



Achieving a Major Bike Mode Shift in Vancouver

By Dale Bracewell, Manager Transportation Planning



@Dale_Bracewell | #NACTO2016 | September 27th, 2016



Transportation 2040

Plan as adopted by Vancouver City Council on October 31, 2012





ECONOMY

Support a thriving economy while increasing affordability




PEOPLE

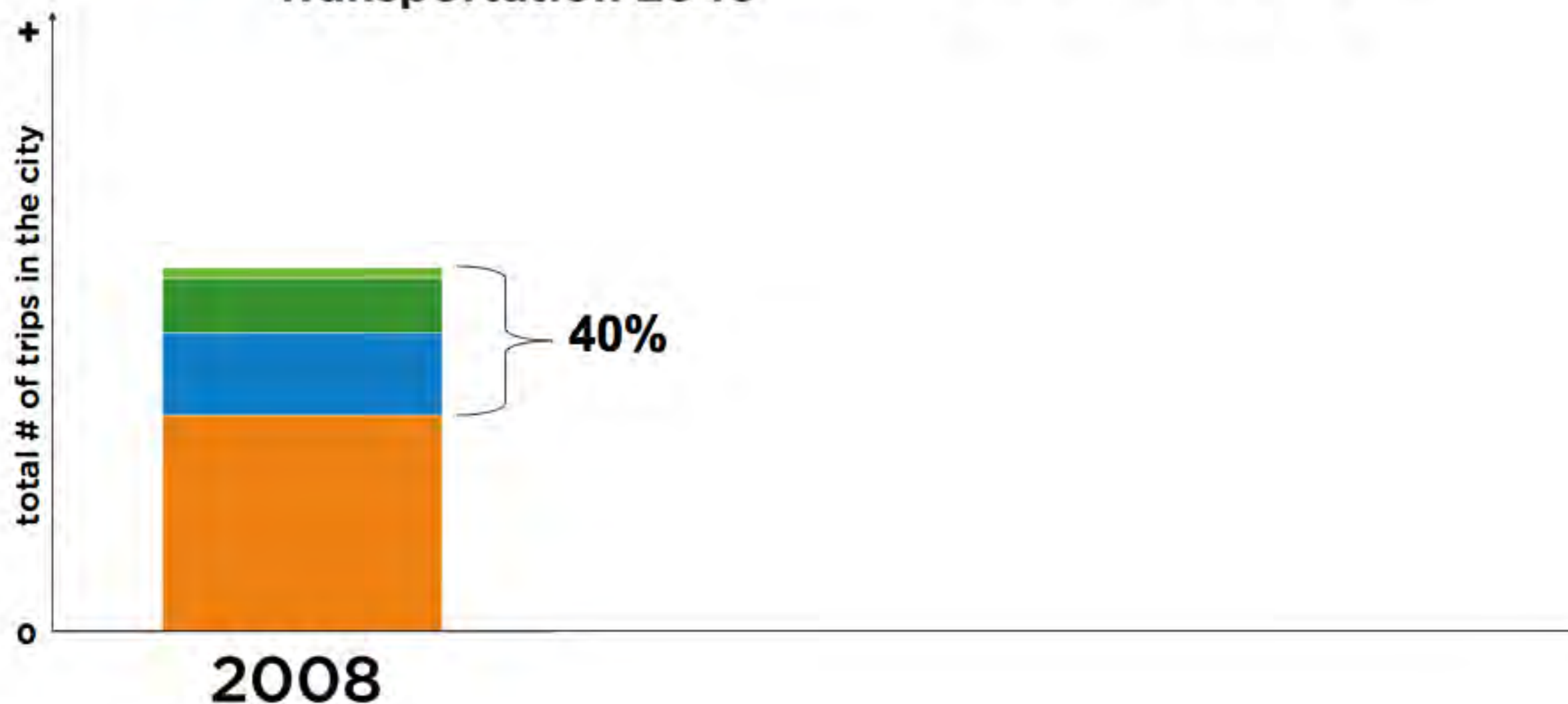
Healthy citizens in a safe, accessible, and vibrant city



ENVIRONMENT

City that enhances its natural environment for its people and the planet

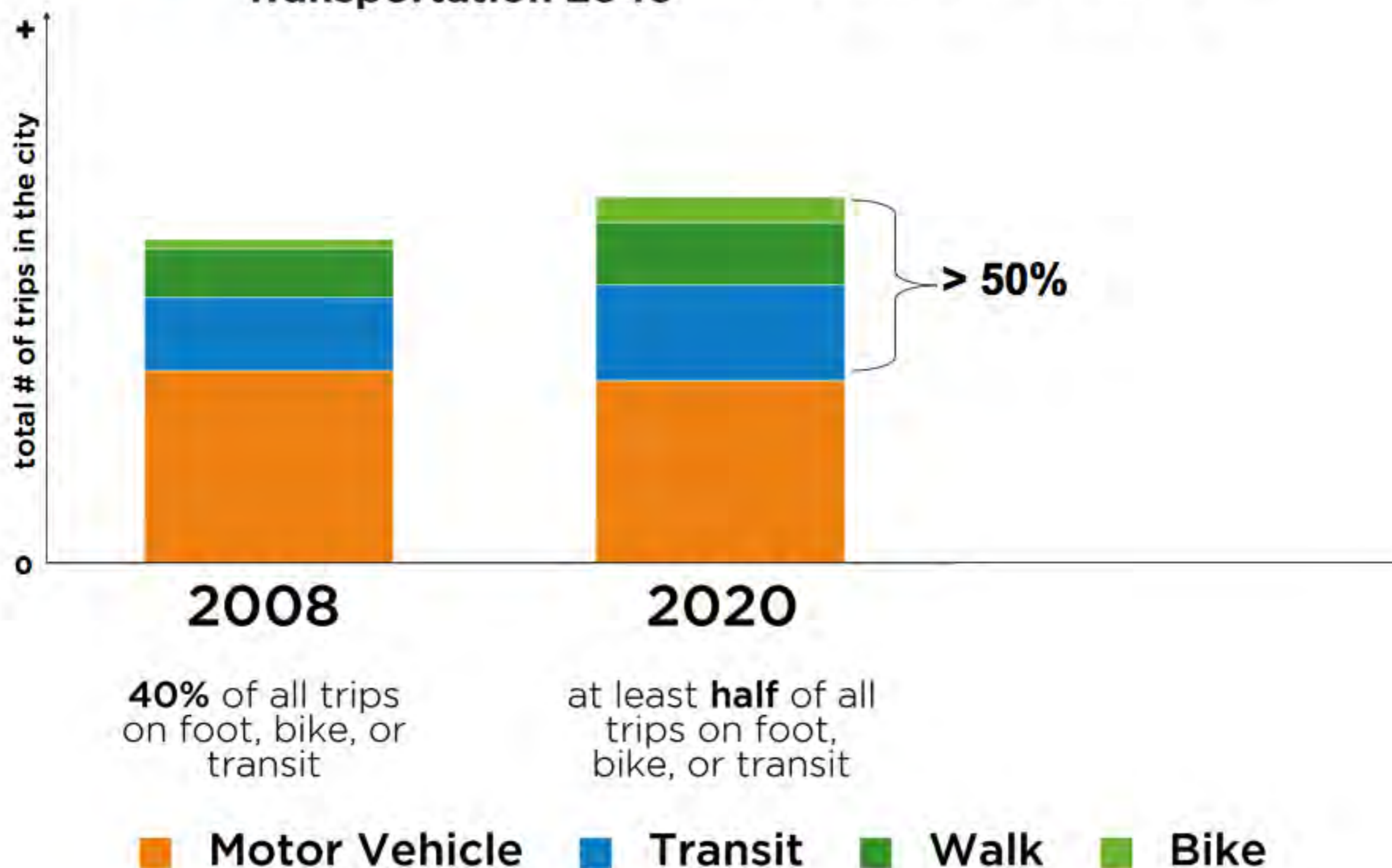
- 
- **Mobility**
 - **Health**
 - **Safety**
 - **Accessibility**
 - **Affordability**
 - **Public Life**
 - **Resiliency**

Transportation 2040

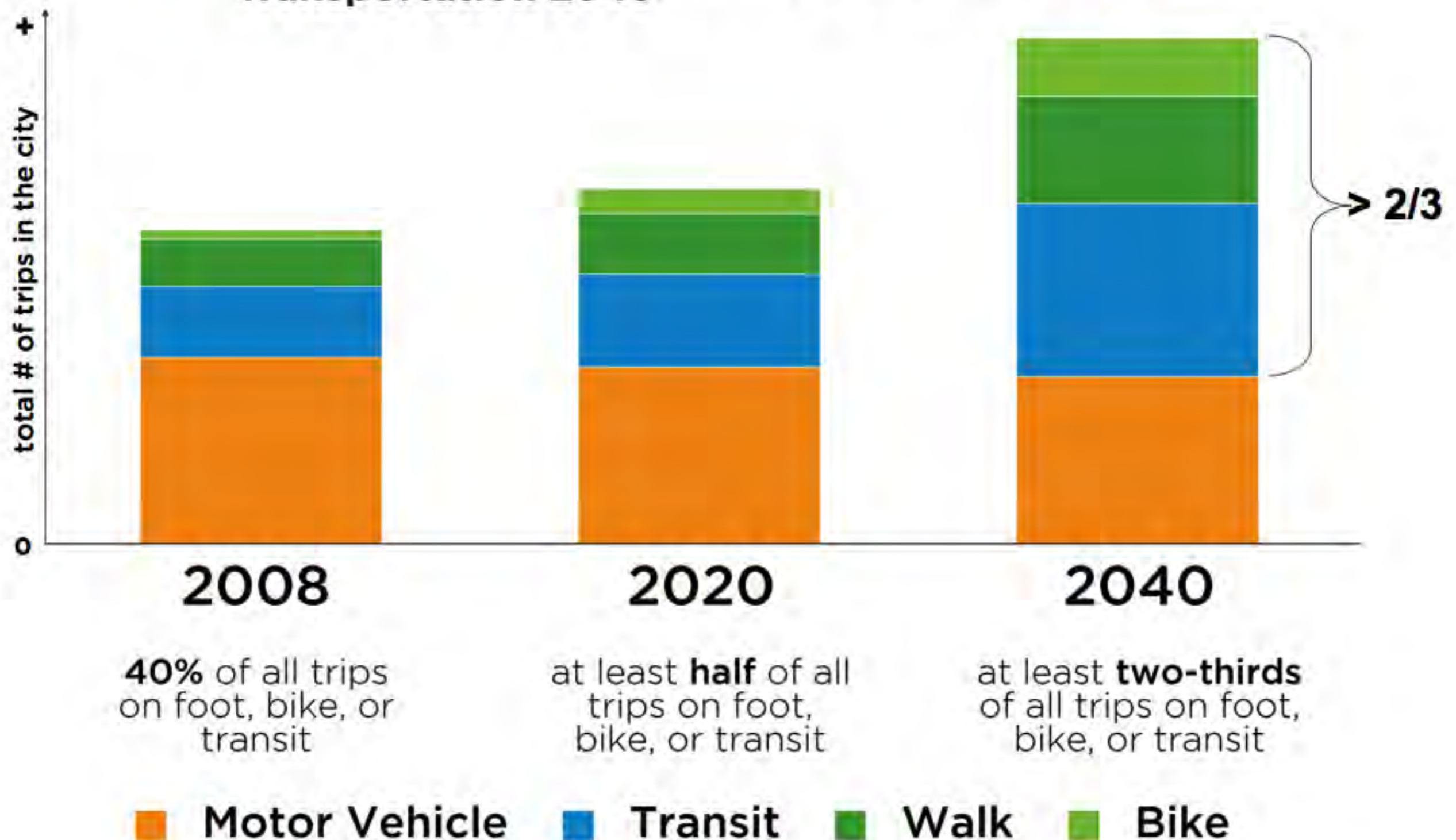
40% of all trips
on foot, bike, or
transit

Motor Vehicle **Transit** **Walk** **Bike**

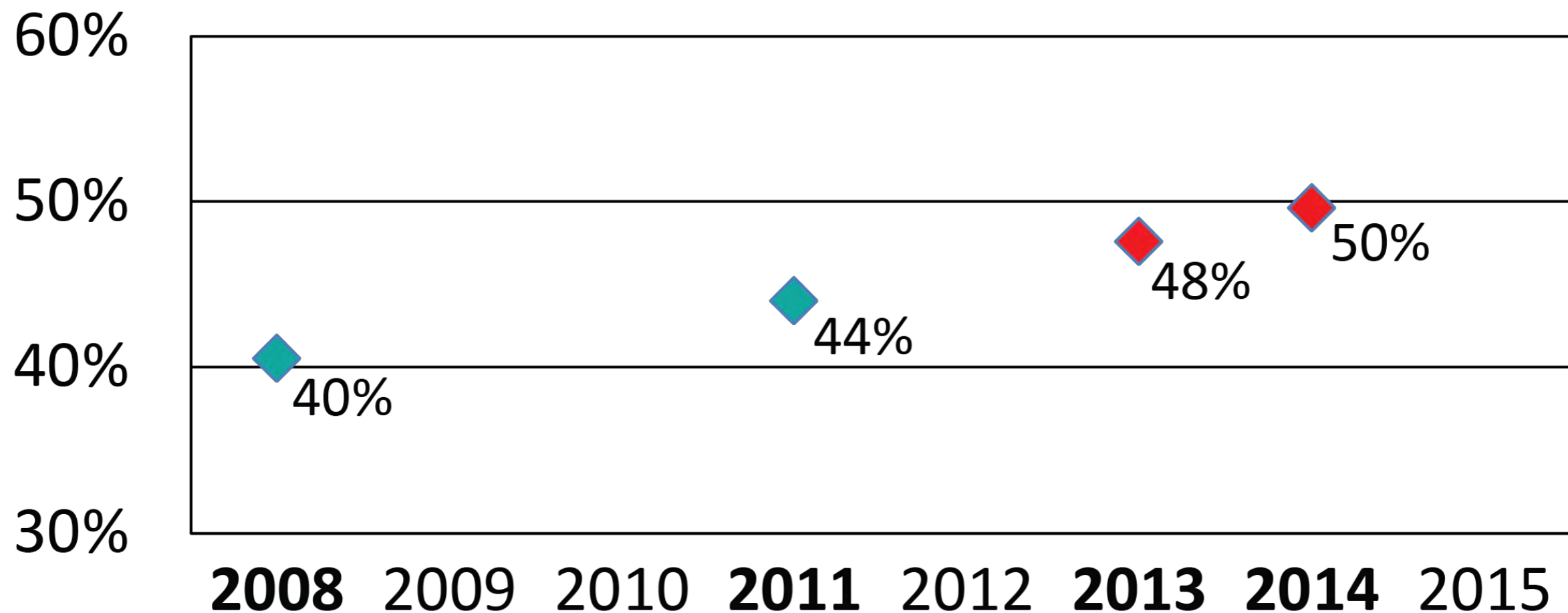
Transportation 2040



Transportation 2040



% of People Walking, Cycling, and Taking Transit




Source: TransLink Trip Diary

Source: City of Vancouver Panel Survey

A dark, atmospheric photograph of a tree-lined sidewalk. In the foreground, a man in a light blue shirt and dark trousers walks towards the camera, carrying a black bag. Next to him, a woman in a light-colored outfit walks away. To the left, a person on a bicycle is visible. The background shows a street with a yellow car and more trees. The overall scene is dimly lit, with shadows from the trees on the sidewalk.

Zero Fatality Safety Target



IMPLEMENTATION PRINCIPLES

- **Invest wisely**
- **Think big picture**
- **Be opportunistic**
- **Innovate**
- **Monitor, learn, adapt**
- **Work together**

CYCLING

make cycling

safe, convenient,

comfortable & fun

for people of

all ages and abilities

Cycling Directions

- Build routes that are **safe, comfortable & convenient**
- Provide **secure & abundant parking**
- Improve **integration** with transit
- Promote cycling as an **everyday option**
- Focus on **education & safety**





Build Safe, Convenient & Comfortable Routes



Provide secure & abundant parking



Secure Bicycle Parking



Improve integration with transit



Promote cycling as an everyday option



Educate All Road Users, Including in Schools

DESIGNING FOR ALL AGES & ABILITIES



Reduce car speeds & volumes



Physically separate users

What is AAA Cycling?

“Rules of Thumb” (in development)

Traffic volume ≤ 500 vehicles per day

Measured speed ≤ 30 km/h (20 mph)

If these can't be achieved:

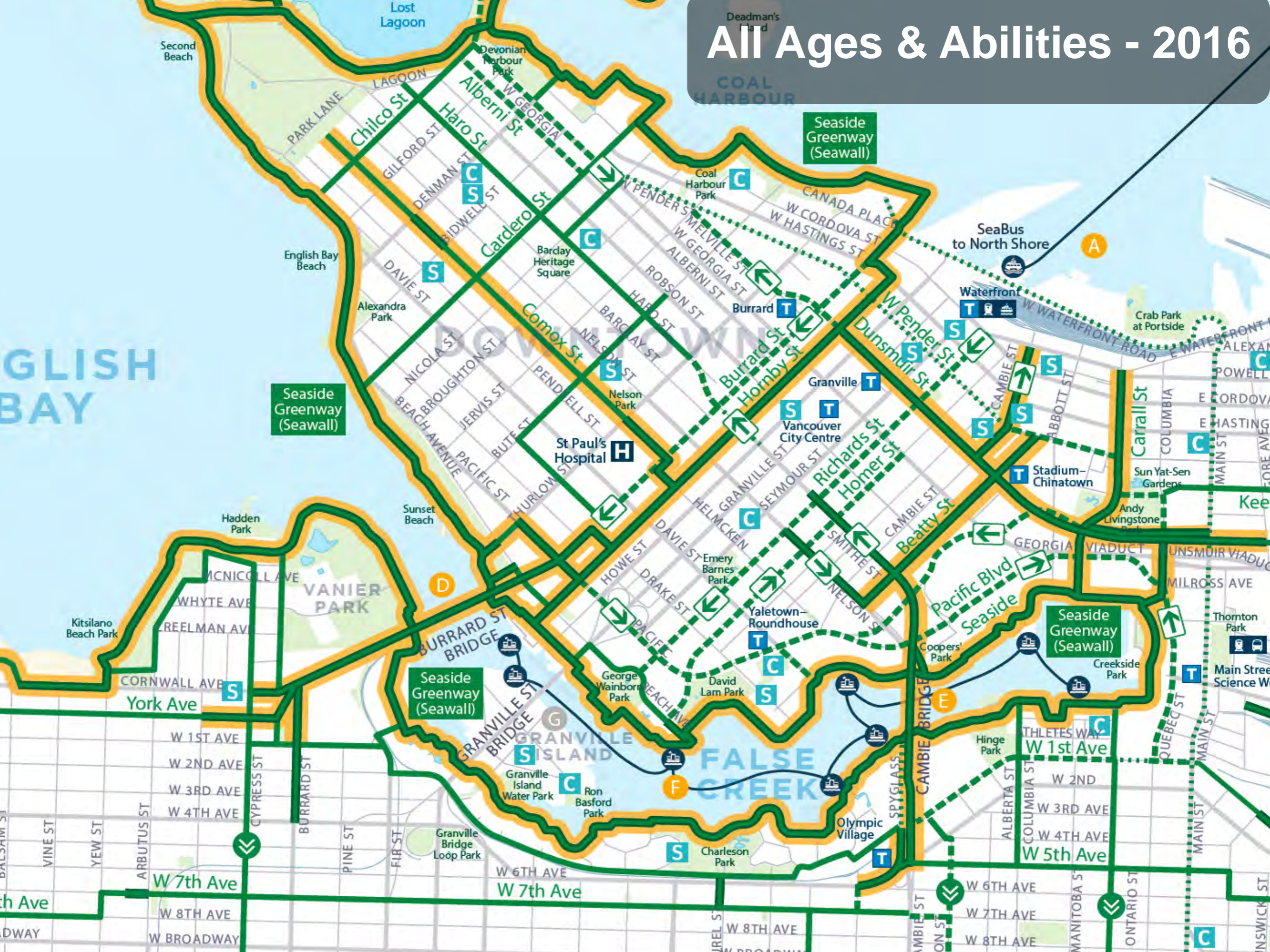
Separate from vehicles!



All Ages & Abilities - 2013



All Ages & Abilities - 2016

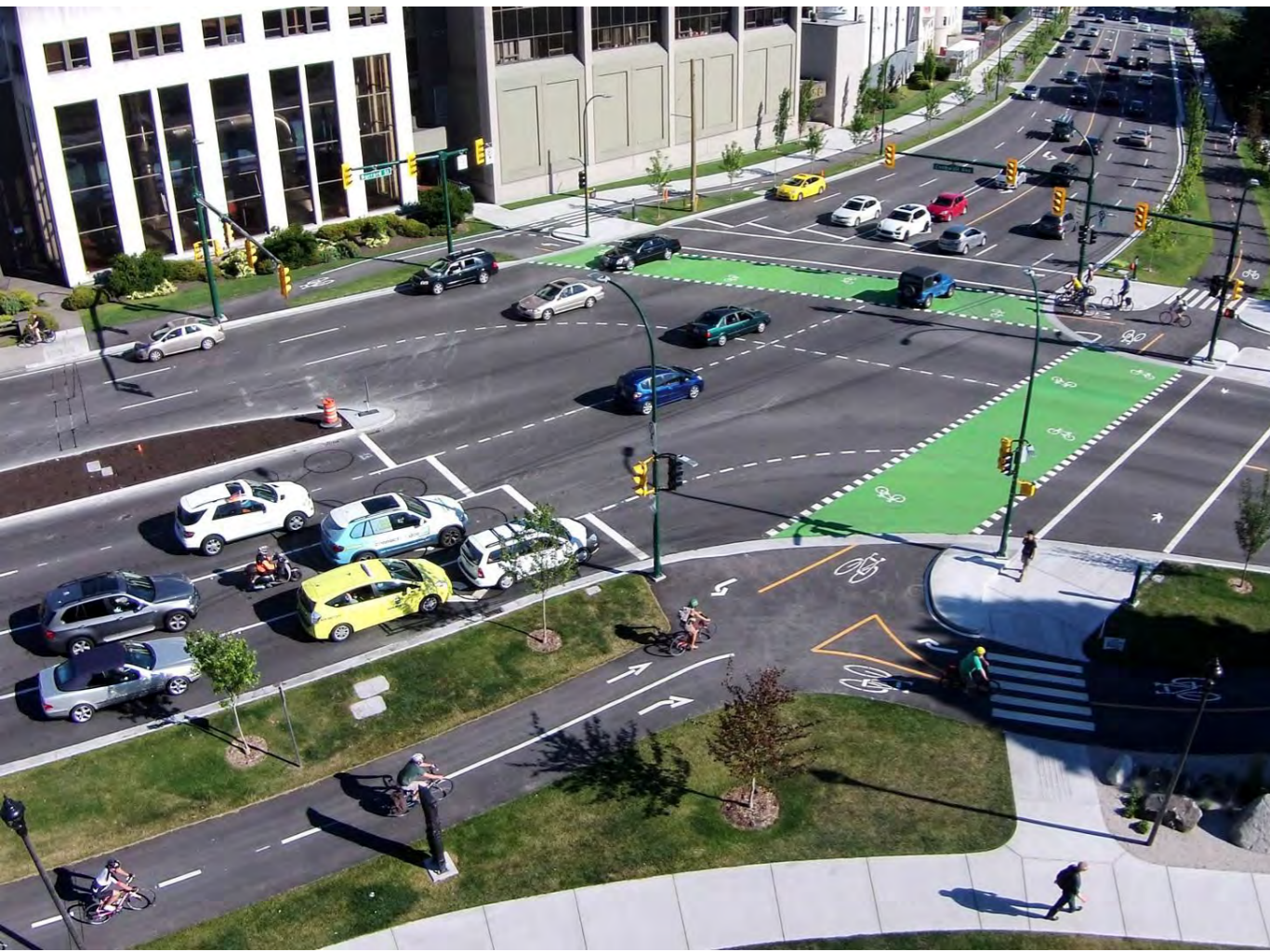


How do we select our Active Transportation corridors?



Prioritize

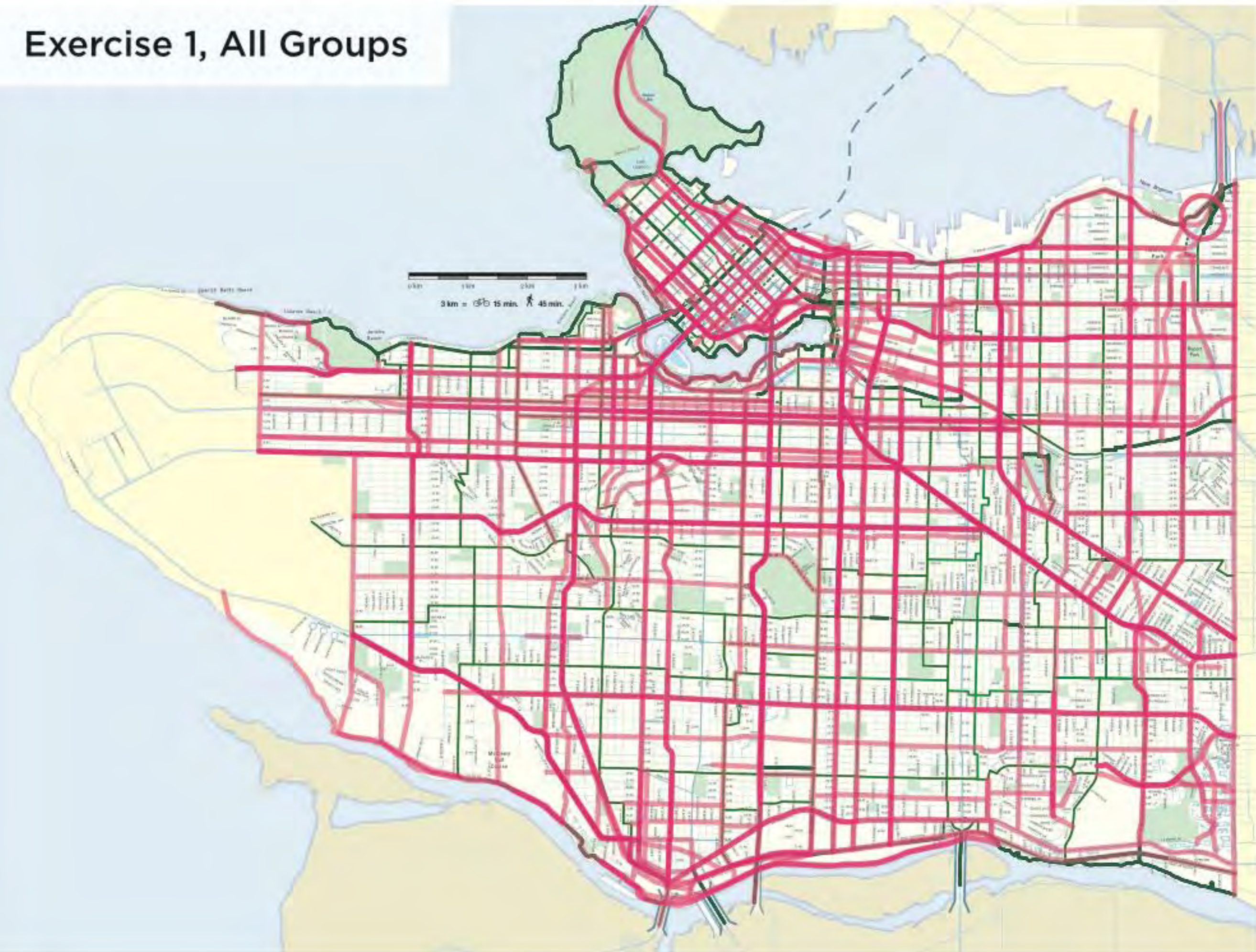
- Gaps in the network
- Areas with high existing or potential ridership
- Priority destinations, e.g. schools, community centres, high streets, transit stations
- High collision locations



Other Factors

- topography
- route directness
- impacts to transit, traffic
- impacts to loading, services, local businesses

Exercise 1, All Groups



Exercise 2, All Groups

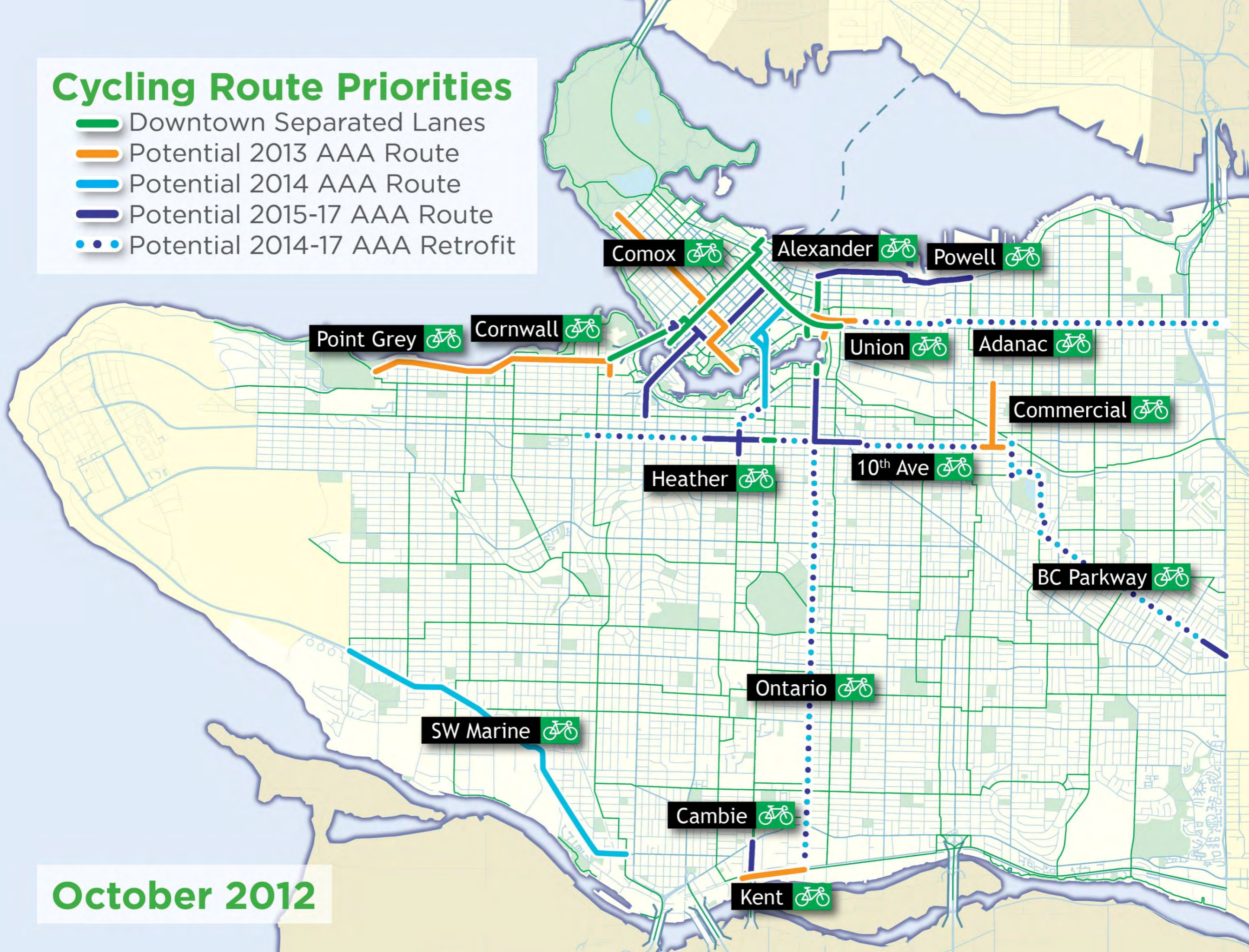
Most Recurring:

- Water (5)
- Alexander (5)
- Powell (4) + Off-Powell (1)
- Commercial Drive (5)
- Kingsway (4)
- Main (4)
- Granville Bridge + (4)
- Smithe / Nelson (3)
- Charles / Malkin (3)
- 10th Ave upgrades (3)
- Beatty (2)
- 14th / 16th (2)
- Expo (2)
- Robson (2)



Cycling Route Priorities

-  Downtown Separated Lanes
-  Potential 2013 AAA Route
-  Potential 2014 AAA Route
-  Potential 2015-17 AAA Route
-  Potential 2014-17 AAA Retrofit

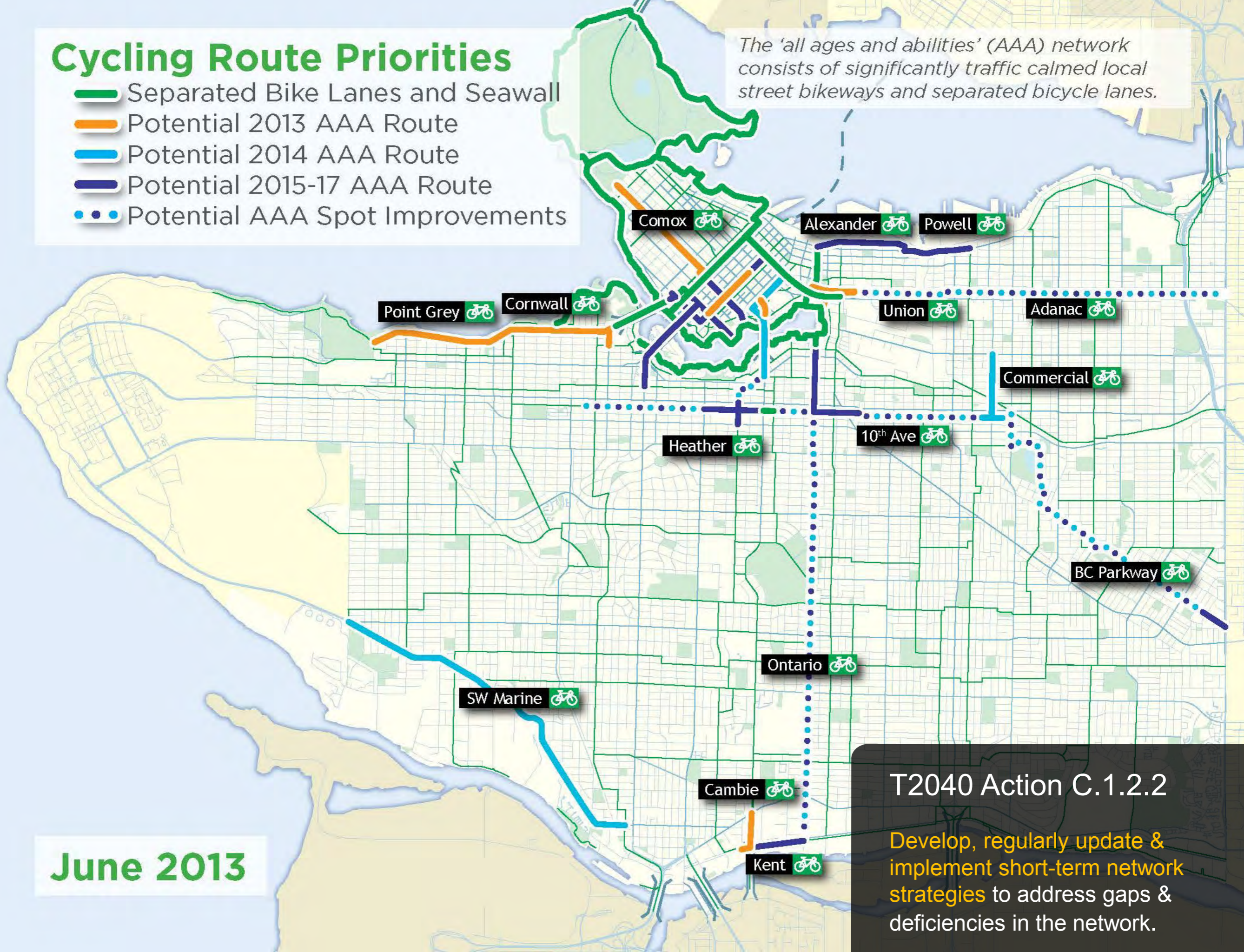


October 2012

Cycling Route Priorities

- Separated Bike Lanes and Seawall
- Potential 2013 AAA Route
- Potential 2014 AAA Route
- Potential 2015-17 AAA Route
- Potential AAA Spot Improvements

The 'all ages and abilities' (AAA) network consists of significantly traffic calmed local street bikeways and separated bicycle lanes.



June 2013

T2040 Action C.1.2.2

Develop, regularly update & implement short-term network strategies to address gaps & deficiencies in the network.

5-Year Cycling Network

Additions & Upgrades 2016-2020

- Planned New Route
- Planned Upgrade

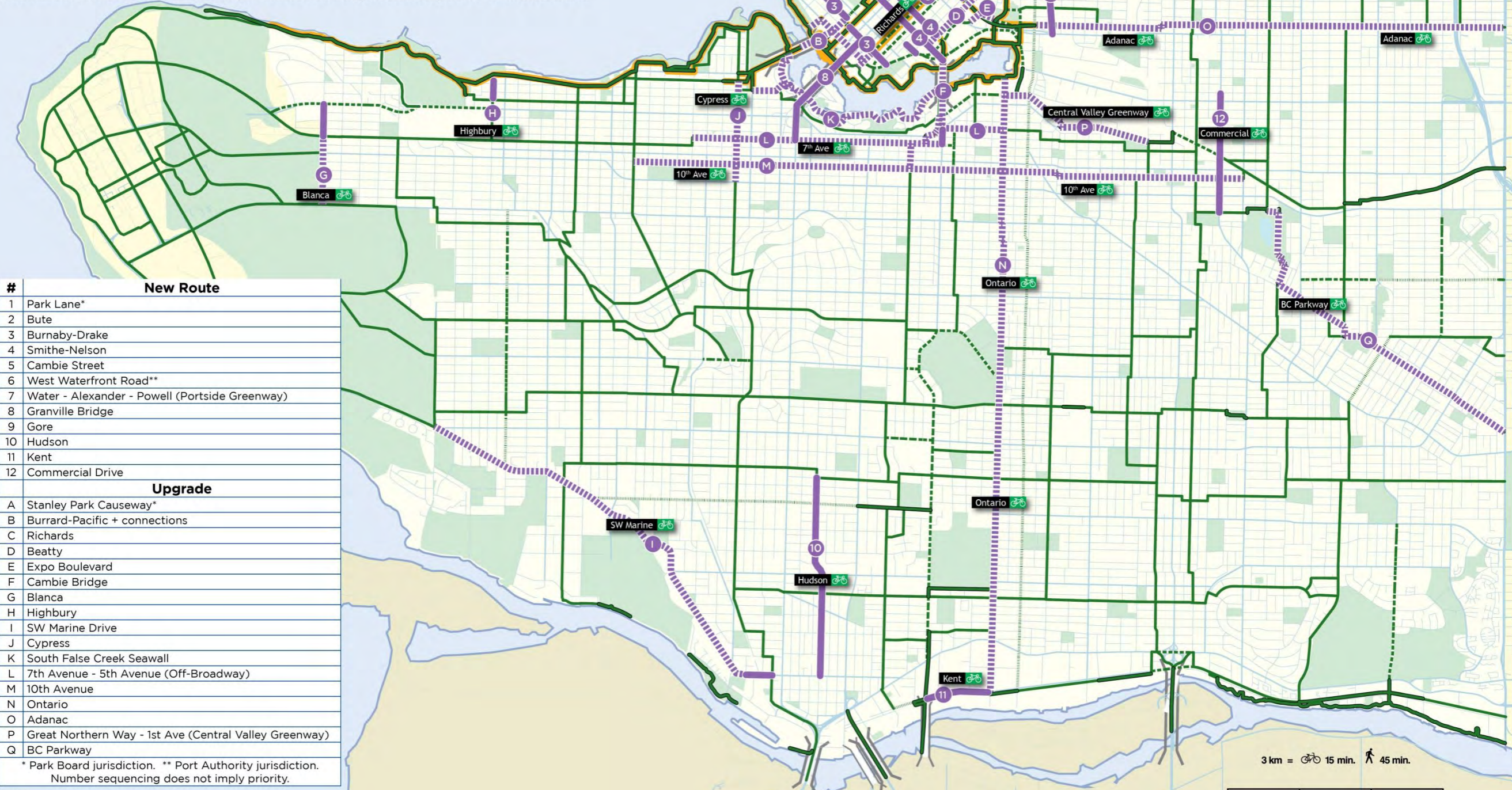
Detailed alignment and timing subject to change.

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.

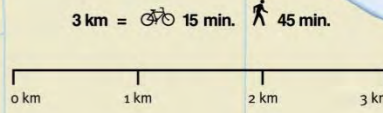
Some projects fall on land outside City jurisdiction (e.g. Port, Park Board) and are subject to outside approval.

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



#	New Route
1	Park Lane*
2	Bute
3	Burnaby-Drake
4	Smithe-Nelson
5	Cambie Street
6	West Waterfront Road**
7	Water - Alexander - Powell (Portside Greenway)
8	Granville Bridge
9	Gore
10	Hudson
11	Kent
12	Commercial Drive
Upgrade	
A	Stanley Park Causeway*
B	Burrard-Pacific + connections
C	Richards
D	Beatty
E	Expo Boulevard
F	Cambie Bridge
G	Blanca
H	Highbury
I	SW Marine Drive
J	Cypress
K	South False Creek Seawall
L	7th Avenue - 5th Avenue (Off-Broadway)
M	10th Avenue
N	Ontario
O	Adanac
P	Great Northern Way - 1st Ave (Central Valley Greenway)
Q	BC Parkway

* Park Board jurisdiction. ** Port Authority jurisdiction.
Number sequencing does not imply priority.



Walking + Cycling in Vancouver

2015 Report Card

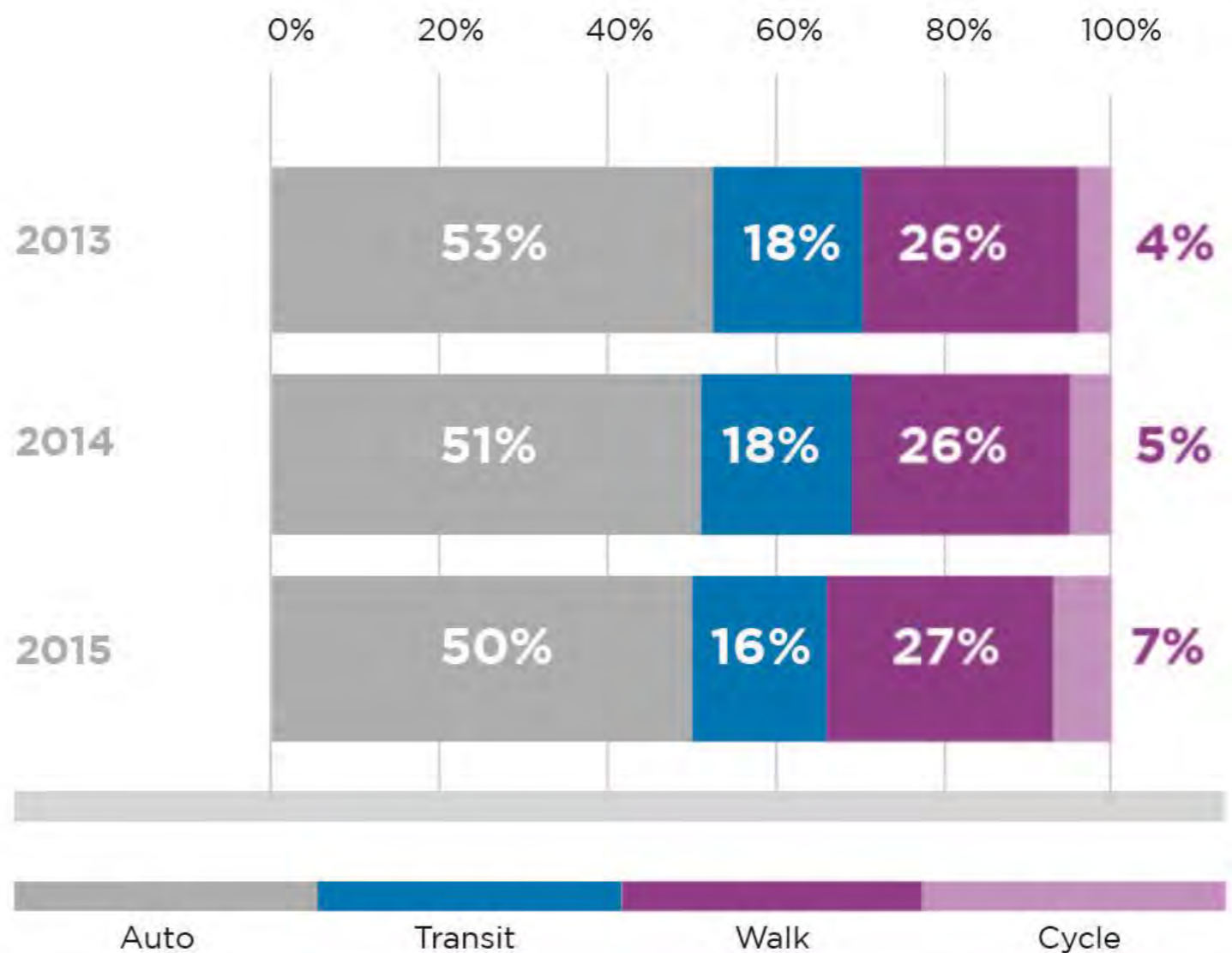


How Vancouverites are Getting Around



Vancouverites are making more of their trips on foot and by bike every year.

Mode Share for All Trips



Source: 2015 Transportation Panel Survey

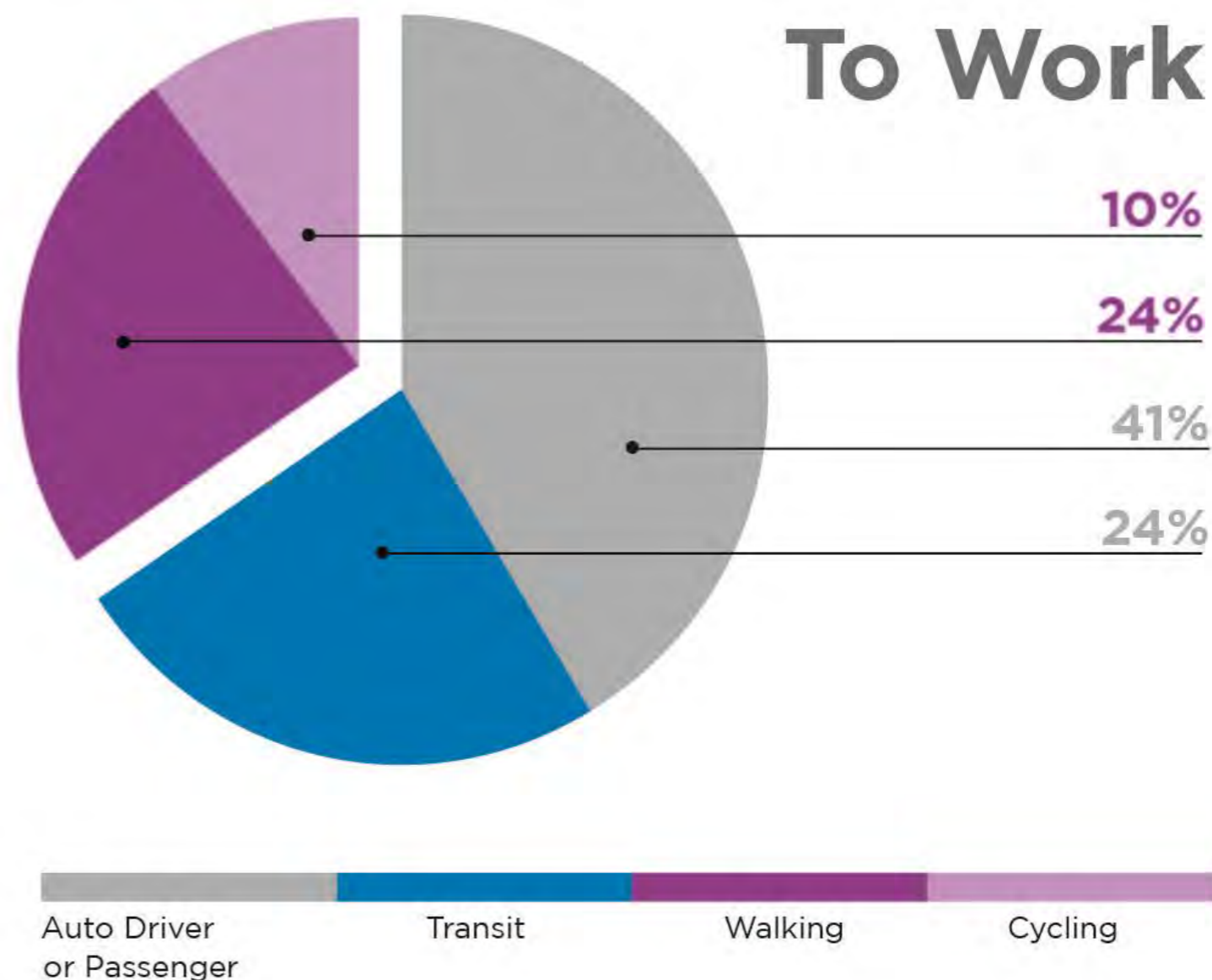
How Vancouverites are Getting Around



Trip Made by
Foot and Bike

Mode Share by Destination

To Work



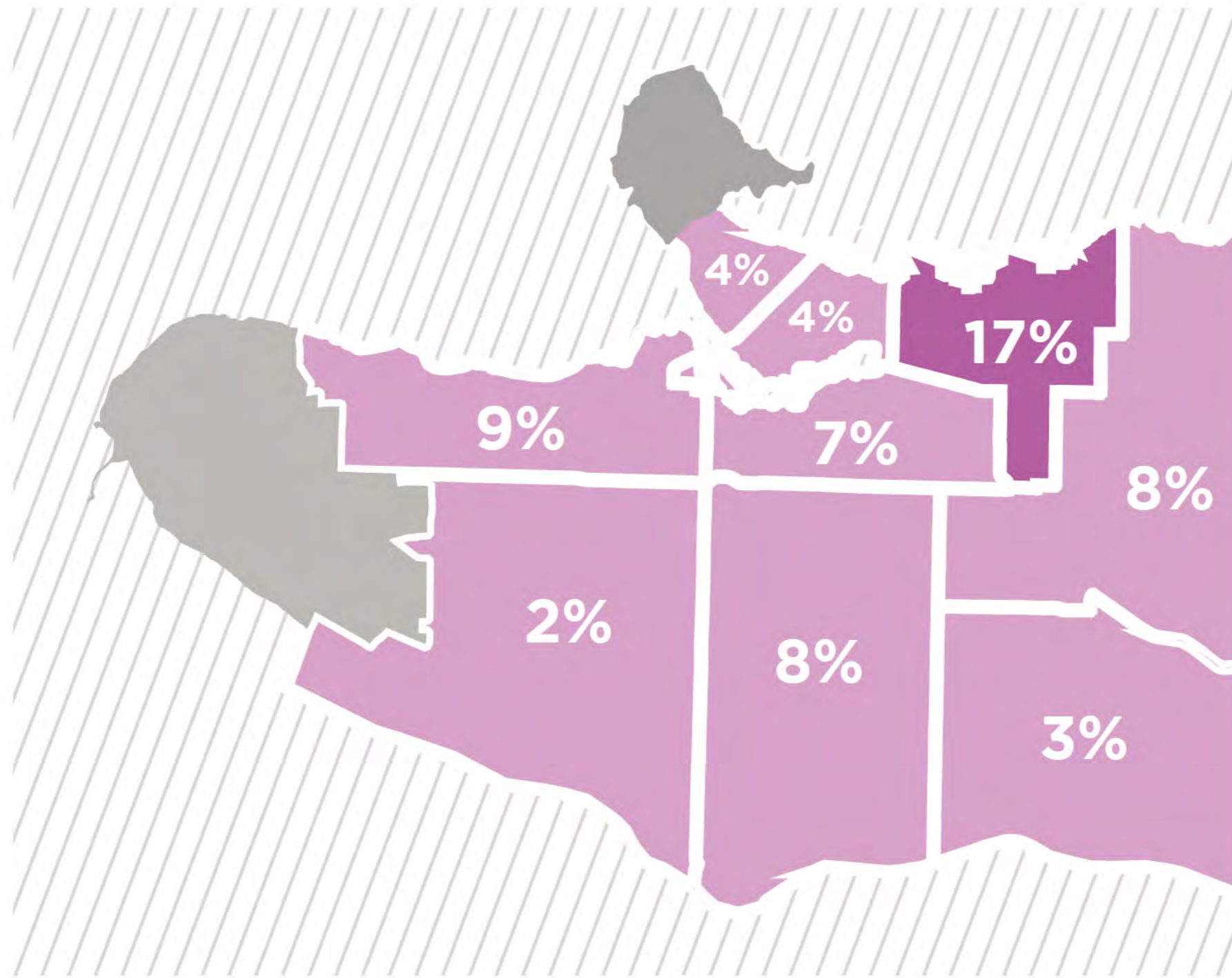
Ten per cent of
Vancouverites cycle
to work and 24 per
cent walk to work.

Source: 2015 Transportation Panel Survey

How Vancouverites are Getting Around



Cycling Mode Share by Home Area



How Vancouverites are Getting Around

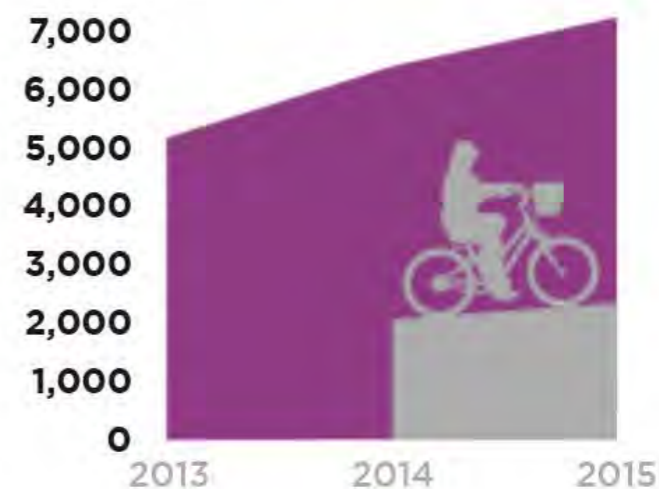


Cycling Volumes

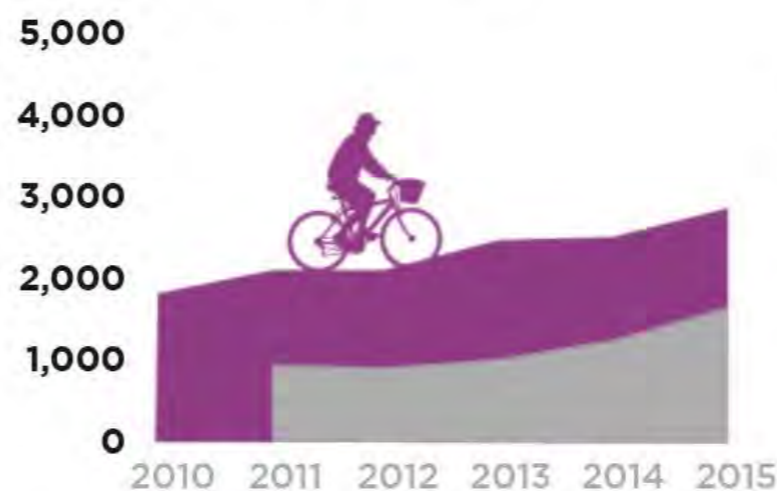
Burrard Bridge
Daily mid-week bike trips*



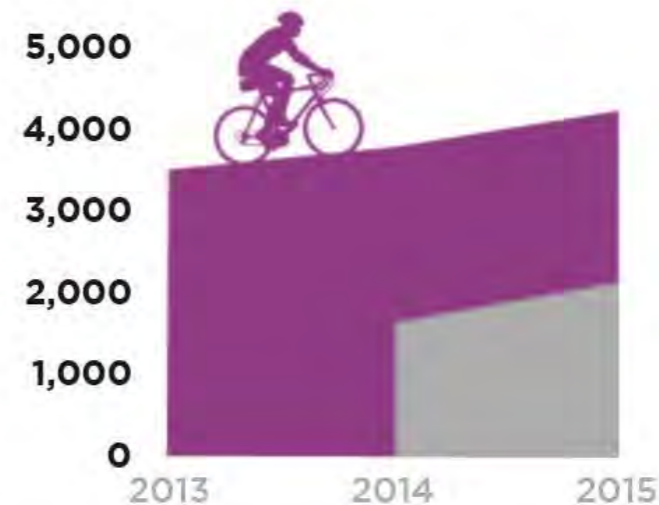
Seawall at Science World
Daily mid-week bike trips*



Dunsmuir Viaduct
Daily mid-week bike trips*



Union Street at Hawks Avenue
Daily mid-week bike trips*



Winter (January/February)
 Summer (July/August)

Source: City of Vancouver bike counter data.

*Average of Tuesdays, Wednesdays and Thursdays, except statutory holidays

How Vancouverites are Getting Around



Who is Walking and Cycling in Vancouver?

Female Cyclists on Hornby Street



Painted Bike Lane



Protected Bike Lane



The share of women cycling on Hornby Street grew 40% after a protected bike lane was constructed in 2011.

Building out our All Ages & Abilities Cycling Network

Neighbourhood Bikeways & Greenways



Active Transportation Spot Improvements

Active Transportation Spot Improvements Completed and Under Construction September 2015

Cycling Spot
Improvements
Completed

28

2

New Pedestrian
& Bike Signals



2

New Active & Safe
Routes to School



2

Cycling Spot
Improvements
Under Construction

27

2

Upcoming Pedestrian
& Bike Signals

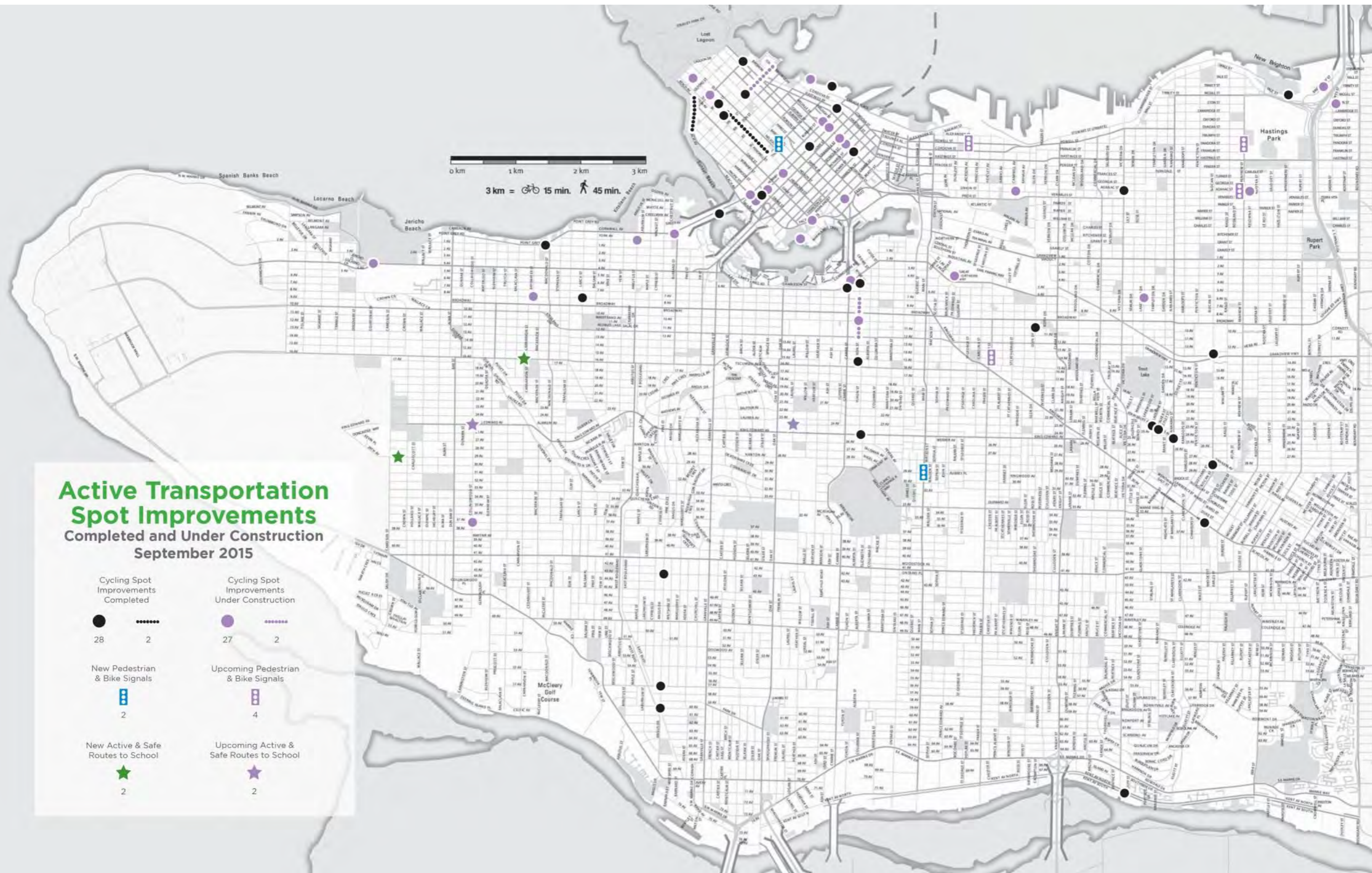


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Upcoming Active &
Safe Routes to School



2



Redevelopment - New Sidewalks & Cycle Tracks



Recent Seawall Improvements



Plaza of Nations



Science World



Coal Harbour



English Bay

Network Management - Slow Cycling Event Zones



Dragon Boat Festival

Local Street Bikeway Maintenance



Before Repaving

Photo: Paul Krueger



After Repaving

Protected Bikeways including Protected Intersections

Streetfilms: Vancouver's Safe Protected Bike Lanes



Vancouver's Breathtaking Network of Safe, Protected Bike Lanes by Clarence Eckerson Jr. on September 20, 2016 | 4895 Plays

In 2012, the Vancouver City Council set an ambitious goal to reach a bicycle mode share of 7 percent of all trips by 2020. The city proceeded to hit the mark in 2015, five years ahead of schedule! When you ... [READ THE FULL POST](#)

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New!



Vancouver's Breathtaking Network of Safe, Protected Bike Lanes 5:36



Touring Copenhagen's Car-Free Bridges 5:47

New!



Great Streets: Walking Burlington's Church Street 2:17



Why are New Yorkers bicycling to work in record numbers? 3:19

New!



Bikes Are Freedom: Inspiration from the Experts 2:18

Meet The Cities: Vancouver Protected Intersections

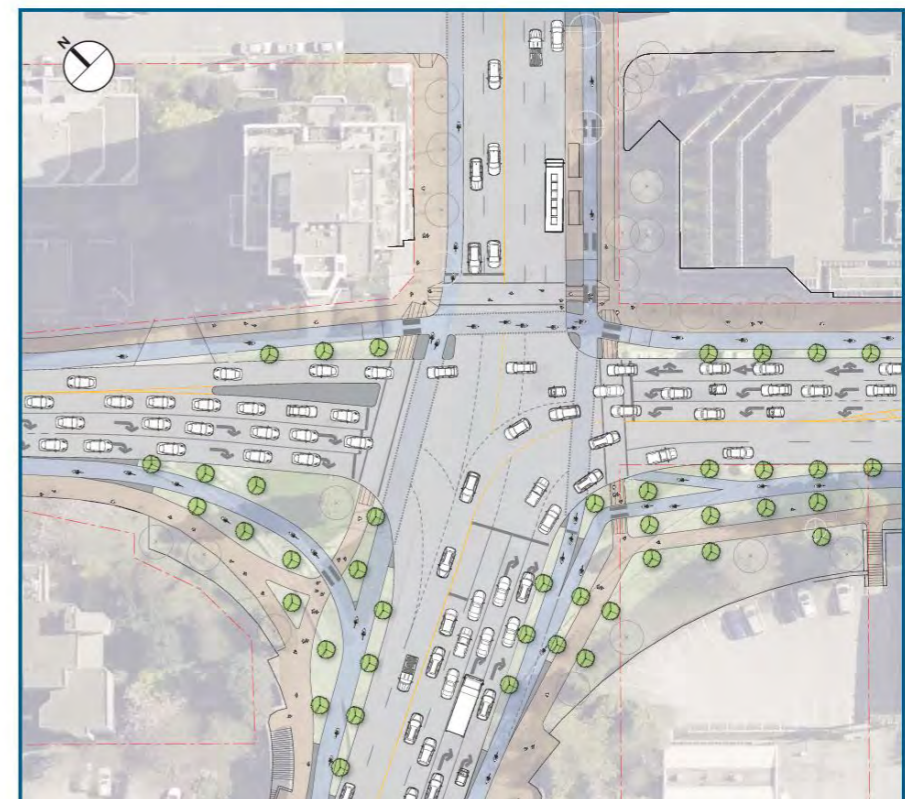
Burrard Bridge



South End (built 2014)



North End: Before (2015)



IMPROVING INFRASTRUCTURE, INCREASING RIDERSHIP

Bike volumes across the Burrard Bridge jumped 30% to over 1.3 million annually in the first year after the Burrard-Cornwall improvements





1. Beatty*
2. Cambie St.
3. Richards*
4. Smithe | Nelson
5. Helmcken Access Improvement
6. Cambie Bridge*

Bike Routes

- Existing Route
- Existing Protected Route
- Planned New Route
- Planned New Protected Route
- Planned Protected Upgrade
- ** Planned Access Improvement

2016-17 Look Ahead: Downtown
Planned New or Upgraded Bike Routes

Downtown Bike Lane Network Expansion

- Detailed Stakeholder Engagement (March-April)
- Public Open House (March)
- Design Completion (April)
- Installation (April-June)



Beatty Street – Before



Beatty Street – After



Beatty Street – Before



Beatty Street – After



Cambie Street – Before



Cambie Street – After



Cambie Street – Before



Cambie Street – After



Nelson Street – Before



Nelson Street – After



Nelson Street – Before



Nelson Street – After



Smithe Street – Before



Smithe Street – After



Smithe Street – Before



Smithe Street – After





Burrard Complete Street

Southbound Protected Bike Lane



Walkability + Bikeability



300km



Vancouver's total
bike network

24%



designed for all-
ages-and-abilities

Walkability + Bikeability



Longest Greenway:
Seaside Greenway



54%

would like to
travel by bicycle
more often.

2015 Transportation Panel Survey

Walkability + Bikeability



People of all ages and abilities can now walk and cycle along the Greenway from Stanley Park to Hornby Street through the West End.

Greenway Health Benefits



Time spent sitting and being sedentary



Days of poor physical and mental health



Days engaged in moderate physical activity per week

Addressing Barriers



Cycling Safety

A large part of feeling safe while cycling is being protected from higher-speed motor vehicle traffic, whether through physical barriers, or traffic-calming measures designed to slow vehicle speeds.

Between 2008 and 2011:



Cycling Trips



Collision Rates

Addressing Barriers



Education and Promotion



Educating, promoting, and celebrating are important to build a culture in Vancouver that supports and encourages active transportation.

Our aim is for Vancouverites to see walking and cycling as convenient, fun, and normal ways to get around every day.

Big Moves in Vancouver

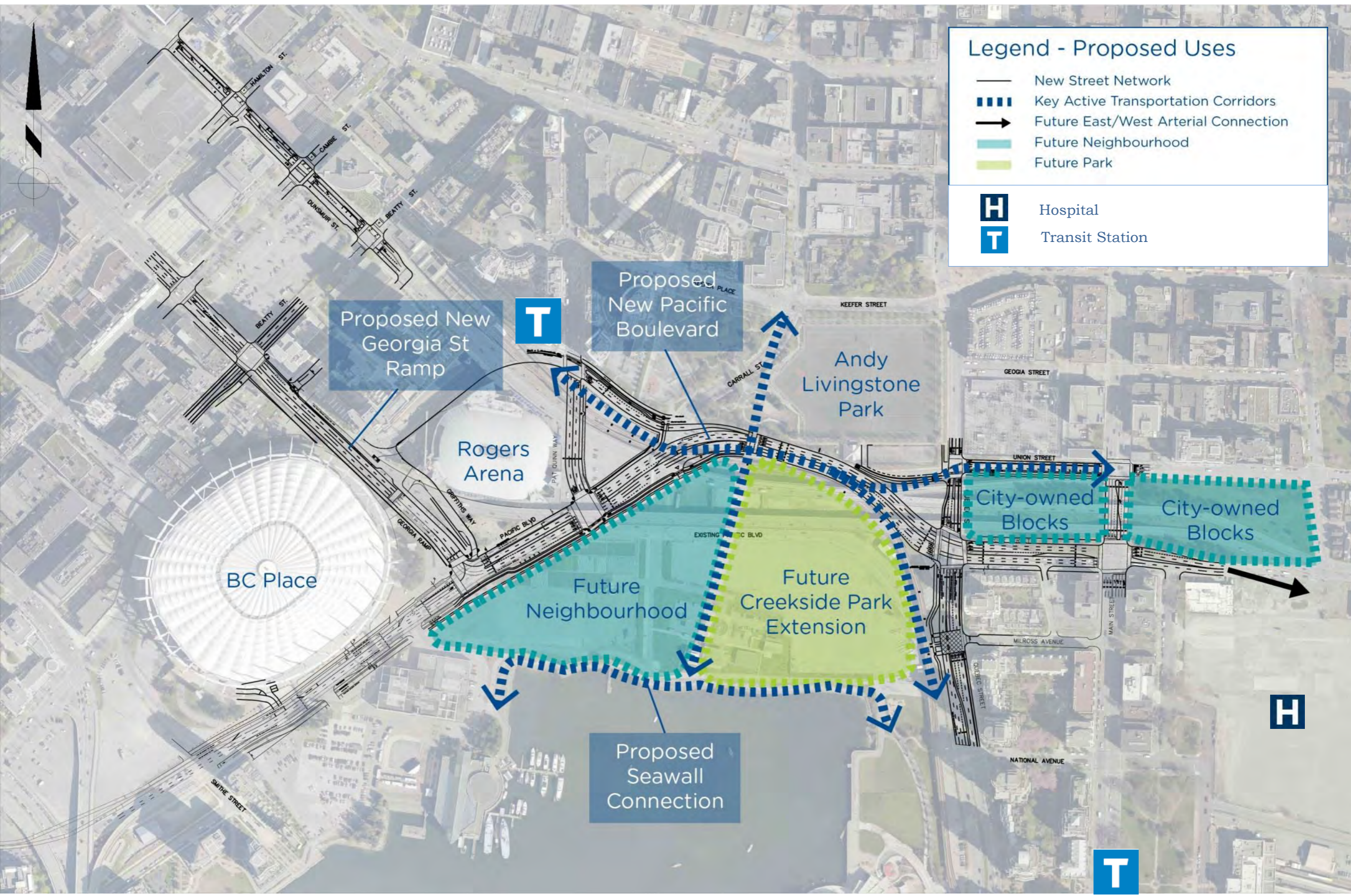
*(in addition to building
our AAA Network)*

mobi

BIKES WE SHARE

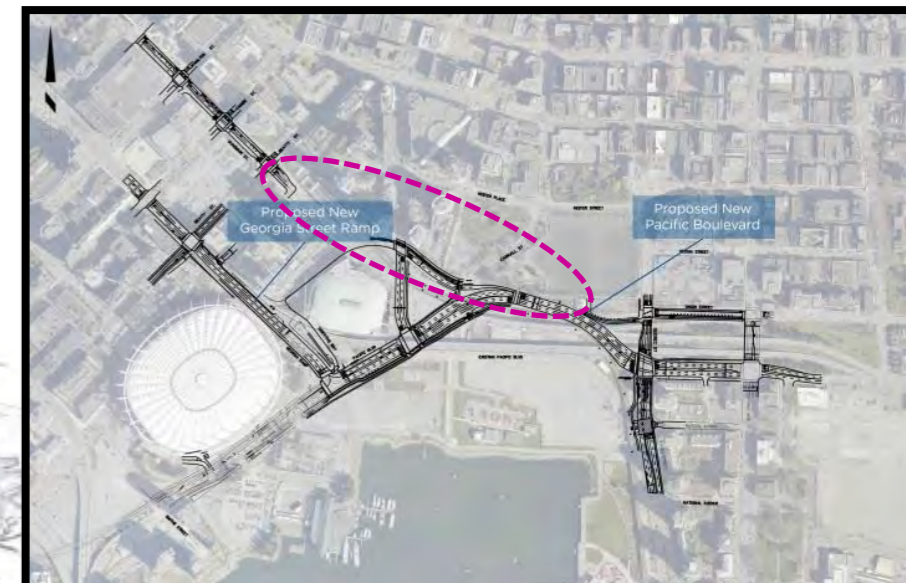
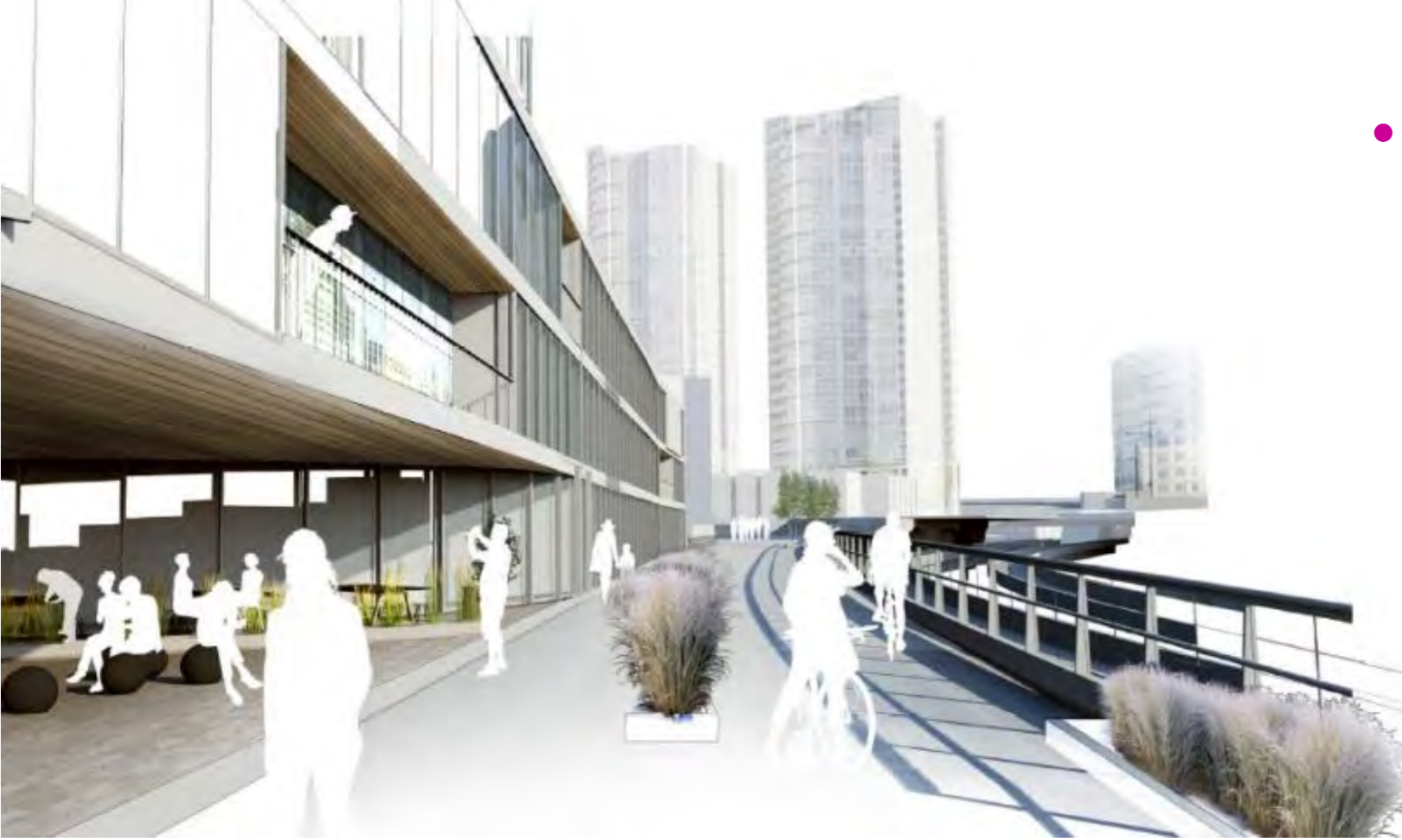
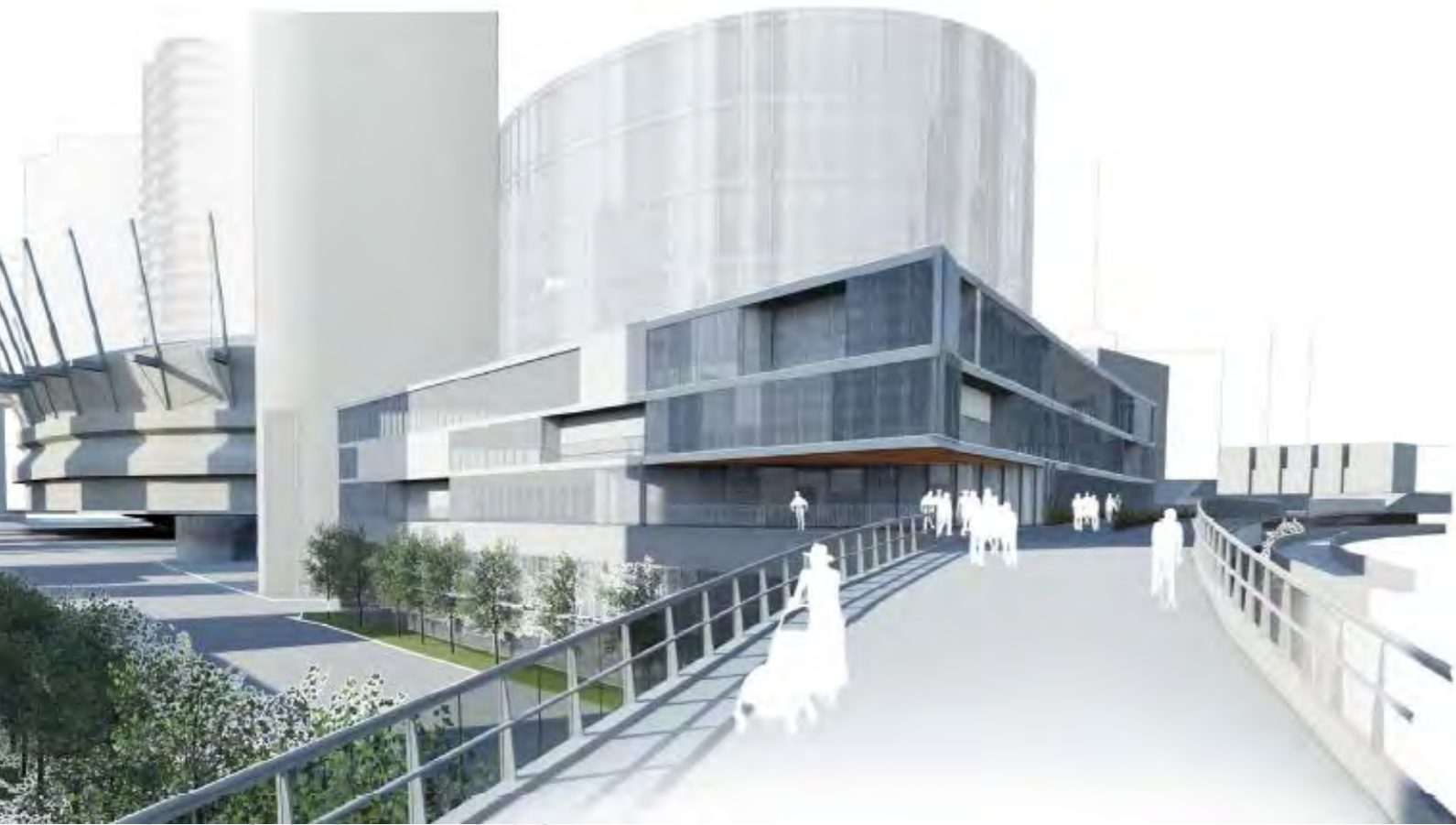


NEFC: Street Network Plan



Dunsmuir Connection

- An elevated park for pedestrians and people cycling
- Sufficient width for safety and capacity
- Connections to new park & main link to Downtown



The Arbutus Greenway





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