

All Age and Abilities Cycling Network

Frequently Asked Questions

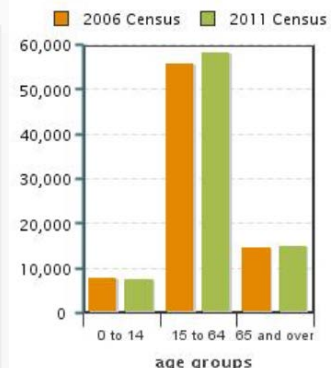
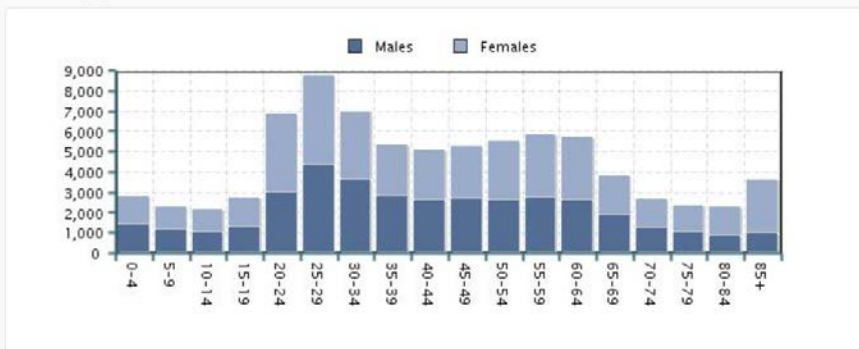
HOW DO AAA CYCLING FACILITIES SUPPORT THE OVERALL CYCLING NETWORK?

- **Attracting new riders and building confidence:** Attracting new ridership requires a comfortable, convenient and connected bicycle network to get people out riding and is fully supported by existing infrastructure for navigating comfortably along existing neighbourhood connections and quiet local roads. Just like how a road system has highways or arterial roads, a bicycle network needs to provide direct, convenient and comfortable routes across town and regionally to make biking a practical transportation option which is affordable, convenient, fun and easy.
- **Neighbourhood connections:** Existing and future bicycle facilities provide valuable connections throughout the neighbourhoods and villages where people live and provide a service in supporting residents daily needs of going to the local grocery store, coffee shop, visiting friends, or getting to school or day care. If a busy road or network gap obstructs a resident from getting to their local village destination, other mobility choices such as driving a car will be more attractive.
- **Connect residents to the AAA Network:** Existing bicycle facilities provide valuable connections for residents to reach the network from their homes and other destinations not on the AAA network.

HAS THE CITY CONSIDERED DEMOGRAPHIC TRENDS AS A PART OF ITS PLANNING?

The City's population age groups are shown below, with the majority of the population between 15 and 65 years of age.

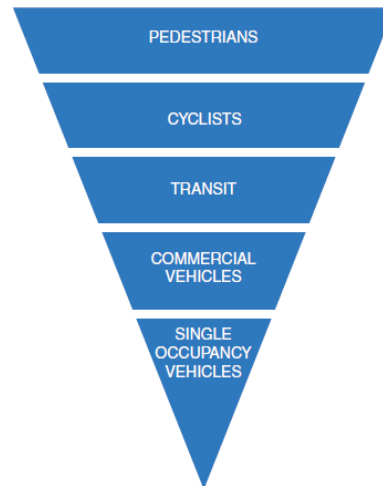
Victoria, CY – Population by five-year age groups and sex



IS THE GOAL TO ELIMINATE CARS?

The City's Official Community Plan identifies a hierarchy of transportation and mobility priorities (see below) which prioritizes pedestrians, cyclists and transit over motor vehicles. Commercial vehicles and single occupancy vehicles will always be required for specific transportation and mobility needs, and will continue to be an integral component of our transportation system.

Figure 10: Hierarchy of Transportation and Mobility Priorities



WHAT ARE THE POTENTIAL ECONOMIC IMPACTS OF PROTECTED BIKE LANES?

There have been a number of academic and business studies on the impacts on the economic impact of bicycle lanes and active transportation investments. Example highlights from recent studies:

- City of Vancouver
 - “DVBIA says cases for bike lanes from engineers, cycling advocates have proven to be correct.
 - "Times have changed... separated bike lanes work in the downtown area," says Charles Gauthier with the DVBIA”
- The United States’ Urban Land Institute reveals findings (March 2016) in support of active transportation economics:
 - A San Francisco State University study found that when the city of San Francisco reduced car lanes and installed bike lanes and wider sidewalks on Valencia Street, two-thirds of merchants said the increased levels of bicycling and walking improved business. Only 4% said the changes hurt sales.
 - The city of Sydney, Australia found that building 200 km of planned bikeways would generate at least \$354 million USD in economic benefits. The network was

also expected to reduce traffic congestion by 4.3 million car trips per year and to increase bicycle trips by 66%.

- A 148% increase in real estate sales next to protected bike facilities in Indiana, or a \$70k value increase in homes next to bike lanes in Pennsylvania.
 - “houses located in areas with above-average walkability or bikability are worth up to \$34,000 more than similar houses in areas with average walkability levels” – according to a 2009 US nationwide study by CEOs for Cities.
- According to a study (“Protected Bike Lanes Mean Business,” PeopleForBikes and the Alliance for Biking & Walking) covered by the Guardian in 2014, some argue that bike lanes are great for business for the following main reasons:
 - Increasing retail visibility and sales volume: Cyclists spend less per shopping excursion, but shop more frequently, and spend more per month
 - Real Estate adjacent to bike lanes is more desirable. New York saw a 49% decrease in store vacancy adjacent to protected lanes, when compared across the City.
 - Cycling attracts healthy, talented people to both work and relocate to a City with superb cycling and active transportation infrastructure.

IS THERE ANY DATA ON WHICH TYPES OF BUSINESSES WILL BENEFIT FROM BIKE LANES?

There has not to date been a survey completed within Victoria to indicate which type of businesses will have greater benefit from bike lanes. Numerous international studies, however, have cited the catalytic nature of bicycle and pedestrian infrastructure improvement projects as important contributions to economic development. Some businesses will benefit more than others and businesses will adapt to market and environmental conditions.

The Urban Land Institute 2016 report entitled “active transportation and real estate: the next frontier” identified positive impacts to property values, public health and the environment and economic development.

HOW DOES THE CITY MEASURE WHERE AND HOW PEOPLE TRAVEL?

The City of Victoria relies on multiple sources of information to understand modal split. As a part of each national Census, the City receives detailed journey to work data which identifies where people live, where they work and how they travel for their daily work-related commute. The CRD also conducts an origin and destination study every 5 years which also provides statistically

- >> **Active transportation infrastructure can catalyze real estate development.** Trails, bike lanes, and bicycle-sharing systems can improve pedestrian and bicyclist access to employment centers, recreational destinations, and public transit facilities, thereby enhancing the attractiveness of developments along active transportation corridors. In some cases, former industrial districts and towns outside urban cores have benefited from active transportation infrastructure due to improved walking and cycling connectivity.
- >> **Investments in trails, bike lanes, and bicycle-sharing systems have high levels of return on investment.** Regions and cities have found that relatively small investments in active transportation can have outsized economic returns due to improved health and environmental outcomes and reduced negative externalities, such as automobile traffic congestion and poor air quality.
- >> **There is evidence of a correlation between access to active transportation facilities and increased property values.** In a number of markets, both urban and suburban, studies have found that direct access to trails, bike-sharing systems, and bike lanes can have a positive impact on property values. A number of current and recent development projects have cited this phenomenon as a rationale for investing in particular locations and/or including bike-friendly features.
- >> **A reciprocal relationship exists between the private and public sectors in terms of maximizing investments in active transportation.** Developers have benefited from the ability to build in sought-after locations that are close to publicly financed active transportation routes, but have also made direct investments in active transportation by partially financing improvements to facilities, such as trail networks or bike-sharing systems, through public/private partnerships.

relevant samples for residents in Victoria covering all types of travel, including mode, age, gender and purpose of travel. BC Transit provides the City with transit user data and the City itself also collects pedestrian, cycling and motor vehicle data at regular intervals on a rotating basis throughout the municipality.

WHAT ALTERNATIVES

ROUTES WERE CONSIDERED?

- **2014 network alternate options:** East/west bicycle network alignments for the downtown core identified in the 2014 Network included Fisgard street, Pandora avenue, Johnson street, Yates street, Fort street, and Humboldt street. Bicycle facilities on Pandora and Johnson have already been committed to and Humboldt and Fort are planned for AAA bicycle network investments in the coming years. View street, Broughton street and Courtenay street were not included in the 2014 bicycle network update do to their lack of directness as routes, disjointed alignments and limited available space for providing high quality bicycle facilities.
- **Corridor Screening:** As a part of the Biketoria network development process, City staff and consultants reviewed a number of potential candidate streets for AAA facilities in the downtown core. With Pandora Ave already committed to as an AAA route (2014) and the desire to maintain a 500m buffer between AAA facilities, east/west candidate streets were identified as: Johnson Street, Yates Street, View Street, Fort Street, Broughton Street and Courtenay Street.
- **Minimum Grid Analysis:** From the list of candidate streets, two *continuous and direct routes* were selected for detailed analysis. These streets were Yates Street and Fort Street. The rationale for this criteria was that people riding bikes, like all other modes (driving, walking and transit), prefer the most direct and continuous route. Cyclists currently use indirect routes because the most direct, continuous routes are not as safe or as comfortable.
- **Design Considerations:** Of the two corridors (Yates and Fort) - there were two combinations that were assessed:
 - i. Two one-way facilities on Yates and Fort
 - ii. One two-way facility on Fort Street

HOW ARE TWO-WAY CYCLE TRACKS DESIGNED?

- A two way protected bike lane is becoming a more common design treatment for AAA bicycle facilities in constrained urban environments like the City of Victoria. Many cities have bi-directional facilities which are safe and efficient at moving cyclists when intersections are also invested in to provide safe and timely for passage and turning movements.
- Best case practices in design and design standards provide a basis from which two way bike lanes on one way streets can be safe, enjoyable and an efficient use of space. The two way protected bike lanes will range in size from 2.7m to 3.5m with an average of 3.0m which will accommodate cyclist volumes up to 250 cyclists per hour comfortably. The two-way facilities are also wide enough to provide vehicles to drive down the bike lanes for maintenance, operational or other emergency needs. High speed commuters will always have the option to cycle on the road way.

IS IT TRUE THAT TWO-WAY FACILITIES HAVE BEEN REMOVED IN CITIES IN EUROPE?

- City staff understand that, due to the success of cycling programs, some two-way bike facilities in Europe are being converted to one-way facilities along with construction of new facilities in order to accommodate higher cycling volumes. Staff will continue to monitor the progress and success of cycling networks in other cities to inform Victoria's program.

WHAT IS THE DATA COLLECTION PLAN FOR PANDORA AVENUE?

- The City is developing data collection strategies to develop objective findings on the use of the Pandora bicycle facilities. Data collection to date includes traffic counts of all modes on Pandora Avenue so a mode shift can be calculated following the completion of the two way protected bike facility. Impacts and benefits of the two way protected bike lane will be assessed after the completion of the two way bike lane. User group surveys will be used to understand consumer mode choice and spending themes and the City is determining what other objective financial information can be secured.

HOW ARE PEOPLE WHO RIDE BIKES MADE ACCOUNTABLE FOR THEIR ACTIONS AND CAN BIKES BE LICENSED?

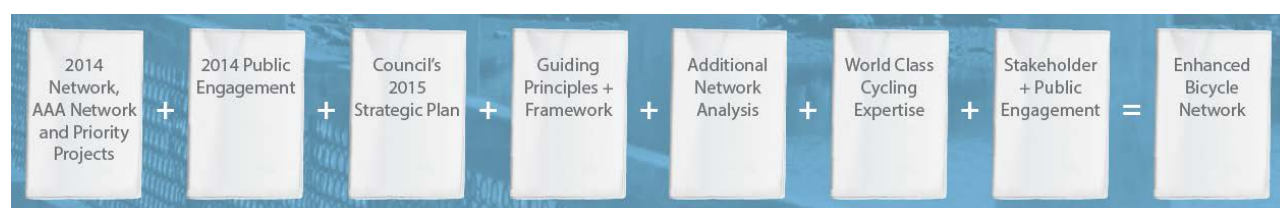
Bike riders in BC are not currently required to be licensed. The City will continue to work with enforcement agencies on cyclist-specific initiatives that encourage positive behaviours.

HOW CAN THE CITY REDUCE THE CASES OF DISTRACTED PEDESTRIANS WHO WALK INTO BUSY ROAD AND BIKEWAYS?

Organizations like the CRD Traffic Safety Commission and WalkOn Victoria can be approached to assist in raising the awareness of distracted pedestrian activities.

HOW WAS THE AAA CYCLING NETWORK DEVELOPED?

To support the evaluation of the 2014 network, recommend enhancements to the network and identify priority corridors, the following project framework and analysis inputs were used to develop the enhance bicycle network.



- **2014 Network and Priority Projects:** The 2014 Network was developed by staff and informed through a city-wide consultation program to enhance the 1995 Bicycle Master Plan network which lacked any connections through the downtown core. Priority corridors approved for implementation by Council in July of 2014 included the following:
 - i. Pandora Avenue - Store street to Cook street (currently under construction)
 - ii. Johnson Street – Store street to Cook street (completed 2016)
 - iii. Vancouver Street – Park Boulevard Tolmie Avenue via Graham and Fifth streets (included in 2016 Priority Network – not completed)
 - iv. Kings / Haultain Streets – Dowler to Richmond Road (included in 2016 Priority Network – not completed)
 - v. Off-Shelbourne route – (slightly revised in 2016 Priority Network – not completed)
 - vi. Wharf / Belleville route - (included in 2016 Priority Network – not completed)
- **2014 public engagement evaluation:** Review of the 2014 consultation process concluded the process was very comprehensive and engaged a diverse range of stakeholders.
- **Council 2015 Strategic Plan:** Premised on connecting villages and the downtown core and being bold and a leader, the #Biketoria study included additional corridors in the bicycle network to augment the 2014 network which included Cook street and Fairfield road as AAA candidate corridors.

- **Guiding principles and framework:** To inform the network enhancement recommendations, the following guiding principles were established:
 - i. **Comfortable** (safe and comfortable for people of all ages and abilities)
 - ii. **Complete** (a connected minimum grid network that ensures all residents have access to AAA facilities with a short cycling distance)
 - iii. **Convenient** (a direct and convenient network that connects major destinations in the City which include the urban core, town centres, urban villages, retail businesses, community amenities such as schools, parks, institutions and health centres, major employment areas and major tourist destinations)

- **Additional network analysis:** Additional technical analysis of the Network included a minimum grid assessment of base conditions of priority corridor candidates to gauge the suitability and feasibility of each corridor. Assessment criteria included the following:
 - i. Length of corridor
 - ii. Road classification
 - iii. Road design (one way / two way)
 - iv. Posted speed limit
 - v. Width of corridor
 - vi. Number of vehicle lanes
 - vii. Parking composition
 - viii. Truck route
 - ix. Greenway
 - x. Current bicycle infrastructure
 - xi. Current level of comfort
 - xii. Pedestrian & cycling Master Plan – Primary Inter-Community Network Designation
 - xiii. Links to adjacent neighbourhoods

More technical analysis to further refine the assessment included geospatial mapping to assess the following:

- i. Existing level of traffic stress
 - ii. Cycling collision heat map
 - iii. Activity density heat map
 - iv. Cycling network gap analysis
 - v. AAA cycling network gap analysis
 - vi. Bicycle commute mode share analysis
 - vii. Cycling potential analysis
 - viii. Equity score mapping
 - ix. Topographical slope analysis
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- **World class cycling expertise:** To help in the analysis of the network enhancement and prioritization study world class cycling implementation experts who were instrumental in the successful development and implementation of cycling infrastructure program in Cities who are world leaders in transportation mode shift (eg. Copenhagen, Portland, Bogota, Vancouver).

- **Stakeholder & public engagement:** The most influential factor in the development of the network recommendations and priority recommendations was a multi-tiered consultation program which was layered with the advancement of conceptual designs and priority recommendations. Highlights from the consultation process include the following:
 - i. Over 2,500 consultation participants in a diversity of consultation platforms including events, surveys, pop up pilot bike lanes, one on one meetings, interest group meetings, and / or social media informed the network recommendations and conceptual designs for each of the 8 priority corridors.
 - ii. Key messages heard included safety matters, quality counts and road congestion is a concern
 - iii. 65% of survey respondents do not normally bike for transportation needs
 - iv. 78% of survey respondents agreed that the proposed AAA enhanced network connects them to the places they want to go
 - v. 70% of survey respondents agree that they will bike more once the AAA network is built
 - vi. 71% of survey respondents agree the AAA network comes close enough to their home
 - vii. Network alignments with strong community concerns included the James Bay Belleville alignment, Oak Bay avenue east of Richmond alignment, Cook street and North park village alignments, and Government street alignment between Yates and Wharf. BC Transit had concerns regarding the Gorge road alignment and the design team (consultants and staff) had concerns with the feasibility of the Shelbourne and Fairfield alignment due to impacts to parking, street trees and project costs.

Priority selection and sequencing recommendations have been further refined by interdisciplinary staff assessment to confirm the recommendations of the staff and consultants work throughout 2016 through a comprehensive framework which evaluated the 8 corridors as 25 isolated segments under the following evaluation metric themes:

- **Safety and Comfort:** Assessment of unsafe existing conditions, level of traffic stress, scale of safety improvements, topographical constraints, quality of design (AAA)
- **Connectivity:** Assessment of segment connection to existing and / or planned facilities, connection to inter-municipal facilities, connection to key destinations, addressing a network barrier, gap or hindrance, directness of route.
- **Demand:** Assessment of segment responding to current bicycle mode share, origin and destination activity, future cycling potential, distribution of infrastructure, latent demand for infrastructure.
- **Feasibility:** Assessment of the conceptual designs for priority corridors were informed by the construction costs, complexity of design, construction impacts, level of public support, leverage from other projects and additional resource needs.