



Visualizing Rapid Implementation Bikeways in Metro Vancouver



Rapid Implementation Bikeways & TransLink

Building high quality bikeways is one of the most effective ways to encourage people to try cycling for transportation. Our Regional Transportation Strategy, Transport 2050, highlights the importance of planning for people first streets – where all people using the street, including people with disabilities and people using transit, cycling, walking, or rolling, feel safe, comfortable, and connected.

To make cycling as easy of an option as possible, municipalities and Indigenous Nations are encouraged to build facilities that are **Comfortable for Most** where possible, providing full protection, off-street facilities, or neighbourhood bikeways.

A **rapid implementation** or **quick build** approach enables the delivery of safe and comfortable cycling facilities, as well as comprehensive cycling networks, all at once and at a lower cost than traditional methods and at along a shorter timeline. This approach allows municipalities and Indigenous Nations to react quickly to changing environments, such as the COVID pandemic, or to safety concerns.

TransLink invests in regional cycling projects through the [Bicycle Infrastructure Capital Cost Sharing \(BICCS\)](#) funding program and the [Major Road Network and Bicycle \(MRNB\)](#) funding program, contributing between 50% and 100% of capital costs. Five of the projects highlighted in the Lookbook were built through these cost sharing programs.



[Transport 2050](#) is the new Regional Transportation Strategy for Metro Vancouver. Designed to be flexible in an era of rapid change, Transport 2050 is the roadmap for the next 30 years. It identifies projects, services, and policies to make transportation better for everyone. The [Rapid Implementation Design Guide for Bikeways](#) is meant to accelerate implementation of Transport 2050 and offers a focus on active transportation in the region.

Rapid implementation cycling projects support multiple strategies in Transport 2050, such as:

- 1.1 Make active transportation the most convenient choice for shorter trips.
- 1.1 5(b) - Support access to shared micromobility services for Indigenous Peoples living on reserve and treaty lands, where desired by the community.
- 3.2 As a priority, invest in transportation modes that are the lowest cost and most affordable for residents.
- 4.1 Eliminate traffic fatalities and serious injuries.
- 4.2 Ensure everyone feels welcome, comfortable and physically secure while getting around.

This document continues the conversation of active transportation implementation that the Design Guide began.

Why visualize these bikeways?

Municipalities and Indigenous Nations across the region are exploring a variety of strategies and treatments to make cycling more accessible and safer — closing gaps in the network, providing new routes, or enhancing physical separation between people on bikes and vehicles.

This document visually showcases examples of these impactful **rapid implementation cycling projects** across the region. These examples are meant to demonstrate a variety of approaches to inspire planners, engineers, and decision makers to consider adopting these quick build methods for enhancing the cycling experience across the region.

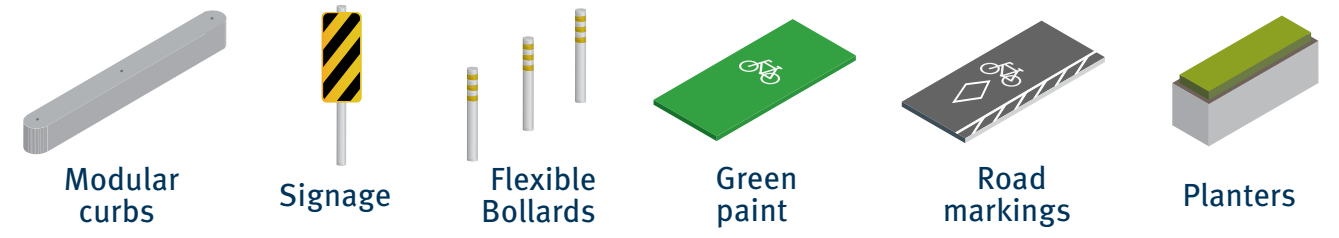


Expanding Metro Vancouver's bikeway network with rapid implementation projects helps the region move towards its goal of 50% of all trips shifting to active transportation and transit by 2050.

- Transport 2050 -

Photo of the Agnes Greenway in New Westminster by Graham Handford (Happy Cities)

Components of Rapid Implementation*



Benefits of Rapid Implementation

Quick build projects can provide opportunities to:

<p>Fill gaps in the bikeway network</p> <p>connecting existing infrastructure.</p> <p>(Still Creek Avenue, Burnaby)</p>	<p>Using space efficiently</p> <p>shifting road space from vehicles to active transportation.</p> <p>(Brooksbank Avenue, North Vancouver)</p>
<p>Improve specific areas</p> <p>reducing conflicts at intersections or bus stops</p> <p>(Beatty Street, Vancouver)</p>	<p>Expand the network</p> <p>introducing new bikeways and new connections</p> <p>(West 1st Street, North Vancouver)</p>
<p>Enhance safety</p> <p>improving physical separation between bikes and vehicles</p> <p>(City Centre Network, Surrey)</p>	<p>Facilitate pilots</p> <p>testing new designs for the purpose of iteration</p> <p>(Agnes Greenway, New Westminster)</p>

* This is a non exhaustive list of components for rapid implementation cycling infrastructure

How to read this document

This document showcases a series of 2-page case studies of rapid implementation cycling infrastructure in the region. Each example is presented with key statistics, including:

- **Project context:** what difference did it make?
- **Treatment:** which quick build infrastructure components were used?
- **Physical length:** how many metres is the project?
- **Implementation timeline:** how long did it take to build the quick build components?
- **Costs:** what is the estimated cost of the quick build components?

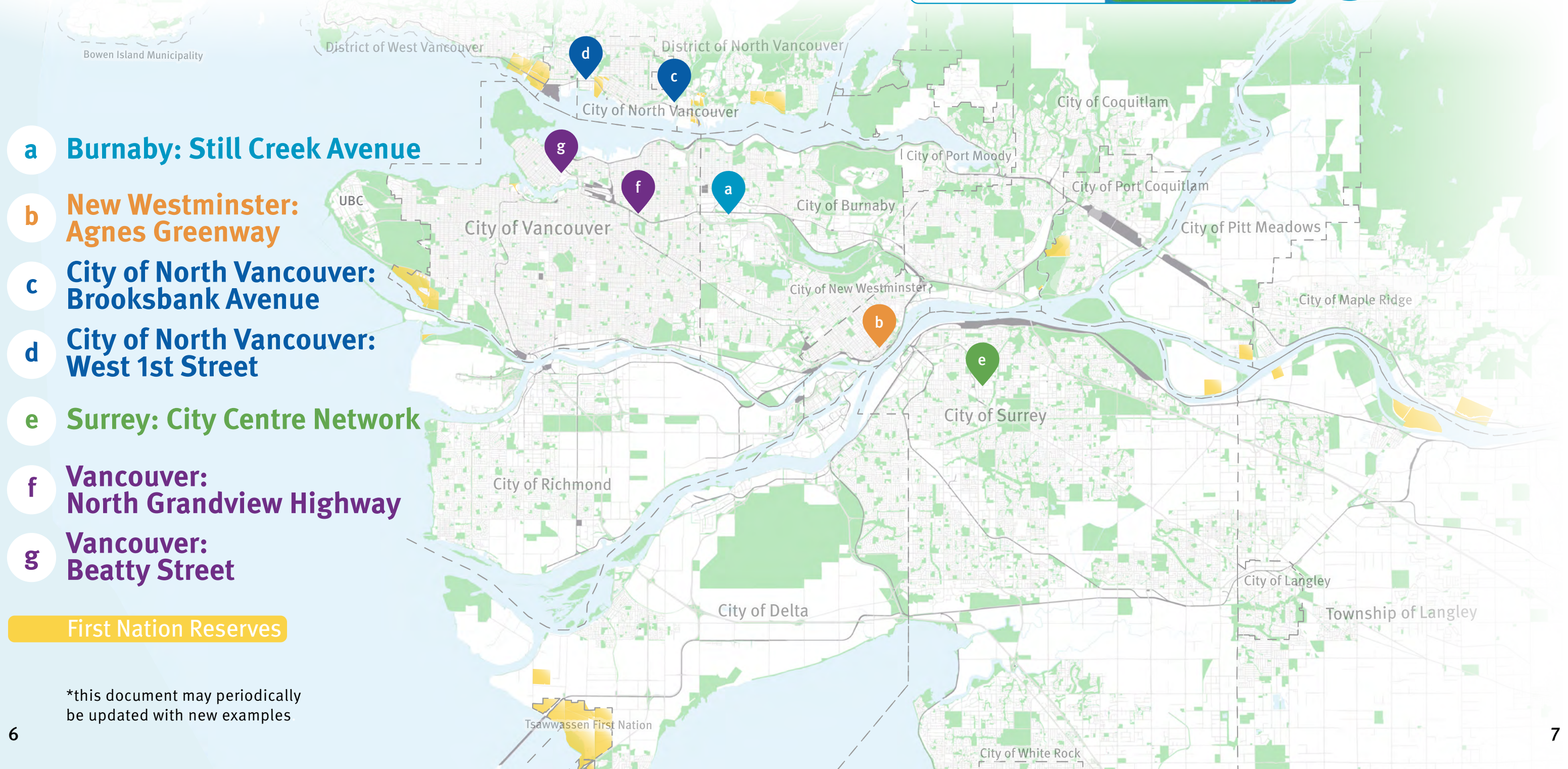
photo
caption
focus

Still Creek Avenue, Burnaby
An interim design for a key safety improvement

Components

- An existing on-street portion of the Central Valley Greenway, a 24-kilometre active transportation corridor connecting Burnaby with Vancouver and New Westminster, was upgraded with modular curbs and bollards to provide greater separation between people on bikes and vehicles.
- Low-cost interim measures were used to spur public engagement. Feedback on the interim measures allowed the project team to refine and modify the plan to better serve people on bikes and the surrounding community.
- The project completed a critical gap in the region's AAA cycling network, providing access to an Urban Centre, a transit hub, and natural areas like the Burnaby Lake Regional Park. It also offers a safe connection through an industrial area that was not previously safe for cycling.

- Length of facility in metres
- Implementation timeline
- Cost of quick build



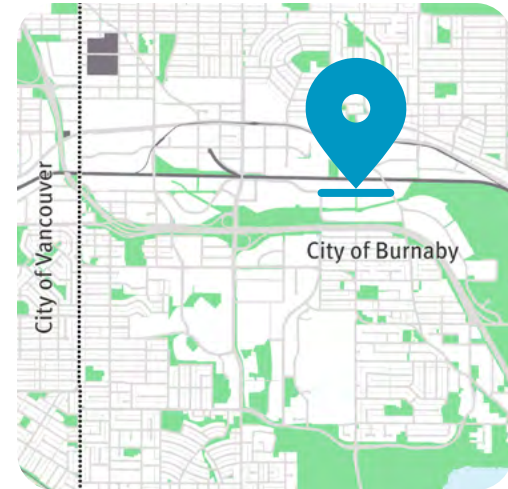
- a Burnaby: Still Creek Avenue**
- b New Westminister: Agnes Greenway**
- c City of North Vancouver: Brooksbank Avenue**
- d City of North Vancouver: West 1st Street**
- e Surrey: City Centre Network**
- f Vancouver: North Grandview Highway**
- g Vancouver: Beatty Street**

First Nation Reserves

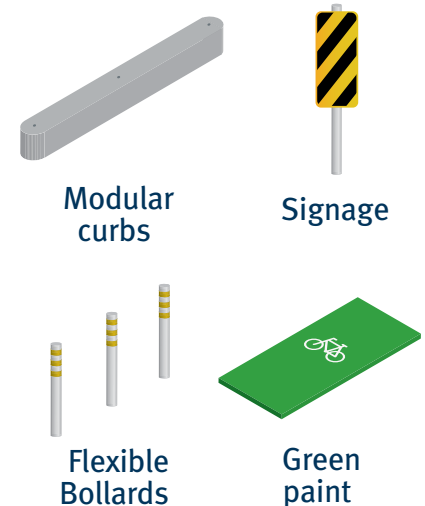
*this document may periodically be updated with new examples

a. Still Creek Avenue, Burnaby

An interim design for a key safety improvement



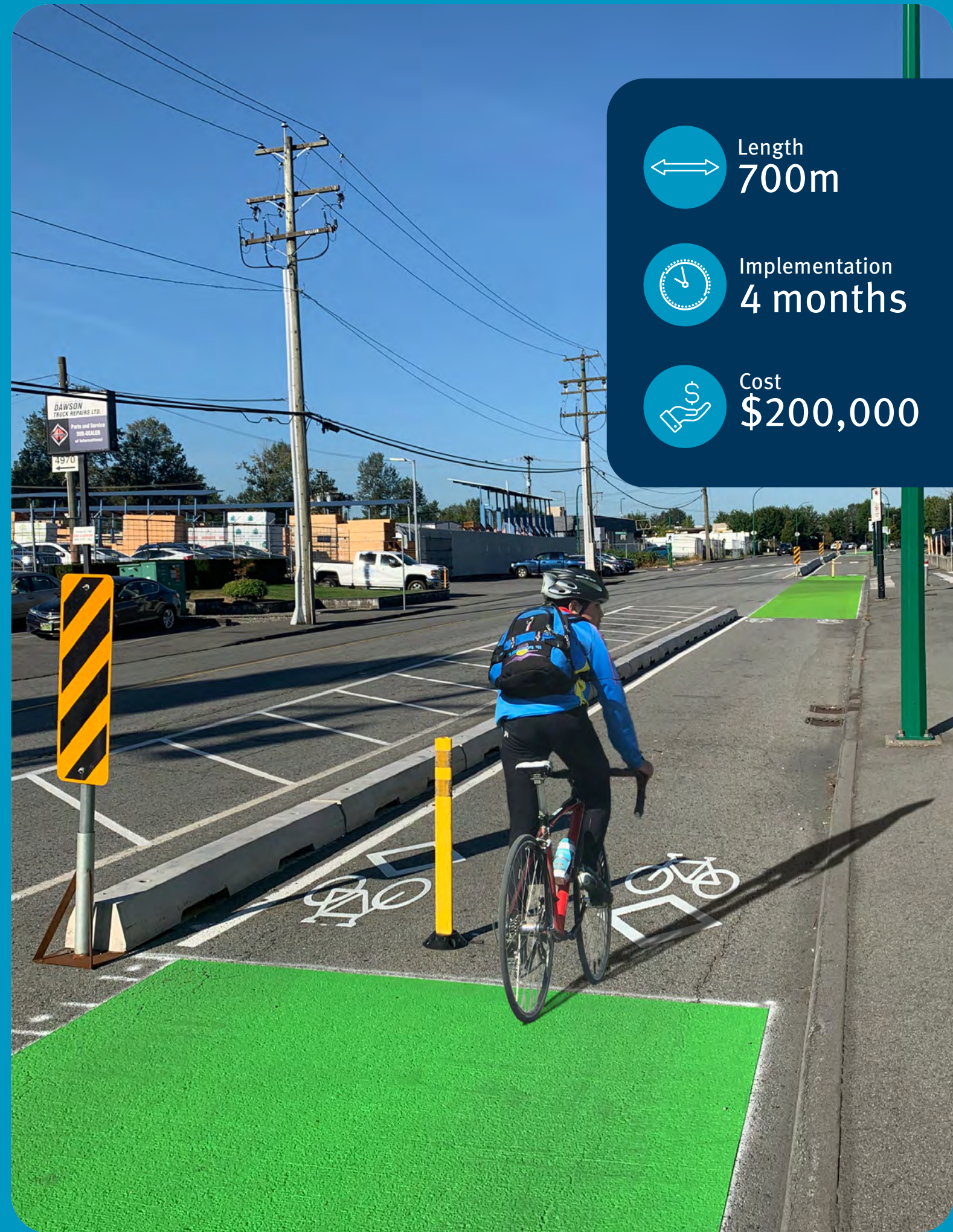
Components



- **What:** An existing on-street portion of the Central Valley Greenway, a 24-kilometre active transportation corridor connecting Burnaby with Vancouver and New Westminister, was upgraded with modular curbs and bollards to provide greater separation between people on bikes and vehicles.
- **How:** Low cost interim measures were used to encourage public engagement. Feedback on the interim measures allowed the project team to refine and modify the plan to better serve people on bikes and the surrounding community.
- **Why:** The project completed a critical gap in the region's **Comfortable for Most** cycling network, providing access to an Urban Centre, a transit hub and natural areas like the Burnaby Lake Regional Park. It offers safe connection through an industrial area that was not previously safe for cycling.

- The facility connects to the existing central valley greenway with paint and low concrete barriers - photo by Po Sun.
- Intersections have been identified with green conflict paint and alternating concrete barriers and signage - photo by Po Sun.

- Length 700m
- Implementation 4 months
- Cost \$200,000



b. Agnes Greenway, New Westminster



Length
900m

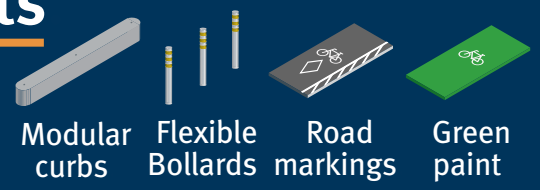


Implementation
2 months



Cost
\$100,000

Components



Modular curbs Flexible Bollards Road markings Green paint



The greenway was built as a temporary installation, designed to give area residents and visitors a chance to experience walking, cycling, and rolling and provide valuable feedback to help shape the permanent design.

Quick build used as a design testing strategy

- **What:** A 1-kilometre greenway along Agnes Street was installed as a temporary design - an initiative from the Downtown Community Plan. The greenway includes a two-way protected bikeway, improved pedestrian infrastructure, and treatments like benches and landscaping.
- **How:** The initial quick build design included bollards, modular concrete curbs,

and roadway paint that was used as the basis for public engagement. The design was improved; a permanent street treatment is under construction, continuing to use road markings and green paint.

- **Why:** Providing a major east-west connection near downtown New Westminster, the Agnes Greenway supports safe access for cyclists throughout the City.



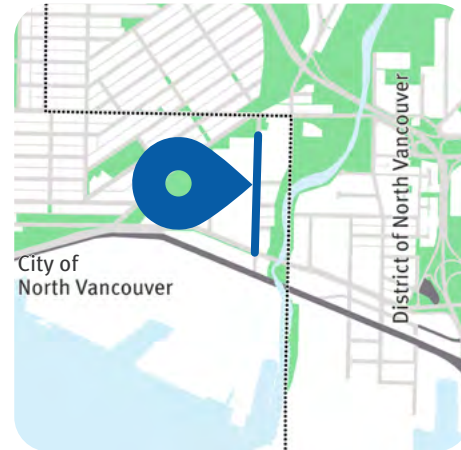
- This design was activated with artwork to add some character to the temporary facility - photos by Happy City.
- Intersections are made safer with concrete curb extensions - photo by City of New Westminster.



c. Brooksbank Avenue, City of North Vancouver

Adding quick build elements to a road repaving

- **What:** With a five month lead time prior to a scheduled re-paving, quick build elements to enhance cycling were identified and integrated into the project.
- **How:** Four vehicle lanes re-allocated to two plus a centre left turn lane, allowing for space to add unidirectional bikeways. This treatment improved traffic flow overall by removing left turning vehicles from traffic flow. Delineators and line markings separate the bikeway from trucks and driveways, as Brooksbank is an important goods movement corridor.
- **Why:** Changes to the road improved safety and provided an average speed reduction of 9%, bringing speeds closer to the posted limit of 50 km/hr.



- Simple quick build elements like paint and bollards allowed for the addition of protected cycling facilities on a newly paved corridor - photos by Brandon Green.



- Length 700m
- Implementation 2 months
- Cost \$50,000

Components

- Flexible Bollards
- Green paint
- Road markings

d. West 1st Street, City of North Vancouver.



Length
1 km



Implementation
3 months



Cost
\$800,000
supported by TransLink

Components

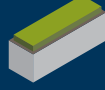
Modular curbs



Flexible Bollards



Planters



Green paint

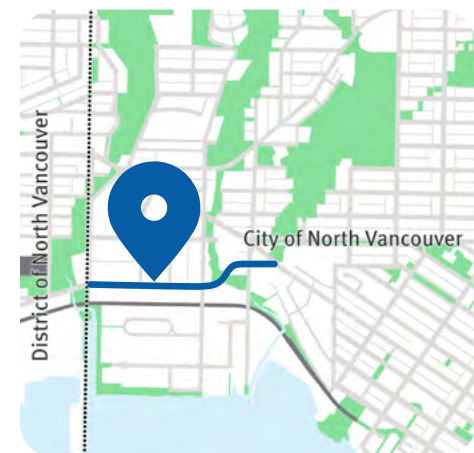


Road markings



Expanding the bikeway network to double ridership

- What:** Unidirectional lanes were installed with pre-cast curbs, planter boxes, parking stalls, and green paint to draw attention to cyclists at crossings and driveways.
- Why:** The bikeway provides a connection through an industrial part of North Vancouver, promoting cycling to work for the numerous area employees.
- Cyclists on West 1st Street doubled after installation, and the project received a 2020 HUB Cycling Award for Infrastructure Improvement.

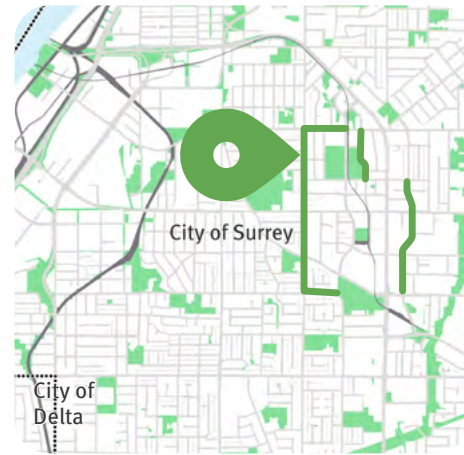


- Intersections were implemented with conflict paint and push buttons - photo by the City of North Vancouver.
- Bike lanes are protected by a combination of concrete, bollards and planters - photos by the City of North Vancouver.

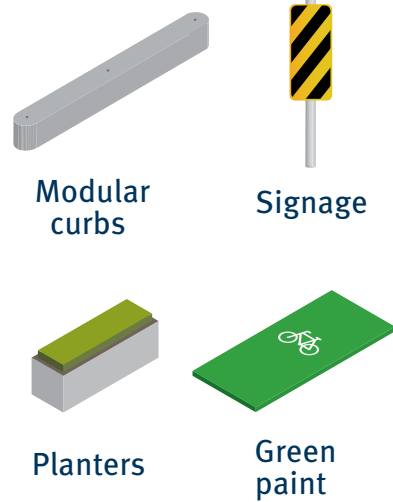


e. City Centre Network, Surrey

Using quick build elements for a network build-out



Components



- **What:** The initial quick build projects are over 5 kilometres in length and provide north/south connectivity near the Urban Centre, connecting residents and visitors to major destinations and transit hubs.
- **How:** With a focus on curbs and planters, Surrey used quick build strategies to kickstart their large scale build out with a goal of over 26 kilometres of protected cycling routes.
- **Why:** Some quick build routes will be replaced with more permanent infrastructure as nearby construction is completed, or through upcoming capital projects. The quick build elements allow action to be taken immediately to improve connectivity, while maintaining the option for upgrades in the future.

- Low height curbs and signage separate bikes from cars - photo by Peter Klitz.
- Heavy planters offer an additional quick build type of protection for bicycle riders - photo by Peter Klitz.



- Length **5 km**
- Implementation **1 year**
- Cost **\$1.8m**
supported by TransLink

The rapid implementation corridors built the foundation of a grid-based protected cycling network in Surrey City Centre.

f. North Grandview Highway, Vancouver

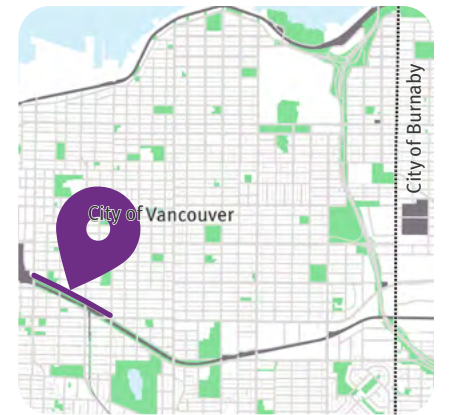
One of two traffic lanes was blocked off to create a protected bidirectional quick build bikeway between Clark Drive and East Broadway.



		
Length 900m	Implementation 1 week	Cost \$580,000
supported by TransLink		
Components		
 Modular curbs	 Signage	 Green paint
		 Road markings

Creating one way streets as a quick build strategy

- What:** A formerly two way collector street with painted bike lanes was converted to one way traffic for vehicles to allow for the installation of a bidirectional bikeway, protected by concrete gravity barriers.
- How:** The transformation of a previous vehicular lane into a bidirectional bikeway allows enough width for a comfortable and social riding environment.
- Why:** This corridor fills a gap in the Central Valley Greenway - connecting cyclists to and from Commercial-Broadway SkyTrain Station.



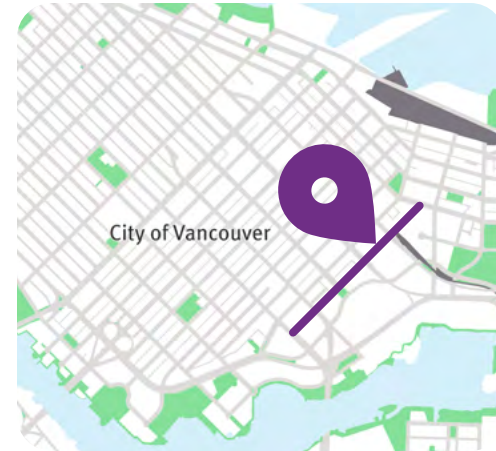
- Simple protection with low concrete curbs offer protection to cyclists - photos by TransLink.
- A two-way vehicular corridor is quickly converted into a better place to cycle as a one way street - photo by TransLink.



g. Beatty Street, Vancouver

Safety upgrade to fill a gap in the network

- **What:** Painted bike lanes were upgraded with additional concrete curbs and planter boxes and placing remaining curbside parking between vehicular travel lanes and the bikeway.
- **How:** The design was improved with additional curb stops to minimize movement of planter boxes by parking vehicles. Curb bump-outs calm traffic, providing a community benefit and greater safety for pedestrians and other road users.
- **Why:** Adjacent to Stadium-Chinatown SkyTrain Station, Beatty Street fills a gap in the **Comfortable for Most** network connecting Cambie Bridge to other routes downtown.



- Low-height curbs and planters not only protect cyclists but also serve as traffic calming through narrowing the vehicular lanes - photo by Michelle Kearns.
- Simple design with curbs and bollards allowed for quick implementation of protected bike lanes - photo by Michelle Kearns.



Length

870m



Implementation

3 weeks

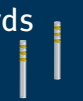


Cost

\$960,000

Components

Flexible
Bollards



Green
paint



Planters



Modular
curbs





This document is intended to inspire and generate ideas, supporting municipalities to create fun, vibrant communities with safe and comfortable active transportation options across the region.

Acting with Urgency

Implementing quick build cycling projects is just one of the many actions required to meet key climate targets, improve safety and equity, and support resilient communities. Cycling networks can be installed efficiently and quickly through quick build methods, and allow for iterative improvements in response to community and user feedback.

The [Rapid Implementation Design Guide for Bikeways in Metro Vancouver](#) is a companion document that outlines planning and design considerations and material selection for planning quick build projects. It also details the funding mechanisms that TransLink and other levels of government offer municipalities to support these projects.

Looking for funding to launch a rapid implementation cycling project in your municipality?

Reach out to TransLink at
ipme@Translink.ca

Prepared by
ACCESS.

for
TRANS LINK