

NO: **R169**

COUNCIL DATE: **July 23, 2012**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **July 19, 2012**

FROM: **General Manager, Engineering**

FILE: **8630-40 (Bike)**

SUBJECT: **Surrey Cycling Plan**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Receive this report as information; and
2. Approve the Surrey Cycling Plan, which is attached as Appendix I to this report, as a secondary plan to the Surrey Transportation Strategic Plan.

INTENT

This report summarizes the key elements of a new Cycling Plan for the City, describes the consultation process related to the development of this new Plan and seeks Council's approval of the new Plan, which is attached as Appendix I to this report.

BACKGROUND

This Cycling Plan (the "Plan") sets out the vision for the expansion of cycling as a safe, convenient and affordable transportation option for the citizens of and visitors to Surrey. The Plan builds on the 2008 Transportation Strategic Plan that identified the importance of cycling in achieving broader transportation and City objectives in the areas of safety, health, accessibility, sustainability, environmental protection, and developing a successful economy.

The approval of the Plan will provide clear direction, strategies and increased focus on this active and cost-effective mode of transportation. The two parallel plans to the Cycling Plan are the Walking Plan and Greenways Plan, which collectively provide a comprehensive policy direction for active transportation.

The Cycling Plan and the Greenway Plan promote cycling for both transportation and recreation purposes. An increase in cycling as a mode of transportation will reduce vehicle congestion and will demonstrate active living and promote healthy communities.

The most successful and livable cities in the world have high levels of cycling. Copenhagen and Amsterdam have a cycling mode share of 40%, and even in North America, cities like Davis, CA and Portland, OR in the USA have achieved 15% and 8% cycling mode share, respectively. New

York, Boston and Montreal have increased their investment in cycling and are seeing significant increases in cycling mode shares as a result.

Currently less than 2% of trips made in Surrey are by bicycle. There is a significant opportunity for this mode of transportation to become more important.

DISCUSSION

In the eighteen years since the Bicycle Blueprint was adopted, much has changed in Surrey. There has been continued rapid growth, an increased recognition of the importance of sustainability in the services that are provided, a diversity of neighbourhoods, an increased awareness of the relationship between car dependency and obesity, an increased focus on active transportation modes, of encouraging a more active and healthier city, changing demographics, and increasing demands on the transportation systems. Collectively these considerations require a responsive, flexible, and innovative approach in relation to building infrastructure for and promoting cycling as a safe and viable transportation choice for more people. This is evident in the number of City policy documents that touch on cycling as listed below:

- Official Community Plan;
- Sustainability Charter;
- Transportation Strategic Plan;
- Walking Plan;
- Greenways Plan;
- Plan for the Social Well-Being of Surrey Residents;
- Parks, Recreation and Culture Strategic Plan; and
- Child- and Youth-Friendly City Strategy.

These plans, directly or indirectly, promote cycling as a viable, sustainable and growing alternative to the private car for many trips. Cycling also improves the ability for citizens to gain access to health services, education, shopping, employment, cultural events, and recreation. The Cycling Plan articulates policies and strategies that recognize that cycling is more than just building bike routes. It examines the full spectrum of considerations that are important to making cycling an attractive alternative.

In addition to examining other City policies, consultation was undertaken with important stakeholders, including community and business associations, advocacy and environmental groups, the School District, Health Authority and transportation agencies. Organizations with a focus on cycling were also consulted including the Hub (former VACC) and BEST (Better Environmentally Sound Transportation). An online survey about cycling, which resulted in 400 responses, was conducted to solicit opinions and comments from those that live and work in Surrey. In December 2011, an Open House was hosted by staff to present information about and invite input into the drafts of the Cycling Plan and the Greenways Plan.

Comments received from the public and external stakeholders can be summarized in three main streams:

- Cycling connections are important;
- From start to finish, the cycling environment matters; and
- Investing in cycling education and awareness is essential.

Expanding on these comments and the direction established through other City policies, the Cycling Plan has been organized around four principles, each of which is supported by a strategic objective:

Principle	Strategic Objective
Making Connections	Expand and improve the on- and off-street cycling network.
Providing Door-to-Door Service	Increase the availability, quality and variety of end-of-trip facilities.
Managing and Maintaining the Network	Keep the network safe, visible, and in good condition.
Promoting Cycling	Promote safe cycling as a healthy, fun, affordable and sustainable way to travel.

These principles and strategic objectives support the creation of a healthy City:

- That is well connected with bike routes, both on- and off-street;
- That is safe and convenient for cyclists of all ages and abilities;
- That has secure bicycle parking in both commercial and residential developments;
- That has easily identifiable and properly maintained bike routes;
- That supports cycling as a realistic transportation choice; and
- **Where more and more people are cycling.**

Under the above-articulated principles, the Plan has identified over seventy Actions for Change to build a cycling-friendly Surrey. Many of these Actions for Change are already underway but there are other new policies and initiatives that will need to be completed over time. The Plan includes shorter term work that can begin immediately while other elements of work will be accomplished over the next few years. The Plan recognizes that there is a need to look at cycling at all levels and at all scales. It includes both small-scale solutions as well as broader strategic changes. Big-picture issues such as budget allocation are important but more detailed measures, such as adequate signage and up-to-date mapping, cannot be underestimated. These seemingly minor components of the Plan can have a significant effect on ridership, enjoyment, and public satisfaction.

To ensure the objectives of the Plan are achieved, it is important that it is regularly updated. In this regard, the Plan contains a number of performance indicators that will help in determining whether the goals of the Plan are being achieved and if adjustments need to be made to the Actions for Change and/or the resources being applied to the implementation of the Plan's Actions for Change.

REGIONAL CYCLING STRATEGY

The City supports the vision of the Regional Cycling Strategy (2011) for a cycling-friendly region, where cycling is safe, convenient, comfortable, and fun for people of all ages and abilities. The regional targets for 2040 are:

- 15% of all trips less than 8 km to be made by bicycle;
- 50% of all cycling trips made by females; and
- 15% fewer deaths or serious injuries while cycling.

Staff supports these goals and the proposed Surrey Cycling Plan will contribute to achieving these regional targets.

Funding levels for cycling infrastructure have recently increased to approximately 3% (\$2 million) of the capital transportation budget. The City also undertakes a large annual capital roads program within which cycling improvements are integrated, including new bicycle lanes and special treatments for cyclists at intersections. If this additional work is taken into account the overall investment in cycling infrastructure annually approaches 14% of the total transportation budget. Such investments will assist in achieving the above-referenced targets.

SUSTAINABILITY CONSIDERATIONS

Surrey has placed sustainability at the centre of all of its decision-making and the Cycling Plan recognizes that creating and shaping a healthy and sustainable City means building a City where people can walk, cycle and use transit as their preferred modes of transportation. The Cycling Plan directly supports the following scope actions of the City's Sustainability Charter:

- SC13: Create a Fully Accessible City; and
- EN15: Sustainable Transportation Options.

CONCLUSION

The Cycling Plan will support cycling in Surrey through a multi-faceted approach that will:

- Expand and improve the on- and off-street cycling network;
- Increase the availability, quality and variety of end-of-trip facilities;
- Keep the cycling network safe, visible, and in good condition;
- Promote safe cycling as a healthy, fun, affordable and sustainable way to travel; and
- Create a more cycling-friendly community.

Based on the above discussion, the Engineering Department recommends that Council approve the Surrey Cycling Plan, which is attached as Appendix I to this report, as a secondary plan to the Surrey Transportation Strategic Plan.

Vincent Lalonde, P.Eng.
General Manager, Engineering

JB/PB/LFM/brb

Appendix I – Surrey Cycling Plan



CYCLING PLAN

toward a cycling friendly community





Toward a cycling friendly community.





CYCLING PLAN

toward a cycling friendly community

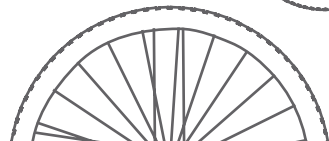
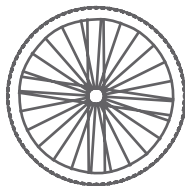
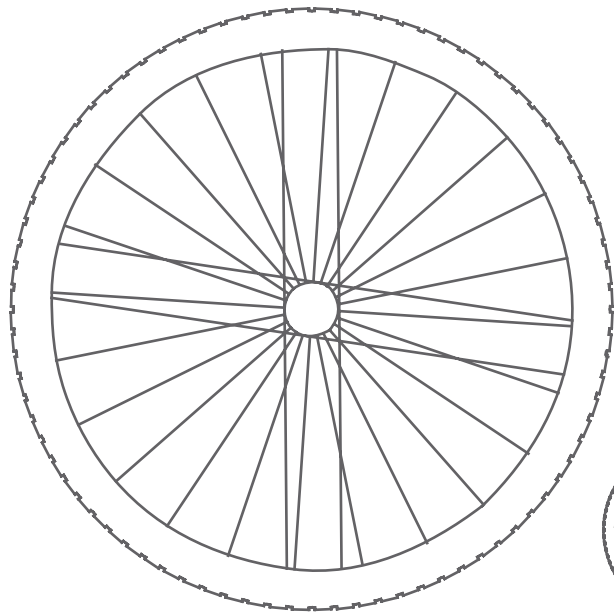
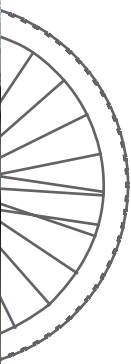


**The principles and strategic objectives
in this Plan support cycling as
a realistic transportation choice.**



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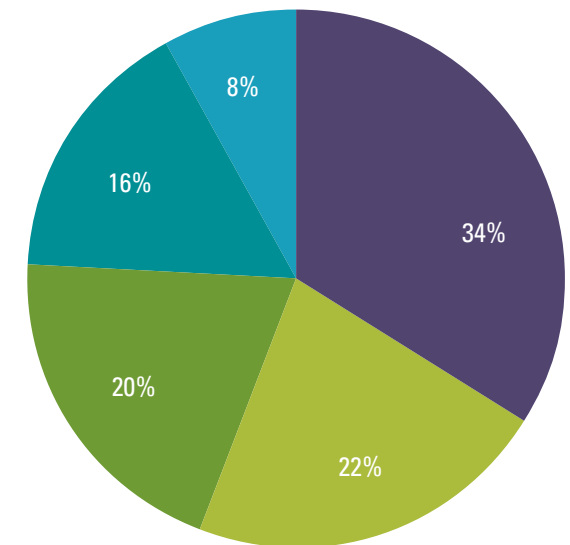


EXECUTIVE SUMMARY

Surrey has placed sustainability at the centre of all of its decision-making and the Cycling Plan recognizes part of creating and shaping a healthy and sustainable city involves supporting alternatives to the car, including cycling, walking and transit. Many shorter, day to day trips can easily be made by bike, whether to go to work, school, shopping, recreation, or to visit friends. 66% of all trips in Surrey are less than 10 km long, and 45% of all trips are less than 5 km long. It is estimated that \$11-14,000 a year can be saved by a household by owning one less vehicle. However, for those who do not have access to a car, or want to use their car less, getting around can be a challenge.

This Cycling Plan sets out the City's vision for the expansion of cycling as a safe and convenient transportation choice for Surrey residents and visitors. The Plan builds on the 2008 Transportation Strategic Plan (TSP) that identified the importance of cycling in achieving broader transportation and City objectives in the areas of safety, health, accessibility, sustainability, environmental protection, and developing a successful Surrey economy. The development of a new Cycling Plan was identified as an important step to progress the strategic objectives identified in the TSP into deliverable actions with clearer direction and more focus on active and sustainable transportation modes.

Distance to Destinations (all modes)



It has been over fifteen years since the last comprehensive cycling policy document was produced. Since the adoption of the Bicycle Blueprint in 1994, much has changed in Surrey. There has been continued rapid growth, an increased recognition of the importance of sustainability in the services we provide, an increased awareness of the relationship between car dependency and obesity, changing demographics, and higher demands on our transportation system. These changes collectively require a broad based, flexible and innovative approach to how the City builds and promotes cycling as a viable and significant transportation choice for more people. This is evident in the number of City policy documents that make reference to cycling:

- ▶ Official Community Plan
- ▶ Sustainability Charter
- ▶ Transportation Strategic Plan
- ▶ Walking Plan
- ▶ Greenways Plan
- ▶ Plan for Social Well-Being
- ▶ Parks, Recreation and Culture Strategic Plan
- ▶ Child-and-Youth-Friendly City Strategy

Collectively, these plans identify cycling as a realistic, sustainable and growing alternative to the private car for many trips. This in turn increases access to health services, education, shopping, employment, cultural events and recreation for all residents of Surrey. In order to complement and integrate cycling-related initiatives in these other plans, the Cycling Plan delivers policies and strategies that recognize that cycling is about more than just building bike lanes and pathways and, as a result, examines a broad range of policies, practices and individual improvements that make cycling work. While today cycling may not be a mainstream mode of transportation, by continuing to invest in our cycling infrastructure and expanding the programs and initiatives identified within this Plan, large increases in cycling will be achieved.

Consultation played a key role in the Cycling Plan, through online survey, Public Open House, and meetings and feedback from internal and external stakeholders. The need for a comprehensive approach to cover all aspects of cycling was also reflected in the comments received from the public:



Complete connections are important.



From start to finish, the cycling environment matters.



Investing in cycling education and awareness is key.

Developing these themes and referencing the policies established through other City strategies, this Plan has been organised around four principles, each of which is supported by a strategic objective:

PRINCIPLES	STRATEGIC OBJECTIVES
Making Connections	Expand and improve the on- and off-street cycling network.
Providing Door to Door Service	Increase the availability, quality and variety of end-of-trip facilities.
Managing and Maintaining the Network	Keep the network safe, visible, and in optimum condition.
Promoting Cycling	Promote safe cycling as a healthy, fun and sustainable way to travel.

These principles and strategic objectives **support the VISION** for a City:

VISION

- That is well connected with bike routes, both on- and off-street
- That is safe and convenient for cyclists of all ages and abilities
- That has secure bicycle parking in both commercial and residential developments
- That has easily identifiable and properly maintained bike routes
- That supports cycling as a realistic transportation choice
- Where more and more people are cycling

Within this Plan's four principles, over seventy Actions for Change have been identified to help build a cycling-friendly Surrey. Many of these Actions for Change are already being done but there also many new policies and initiatives. The Plan includes shorter term work that can begin immediately; some that we are already doing and should continue; while others are discrete tasks that will be accomplished over the next few years. The Plan recognizes that there is a need to look at cycling at all levels and at all scales and it includes both small-scale solutions as well as broader strategic changes. Big-picture issues such as budget allocation are important but we cannot underestimate the importance of the more detailed measures such as adequate signage and updated mapping. These seemingly minor interventions can have a great effect on ridership, enjoyment, and public satisfaction.

To ensure the objectives of this Plan are achieved, it is important that it remains relevant and adhered to, as well as regularly updated. As a result, the Plan contains a number of performance indicators that will help us determine whether we are achieving our goals and if we need to adjust our Actions for Change, level of resources and our performance indicators.

We support the vision from Translink's Regional Cycling Strategy (2011) for a cycling-friendly region, where cycling is safe, convenient, comfortable, and fun for people of all ages and abilities. The regional targets for Metro Vancouver for 2040 are: 15% of all trips less than 8 km to be made by bicycle; 50% of all cycling trips made by females; and 15% fewer people killed or seriously injured while cycling. The City of Surrey supports these goals and will contribute to achieving the regional targets.

The City's cycling funding levels have recently increased to approximately 3% of the capital transportation budget (typical annual budget is approximately \$67 million). With this increase, the large amount of cycling infrastructure delivered through the capital roads program, plus cost-sharing opportunities, along with increased outreach for education, encouragement and awareness, we believe Surrey is positioned to achieve a greater number of trips made by cycling, and safer cycling trips.





Cycling is a transportation choice that helps create a modern, progressive and liveable city.

PART 1 CYCLING MATTERS

CYCLING MATTERS

This Cycling Plan sets out the vision, goals and strategies to move Surrey toward being one of the premier cycling cities in Canada. This Plan expands on the principles identified in the 2008 Transportation Strategic Plan that recognized the importance of cycling in achieving broader transportation and City objectives in the areas of safety, health, universal access, sustainability, environmental protection, and developing a successful Surrey economy. A new Cycling Plan was identified as a priority in order to provide clear direction and give more attention to this currently under-used mode of transportation in Surrey. It has been over 15 years since the Bicycle Blueprint, the last bicycle plan, was adopted. Surrey has changed considerably since then, with continued rapid growth, clear sustainability goals, increased awareness of the relationship between car dependency and health, changing demographics and growing demands on our transportation systems. The City now needs a higher level of attention with more flexible and broad based approaches in how we build, operate and promote cycling as a viable transportation choice. With approximately 3% of transportation funding currently dedicated toward cycling, the need for a plan to guide and inform how best to use these resources has become more and more important.

Surrey supports the vision from Translink's Regional Cycling Strategy (2011) for a cycling-friendly region, where cycling is safe, convenient, comfortable, and fun for people of all ages and abilities. The regional targets for 2040 are: 15% of all trips less than 8 km to be made by bicycle; 50% of all cycling trips made by females; and 15% fewer people killed or seriously injured while cycling. The City of Surrey supports these goals and will contribute to achieving the regional targets.

Today, most Surrey residents use their cars for even the shortest trips, and as the City grows, it becomes increasingly challenging to maintain road infrastructure and provide a level of service that accommodates growth. Travel is an important part of most people's lives and nearly everyone makes some sort of journey every day. There is a significant reliance on the car that is having serious implications on congestion, our environment, safety and health. For many who do not have access to a car or want to use their car less, getting around by other modes comfortably and conveniently can be more challenging.

With approximately 470,000 residents (2011) and growing rapidly, Surrey is expected to reach a population of 740,000 by 2041 (Regional Growth Strategy). Surrey has the highest percentage of youth in the region (22% of the children and youth, in the Metro Vancouver area), with over 105,000 aged 0-19.



THIS CYCLING PLAN SEEKS TO:

Promote cycling as a viable, sustainable and growing alternative to the private car, which can in turn, increase access to jobs, health services, education, cultural events, shopping, places of worship and recreation

Deliver policies and strategies that recognize that cycling is about more than just building pathways or painting bike lanes and, as a result, look at everything that makes cycling work from top to bottom.

Create a culture within the City that promotes cycling within both strategic and “street level” decision making and planning across different departments

Align with and support other City strategies including the Official Community Plan (OCP), Transportation Strategic Plan, Walking Plan, Greenways Plan, Neighbourhood Concept Plans (NCPs), Sustainability Charter, and Child- and Youth-Friendly Strategy.

Expand opportunities for cycling that appeal to as many people as possible by providing a variety of cycling infrastructure (ge. bike lanes on arterial roads, off-street pathways, and local road and neighbourhood bike routes).

The city welcomes approximately 12,000 new residents a year, which provides a great opportunity to effect change in the number of people cycling through a combination of good planning, sustained investment, education and encouragement. Surrey is a prosperous and dynamic city that shares many of the interests, values and aspirations of other world class cities and cycling is a transportation choice that helps create a modern, progressive and liveable city. Liveable cities are where people want to be and they are better at attracting new residents and new investments. People increasingly value cities that offer multiple transportation choices as well as diverse populations, cultural events and a clean, green environment.

Individuals are more and more motivated to make choices that respond to climate change. Choosing lower carbon lifestyles is becoming more mainstream and, in Surrey, examples of this include hybrid vehicles, community supported local agriculture and recycling. With this bigger concern for the environment and more focus on health by people, many cities across the world are giving more attention to sustainability in policy making and decision making and in this context, becoming more cycling-friendly is an important way to achieve these aims.

1.1 SUCCESS WITHIN OUR REACH

Achieving significant increases in cycling in Surrey is within our reach. While today cycling may not be a mainstream mode of transportation, by continuing to invest in our cycling infrastructure and expanding the programs and initiatives identified within this Plan, large increases in cycling can be achieved. Other cities across the world that have made this long term commitment to cycling, have seen a significant increase in cycling.

It is not expected that everyone is able to cycle everywhere all the time. Nevertheless, the City believes that it is important to develop an infrastructure of cycling routes and facilities, supported by an informed and environmentally aware public to provide more transportation options and generate more cycling trips.



**Large increases
in cycling can be
achieved...**



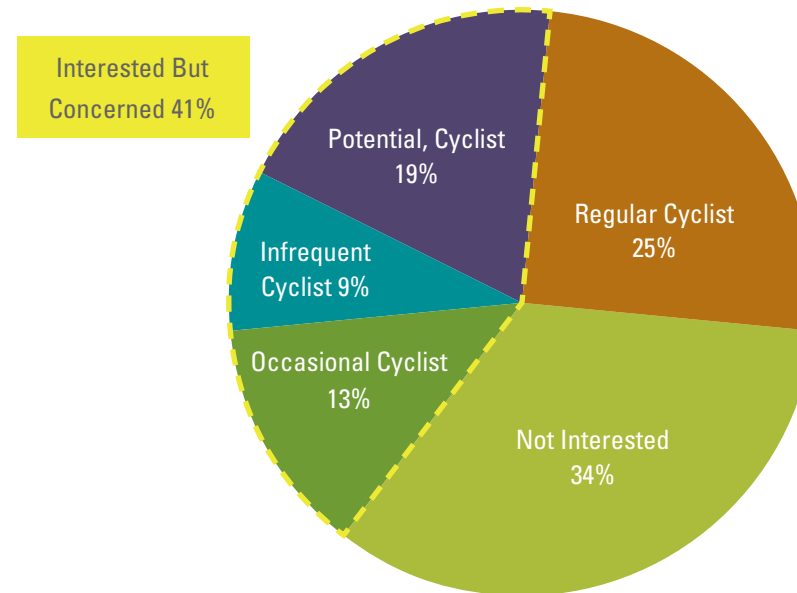
the future lives here.

It is important to get more people feeling comfortable and cycling more often.

PART 2 DEVELOPING THE PLAN

2.1 WHO IS THE SURREY CYCLIST?

Market research conducted within the region by TransLink in 2010 showed that there are three broad levels of interest in cycling: Regular Cyclist, Interested But Concerned (Potential, Infrequent and Occasional) and Not Interested.



REGULAR CYCLIST (25%)

- Usually comfortable cycling on bike lanes, and being beside traffic
- Many times simply sharing the lane with vehicle
- Most regular cyclists are looking for the fastest and most direct route to get to a destination.

INTERESTED BUT CONCERNED (41%)

- Includes Potential Cyclists, Infrequent Cyclists and Occasional Cyclists
- Not always comfortable sharing space with traffic
- Prefer more separated facilities, like pathways or separated bike lanes
- Moving slower, as space is sometimes shared with pedestrians, and they often need to stop more often to cross roads,
- More concerned about their safety on the road, and they are often accompanied by their children
- They often don't mind a longer route that feels safer and is more separated from traffic.

NOT INTERESTED (34%)

- No matter what infrastructure or equipment (lighter bicycles, electric bicycle, more comfortable helmets, waterproof clothing,...) is available, this segment of the population are not interested in riding a bicycle

The research, conducted in various municipalities in Metro Vancouver, indicates that with the right kind of measures and investment, there is a large potential for a significant portion of the population to take up cycling or cycle more than they do today. There is also potential for the one third of people who expressed no interest in cycling, to express some interest in cycling in the future, once they see more infrastructure and more cyclists.

The City needs to plan and provide facilities for the interested cyclist group who represents over 40% of cyclists, as well as for the regular cyclist group, representing 25% of cyclists, in order to see an increase in the number of people cycling, and in the frequency with which people use their bicycles. Facilities and education are important to get more people feeling comfortable cycling more often.

One of the ways to get less confident and new cyclists more comfortable with cycling is to offer facilities more separated from traffic. Surrey's new Greenways Plan identifies a planned network of over 350 km of greenways (multi-use pathways), which are shared with pedestrians, but buffered from vehicle traffic. These facilities can be considered an "entry-level" cycling facility, as well as Neighbourhood Bike Routes, which guide cyclists through local roads and pathways, where there is less traffic volume and speeds, even though it is usually a longer route. For the more confident and often commuter cyclist, these facilities are often too slow, and not the most direct route. Commuter cyclists usually prefer to be on the road, on the fastest and most direct route, which most of the times are on arterial or collector roads, usually on a bike lane or shoulder, and sometimes sharing a lane with traffic, until the roads have been widened to their ultimate standard. It is important to provide facilities for both the confident and the more insecure cyclists.

Cycling has been changing over the years, from a mode of transportation that was "for those who don't have a choice", to a "choice" mode of transportation for many people. Research undertaken by TransLink in 2008 shows that the higher the income, the higher the percentage of trips made by bicycle. 34% of trips made by bicycle are from households with annual income of \$100k or more, and 53% of trips are by households with annual income of \$80k or more.

2.2 CURRENT CYCLING ACTIVITY AND FACILITIES

Cycling in Surrey as a transportation mode share is relatively low. According to the 2006 Census, only 0.4% of trips to work are made by bicycle in the City overall, but in some areas of the City it can be more than 1.5%. In 2006, the TransLink Trip Diaries showed that 6% of all trips (not just to work) made in Surrey (and Delta) were made by bicycle.

Surrey currently has almost 450 km of cycling routes in our network (equivalent to 900 km of one-way lane-km). Since 1993, when these facilities started being built, the average rate of construction has been approximately 12 km/year of on-street facility, and 4 km/year of greenways (multi-use pathways). Some existing local roads and sidewalks are used in the interim to connect two routes through signage. In 2011, the first Neighbourhood Bike Route started being implemented, with the pilot connecting from Ocean Park to Semiahmoo. These routes guide cyclists through local roads and pathways, with signage and pavement markings, avoiding main roads where there is more traffic volume and speed.

All collector and arterial roads are planned to have bike lanes once they are widened to their ultimate cross-sections. Local roads usually have shared traffic, as they have lower traffic speeds and volumes. Greenways (multi—use pathways) are planned along certain corridors, and connect to each other forming

a municipal network. Regional connections are also important, as the BC Parkway, which is a multi-use pathway that connects King George SkyTrain Station to Main Street – Science World SkyTrain Station. Most of the BC Parkway has already been built, but there are sections that still need to be constructed. There is also a continuous built corridor of greenway that connects from King George SkyTrain Station to the Golden Ears Bridge, in Langley. On-street regional connections are also important, and Surrey has been working with White Rock, Delta and Langley (City and Township) to develop on-street bike lane continuity on arterial and collector roads. The BC Ministry of Transportation and TransLink also play an important role in connecting Surrey to municipalities north of the Fraser River through the Pattullo Bridge, Port Mann Bridge, and Golden Ears Bridge.

Even though Surrey has many km of bike lanes, due to the geographical size of the City plus the projected growth in residents and employment, there remains a need for much more to be built and improved. Many bike lanes are not continuous, or you cannot always get to your destination due to missing links. This also needs to be supported by expanded education and promotion efforts to ensure that this healthy, sustainable, enjoyable and affordable transportation choice is available to as many residents of Surrey as possible.



TYPE OF FACILITY	DEFINITION	KM BUILT (APRIL 2012)
Bike Lane / Shoulder	Dedicated lane for cycling, with or without a curb	205 km
Cycling-Friendly Road	Wider travel lane, sharing side-by-side with vehicles	22 km
Shared Use Traffic Lane	Regular travel lane, sharing single-file with vehicles	88 km
Local Road and Sidewalk	Temporary use of these facilities to connect between two routes	43 km
Greenways	Multi-use pathways, usually 3 m to 4 m wide, shared with pedestrians	75 km
Neighbourhood Bike Routes	Local roads (low speeds and volume) and pathways, shared with vehicles and/or pedestrians	5 km
TOTAL		438 km

Understanding the influences that shape whether people cycle or not is vital to developing strategies to respond to them. Different geographical areas have specific challenges and opportunities, which are key to setting targets appropriate to each of them. The level of cycling is a result of a number of factors that have their own challenges and opportunities (see Supportive Maps in the Appendix).

FACTOR	CHALLENGES	OPPORTUNITIES
Connectivity	Big blocks and few direct routes (existing) discourage walking and cycling.	Growing city creates opportunity for more cycling-friendly linkages.
Land Use	Many residential areas were developed in a time when traditional planning placed residential areas far from commercial areas.	More mixed-use development, through growth of new planned areas decreases cycling distances to destinations.
Population Density	Population is concentrated in a few areas and the gaps between communities usually include barriers like farm land, hills, and rivers/creeks.	Most population is being concentrated in the Town Centres, with most destinations at a comfortable cycling trip away (less than 5km).
Topography	Elevation changes and many rivers and creeks create physical barriers.	For short trips within the Town Centres, the land is mostly flat, with the biggest changes in elevation between them
Agricultural Land Reserve (ALR)	The ALR separates some of the hubs of population and employment, with higher traffic speeds, and making the distances between neighbourhoods seem larger.	ALR is relatively flat with few of intersections and driveways, making it an easier ride with fewer conflicts for cyclists. There is also opportunity for pathways along dykes through the ALR.
Cycling routes	Due to availability of funding, permits, properties and right-of-way, many cycling routes are still incomplete or with narrow sections.	The City has built over 400 km of cycling facilities in the past 15 years, and a complete network is planned with over 600 km of on-street facilities and 350 km of greenways.
End-of-Trip Facilities	Currently, there is little availability of bike parking and other end-of-trip facilities.	City and businesses to provide more bike parking at key destinations and new developments.

2.3 HOW CONSULTATION SHAPED THE PLAN

"I believe connectivity is very important, as well as legible routes - people need to be clear on where they are going."

"Safety on the roads is a key issue for me as well as driver awareness of bicycles."

"I would cycle more if there were connection routes east-west and north-south across Surrey utilizing parks, transmission line corridors, etc., where possible to minimize travelling on roads (unless bike only lanes are present)."

"For me, having a dense network of bike paths, on local roads (not arterials), located near SkyTrain and major bus routes would be great! And being able to bring your bike on SkyTrain during peak hours - even better!"

"I think bicycles can solve transportation and health problems. Invest heavily and visibly respect this activity - if you build it, they will come!"

This Plan needed to look at cycling in a comprehensive and innovative way that was responsive to the issues that deter people from cycling. It was important that the people of Surrey and the organizations that have an interest in cycling in its broadest sense were given the opportunity to provide input and advice. For the Plan to have legitimacy and ownership by the public and stakeholders, the consultation followed the approach established within the Transportation Strategic Plan of:

- ▶ Seeking out a wide range of opinions and views

- ▶ Ensuring that all members of the community with different transportation needs were represented (including youth, seniors and people with disabilities)

- ▶ Establishing local issues and priorities

- ▶ Employing a range of consultation methods

The City consulted with numerous stakeholders, including community associations, business improvement associations, cycling advocacy groups, groups interested in transportation and environmental sustainability, and other agencies such as the School District and Health Authority. A public online survey was also offered in 2009 and the feedback received has been used throughout this Plan to help develop broad objectives of the Plan and detailed strategies and implementation systems. A draft of the plan was also presented in an Open House in December 2011.

This Plan makes regular reference to the results of the survey as well as specific comments and feedback. This is an important part of the Plan as it shows how the specific initiatives and strategies respond to the issues and priorities identified by the residents of Surrey. Details of the consultation process and results are provided within the Appendix. Here are some of the values we heard:

- ▶ Complete and connected networks of bike routes are important

- ▶ Availability of safe and secure bicycle parking, and a place to shower or change when reaching a destination are key components to a successful cycling network

- ▶ Addressing safety concerns, poor maintenance, and lack of wayfinding is a significant incentive to have more people cycling more often

- ▶ Celebrating, raising awareness and promoting cycling are critical elements to get people cycling more

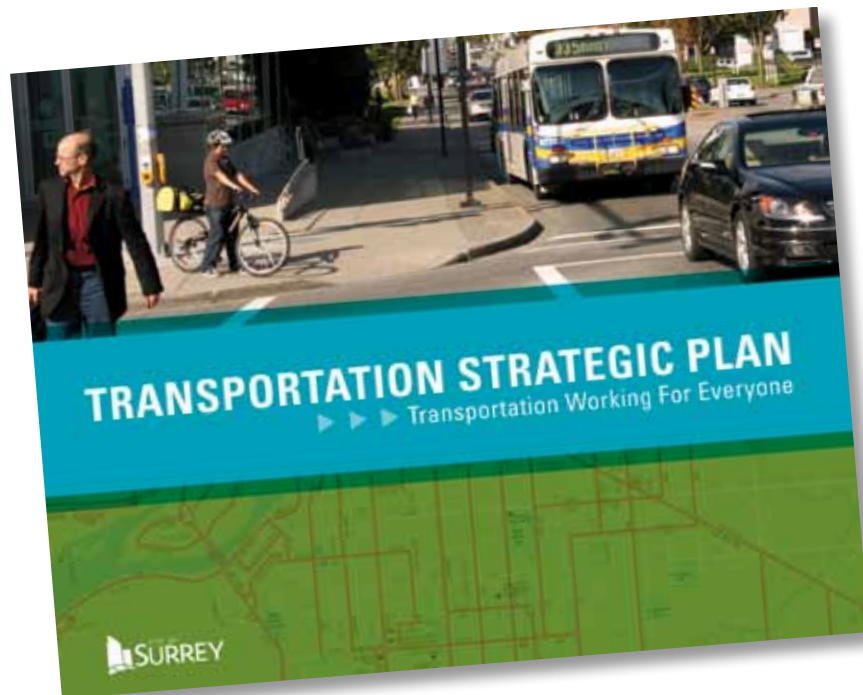


2.4 POLICY INTEGRATION

Surrey's cycling achievements over the last 15 years have set the foundation for a cycling-friendly City. Much progress has been made in policy development and planning, allocating additional resources, delivering infrastructure and creating cycling-friendly design standards. However, this work has not, and cannot, take place in a policy vacuum. It is hugely important that there is comprehensive integration with and support for other City goals and objectives.

THE TRANSPORTATION STRATEGIC PLAN

This Cycling Plan supports and develops many of the policies and initiatives contained within the Transportation Strategic Plan (TSP). In doing so, it contributes to the delivery of the overarching economic, social, health-related and environmental objectives of the City.



ENVIRONMENTAL

- ▶ Less pollution and emissions
- ▶ More efficient use of road space
- ▶ Sustainable (“green”) transportation

HEALTH-RELATED

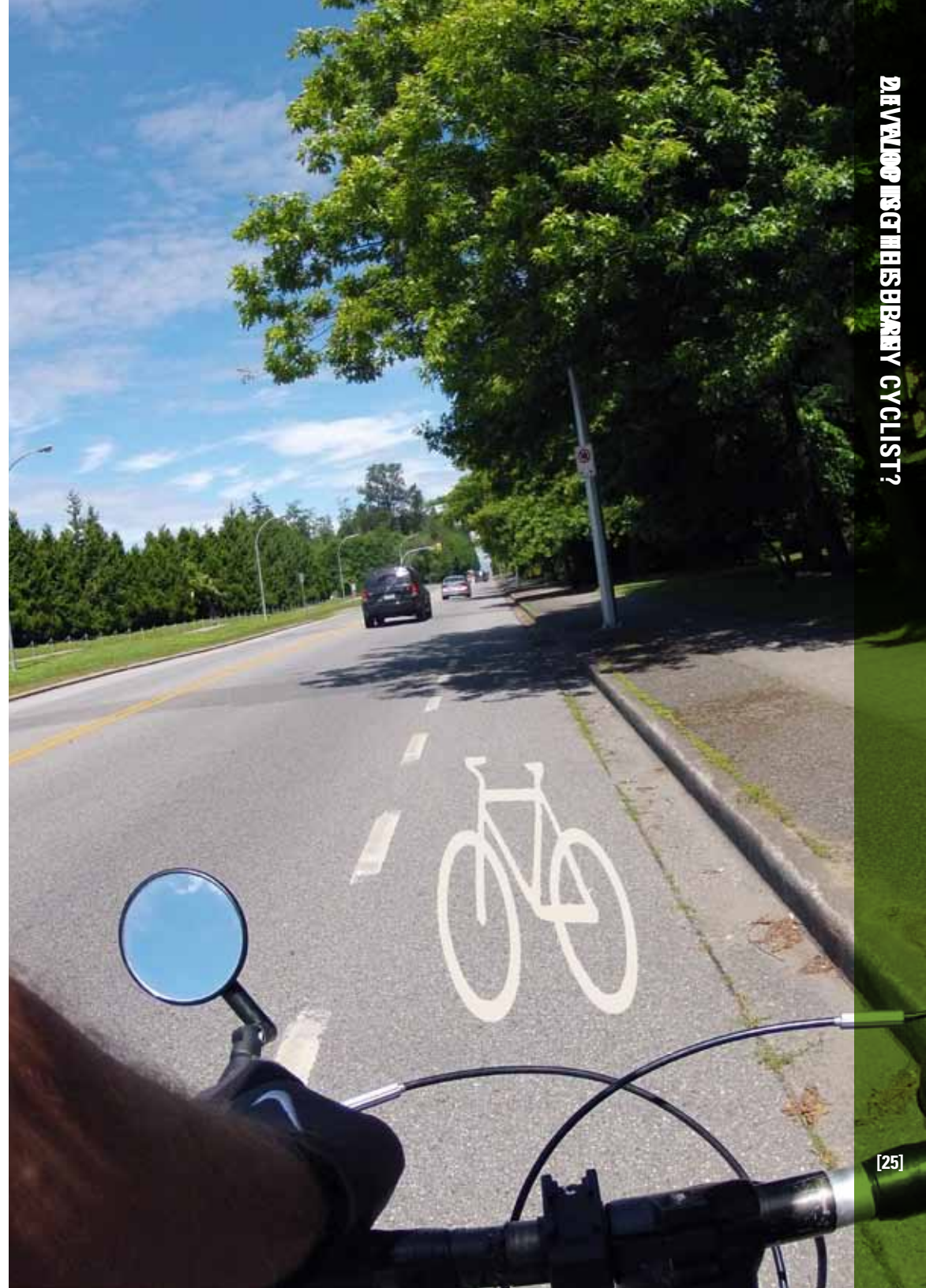
- ▶ Healthier individuals
- ▶ More active communities
- ▶ Less stress
- ▶ Reduced obesity
- ▶ Reduced risk of chronic diseases

ECONOMIC

- ▶ Reduced fuel costs
- ▶ Reduced road maintenance
- ▶ Delays implementation of expensive road improvement projects

SOCIAL

- ▶ Child and youth-friendly transportation
- ▶ Improved access to transportation for those unable to use a car
- ▶ Low cost transportation for low income individuals



The TSP is organized around six core principles and some of the examples of how the Cycling Plan helps deliver these are provided below:

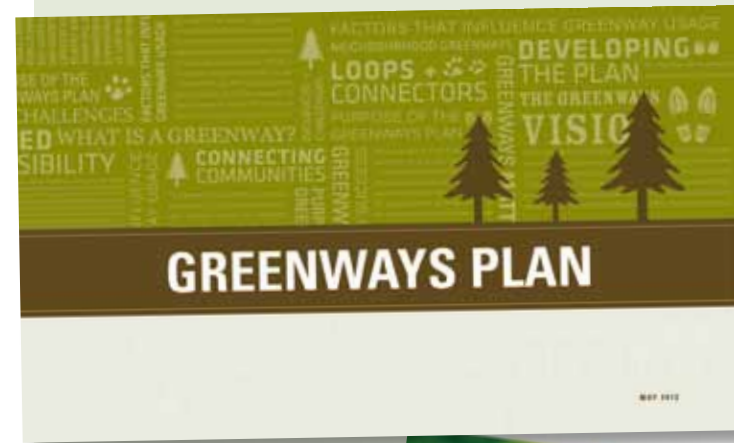
TSP PRINCIPLE	CYCLING PLAN ACTION FOR CHANGE
<p>1. EFFECTIVE AND EFFICIENT NETWORK MANAGEMENT:</p> <p><i>Efficiently manage, maintain and improve the transportation system for all modes.</i></p>	<ul style="list-style-type: none"> • Review cycling pavement markings and symbols throughout the city and develop a plan to upgrade them to current standards. • Improve the City’s management (planning and maintenance) of our cycling assets through expanded use of GIS. • Identify high use cycling routes, industrial frontages and other priority areas and develop an enhanced level of service for sweeping.
<p>2. MORE TRAVEL CHOICE:</p> <p><i>Promote alternative and sustainable travel choice and provide better accessibility to jobs, education, health and recreation for all.</i></p>	<ul style="list-style-type: none"> • Identify barriers and connect missing links, working with interim solutions where the ultimate bike lane is not yet achievable. • Explore opportunities for separated bike lanes in appropriate locations. Separation can be barriers, curbs, parked vehicles, painted buffer, boulevard and other innovative solutions. • Implement Neighbourhood Bike Routes on a number of local roads, complementing the bike lanes on arterial and collector roads.
<p>3. SAFER, HEALTHIER COMMUNITIES:</p> <p><i>Improve community safety, health and quality of life.</i></p>	<ul style="list-style-type: none"> • Investigate and pilot different solutions for intersection treatment and engineering solutions to improve cyclists’ safety. • Under the umbrella of the Safe and Active Schools Program, continue to support and sponsor groups that provide student skills training to improve cyclist safety, comfort and confidence, as well as bicycle maintenance courses. • Work with the local community and cycling groups to identify safety concerns along cycling routes and develop strategies to reduce the problem (e.g. improved lighting, improved sweeping regimes, vegetation clearance, etc.).

TSP PRINCIPLE	CYCLING PLAN ACTION FOR CHANGE
<p>4. SUCCESSFUL LOCAL ECONOMIES:</p> <p><i>Reduce congestion and support the sustainable economic development and vitality of Surrey.</i></p>	<ul style="list-style-type: none"> • Work with the Business Improvement Associations (BIAs) to enhance bike end-of-trip facilities in the City Centre and Town Centres. • Expand the public bike rack program with a target of introducing approximately 10-20 new bike racks a year over the next several years within the City Centre, Town Centres and public facilities. • Encourage businesses to provide facilities such as change rooms, showers, lockers and drying racks for employees.
<p>5. PROTECTION OF OUR BUILT AND NATURAL ENVIRONMENT:</p> <p><i>Reduce the impacts of transportation on the built and natural environment.</i></p>	<ul style="list-style-type: none"> • Promote complete streets by introducing 1.7-1.8 m wide bike lanes on all arterial and collector roads when widened to their ultimate cross-section, following the City of Surrey Design Criteria Manual and Standard Drawings. • Develop and deliver an ongoing bicycle promotion campaign about the benefits of cycling as an enjoyable, healthy and inexpensive way to travel.
<p>6. TRANSPORTATION INTEGRATION:</p> <p><i>Promote integration between transportation and land use to reduce the need to travel and support trips by more sustainable modes.</i></p>	<ul style="list-style-type: none"> • Promote cycling connectivity through the development of a finer grid road network, through Neighbourhood Concept Plans (NCPs) and new developments. • Continue to partner with other City Departments to ensure cycling facilities are built and cycling is facilitated with new developments, projects and policies. • Undertake a comprehensive review of the Zoning By-Law parking standards and requirements for bicycles. Apply them consistently for all development applications.

SHARED PRIORITIES

The Cycling Plan will be a guide for future investment and preparation of capital plans, will influence programs and policies, and will be a resource for the City, for advocacy groups and for anyone interested in cycling. This Plan is complemented and supported by other policies and initiatives such as the Transportation Strategic Plan, Official Community Plan, Sustainability Charter, Child- and Youth-Friendly City Strategy, Walking Plan, Community Energy & Emissions Plan, Zoning By-Law and others. Each of these plans advances cycling in Surrey, as cycling is not the exclusive domain of one department or delivered by one activity. Implementation of the Cycling Plan is a city-wide effort and is the responsibility of all City staff. Collaboration among staff of different departments will ensure the successful implementation of the policies and programs contained within the Plan. This Plan will also help to identify where shared priorities exist and will allow for reduced duplication of effort as well as increased coordination and greater impact.

Although the City implements many cycling projects and programs, there are other agencies and levels of government that also have a role in the expansion of cycling infrastructure. The City will continue to collaborate with our partners including the RCMP, ICBC, TransLink and the Provincial and Federal Governments and seek to maximize the expertise, funding opportunities and programs they provide.



2.5 VISION, PRINCIPLES AND OBJECTIVES



There are four principles in the Cycling Plan, each with three to four objectives. Each objective has its own Actions for Change that are detailed in the following chapter. The principles and strategic objectives support the vision for a City:

VISION

- ▶ That is well connected with bike routes, both on- and off-street
- ▶ That is safe and convenient for cyclists of all ages and abilities
- ▶ That has secure bicycle parking in both commercial and residential developments
- ▶ That has easily identifiable and properly maintained bike routes
- ▶ That supports cycling as a realistic transportation choice
- ▶ **Where more and more people are cycling**

The strategic objectives of this Plan have been developed by integrating the consultation feedback, the principles contained within the Transportation Strategic Plan and drawing upon the experiences and successes both within Surrey and elsewhere.

Each of the four principles is presented here with its strategic objective, its service objectives (1a, 1b, 1c,...) and the various Actions for Change. The Actions for Change are also categorized into “New Strategies and Initiatives” and “Ongoing Strategies and Initiatives” for each service objective.

After the summary table for each principle, there are issues and influences for each service objective (1a, 1b, 1c,...), and the background for the Actions for Change.

PRINCIPLE	1. MAKING CONNECTIONS Expand and improve the on-and-off-street cycling network	2. PROVIDING DOOR-TO-DOOR SERVICE Increase the availability, quality and variety of end-of-trip facilities	3. MANAGING AND MAINTAINING THE NETWORK Keep the network safe, visible, and in optimum condition	4. PROMOTING CYCLING Promote safe cycling as a healthy, fun and sustainable way to travel
STRATEGIC OBJECTIVES	1.a Develop a finer and more complete network of on- and off-street cycling routes	2.a Ensure there is more provision of secure public bike parking at popular destinations	3.a Install adequate signage and pavement markings for cycling routes	4.a Provide educational resources and information to support efficient, safe and enjoyable cycling
	1.b Increase the contribution of local roads to the cycling network	2.b Ensure developments are cycling-friendly	3.b Develop a wayfinding program for both on- and off- street cycling routes	4.b Support others who promote cycling in Surrey
	1.c Promote integration of City policies and practices to identify and deliver City-wide shared priorities	2.c Increase bike end-of-trip support at transit facilities	3.c Enhance maintenance programs for cycling facilities	4.c Celebrate cycling in Surrey
	1.d Work with other municipalities and senior governments to improve connectivity within the region		3.d Provide special treatment for cyclists at vulnerable locations	4.d Encourage safe behaviour and mutual respect among drivers, pedestrians and cyclists



A long, illuminated pedestrian bridge at night, featuring a series of arches and railings, glowing with a warm, golden light. A blue path leads towards the bridge, and the background shows a dark sky and silhouettes of trees.

**With over 70 actions for change,
this plan looks at cycling in a
comprehensive and innovative way.**

PART 3 SHIFTING GEARS

PRINCIPLE 1

MAKING CONNECTIONS

STRATEGIC OBJECTIVE 1: EXPAND AND IMPROVE THE
ON- AND OFF-STREET CYCLING NETWORK

**Complete and
connected routes
are important...**

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
<p>1.a Develop a finer and more complete network of on- and off-street cycling routes</p>		Identify barriers and connect missing links, working with interim solutions where the ultimate bike lane is not yet achievable.	Existing
		Implement demonstration and pilot projects, such as weekend special events and consider temporary road closures.	Additional
		Conduct cycling audits of road projects to ensure safety, operation and connectivity for cyclists, and seek upgrades to existing facilities within the scope of the project.	Existing
		Incorporate into the City of Surrey Design Criteria Manual and Standard Drawings improved cycling measures, like bike push buttons, bike boxes, and coloured pavement.	Existing
		Explore opportunities for separated bike lanes in appropriate locations. Separation can be barriers, curbs, parked vehicles, painted buffer, boulevard and other innovative solutions.	Existing
		Expand on-street cycling route network to priority destinations, using the main roads system (arterial and collector roads).	Existing
		Expand off-street cycling route network as part of the Greenways Network, using BC Hydro / FortisBC corridors (Greenways Plan).	Existing
		Promote complete streets by introducing 1.7-1.8 m wide bike lanes on all arterial and collector roads when widened to their ultimate cross-section, following the City of Surrey Design Criteria Manual and Standard Drawings.	Existing
		Promote cycling connectivity through the development of a finer grid road network, through Neighbourhood Concept Plans (NCPs) and new developments.	Existing
		Develop a public consultation strategy regarding the implementation of cycling projects within existing neighbourhoods and undertake an appropriate level of public consultation prior to each construction project in the preliminary stages of project planning.	Existing
		Continue to invest in off-street facilities (Greenways Network), seeking partnership and funding opportunities to facilitate projects.	Existing

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
1.b Increase the contribution of local roads to the cycling network	New Strategies and Initiatives	Implement Neighbourhood Bike Routes on a number of local roads, complementing the bike lanes on arterial and collector roads.	Additional
		Provide connections between new and existing roads to improve cycling connectivity.	Additional

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
1.c Promote integration of City policies and practices to identify and deliver City-wide shared priorities	New Strategies and Initiatives	Promote cycling through the application of a sustainability checklist for new developments.	Existing
		Coordinate pedestrian, cycling and transit facility budgets to maximize the efficiency of available funding and to give added value to projects.	Existing
	Ongoing Strategies and Initiatives	Ensure cycling is considered in new City policies and documents, and jointly implement actions and efforts.	Existing
		Coordinate with the Greenways Plan and the Walking Plan to continue developing the Greenway Network, including road crossing improvements.	Additional
		Continue to partner with other City Departments to ensure cycling facilities are built and cycling is facilitated with new developments, projects and policies.	Existing

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
1.d Work with other municipalities and senior governments to improve connectivity within the region	New Strategies and Initiatives	Partner with TransLink, other organizations, and other municipalities to promote and implement the Regional Cycling Strategy for Metro Vancouver.	Existing
		Advocate for TransLink to investigate ways to facilitate the bicycle-transit interaction, connecting transit facilities to the Bike Network.	Existing
	Ongoing Strategies and Initiatives	Identify and maximize funding opportunities and grants to cost-share cycling infrastructure.	Existing
		Collaborate and partner with various agencies to coordinate cycling connections with neighbouring municipalities.	Existing



OBJECTIVE 1A: Develop a finer and more complete network of on- and off-street cycling routes

ISSUES AND INFLUENCES

- ▶ 73% of the public prefer / accept “bike lanes on busier streets” for the on-street Bike Network, and more than half of them prefer not having parked cars next to the bike lane
- ▶ 89% of the public have “off-street paths” as their preferred / accepted cycling facility
- ▶ 85% of the public say that “more off-street paths” are likely to make them bike more
- ▶ About 12% of the public don’t have regular access to a car
- ▶ New road standards were adopted in 2010, and are included in the City of Surrey Design Criteria Manual and Standard Drawings
- ▶ New Standard: 1.8 m wide bike lanes on arterial roads and 1.7 m or 1.8 m wide bike lanes on collector roads
- ▶ Previous Standard: 1.3 m wide bike lanes on arterial roads and 1.5 m wide bike lanes on collector roads
- ▶ City currently cost-shares projects with TransLink, Provincial and Federal governments
- ▶ Walking and cycling pathways are the most used and most requested park features
- ▶ 72 km of a planned 350 km network of multi-use pathways have been constructed (approximately 20% built)
- ▶ All Neighbourhood Concept Plans (NCPs) include a plan for cycling connectivity
- ▶ The Transportation Association of Canada (TAC) has recently reviewed the Bikeway Traffic Control Guidelines for Canada, which provides standards for signage and pavement markings for on-street cycling facilities.

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ “It feels to me that the network of bike lanes is disjointed”
- ▶ “We need more direct routes to major destinations rather than having to zigzag around different side streets”
- ▶ “I would cycle more if there were connected routes east-west and north-south across Surrey utilizing parks, transmission line corridors, etc., where possible to minimize travelling on roads”

Surrey's future as a cycling-friendly City has sound foundations. Cycling has great potential in Surrey as 25% of all trips are less than 3 km and 45% are less than 5 km (2009 Walking and Cycling Survey). As more on- and off-street cycling improvements are made, it will become increasingly convenient for Surrey residents to use bicycles for many more of these short trips.

Bike lanes are built as part of new and widened arterial and collector roads. Interim cross-sections are sometimes modified to allow for bike lanes through restriping, interim widenings and space reallocation. While recognizing that bike lanes on busier roads may not be preferred by all cyclists, it is important to provide this infrastructure in the context of a geographically large mixed urban / suburban / rural municipality. The lacking of a finer grid road network, in many locations, makes the main road the only possible route to get across a certain area. On-street bike lanes are also a cost-effective way of delivering considerable expansion to the Cycling Network. This approach gives the City the flexibility, as cycling continues to increase, to go back to the higher usage locations and improve the infrastructure.

In partnership with the Parks, Recreation and Culture Department, the Engineering Department plans and invests in multi-use pathways throughout the City, as part of the Greenways Network. Over 70 km of the off-street network have been built over the last 15 years and the City has been successful in doubling or tripling the budget available for some projects through funding partnerships. For instance, by cost-sharing with the Provincial and Federal governments Surrey was able to build an additional \$10.75 million worth of cycling infrastructure in 2010/2011 including two signature cycling and pedestrian crossings of Highway #1 and Highway #99. The new Greenways Plan explores more details and actions specific for greenways.

Work is underway to make the existing road system more bicycle accessible. The City has made significant progress with respect to street design and consideration for cyclists with, for example, the creation of new road cross-sections for arterial and collector roads to allow for wider bike lanes (1.8 m for arterial roads and 1.7 m-1.8 m for collector roads). The City undertakes major construction projects every year including re-paving, road widenings and new bridges that include cycling infrastructure. The planning process for new projects helps ensure full consideration is given to cycling and improvements are incorporated into the design.

For the growing network of off-street routes, there is a need to secure significant amounts of property which is acquired either through negotiated purchase or through dedication as part of new development. This often means that a piecemeal development of the network occurs. Establishing interim routes and connections is therefore an important part of the development of the ultimate network.

New infrastructure in new neighbourhoods are usually well received, but on existing neighbourhoods, there is often opposition to change happening in the neighbourhood, and public involvement and consultation in the preliminary stages of cycling projects are important to raise awareness of value and opportunity for cycling growth, and provides opportunity to modify the project and address residents' concerns. Temporary (seasonal) demonstration projects, special events and pilot projects for innovative cycling treatments should also be considered to enhance the bike network.

ACTION FOR CHANGE

Expand on-street cycling route network to priority destinations, using the main roads system (arterial and collector roads).

Expand off-street cycling route network as part of the Greenways Network, using BC Hydro / FortisBC corridors (Greenways Plan).

Promote complete streets by introducing 1.7-1.8 m wide bike lanes on all arterial and collector roads when widened to their ultimate cross-section, following the City of Surrey Design Criteria Manual and Standard Drawings.

Identify barriers and connect missing links, working with interim solutions where the ultimate bike lane is not yet achievable.

Promote cycling connectivity through the development of a finer grid road network, through Neighbourhood Concept Plans (NCPs) and new developments.

Develop a public consultation strategy regarding the implementation of cycling projects within existing neighbourhoods and undertake an appropriate level of public consultation prior to each construction project in the preliminary stages of project planning.

Continue to invest in off-street facilities (Greenways Network), seeking partnership and funding opportunities to facilitate projects.

Implement demonstration and pilot projects, such as weekend special events and consider temporary road closures.

Conduct cycling audits of road projects to ensure safety, operation and connectivity for cyclists, and seek upgrades to existing facilities within the scope of the project.

Incorporate into the City of Surrey Design Criteria Manual and Standard Drawings improved cycling measures, like bike push buttons, bike boxes, and coloured pavement.

Explore opportunities for separated bike lanes in appropriate locations. Separation can be barriers, curbs, parked vehicles, painted buffer, boulevard and other innovative solutions.



OBJECTIVE 1B: Increase the contribution of local roads to the cycling network

ISSUES AND INFLUENCES

- ▶ *Inconsiderate drivers and fear of traffic volume and speed are the top two cycling deterrents (online survey, 2009)*
- ▶ *Conflicts with vehicles are a concern to many cyclists when sharing the road*
- ▶ *74% of the public say that they would bike more if there were more cycling routes on local streets*
- ▶ *41% of the population are “interested in cycling, but concerned”, and they are more likely to use routes with less vehicle traffic and lower speeds*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *“Try to put cycling routes on streets that follow major routes but not actually on major routes around the neighbourhood”*

Local roads do not usually require a dedicated bike lane or shoulder for cyclists, as traffic volume and speed are low enough to share the road between drivers and cyclists. Local roads provide important connections into neighbourhoods and also provide an alternative route for the less confident or inexperienced cyclist (41% of the population). Children and seniors usually feel more comfortable cycling on the local roads, where there is less traffic and speeds are lower. These connections can also be considered entry-level cycling facilities, and as confidence increases, cyclists are able to move to busier, and often more direct, routes.

Walkways between roads and cul-de-sacs are an important addition to the local road connections. They help shorten distances by providing more direct, connected routes through the neighbourhood. Investment in pathways and road connections will continue to be made by the City and will be built according to funding availability and site conditions. Information on how to get around on local roads and their connectivity to main roads in the network will be developed through a Neighbourhood Bike Route routes program. Other measures will include signage to help guide cyclists through local roads, treatments to help cross busier roads, and an education and awareness component aimed at improving mutual respect between drivers and cyclists sharing the road on these routes.

ACTION FOR CHANGE

Implement Neighbourhood Bike Routes on a number of local roads, complementing the bike lanes on arterial and collector roads.

Provide connections between new and existing roads to improve cycling connectivity.

OBJECTIVE 1C: Promote integration of City policies and practices to identify and deliver city-wide shared priorities

ISSUES AND INFLUENCES

- ▶ *The Transportation Strategic Plan adopted in 2008 sets the vision and goals for transportation, including the need for a new Cycling Plan*
- ▶ *City policies that influence and support cycling policies and practices: Official Community Plan (OCP), Zoning By-Law, Sustainability Charter, Child- and Youth-Friendly City Strategy, Walking Plan, and others*
- ▶ *Many advocacy groups (Hub – former VACC Vancouver Area Cycling Coalition, BEST – Better Environmentally Sound Transportation, and others) and cycling enthusiasts are involved in cycling planning and discussion of specific projects with the City*

With the completion of the Transportation Strategic Plan (TSP), the Sustainability Charter, the Child- and Youth-Friendly City Strategy, the Official Community Plan (OCP), a new Road Classification map, and the Walking Plan, effort has been made to integrate this Cycling Plan with these documents, and complement them allowing different City Departments and stakeholders to work together to ensure cycling issues are addressed.

Regular road widening projects, development applications and repaving projects also provide opportunities to introduce interim or permanent cycling routes.

ACTION FOR CHANGE

Promote cycling through the application of a sustainability checklist for new developments.

Coordinate pedestrian, cycling and transit facilities' budgets to maximize the efficiency of available funding and to give added value to projects.

Ensure cycling is considered in new City policies and documents, and jointly implement actions and efforts.

Coordinate with the Greenways Plan and the Walking Plan to continue developing the Greenway Network, including road crossing improvements.

Continue to partner with other City Departments to ensure cycling facilities are built and cycling is made easier with new developments, projects and policies.



OBJECTIVE 1D: Work with other municipalities and senior governments to improve connectivity within the region

ISSUES AND INFLUENCES

- ▶ *The City has taken advantage of TransLink's yearly Bicycle Infrastructure Capital Cost-Sharing (BICCS) Program since it started in 2001*
- ▶ *Other agencies (Metro Vancouver, Ministry of Transportation and Infrastructure, Ministry of Community Development, etc.) offer programs that Surrey uses to maximize funding available for cycling*
- ▶ *In 2009 the City secured funding with the Provincial and Federal governments to build \$10.75 million of cycling infrastructure*
- ▶ *The City participates in the regional Bicycle Subcommittee with TransLink and other municipalities in the region to discuss cycling. There are approximately 10 meetings a year.*

Maintaining dialogue, meeting and involving other levels of government in planning and funding is important to ensure the City follows regional standards and that cycling infrastructure is as seamless as possible across different municipalities within the Region. By playing an active role in bicycle planning for the Region, Surrey continues to maximize its influence and funding opportunities. The ability to fast-track cycling projects to best respond to external funding opportunities has, in cases, doubled or tripled our investment opportunities in cycling infrastructure. The Provincial government has offered different programs through the years such as Local Motion and the Cycling Infrastructure Partnerships Program (CIPP). TransLink has also been offering cost-sharing opportunities through the Bicycle Infrastructure Capital Cost Sharing (BICCS) Program since 2001. The City seeks to maximize these funding opportunities, as they allow for more infrastructure to be built each year.

Bicycle-transit integration is very important. Good connections from the cycling network to transit exchanges and stations are critical, as well as bike lockers at stations, and access onto SkyTrain with bikes. The City will work with TransLink on these challenges.

ACTION FOR CHANGE

Partner with TransLink and other municipalities to promote and implement the Regional Cycling Strategy for Metro Vancouver.

Identify and maximize funding opportunities and grants to cost-share cycling infrastructure.

Collaborate and partner with various agencies to coordinate cycling connections with neighbouring municipalities.

Advocate for TransLink to investigate ways to facilitate the bicycle-transit interaction, connecting transit facilities to the Bike Network.

PRINCIPLE 2

PROVIDING DOOR TO DOOR SERVICE

STRATEGIC OBJECTIVE 2: INCREASE THE AVAILABILITY, QUALITY AND VARIETY OF END-OF-TRIP FACILITIES

Availability of safe and secure bicycle parking and a place to shower or change when reaching a destination are key components to a successful cycling network.



OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
2.a Ensure there is more provision of secure public bike parking at popular destinations	New Strategies and Initiatives	Expand the public bike rack program with a target of introducing approximately 10-20 new bike racks a year over the next several years within the City Centre, Town Centres and public facilities.	Additional
		Encourage School District #36 to install bike racks at schools in visible and easily accessible locations as part of the broader Safe and Active Schools Program.	Existing
		Work with the Business Improvement Associations (BIAs) to enhance bike end-of-trip facilities in the City Centre and Town Centres.	
	Ongoing Strategies and Initiatives	Provide and advertise secure bike parking or bike valet service through volunteer organizations at major public events, such as Canada Day, WinterFest, Party for the Planet, and the Cloverdale Rodeo.	Additional

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
2.b Ensure developments are cycling-friendly	New Strategies and Initiatives	Undertake a comprehensive review of the Zoning By-Law parking standards and requirements for bicycles. Apply them consistently for all development applications.	Existing
		Examine partnership opportunities with commercial developments and residential stratas to provide bike parking.	Additional
		Promote convenient connections to cycling routes and internal circulation within and between existing and new commercial and multi-family residential developments.	Existing
		Encourage businesses to advertise where they have bike parking available and direct cyclists on-site.	Existing
		Encourage businesses to provide facilities such as change rooms, showers, lockers and drying racks for employees.	Existing
		Develop a bicycle end-of-trip facilities handbook for new developments.	Additional

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
2.c Increase bike end-of-trip support at transit facilities	New Strategies and Initiatives	Support TransLink's goal to make its transit fleet 100% accessible to bicycles and increase the bicycle carrying capacity of transit vehicles.	Existing
		Advocate for bikes to be allowed on the SkyTrain without time or direction restrictions.	Existing
	Ongoing Strategies and Initiatives	Advocate for secure bike parking at SkyTrain stations and transit exchanges, that allows for spontaneous trips (eg. Bike cages, Bike Station).	Existing
		Collaborate with the transit service providers to ensure integrated and high-quality transit exchanges as part of Town Centres and City Centre improvements.	Existing
		Continue to secure transit infrastructure close to activity generators and destinations.	Existing

OBJECTIVE 2A: Ensure there is more provision of secure public bike parking at popular destinations

ISSUES AND INFLUENCES

- ▶ #1 end-of-trip facilities priority for 82% of the public is more bike parking at commercial areas
- ▶ Currently there are over 2,000 spaces for bike parking at libraries, recreation centres, parks and schools in Surrey
- ▶ Zoning By-Law provides requirements for bike parking for new non-residential and multiple unit residential buildings, with minimum dimensions and location

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"Why is there no bike parking in City Centre? I have never frequented many businesses as there is nowhere to lock up a bike. When I go to banks I bring my bike inside with me."*

The availability of safe, visible and easy to use bike parking is a fundamental determinant of whether someone chooses to cycle or not. The demand for bike parking can be very obvious when bicycles are chained to street lights or fences but historically there has been little attention given to this basic cycling need. One of the main changes in our bicycle planning and implementation strategy is a greater focus on expanding the provision of public bike parking. Bike racks are often not expensive and easy to install, providing excellent value for money in allowing more people to cycle.

The City can work with schools and businesses to provide more bike parking and facilitate cycling to popular destinations.

Today, many public facilities in Surrey have bike racks, such as libraries, recreation centres, parks and schools, as well as some transit stations and exchanges. Some shopping malls and supermarkets also provide bike parking. However, the current provision of bike parking is by no means universal and where it is provided, the racks provided are often hidden away, difficult to find, or limited in number. Public bike racks will be installed within the boulevard at visible and easily accessible locations. More opportunity for secure bike parking at City events is also important, as well as advertising that it'll be available and where to find them at the event.

ACTION FOR CHANGE

Expand the public bike rack program with a target of introducing approximately 10-20 new bike racks a year over the next several years within the City Centre, Town Centres and public facilities.

Work with the Business Improvement Associations (BIAs) to enhance bike end-of-trip facilities in the City Centre and Town Centres.

Encourage School District #36 to install bike racks at schools in visible and easily accessible locations as part of the broader Safe and Active Schools Program.

Provide and advertise secure bike parking or bike valet service through volunteer organizations at major public events, such as Canada Day, WinterFest, Party for the Planet, and the Cloverdale Rodeo.

OBJECTIVE 2B: Ensure developments are cycling-friendly

ISSUES AND INFLUENCES

- ▶ *Signage and pavement markings to direct cyclists through private property (commercial and multi-family residential developments) are rare*
- ▶ *Advertisement of existence, location and number of bike parking spaces is usually non-existent in commercial and residential developments*
- ▶ *Little provision of showers, lockers and/or change rooms for employees / visitors at commercial developments*
- ▶ *73% of the public say provision of secure indoor bike storage is medium or high priority for end-of-trip investment*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"Having shower facilities and bike storage at major sources of employment really helps."*

Development that concentrates growth and creates mixed use, pedestrian- and cycling-friendly neighbourhoods has been associated with improved health, community well being and safety. With the fast pace of development within the City, the potential to increase cycling is high and in particular, there is a very significant contribution to be made to the amount of bike parking delivered. The Zoning By-Law needs to be comprehensively updated to improve both the amount of bike parking provided, as well as the design standards for bike parking and storage. To support this, the City will distribute a bike parking handbook to the development community which will include best practice on parking and other end-of-trip facilities such as change rooms and showers for employees and visitors. With the theft of bicycles being a large concern for many, the importance of providing secure parking needs to be emphasised.

According to a 2009 TransLink study, 49% of bike theft occurs at home from a garage or parkade, showing the need for secure residential indoor bike parking.

ACTION FOR CHANGE

Undertake a comprehensive review of the Zoning By-Law parking standards and requirements for bicycles. Apply them consistently for all development applications.

Examine partnership opportunities with commercial developments and residential stratas to provide bike parking.

Promote convenient connections to cycling routes and internal circulation within and between existing and new commercial and multi-family residential developments.

Encourage businesses to advertise where they have bike parking available and direct cyclists on-site.

Encourage businesses to provide facilities such as change rooms, showers, lockers and drying racks for employees.

Develop a bicycle end-of-trip facilities handbook for new developments.

OBJECTIVE 2C: Increase bike end-of-trip support at transit facilities

ISSUES AND INFLUENCES

- ▶ *Bike lockers are available for rent from TransLink at Scott Road Station (20 lockers), King George Station (64 lockers and plans for a bike cage for approx. 100 bikes in 2012), Scottsdale Exchange (8 lockers) and South Surrey Park & Ride (10 lockers). New lockers have been installed at Surrey Central Station in early 2012.*
- ▶ *Transit system bike support: racks for 2 bikes on all buses / community shuttles. Bikes allowed on the SkyTrain (except 7am-9am westbound, and 4pm-6pm eastbound)*
- ▶ *74% (survey respondents) consider medium / high priority to have more space for bikes on buses and on the SkyTrain*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"Being able to bring your bike on the SkyTrain during peaks hours would be great."*

Research shows, unsurprisingly, that the most important aspects of a cycling-friendly transit system are: improved routes to transit hubs and improved bike parking. End-of-trip facilities close to transit stations, Park-and-Rides and exchanges are increasingly in demand, as more people take multi-modal trips. Although bike parking is the fundamental end-of-trip facility, there is also value in offering washrooms, repair services, change rooms, showers and more secure parking. The City supports TransLink's actions to increase the amount of bike parking at transit hubs and will work with them to help ensure there is full coordination with the City's efforts to improve connections. Cycling-friendly transit creates a flexible, multi-modal option that complements both transit and cycling. The use of transit for part of a bike trip can reduce the impact of distance, bridge a gap in the Bike Network or mitigate bad weather. At the same time, cycling can improve access to the transit network and reduce demand for amenities such as Park-and-Ride.

A "bike station" incorporates many services to cyclists into one location. Through its place on TransLink's regional Bicycle Subcommittee, the City will advocate for the installation of "bike stations" and other bike parking close to transit exchanges, and to encourage cycling-related businesses to establish in the station. Other locations may also be identified for additional "bike stations" or secure indoor bike parking.

Other forms of bicycle-transit integration are also important, like allowing for more bikes on the buses and allowing for bikes on the SkyTrain without time or direction restrictions. Bicycle-transit integration provides more comfort and confidence for longer rides or alternatives for weather changes, if the cyclists have the option of putting the bike on the transit for part of the route.

ACTION FOR CHANGE

Support TransLink's goal to make its transit fleet 100% accessible to bicycles and increase the bicycle carrying capacity of transit vehicles.

Advocate for secure bike parking at SkyTrain stations and transit exchanges, that allows for spontaneous trips (eg. Bike cages, Bike Station,...).

Advocate for bikes to be allowed on the SkyTrain without time or direction restrictions.

Collaborate with the transit service providers to ensure integrated and high-quality transit exchanges as part of Town Centres and City Centre improvements.

Continue to secure transit infrastructure close to activity generators and destinations.

PRINCIPLE 3

MANAGING AND MAINTAINING THE NETWORK

STRATEGIC OBJECTIVE 3: KEEP THE NETWORK SAFE,
VISIBLE AND IN OPTIMUM CONDITION

Addressing safety concerns, poor maintenance, and lack of wayfinding is a significant incentive to have more people cycling more often.

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
3.a Install adequate signage and pavement markings for cycling routes	New Strategies and Initiatives	Provide "Share the Road" signage and pavement markings on important "shared traffic" cycling connections.	Additional
		Identify intersections and mid-block crossings that present difficulty for cyclists and investigate potential improvements with signage and pavements markings.	Additional
		Include bike push buttons when retrofitting traffic signals that are part of the existing Bike Network. Routes that are going to be implemented in the short term should also be considered.	Existing
		Review cycling routes and parking restrictions signage in specific corridors.	Additional
		Review cycling pavement markings and symbols throughout the city and upgrade them to current standards.	Additional
	Ongoing Strategies and Initiatives	Improve the City's management (planning and maintenance) of our cycling assets through expanded use of GIS.	Additional
		Provide uniform and sufficient signage of all cycling routes.	Existing
		Provide signage and pavement markings ("sharrows") at Neighbourhood Bike Routes to help cyclists navigate the local roads.	Existing

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
3.b Develop a wayfinding program for both on- and off-street cycling routes	New Strategies and Initiatives	Identify key locations for installing wayfinding signage throughout the bike system, integrated at key locations with pedestrian and transit information.	Existing
		Work with cycling advocacy groups to identify locations / destinations that need to be referred to in the wayfinding signage (neighbourhoods, main commercial destinations, public buildings, etc.).	Existing
		Develop comprehensive signage and wayfinding plan for the Greenway Network, working in conjunction with other City Departments.	Additional

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
3.c Enhance maintenance programs for cycling facilities	New Strategies and Initiatives	Identify high use cycling routes, industrial frontages and other priority areas and develop an enhanced level of service for sweeping.	Additional
		Include cleanliness and debris clearance of cycling routes on Erosion and Sediment Control (ESC) inspections for construction sites.	Additional
	Ongoing Strategies and Initiatives	Continue to review all cycling routes four times a year as part of the road maintenance review to identify locations that need maintenance for pot holes and / or irregularities on the pavement.	Existing
		When other capital works are done on a cycling route, review the possibility of relocating manholes or other obstacles to improve safety and comfort for cyclists.	Additional
		Continue to require property owners to maintain clearance for cyclists on roads and multi-use pathways by pruning encroaching vegetation.	Existing

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
3.d Provide special treatment for cyclists at vulnerable locations	New Strategies and Initiatives	Investigate and pilot different solutions for intersection treatment and engineering solutions to improve cyclists' safety.	Additional
		Establish cyclist conflict hot spots through collision data and cyclist surveys, and develop a program to improve cyclist safety at these locations.	Additional
	Ongoing Strategies and Initiatives	Through Traffic Control inspections, ensure provision for cyclists are included in road works and temporary obstructions management practice, accommodating cyclists with adequate space and alternate routes, and providing directions. Monitor to prevent construction signs from obstructing cycling routes.	Existing
		Install clear and consistent signage along cycling routes to advise cyclists of turns and route options, and to advise drivers to be aware of cyclists' presence.	Existing
		Promote road design standards that improve the cycling experience, and apply the Bikeway Traffic Control Guidelines for Canada from the Transportation Association of Canada (TAC) guidelines for construction of bicycle facilities.	Existing



NEIGHBOURHOOD
ROUTE
Ocean Park to
Semiahmoo



OBJECTIVE 3A: Install adequate signage and pavement markings for cycling routes

ISSUES AND INFLUENCES

- ▶ *Cycling-friendly lanes and shared traffic roads were signed in 2010 with "Share the Road" signs, but few roads have "sharrows" (pavement marking)*
- ▶ *62% of the public consider cyclist push buttons at signalised intersections very likely / likely to make them bike more*
- ▶ *65% of the public consider clear pavement marking and signage at intersections very likely / likely to make them bike more*
- ▶ *In 2010 the City spent \$250,000 on over 2,000 Cycling route and Share the Road signs throughout the City (all existing cycling routes were signed)*
- ▶ *More "Share the Road" signage and pavement markings are likely / very likely to make 51% of the public cycle more*
- ▶ *Greenways Network is not clearly marked and due to some missing links, most people don't know where they go to/from*
- ▶ *Pavement markings are redone once a year for lines. Symbols are not repainted in thermoplastic, but in regular paint*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"We need 'Share the Road' signs."*

Providing clear and consistent bicycle route and “Share the Road” signage and pavement markings is important to help guide cyclists around the city, advising them where to turn and which roads are part of the Bike Network, as well as advising drivers that cyclists can be expected on those roads. The City has already started on a program of improvements with a city-wide signage improvement program completed in 2010. A full review of cycling pavement markings and symbols needs to be done throughout the city to develop a plan to gradually upgrade them to current standards, as budget allows. Neighbourhood Bike Routes and Greenways have differentiated standards for signage and pavement markings.

The City has an ongoing program of signage maintenance and replacement and an annual program of pavement marking repainting. All cycling route signs and pavement markings are treated as a fully integrated part of the larger inventory of signs and pavement markings and as such are improved in line with broader maintenance regimes.

One of the challenges for cyclists on the road is crossing other roads. On full signals there is typically a bike push button if the road is part of the Bike Network. In addition, innovative treatments for crossings and bicycle detection need to be examined. Other road crossings and treatments to facilitated cycling should be considered for unsignalized intersections. If the Cycling Route was implemented after the traffic signal was installed, there is opportunity to include bike push buttons when traffic signals are being retrofitted. Traffic signals being retrofitted in areas where a route is planned in the short term should also include bike push buttons.

Management of cycling assets through GIS can be improved, both for planning and maintenance purposes. Expanded information and frequent updates to the cycling data in City’s mapping software (COSMOS) and other tools will help manage the Bike Network, signage, pavement markings, and bike racks.

Many bike shoulders and bike lanes currently do not have any parking restrictions, as signage was not implemented when the routes were first put in place. Many of those locations have little parking demand. However, as the city redevelops and

more density is added to many of our main roads, vehicles are more commonly using bike lanes and shoulders for parking. A review of parking signage along specific corridors will help deter blocking the bike lanes with parking and stopping.

ACTION FOR CHANGE

Provide uniform and sufficient signage of all cycling routes.

Provide “Share the Road” signage and pavement markings (“sharrows”) on cycling-friendly roads and important “shared traffic” cycling connections.

Identify intersections and mid-block crossings that present difficulty for cyclists and investigate potential improvements with signage and pavements markings.

Include bike push buttons when retrofitting traffic signals that are part of the existing Bike Network. Routes that are going to be implemented in the short term should also be considered.

Improve the City’s management (planning and maintenance) of our cycling assets through expanded use of GIS.

Provide signage and pavement markings (“sharrows”) at Neighbourhood Bike Routes to help cyclists navigate the local roads.

Review cycling routes and parking restrictions signage in specific corridors.

Review cycling pavement markings and symbols throughout the city and develop a plan to upgrade them to current standards.

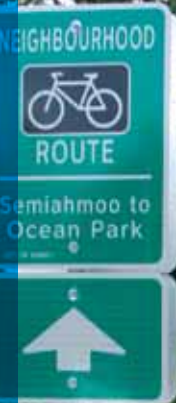
OBJECTIVE 3B: Develop a wayfinding program for both on- and off-street cycling routes

ISSUES AND INFLUENCES

- ▶ *Little existing directional signage for cyclists*
- ▶ *Greenway Network has little identification*
- ▶ *42% of the public consider directional signage very likely / likely to make them cycle more*
- ▶ *30% of the public have identified "circuitous / unconnected routes" as a deterrent to cycling*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"People need to be clear on where they are going."*



As the quality and profile of the cycling infrastructure improves so does the need to make best use of it. In this regard, providing assistance to cyclists on the use and navigation of the Bike Network will become increasingly necessary. The nature of the wayfinding program and priorities for its implementation will be developed in partnership with local cycling advocacy groups and other City Departments.

Greenways have a special appeal to those who are less confident, younger and beginner cyclists because they are either off-road or adjacent to the road but are separated from vehicular traffic. They also provide a place for people just to explore and enjoy the City. Currently, some 17% of the total Bike Network is provided by the Greenway system. Surrey's first Greenway was built in the early 1990's and since then it has grown into a 70 km long system. This large and growing resource has come about as a result of a sustained planning effort and a large financial investment, however, for many Surrey residents, there is a lack of awareness or knowledge of this very important resource. The City is committed to raising the profile of this impressive resource and to making sure it is used and enjoyed by more people. Branded wayfinding signage will be implemented across the Greenway Network starting with those with the greatest potential to increase cycling and walking in communities.

ACTION FOR CHANGE

Identify key locations for installing wayfinding signage throughout the bike system, integrated at key locations with pedestrian and transit information.

Work with cycling advocacy groups to identify locations / destinations that need to be referred to in the wayfinding signage (neighbourhoods, main commercial destinations, public buildings, etc.).

Develop comprehensive signage and wayfinding plan for the Greenway Network, working in conjunction with other City Departments.



OBJECTIVE 3C: Enhance maintenance programs for cycling facilities

ISSUES AND INFLUENCES

- ▶ *Bike lanes are currently swept twice a year on arterial roads (spring and fall). In commercial areas, bike lanes are swept approximately once every 3 weeks. The City is looking to increase the frequency of sweeping in the coming years*
- ▶ *Bike lanes are reviewed four times a year for pavement condition and potholes, as part of the regular road check cycles. Pathways are checked once a year for pavement condition*
- ▶ *Potholes and unswept / unploughed bike lanes are among the top 4 cycling deterrents for the public*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"Bike lanes not being repainted after construction is a problem."*
- ▶ *"Cycling paths/signed shoulders should be swept clear of broken glass and other debris."*
- ▶ *"Road debris is my biggest concern."*
- ▶ *"Roadsides are not maintained for cyclists (e.g. pavement unconformity, storm drains, sand, and garbage)."*

More than 43% of those surveyed by the City said that the surface maintenance of on-street bike lanes and greenways such as sweeping, snowploughing and cutting back of vegetation would encourage them to cycle more. A smooth surface is important for the comfort and safety of cyclists. If the surface condition is poor, cyclists can find themselves at risk of falling, having to ride further away from the curb and therefore closer to traffic, or simply suffering the inconvenience and disruption of a tire puncture.

Currently there is no specific cyclic maintenance program for cycling routes: they are swept as part of broader road maintenance regimes. In conjunction with our enhanced recording of cycling activity described in our section on monitoring and performance indicators, the City will review and identify locations where there is higher cycling use and where enhanced levels of maintenance will be expected to increase cycling.

Some Actions for Change can be immediately implemented, such as including the cleanliness of bike lanes around construction sites in the Erosion and Sediment Control inspections. Property owners will continue to be required to maintain clearance to cyclists on roads and pathways. When other capital works are done on a cycling route (existing or future), there may be opportunity to relocate manholes and other cycling deterrents to improve the quality of the cycling experience along the Bike Network.

ACTION FOR CHANGE

Review all cycling routes four times a year as part of the road maintenance review to identify locations that need maintenance for pot holes and / or irregularities on the pavement.

When other capital works are done on a cycling route, review the possibility of relocating manholes or other obstacles to improve safety and comfort for cyclists.

Identify high use cycling routes, industrial frontages and other priority areas and develop an enhanced level of service for sweeping.

Include cleanliness and debris clearance of cycling routes on Erosion and Sediment Control (ESC) inspections for construction sites.

Continue to require property owners to maintain clearance for cyclists on roads and multi-use pathways by pruning encroaching vegetation.

OBJECTIVE 3D: Provide special treatment for cyclists at vulnerable locations

ISSUES AND INFLUENCES

- ▶ *Inaccurate and incomplete data on collisions: most bike accidents are only reported in the event of a fatality or a serious injury*
- ▶ *Of bike collisions reported to ICBC, 57% occurred at an intersection, 74% during daylight, 80% with a dry roadway and 74% with the cyclist going straight ahead*
- ▶ *"Feeling unsafe due to traffic speed and volume" is the #1 cycling deterrent for 77% of the public*
- ▶ *62% of the public feels that inconsiderate drivers is a cycling deterrent*
- ▶ *10-12 new traffic signals are implemented each year which provides improved road crossings*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"Drivers need more awareness about checking the bicycle lanes before they turn into them preparing to make a right hand turn."*

There is an increased focus among municipalities, engineers and funding agencies to improve road safety. Community safety is identified as one of the strategic objectives within the Transportation Strategic Plan. Safety is therefore, an important aspect of any plan promoting cycling. Most accidents happen at intersections or when a car is making a turn mid-block into a property. In 74% of collisions with serious injuries or fatalities, the cyclist was going straight ahead. Improving cyclists' visibility and drivers' awareness of cyclists through signage and pavement markings, will increase safety for all on the roads. The City will also liaise with ICBC, individual cyclists and cycling associations to improve collection of data on cyclists collisions.

Cycling education and encouragement are also components of increased safety. New treatments for intersections need to be investigated and piloted accordingly. In 2010 the City piloted a bike/bus lane queue jumper on King George Boulevard at 96 Avenue, which has been working well. More monitoring will be done, and other locations are being looked at to replicate this solution.

Bicycle facilities should be designed in accordance with Bikeway Traffic Control Guidelines for Canada and Geometric Design Guide for Canadian Roads from the Transportation Association of Canada (TAC). Construction sites should address detours for cyclists and may include the need to merge into a travel lane – signage and training for crew should be arranged.

ACTION FOR CHANGE

Install clear and consistent signage along cycling routes to advise cyclists of turns and route options, and to advise drivers to be aware of cyclists' presence.

Through Traffic Control inspections, ensure provision for cyclists are included in road works and temporary obstructions management practice, accommodating cyclists with adequate space and alternate routes, and providing directions. Monitor to prevent construction signs from obstructing cycling routes.

Investigate and pilot different solutions for intersection treatment and engineering solutions to improve cyclists' safety.

Promote road design standards that improve the cycling experience, and apply the Bikeway Traffic Control Guidelines for Canada and Geometric Design Guide for Canadian Roads from the Transportation Association of Canada (TAC) guidelines for construction of bicycle facilities.

Establish cyclist conflict hot spots through collision data and cyclist surveys, and develop a program to improve cyclist safety at these locations.

PRINCIPLE 4

PROMOTING CYCLING

STRATEGIC OBJECTIVE 4: PROMOTE SAFE CYCLING AS A HEALTHY, FUN AND SUSTAINABLE WAY TO TRAVEL

Celebrating, raising awareness and promoting cycling are critical elements to get people cycling more.

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
<p>4.a Provide educational resources and information to support efficient, safe and enjoyable cycling</p>	<p>New Strategies and Initiatives</p>	<p>Include bike parking information on the Bike Map and on the City's mapping software (COSMOS) to encourage cycling, identifying as much information as possible, such as type, location, capacity, and operating hours.</p>	<p>Additional</p>
		<p>Investigate different formats for the printed Bike Map, looking at pocket versions or neighbourhood maps.</p>	<p>Additional</p>
		<p>Develop a smart phone application with mapping, GPS location and slope information for cyclists. This may be done in conjunction with the application for the City's mapping software (COSMOS).</p>	<p>Additional</p>
	<p>Ongoing Strategies and Initiatives</p>	<p>Regularly update the Bike Map and inventory of bicycle facilities both on the City's mapping software (COSMOS) and the printed version.</p>	<p>Existing</p>
		<p>Continue to consult with local residents on details about projects that will change operation and/or access close to where they live.</p>	<p>Existing</p>
		<p>Establish and maintain partnerships to deliver bicycle information and training more effectively and at a lower cost.</p>	<p>Existing</p>
		<p>Continue to support and sponsor the Hub (former VACC) and other organizations in their efforts to translate handbooks and reach more immigrant communities with cycling information.</p>	<p>Additional</p>

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
4.b Support others who promote cycling in Surrey	New Strategies and Initiatives	Sponsor or encourage university research in any of several aspects associated with cycling and greenways data collection and analysis – usage data, suitability analysis, GIS data entry, mapping, user characteristics and behaviours, etc.	Additional
	Ongoing Strategies and Initiatives	Support groups that promote cycling in Surrey, providing them with maps and material, and help promote their events.	Existing
		Under the umbrella of the Safe and Active Schools Program, continue to support and sponsor groups that provide student skills training to improve cyclist safety, comfort and confidence, as well as bicycle maintenance courses.	Existing
		Expand the Engineering Department's contribution to the promotion of active and healthy living programs	Additional
4.c Celebrate cycling in Surrey	New Strategies and Initiatives	Provide more support to encourage cycling to major City events in Surrey, by providing bike parking, cycling route information and tips with event marketing.	Additional
		Develop and deliver an ongoing bicycle promotion campaign about the benefits of cycling as an enjoyable, healthy and inexpensive way to travel.	Additional
		Market all new cycling projects to increase public awareness and improve usage, making use of the new Cycling webpage.	Existing
		Produce a cycling promotional video for website, conferences, public meetings and other events to promote cycling in Surrey.	Existing

OBJECTIVE	ACTION FOR CHANGE		INVESTMENT OF RESOURCES
<p>4.d Encourage safe behaviour and mutual respect among drivers, pedestrians and cyclists</p>	<p>New Strategies and Initiatives</p>	<p>Sponsor or encourage university research in any of several aspects associated with cycling and greenways data collection and analysis – usage data, suitability analysis, GIS data entry, mapping, user characteristics and behaviours, etc.</p>	<p>Additional</p>
		<p>Promote cycling to the “Interested, but Concerned” population, encouraging facilities like the Neighbourhood Bike Routes and the Greenway Network.</p>	<p>Additional</p>
		<p>Work with the local community and cycling groups to identify safety concerns along cycling routes and develop strategies to reduce the problem (e.g. improved lighting, improved sweeping regimes, vegetation clearance, etc.).</p>	<p>Additional</p>
		<p>Develop an information program / campaign to encourage drivers to be more considerate of the needs of cyclists and reduce the risks of vehicle-caused bike accidents.</p>	<p>Additional</p>
	<p>Ongoing Strategies and Initiatives</p>	<p>Work with the RCMP seeking expansion of their enforcement role of traffic laws that will help foster expected behaviour that will build stronger relationships among drivers, cyclists and pedestrians.</p>	<p>Existing</p>

OBJECTIVE 4A: Provide educational resources and information to support efficient, safe and enjoyable cycling

ISSUES AND INFLUENCES

- ▶ *New City of Surrey Bike Map released in April 2011 with over 40,000 copies distributed. Map also available online*
- ▶ *Cycling webpage was added to www.surrey.ca/transportation in 2010, with list of upcoming projects and other information*
- ▶ *Bike Map and Cycling webpage include information about the Cycling Plan, cycling rules for on-street and off-street routes, signage and pavement markings, parks, how cycling infrastructure is built and information about bikes on transit*
- ▶ *Cycling email was created in 2010: cycling@surrey.ca*



Although Surrey’s Bike Network is regularly updated on the City’s online mapping software (COSMOS) to reflect the most recent additions, the printed map has typically only been updated every 6-7 years with the most recent update in 2011. The Bike Map is the City’s premier tool for showing the network, explaining etiquette and promoting safe and respectful use of our transportation systems. Henceforth, a new printed map will be available every 2-3 years. To ensure as many people as possible know about the map, publication will be accompanied by promotion and publicity on the City’s website and local media.

A cycling webpage has been added to the City’s website at www.surrey.ca/transportation, with information on maps, routes, basic cycling information and details on recent and upcoming projects as well as an exclusive cycling email cycling@surrey.ca for any cycling-related inquiries. As more and more people go to the City’s website for information on services, expansion of the cycling page will continue with more information on specific safety and neighbourhood route projects as well as new sections on cycling safety, local events and where to find bike parking (public bike rack information will be added). Different formats of the maps should be investigated, as well as an application for smart phones, possibly in conjunction with the COSMOS (City’s mapping software) application.

Each project is unique, with some projects having little or no impact on residents, while other projects involve new parking restrictions or generate concerns about privacy and security. Neighbourhood consultation on specific connections, as well as the broader goals and network we are trying to achieve, are an important part of a cycling project. Public consultation will create community awareness and support for the new proposed routes, as well as opportunities for input on design.

Many organizations are involved in cycling education, advocating and promoting. The City will establish new partnerships, and continue to support and sponsor these organizations in their efforts to reach Surrey residents with information and training.

ACTION FOR CHANGE
Include bike parking information on the Bike Map and on the City’s mapping software (COSMOS) to encourage cycling, identifying as much information as possible, such as type, location, capacity, and operating hours.
Regularly update the Bike Map and inventory of bicycle facilities both on the City’s mapping software (COSMOS) and the printed version.
Investigate different formats for the printed Bike Map, looking at pocket versions or neighbourhood maps.
Develop a smart phone application with mapping, GPS location and slope information for cyclists. This may be done in conjunction with the application for the City’s mapping software (COSMOS).
Continue to consult with local residents on details about projects that will change operation and/or access close to where they live.
Establish and maintain partnerships to deliver bicycle information and training more effectively and at a lower cost.
Continue to support and sponsor the Hub (former VACC) and other organizations in their efforts to translate handbooks and reach more immigrant communities with cycling information.



OBJECTIVE 4B: Support others who promote cycling in Surrey

ISSUES AND INFLUENCES

- ▶ *An average of 50% of children are driven to school*
- ▶ *25% of all deaths in Surrey are related to heart disease*
- ▶ *Personal attitudes and choice plays a big role in determining which transportation mode they use*
- ▶ *The City supports and sponsors various Hub (former VACC) programs and advertises Streetwise cycling courses every year*
- ▶ *The City supports and sponsors Better Environmentally Sound Transportation (BEST)'s "June is Bike Month" campaign, "Commuter Challenge" and other initiatives*
- ▶ *Since the school year 2009/2010, as part of the Safe & Active School Program, the City has been funding cycling courses for elementary school children in schools developing a School Travel Plan*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"Road safety training for cyclists should be mandatory."*

A comprehensive cycling plan requires attention not only to the infrastructure to support safe cycling but also to educate, encourage and enforce safe behaviours from all who use streets and cycling routes. While the City has a lead role to play in this, there are groups who have additional resources to provide complementary and specialist expertise and initiatives. By supporting and partnering with these organizations, the overall impact of both the City's work and that of the groups is further enhanced.

Cycling education and encouragement can also be incorporated in other City's initiatives, such as the Safe and Active Schools Program. Currently all schools involved in School Travel Planning get two years of cycling training. This program can be expanded to include courses for secondary schools as well, with bike tune-up courses as well. University research may also help with data collection and analysis, providing our initiatives with direction and feedback. Maintaining existing partnerships and expanding them to deliver cycling information and to receive cyclists' feedback, will help to promote cycling in Surrey.

ACTION FOR CHANGE

Sponsor or encourage university research in any of several aspects associated with cycling and greenways data collection and analysis – usage data, suitability analysis, GIS data entry, mapping, user characteristics and behaviours, etc.

Support groups that promote cycling in Surrey, providing them with maps and material, and help promote their events.

Under the umbrella of the Safe and Active Schools Program, continue to support and sponsor groups that provide student skills training to improve cyclist safety, comfort and confidence, as well as bicycle maintenance courses.

Expand the Engineering Department's involvement in the promotion of active and healthy living programs such as "Go for 20" in partnership with the Parks, Recreation and Culture Department and health service providers.

OBJECTIVE 4C: Celebrate cycling in Surrey

ISSUES AND INFLUENCES

- ▶ *The City currently supports Bike to Work Week and Bike Month, as well as other events and campaigns that encourage and promote cycling*
- ▶ *End-of-trip facilities are present at all Surrey Libraries and Recreation Centres, and many parks and other City facilities*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"We need more cyclists – much of the car anxiety situations arise because drivers do not expect to see a cyclist in that spot"*
- ▶ *"Bicycles can solve transportation and health problems. Invest heavily and visibly respect this activity - if you build it, they will come!"*



Cycling is increasingly seen as an enjoyable and stylish means of travel. More people are choosing to cycle as an expression of their commitment to personal health or protection of the natural environment. The City already takes part in events such as Earth Day, Commuter Challenge and Bike to Work Week. Support for these events will continue through marketing and provision of materials such as Bike Maps and will be supplemented by an ongoing promotion effort on the benefits of cycling. At other events organized by the City, cycling will be promoted by providing bike parking and/or partnering with other organizations to provide bicycle valet parking, as well as promote the cycling routes to get to the event. In 2011, three bicycle and pedestrian overpasses were constructed across Highway 1 in Guildford, Highway 99 in South Surrey, and North Creek in Cloverdale. These represented some of the most significant cycling projects ever undertaken within Surrey and rightly deserved to be celebrated by the City, our funding partners and the community. Although not all cycling projects or initiatives are as large as these, the City will seek to promote, celebrate and recognize other investments as they happen.

ACTION FOR CHANGE

Provide more support to encourage cycling to major City events in Surrey, by providing bike parking, cycling route information and tips with event marketing.

Develop and deliver an ongoing bicycle promotion campaign about the benefits of cycling as an enjoyable, healthy and inexpensive way to travel.

Market all new cycling projects to increase public awareness and improve usage, making use of the new Cycling webpage.

Produce a cycling promotional video for website, conferences, public meetings and other events to promote cycling in Surrey.

OBJECTIVE 4D: Encourage safe behaviour and mutual respect among drivers, pedestrians and cyclists

ISSUES AND INFLUENCES

- ▶ *62% of survey respondents feel deterred from cycling due to inconsiderate drivers*
- ▶ *Mandatory helmet usage for all cyclists (Provincial Law, 1996)*
- ▶ *Cyclists are not allowed on sidewalks in Surrey unless otherwise posted. This regulation varies among municipalities and there seems to be confusion among cyclists whether they are allowed or not in some cases (sidewalk vs. pathway)*
- ▶ *According to a study done in 1998, 75% of all bicyclist fatalities involve head trauma*
- ▶ *84% of survey respondents who cycle always wear a helmet; 10% usually; 6% rarely or never*

COMMENTS FROM THE 2009 WALKING AND CYCLING SURVEY:

- ▶ *"Cars park in the bike lanes."*
- ▶ *"The City needs to work on motorist awareness programs so that cyclists are accepted as part of the transportation options."*
- ▶ *"Drivers need more awareness about checking the bike lanes before they turn."*
- ▶ *"Safety is the main concern. Concern with driver attitude and behaviour."*



Safe behaviour is critical for the safety of all cyclists. Accidents are more likely to happen when a cyclist does not follow expected cycling behaviour, or does not signal appropriately, as drivers and pedestrians plan their movements based on expected behaviour. Signage and education are the main components for increasing safety and awareness. For example, in an on-street route, cyclists are required to ride in the same direction as the cars (on the right side of the road). Cyclists are not permitted on sidewalks, unless otherwise posted, but they are permitted on multi-use pathways, which can be off-street or on the boulevard (next to the road). Drivers should also learn how to share the road with cyclists, interpreting signs and understanding expected behaviour. One of the main complaints by cyclists is the lack of respect from drivers who do not provide enough space or drivers who disregard the presence of cyclists when making turns or opening car doors. Pedestrians should also be included in these education campaigns for expected behaviour on shared pathways.

Additional signage will be put on multi-use pathways, as part of the greenways wayfinding signage initiative, to help users differentiate between a sidewalk and a greenway, particularly when the greenway is on the boulevard beside the road. This will ensure that cyclists only share spaces with pedestrians when the space is intended to be shared and has enough width to accommodate all users

Not only education and promotion, but also working with the RCMP for enforcement will help improve expected behaviour for drivers, cyclists and pedestrians, so they can share spaces and respect dedicated spaces for each user. Examples are: no bikes on sidewalks, use of correct hand signals when turning (cyclists), drivers yielding and checking for bikes on bikes lanes before making a right turn or opening doors of parked vehicles, no parking/stopping on the bike lanes.

Working with the local community to understand concerns and develop strategies to solve them is an important aspect of getting more people cycling. Targeting the “Interested, but Concerned”, and promoting facilities like the Neighbourhood Bike Routes and the Greenway Network will also increase the number of cyclists in Surrey.

ACTION FOR CHANGE

Develop an education campaign to inform pedestrians, cyclists and drivers on what the rules and expected behaviour are for each user on the road and on pathways.

Develop an information program / campaign to encourage drivers to be more considerate of the needs of cyclists and reduce the risks of vehicle-caused bike accidents.

Work with the local community and cycling groups to identify safety concerns along cycling routes and develop strategies to reduce the problem (e.g. improved lighting, improved sweeping regimes, vegetation clearance, etc.).

Promote cycling to the “Interested, but Concerned” population, encouraging facilities like the Neighbourhood Bike Routes and the Greenway Network.

Work with the RCMP seeking expansion of their enforcement role of traffic laws that will help foster expected behaviour that will build stronger relationships among drivers, cyclists and pedestrians.



PART 4 MEASURING SUCCESS

MEASURING SUCCESS



In order to achieve the objectives of this Plan, it is important that the Plan remains relevant and adhered to, as well as regularly updated and added to. Most of the Actions for Change are not merely items on a list to check off. The four steps in this cycle, identified in the Transportation Strategic Plan, are:



This Cycling Plan has done much of the base work in identifying, analyzing and planning Actions for Change, and some of them are already part of our approach. Others are well on their way to being implemented, and the rest will be applied in the future. The next steps of monitoring, reviewing and adjusting are just as important as implementation. One way of doing this is through performance indicators: easy-to-measure ways to check if we are still on track. They can help us determine whether: still on track. They can help us determine whether:



4.1 PERFORMANCE INDICATORS

It can be difficult to measure success. Even some of the seemingly straightforward measurements of the effectiveness of the Cycling Plan, such as the number of people cycling, can be a challenge when there is no easy way to quantify the results. Consequently, this Plan includes several manageable performance indicators that will give a good indication of the availability to and accessibility of cycling in Surrey.

INDICATOR	UNIT OF MEASURE
New on-street bike routes	Km/year
New greenways	Km/year
School Travel Planning program	Number of participating schools
Bicycle Parking	Number of new bike parking spaces per year
Safety	% of women and children cycling
Cycling as a main mode of daily travel	% of Surrey residents commuting by bicycle

During the development of this Plan, consultation was undertaken with stakeholders and citizens of Surrey. The information received has proven to be critical in helping to develop this plan and test our understanding of the issues and needs around cycling in Surrey. As part of the City's plans to improve its understanding of the public's priorities, perceptions and attitudes towards transportation through surveys and face-to-face discussions with citizens, issues around cycling and feedback on specific initiatives will be included within this ongoing process.

Traffic counts are regularly undertaken in various locations throughout the city, but bicycles are not usually counted separately. The City will investigate the best ways to include bicycle counts and how to make better use of them.

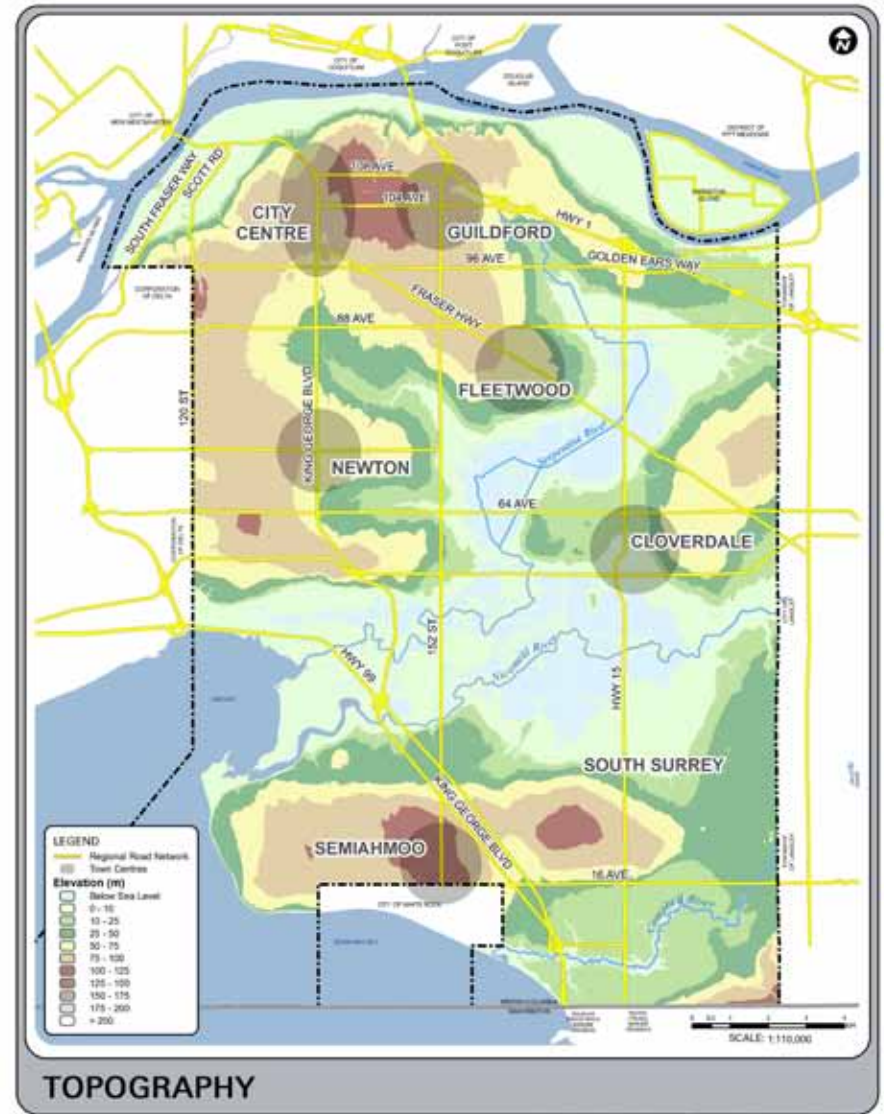
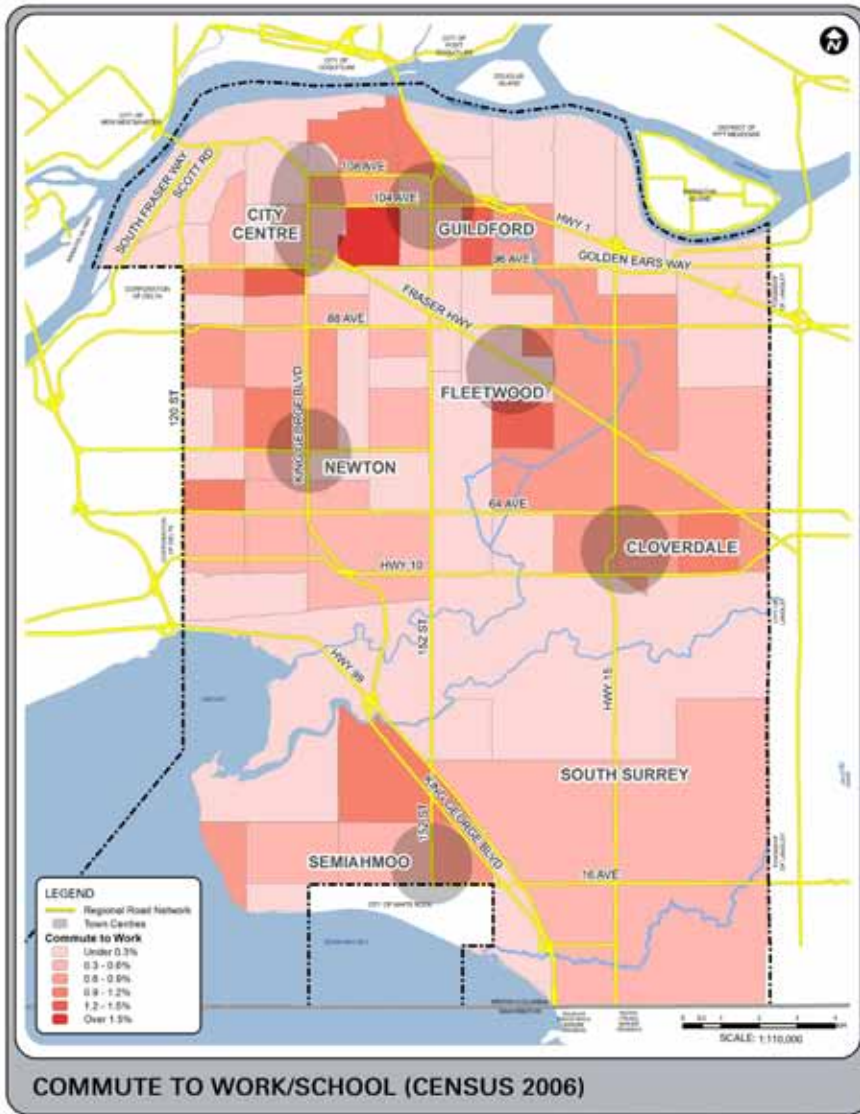
Other measures will help us better understand our cycling environment, and guide us in the planning of new facilities:

- Better utilize pedestrian and bicycle counts that occur at intersections where vehicle traffic counts occur. Review the time of year when counts occur at key non-motorized locations to better reflect periods of bicycle usage.
- Implement a bi-annual survey of cyclists' perceptions and attitudes towards cycling, as well as feedback on new projects, issues and challenges.
- Purchase bicycle count equipment to monitor usage of network.



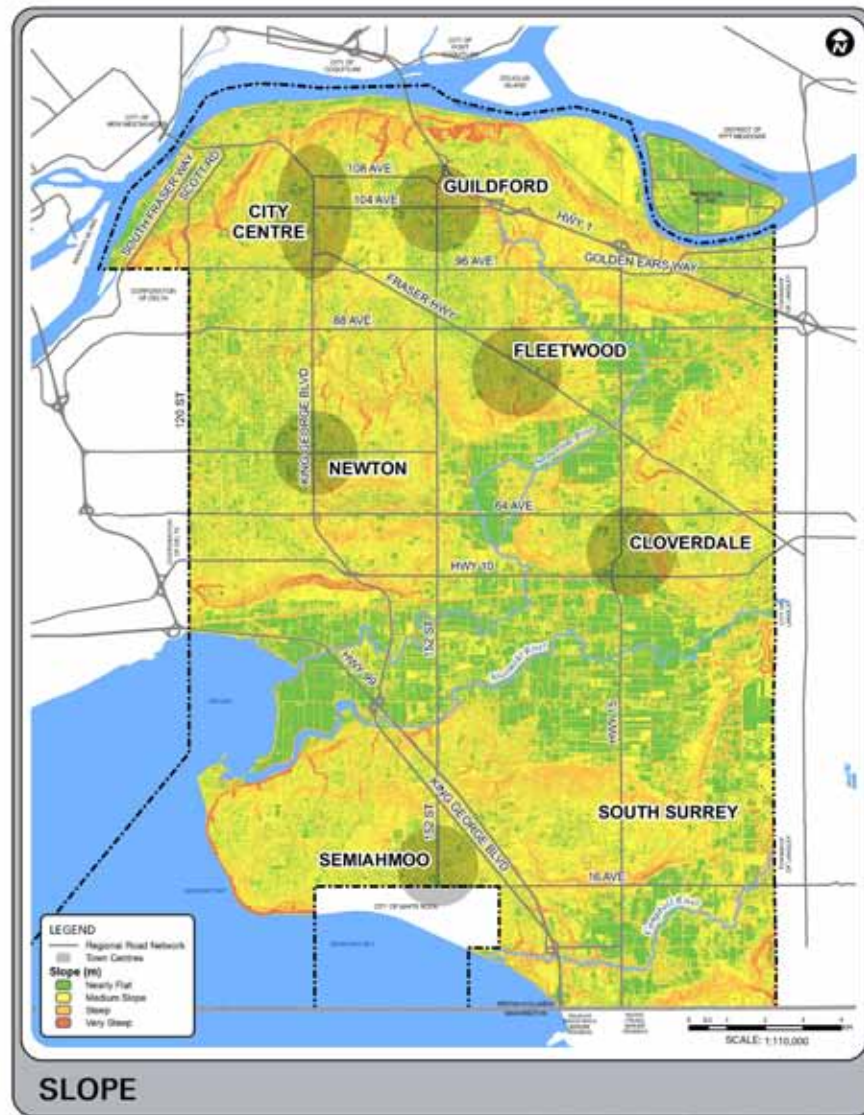


APPENDIX

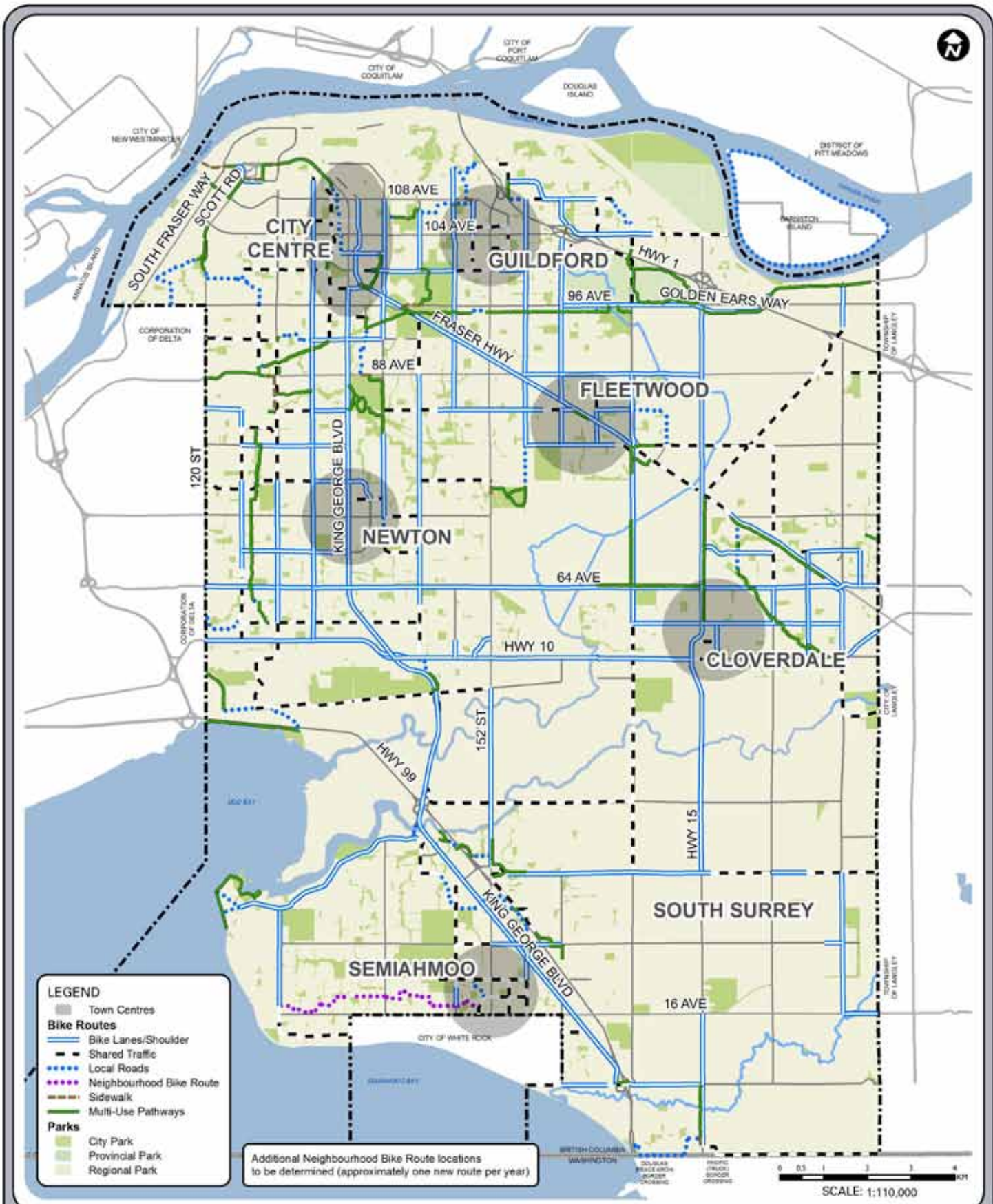


DISTANCES BETWEEN TOWN CENTRES

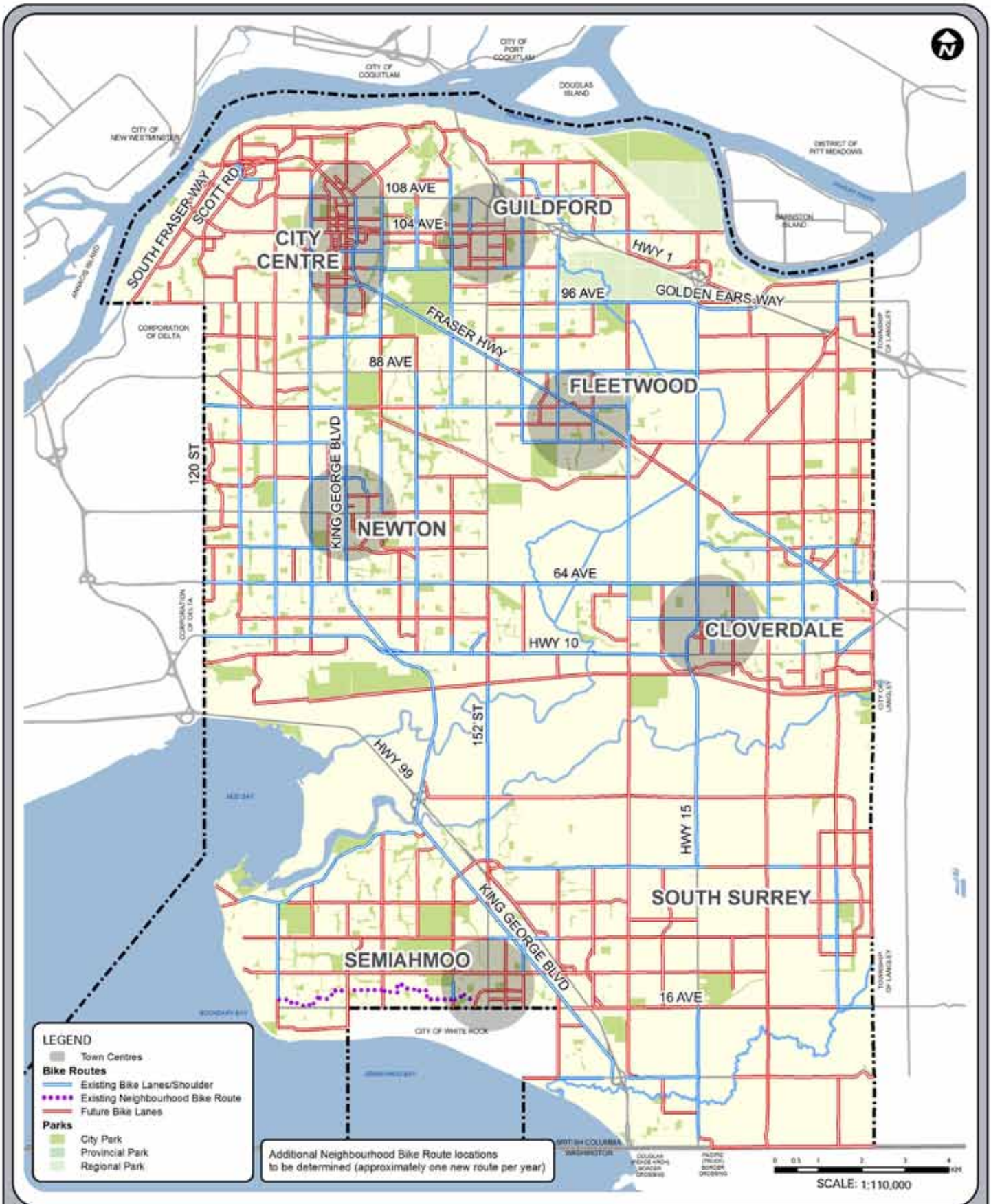
km	City Centre	Guildford	Newton	Fleetwood	Cloverdale	Semiahmoo
City Centre	N/A	3.3	6.5	7.2	13.7	18.9
Guildford	3.3	N/A	9.7	6.1	13.9	17.2
Newton	6.5	9.7	N/A	7.8	10.6	14.2
Fleetwood	7.2	6.1	7.8	N/A	6.4	15.3
Cloverdale	13.7	13.9	10.6	6.4	N/A	13.5
Semiahmoo	18.9	17.2	14.2	15.3	13.5	N/A



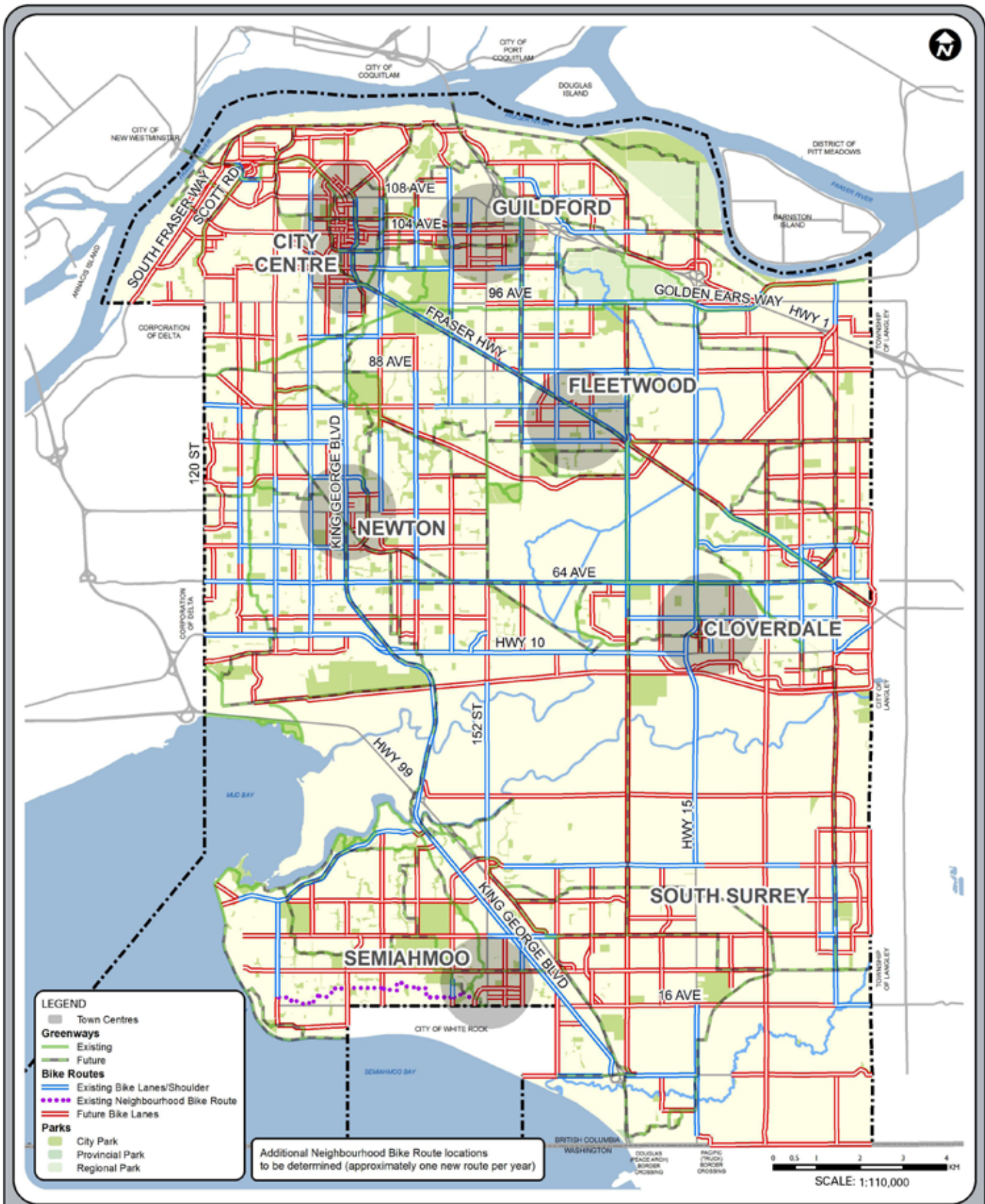
Source: © Mapping Solutions Ltd. Topographic, CyclingPlan & ArcGIS. © City of Surrey, Cartographer: WSR. Date Printed: April 2012



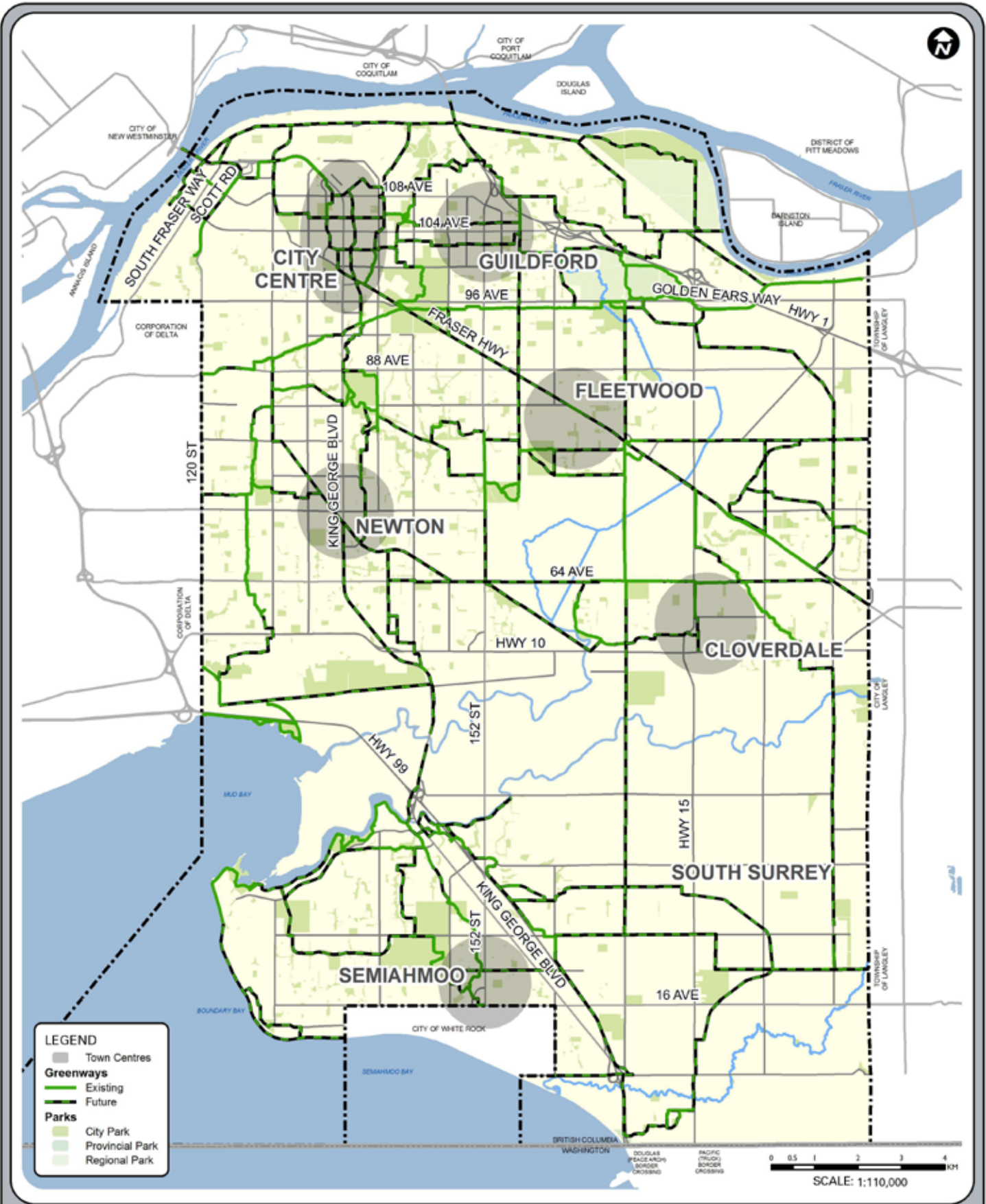
EXISTING ON AND OFF STREET CYCLING NETWORK



ON-STREET CYCLING NETWORK VISION FOR 2052

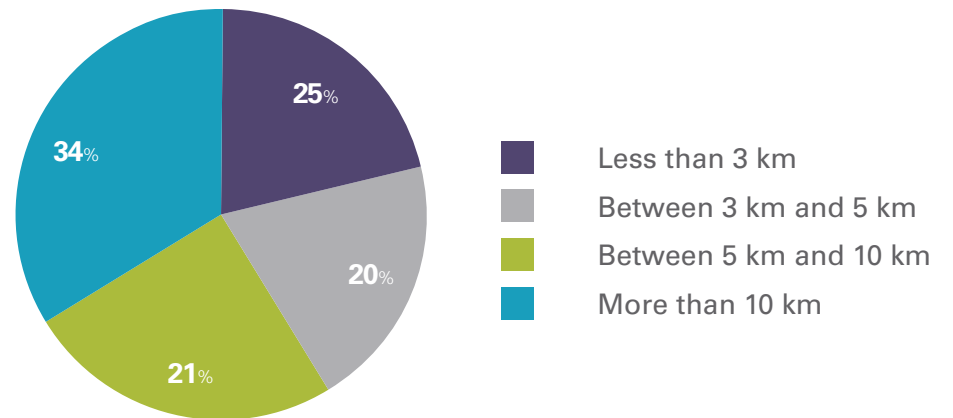
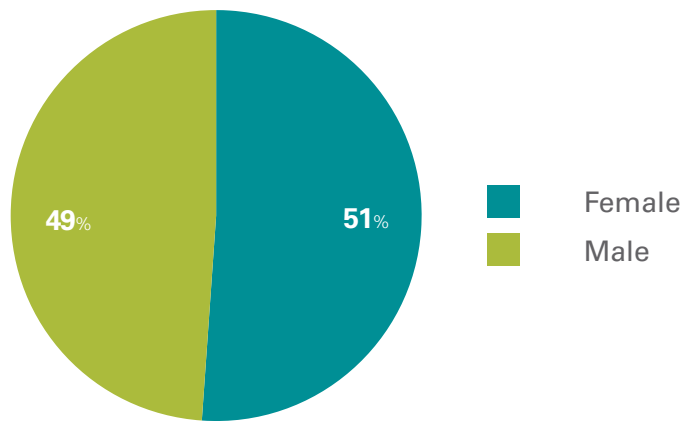
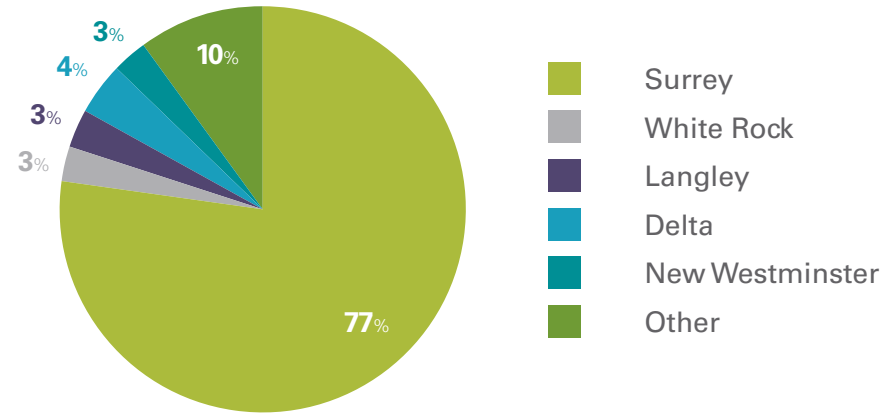
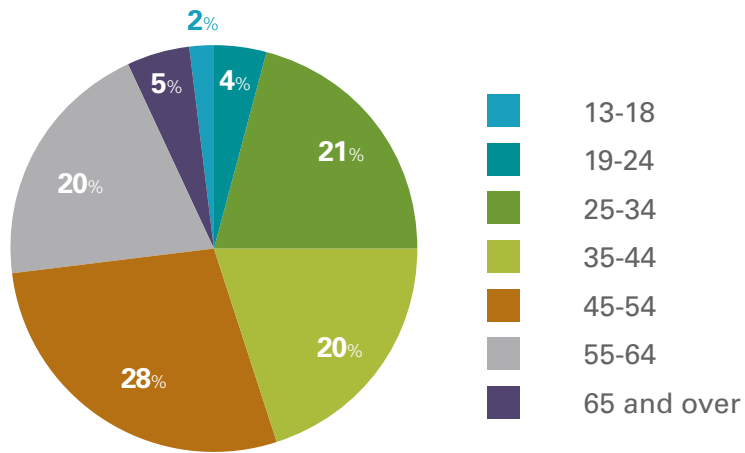


VISION FOR ON - AND OFF - STREET CYCLING NETWORK

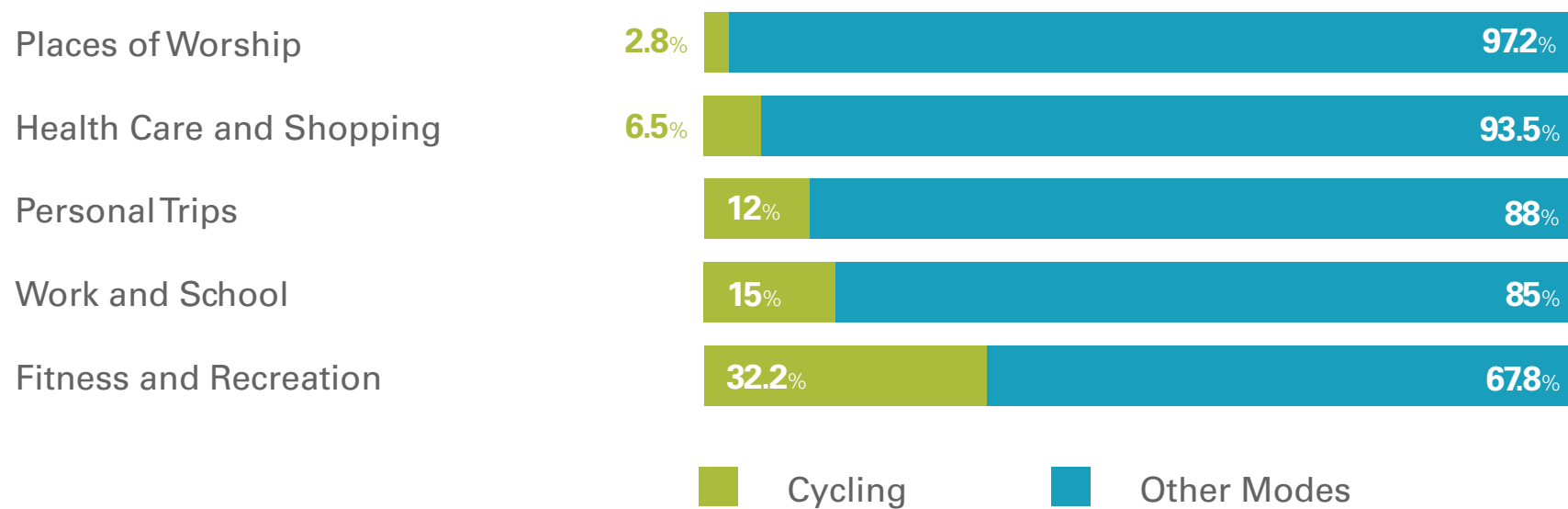


GREENWAYS NETWORK

Public Online Survey Results



Cycling Trips compared to other modes



Some specific questions were asked about desirable and undesirable cycling facilities, so that investments can be made targeting the most desirable facilities. There are different people with different preferences and it is important to cater for all of them. Not everyone likes cycling on busy roads, but those are usually the shortest route to a destination, making those routes very appealing for commuter cyclists. However, when cycling with children, most people would like to be further away from traffic.

The most common deterrent for cycling is the feeling of being unsafe due to traffic speed and volumes, combined with the second most common deterrent being inconsiderate drivers. Sharing the road and providing the cyclist with enough space doesn't seem to be the case most of the time. Education measures and signage are two examples of measures that can help make cycling more comfortable, enjoyable and safer.

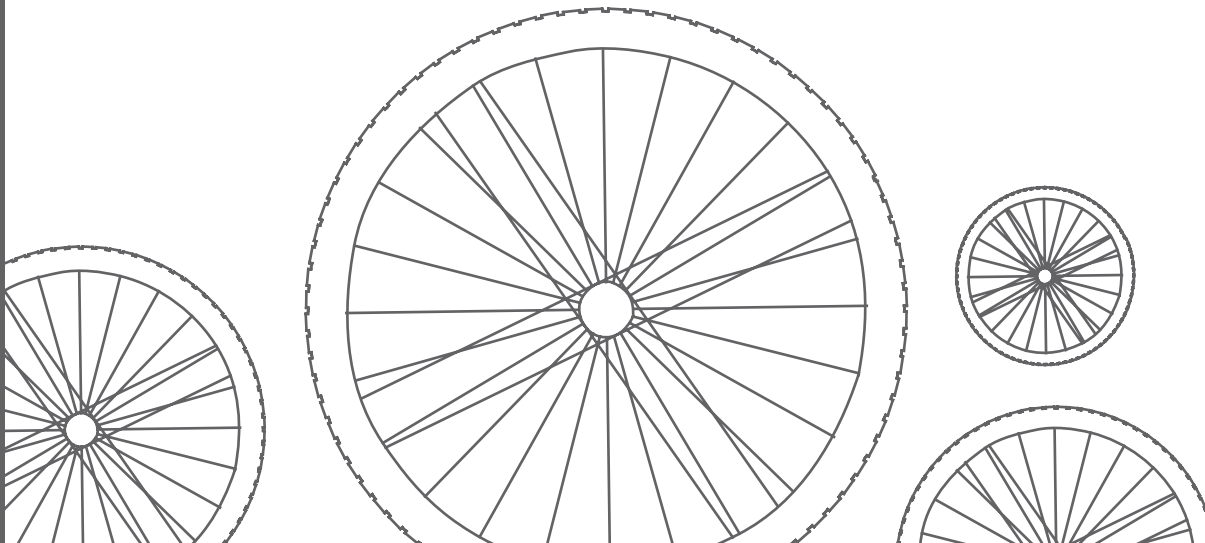
Some deterrents are out of the engineering realm of actions, such as weather, hills and distance between home and work. In addition, people were concerned with the quality of the cycling environment, and not merely whether facilities existed or not. This shows that maintaining facilities, having proper signage and ensuring the cyclist is respected are as important as building new facilities. The following preferences and deterrents are listed in order of most voted in the survey:

Desirable Facilities

- Bike lanes without parked cars
- Local / rural roads with signage
- Bike lanes with separation from traffic

Undesirable Facilities

- Shares lanes on busy roads
- Local roads without signage
- Rural roads without paved shoulders



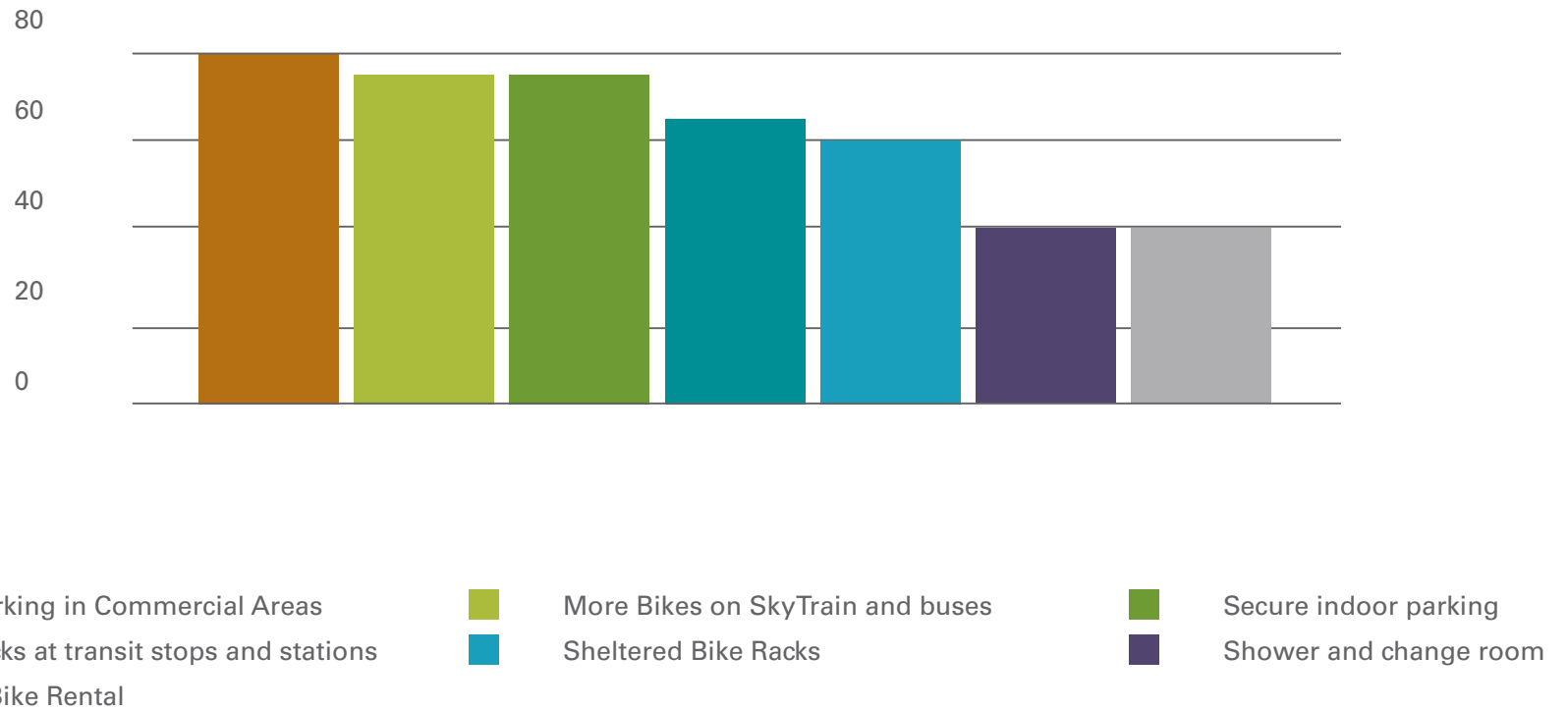
I feel unsafe due to traffic speed and volumes
Drivers are inconsiderate
Bike routes are unswept / unploughed
There are potholes on the route
I'm afraid of cars parked beside the bike route
The bike lanes are too narrow
There's too much air and noise pollution from traffic
It's difficult to cross roads

so I don't cycle very
much or often

I would cycle more if

bikes lanes had greater separation from traffic
there were more off-street paths and greenways
(multi-use pathways)
local roads were bike routes
there was clear pavement marking and signage
there were more connections between cul-de-sacs and streets
(walkways)
I had a place to park my bike at my destination
my destination was closer

Priorities for end-of-trip facilities







toward a cycling friendly community



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CITY OF SURREY

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For more information on the wide range of transportation policies, programs and initiatives in Surrey go to:

www.surrey.ca/transportation