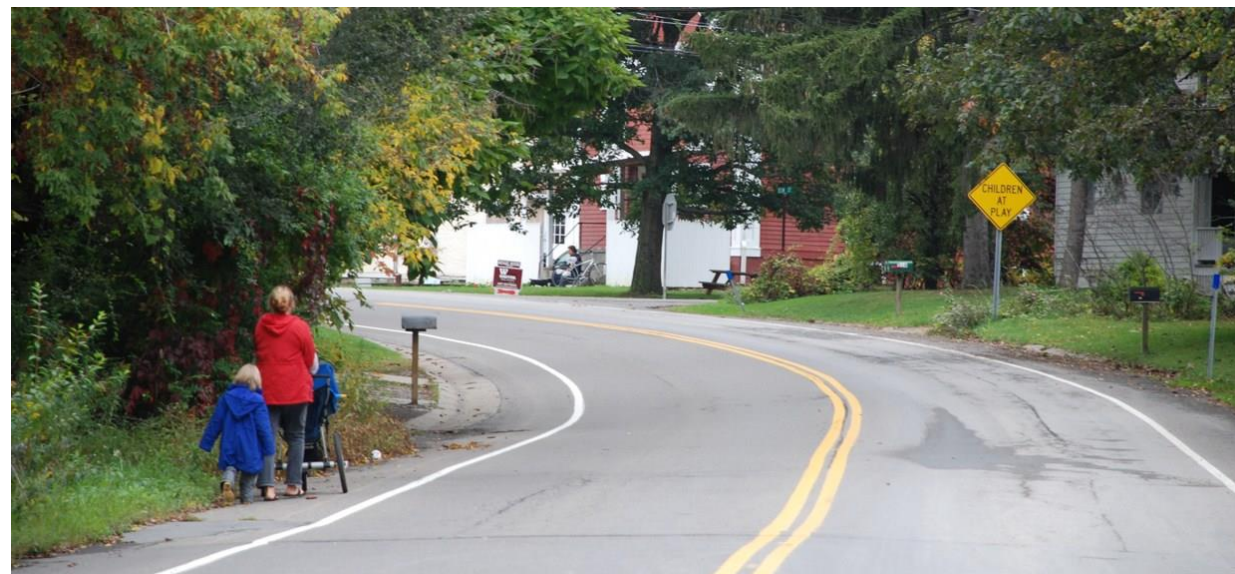


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# Strategy 1.2 Increase Sidewalk Connectivity

- **Sidewalks are needed for safety and accessibility**
  - “The use of shoulders as a substitute for sidewalks is never justified in urban areas. Sidewalks should be delineated by a vertical and horizontal separation from moving traffic to provide an adequate buffer space and a sense of safety for pedestrians.”
    - *Source: NACTO Urban Street Design Guide*

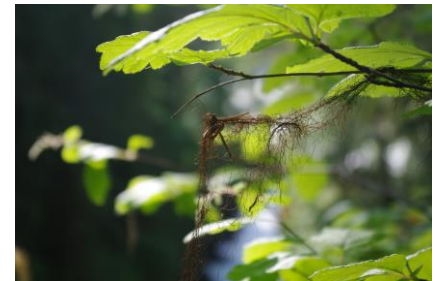
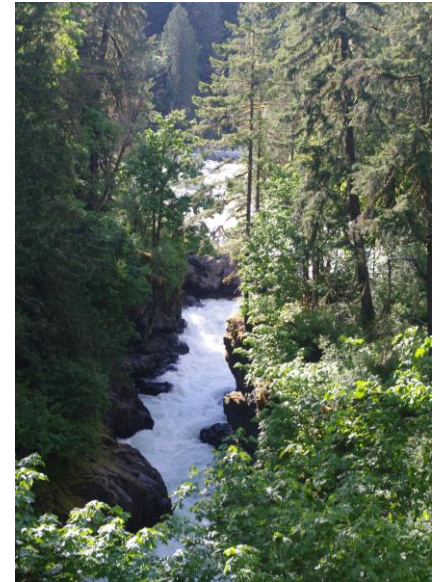


*Project for Public Spaces*

# Strategy 1.3 Regional Trail Connections

- **ATP Actions**

- Provide sidewalk coverage and cycling facilities on routes that access trail heads
- Look into creating better access and pedestrian and cycling facilities to the City's waterfront, particularly along River Road
- Wayfinding and signage that identify routes to access points to major trails throughout the City
  - *The City should work with the Parks Department and ACRD to provide uniformity in signage*
- Provide information regarding the trail, distance, route at trail heads



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# Strategy 1.3 Regional Trail Connections

- **Successes**

- Parks and Recreation Department has installed “Parks, Playgrounds, Facilities and Trails Maps” at entrance to select trails around Port Alberni
- Parks and Recreation Department website contains detailed trail info on many of the local trails
  - [www.portalberni.ca/trail-information](http://www.portalberni.ca/trail-information)



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# Strategy 1.3 Regional Trail Connections

- **Gaps**
  - Not all trail heads connect to sidewalks or cycling facilities
  - River Road needs to be enhanced for cyclists and pedestrians
  - Signage along trails is inconsistent in both location and visual appearance



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# Strategy 1.3 Regional Trail Connections

- **Recommendations**

1. Prioritize routes that connect with the trail network and the waterfront when addressing gaps in the sidewalk and cycling networks
2. Work with interested parties to improve signage on and leading to the trails, connecting them visually with the look and the feel of the signs that are presently used in town
  - *Alberni Valley Venture and Alberni Valley Riders have each expressed interest in working on cycling and signage initiatives*



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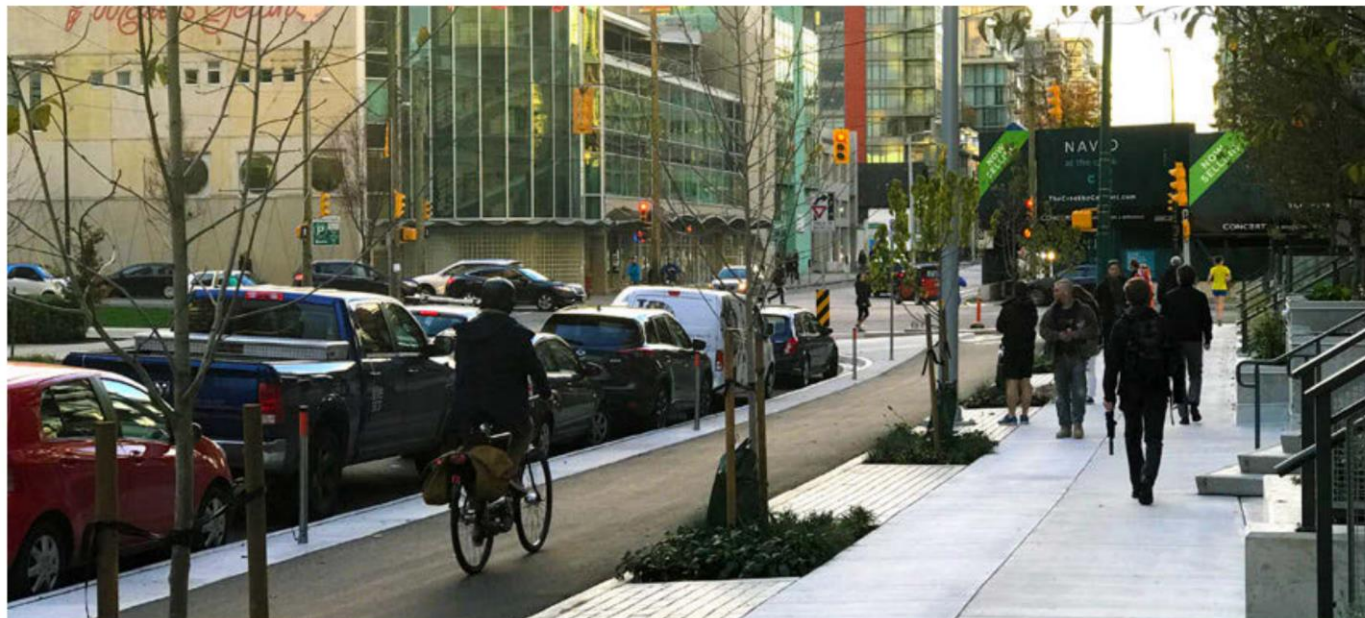


# Strategy 1.3 Regional Trail Connections

- **Recommendation**

3. Where possible, create separate spaces for cyclists and pedestrians on multi-use pathways and trails. When a path or trail is designed primarily for one user group, indicate this on signage and trail maps.

- *Shared-use pathways are excellent active transportation facilities*
- *However, they tend to have a higher collision risk than bike-only pathways and may be uncomfortable for pedestrians when there is heavy and/or fast bicycle traffic*



**Separated space is more comfortable for all**

*City of Vancouver Transportation Design Guidelines: All Ages and Abilities Cycling Routes*



# Safety and Education

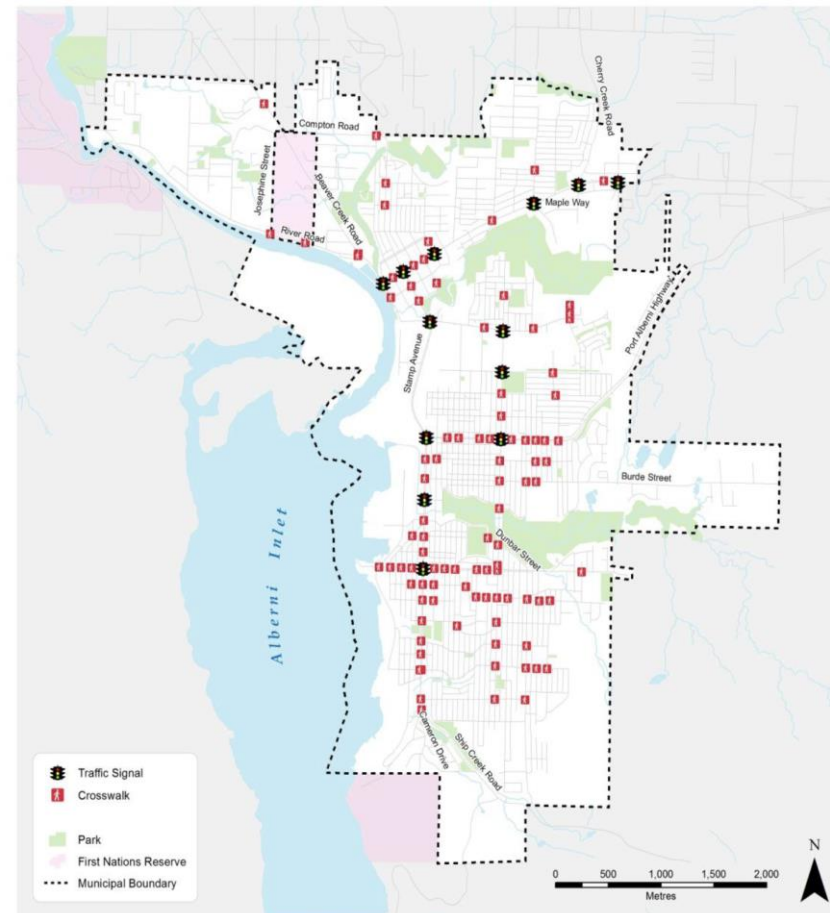
- **Strategy 2.1**
  - Pedestrian Crossings
- **Strategy 2.2**
  - Bicycle Street and Bridge Crossings
- **Strategy 2.3**
  - Walking and Cycling Education

# Strategy 2.1 Pedestrian Crossings

## • ATP Actions

- All signalized intersections should have consistent treatments and be retrofitted to include pedestrian pushbuttons, pedestrian countdown timers, audible pedestrian signals, and other features
- Add more pedestrian crossings
- Ensure all intersections between collector and arterial roads have marked pedestrian crosswalks at all legs of the intersection
- Install curb extensions and incorporate curb letdowns
- Improve unsignalized pedestrian crossings with pedestrian-activated signals.

Figure D1  
Existing Pedestrian Infrastructure



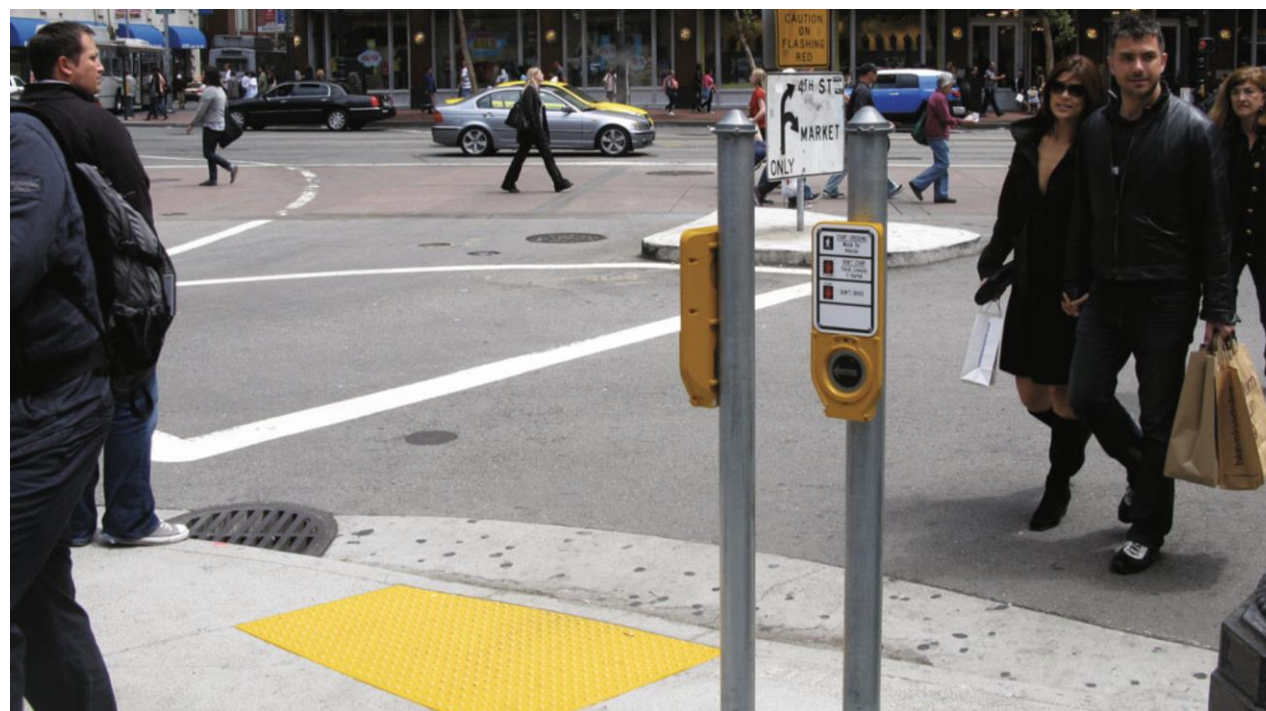
# Strategy 2.1 Pedestrian Crossings

- **Successes & Gaps**

- The current status of this strategy is outside the scope of this analysis

- **Recommendation**

1. The ATP plan calls for consistent pedestrian-friendly treatments at all signalized intersections. This should continue to be addressed moving forward.

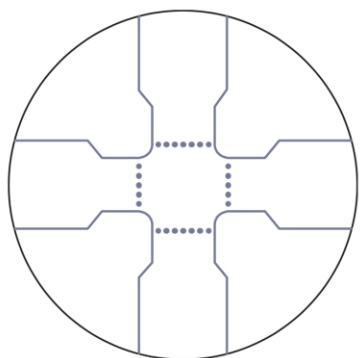


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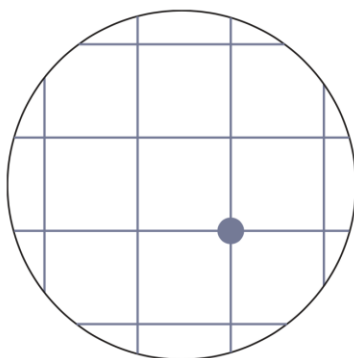
# Strategy 2.1 Pedestrian Crossings

## • Intersections: design best practices



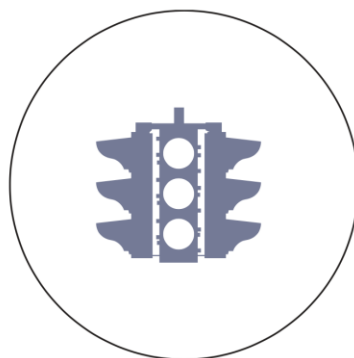
### Design Intersections to Be as Compact as Possible

Compact intersections reduce pedestrian exposure, slow traffic near conflict points, and increase visibility for all users. Limit the addition of dedicated turn lanes and pockets, and remove slip lanes where possible. Break large, complex intersections into a series of smaller intersections. Use existing pedestrian behaviors and desire lines to dictate design.



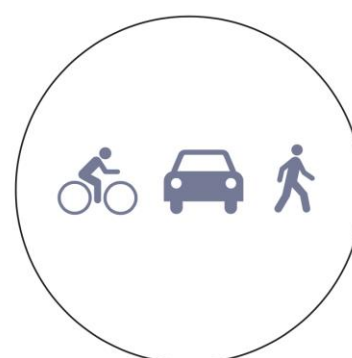
### Analyze Intersections as Part of a Network, not in Isolation

Solutions may be found at the corridor or network level. Tradeoffs can often be made between the intersection and the network in terms of traffic volume and capacity.



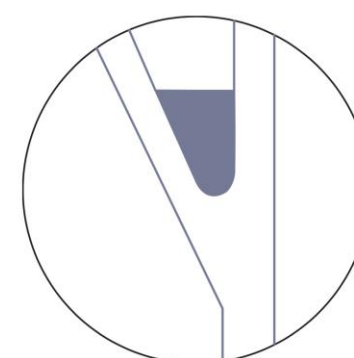
### Integrate Time and Space

Reconfiguring intersections in time (through signalization) provides an alternative to widening intersections to solve delay or congestion. Integrate spatial and temporal intersection design strategies throughout a project.



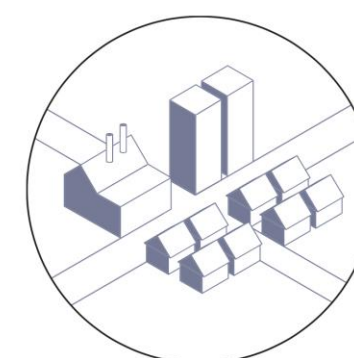
### Intersections Are Shared Spaces

The goal of intersection design is not strictly to reduce the number of conflicts for a given user at a select location, but to create a space in which users are mutually aware of one another and visible and predictable in their actions to reduce the overall rate and severity of crashes.



### Utilize Excess Space as Public Space

Interim public plazas and low-cost safety improvements should be used to enhance public life and mitigate safety concerns in the near term.



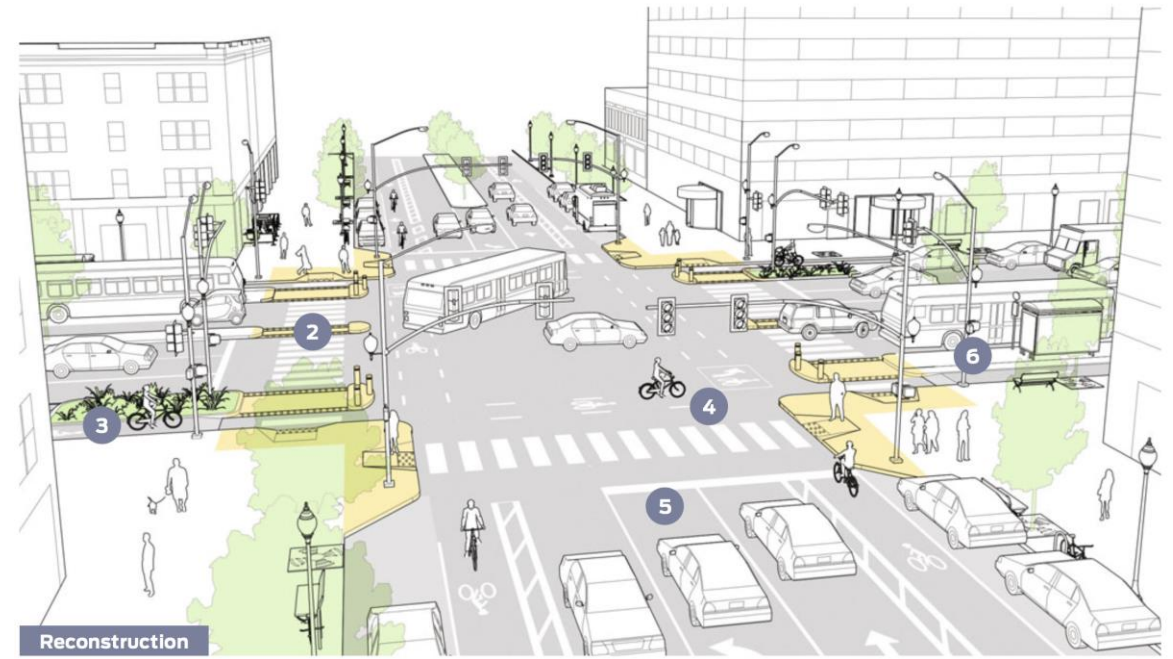
### Design for the Future

Design should account for existing and future land uses as well as projected and induced demand for all users. Land uses and pedestrian generators play an equally important role in making decisions about intersections and relate directly to the desires and objectives of the surrounding community.

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# Strategy 2.1 Pedestrian Crossings

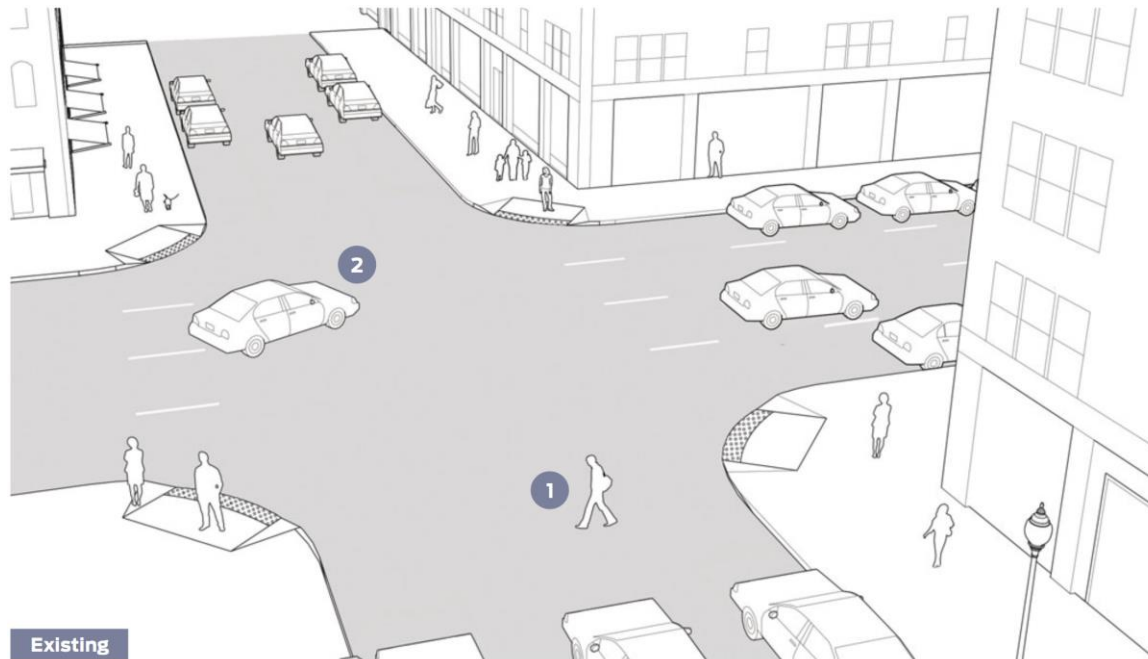
- Intersection Treatments
  - Major Intersection



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# Strategy 2.1 Pedestrian Crossings

- Intersection Treatments
  - Major Intersection
  - Minor Intersection



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# Strategy 2.1 Pedestrian Crossings

- **Traffic Calming**
  - Mini roundabout/neighbourhood traffic circle



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# Strategy 2.1 Pedestrian Crossings

- **Traffic Calming**

- Mini roundabout/neighbourhood traffic circle
- **Raised Intersection**



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# Strategy 2.1 Pedestrian Crossings

- **Traffic Calming**

- Mini roundabout/neighbourhood traffic circle
- Raised Intersection
- Curb extensions

**Before:**



**After:**



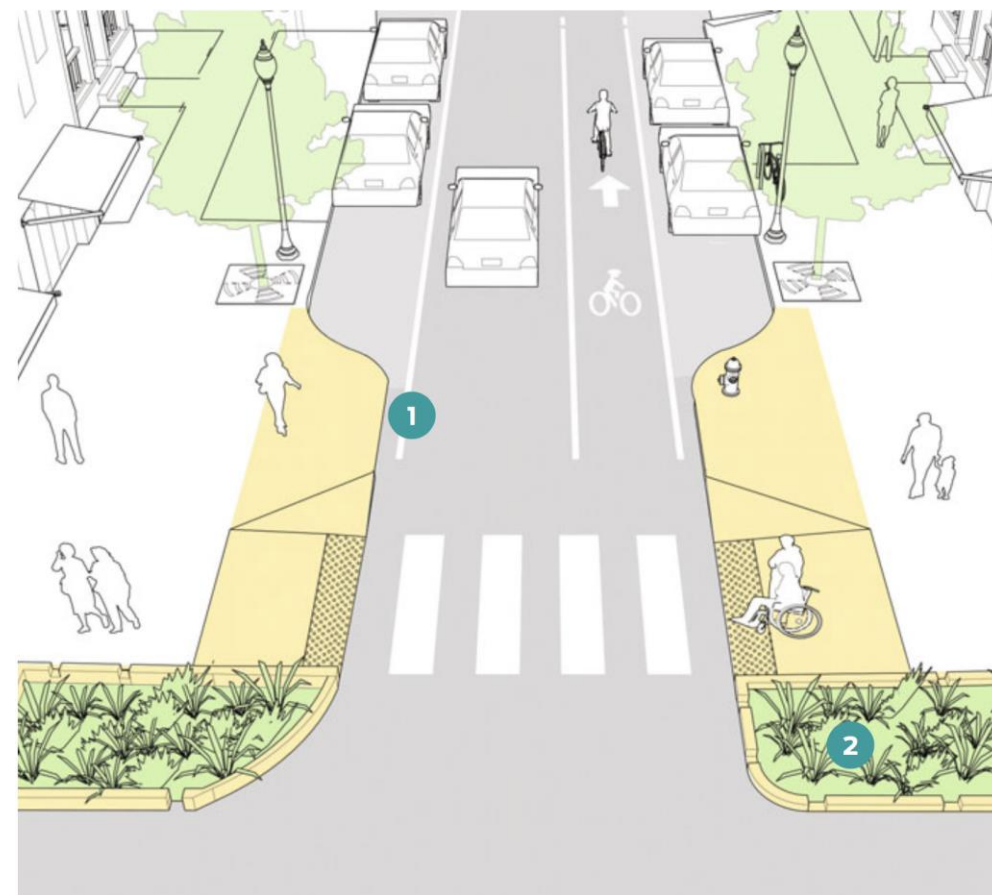
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# Strategy 2.1 Pedestrian Crossings

- **Traffic Calming**

- Mini roundabout/neighbourhood traffic circle
- Raised Intersection
- Curb extensions
  - **Gateway (neckdown)**



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# Strategy 2.1 Pedestrian Crossings

- **Traffic Calming**

- Mini roundabout/neighbourhood traffic circle
- Raised Intersection
- **Curb extensions**
  - *Gateway (neckdown)*
  - ***Midblock extension (pinchpoint/choker)***

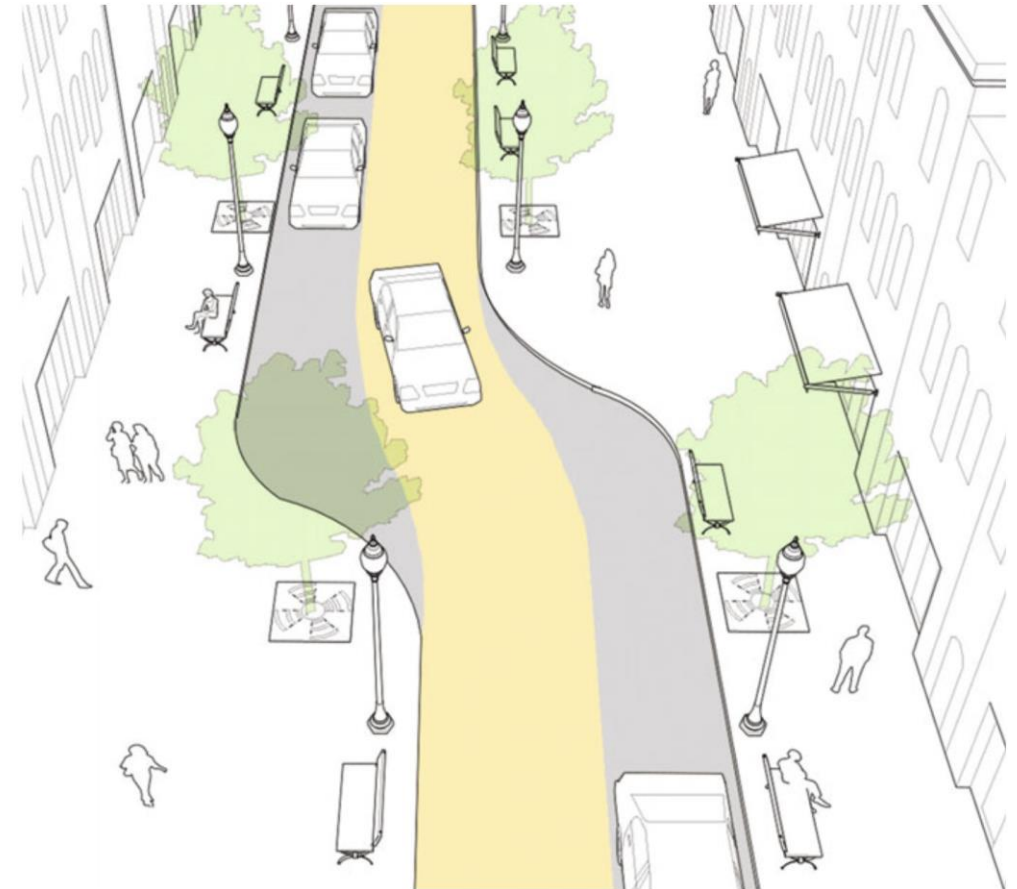


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# Strategy 2.1 Pedestrian Crossings

- **Traffic Calming**

- Mini roundabout/neighbourhood traffic circle
- Raised Intersection
- **Curb extensions**
  - *Gateway (neckdown)*
  - *Midblock extension (pinchpoint/choker)*
  - ***Offset curb extension (chicane)***



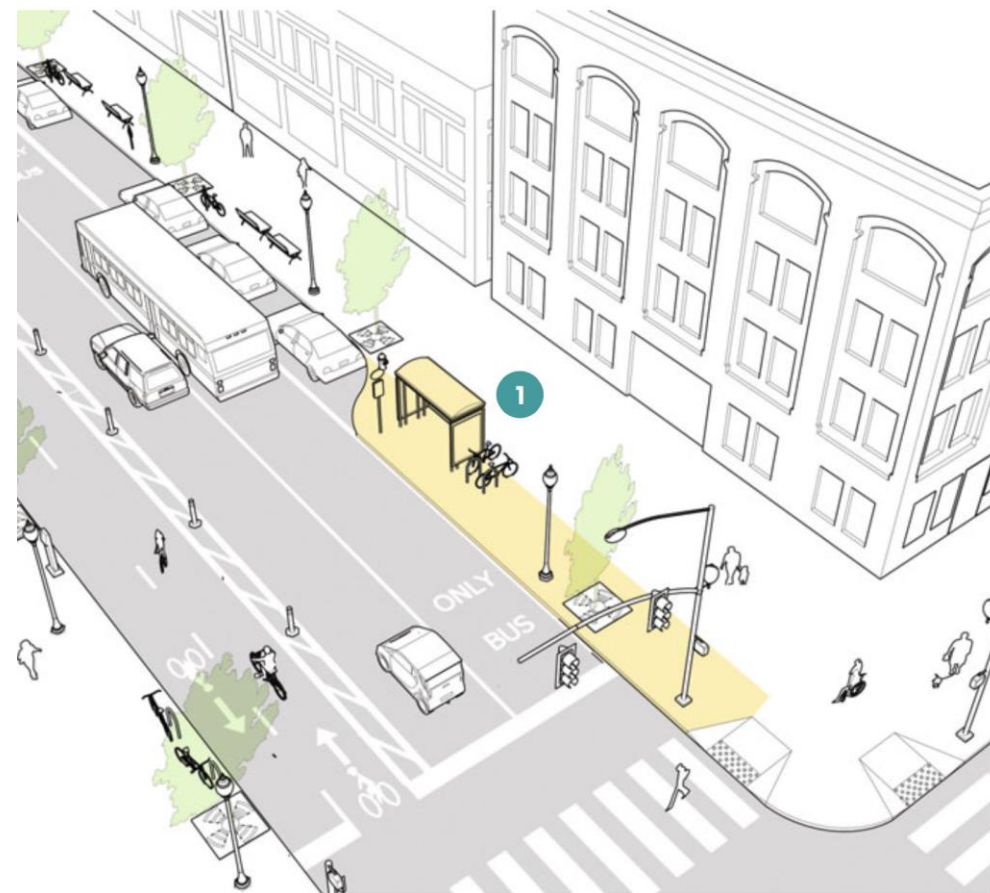
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# Strategy 2.1 Pedestrian Crossings

- **Traffic Calming**

- Mini roundabout/neighbourhood traffic circle
- Raised Intersection
- **Curb extensions**
  - *Gateway (neckdown)*
  - *Midblock extension (pinchpoint/choker)*
  - *Offset curb extension (chicane)*
  - **Bus bulb**



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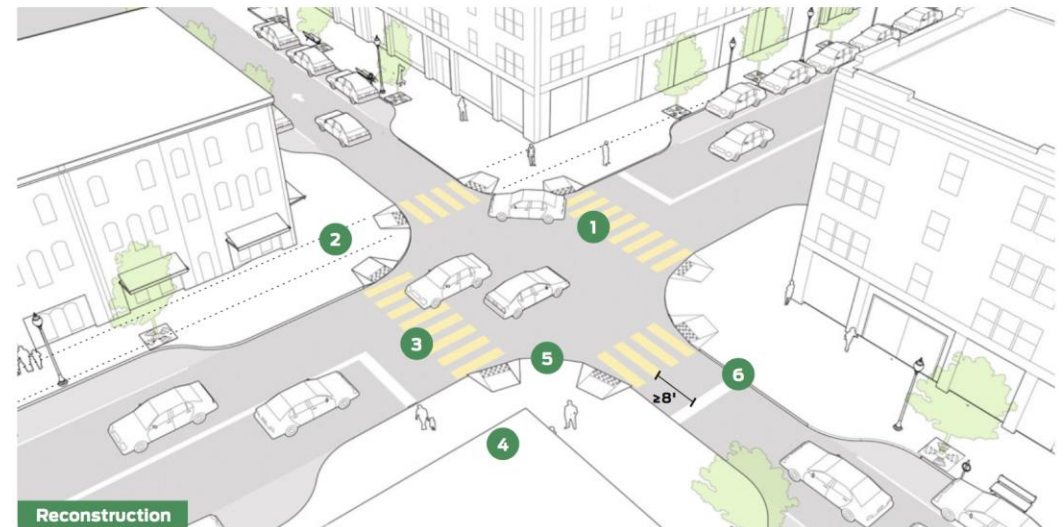
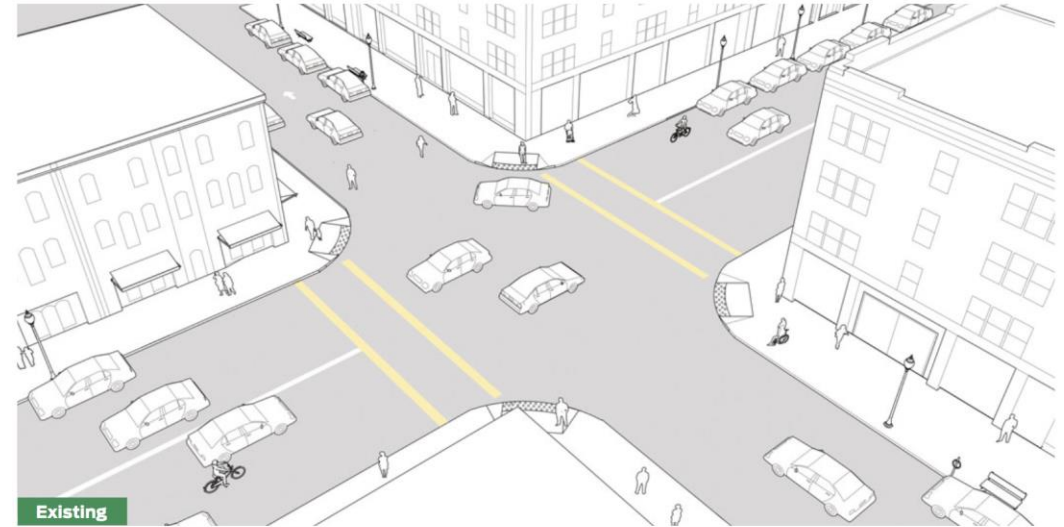
# Strategy 2.1 Pedestrian Crossings

- **Crosswalks**

- “The presence of a crosswalk does not, in and of itself, render a street safe. Based on their surrounding contexts, speed, and overall roadway width, crosswalks often require additional safety measures such as safety islands, signals, or traffic calming.”

- *Source: NACTO Urban Street Design Guide*

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# Strategy 2.1 Pedestrian Crossings

- **Crosswalks**
  - Design strategies:
    - *Pedestrian Safety Islands*



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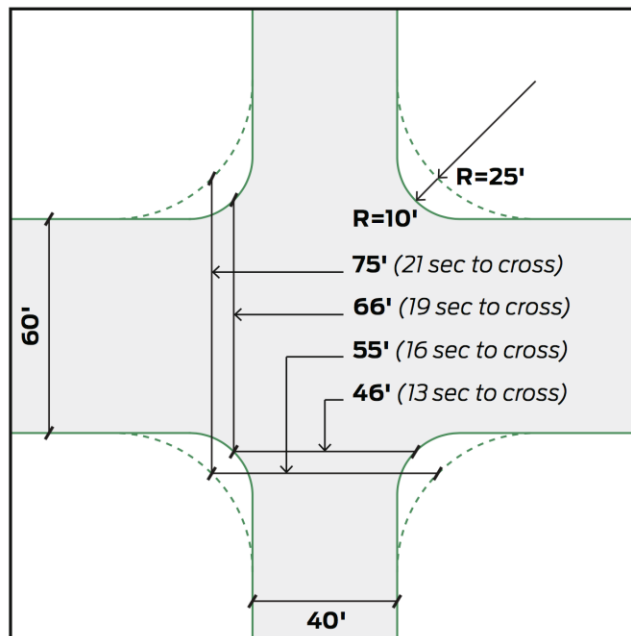
# Strategy 2.1 Pedestrian Crossings

- **Crosswalks**

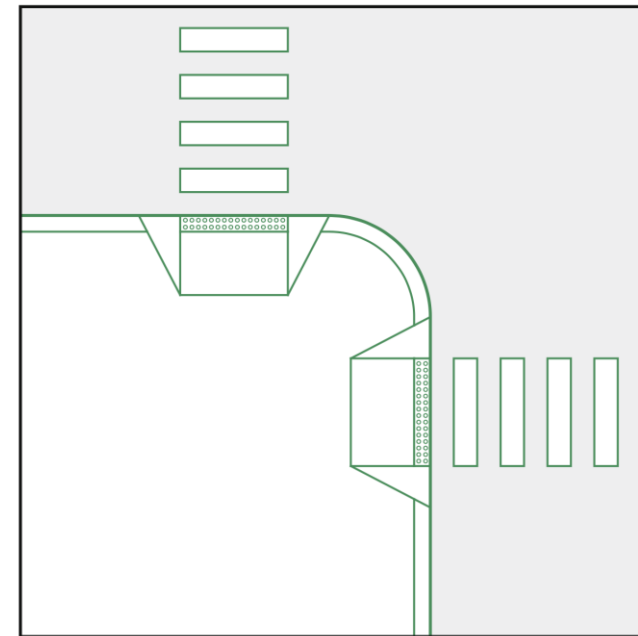
- **Design strategies:**

- *Pedestrian Safety Islands*
- **Corner Radii**

The size of the corner relates directly to the length of the crosswalk. Longer crosswalks take more time to cross, increasing pedestrian exposure risk and diminishing safety.<sup>1</sup>



A smaller curb radius expands the pedestrian area, allowing for better pedestrian ramp alignment.



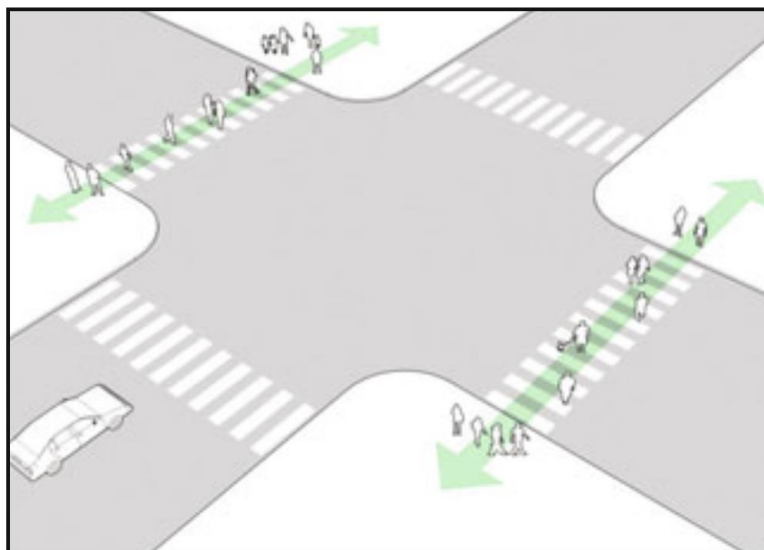
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# Strategy 2.1 Pedestrian Crossings

- **Crosswalks**

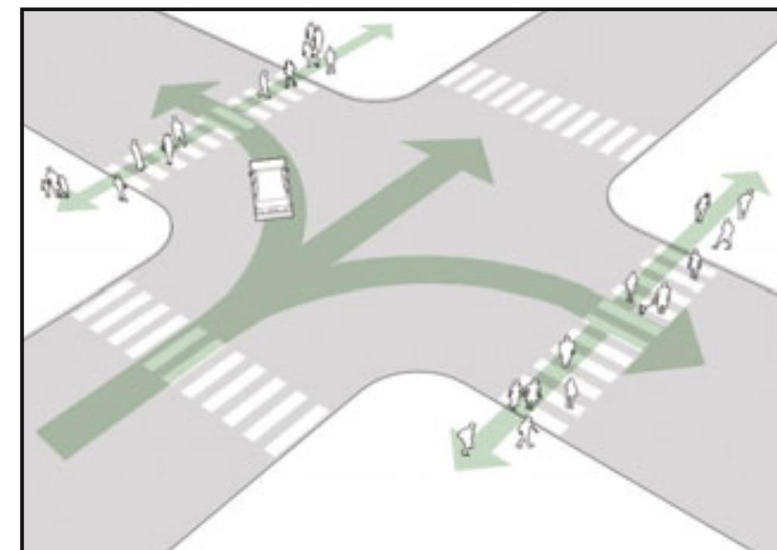
- **Design strategies:**

- *Pedestrian Safety Islands*
- *Corner Radii*
- ***Leading Pedestrian Int***



## PHASE 1

Pedestrians are given a minimum head start of 3–7 seconds when entering the intersection.



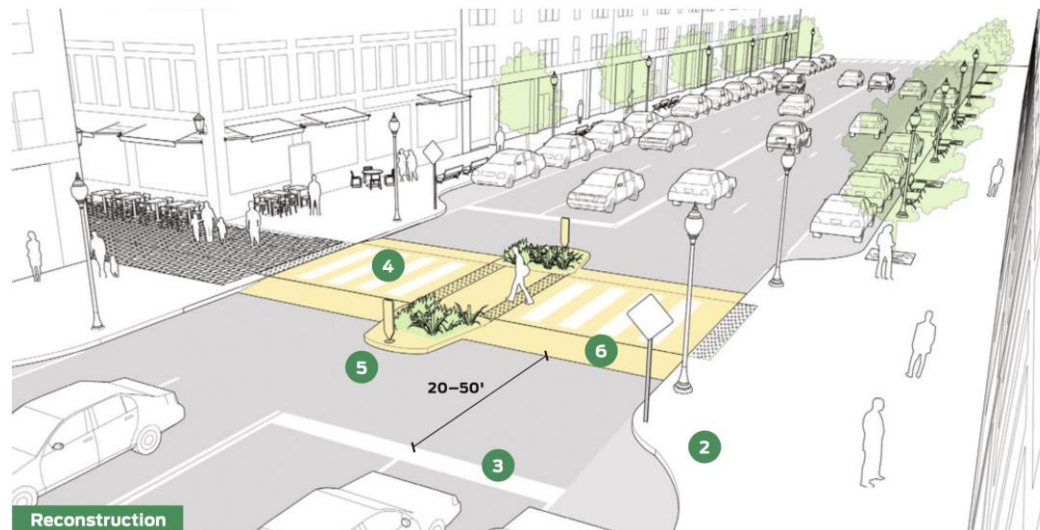
## PHASE 2

Through and turning traffic are given the green light. Turning traffic yields to pedestrians already in the crosswalk.

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# Strategy 2.1 Pedestrian Crossings

- Midblock Crossings



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# Strategy 2.1 Pedestrian Crossings

- **Pedestrians signals**
  - Countdown signals create predictability
  - Cycle length
    - *“Pedestrians, including elderly and disabled persons, should be able to cross an intersection in a single cycle, rather than two cycles, unless a street is segmented by a transit, bus, or other destination median.”*
      - Source: NACTO Urban Street Design Guide
- Actuated vs. Fixed Signals



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Spacing Magazine

## Strategy 2.2 Bicycle Street and Bridge Crossings

- **ATP Actions**

- Especially along all on-road bicycle routes, it is essential that all road users at an intersection recognize their space on the road through line painting and symbols, such as sharrows, or green paint at intersections and areas where there is the potential for conflict between cyclists and vehicles
- Bottlenecking at 10th Avenue, 4th Avenue, and Gertrude Street were identified as major safety concerns for cyclists
  - *An initial implementation step is providing special treatment for the section at the 10th Avenue dip. As the road is too narrow to provide a full bike lane, it is recommended that coloured pavement markings be implemented to indicate the potential conflict zone between bicycles and vehicles.*
- The City will explore addressing safety concerns at these areas through future consideration of an alternative cyclist and pedestrian crossing over Roger Creek
- The City will widen the bridge and add a pedestrian crossing at Gertrude Street bridge over Kitsuksis creek in the near future
- Further research and consideration of an off street path that follows the E&N Railroad should be explored

## Strategy 2.2 Bicycle Street and Bridge Crossings

- **Successes**

- Gertrude St. Bridge bike lane



*Sarah Thomas*

- **Gaps**

- Conflict zones such as intersections and narrow roadways are in need of upgrading to ensure cyclist safety
- Alternative cyclist/pedestrian crossing over Roger Creek is required
- No pedestrian development along E&N Rail Line



## Strategy 2.2 Bicycle Street and Bridge Crossings

- **Recommendation**

1. Green paint and other intersection treatments should be used to indicate areas of conflict between cyclists and drivers. The following intersections are of particular concern:

- *10<sup>th</sup> Ave. and Roger St.*
- *Gertrude St. and Roger St.*
- *Redford St. and Stamp Ave.*
- *Victoria Quay and Johnson St.*
- *10<sup>th</sup> Ave. between N. Park Dr. and Dunbar St. ("The Dip")*
- *4<sup>th</sup> Ave. and Dunbar St.*



*NACTO Urban Bikeway Design Guide*

## Strategy 2.2 Bicycle Street and Bridge Crossings

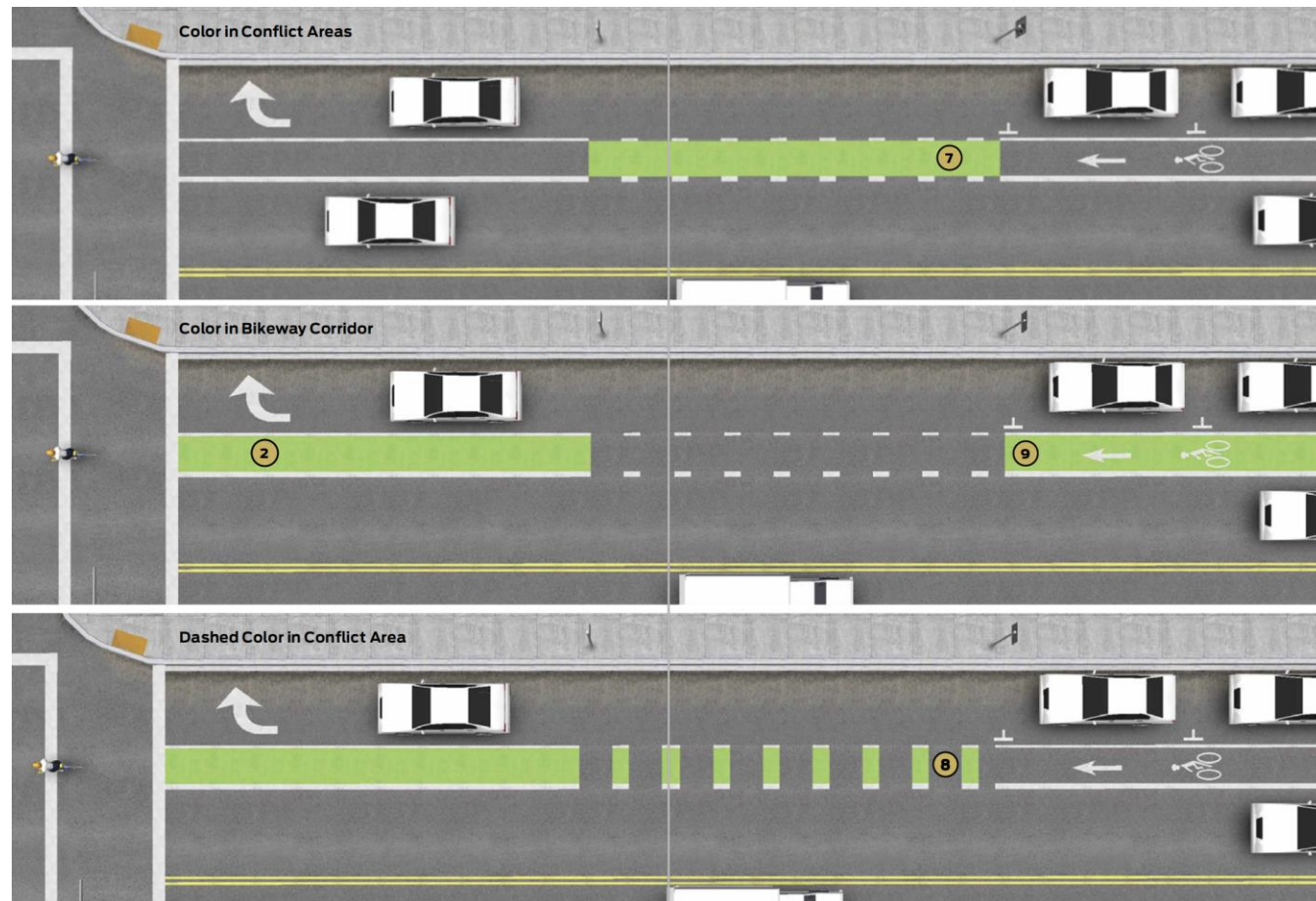
- **Green Paint**

- Increases facility visibility and comfort
- Identifies potential areas of conflict
- Promotes multimodal nature of corridor

- *“Colored pavement can be utilized either as a corridor treatment along the length of a bike lane or cycle track, or as a spot treatment, such as a bike box, conflict area, or intersection crossing marking.”*

- Source: NACTO Urban Bikeway Design Guide

NACTO Urban Bikeway Design Guide





## Strategy 2.2 Bicycle Street and Bridge Crossings

- **Intersections**
  - Intersection crossing marks



VANCOUVER, BC (PHOTO: WWW.PEDBIKEIMAGES.ORG, CARL SUNDSTROM)



**Dotted Line Extensions**



**Shared Lane Markings**



**Colored Conflict Area**



**Elephant's Feet**

*NACTO Urban Bikeway Design Guide*



# Strategy 2.2 Bicycle Street and Bridge Crossings

- **Intersections**

- Intersection crossing marks
- Bike boxes



NACTO Urban Bikeway Design  
Guide

# Strategy 2.2 Bicycle Street and Bridge Crossings

- **Intersections**

- Intersection crossing marks
- Bike boxes
- Two stage queue boxes



OTTAWA, CANADA

*NACTO Urban Bikeway Design  
Guide*



## Strategy 2.2 Bicycle Street and Bridge Crossings

- **Intersections**

- Intersection crossing marks
- Bike boxes
- Two stage queue boxes
- Median refuge island



*NACTO Urban Bikeway Design  
Guide*



## Strategy 2.2 Bicycle Street and Bridge Crossings

- **Intersections**

- Intersection crossing marks
- Bike boxes
- Two stage queue boxes
- Median refuge island
- Through bike lane



*NACTO Urban Bikeway Design  
Guide*

# Strategy 2.2 Bicycle Street and Bridge Crossings

## • Intersections

- Intersection crossing marks
- Bike boxes
- Two stage queue boxes
- Median refuge island
- Through bike lane
- Signal detection & actuation



PHOTO: RICHARD DRUDL



SAN LUIS OBISPO, CA



SAN LUIS OBISPO, CA



PHOTO: RICHARD DRUDL

*NACTO Urban Bikeway Design Guide*



## Strategy 2.2 Bicycle Street and Bridge Crossings

- **Recommendation**

2. Continue researching the creation of a connected bike and pedestrian route along the existing E&N rail bed. Work with groups like *Friends of Rails to Trails Vancouver Island (FORT-VI)*, who want to connect this trail to other *Rails to Trails* initiatives across Vancouver Island.

- [fortvi.ca/](http://fortvi.ca/)





## Strategy 2.3 Walking and Cycling Education

- **ATP Actions**

- Work with cycling groups and organizations in the City
- Develop education and awareness programs and initiatives
- Actively market and promote the active transportation facilities, policies and programs in the City
- Develop a Bicycle User Map for the City that shows bicycle facilities, regional trail heads, key destinations, transit routes, bicycle parking, and bicycle shops
- Develop a webpage that focuses on pedestrian and cycling facilities in Port Alberni
- Develop mobility scooter education and awareness
  - *This is a program that could be delivered through the local seniors' centre or other recreational facilities. Goal is to provide important information about the legal requirements for scooter driving. There could be an opportunity for joint implementation with the outcomes of the Age Friendly Report.*

## Strategy 2.3 Walking and Cycling Education

- Successes
  - Bike to Work Week



PJ Bell



## Strategy 2.3 Walking and Cycling Education

- **Successes**

- Bike to Work Week
- Adult bike skills course in Parks and Rec guide



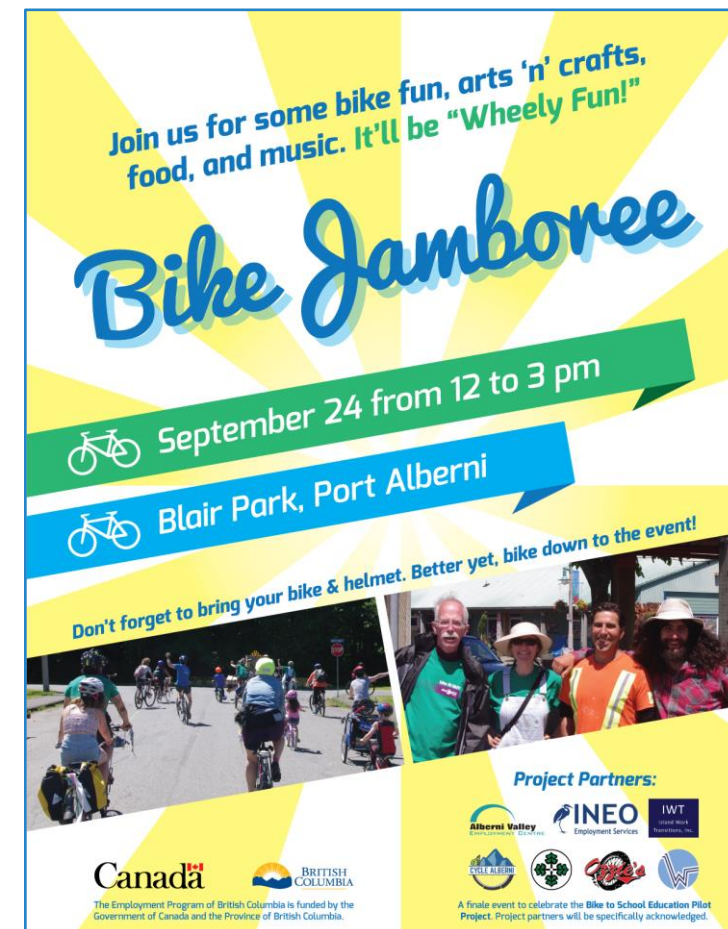
*Elena Rardon*



## Strategy 2.3 Walking and Cycling Education

- **Successes**

- Bike to Work Week
- Adult bike skills course in Parks and Rec guide
- Bike events



## Strategy 2.3 Walking and Cycling Education

- **Successes**

- Bike to Work Week
- Adult bike skills course in Parks and Rec guide
- Bike events
- **Wheely Fun Alberni:**  
**Bike to School Education Pilot**



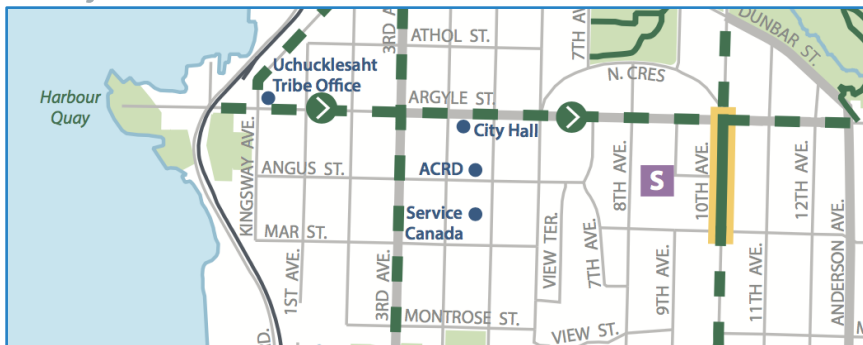
PJ Bell



## Strategy 2.3 Walking and Cycling Education

- **Successes**

- Bike to Work Week
- Adult bike skills course in Parks and Rec guide
- Bike events
- Wheely Fun Alberni:  
Bike to School Education Pilot Project



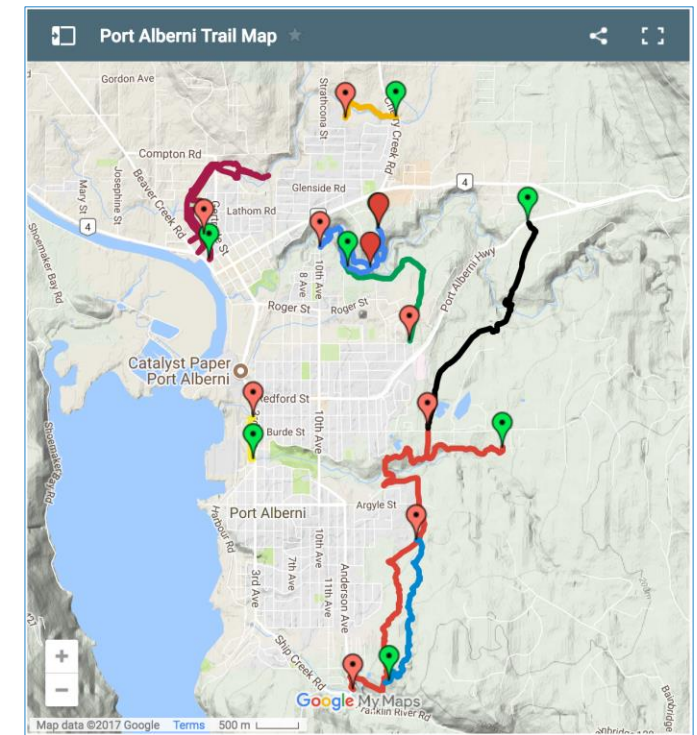
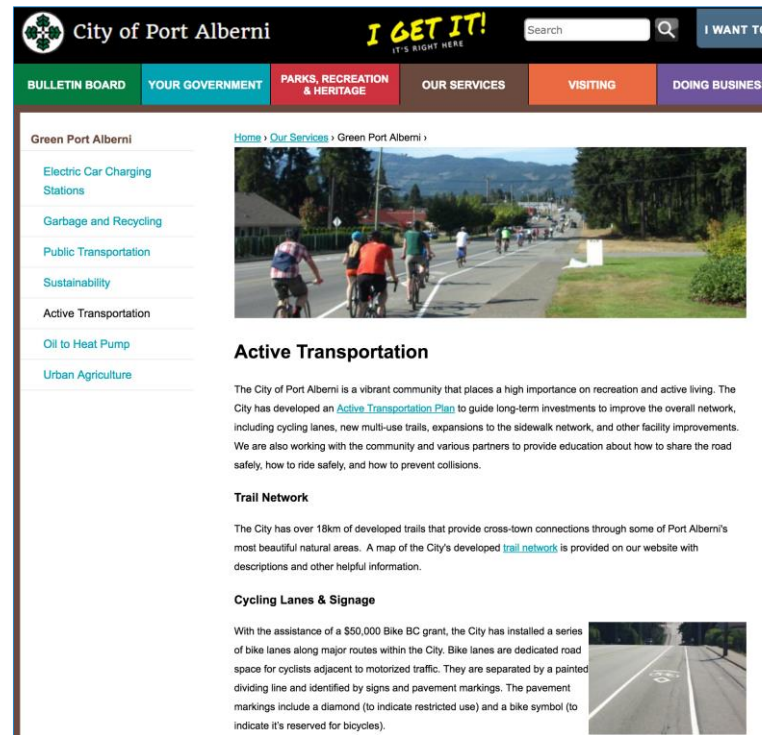
*Community engagement session to review cycling map*



## Strategy 2.3 Walking and Cycling Education

- **Successes**

- Bike to Work Week
- Adult bike skills course in Parks and Rec guide
- Bike events
- Wheely Fun Alberni: Bike to School Education Pilot Project
- Cycling Map
- [Website](#)



[www.portalberni.ca/active-transportation](http://www.portalberni.ca/active-transportation)

## Strategy 2.3 Walking and Cycling Education

- **Gaps**

- Consistent funding and support for existing programs
- Bike theft
- Hazard mapping
- Walking & mobility scooter education and awareness
  - *Current status of this action is outside the scope of this analysis*



William Murphy

## Strategy 2.3 Walking and Cycling Education

### • Recommendations

1. Continue to support and work alongside Cycle Alberni and other groups interested in promoting Active Transportation

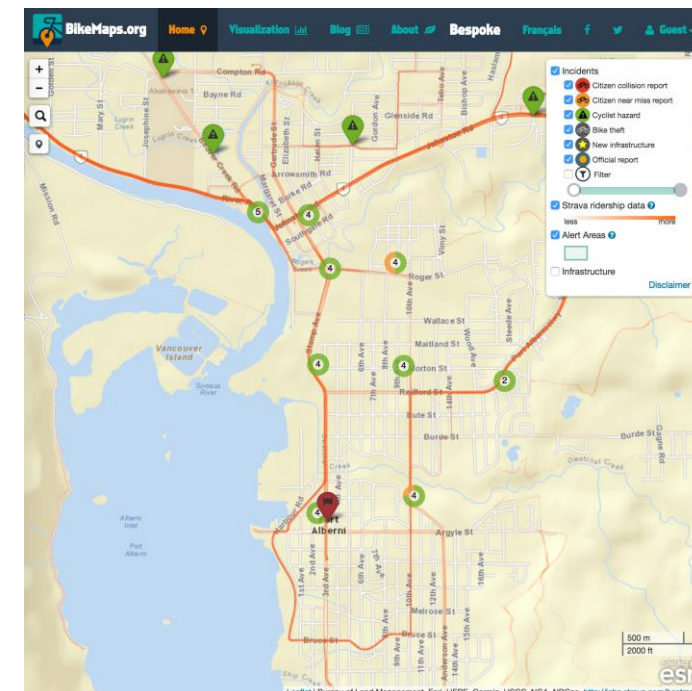
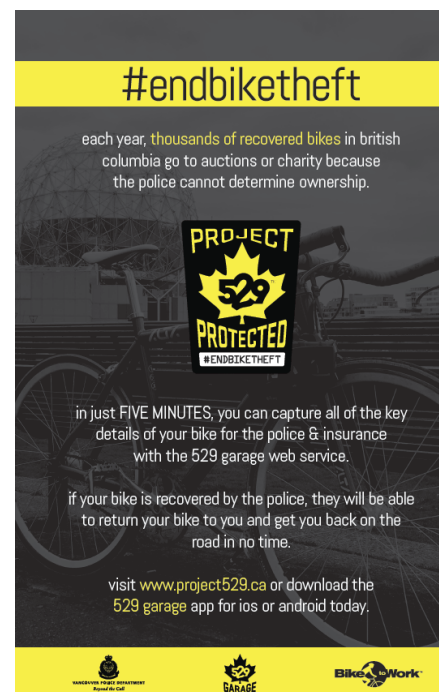
- *Provide consistent funding and consider taking municipal ownership of certain events/initiatives*

2. Work with Cycle Alberni to update the Port Alberni Cycle Map as required

3. Work with the RCMP to create or adopt a stolen bicycle registry

- *E.g. Project 529*

4. Encourage the use of [www.BikeMaps.org](http://www.BikeMaps.org) to map hazards and utilize the data to repair/update infrastructure





# Accessibility and Design

- **Strategy 3.1**
  - Pedestrian Accessibility
- **Strategy 3.2**
  - Bicycle Parking
- **Strategy 3.3**
  - Wayfinding and Signage

# Strategy 3.1 Pedestrian Accessibility

- **ATP Actions**

- Ensure that all the signalized intersections have accessible crossing features, including:
  - *Accessible pedestrian signals, traffic islands, let downs, curb ramps, tactile surfaces and warning strips, and directional guiding strip*
- Street design standards in the City's servicing bylaw should be updated to provide wider sidewalks to accommodate scooters and ascribe other accessibility features, including lighting and benches.
- The City should adopt a sidewalk maintenance policy. This policy would include standards for inspection, identifying defects and obstacles, and prioritizing repairs.
  - *The Municipal Insurance Association may be able assist with questions of liability related to sidewalk maintenance*



PJ Bell

# Strategy 3.1 Pedestrian Accessibility

- **Successes & Gaps**

- The current status of this strategy is outside the scope of this analysis.

- **Recommendation**

1. The ATP plan calls for improving sidewalk design, accessibility, and maintenance by updating policy and bylaws. This should continue to be addressed moving forward.



*Buchheit Construction*



# Strategy 3.1 Pedestrian Accessibility

## • Sidewalk Zones

- Frontage zone
- Pedestrian through zone
  - *Ensure that sidewalk is wide enough for two people using mobility aids to pass each other*
    - Wheelchair users need about 1.5 m to turn around and 1.8 m to pass other wheelchairs (US DOT)
- Street furniture/curb zone
- Enhancement/buffer zone

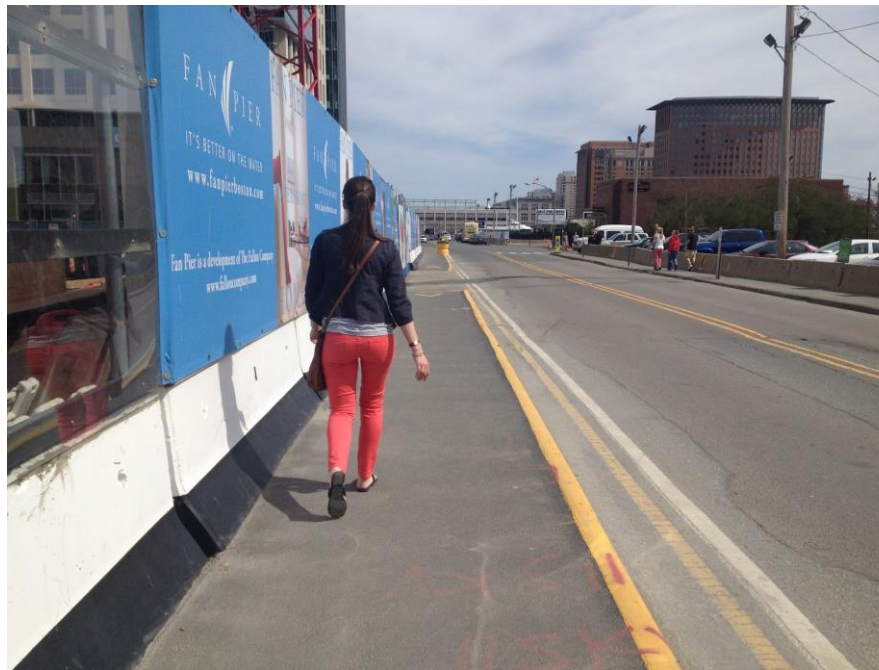


NACTO Urban Street Design Guide

# Strategy 3.1 Pedestrian Accessibility

- Sidewalk Design
  - Buffering

**No buffer:**



**Comfortable buffer:**

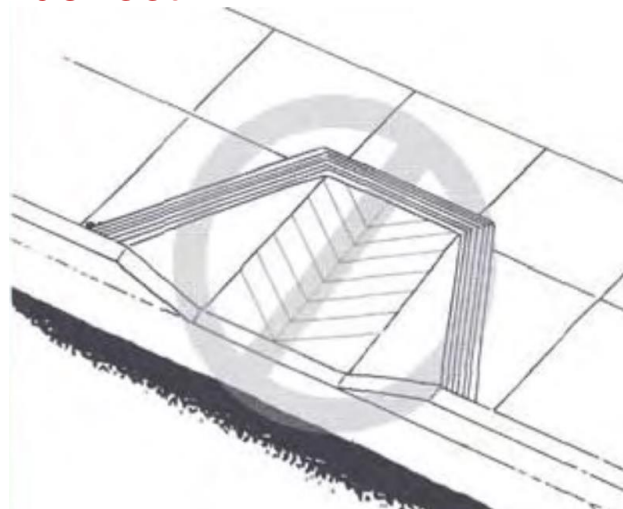


*Calm Streets Boston*

# Strategy 3.1 Pedestrian Accessibility

- **Sidewalk Design**
  - Buffering
  - Warning strips

**Inadequate Design:**  
Grooves are not detectable  
underfoot



**Good Design:**  
A 610mm strip of detectable warnings  
installed at bottom of curb ramp to indicate  
transition from sidewalk to street



*UD DOT Accessible Sidewalks and Street  
Crossings Guide*



# Strategy 3.1 Pedestrian Accessibility

- **Sidewalk Design**
  - Buffering
  - Warning strips
  - Lighting

## Pedestrian-scale lighting



*NACTO Urban Street Design Guide*

# Strategy 3.1 Pedestrian Accessibility

- **Sidewalk Design**

- Buffering
- Warning strips
- Lighting
- Rest areas



*880 Cities*



## Strategy 3.2 Bicycle Parking

- **ATP Actions**

- **Implementation Strategy:**

- 1. *Install bicycle parking at all municipal and community facilities*

- **Priority:** Farmer's Market

- 2. *Update the City's Zoning Bylaw to include requirements for bike parking in new developments, especially multi-family and commercial developments.*

- 3. *Partner with local businesses to install bicycle parking.*

- **Additional and/or improved bicycle parking is recommended in key areas of Port Alberni, such as:**

- *Key commercial areas, key cultural and civic facilities, schools, parks & trailheads*

- For locations within public space, the City should work to implement bicycle parking where possible within the road right-of-way.
- The City should continue to provide facilities for their own employees for showering and getting changed in addition to increasing the amount of bicycle parking



## Strategy 3.2 Bicycle Parking

### • Successes

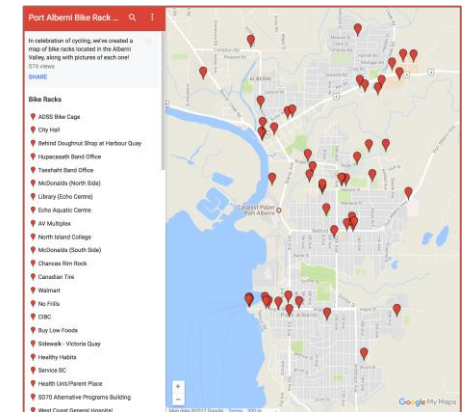
- Bylaw No. 4856 (Adopted November 10, 2014)
  - *Requires all new commercial and multifamily residential developments to include bicycle parking*
- YPAV Community Bike Rack project
  - [www.ypalbernivalley.ca/holloway-rd/](http://www.ypalbernivalley.ca/holloway-rd/)
- Bike Rack Map
  - [www.avtransitiontown.org/cycle-alberni/bike-rack-map](http://www.avtransitiontown.org/cycle-alberni/bike-rack-map)

### • Gaps

- Additional bike parking in key areas is required
- Status of municipal change room/shower facilities is out of the scope of this analysis



AV News



Cycle Alberni

## Strategy 3.2 Bicycle Parking

- **Recommendations**

1. Continue working with local businesses and organizations like YPAV to add new bike racks throughout the city
2. Strengthen the bike parking bylaw requirement by adding set targets/ratios for bike parking in new developments
  - *Ensure that an adequate mix of short- and long-term parking is provided. For example, in multifamily buildings, Vancouver requires 1.25 long-term spaces/unit plus at least 6 short-term spaces for developments containing a minimum of 20 dwelling units.*
3. Develop a retrofit strategy to add bike parking to existing developments
4. Ensure that change rooms and shower facilities are available to staff at municipal facilities



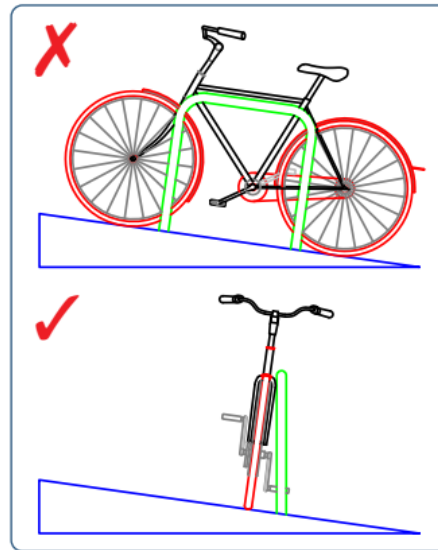
PJ Bell

# Strategy 3.2 Bicycle Parking

- **Bicycle Parking Considerations**

- **Rack Design**

- *Functionality*
- *Placement*
- *Materials*
- *Installation*



Good



Okay



Bad



Cambridge City Council; American Bicycle Security Company; IBikeToronto; Alibaba; Belson; Steve Vance; Embraceable Hue Photography











## Strategy 3.2 Bicycle Parking

### • Bicycle Parking Considerations

- Rack Design
  - *Functionality*
  - *Placement*
  - *Materials*
  - *Installation*
- Bicycle dimensions



PJ Bell

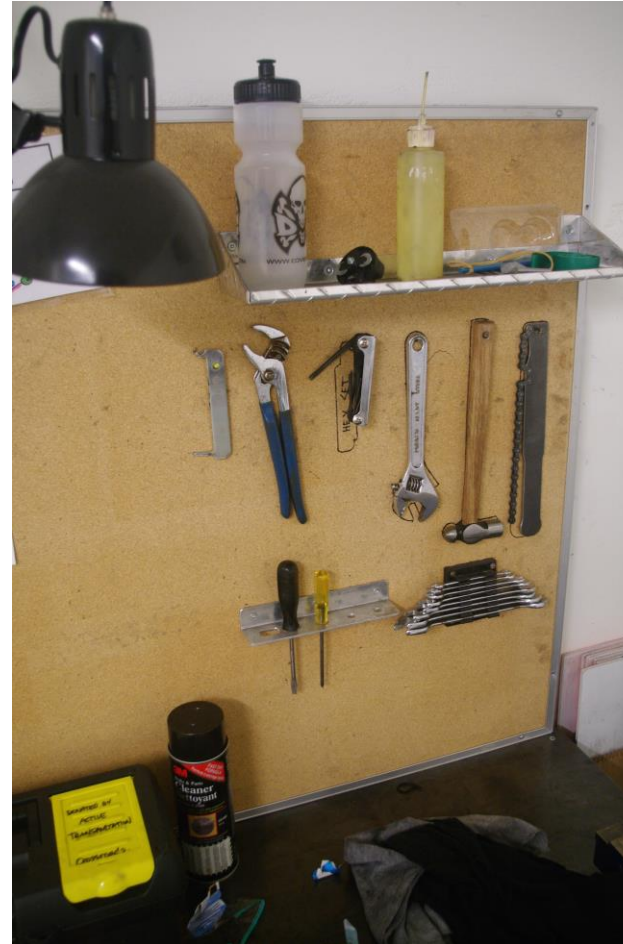
BICYCLE TYPE		DIMENSIONS (FEET)		
		Length	Height	Width
Standard Bicycle		6	4	2
Child Bicycle		5	2-3	2
Tandem Bicycle		9	4	2
Cargo Bicycle		8	4	3
Bicycle+Trailer Bike		10	4	2
Bicycle + Child Trailer		10	4	3
Bicycle and Child Seat		6	5	2
Recumbent Bicycle		7	4	3

San Francisco Planning Department

## Strategy 3.2 Bicycle Parking

- **Bicycle Parking Considerations**

- Rack Design
  - *Functionality*
  - *Placement*
  - *Materials*
  - *Installation*
- Bicycle dimensions
- **Amenities**
  - *Lockers*
  - *Shower facilities*
  - *Change rooms*
  - *Repair kit / tire pump*



PJ Bell

## Strategy 3.2 Bicycle Parking

- **Bicycle Parking Considerations**

- Rack Design
  - *Functionality*
  - *Placement*
  - *Materials*
  - *Installation*
- Bicycle dimensions
- Amenities
  - *Lockers*
  - *Shower facilities*
  - *Change rooms*
  - *Repair kit / tire pump*
- Wayfinding for bike parking



*Reliance Foundry*



## Strategy 3.2 Bicycle Parking

- **Recommendation**

5. Work with Cycle Alberni or other interested parties to create a Bicycle Valet system for use at community events

- *See examples in Nanaimo, Victoria, Vancouver, and many other communities*



*Greater Nanaimo Cycling Coalition*

# Strategy 3.3 Wayfinding and Signage

- **ATP Actions**

- Provide enhanced wayfinding and signage for pedestrians and cyclists
  - *Short-term priority: pedestrian wayfinding*
  - *Long-term priority: cycling wayfinding (as network is built out)*



PJ Bell



## Strategy 3.3 Wayfinding and Signage

- **Successes**

- Port Alberni's existing blue wayfinding signs give the city a unique identity that can be built off of for future wayfinding
- Local community groups have taken the initiative to make signs for some of the trails, laying a framework that can be further developed

- **Gaps**

- Cycling routes need to be better identified with signage and road markings
- Trails are inconsistently signed and there is no wayfinding in the city to lead pedestrians or cyclists towards the trails



PJ Bell



## Strategy 3.3 Wayfinding and Signage

- **Recommendation**

1. Create a wayfinding and signage strategy to ensure full coverage and consistency across all cycling and pedestrian routes, including trails

### Why invest in wayfinding?

- *Familiarizes users with the active transportation network*
- *Identifies the best routes to destinations*
- *Overcomes a “barrier to entry” for infrequent pedestrians and bicyclists*
- *Signage that includes mileage and travel time to destinations may help minimize the tendency to overestimate the amount of time it takes to travel by active modes*
- *Visually indicates to motorists that they are driving along a bicycle route and should use caution*
- *Passively markets the bicycle network by providing unique and consistent imagery throughout the jurisdiction*

- **Source: NACTO Urban Bikeway Design Guide**



LetsGoBiking

## Strategy 3.3 Wayfinding and Signage

- **Signage Categories**

- Regulatory
- Warning
- Wayfinding
  - *Confirmation*
  - *Turn*
  - *Decision*

- **Intended Audience**

- “In all cases, markings must strive for a high level of visibility, instant identification, and take into account both motorist and bicyclist movements in relation to the marking placement.”
  - *Source: NACTO Urban Bikeway Design Guide*



BERKELEY, CA



OAKLAND, CA

### Confirmation



CHICAGO, IL

### Turn



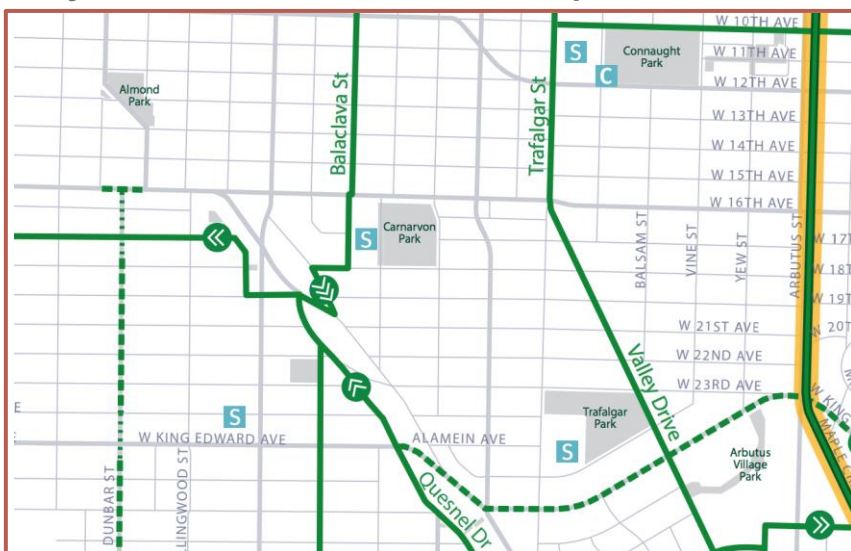
PORTLAND, OR

### Decision

## Strategy 3.3 Wayfinding and Signage

- **Recommendation**
  2. Give logical names to common pedestrian and cycling routes and then brand signage and maps using these names

*City of Vancouver Bike Map*



PJ Bell



## Strategy 3.3 Wayfinding and Signage

- **Recommendation**

3. Accompany signage with pavement markings in order to ease wayfinding, indicate shared and separated spaces, and draw motorists' attention to the cyclists

*Examples of markings used for wayfinding:*



*NACTO Urban Bikeway Design Guide*

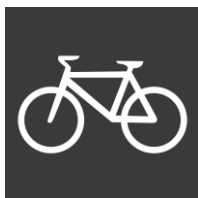


*PJ Bell*

## Strategy 3.3 Wayfinding and Signage

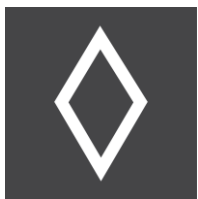
### • Recommendation

4. Avoid painting sharrows in dedicated bike lanes. When existing markings are due to be repainted, replace the existing markings with the Dedicated Bike Lane symbol as shown below.
  - “Shared Lane Markings shall not be used on shoulders, in designated bicycle lanes, or to designate bicycle detection at signalized intersections.”
    - Source: Manual on Uniform Traffic Control Devices (MUTCD 9C.07 03)



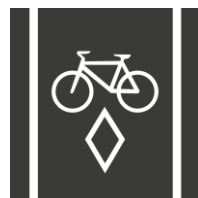
#### Bike Symbol

*Indicates a cycling route. Can be used alone in a bike lane or used in combination with other symbols such as the chevron (double arrow) or diamond.*



#### Special Vehicle Lane

*Indicates that the lane is reserved for buses, taxis, carpooling, and/or bikes. Accompanying signage will indicate which vehicles are eligible to use lane.*



#### Dedicated Bike Lane

*Indicates that the lane is reserved for bicycles.*



#### Shared Roadway (Sharrow)

*Indicates where cyclists should generally be positioned on the road when riding in traffic and reminds motorists that the road is a shared space.*



# Strategy 3.3 Wayfinding and Signage

- Cycling Route Marking: Best Practices

Port Alberni dedicated bike lanes



Sarah Thomas

Currently, the markings simultaneously indicate a shared use lane and a dedicated bike lane.

Shared Roadway



Treehugger.com

Dedicated Bike Lane



Bike Portland

Directional arrows may be used in bike lanes to indicate travel direction, but only single arrows; the chevron (double arrow) should be reserved solely for shared roadways.



# Additional Recommendations

## 1. Continue Active Transportation Data Collection

- Crucial for assessing impact of new infrastructure and bylaw changes
- Must be collected over time, including before and after implementation of upgrades

## 2. Take ownership over funding and active transportation initiatives

- Groups like Cycle Alberni helping to bring in money by applying for grants
- City has been relying on outside organizations



*Statistics from 2016 Bike Counts in Port Alberni (Cycle Alberni)*

# Additional Recommendations

## 3. The City should adopt specific targets (with set timelines) for cycling and walking mode share

- The City should gather baseline statistics and track changes in mode share as active transportation improvements are implemented
- The City should track demographic data about cyclists and pedestrians in order to assess the impact of active transportation programs and infrastructure

*“Data show that the countries with the highest ridership rates, such as Denmark, the Netherlands, and Germany, have virtually eliminated, or in some cases reversed, the gender gap. The same pattern occurs across cities: where the gender gap decreases, overall ridership rates increase. This has led some commentators to deem the percentage of women riding as a key indicator of the presence of factors that support bicycling for the general population.”*

*Source: Zimmerman and Kramer (2013): Getting the Wheels Rolling: A Guide to Using Policy to Create Bicycle Friendly Communities*



# Final Thoughts

- Congratulations!
- ...We look forward to seeing where it goes from here.



*PJ Bell*



# Contact

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