



Annual Monitoring Report & Safety Action Plan

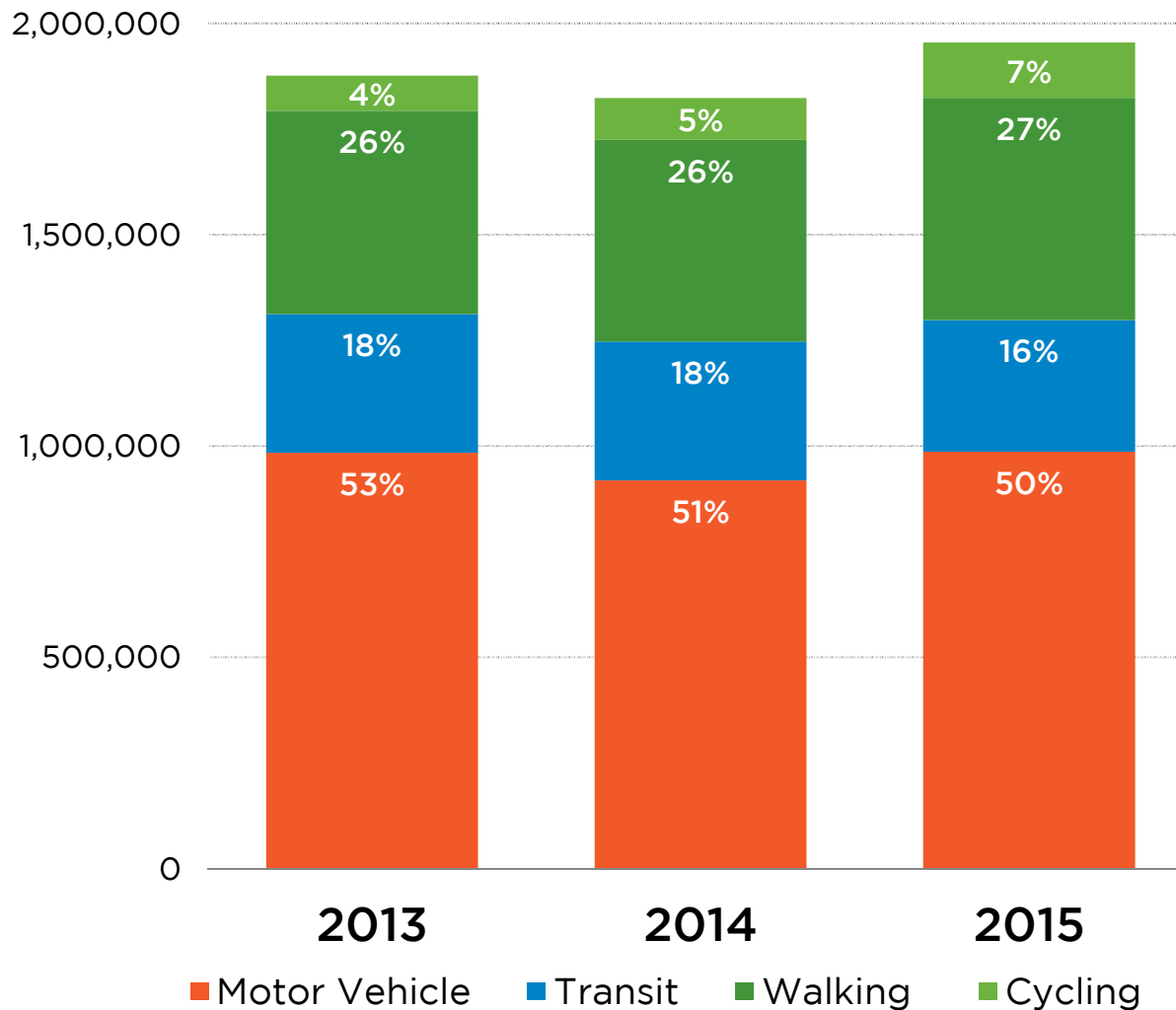
May 4, 2016
Council Presentation

Presentation Overview

1. 2015 Panel Survey Results
2. Seaside Greenway
3. Comox-Helmcken Greenway
Health Studies
4. Monitoring Safety
5. Zero Traffic-Related Fatalities and
Serious Injuries Action Plan

1. 2015 Panel Survey Results

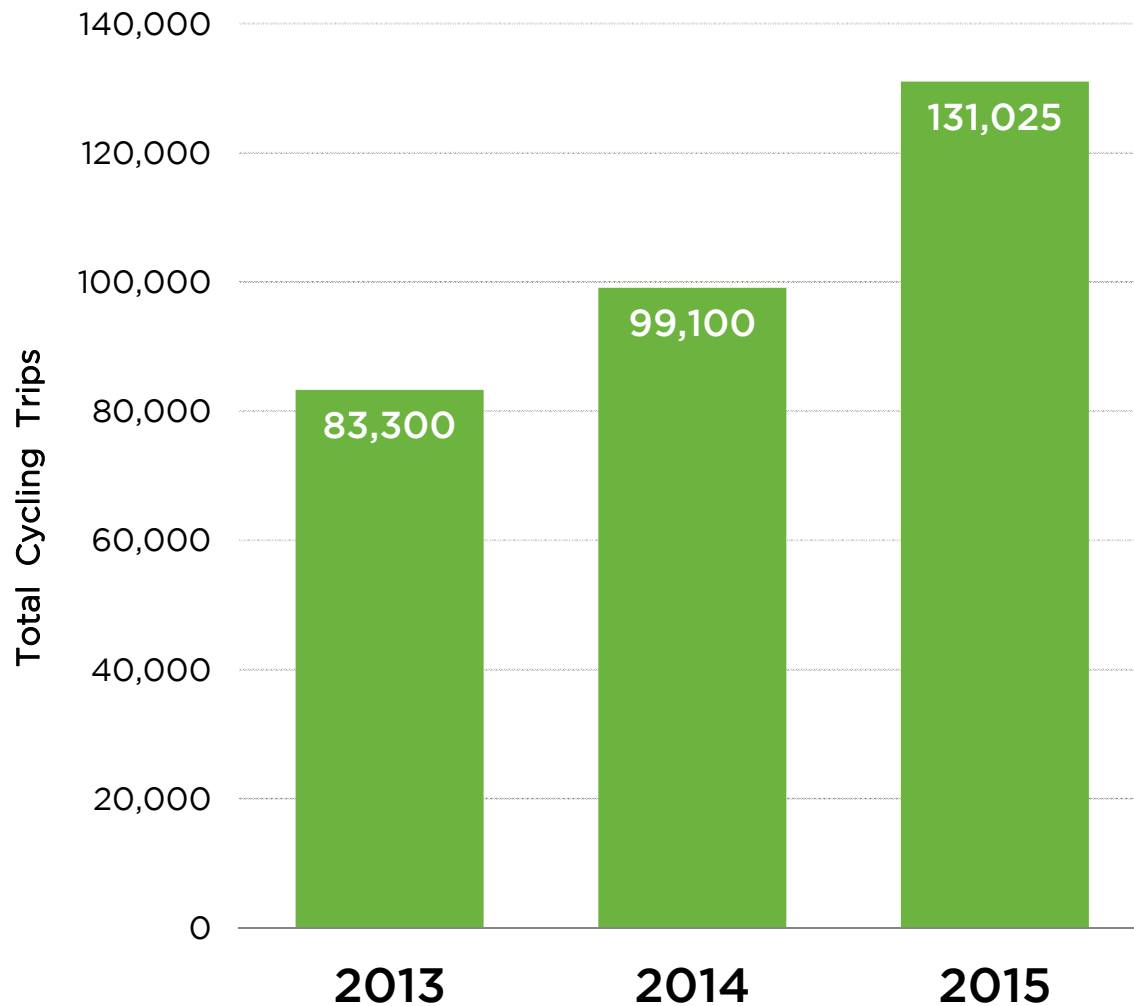
Daily Trips by Mode of Travel



Source: 2013-2015 Panel Surveys, excluding recreational trips

- Pedestrian travel high but steady
- People cycling up again
- Transit slightly down
- Vehicle trips remain about the same

Total Cycling Trips

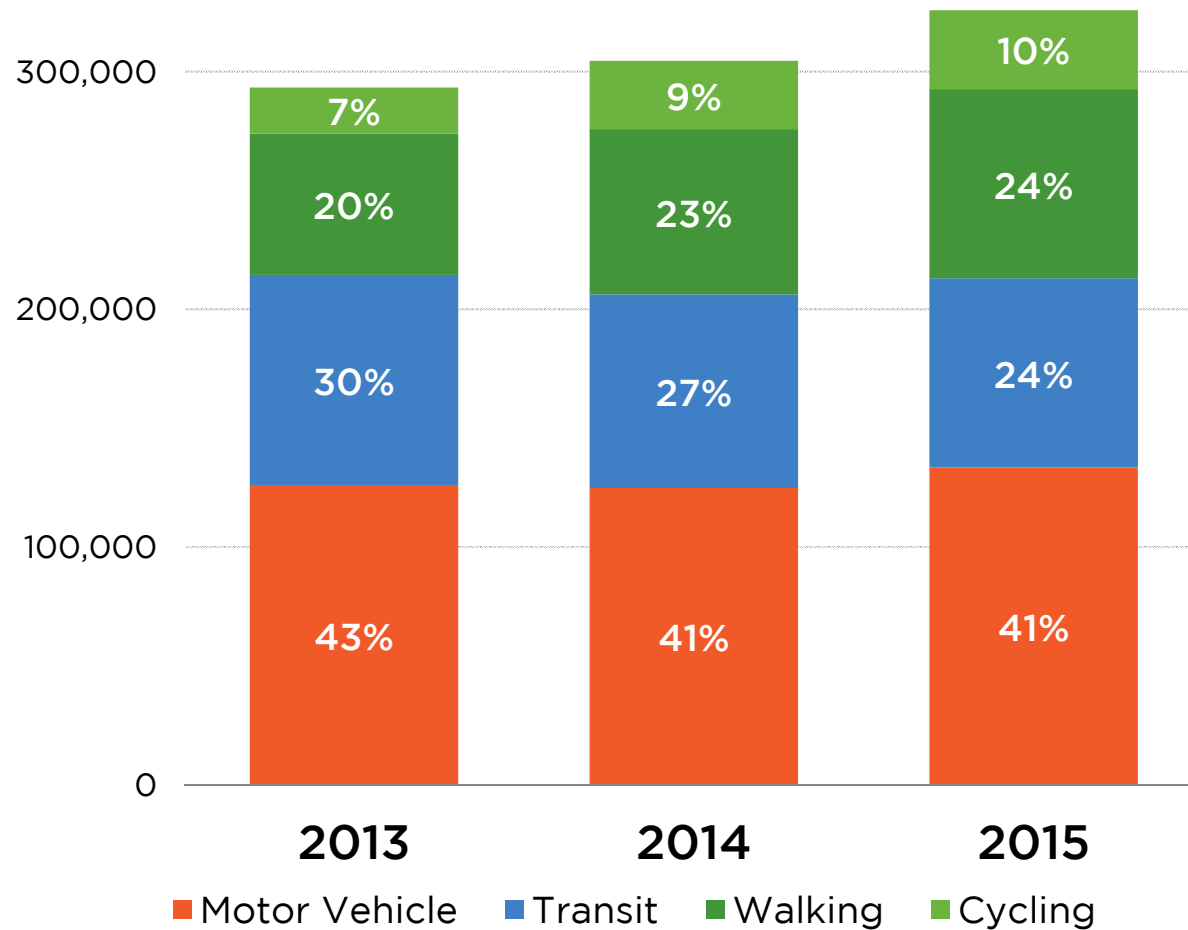


Total cycling trips **increased 32%** from 2014 to 2015

At 2020 target of 7% of all trips

Source: 2013-2015 Panel Surveys, excluding recreational trips

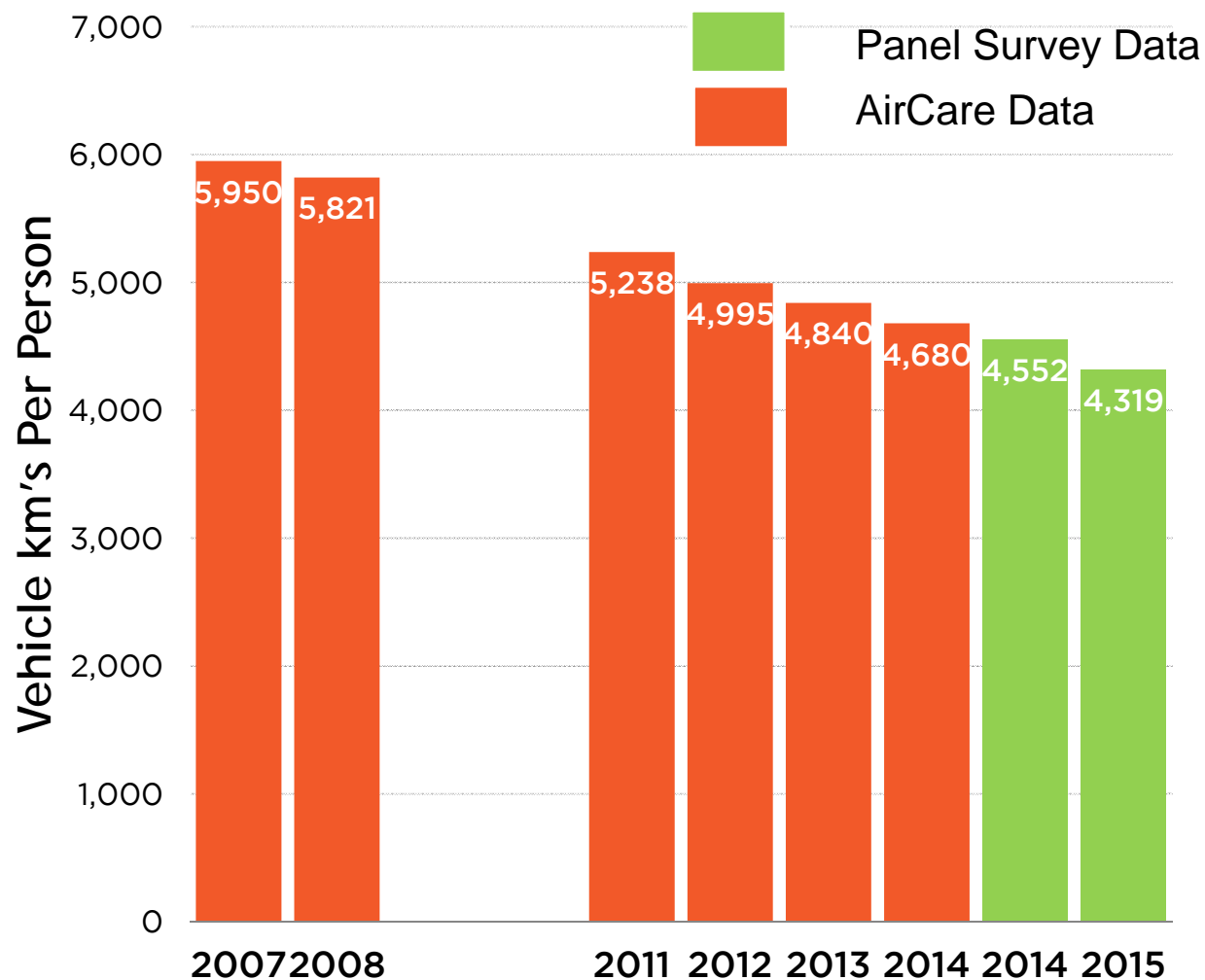
Work Trips by Mode of Travel



Cycling Travel
to work Mode
Share at 10%
could be
higher than any
other North
American City
over 500k
population

Source: 2013-2015 Panel Surveys, excluding recreational trips

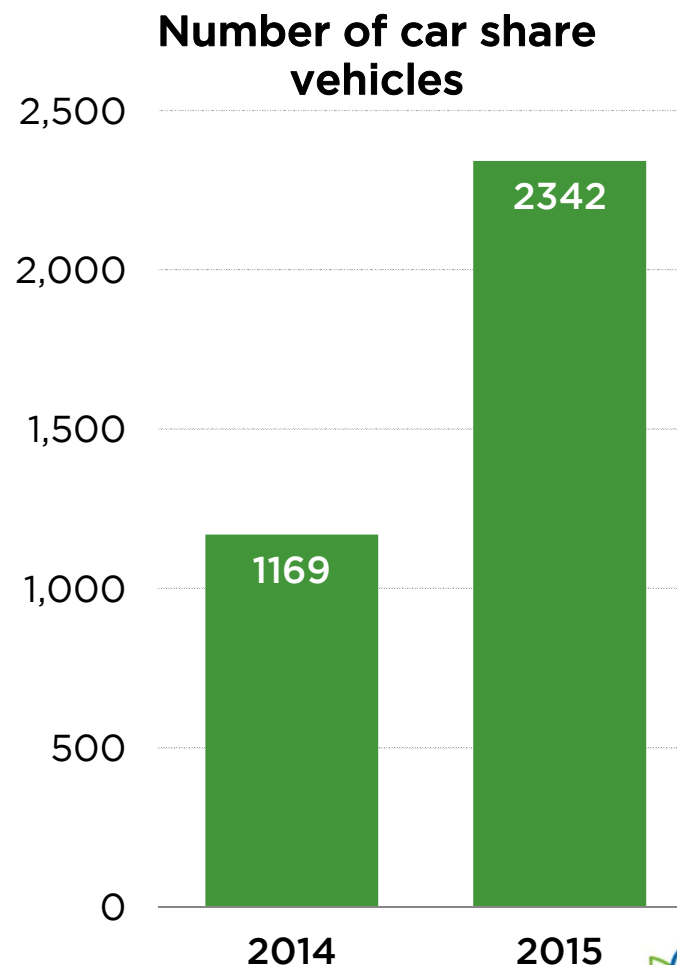
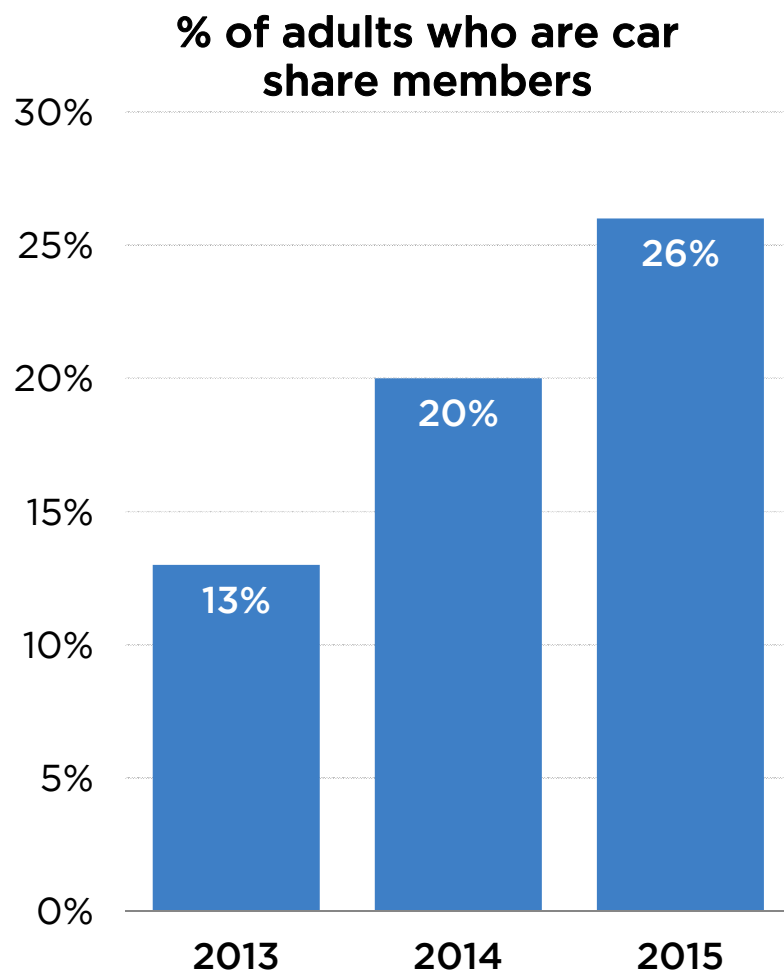
Annual Distance Driven per Person



The average annual distance driven per person **fell 27%** from 2007 to 2015

Source: *ICBC Vehicle Data and AirCare Data Odometer Readings. **City of Vancouver Panel Surveys

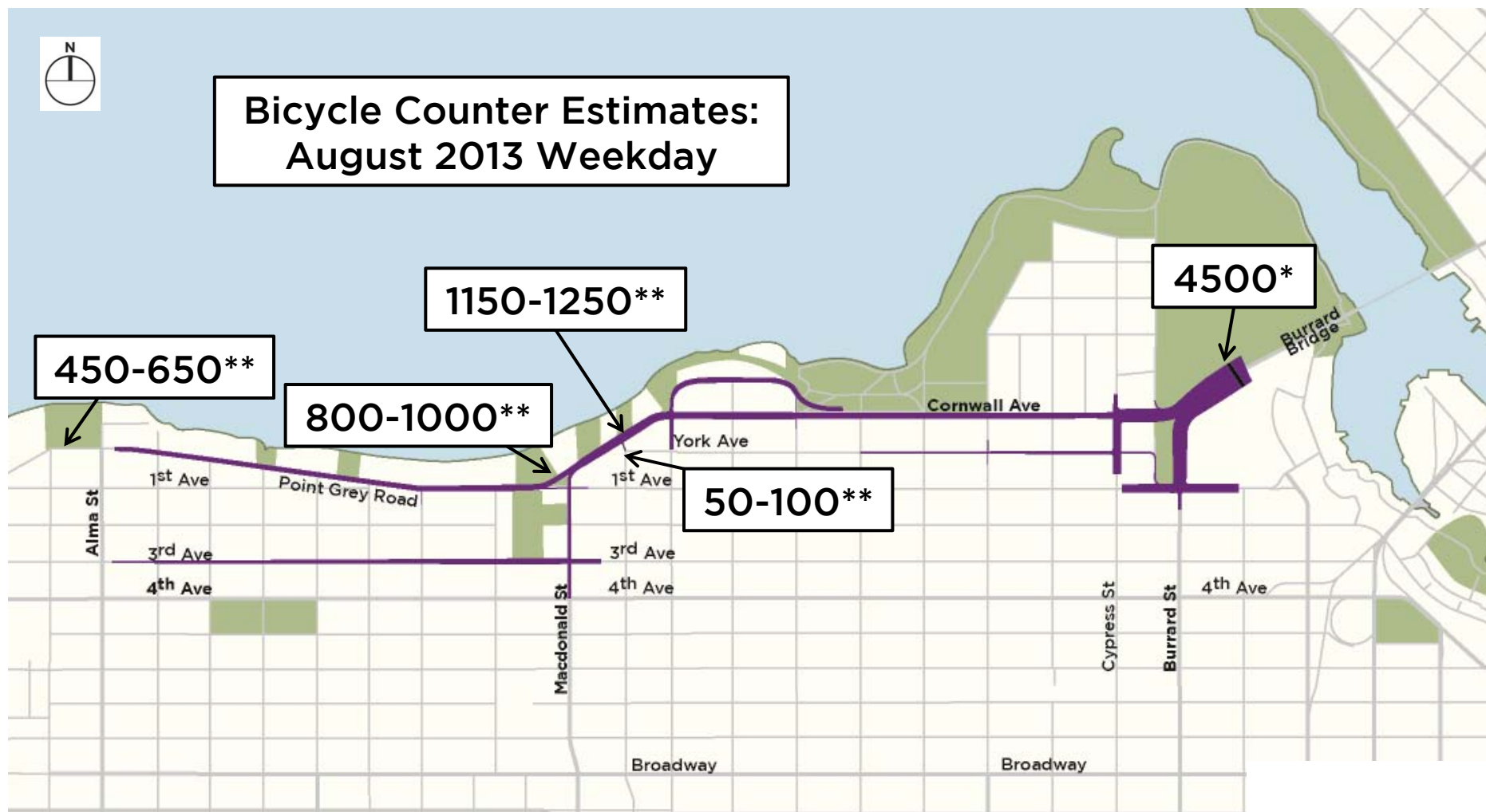
Growing Car Share in Vancouver



Source: 2013-2015 Panel Surveys. City of Vancouver.

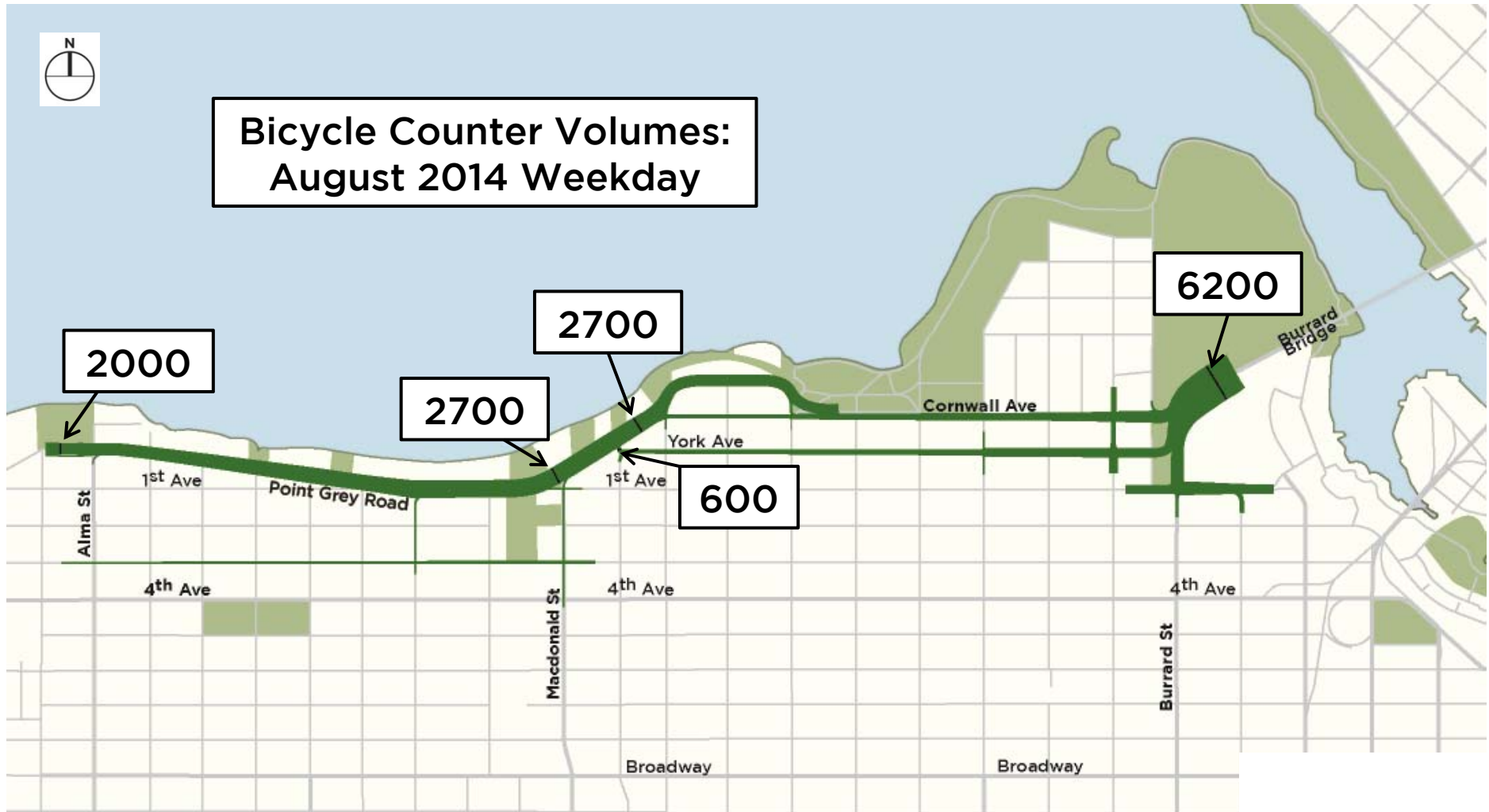
2. Seaside Greenway

Seaside Greenway: Estimated Average Daily Bicycle Volumes (before project)



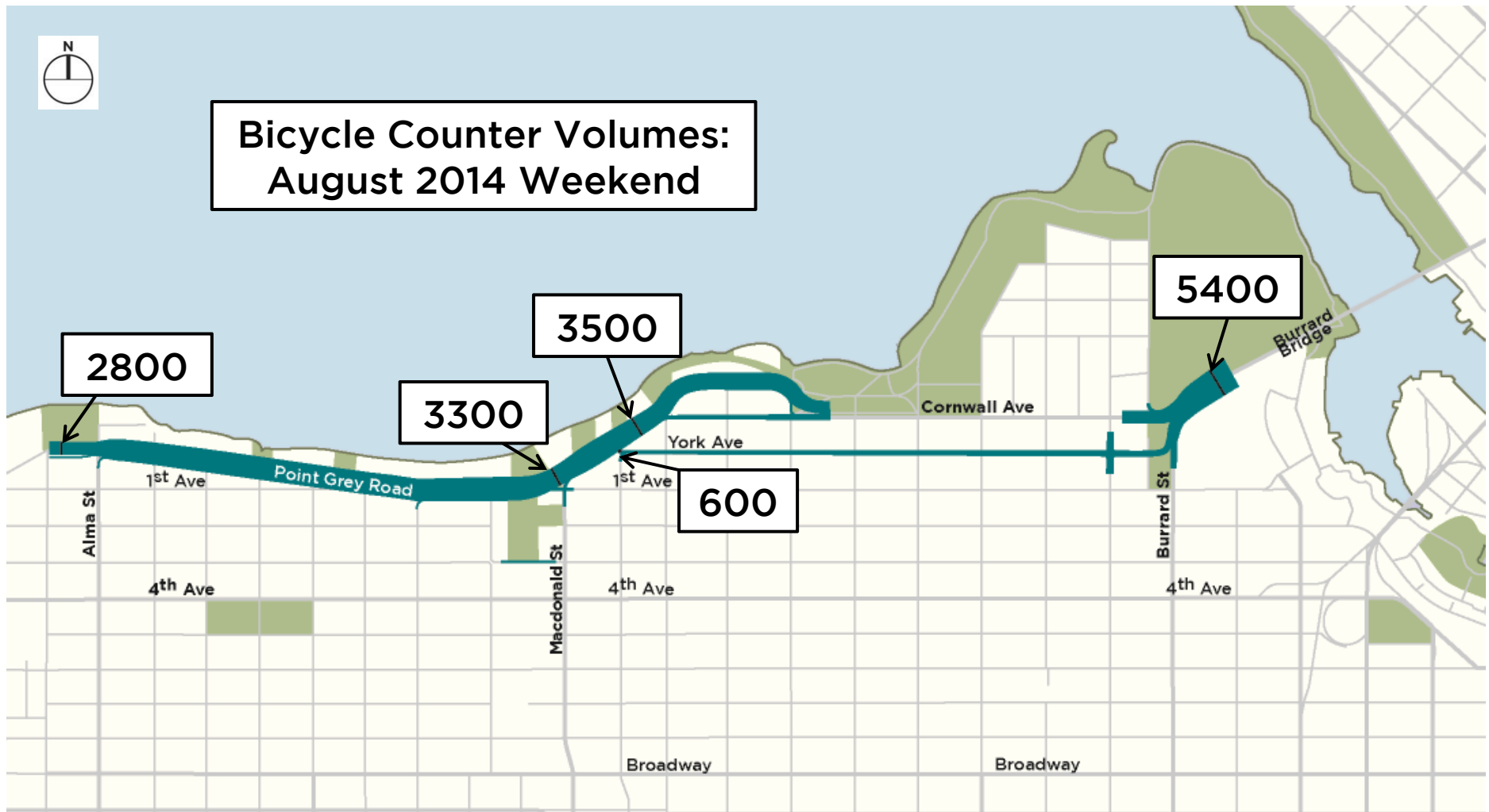
Source: *The data provided are approximate average daily two-way bicycle volumes at each location for midweek (Tuesday to Thursday) days in August. These include averages from automatic counters and comparable estimates based on 12 hour (7am - 7pm) manual bicycle counts (with factors derived from automatic counters for 2012-2013 plus August 2014). **City of Vancouver factored estimates based on manual counts.

Seaside Greenway: Average Daily Bicycle Volumes (after project completion)



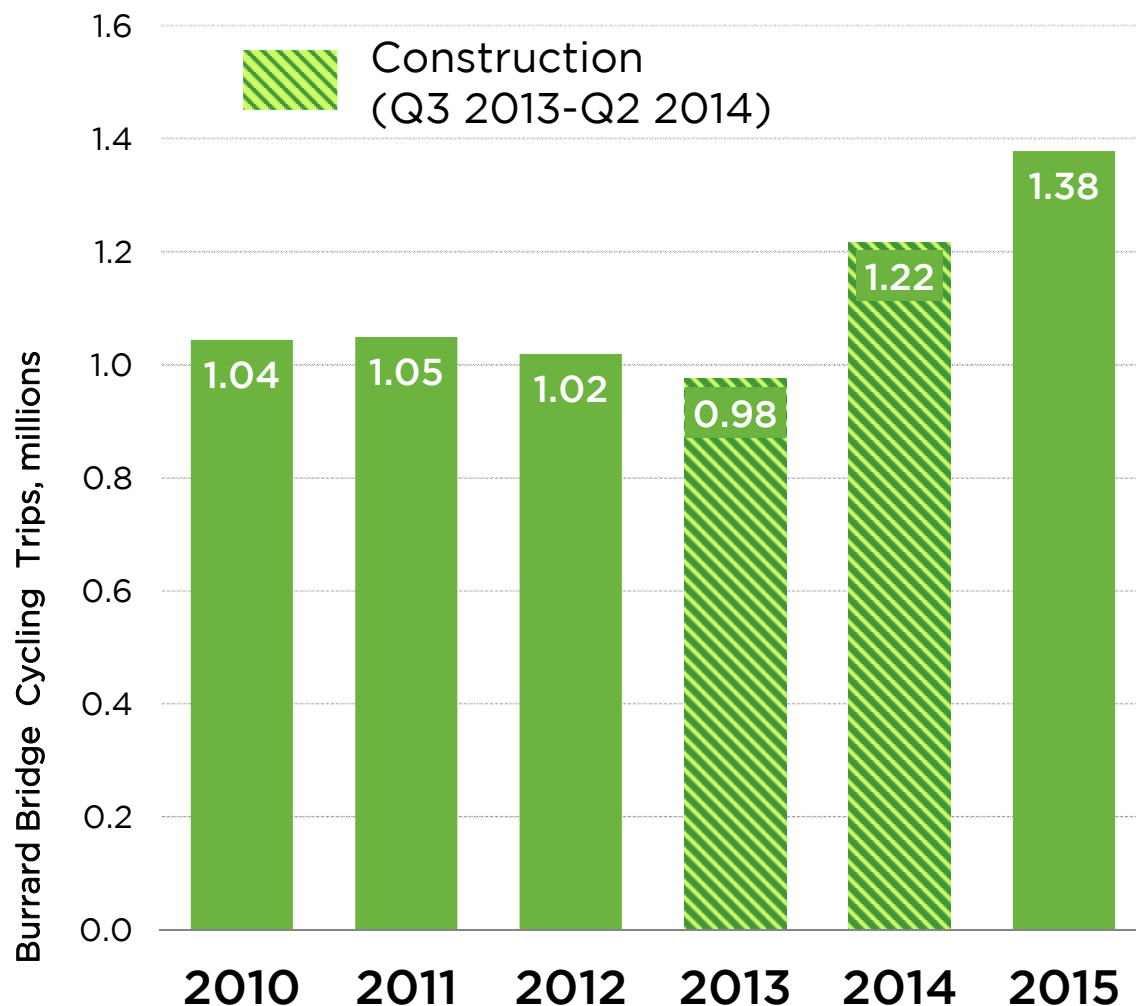
The data provided are approximate average daily two-way bicycle volumes at each location for midweek (Tuesday to Thursday) days in August. These include averages from automatic counters and comparable estimates based on 12 hour (7am - 7pm) manual bicycle counts (with factors derived from automatic counters for 2012-2013 plus August 2014).

Seaside Greenway: Average Daily Bicycle Volumes (after project completion)



The data provided are approximate average daily two-way bicycle volumes at each location for weekend (Saturday and Sunday) days in August. These include averages from automatic counters and comparable estimates based on 12 hour (7am - 7pm) manual bicycle counts (with factors derived from the five automatic counters for the full month of August).

Burrard Bridge Cycling Volumes

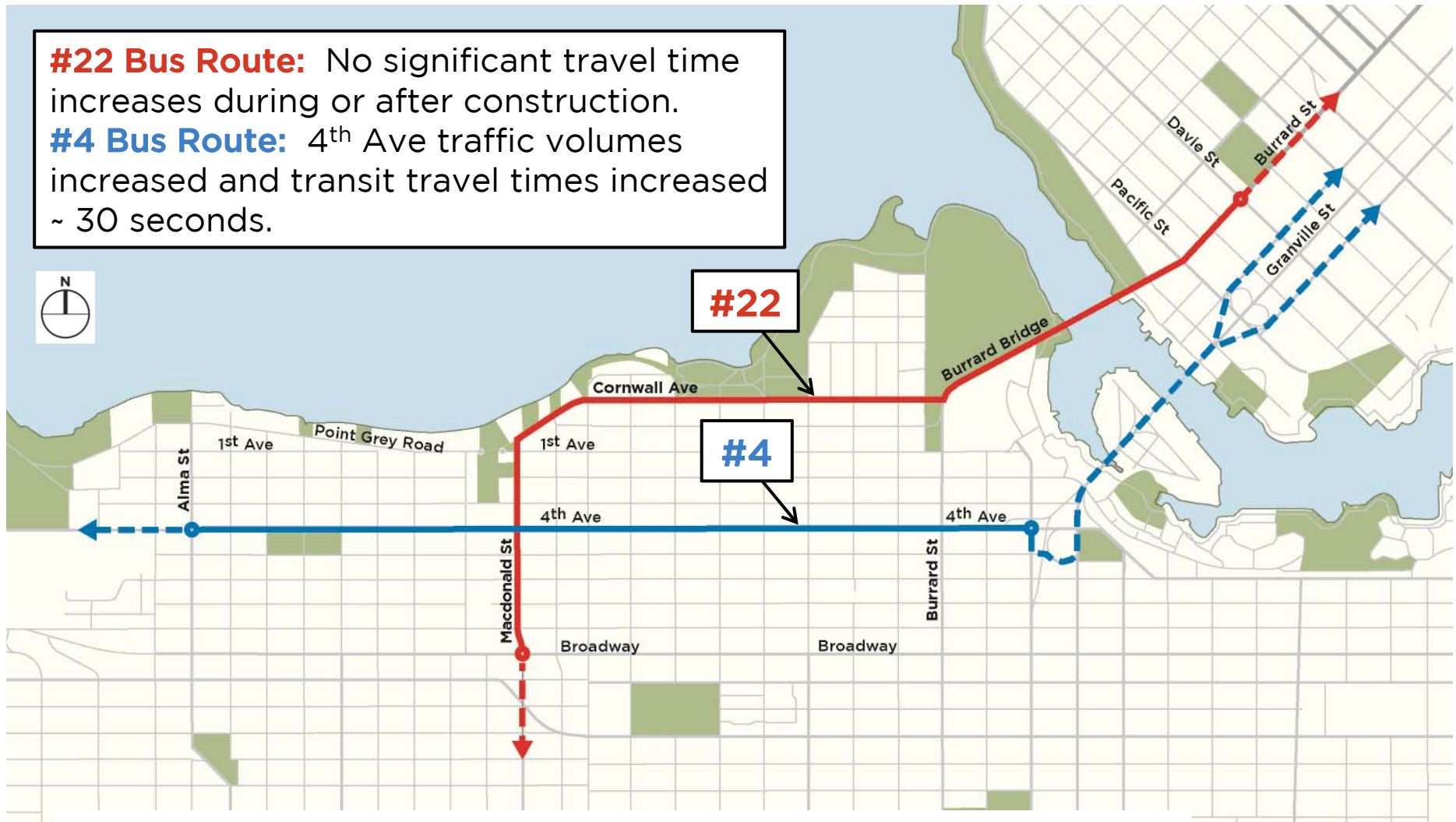


Source: Burrard Bridge Automatic Bicycle Counter Data

Total annual cycling trips across the Burrard Bridge **increased by more than 30%** after South Intersection and Seaside Greenway upgrades

Minimal Impacts on Transit Travel Times

#22 Bus Route: No significant travel time increases during or after construction.
#4 Bus Route: 4th Ave traffic volumes increased and transit travel times increased ~ 30 seconds.



Source: City of Vancouver staff monitored bus travel times for selected routes before, during and after construction

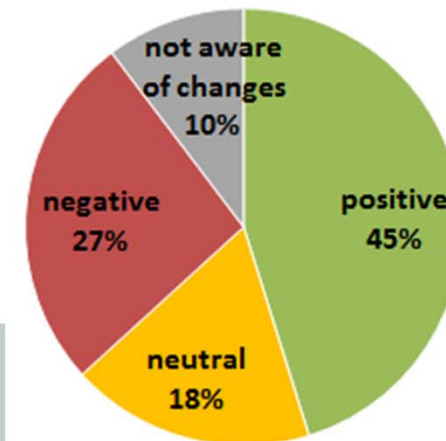
3. Comox-Helmcken Health Studies

Centre for Hip Health and Mobility: Active Streets, Active People – Comox-Helmcken Greenway



Perception of Comox Greenway

On the whole, do you think that the changes are...

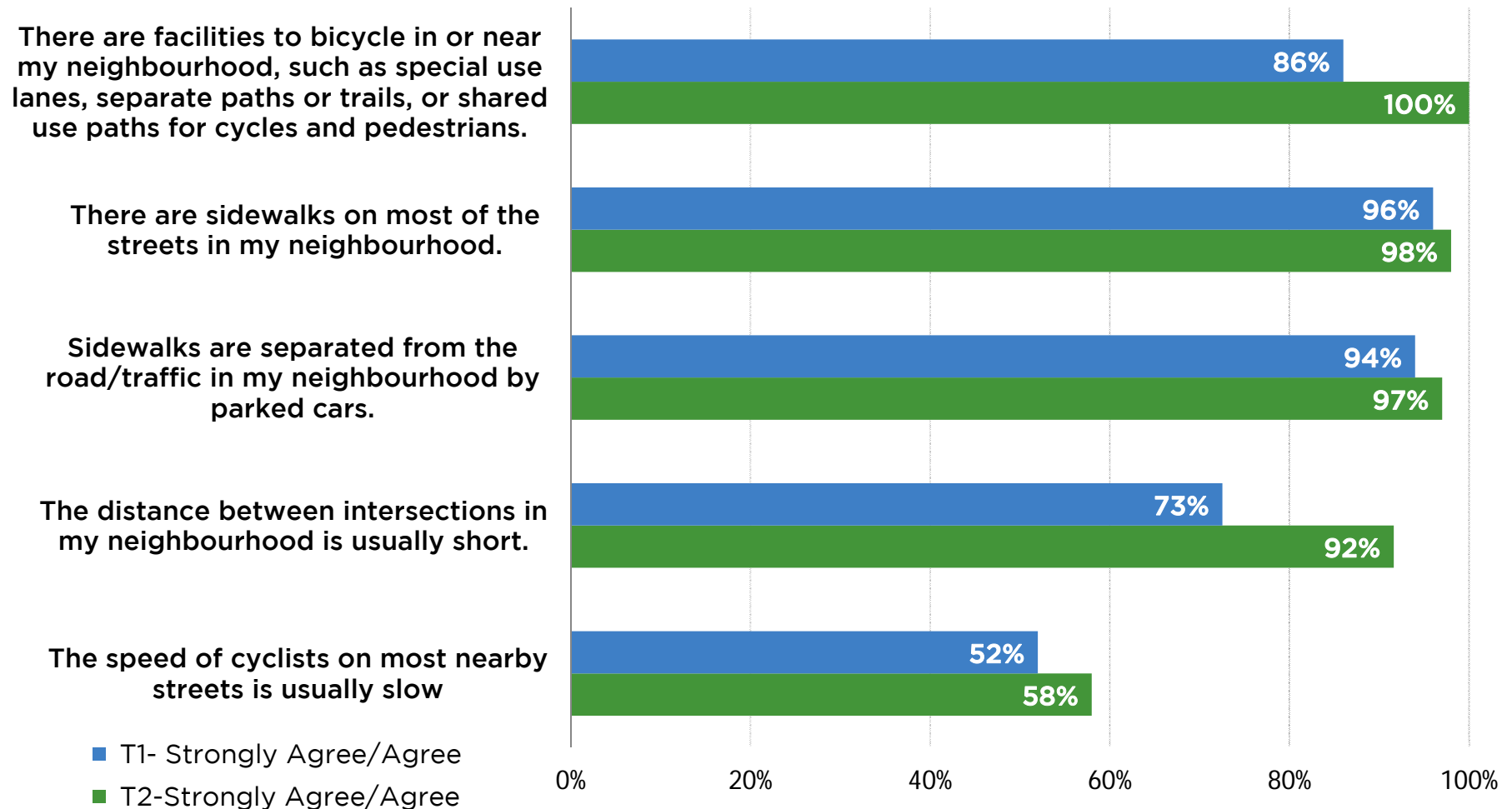


Age distribution in Canada, 2016

under
the age of
15
years old

over
the age of
85
years old

Centre for Hip Health and Mobility: Active Streets, Active People – Comox-Helmcken Greenway



Source: Centre for Hip Health and Mobility, Active Streets Active People , Comox-Helmcken Greenway, 2011-2015

UBC Health & Community Design Lab: Study of Travel, Health, and Activity – Comox-Helmcken Greenway



Participants:

- 473 participants (red)
- 76 participants outside 500 m study area (blue)

UBC Health & Community Design Lab: Study of Travel, Health, and Activity – Comox-Helmcken Greenway



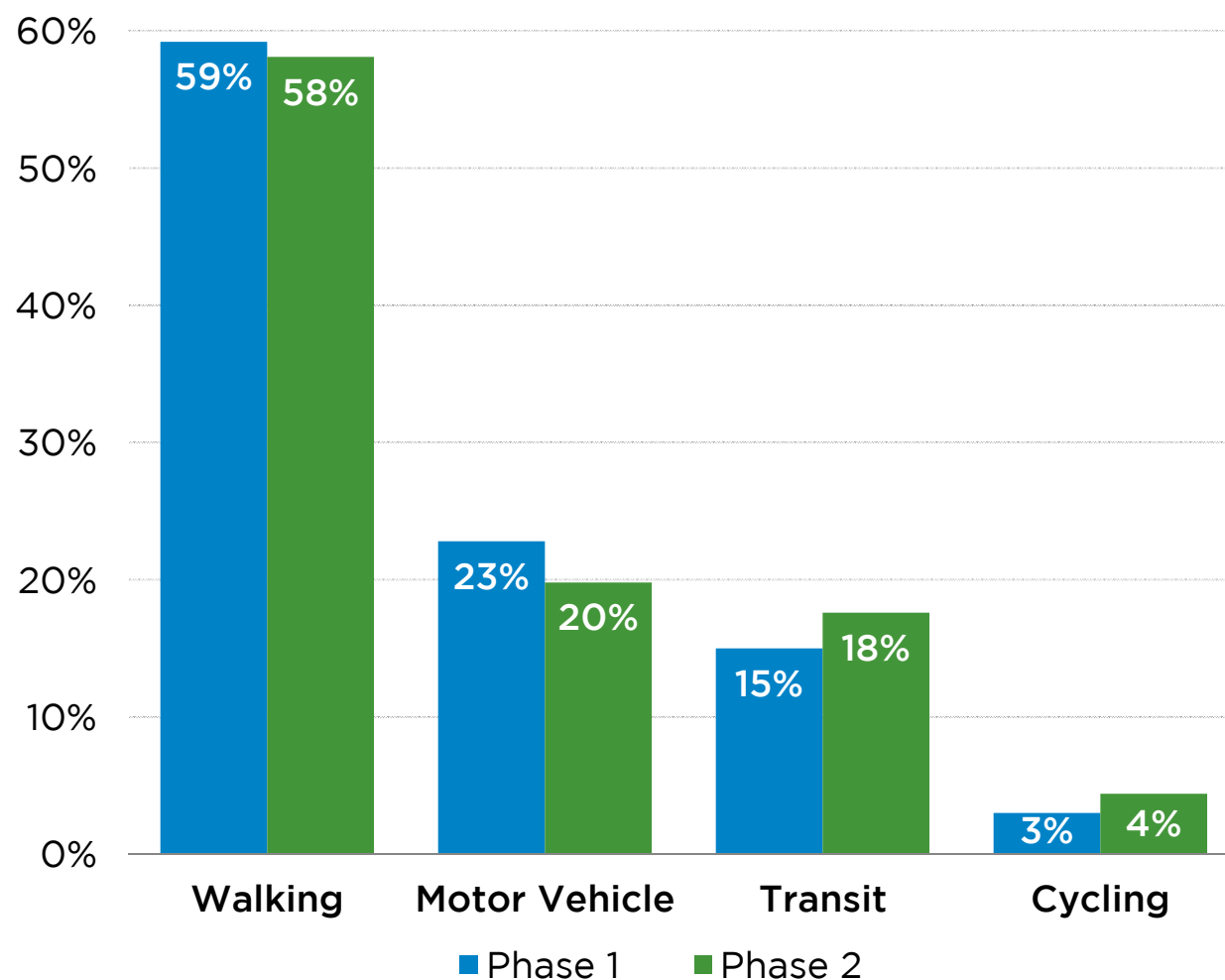
Population Health

Participants living near the Comox-Helmcken Greenway reported:

- a 16.1% increase in the number of days they engaged in moderate physical activity in a week
- an 8.0% decrease in the time spent sitting and being sedentary
- a 9.8% decrease in the number of days of poor physical and mental health

Source: UBC Health & Community Design Lab - Study of Travel, Health, and Activity, Comox-Helmcken Greenway: 2012-2015

UBC Health & Community Design Lab: Study of Travel, Health, and Activity – Comox-Helmcken Greenway



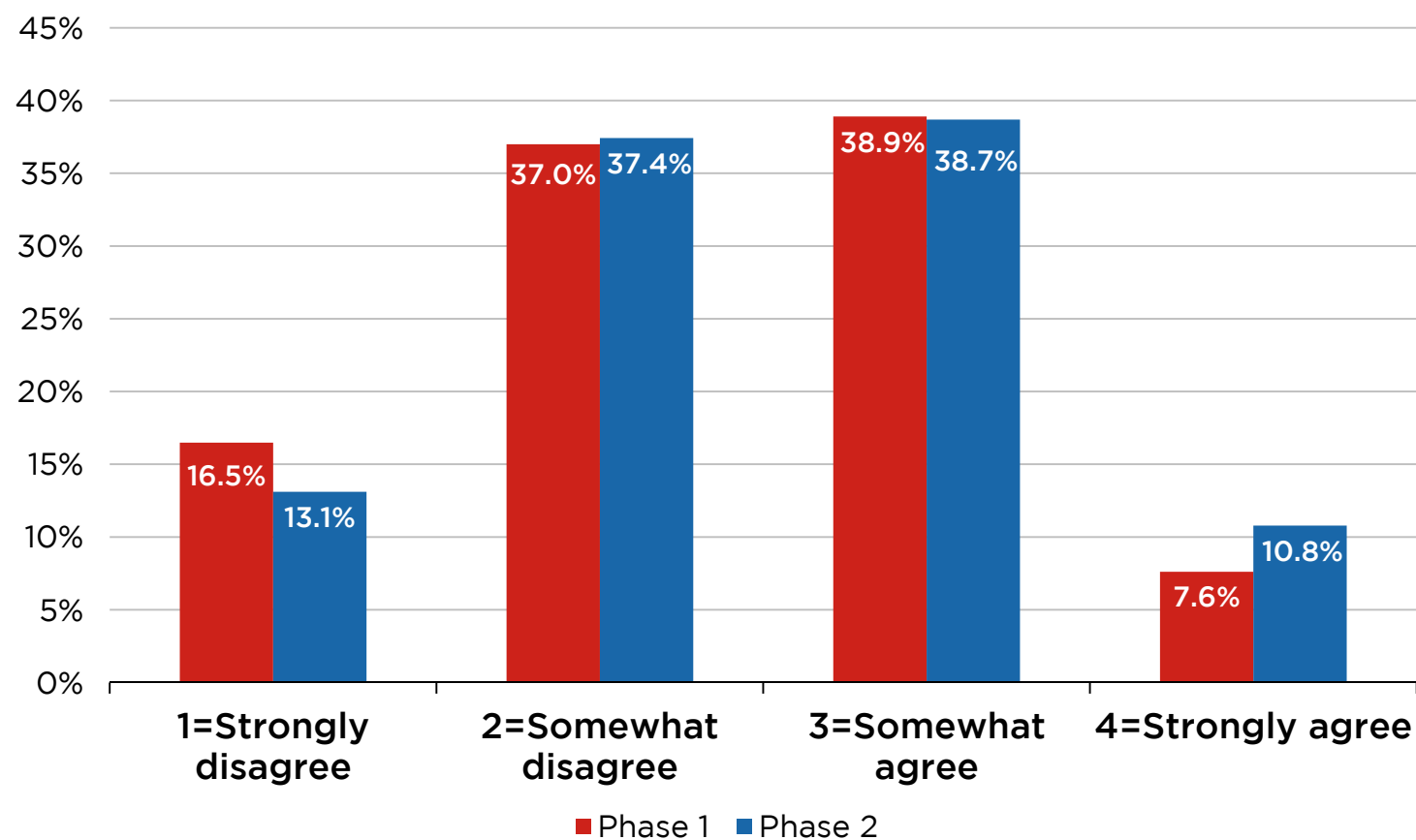
Overall, mode share saw an increase in bicycle and transit trips, and a decrease in auto and walking trips.

Source: UBC Health & Community Design Lab - Study of Travel, Health, and Activity, Comox-Helmcken Greenway: 2011-2015

UBC Health & Community Design Lab: Study of Travel, Health, and Activity – Comox-Helmcken Greenway

Increased perceived ease of friendship formation:

“It is easy to make friends in my neighbourhood” (mean: 2.4 -> 2.5; somewhat disagree)



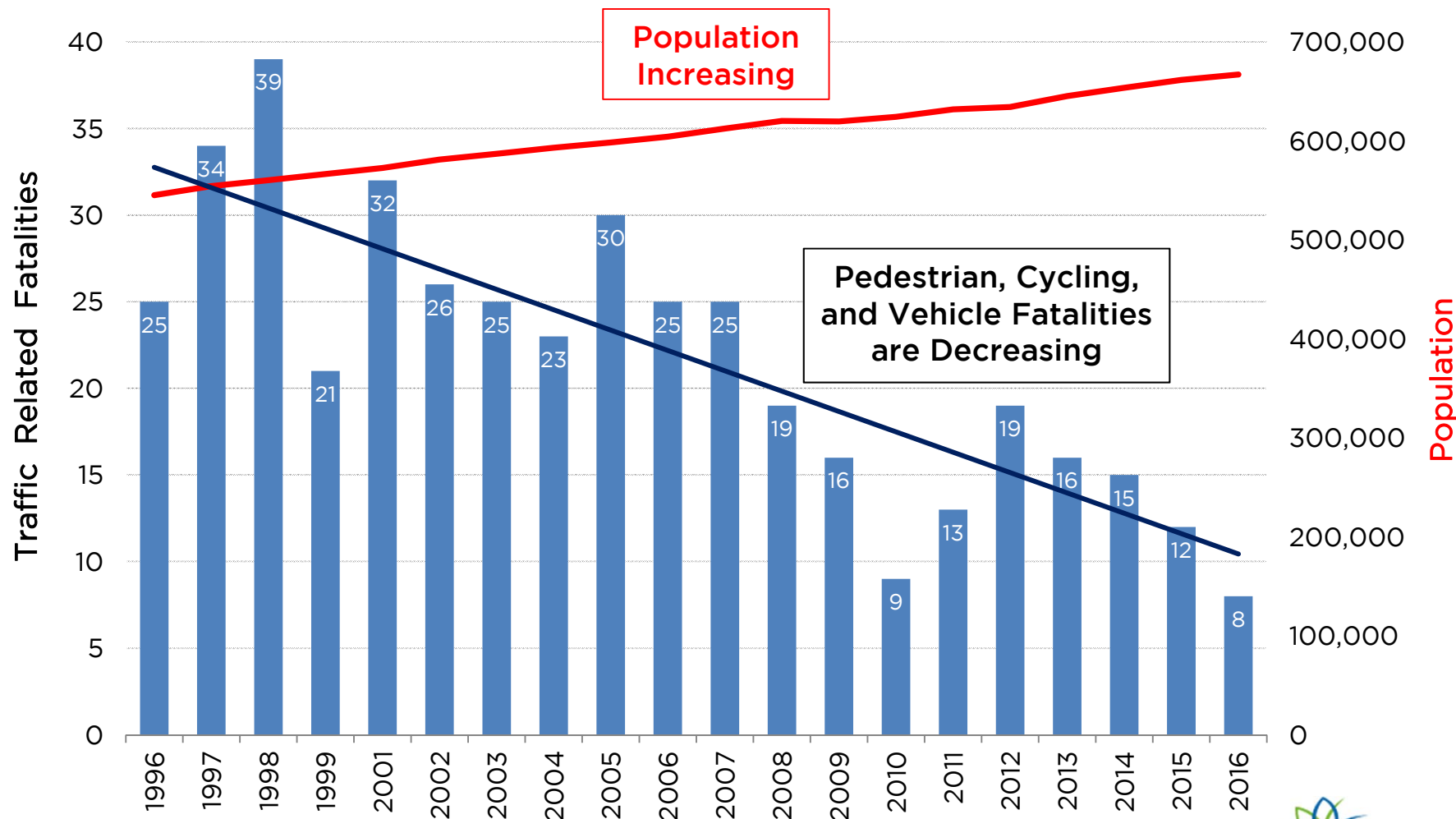
Source: UBC Health & Community Design Lab - Study of Travel, Health, and Activity, Comox-Helmcken Greenway: 2011-2015

4. Monitoring Safety

Data Sources

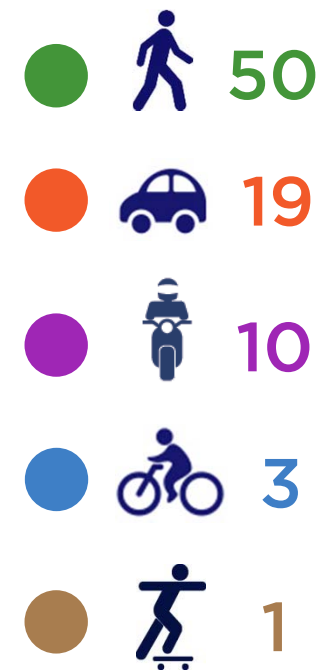
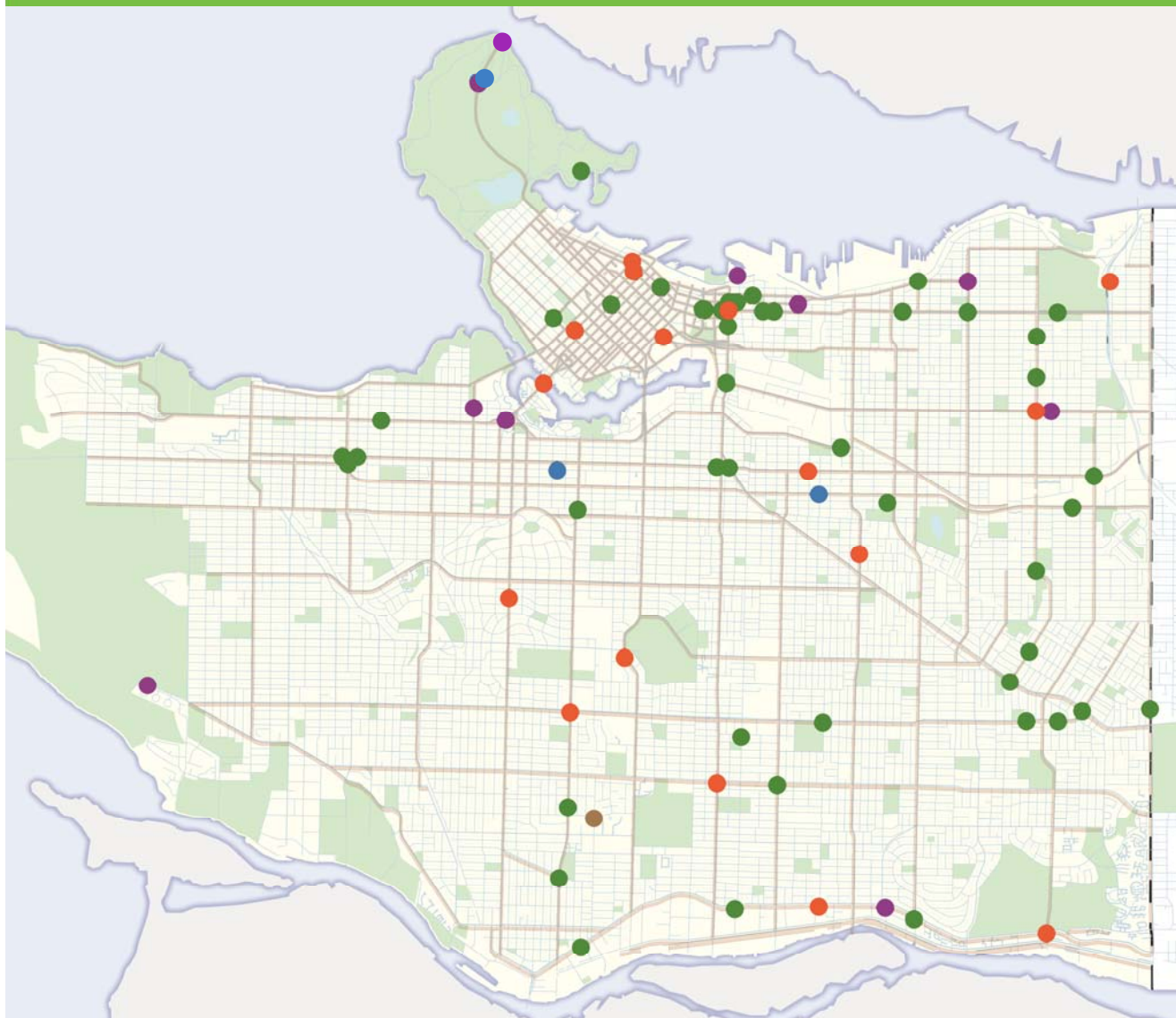
- Transportation related Fatalities – VPD
 - Summary reports as they occur
 - Annual review
- Collisions involving – ICBC
 - Annual collision review
 - Last data received for 2013 - pending database update

Traffic-Related Fatalities - Summary



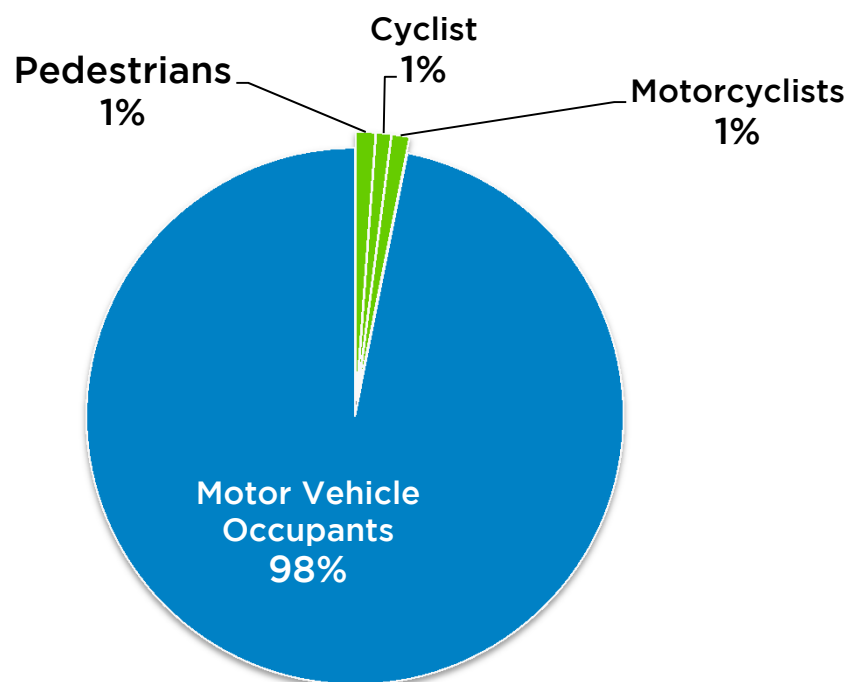
Source: VPD Traffic Fatality Data (1996-2016)

Traffic-Related Fatalities by Mode in the past 6 years



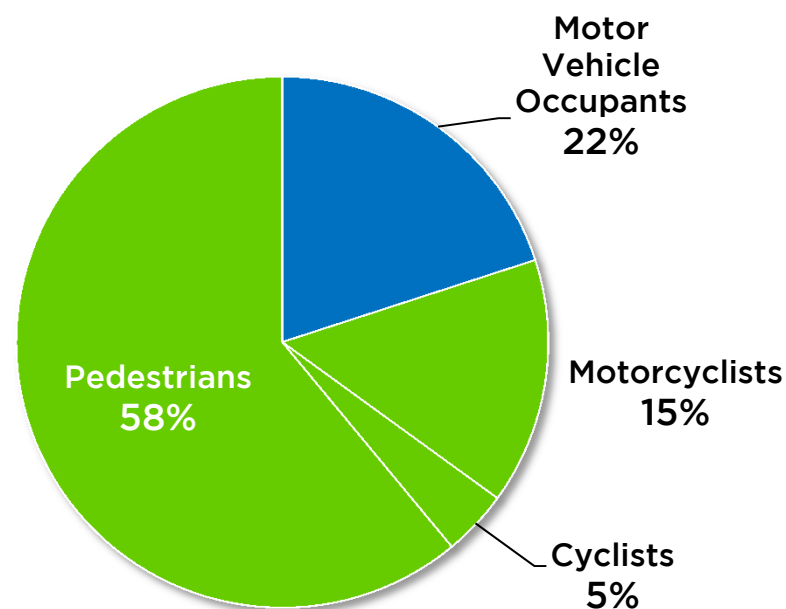
Source: VPD Traffic Fatality Data,
2011-2016

Traffic-Related Collisions and Fatalities



Collisions in Vancouver by road user

Source: ICBC Collision Data, 2009-2013

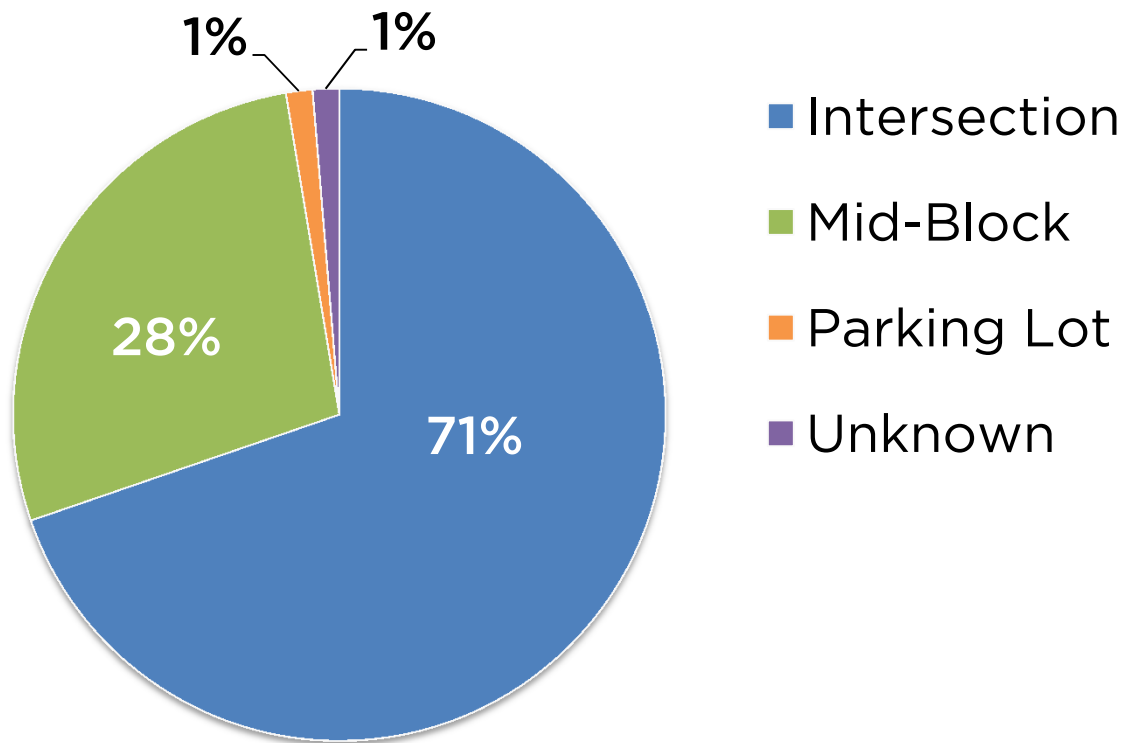


Fatalities in Vancouver by road user

Source: VPD Traffic Fatality Data, 2009-2013

Traffic-Related Fatalities: Where?

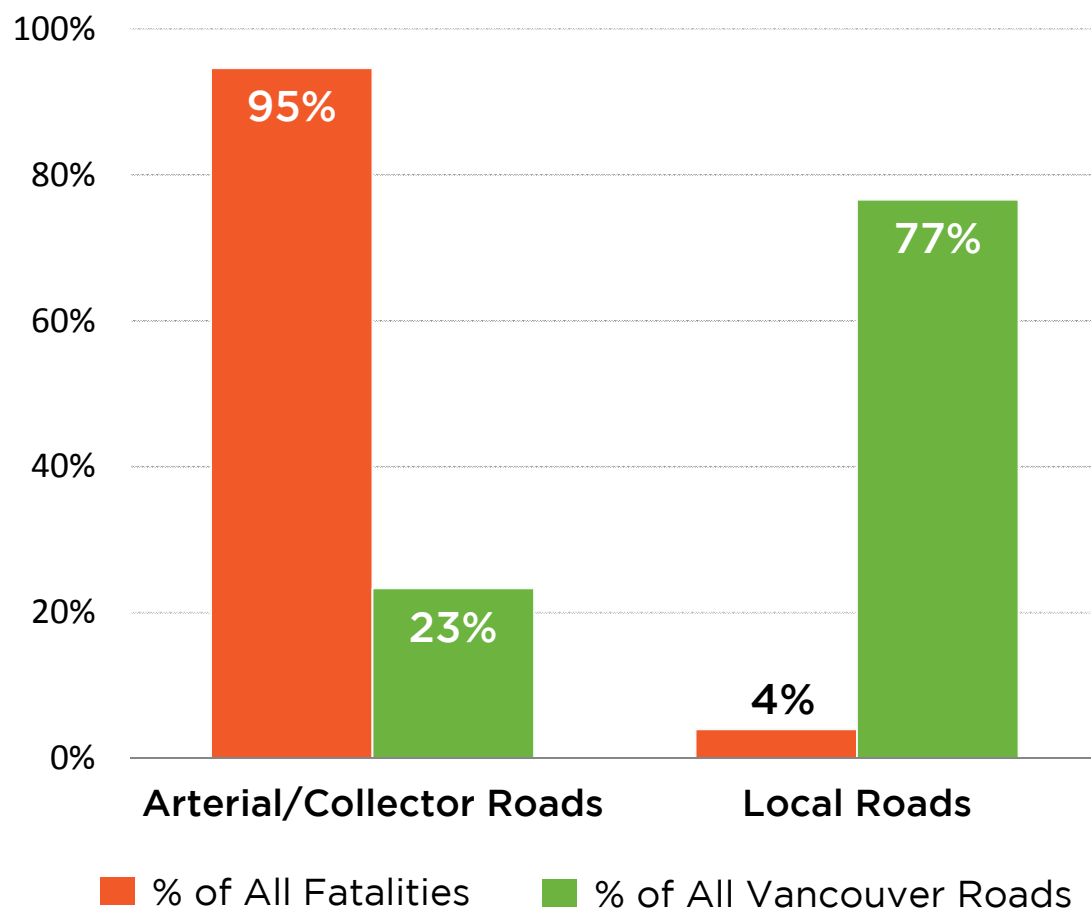
Traffic Fatalities by Location



Source: VPD Traffic Fatality Data, 2011-2015

Traffic-Related Fatalities: Where?

Traffic Fatalities by Road Type

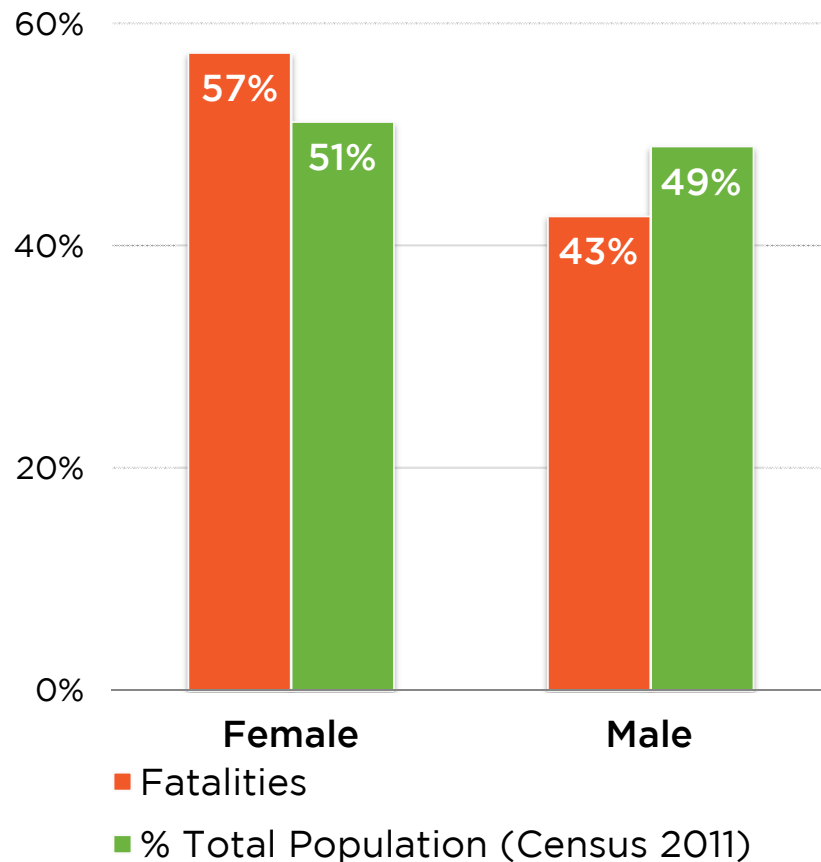


95% of all fatalities occur on arterial/collector roads, which comprise only 23% of all Vancouver roads

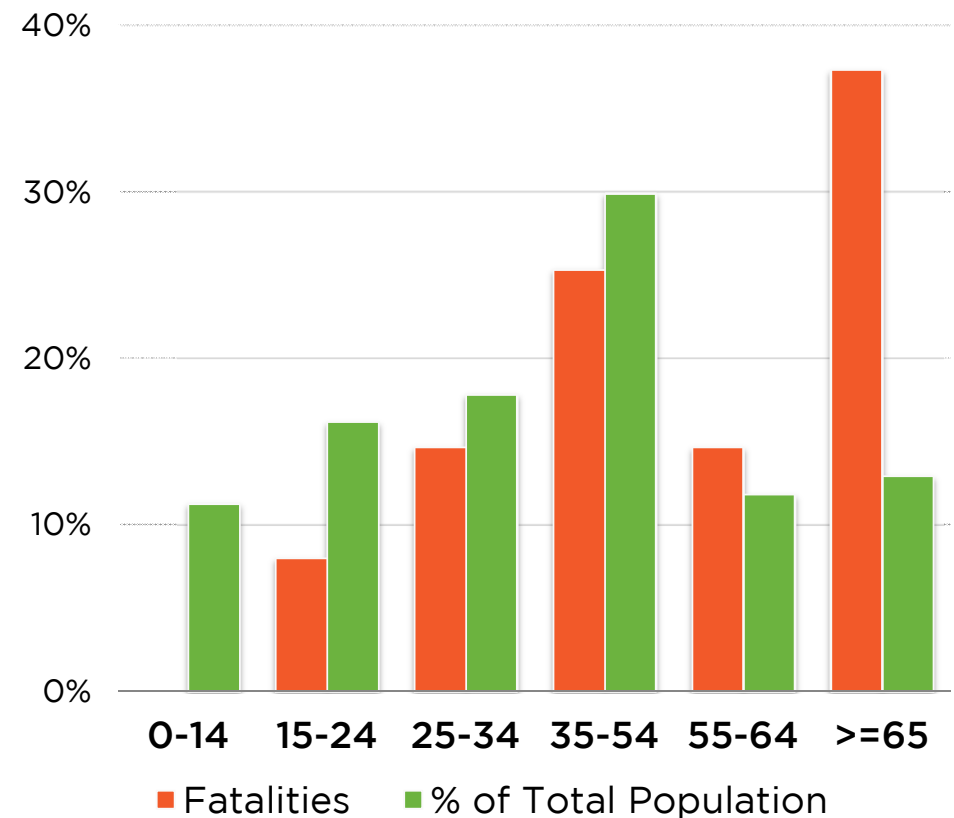
Source: VPD Traffic Fatality Data, 2011-2015.

Traffic-Related Fatalities: Who?

Traffic Fatalities by Gender



Traffic Fatalities by Age



Traffic-Related Fatalities: How?

2015 Fatalities



9 pedestrians

- Through vehicle & pedestrian: 7
- Right Turn vehicle & pedestrian: 1
- Parking lot: 1



2 motorcyclists

- Through & through
- Left turn & through



1 driver

- Left Turn & Through



5. Zero Traffic-Related Fatalities and Serious Injuries Action Plan

Council Resolution

- **THEREFORE BE IT RESOLVED THAT Council direct staff to report back on a strategy for achieving zero traffic-related fatalities and serious injuries, including:**
 - A review of best practices from other jurisdictions,
 - An action plan, and
 - A funding strategy to accelerate implementation.
- **BE IT FURTHER RESOLVED THAT Council direct staff to report back with quick start actions by June, 2016, and longer-term policies by November, 2016.**

Vision Zero: Peer Cities Review

- Initiated by Sweden in 1997
- Other countries in Europe
 - Netherlands
 - Norway
 - Spain
 - Finland
- North America:
 - USA: 16 cities
 - Canada: Edmonton, Ottawa, Strathcona County, Surrey, Toronto

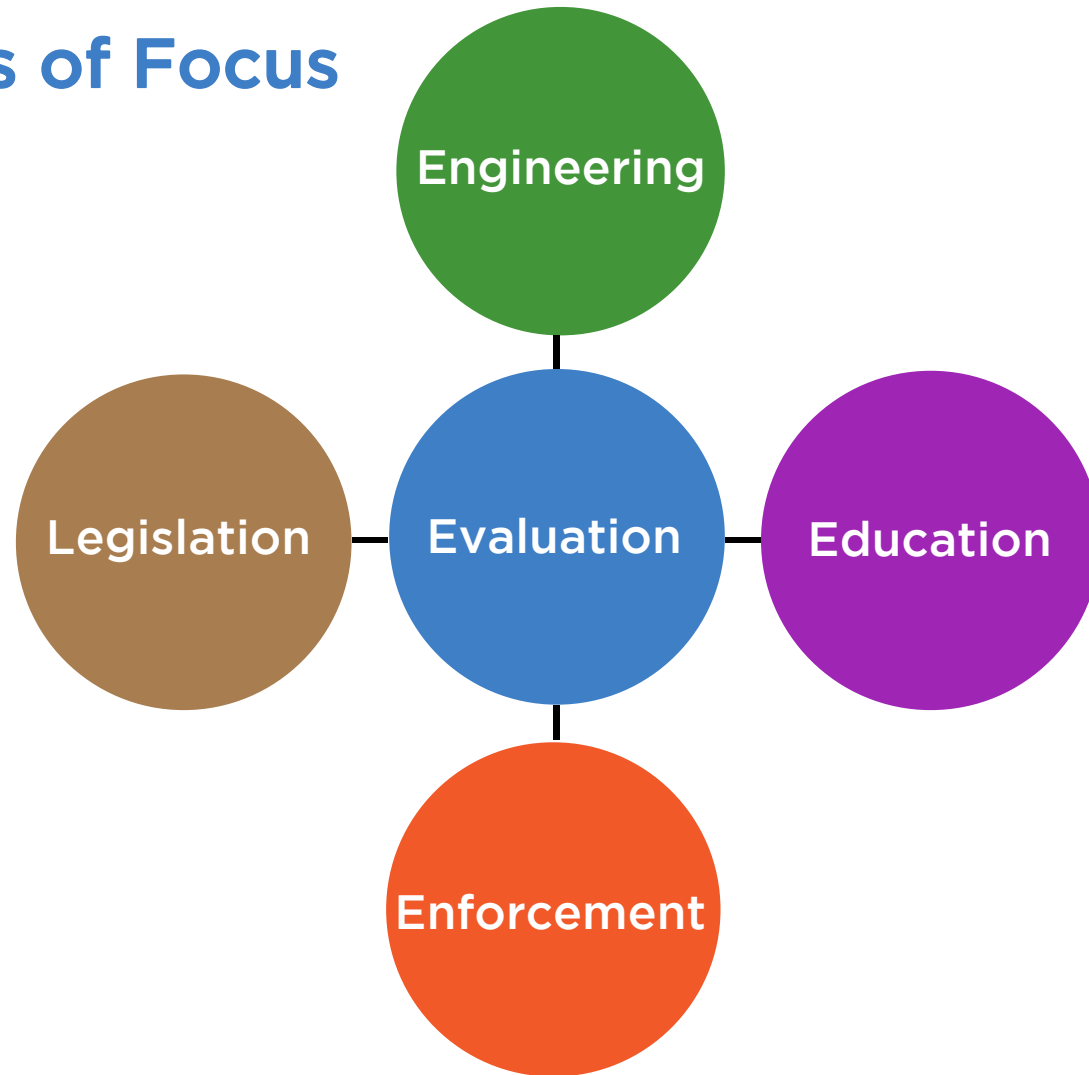
Vision Zero: Peer Cities Review

Core Principles

- Traffic deaths are preventable and unacceptable
- Human life takes priority over mobility
- Policies at all levels of government need to align to make safety a priority

Vision Zero: Peer North American Cities Review

Key Areas of Focus



Vision Zero: Peer Cities Review

Key Actions

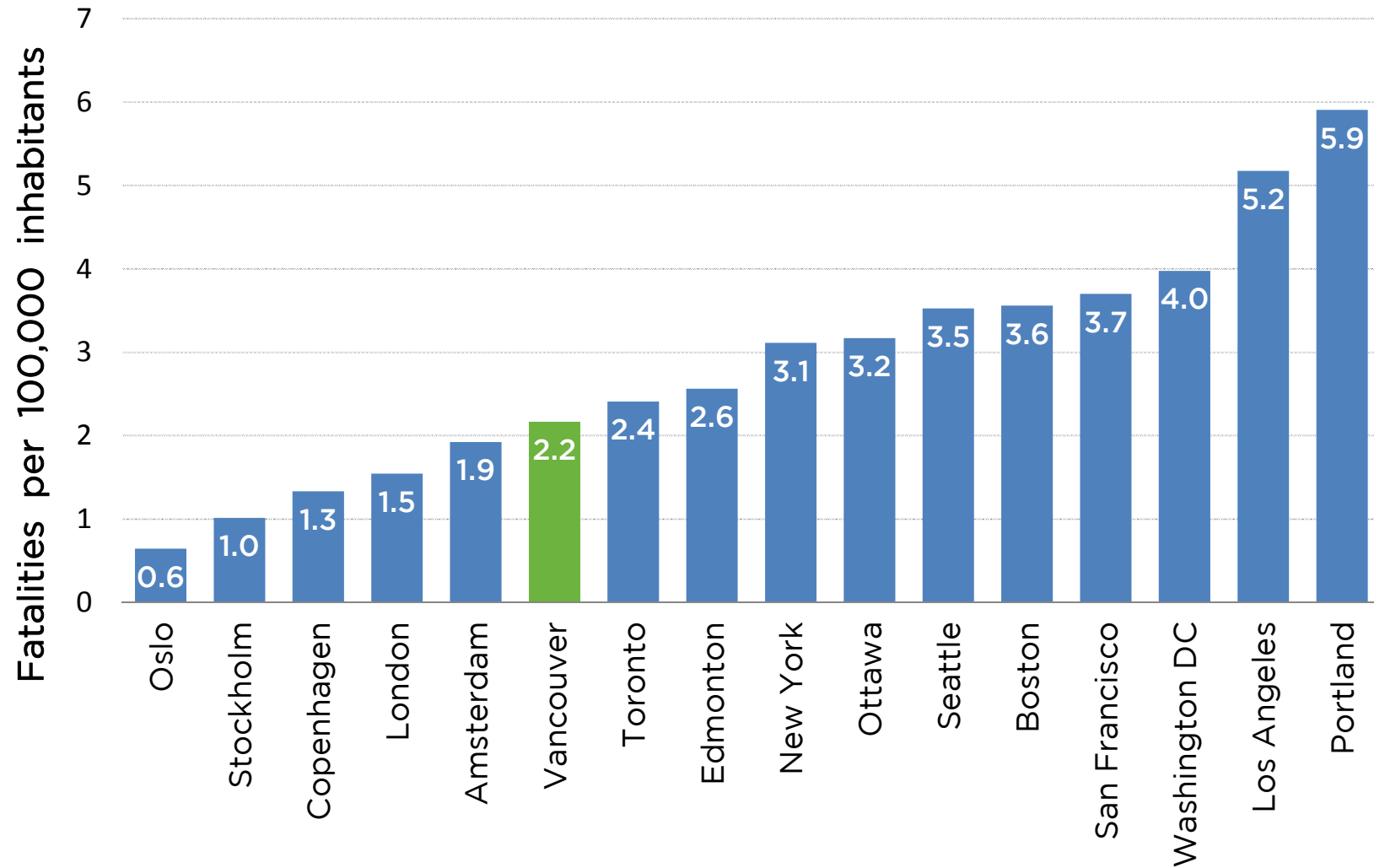
- Identify Priority Corridors with high numbers of injuries and fatality
- Engineering interventions in high priority areas
 - Targeted speed reductions
 - Intersection and corridor improvements
 - Focus on vulnerable road users
- Vision Zero Task Force
- Education and Enforcement Strategies
- Legislation changes

Vancouver Safety Progress

- Transportation 2040: Zero Traffic Related Fatality goal
- Pedestrian Safety Study and Action Plan
- Cycling Safety Study and Action plan
- Creation of Traffic Safety Advisory group
- Working on sharing serious injury data



Vancouver Compared to Other Cities



Moving Towards Zero: Action Plan

1. Enhanced Data
2. Evaluate and Prioritize Locations
3. Engineering Action Plan
4. Enforcement
5. Education & Public Outreach
6. Legislation

1. Enhanced Data

Enhanced evaluation to understand traffic-related severe injuries and make data-driven decisions

Actions:

- Work with Health partners to better understand serious injury data
- Working with ICBC to share severity of traffic related injuries
- To better understand:
 - How many severe injuries happen per year ?
 - When? Where? How? Who?
 - Quantify non-vehicle related incidents

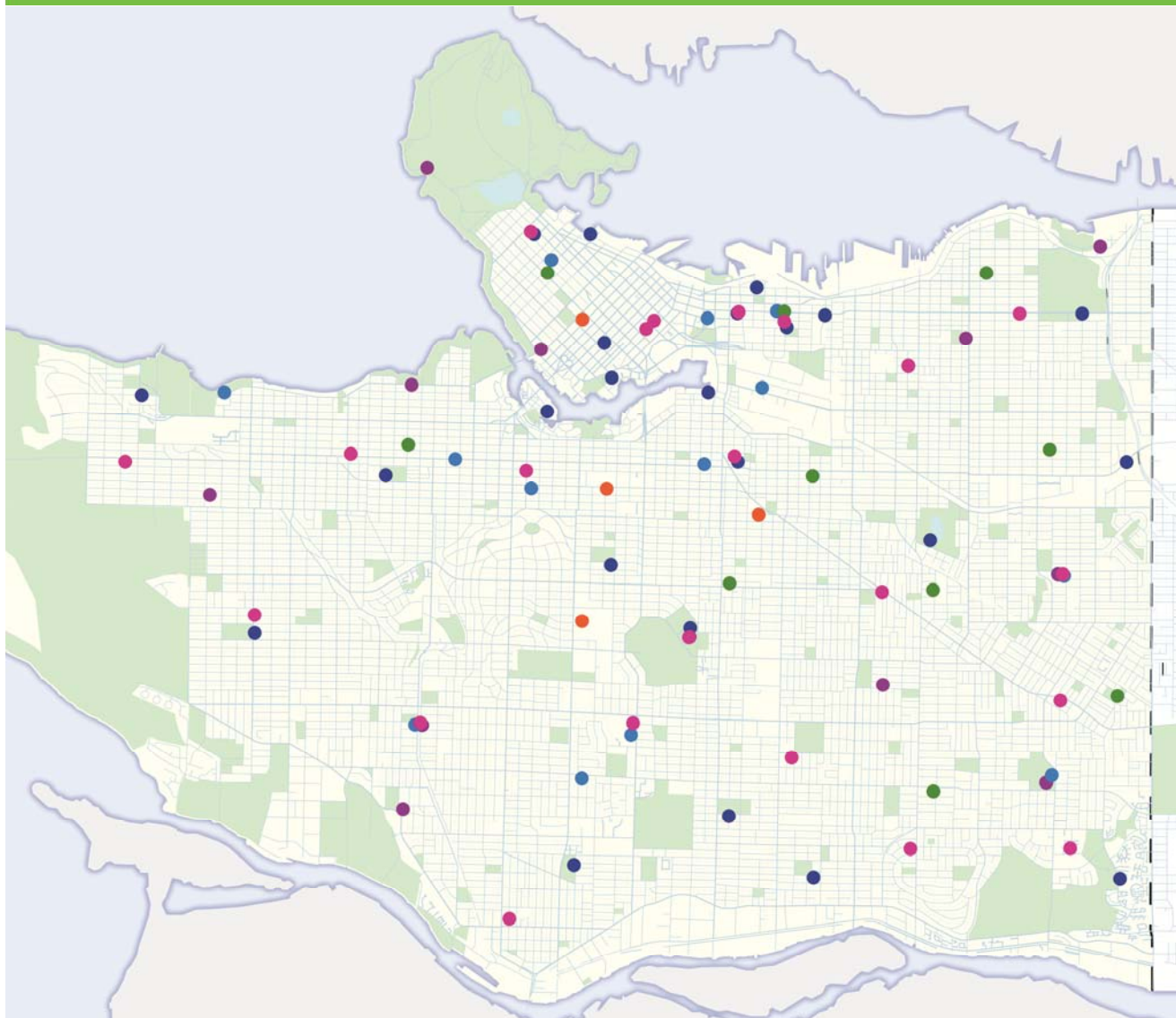
2. Evaluate and Prioritize Locations

Develop Collision Prediction models

- Identify priority locations based on high risk fatal & severe injuries
- Conduct a vehicle & motorcycle study
 - 37% of fatalities
- Identify priority locations based on high presence of vulnerable road users (ie. seniors)

2. Evaluate and Prioritize Locations

Example: Focus on Seniors



- Selected Seniors Centres
- Hospitals
- Community Centres
- Libraries
- Neighbourhood Houses
- Swimming Pools

- Correlate serious injuries and fatalities with seniors areas
- Work with the Seniors Advisory Committee to identify strategies

2. Evaluate and Prioritize Locations

- Identify priority locations by countermeasure

Overrepresented type of collision	Countermeasure
Pedestrian collisions after dark	LED Lighting
Turning vehicles & pedestrians at signals	Leading Pedestrian Intervals
Sidewalk bike riding & falling into traffic	Protected bike lanes

2. Evaluate and Prioritize Locations

Detailed safety studies at priority locations

- Automated video conflict analysis at priority ranked locations



3. Engineering Action Plan

Develop best safety practices toolkit & select the most effective solutions to address priority locations

- **Validate Toolkit**
- **Pilot New Items**

3. Engineering Action Plan

Assess effectiveness and further implement



LED Lighting



Highlight conflict zones



Left turn arrows



Protected Intersections and turn phases

Evaluate pilot programs



Rectangular Rapid Flashing Beacons
3 locations in pilot



Accessible Pedestrian Signals
2 locations in pilot



Leading Pedestrian Intervals
1 location in pilot



Lagging Right Turn Phase
Explore pilot location

3. Engineering Action Plan

Proactive safety

- All Ages and Abilities Bike Network expansion
- Active & safe travel plans to school
- Review key routes around seniors areas
- Policies for new infrastructure
 - LED lighting
 - Countdown timers
 - Sidewalks
 - Curb ramps

4. Enforcement

Target high risk behaviors

Actions:

- Work with VPD to develop targeted enforcement programs to tackle dangerous behaviors at priority locations
 - Speeding
 - Failure to yield to pedestrians
 - Failure to stop at signals
 - Improper turning
 - Disobeying signs
 - Distracted/impaired driving

5. Education and Public Outreach

Engage Vancouverites to travel safely & continue to work in cooperation with safety partners

Actions:

- Create a Vision Zero website
- Report annual progress
- Work with VPD & ICBC on safety education campaigns
- Continue to work with Traffic Safety Advisory Group

6. Legislation

Work with the provincial government towards zero safety goal

Actions:

- Explore expanding red light camera locations
- Advocate for the return of speed camera enforcement
 - School & parks
 - High fatal & severe injury locations
- Request changes to blanket speed limit
- Advocate for changes under the Motor Vehicle Act to protect vulnerable road users
 - Increased penalties for dangerous driving

Next Steps

- **Serious injury data analysis**
 - ICBC
 - Healthcare organizations
- **Priority Intersection, Corridors & Neighborhoods**
 - By countermeasure
 - By vulnerable road users (ie. seniors, pedestrians etc)
 - Select top locations for deep dive
- **Engineering Action Plan**
 - Best practices toolkit
 - Quick start action plan

Report Back November 2016

Questions