Vancouver-UBC Local Committee

April 16th, 2019

Your Cycling Connection

Topics

- State of Cycling (SoC) Benchmarking Project

- New Arterial (Prior/Venables replacement)

  Recommended Route from Community Panel

SoC - Project Organization

- The project is in support of making HUB Cycling the voice for cycling in Metro Vancouver
- This is a staff project, led by Gavin Davidson
- The project is supported by Translink and Metro Vancouver municipalities

SoC - Project Objectives

- Create a database, associated maps and report to better assess the state of cycling in Metro Vancouver
- Agree a standard regional cycle route definition framework
- Store data in a form accessible to GIS and related software
- Analyze the quantity and quality of Metro Van's cycling infrastructure and in relation to complementary data sets
- Establish an agreeable and achievable plan for ongoing data collection, analysis and reporting

SoC - Types of Cycling Infrastructure

Protected from vehicle traffic

- Bike Path (off road)
- Protected Bike Lane (on road)
- Multi Use Path (off road)

Not protected from vehicle traffic

- Neighbourhood street bikeway or shared roadway
- Bike lane (painted)
- Bike accessible shoulder (signed and marked)

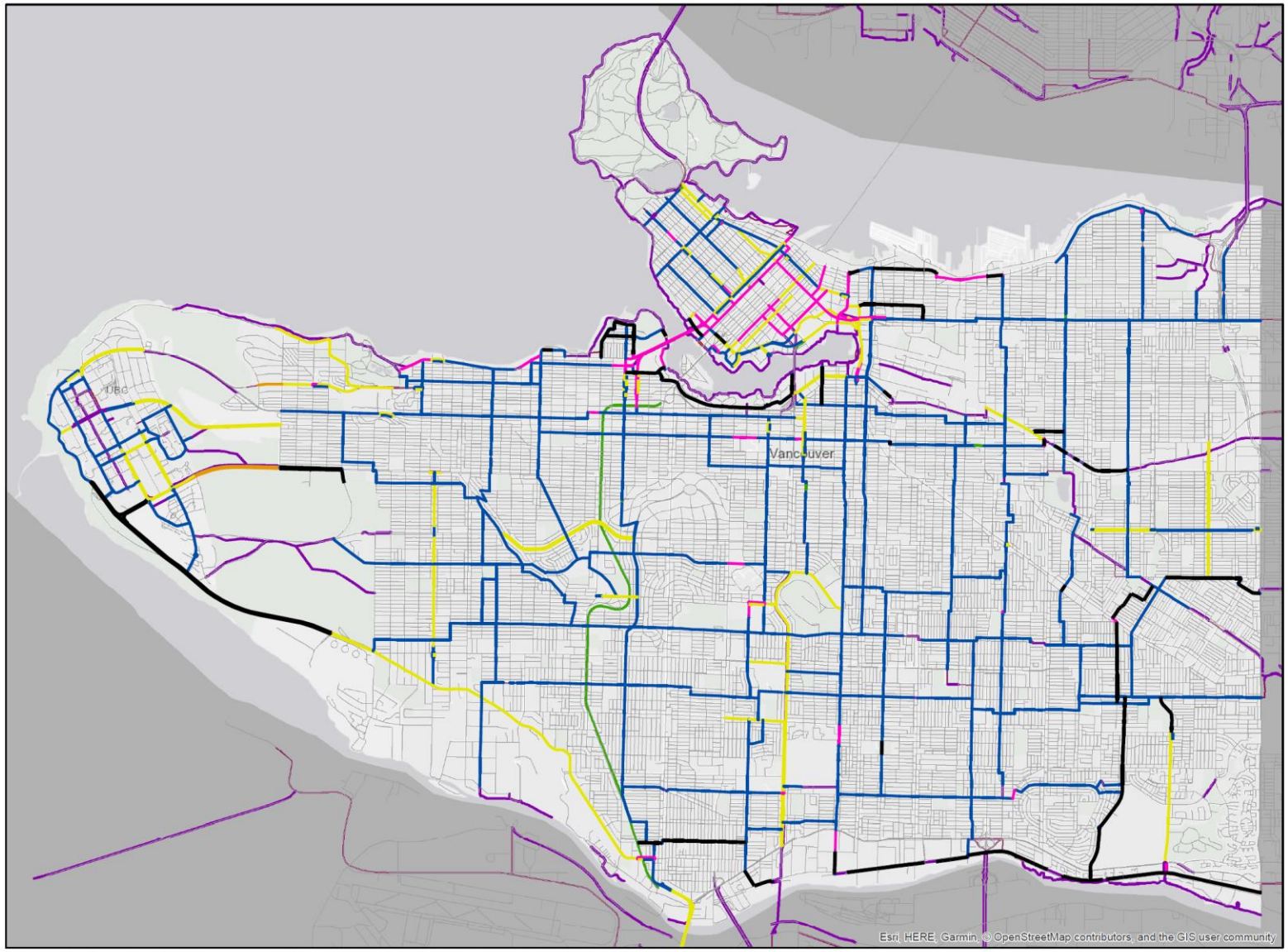
SoC - Classes of Cycling Infrastructure

- Classes A, B, and C
- Specifications for minimum widths
- Specifications for maximum posted vehicle speeds
- Specifications for maximum vehicle volumes
- Specifications for maximum user volumes (specific to Multi Use Paths)

State of Cycling Benchmarking Report

Question: How should the project team show designated infrastructure that doesn't meet Class A, B, or C?

1. Leave it off the map
2. Put it on the map regardless
3. Put it on the map, with a time limit for the municipality or MoTI to bring it up to minimum standards

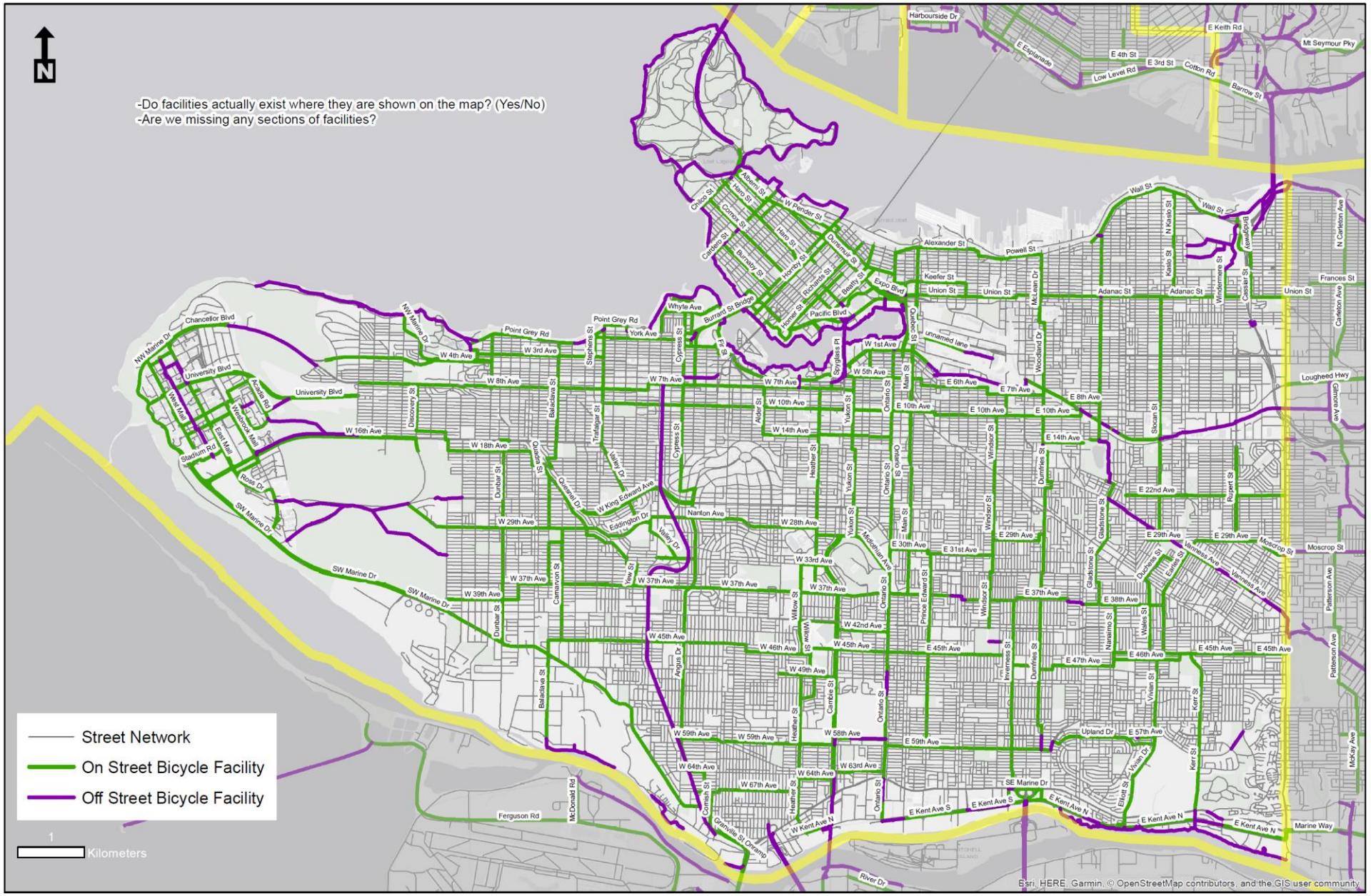


KM
0 1 2

Designated Cycling Facility

- Bike Accessible Shoulder
- Bike Lane
- Bike Path
- Multi-Use Path
- Protected Bike Lane
- Shared Rd Facility
- Flagged for Discussion

For Internal Committee Use only. PLEASE DO NOT SHARE!

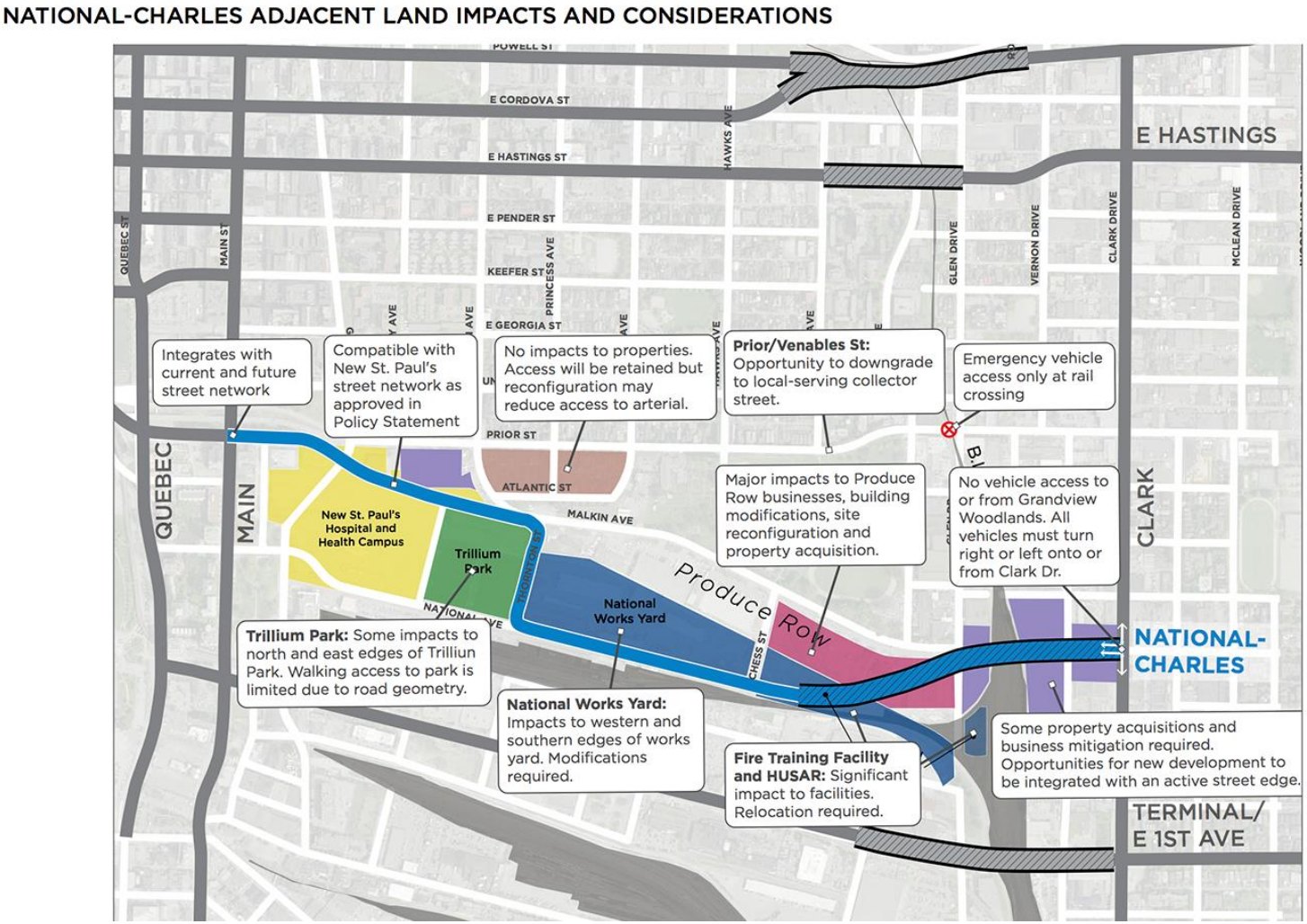

-Do facilities actually exist where they are shown on the map? (Yes/No)
-Are we missing any sections of facilities?
N
Street Network
On Street Bicycle Facility
Off Street Bicycle Facility
1
Kilometers
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

	Type *	Class A** (Comfortable for most people)	Class B (Comfortable for some people)	Class C (Comfortable for few people)	Notes
	Separated from vehicle traffic				
1	Bike Path: Off-road facility for the exclusive use of people cycling, may be unidirectional or bidirectional. Separate from both motorists and pedestrians, but designed based on bicycles operating in parallel with pedestrians, especially at intersections.	**Width: Bidirectional 3.1-4.8 m, Unidirectional 2.1-3.0 m** **Posted Speed: N/A** **Volume: N/A**	Width: Bidirectional 2.4-3.0 m, Unidirectional 1.5-2.0 m Posted Speed: N/A Volume: N/A	More narrow widths and unpaved facilities would be unclassified but may be shown on a regional cycling map	When in a road right of way (ROW): A bike path should fall outside of the Clear Zone (>1.2 m on roadways with posted speeds of <60 km/h - see Transportation Association of Canada Geometric Design Guide (TAC GDG), Table 7.3.1 for higher speed roads). Further, designs of bike paths should avoid obstacles in the pathway, include adequate sight lines and lighting, be direct, and avoid the use of rigid bollards. If cyclist volumes exceed 1,500 per day then recommended facility widths shall be >3.6 m bidirectional, and >2.4 m unidirectional. Bike Path's are generally appropriate near higher speed roads.
2	Protected Bike Lane: Exclusive on-road facility delineated by a vertical barrier element/physical separation from motor vehicles, as well as separation from pedestrians. Can be unidirectional or bidirectional	Width: Bidirectional 3.1-4.8 m, Unidirectional 2.1-3.0 m Posted Speed: ≤60 km/h Volume: N/A	Width: Bidirectional 2.4-3.0 m, Unidirectional 1.5-2.0 m Posted Speed: ≤80 km/h Volume: N/A	More narrow widths would be unclassified but may be shown on a regional cycling map	Separation from vehicles by delineator (curbs, bollards, concrete barriers, etc.) is required. Type of delineator dependent on speed and volume of traffic (for specific details see TAC GDG Chapter 5, section 5.7.5). Parking may provide additional barrier beyond the delineator - at a minimum curbstops over 100 mm high are necessary with periodic gaps for drainage and wheelchair access. Width of delineator is 0.30-1.0 m. If adjacent to parking, min separation is >0.80 m (Class A), >0.60 m (Class B). Volume: If motor vehicle ADT is greater than 4,000, this facility is more acceptable than others. If cyclist volumes exceed 1,500 per day then recommended facility widths shall be >3.6 m bidirectional, and >2.4 m unidirectional.
3	Multi-Use Path (MUP): Off-road facility that allows for shared use by people cycling and pedestrians.	**Width: Bidirectional 4.0-6.0 m, Unidirectional bikes 3.0-4.0 m** **Posted Speed: N/A** **Volume: N/A** **Paved**	Width: Bidirectional 3.0-3.9 m, Unidirectional bikes 2.4-2.9 m Posted Speed: N/A Volume: N/A Paved	Width: Bidirectional 2.7-2.9 m, Unidirectional bikes 2.1-2.3 m Posted Speed: N/A Volume: N/A Unpaved	MUP's are not intended to replace a sidewalk where there is sufficient motor vehicle or pedestrian and bicycle traffic that may lead to high rates of conflict. As a guide, MUPs are not appropriate when pedestrian and bicycle traffic volumes exceed a total peak hour volume of 200 users or where motor vehicle volumes on the parallel roadway exceed 4,000 ADT. MUPs are generally appropriate near higher speed roads. A MUP should fall outside of the Clear Zone (>1.2 m on roadways with posted speeds of <60 km/h - see TAC GDG, Table 7.3.1 for higher speed roads). Further, designs of MUPs should avoid obstacles in the clear zone, include adequate sight lines and lighting, be direct, and avoid the use of rigid bollards.
	Unseparated from vehicle traffic				
4	Neighbourhood Street Bikeway or Shared Roadway: Bikes and motor vehicles share the roadway, which provides a continuous corridor of suitable operating conditions for people cycling, including limiting exposure to motor vehicle traffic. Can include a variety of roadways including local roads, alleys and service roads.	Width: Parking one side 5.5 - 7.5 m, parking both sides 8.0 - 11.0 m Posted Speed: ≤30km/h Volume: ≤1,000 ADT Traffic control at all major intersections designed to be bicycle activated. Traffic diversion and traffic calming preferred.	Width: Parking one side 5.5 - 7.5 m, parking both sides 8.0 - 11.0 m Posted Speed: ≤30km/h Volume: ≤2,000 ADT Traffic control at all major intersections designed to be bicycle activated. Traffic diversion and traffic calming preferred.	Width: varies, depending on road type Posted Speed: ≤50 km/h Volume: ≤3,000 ADT	Traffic diversion can include such treatments as directional and median barriers. Traffic calming can include such treatments as raised crossings, and bicycle permeable humps and chicanes. All such facilities should include shared lane markings to indicate the potential presence and positioning of people cycling. Municipalities are encouraged to limit posted speeds to 30 km/h on all Neighbourhood Street Bikeways and Shared Roadways. Widths: If curb less than 100 mm, or parking along curb, gutter pan can be included in width. Otherwise, width excludes gutter pan.
5	Bike Lane: On-road facility adjacent to a curb or a parking lane and delineated from motor vehicles with paint markings.	Never	Width: 1.8 - 2.4 m Posted Speed: ≤50 km/h Volume: ≤4,000 ADT Absence of curbside parking.	Width: 1.5-1.7 m Posted Speed: <60km/h Volume: N/A Presence of curbside parking permitted. If present, a buffer should be included btwn parking and bike lane. Combined curbside parking & buffer should be >3.0 m.	If parking present or speeds/ volumes might exceed limits or over 1,500 people cycling per day, protected bikeway recommended. Widths: If curb less than 100 mm, or parking along curb, gutter pan can be included in width. Otherwise, width excludes gutter pan.
6	Bike Accessible Shoulder: Signed and marked, paved area with no curb, located to the right of roadway general purpose travel lanes, and separated from general purpose lanes by white edge line or painted buffer. Usually in rural areas. May be shared with pedestrians.	Never	Width: 1.8-2.4 m Posted Speed: <50 km/h Volume: ≤4,000 ADT	Width: 1.5-1.7 m Posted Speed: <90 km/h If speeds >60km/h, buffer required between bicycle and vehicle lanes Volume: N/A	Parking not permitted in bikeway. If speeds/ volumes exceed limits, or over 1,500 people cycling per day protected bikeway recommended Width for buffered facility: 2.4-3.5 m total, bike lane 1.8-2.4 m

* In all cases pavement markings (bicycle stencils) and signage are necessary at regular intervals and should be placed 20 to 30 metres in advance of, and following each intersection and other decision points, or every 400 m when intersections are not present.

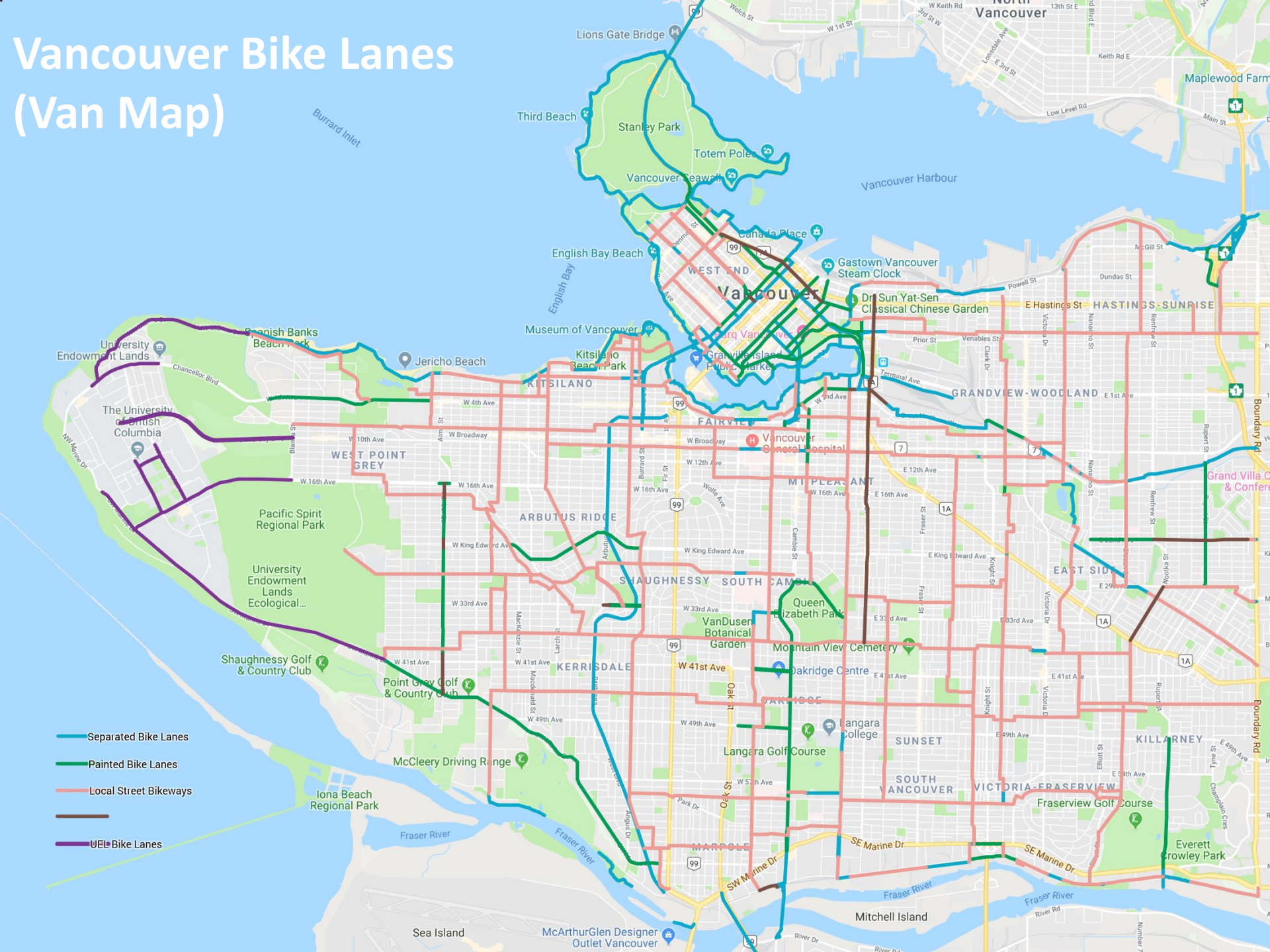
** Those facilities that do not meet the criteria for Classes A, B and C will be considered unclassified bikeway facilities. Such facilities should be upgraded over time to meet criteria for designated bikeways.

New Arterial Route Recommendation (Community Panel vote)

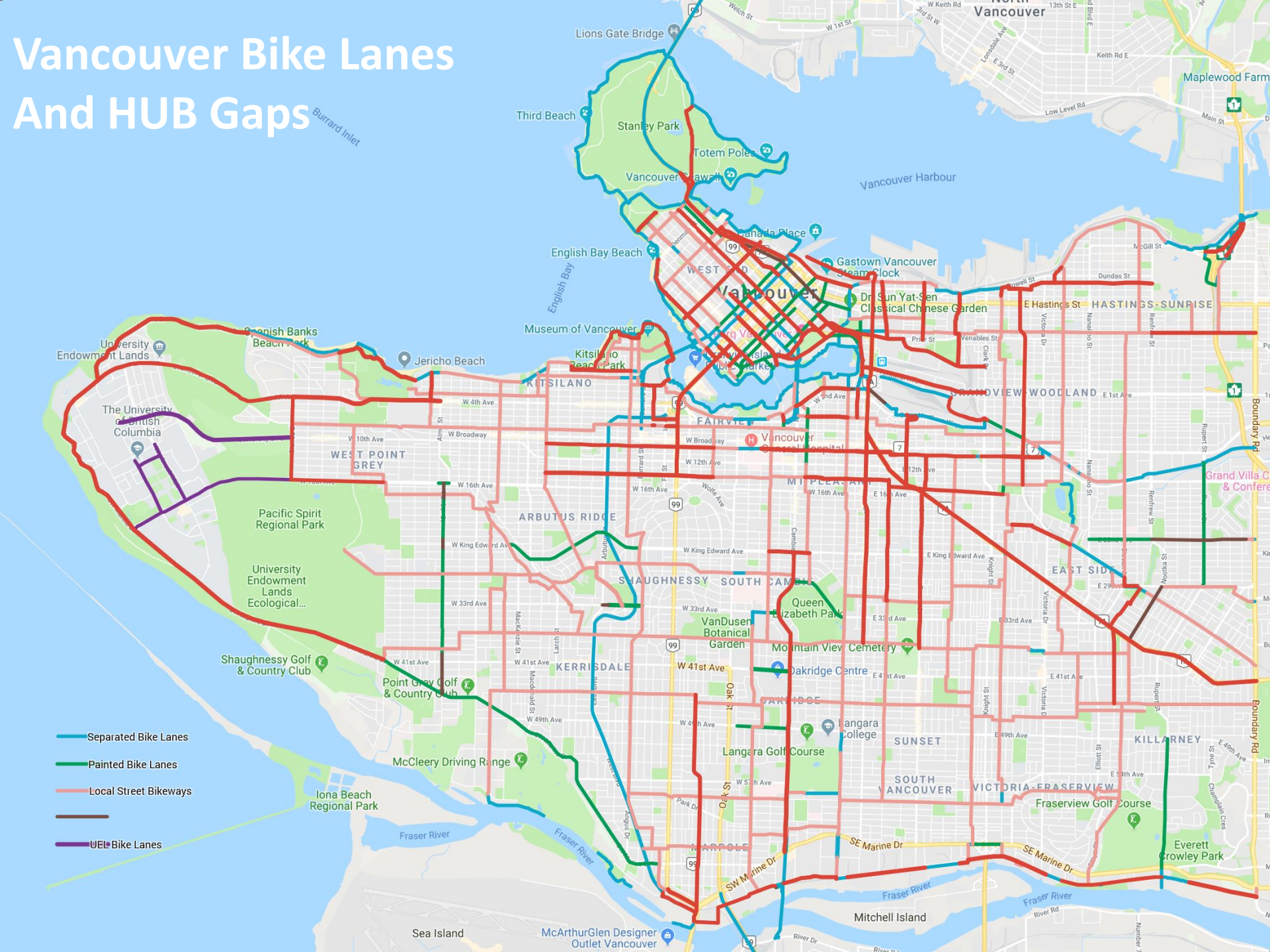


Appendices

Vancouver Bike Lanes (Van Map)



Vancouver Bike Lanes And HUB Gaps



5-Year Cycling Network: Additions & Upgrades 2018-2022

Added Nov 2017

Planned Routes	
1	Park Lane*
2	Bute
3	Drake
4	Smithe
5	Nelson
6	West Waterfront Road**
7	Water-Alexander-Powell
8	Granville Bridge
9	Gore
10	Hudson
11	Kent
12	Commercial
13	Blanca
14	14th Ave
15	St. George Rainway
16	Duchess-Wales*
17	Helmcken
18	King Edward
19	Pandora-Semlin
20	Prince Edward
21	Quebec
22	Cambie
23	Stainsbury

Planned Upgrades	
A	Smithe
B	Nelson
C	Cambie Bridge
D	Highbury
E	Cypress
F	5th Ave
G	Ontario
H	Adanac
I	BC Parkway
J	10th Ave
K	Richards
L	Cambie
M	Georgia
N	1st Ave
O	Kent

* Park Board jurisdiction
** Port Authority jurisdiction
Number/Letter sequence does not imply priority

Planned Route
Planned Upgrade
AAA Network
Protected Bike Lane
Local Street Bikeway
Painted Bike Lane
Shared Use Lane

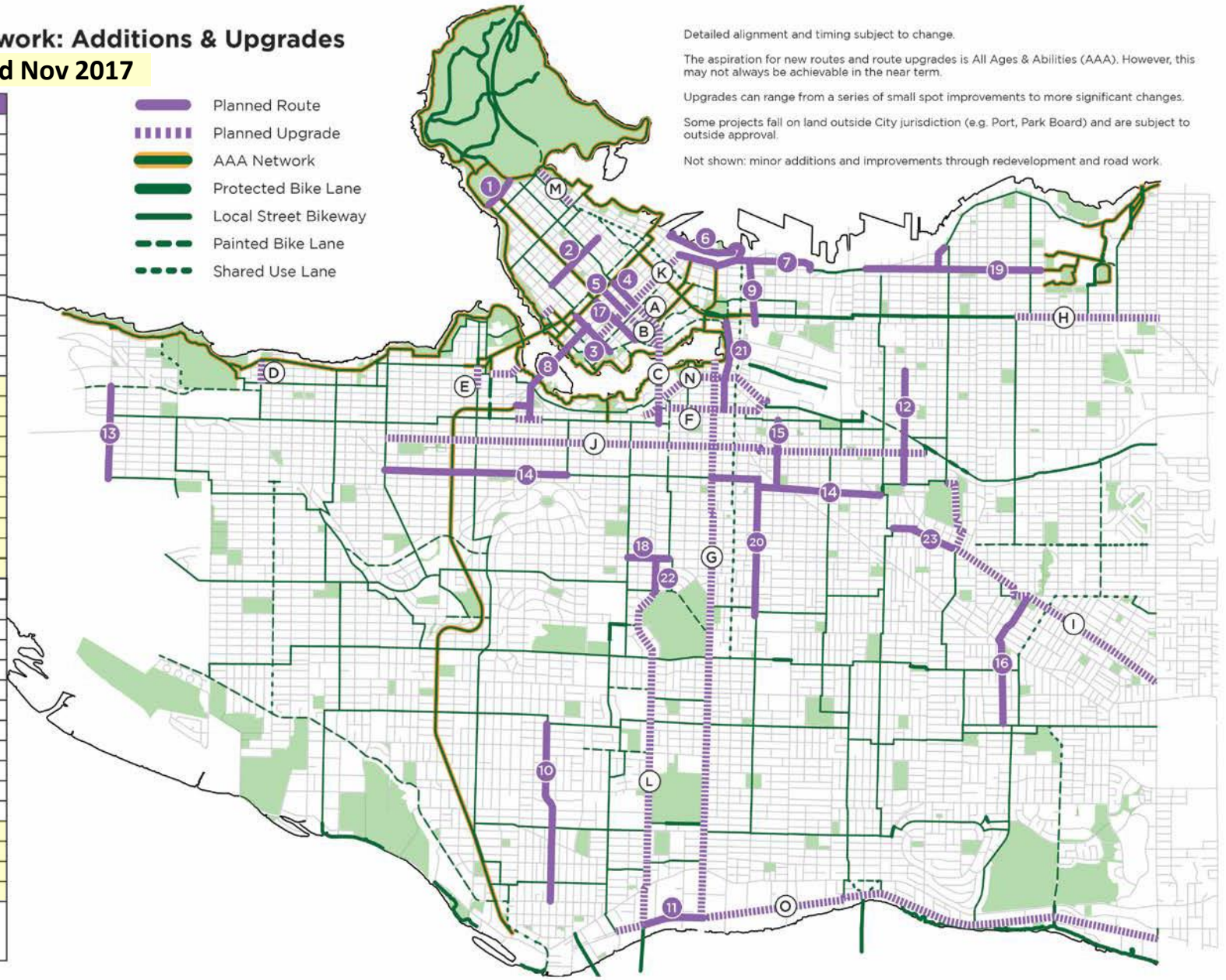
Detailed alignment and timing subject to change.

The aspiration for new routes and route upgrades is All Ages & Abilities (AAA). However, this may not always be achievable in the near term.

Upgrades can range from a series of small spot improvements to more significant changes.

Some projects fall on land outside City jurisdiction (e.g. Port, Park Board) and are subject to outside approval.

Not shown: minor additions and improvements through redevelopment and road work.



Translink Major Bikeway Network (MBN)