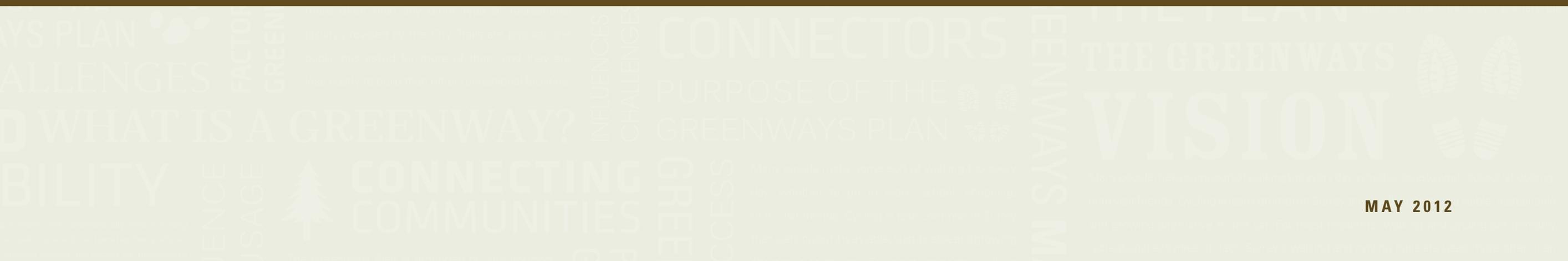




GREENWAYS PLAN



MAY 2012



Greenways Plan

MAY 2012





Crescent Beach Greenway

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EXECUTIVE SUMMARY

Many people make some sort of walking trip every day, whether to go to work, school, shopping, or to visit friends. Cycling is less common in Surrey than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In fact, Surrey's walking and cycling trails are used more often than any other type of recreational facility provided by the City. Trails are popular, the public has asked for more of them and they are less costly to build than other recreational facilities.

The City of Surrey's Walking Plan and the Cycling Plan both recognize the importance of walking and cycling in achieving broader transportation and City objectives in the areas of safety, health, accessibility, sustainability, environmental protection and developing a successful Surrey economy. Multi-use pathways (greenways) are critical pieces of the transportation infrastructure that make walking and cycling possible in Surrey.

The importance of trails, greenways, walking and cycling is mentioned in many of the City's policy documents and plans, including: the Sustainability Charter; the Official Community Plan; the Transportation Strategic Plan; the Parks, Recreation and Culture Strategic Plan; the Plan for Social Well-Being and the Child- and Youth-Friendly City Strategy. These plans, either directly or indirectly, promote walking and cycling as critical components of a healthy and active community and as viable, sustainable alternatives to the car. These plans recognize that greenways matter. The Greenways Plan is aligned with and supports these corporate plans and policies and it merges recreational objectives with transportation objectives. Greenways improve and enhance both the cycling and the walking experience by providing connections and interesting routes for pedestrians and cyclists to move throughout the community.

THE INTENT OF THE GREENWAYS PLAN IS TO:

- Provide a framework for the greenway implementation process;
- Establish general policies for greenway routing and design;
- Indicate the general layout of the Greenway Network;
- Ensure the integration of greenway planning with land-use planning; and
- Establish Actions for Change that influence operational decision-making in multiple departments.



Hook Greenway

“Building Individual and Community Connections through Greenways”

The Plan is organized around four primary principles:

- **COMMUNITY CONNECTIONS**
- **SHAPING SURREY**
- **CONTINUOUS IMPROVEMENT**
- **QUALITY DESIGN AND MANAGEMENT**

Each Principle is supported by a Strategic Objective and a number of Operational Objectives. These principles and objectives will help to build a City where:

- There is a network of connected greenways, sidewalks and bike routes
- Walking and cycling are increasingly popular recreational activities and realistic transportation choices for everyone
- Active transportation is the first choice for all in the City Centre
- Walking and cycling experiences are interesting, enjoyable and safe

Surrey has already constructed a number of greenways that are becoming increasingly popular with residents. People are excited about the possibility of a connected network of greenways throughout the community. A sound foundation has been established but the implementation of the remaining routes and connectors will face some challenges that require planning and attention to detail guided by a strong corporate policy framework. This plan is intended to provide that framework.

Within the Plan’s four principles, more than fifty Actions for Change have been identified to help Surrey achieve its greenway objectives. As this is a corporate plan, to be implemented by several departments over time, the responsibility for each action item is assigned to one or more departments in the City. The City is doing some of these Actions and it is important to acknowledge them and continue on this positive track. Other Actions are new tasks that can be accomplished over the course of this Plan. The Actions for Change include both minor changes and significant work-plan items.

To ensure that the City achieves the objectives of this Plan, it is important that it remains relevant, top-of-mind and up-to-date. To this end, the Plan contains several performance indicators that will help determine the extent to which goals are being achieved and form the basis of future reporting on greenways.



A Typical Off-Street Greenway Corridor



Semiahmoo Greenway: **Pebble Mosaic** by Glen Andersen



WHAT IS A GREENWAY?





SERPENTINE
HILLS



Serpentine
Fields
1.8 km



WHAT IS A GREENWAY?

Some jurisdictions use the term greenway to refer to linear parks or riparian and wildlife corridors. Increasingly however, the term greenway refers to only those corridors that contain a multi-use pathway. Regionally, perhaps the best example of a greenway is the Central Valley Greenway (CVG) - a 25 km pedestrian and cycling route in metro Vancouver running from Science World to New Westminister. The CVG links downtown Vancouver to transit hubs, residential and employment areas, schools, shopping and parks. The CVG was developed in partnership with Translink, Metro Vancouver, Burnaby, New Westminister and Vancouver as a showcase Urban Transportation project.

A good B.C. example of a greenway network is in the Resort Municipality of Whistler where, for the most part, Greenways did not have to be retrofitted into established neighbourhoods. As a result, most of their greenways are in park-like corridors with very few along a road. Greenways are an integral component of the outdoor, active Whistler lifestyle and a major visitor attraction. Whistler's greenway system offers many examples of best practices in greenway planning, design and management.

Unlike Whistler, the greenway network in Vancouver relies heavily on street Rights-of-Way which make up approximately 50% of the network. For example, the Ridgeway Greenway extends across town for approximately 13 km from Pacific Spirit Park to the City of Burnaby's Central Park. This greenway is primarily along 37th Avenue and other residential streets that have been enhanced for pedestrian and cyclist safety and comfort. Although this major greenway is shared with vehicles, the extensive and creative use of landscaping, seating, signage, drinking fountains and public art make this a very interesting and pleasant cycling or walking route across the city through many of Vancouver's neighbourhoods.

In the City of Surrey, the concept of a linear greenbelt system connecting parks and open spaces was first incorporated into the Official Community Plan (OCP) in 1985. By 1996, Surrey Parks Planning and Engineering Transportation Planning staff had identified a total of twenty (20) different greenways, had collected detailed data on each site and have subsequently made significant progress on the construction of many kilometres of multi-use pathways (greenways) throughout the community.

DEFINITION

A paved, multi-use pathway separated from motor vehicles for pedestrians, cyclists and other non-motorized users.

Surrey's Greenways Plan, Walking Plan and Cycling Plan, all refer to walking and cycling and each plan uses the term greenway. In all cases, a greenway is defined as a paved multi-use pathway separated from motor vehicles for pedestrians, cyclists and other non-motorized users.

Ideally, a greenway is a 4 metre wide asphalt paved surface built within a separate, off-street, linear corridor that is at least 10 metres wide. Landscaping, interpretive signage, lane markings for pedestrians and cyclists, directional signage, shelters and benches may be provided. Where it is not possible to provide a separate corridor for the greenway, it may be built parallel to, but separated from, the motor vehicle roadway. In these cases, landscaping and as much separation as possible is provided.

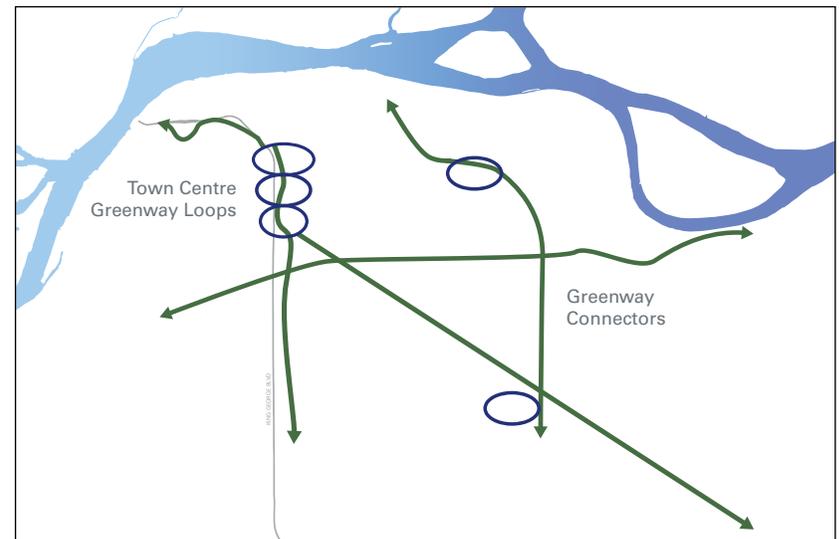
A HIERARCHY OF GREENWAYS

CITY GREENWAYS – LOOPS & CONNECTORS

City Greenways, consisting of loops and connectors, are the subject of this Greenways Plan. City Greenways form the skeleton of the Greenways Network. They provide the main, multi-use pathways around each of the town centres for the six distinct communities in Surrey (loops) and they provide the primary multi-use pathway connectors between these various town centres (connectors).

NEIGHBOURHOOD GREENWAYS

Greenways also exist at a neighbourhood level. This finer grid of greenways provides important connections to sidewalks, bike routes and local roads and they must be specifically planned for in each neighbourhood when the city undertakes a Neighbourhood Concept Planning process.





Pioneer Greenway



GREENWAYS MATTER

This Greenways Plan sets out a Vision for the creation of a Greenways Network in Surrey and establishes a guide for the continued implementation of the greenways initiative. A commitment to greenways results in the achievement of many corporate and community objectives. Greenways matter in a number of ways.

PERSONAL HEALTH & WELL BEING

- encourage physical fitness and healthy lifestyles to decrease obesity and chronic disease
- create new outdoor recreation and active living opportunities
- provide opportunities to walk and cycle where those who are interested, but concerned can feel safer
- provide active transportation alternatives removed from vehicle noise and pollution
- allow users to engage with and perceive the details of their community which contributes to spiritual and mental well-being

SOCIAL/CULTURAL BENEFITS

- provide venues for social interaction among users
- connect users with public art, cultural and historical assets
- foster community involvement
- provide natural learning sites and healthy environments for youth activities

ECONOMIC BENEFITS

- provide the most desired and the least expensive recreation facility that the City can provide
- improve the image and attractiveness of the City as a business/home location
- improve adjoining property values and the marketability of homes
- provide cost effective transportation alternatives for residents who do not own cars

ENVIRONMENTAL BENEFITS

- preserve the associated green space for public use
- provide an opportunity for increased understanding and appreciation of the adjacent natural environment
- improve air quality by providing an alternative to motorized transportation
- often provide, or enhance existing, wildlife habitat corridors





Teens using a Greenway



PURPOSE OF THE GREENWAYS PLAN



PURPOSE OF THE GREENWAYS PLAN

The Greenways Plan provides a framework for the greenway planning and implementation process. It is a broad, high-level, policy document that indicates conceptual connections rather than specific alignments. However, this plan is not so general that the objective is unclear nor is it so specific that it lacks the flexibility to respond to future land development proposals. Exact routes are not indicated but the intent to get from one specific place to another is shown. Issue-based policies and priorities are stated throughout the plan. Although greenways can enhance natural environments, that is not the primary focus of the Greenways Plan. A greenway may be adjacent and parallel to a wildlife or riparian corridor; however, a greenway is not intended or managed primarily for wildlife and/or environmental reasons.

Multiple, linked greenways combine to create a greenway network that connects pedestrians and cyclists with parks, libraries, recreation and cultural centres, retail areas, points of interest and places of employment in their neighbourhood and throughout the community. The Greenway Network will evolve and change over time as Surrey grows, as opportunities emerge, as barriers are resolved and as budgets allow. Through the Greenways Plan, the City intends to make walking and cycling a part of daily life for Surrey residents and not just a part time, fitness or recreational activity. This Greenways Plan seeks to:

- **PROVIDE A FRAMEWORK FOR THE CONTINUED IMPLEMENTATION OF GREENWAYS AS BOTH TRANSPORTATION AND RECREATION FACILITIES;**
- **ESTABLISH GENERAL POLICIES FOR GREENWAY ROUTING AND DESIGN;**
- **INDICATE THE GENERAL LAYOUT OF THE GREENWAY NETWORK;**
- **ENSURE THE INTEGRATION OF GREENWAY PLANNING WITH LAND-USE PLANNING; AND**
- **ESTABLISH ACTIONS FOR CHANGE WITHIN THE CITY THAT INFLUENCE OPERATIONAL DECISION-MAKING IN MULTIPLE DEPARTMENTS.**







DEVELOPING THE PLAN



DEVELOPING THE PLAN

The Greenways Plan is grounded on and borrows elements from the City's primary planning and policy documents including: the Sustainability Charter; the Official Community Plan; the Parks, Recreation and Cultural Services Strategic Plan; the Transportation Strategic Plan; the Walking Plan; and the Cycling Plan. Each of these important City policy documents contain references to greenways. The Greenways Plan builds on the primary goals of these other plans, is coordinated with them, and provides more detailed objectives and action statements that are specific to the greenways initiative.

Public engagement was undertaken in a variety of ways including a workshop at the Youth Forum in April and six public open houses in May 2011. A public survey was posted online from mid-April through to the end of June 2011. More than 300 survey respondents provided feedback regarding their use of greenways, what it would take for them to use the greenways more often and where they would like to see the greenways go in the community. The feedback received from all these sources has been used to develop both the broad objectives and many of the detailed strategies, objectives and action items of the Plan.

Four primary principles related to greenways emerged:

- **A COMPLETE NETWORK IS IMPORTANT. CONNECT THE GREENWAYS TO THE SIDEWALKS, PEDESTRIAN FACILITIES, BIKE ROUTES AND SUPPORT FACILITIES.**
- **TAKE ADVANTAGE OF GROWTH AND DEVELOPMENT IN THE CITY TO INCORPORATE GREENWAYS INTO THE FABRIC OF NEW NEIGHBOURHOODS AND COMMUNITIES.**
- **CONTINUOUSLY ADD GREENWAY SECTIONS, CONSTRUCT MISSING LINKS AND MAKE ANNUAL IMPROVEMENTS TO THE NETWORK.**
- **DESIGN & MANAGEMENT PRINCIPLES ARE IMPORTANT IN ORDER TO CREATE INTERESTING GREENWAY EXPERIENCES. SAFETY, QUALITY, COMFORT, ACCESSIBILITY AND ATTENTION TO DETAIL MATTER.**

The quotations used throughout this Greenways Plan are taken primarily from the Greenways Survey (2011). Where noted, responses to the Walking and Cycling Plan Survey (2009) are also quoted in this Plan. The detailed results of the Greenways Survey (2011) are included in the Appendix.



“We need more routes that are safe away from traffic in green park-like settings but with enough residential area around to feel safe (not isolated trail through the woods).”

“The mid-block crossings in the medians are great.”

“Greenways need to focus on destination routes not only routes that are enjoyable..”

“As long as it’s safe and there are pathways for shorter distances, I definitely walk more than I drive.”

“It’s time to build communities centred around walking and cycling.”

Surrey Walking & Cycling Plans Survey 2009

POLICY INTEGRATION

Surrey has many existing policies, plans, guidelines, programs and projects that address trails, linear corridors, pedestrian systems, greenways and bike routes. These plans and programs are delivered by various departments and sections within the City. This Greenways Plan will coordinate existing interdepartmental initiatives help make greenways a top of mind item for those involved in community building in Surrey.

THE SUSTAINABILITY CHARTER

The City adopted the Sustainability Charter as the overarching policy document to guide the actions of the City. Sustainability means: “meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.” The Greenways Plan strives to support several components of the Vision Statement of the Sustainability Charter including aspects associated with:

- The Creation of a Safe Community
- The Efficient Movement of People and Goods, Not just Private Vehicles
- The Promotion of Active Living and Cultural Opportunities
- The Promotion of Social Connections and Belonging

THE OFFICIAL COMMUNITY PLAN

The Official Community Plan (OCP) is the City’s primary land use and built environment policy document. It establishes the principles and requirements associated with the physical fabric of the city. The Greenways Plan supports several of the policies contained in the OCP including:

- Building a Complete Community
- Increasing Transportation Choice
- Improving Community Connectivity
- Improving the Quality of the Community
- Providing Parks and Recreation Facilities

THE PARKS, RECREATION AND CULTURE STRATEGIC PLAN

The Parks, Recreation and Culture (PRC) Strategic Plan contains a number of goals and service objectives related to the many roles of the PRC Department. The primary Vision for the PRC Department is: “To Create a Community where Individuals, Culture and the Environment Thrive.” The Parks, Recreation and Culture Mission Statement is:

To enhance the quality of life for the people of Surrey by working together to:

- Protect our natural environment;
 - Preserve our heritage;
 - Provide parks for active and passive use;
 - Ensure access to recreational and cultural opportunities.
-

The PRC Strategic Plan is a tool used to ensure that the needs of residents are met in the upcoming decade (to 2017). It specifically states that a “more comprehensive system of trails and green connections” is one of only five top-ranked priorities for the Department. The other four top priorities are: enhanced parks maintenance standards; more protection of natural open space and biodiversity; more fitness capacity and more multi-purpose space. All of the top five PRC priorities are addressed in the Greenways Plan. The PRC Strategic Plan identifies the preparation of an overall Greenways Plan as a strategic direction for the Department. It states that the Department should “update and complete the Greenway/Blueway Master Plan in consultation with the Engineering and Planning Departments.”

THE TRANSPORTATION STRATEGIC PLAN

The Transportation Strategic Plan (TSP) is the City’s high-level transportation planning document and this Greenways Plan reinforces and supports its principles. Supporting the objectives of the TSP in turn helps deliver the broad economic, social and environmental objectives of the City.

The TSP identified the importance of walking and cycling in achieving the City’s transportation objectives in the areas of health, accessibility, sustainability, environmental protection and a successful Surrey economy. The development of a new Cycling Plan and Walking Plan (completed in 2011) was identified as a priority in the 2008 TSP. Greenways are an important component of both the Walking Plan and the Cycling Plan.

SUSTAINABILITY CHARTER

Socio-cultural Sustainability
Economic Sustainability
Environmental Sustainability



OCP

Build Compact and Complete Communities
Increase Transportation Choice
Protect Agricultural and Natural Areas
Improve the Quality of the Community
Provide Parks and Recreation Facilities



TRANSPORTATION STRATEGIC PLAN

Manage the transportation system for all modes.
Promote alternative and sustainable travel choice.
Improve transportation safety and quality of life.
Reduce congestion.
Reduce the impacts of transportation on the environment.
Promote integration between transportation and land use.

PARKS, RECREATION AND CULTURE STRATEGIC PLAN

Invest in Planning and Management
Provide Parks, Recreation and Cultural Services
Invest in both existing and new recreation facility infrastructure

INFLUENCES AND CHALLENGES

Creating and shaping a healthy and sustainable city means building a city where people can walk, cycle and use transit as their preferred ways to get about. Although walking and cycling are fundamental modes of transportation, these activities are often overlooked in favour of taking the car. Even in Surrey's more active neighbourhoods, those with traditional grid-road networks and homes in close proximity to shops, only 8% of people walk to work and even fewer – only 6.5% - cycle to work. However, "cycling close to the Town Centres is more common than cycling through the Agricultural Land Reserve." (Cycling Plan 2011) Walking and cycling as a daily transportation choice is not yet the most common choice for Surrey residents.

On the other hand, recreational or casual use of trails and greenways is extremely popular. The public survey component of the PRC Strategic Plan (2008) indicates that 70% of the respondents had used a walking or cycling trail in Surrey in the past year. Recreational walking and cycling is therefore the most common fitness activity for the residents of Surrey. Clearly, trails and greenways matter.

A study by Metro Vancouver in the late 1990's revealed that 92% of residents in the Lower Mainland walk regularly for pleasure and that if trails are provided, they are used. A more recent study, the Regional Outdoor Recreation Opportunities Study (March 2011) conducted jointly by Metro Vancouver and the Fraser Valley Regional District found that "walking for pleasure or exercise" is the number one outdoor recreation activity in the region. Recreational walking and cycling seems to dominate people's leisure time. The challenge is to have it dominate their daily transportation routine.

When asked what new outdoor recreation facilities were needed, respondents identified walking and cycling trails as the top priority. (Parks, Recreation and Culture, Strategic Plan, 2008-2017)

Understanding the influences that shape behaviour is vital to the development of appropriate greenway strategies. The extent to which people will walk and cycle is a result of a number of factors; each factor has specific challenges and opportunities. The following chart, adapted from Surrey's Cycling Plan, provides a summary of those opportunities and challenges.



Tynhead Greenway

FACTORS THAT INFLUENCE WALKING & CYCLING

FACTOR	CHALLENGES	OPPORTUNITIES
Connectivity	The network is incomplete and there are a number of major gaps.	Recently the City has been requiring more road connectivity and greenway connections through developments.
Suburban Community	Surrey has historically been a suburban area, where people are used to relying on their cars.	With transit service increasing and more cycling and walking infrastructure provided, the change from the car is possible.
Road Network	Big blocks and few direct routes for walking and cycling.	The road improvement plans create annual opportunities to achieve greenways next to the roads.
Land Use	Historical layouts with residential areas far from commercial areas.	Recent trends towards mixed-use allows for greenways to be incorporated into new development.
Population Density	Population is concentrated in a few areas and the gaps between communities are not very pedestrian or bicycle friendly.	Most population is concentrated in a few Town Centres, with most destinations at a comfortable cycling or walking trip away (less than 5km).
Topography	Elevation changes and many rivers and creeks are physical barriers.	Most of the Town Centres are flat. The rivers and elevation changes between them can create interesting rides and scenic stopping opportunities.
Agricultural Land Reserve (ALR)	The ALR creates large gaps between some of the centres of population and employment.	The ALR tends to have low traffic volumes and few intersections, reducing the number of conflicts for pedestrians and the cyclists.

A SHARED RESPONSIBILITY

Collaboration among staff from different departments will ensure the successful implementation of the policies and programs contained in this Plan. The key Departments and Sections referenced in this plan are as follows:

PARKS, RECREATION AND CULTURE DEPARTMENT

Parks Division (Parks Div)

 Parks Planning Research and Design Section (Park Plan)

 Parks Operations Section – North & South (Park Ops)

 Park Development Services Section (Park Dev)

 Civic Beautification Section (Beaut)

Culture Division

 Public and Community Art Section (PCArt)

Community & Recreation Services Division (CRS Div)

Marketing and Communications Division (Market)

ENGINEERING DEPARTMENT

Operations Division (Eng Ops)

Realty Services Division (Realty)

Design and Construction Division (E D & Constn)

Transportation Division (Transp Div)

 Traffic Operations Section (Traffic Ops)

 Transportation Planning Section (Trans Plan)

Land Development Division (Land Dev)

PLANNING AND DEVELOPMENT DEPARTMENT

Community Planning Division (Com Plan)

Area Planning and Development Division – North and South (Area Plan)

Civic Facilities Division (Facilities)

Each Department, Division and Section has discrete responsibilities and mandates that are important to the overall achievement of the City's Greenway objectives. The "implementation" column associated with each of the action statements in this Plan identifies the specific Section or Division of a particular Department that must play a key role in the implementation of the action item.





Narrow Greenway

THE CITY OF SURREY GREENWAYS PLAN

than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In fact, Surrey's walking and cycling trails are used more often than any other type of recreational facility provided by the City. Trails are popular, the public has asked for more of them and they are less costly to build than other recreational facilities.



The Greenways Plan is grounded on and builds on elements from the City's primary planning and



INFLUENCES + CHALLENGES



NEIGHBOURHOOD GREENWAYS

LOOPS + CONNECTORS

PURPOSE OF THE GREENWAYS PLAN

GREENWAYS MAT

DEVELOP THE PLAN THE GREENWAYS VISION

Many people make some sort of walking trip every day, whether to go to work, school, shopping, or to visit friends. Cycling is less common in Surrey than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In

Many people make some sort of walking trip every day, whether to go to work, school, shopping, or to visit friends. Cycling is less common in Surrey than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In



INFLUENCES + CHALLENGES

NEIGHBOURHOOD GREENWAYS

LOOPS + CONNECTORS

PURPOSE OF THE GREENWAYS PLAN

GREENWAYS MAT

DEVELOPING THE PLAN

THE GREENWAYS VISION



Many people make some sort of walking trip every day, whether to go to work, school, shopping, or to visit friends. Cycling is less common in Surrey than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In

Many people make some sort of walking trip every day, whether to go to work, school, shopping, or to visit friends. Cycling is less common in Surrey than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In

THE CITY OF SURREY GREENWAYS PLAN

THE GREENWAYS VISION

Greenways are both transportation corridors and recreational amenities. They provide physical connections among the various parts of the city and they build social connections among individual members of the community. The Vision that will guide how greenways evolve over time recognizes the broad, community function of greenways and the multiple objectives associated with the creation of a Greenways Network in the City. The Vision for Surrey's Greenways Plan is:

BUILDING INDIVIDUAL AND COMMUNITY CONNECTIONS THROUGH GREENWAYS

Surrey's Greenways provide opportunities for residents to live healthy, active and socially connected lives through a network of interconnected, multi-use pathways that provide safe and interesting routes to primary destinations, major parks and points of interest throughout the community.

GREENWAYS PLAN PRINCIPLES AND OBJECTIVES

The principles and the strategic objectives of the Greenways Plan have been developed from a combination of the results of consultation, the objectives of the Parks, Recreation and Culture Strategic Plan and the principles of the Transportation Strategic Plan.

PRINCIPLE	STRATEGIC OBJECTIVE
<p>1. Community Connections: The Importance of Networks</p>	<p>Achieve a continuous and connected network of greenway routes that link people to parks, libraries, recreation and cultural centres, retail areas, employment areas, town centres and points of interest throughout the community.</p>
<p>2. Shaping Surrey: New Opportunities from New Development</p>	<p>Integrate greenways planning with strategic land use planning and facilitate development that supports greenway connections.</p>
<p>3. Continuous Improvement: Coordinate, Partner and Advocate</p>	<p>Continuously expand and enhance the greenways network by promoting greenways, leveraging funds and coordinating projects.</p>
<p>4. Quality Design & Management: Accessibility, Safety and Comfort</p>	<p>Create and manage a greenways environment that is accessible, safe, comfortable and interesting to use.</p>

PRINCIPLE 1: COMMUNITY CONNECTIONS: THE IMPORTANCE OF NETWORKS

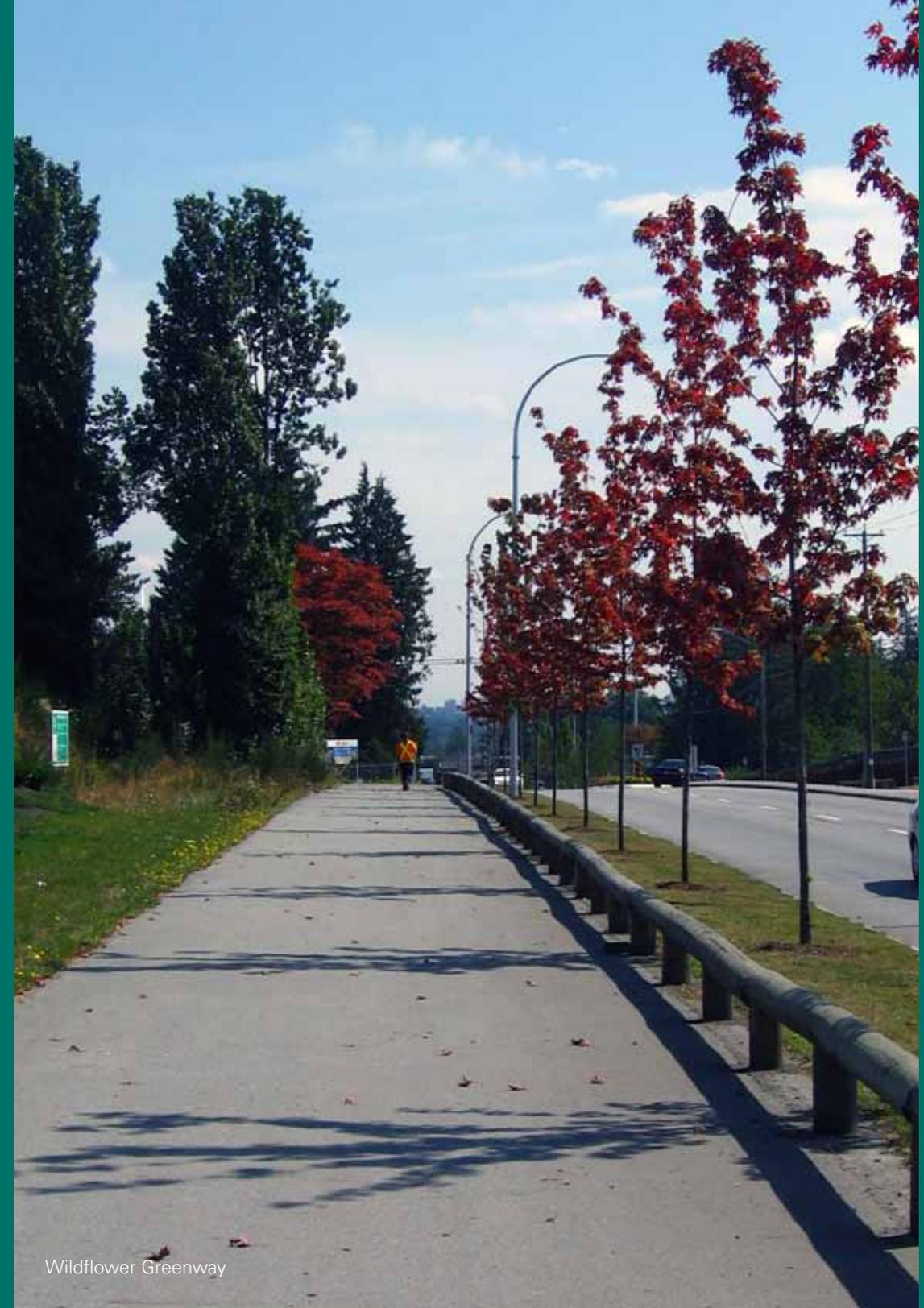
Considerable progress has been made regarding the construction of greenways in Surrey over the past two decades. The partnership between the Engineering Transportation Division and the Parks Division has been an effective collaboration. Greenways, once considered to be just for recreation, are also an important component of the transportation system

More than 70 km of greenways have been built since the mid-nineties. Senior levels of government have assisted with a number of major greenway projects such as: the Tynehead Loop Greenway (Metro Vancouver); the Golden Ears Greenway (Translink); the Surrey Parkway (Translink) and several Provincial Highway overpasses. These major greenway projects, combined with other cost-sharing projects initiated by the City on the Quibble Creek Greenway, the Green Timbers Greenway, Cloverdale Greenway and the Serpentine Greenway have created a critical mass of greenways within Surrey that is noticeable to the public.

A foundation of greenways has been established in Surrey. Approximately 30% of the Greenway Network has been built. However, gaps currently exist because greenways don't always connect. A greenway may meet a major road and stop. A greenway may come up to an older, developed neighbourhood with no obvious route forward or a greenway may not carry on along a length of Right-of-Way because there's a creek that needs to be crossed. A greenway beside a new road project may extend to where that new road meets an older one, and the greenway stops. Identifying the critical missing links and completing the connecting sections on a priority basis is an important action item that will transform the current collection of greenways into a network. However, finding routes, establishing the greenway corridors, acquiring the land and the Rights-of-Way needed to create future network connections within the established property patterns of Surrey will be increasingly complicated.

ISSUES AND INFLUENCES

- 64% of the public say they would walk more if there were more walkways (Walking Plan Survey, 2009)
- Walking and cycling trails are the most used and most requested park features (PRC Strategic Plan)
- Many neighbourhoods were built before developers were required to construct sidewalks and park amenities
- 72 km of the multi-use greenway system has been constructed since 1993.
- “If safe cycling/pedestrian routes could be provided that include greenways, it is my belief that the overall health of the citizens would greatly improve, especially that of kids.”
- “You need more connections throughout the city to make it more accessible to the public.”
- “I would love a complete network of greenways that connect all major parks in Surrey.”
- “Build the continuous network as soon as possible”



Wildflower Greenway



STRATEGIC OBJECTIVE 1: ACHIEVE A CONTINUOUS AND CONNECTED NETWORK OF GREENWAY ROUTES THAT LINK PEOPLE TO PARKS, LIBRARIES, RECREATION AND CULTURAL CENTRES, RETAIL AREAS, EMPLOYMENT AREAS, TOWN CENTRES AND POINTS OF INTEREST THROUGHOUT THE CITY.



1. ACHIEVE A CONTINUOUS & CONNECTED NETWORK OF GREENWAYS

OBJECTIVE	ACTION FOR CHANGE	NEW OR ONGOING	WHO
1a) Plan for convenient and interesting greenway routes within and between Surrey's six distinct communities (loops and connectors).	Regularly review and update the City's Greenway Map as new opportunities emerge for improved routing options and connectivity.	Ongoing	Park Plan Trans Plan
	Ensure that a greenway loop is incorporated into the physical fabric of each of the Town Centres in Surrey's distinct communities.	Ongoing	Park Plan Trans Plan Com Plan
	Undertake a gap analysis of the built greenway network and identify the priority locations for new greenways and opportunities to bridge the gaps.	Ongoing	Park Plan Trans Plan
	Continue to locate greenways through linear parkland corridors and adjacent to natural corridors to improve the greenway experience and within utility corridors (gas, hydro and rail) whenever access rights can be acquired and within Statutory Rights-of-Way adjacent to road Rights-of-Way whenever a utility or parkland corridor is not possible.	Ongoing	Park Plan Trans Plan Com Plan Area Plan
	Construct greenways around City Facility sites as a standard component of facility design and construction.	New	Facilities Park Plan Trans Plan

OBJECTIVE	ACTION FOR CHANGE	NEW OR ONGOING	WHO
	Review existing greenway connectors and determine which missing sections are needed to connect the six distinct communities to each other.	New	Park Plan Trans Plan
	Identify and illustrate the primary and secondary destinations in each distinct community.	New	Park Plan Trans Plan Com Plan
	Examine the feasibility of and explore opportunities related to the joint use of some of the existing active rail corridors that transverse the community as potential 'rails with trails' greenway routes.	New	Park Plan Trans Plan Com Plan
1b) Provide wayfinding signs and create a greenway image.	Develop a wayfinding signage program that helps users find the Greenway Network and use it with confidence.	New	Market Park Plan Trans Plan Com Plan Beaut
	Identify one key rest area in each Town Centre for design treatment as a "special place" that announces the greenway network for that Town Centre.	New	Parks Plan Com Plan Area Plan Beaut PCArt

OBJECTIVE 1A: PLAN FOR CONVENIENT AND INTERESTING GREENWAY ROUTES WITHIN AND BETWEEN TOWN CENTRES.

ACTIONS FOR CHANGE

- Identify and illustrate the primary and secondary destinations in each distinct community.
- Construct greenways around City Facility sites as a standard component of facility design and construction.



CITY DESTINATIONS

- “I’m pleased with my local greenway because it’s a great place to walk. However, it doesn’t connect up very well with my local shopping area.”
- “Better connections are needed from 108th skytrain station and Guildford Mall, between [parallel to] 108th and 104th.”
- “I believe connecting schools and shopping centres and bus loops is the most important.”

Respondents to the Greenways Survey (2011) are excited by the possibility that one day they may be able to get to major destinations along a greenway route. Surrey residents identified the following meaningful greenway destinations in the City.

- Transit stations;
- Recreation Centres, Cultural Centres and Libraries;
- Shopping malls;
- Schools;
- Major Parks and natural areas;
- Various shops and services.

The City should lead by example and build greenways around and onto City facilities as a component of all City facility project plans. Historically City facilities are poorly connected to greenways – see, for example, the Newton Recreation Centre and Aquatic facility, the Fleetwood Community Centre and/or the Guildford Library and Recreation Centre. Steps must be taken to connect the City’s important community facilities to the Greenway Network.

NATURAL DESTINATIONS AND HABITAT CONNECTIVITY

Surrey's large parks and natural areas are popular destinations for greenway users. Bear Creek Park, Crescent Beach, Green Timbers, Holland Park, Tynehead Regional Park and Mud Bay were specifically listed as desired greenway destinations. Existing greenways to and through natural areas, such as the Green Timbers Greenway, have proven to enhance the active transportation experience. Linkages to parks and natural areas not only serve recreational and transportation purposes but also provide wildlife habitat connectivity benefits. Opportunities to locate greenway routes through natural areas should continue to be explored. A separate section of this Plan addresses maintenance standards and the need to achieve habitat diversity as a greenway quality management objective.



ACTIONS FOR CHANGE

- Continue to examine opportunities to locate greenways adjacent to natural corridors and add greenway links that improve habitat connectivity.

Green Timbers





ACTIONS FOR CHANGE

- Ensure that a greenway loop is incorporated into the physical fabric of each of the six town centres in Surrey's distinct communities.
- Regularly review and update the City's Greenway Map (Appendix 7.1) as new opportunities emerge for improved routing options and connectivity.

TOWN CENTRE GREENWAY LOOPS

- "Connections are needed around the Central City area and to the rest of the network."

Surrey is a very large area that has developed, and continues to develop, around six town centres located in distinct communities. These are Fleetwood, Cloverdale, Guildford, Newton, Whalley/City Centre and Semiahmoo. A greenway loop in each Town Centre is the basic building block of the greenway network. The most significant problem deterring greater use of the greenways, according to respondents to the Greenways Survey (2011), is that there was "no greenway nearby" followed by "doesn't go where I want to go". The completion of a greenway loop in each Town Centre will provide an opportunity for residents to explore their surroundings in a casual way and become familiar with their immediate living environment. As residents explore the greenways in their local area and discover the places they can get to with short trips, the practicality of greenway use becomes apparent. The Town Centre loop is the introductory greenway. An enjoyable experience here can stimulate interest in longer trips beyond the neighbourhood and, eventually, some use of the greenway to commute.

The sidewalks in every neighbourhood and Town Centre are the most common piece of infrastructure that pedestrians use to move about the City. Sidewalks are often the starting point for greenway pedestrians. As well, back lanes, mid-block crossings, public walkways between private development sites, local roads, neighbourhood bike routes and bike routes on arterials and collectors are the necessary connectors that give cyclists and pedestrians the ability to get to the greenways. Integration of the various types of transportation infrastructure is important as each benefits the other by providing increased routing, connectivity and choice.

- "Surrey is in a better position than Vancouver to build an extensive greenway system which will be one of the reasons that people choose to live in Surrey, especially as it continues to densify." from the internet blog civicsurrey.ca, August 2011

TOWN CENTRE TO TOWN CENTRE GREENWAY CONNECTORS

- “Walking/cycling paths don’t seem to go to places I need to reach ... the one that meanders through Green Timbers up to approximately 168th St ... has semi-adequate road crossings but doesn’t go anywhere useful ... say Guildford or Surrey Place. ” (Walking & Cycling Plan Survey, 2009)
- “Many major routes in Surrey have no safe walking paths. E.g., to get from Cloverdale to White Rock area, it is necessary to walk on the side of a busy road (176 or 168 St) (Walking & Cycling Plan Survey, 2009)
- “I would like walking/cycling paths connected from city to city. Maybe connected ... from Abbotsford to Vancouver including the beautiful trail along Mud Bay/Hwy 99.”

A greenway connector between each of the distinct communities in Surrey will allow greenway users to move beyond their local neighbourhood, community and Town Centre. A greenway connector between Town Centres covers greater distances than the Town Centre loops; they generally serve the non-recreational user and should be as direct as possible. Often, due to lack of other options, the greenway connectors have been located in a Statutory Right-of-Way that is adjacent to but separated from a major road. Greenway connectors from Newton, Fleetwood and Cloverdale have to cross a wide expanse of Agricultural land where the best routing option is adjacent to the roads. Although the lengthy connector greenways need to be as direct as possible, it is important that the green character of these connectors be maintained. Alternative routes for these greenway connectors (or sections of them) should be examined and identified. If the greenway must be built adjacent to the road the use of landscaping, especially where space is limited, to provide a physical separation from traffic is needed to ensure that the greenway connectors between communities are not only as direct as possible but also safe, interesting and enjoyable.

A number of cities in North America, (eg., Kelowna, B.C.), have been able to take advantage of existing, active rail corridors in their community to incorporate long greenway sections into established neighbourhoods. They are referred to

as rails with trails. Design details that protect the safety of greenway users must be incorporated into these multi functional corridors. The advantage of these corridors is that they are well established within the existing land-use pattern and are often underutilized by the railroads. The disadvantage is that there is some liability and risk associated with mixing sanctioned pedestrian and cycling use with railroad use. Some rail corridors may be entirely unfeasible. All corridors will require extensive review and discussion with railway operators who may be reluctant participants. However, in spite of the challenges and the need to proceed with caution, the rail corridors and Rights-of-Way are such an enormous opportunity that some time and effort should be assigned to an examination of their feasibility.



ACTIONS FOR CHANGE

- Review existing greenway connectors and determine which missing sections are needed to connect the six distinct communities to each other.
- Examine the feasibility of and explore opportunities related to the joint use of one or more of the existing active rail corridors that transverse the community as potential ‘rails with trails’ greenway routes.



ACTIONS FOR CHANGE

- Undertake a 'gap analysis' of the built greenway network and identify the priority locations for new greenways and opportunities to bridge the gaps.
- Continue to locate greenways through linear parkland corridors and adjacent to natural corridors to improve the greenway experience and within utility corridors (gas, hydro and rail) whenever access rights can be acquired and within Statutory Rights-of-Way adjacent to road Rights-of-Way whenever a utility or parkland corridor is not possible.

DEAD ENDS, GAPS AND BARRIERS

- "Finish the greenway from Wildflower to Sky Train."
- "Need a connection from King George Sky Train station to the Green Timbers greenway."
- "...the current greenways are very fragmented ..."

Within Surrey there are a number of natural and man-made physical barriers to the construction of greenways, such as ravines, freeways, railways and rivers. These divide neighbourhoods and create gaps that prevent pedestrians from travelling the most direct route to community destinations. Each barrier needs to be identified and a strategy adopted to resolve each barrier. Sometimes the only way to deal with a barrier is to build the greenway beside it and travel a certain distance to a point where the barrier can be crossed. Often, crossing a barrier can be hazardous and safety is a major consideration. Some barriers cannot be eliminated for many years until a related major project is undertaken. The key to network connectivity is to fill the gaps and resolve the barriers. A concentrated effort and several actions for change need to be undertaken in order to identify the barriers and find greenway routes through, around or over those barriers. As long as the greenways remain unconnected, the network will not be complete.



Serpentine Greenway

OBJECTIVE 1B: PROVIDE WAYFINDING SIGNS AND SUPPORT SPACES THAT CREATE A POSITIVE GREENWAY IMAGE

ACTIONS FOR CHANGE

- Develop a wayfinding signage program that helps users find the Greenway Network and use it with confidence.



- “More maps and information about the greenways would be helpful.”
- “I didn’t even know there were greenways located in Surrey. Letting the public be more aware of the greenways would be beneficial.”
- “Need signage at street crossings so you know where you are, and maps on posts.”

SIGNAGE

Respondents to the Greenways Survey (2011) were asked to rank the problems that deterred them from using greenways. The most significant deterrents listed by respondents were: lack of signage and; lack of awareness regarding exactly where the greenways go. It is human nature to be reluctant to venture down a path that goes off into the unknown. A hierarchy of signage needs to be developed. Signs indicating the overall greenway system should be placed at critical locations such as major rest areas; directional signage should be located where two greenways meet so the user is not confused about which way to proceed and; name signs are needed where greenways meet a street (potential start point) simply for information. Although some signage currently exists, a standard approach needs to be adopted and implemented. Coordinate with the Metro Vancouver bikeway signage initiative and make it similar so there is some continuity of signage throughout the region.

Greenway signage should have a consistent and distinct image that users will come to recognize as an indicator of the Greenway Network and that distinguishes the greenways from other walkways, trails and paths. Some signs should celebrate the unique character of the greenway. As these signs are added to the network to provide more and more useful information, users will become increasingly familiar with the network and more able to use the greenway system with confidence.

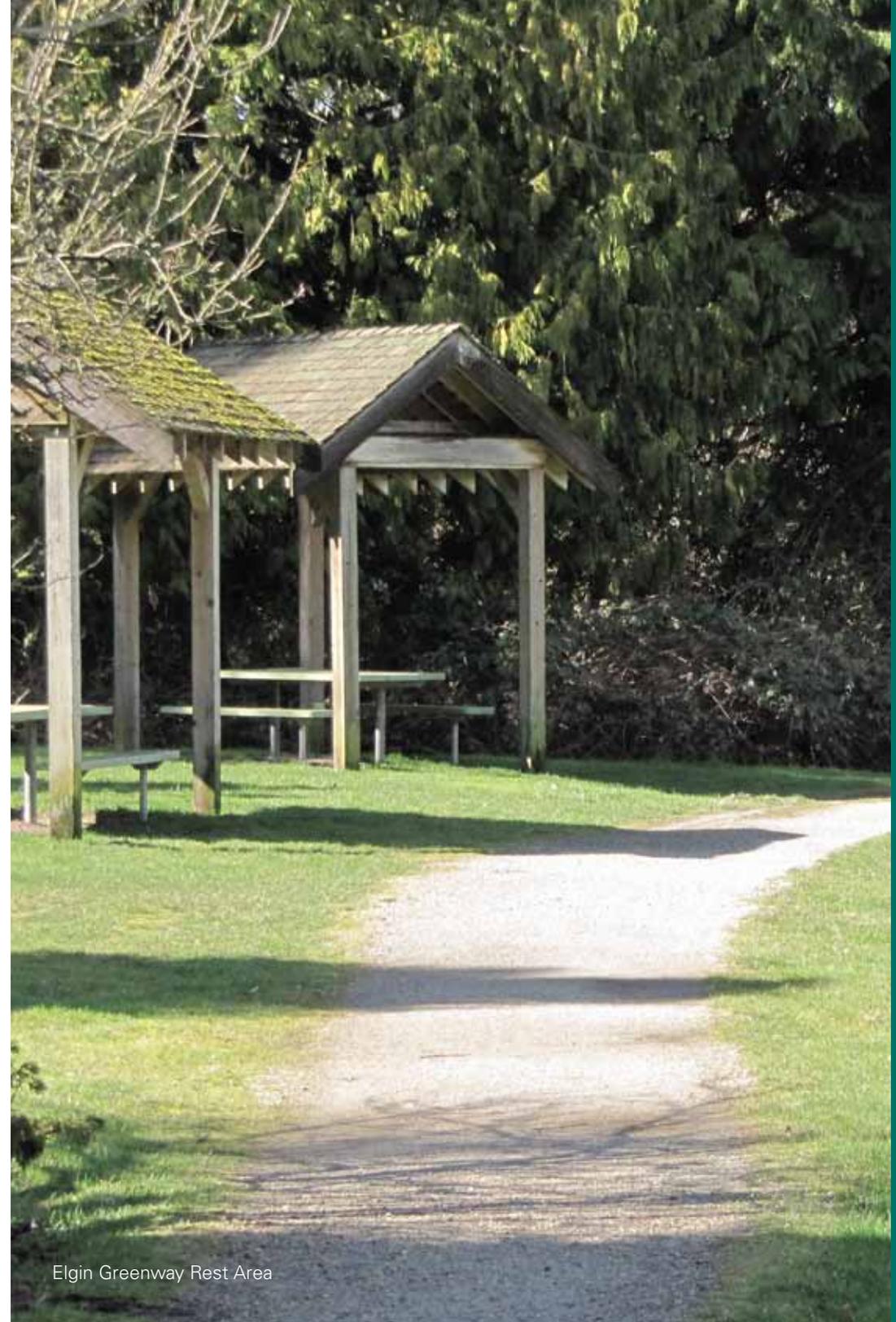
THE LOCAL GREENWAY REST AREA

The local neighbourhood - the amenities nearby and the visual character of the area – is part of the mental image we each associate with home. The incorporation of one major rest area in each distinct community is an important aspect of the network as it builds awareness of the greenway network close to home. The local rest area is a logical place for interpretive signage that explains the greenway network and how it relates to amenities in the area. The local rest area must be well designed, reflect the character of the local community and create a positive image for residents. It may be necessary to acquire a small parcel of land at key locations in order to provide these special greenway support spaces. In some cases it may be possible to use a park adjacent to the greenway route in which to include amenities for the greenway rest area.



ACTIONS FOR CHANGE

- Identify one key rest area in each Town Centre for design treatment as a “special place” that announces the greenway network for that Town Centre.



Elgin Greenway Rest Area

PRINCIPLE 2: SHAPING SURREY: NEW OPPORTUNITIES FROM NEW DEVELOPMENT

As Surrey has grown and redeveloped, the trend has been towards creating complete, mixed-use neighbourhoods that are more walkable and bikeable than in previous decades. These more complete communities provide environments where families can grow in place, where children have friends nearby, where adolescents don't need to rely on adults for transportation and where the greenway infrastructure contributes to a healthy environment for residents of all ages.

As Surrey continues to grow, each new development is expected to add value to the community. Developers install the services and infrastructure needed to support development, including local roads and sidewalks. In many areas of the City, Neighbourhood Concept Plans (NCPs) indicate which services and amenities (including greenways) must be provided by the developer. Where an NCP does not exist, there is no mechanism in place to ensure that greenways are constructed in redeveloping neighbourhoods. This lack of consistency in development requirements from area to area needs to be addressed.

In the older neighbourhoods where street patterns were established years ago and where smaller parcels are now being redeveloped, it is more difficult to achieve a greenway network. Since only small pieces of the greenway system can be completed with each redevelopment, it will take many years to create a network of greenways in some established neighbourhoods. Greenway planning and coordination among various City departments and a consistent approach to development requirements is crucial to achieving the City's greenway objectives in these older, established, but redeveloping areas of the City.



ISSUES AND INFLUENCES

- 68% of public would walk more if their destinations were closer together
- 78% of the public believes that shopping, schools and jobs should be located within walking and cycling distance of communities
- 72% of public would walk more if there were more off-street paths
- Most people consider 3 km to be the greatest distance they would walk; 1 km is considered a comfortable walking distance
- 90% of the public travels >3 km to work
- 72% of public travels >3 km to health care
- 61% of public travels >3 km to shopping
- "I walk for exercise and other activities if the distance is short."
- "For Surrey to be more walkable we need ALL neighbourhoods to have a mix of commercial and residential that goes beyond the centralized strip-mall model. Building small-scale commercial (corner grocer, corner store) into the neighbourhood fabric can reduce car dependency if it's within a 1 km walk of most homes."
- "There aren't enough walkways to allow direct walking routes so we do not walk to do errands."

Surrey Walking and Cycling Plans Survey, 2009





STRATEGIC OBJECTIVE 2: INTEGRATE GREENWAYS PLANNING WITH STRATEGIC LAND USE PLANNING AND FACILITATE DEVELOPMENT THAT SUPPORTS GREENWAY CONNECTIONS.

2. INTEGRATE GREENWAYS PLANNING WITH STRATEGIC LAND USE PLANNING

OBJECTIVE	ACTION FOR CHANGE	NEW OR ONGOING	WHO
<p>2a) Through the development review process, seek opportunities to create more greenway connections.</p>	<p>Ensure that NCPs in growth areas take advantage of greenways to interconnect parks, neighbourhood and Town Centre destinations and routes to school.</p>	<p>Ongoing</p>	<p>Com Plan Park Plan Trans Plan Area Plan</p>
	<p>Encourage mixed-use neighbourhoods and developments that provide greenways and connections to greenways.</p>	<p>Ongoing</p>	<p>Com Plan Park Plan Area Plan Trans Plan</p>
	<p>In redeveloping areas, where an NCP has not been prepared, examine opportunities to modify the development review process to ensure that greenway construction is a requirement of development approval.</p>	<p>Ongoing</p>	<p>Com Plan Area Plan Park Plan Trans Plan Land Dev</p>
	<p>Ensure that pedestrian circulation systems within developments are effectively connected to public pedestrian systems, bike routes and greenways.</p>	<p>Ongoing</p>	<p>Park Plan Trans Plan Area Plan</p>
<p>2b) Ensure that land acquisitions for greenway corridors keep pace with community growth.</p>	<p>Identify the priority land acquisitions needed for greenway corridors on an annual basis and in the early stages of the NCP and proceed with the priority acquisitions in a timely fashion.</p>	<p>Ongoing</p>	<p>Park Plan Trans Plan Realty</p>
	<p>In NCP areas (existing and future) use existing background studies and this Greenways Plan to determine the general routes needed for the greenways. Base actual land acquisition priorities on a comprehensive review of the NCP and the integration of the greenway into the neighbourhood.</p>	<p>Ongoing</p>	<p>Park Plan Trans Plan Realty</p>
	<p>Where development is occurring outside of NCP areas, acquire land for Statutory Rights-of-Way, linear parks and greenways on the basis of the priorities itemized in existing background studies and this Greenways Plan.</p>	<p>Ongoing</p>	<p>Park Plan Trans Plan Realty</p>

OBJECTIVE 2A: THROUGH THE DEVELOPMENT REVIEW PROCESS, SEEK OPPORTUNITIES TO CREATE MORE GREENWAY CONNECTIONS.



ACTIONS FOR CHANGE

- In redeveloping areas, where an NCP has not been prepared, examine opportunities to modify the development review process to ensure that greenway construction is a requirement of development approval.

GREENWAY REQUIREMENTS IN ESTABLISHED NEIGHBOURHOODS

The City has developed and evolved over several decades. One result is that greenway facilities vary considerably from one neighbourhood to the next. (eg., there are no greenways in some older neighbourhoods.) Recently, development has been guided by Neighbourhood Concept Plans which show very specific locations for greenways; amenity contributions are collected as a condition of development approval; and greenways are planned and built as the area grows and develops. Many areas of the City are not covered by an NCP or any other form of secondary plan. Development and redevelopment in these areas is guided by the Official Community Plan (OCP). Greenway routes and corridors are only shown conceptually within the OCP and amenity contributions are not mandatory. Where NCPs do not exist, there is no mechanism in place to ensure that off-street greenways are constructed as part of neighbourhood redevelopment.

In older, established neighbourhoods, it can be difficult to incorporate off-street greenways (long narrow spatial elements) into an area that is only redeveloping a few lots (small, non-linear spatial elements) at a time. The routing and planning for greenways through established neighbourhoods is more complex than in rural areas. If a mechanism is established to require a contribution or construction of a greenway with each redevelopment proposal, eventually the greenway network will be achieved, one piece at a time. This can be accomplished by requiring each developer to build a greenway, or fill identified greenway gaps, as part of their development. The importance of these short sections will not be immediately apparent but with the passage of time and a consistent approach, a connected network will emerge.

DEVELOPING WALKABLE NEIGHBOURHOODS

Since large portions of Surrey have not yet been fully developed, great opportunities exist in these areas to shape transportation, land-use patterns and densities to provide greenways that are integrated into the fabric of the neighbourhood from the start. Securing improvements through the development review process is critically important and is an integral part of the Greenways Plan. In a city characterized by rapid growth, there are many opportunities to influence how development supports walking and cycling. The way that buildings, open space, streets and sidewalks are incorporated into neighbourhood plans can have a major impact on greenway use. If the neighbourhood is walkable, the local greenway will be used. A safe route to school for a child may include a local road, sections of sidewalk and a greenway. Unless all of these elements exist and are coordinated with the other, the walking and cycling experience is problematic. By designing Surrey's buildings and open space with walking and cycling in mind, an environment that is connected, safe, convenient, and interesting will be created.



ACTIONS FOR CHANGE

- Ensure that NCPs in growth areas take advantage of greenways to interconnect parks, neighbourhood and town centre destinations and routes to school.
- Ensure that pedestrian circulation systems within developments are effectively connected to public pedestrian systems, cycle routes and greenways.
- Encourage mixed use neighbourhoods and developments that provide greenways and connections to greenways.

OBJECTIVE 2B: ENSURE THAT LAND ACQUISITION FOR GREENWAY CORRIDORS KEEPS PACE WITH COMMUNITY GROWTH.



ACTIONS FOR CHANGE

- Identify the priority land acquisitions needed for greenway corridors on an annual basis and in the early stages of Neighbourhood Concept Planning and proceed with the priority acquisitions in a timely fashion.
- In NCP areas (existing and future) use this Plan and the existing background studies to determine the general routes needed for the greenways. Base actual land acquisition priorities on a comprehensive review of the NCP and the integration of the greenway into the neighbourhood.
- Where development is occurring outside of NCP areas, acquire land for Statutory Rights-of-Way, linear parks and greenways on the basis of the priorities itemized in existing background studies and this Greenways Plan.

GREENWAY REQUIREMENTS IN ESTABLISHED NEIGHBOURHOODS

The off-street greenways in parks and utility corridors are a significant component of Surrey's park system. Many of the City's greenways have been constructed on parkland and Rights-of-Way that were originally acquired for use as linear parks. The greenways are an increasingly important component of the City's park and trail system which allows the residents of Surrey to participate in a very popular recreation activity – walking and cycling for fun and fitness. Trails and greenways are an important recreation facility and the use of parkland acquisition funds to acquire the land for greenway routes continues to be a high priority parkland expenditure. In order to keep pace with population growth, it is necessary to purchase park land for community amenities, including greenways, on an annual basis.

Land acquisition is an expensive and complex process. When redevelopment of an established neighbourhood involves land assembly and a comprehensive approach, the City can obtain land for parks and greenways as a condition of development approval. However, redevelopment of an established area often occurs one parcel at a time. It may take many years to complete the acquisition of the multiple parcels and rights-of-way needed to create a linear corridor for a particular greenway through an established neighbourhood. This Greenways Plan provides a framework to establish priorities and to help guide the long term, ongoing acquisition of land for greenways.



PRINCIPLE 3: CONTINUOUS IMPROVEMENT: COORDINATE, PARTNER AND ADVOCATE

In addition to being one piece of the City's park system, greenways are an increasingly important component of Surrey's transportation network. In order to avoid duplication of effort and other inefficiencies, staff need to be particularly focused on coordinating their work with the efforts of others: annual work plans need to be coordinated across department lines; budgets and the allocation of time resources must occur in several departments; construction projects often cover multiple sites and require inter-agency coordination; and funds in multiple departments need to be combined with grants and funds from other agencies and different levels of government in order to optimize the resources available for greenway initiatives.

Greenways are achieved by allocating a portion from various initiatives in two or more departments and combining these resources with grants and allocations from other agencies and levels of government. Staff in several departments must continue to coordinate their activities, partner with others and take the time to actively seek out those potential partnerships.

The process of building greenways needs to be sensitive and responsive to public issues and concerns. The design process should focus on building an effective relationship with stakeholders, making design modifications in response to their concerns and creating a sense of local ownership of the greenway facility. During this process, staff have found that they also have a role to play in representing the overwhelming public benefits associated with greater public access and use of linear corridors, trails and greenways. Ultimately the most successful and heavily used greenways will be those that are the result of an effective partnership with the adjacent residents and community members.

ISSUES AND INFLUENCES

- Multiple City departments as well as senior levels of government are involved in funding and constructing multi-use pathways (greenways) in Surrey.
- The greenway priorities, objectives and construction practices vary among agencies.
- No single government agency has the funds and mandate to complete the greenways network in Surrey on its own.
- Although the public use greenways and place a high value on them, greenway users are not an organized advocacy group.





STRATEGIC OBJECTIVE 3: CONTINUOUSLY EXPAND AND ENHANCE THE GREENWAYS NETWORK BY PROMOTING GREENWAYS, LEVERAGING FUNDS AND COORDINATING PROJECTS.



3. PROMOTE GREENWAYS, LEVERAGE FUNDS & COORDINATE PROJECTS

OBJECTIVE	ACTION FOR CHANGE	NEW OR ONGOING	WHO
3a) Manage the various greenway initiatives undertaken by city departments and external agencies in a co-ordinated manner.	Conduct joint capital program planning sessions involving the Engineering Transportation Division and the Parks Division.	Ongoing	Trans Plan Park Plan
	Develop a public consultation strategy regarding the implementation of greenway sections within existing neighbourhoods and undertake an appropriate level of public consultation prior to each greenway construction project.	Ongoing	Park Plan Trans Plan
	Incorporate inter-departmental coordination into all greenway construction projects and review annual work plans with each other.	Ongoing	Parks Div Transp Div
	Improve the collection and management of information (location, site characteristics and condition) related to Surrey's greenway assets. Use existing tools such as the City of Surrey Online Mapping System (COSMOS) and the Geographic Information System.	New	Park Plan Trans Plan
3b) Explore all potential service delivery methods to build, maintain and improve the greenway system.	Continue the joint multi-departmental allocation of funds and resources to the greenway program for new construction, renovations and retrofits on an annual basis.	Ongoing	Park Plan Trans Plan Beaut
	Continue to work with external agencies to plan and construct greenways and crossings of major physical barriers, such as ravines and highways.	Ongoing	Trans Plan Park Plan
	Sponsor or encourage student research in any of several aspects associated with greenways data collection and analysis – usage data, suitability analysis, GIS data entry, mapping, user characteristics and behaviours, etc	Ongoing	Park Plan Trans Plan Traffic Ops
	Seek out new grants and funds provided by other agencies and levels of government	Ongoing	Park Plan Trans Plan
	Explore opportunities to partner with the private sector on the development and/or maintenance of the greenways.	New	Park Plan Trans Plan

OBJECTIVE	ACTIONS FOR CHANGE	NEW OR ONGOING	WHO
	Develop guidelines for, and actively move forward with sponsorship and donation programs (“buy-a-metre,” or “greenway gift program”) for furnishings and enhancements	New	Park Plan Park Ops
	Partner with Non-Governmental Organizations and not-for-profit groups to apply for capital funds and greenway promotion funds.	New	Parks Plan Trans Plan
	Involve the public in greenways enhancement and maintenance through the Partners in Parks program.	New	Park Plan Park Ops Trans Plan Beaut
	Work with Metro Vancouver on their initiative to coordinate a regional approach to the public access to dykes.	New	Park Plan
3c) Advocate for and promote the benefits of public pathways and greenways.	When concerns are raised about trails and greenways, point out the overwhelming public benefits associated with greater, rather than restricted, public use of various linear corridors for walking and cycling.	Ongoing	All
	Advocate for change and a new commitment from all segments of the community to invest in greenways and liveable communities.	New	All
	Engage the Agriculture Advisory Committee and Surrey farmers in a discussion regarding the public use of dykes for walking & cycling in a manner that has little or no impact on farms and farming.	New	Parks Div Com Plan Trans Plan
	Develop a plan for a demonstration project for limited use of agricultural dykes. Consider an Agritourism project.	New	Park Plan Trans Plan
	Develop a communications and promotional strategy to support the City’s greenways initiatives and to promote walking and cycling as part of everyday life. Coordinate with the Cycling Plan & Walking Plan.	New	Market Park Plan Trans Plan CRS

OBJECTIVE 3A: MANAGE THE VARIOUS GREENWAY INITIATIVES UNDERTAKEN BY CITY DEPARTMENTS AND EXTERNAL AGENCIES IN A COORDINATED MANNER.



ACTIONS FOR CHANGE

- Conduct joint capital program planning sessions involving the Engineering Transportation Section and the Parks Division during the preparation of the annual departmental work plans.
- Incorporate inter-departmental coordination into all greenway construction projects and review annual work plans with each other.
- Improve the collection and management of information (location, site characteristics and condition) related to Surrey's greenway assets. Use existing tools such as the City of Surrey Mapping System (COSMOS) and Geographic Information Systems.

The Parks Division of the Parks, Recreation and Culture Department and the Transportation Division of the Engineering Department have forged a partnership that brings two very different groups together with a mutual interest in greenways. Each group has its own strengths and approaches tasks in slightly different ways. Together, as partners, these two City Divisions have achieved much more than either is capable of on its own. However, like every relationship it must be nurtured if it is to be sustained over time. Specific action steps aimed at nurturing the partnership are included in this plan. A high degree of coordination and cooperation is proposed, particularly regarding annual work plans and project management.

Greenway Network Planning is a shared responsibility:

Transportation Planning

Parks Planning

Greenway design and construction is the shared responsibility of:

Engineering Design and Construction

Parks Operations – Development Services

Greenway maintenance is a shared responsibility:

Engineering Operations (asphalt inspection and repairs in all greenway corridors; vegetation control in road corridors)

Parks Operations (vegetation control for greenways in park and utility corridors)

Signage Installation, Maintenance and Repair

Traffic Operations (all signs in or adjacent to the roadway)

Parks Operations (signs that are not in the road corridor)

Information about the greenways needs to be managed proactively by both Parks and Transportation Planning. Mapping needs coordination. The GIS information and attribute data provides a great deal of information about the age, condition and other aspects of the greenways. The public consultation process on projects that include both road Rights-of-Way and green space corridors needs to be coordinated and customized for each particular situation. The primary expert, coordinator and person responsible for greenway planning and implementation in each department needs to be clearly stated. If possible, additional staff resources in both Transportation and Parks should be allocated to the greenways initiative.

PUBLIC CONSULTATION

An appropriate level of public consultation should occur prior to each greenway construction project and requires coordination among departments. The consultation process for a greenway on parkland or on a utility ROW with homes backing onto it may be more comprehensive than the consultation process for a greenway adjacent to (but separate from) a road. People expect asphalt in the road Right-of-Way; they are not always immediately supportive of a multi-use pathway through a local green space. This is particularly true when the greenway is to be built on land which has been vacant or under-utilized during the course of their residency. Residents are used to the adjacent open space and often want it to remain as-is. Any change in land-use next to existing homes is a change in status quo; residents may be concerned that the change will not be an improvement and that the greenway will bring problems into the neighbourhood. City staff must ensure that greenways are implemented in a manner that is sensitive to these concerns.

The interconnectedness of greenways complicates the consultation process. System wide or greenway corridor consultation may be more appropriate than a consultation process for each greenway section as it is built. A consultation strategy needs to be developed, adopted and incorporated into the greenway implementation process.

The introduction of greenways into established neighbourhoods is a critical component of a connected network for the future. In light of the importance of greenway connections through established neighbourhoods and the associated public concerns that arise during consultation, the City should update the Greenway Proximity Study (2001). This study determined that there was no significant difference in crime rates for homes near greenways than in other areas and that property values were slightly improved for homes near greenways compared to similar homes in other areas. The Proximity Study needs to be updated to provide current information regarding the impact of greenways on crime and property values in adjoining neighbourhoods.



ACTIONS FOR CHANGE

- Develop a public consultation strategy regarding the implementation of greenway sections within existing neighbourhoods and undertake an appropriate level of public consultation prior to each greenway construction project.

OBJECTIVE 3B: EXPLORE ALL POTENTIAL SERVICE DELIVERY METHODS TO BUILD, MAINTAIN AND ENHANCE THE GREENWAY SYSTEM

The multiple benefits and functions of Greenways make them ideal candidates for potential funding by a number of diverse agencies and organizations. The City has had considerable success in qualifying several greenways as transportation projects for funding assistance from senior levels of government. Various foundations and corporate grant programs that may also be available should be pursued. Cooperation with Metro Vancouver has led to the construction, by Metro, of greenways in regional parks that link with the City Greenway network, thus allowing for a more complete Greenway Network. Continued coordination and partnerships with external government agencies is necessary.

The fact that greenways are so popular with the general public for recreation suggests that certain greenways or greenway rest areas may be ideal candidates for the Partners in Parks Program and potential locations where the public may wish to donate benches, water fountains, shelters, bike racks and/or interpretive signs. These opportunities should be actively pursued on an ongoing basis.

To date, many greenway construction projects have relied on partnership funding. Not all future projects will be ideal candidates for matching funds from other agencies. They may be short pieces of greenway or missing connectors that require a minor acquisition or construction budget. The introduction of new greenways into older neighbourhoods will require some level of City capital funding as will greenway renovations and facelifts. City funding is needed in order to keep adding new greenway sections to the network and also to make improvements to the existing network. Both the Engineering Department and the Parks, Recreation and Culture Department may have to re-allocate capital funds in order to adjust.



ACTIONS FOR CHANGE

- Partner with NGOs and not-for-profit groups to apply for capital funds and greenway promotion funds.
- Continue to work with external agencies to plan and construct greenways and crossings of major physical barriers, such as ravines and highways.
- Involve the public in greenways enhancement and maintenance through the Partners in Parks program.
- Sponsor or encourage student research in any of several aspects associated with Greenways data collection and analysis – usage data, suitability analysis, GIS data entry, mapping, user characteristics and behaviours, etc.
- Seek opportunities to partner with the private sector on the development and/or maintenance of the greenways.
- Seek out new grants and funds provided by other agencies and levels of government.
- Actively move forward with sponsorship and donation programs (“buy a metre” or “greenway gift program”) for furnishings and enhancements.
- Continue the joint multi-departmental allocation of funds and resources to the greenway program for new construction, renovations and retrofits on an annual basis.
- Work with Metro Vancouver on their initiative to coordinate a regional approach to the public access to dykes.



Clayton Greenway

OBJECTIVE 3C: ADVOCATE FOR AND PROMOTE THE BENEFITS OF PUBLIC PATHWAYS AND GREENWAYS

In a community as diverse as Surrey there exists a broad range of interests, opinions, goals and objectives. The challenge of local government is to achieve multiple goals in a manner that balances private rights and interests and the public good. Greenway goals should not be pursued to the detriment of other goals that are in the public interest. Neither should greenway goals be abandoned in favour of private interests.

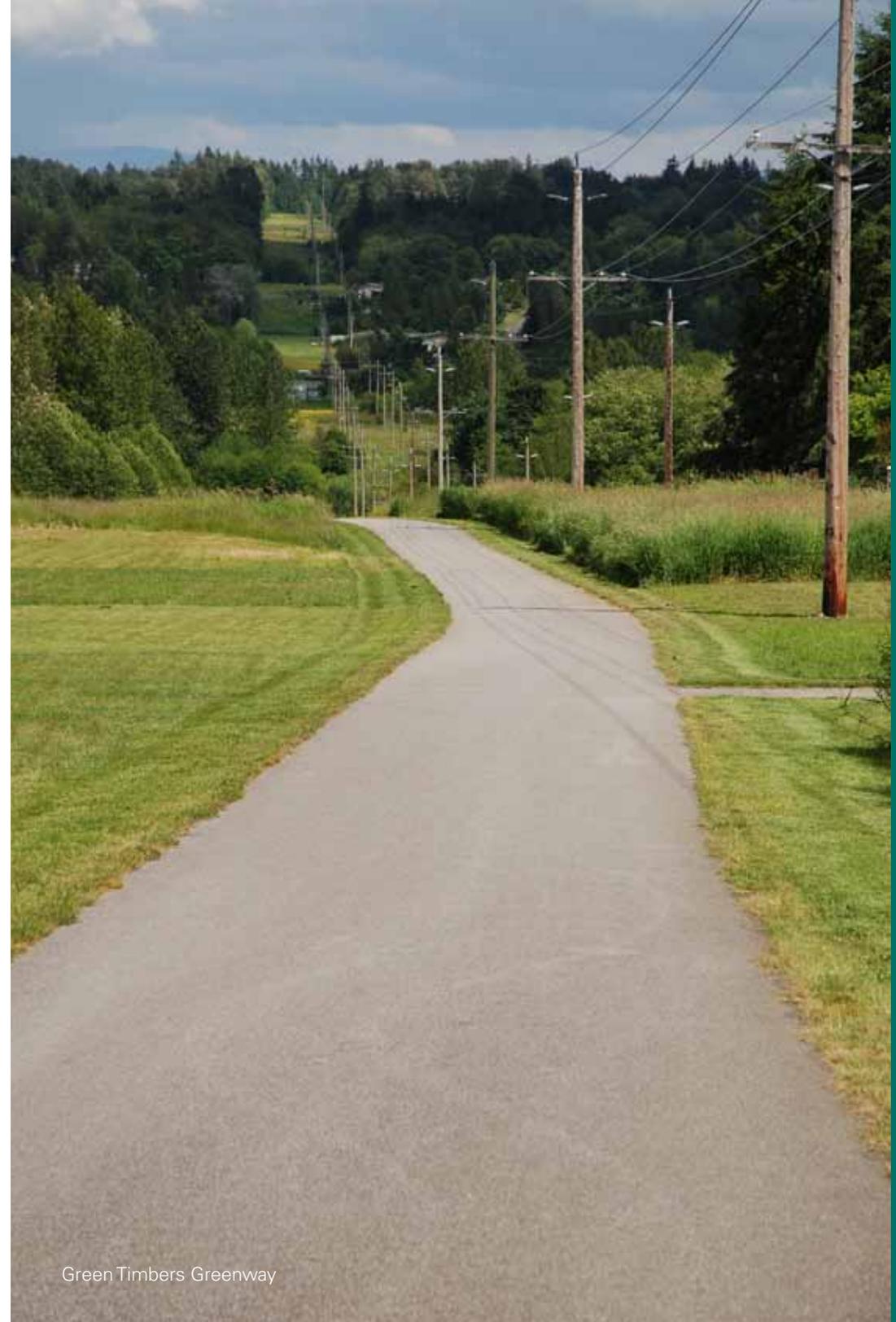
The advocacy role in a community is often played by an organization or community group that rallies around their particular interest. In general, the greenway users in Surrey are a diverse group that are not organized to the same extent as sports groups or other community groups. There are no greenway user teams, leagues or organizations; just members of the public who use Surrey's greenways. City staff have found that there is a strong role for them to play in terms of representing the public benefits associated with greater public access and use of linear corridors, trails and greenways.

Over time, greenways will see a growth in use as the network becomes more complete and the convenience of greenway use is realized by more and more people. This growth can be stimulated and encouraged by building awareness and promoting the greenways using brochures, maps, other print media and special events in key locations in the greenway system. An overall communications and promotional strategy is needed. It should be prepared in conjunction with a similar initiative related to the city's Cycling Plan and coordinated with regional programs that support cycling.



ACTIONS FOR CHANGE

- When concerns are raised about trails and greenways, point out the overwhelming public benefits associated with greater, rather than restricted, public use of various linear corridors for walking and cycling.
- Advocate for change and a new commitment from all segments of the community to invest in greenways and liveable communities.
- Engage the Agriculture Advisory Committee and Surrey farmers in a discussion regarding the public use of dykes for walking and cycling in a manner that has little or no impact on farms and farming.
- Develop a plan for a demonstration project for limited use of agricultural dykes. Consider an Agritourism project.
- Develop a communications and promotional strategy to support the City's greenways initiatives and to promote walking and cycling as part of everyday life. Coordinate with the Cycling Plan & Walking Plan.



Green Timbers Greenway

PRINCIPLE 4: QUALITY DESIGN AND MANAGEMENT: AESTHETICS, ACCESSIBILITY, SAFETY AND COMFORT

Many Surrey residents have stated that they prefer walking and cycling along greenways that are separated from the road. They feel safer when they do not have to deal with traffic speed, noise, air pollution and congestion. On the other hand, many people have expressed concern about the safety of secluded, dark greenways. Careful decision making on greenway routes, design and maintenance is necessary.

Greenways must be safe to use. This requires that sound CPTED (Crime Prevention through Environmental Design) principles be applied to greenway design. Concern for user safety also requires that infrastructure maintenance practices be adopted as a matter of course so that the greenway is not covered in water or ice, tripping hazards are managed, encroaching vegetation is trimmed back, litter is controlled and signage is sufficient to allow for wayfinding. User conflicts must be minimized by proper design, pavement markings, signs related to behaviour and an education program regarding multi-use pathway use and safety. If specific incidents of compromised user safety or crime occur, there must be a proactive and timely response and intervention by the City to eliminate or mitigate the cause of the incident.

Greenways are appreciated by Surrey residents for many reasons, not the least of which is the green look and feel of them. The quality of the greenway experience is important and should be maintained and enhanced. Every greenway construction project, particularly those that are within, or adjacent to, a road Right-of-Way, should include a certain minimum landscape component in order to enhance habitat values and contribute to the creation of a mental image and memorable character and feel of the greenway experience. Greenways should provide an experience that is not simply a bike route or sidewalk experience and it should be inherently obvious to users when they are on a greenway and when they are not.

ISSUES AND INFLUENCES

- 23% of the public don't use greenways because they are too dark/no lighting.
- 31% of the public say they would use greenways more frequently if they were more visible and less secluded.
- "I avoid walking in areas I feel unsafe in" - Walking Plan Survey.
- "We would like to see safer greenways."
- "If people felt safe using greenways, they would do so, resulting in a better feeling of community and a better place for all to live."
- "Greenways need to feel nice to walk through."

Pioneer Greenway



Connections: An illuminated artwork by Doug Welch for EOS Light Media





STRATEGIC OBJECTIVE 4: CREATE AND MANAGE A GREENWAYS ENVIRONMENT THAT IS ACCESSIBLE, SAFE, COMFORTABLE, AND INTERESTING.

4. ACCESSIBILITY, SAFETY & DESIGN QUALITY

OBJECTIVE	ACTION FOR CHANGE	NEW OR ONGOING	WHO
4a) Create and manage a greenway environment that is accessible, safe and secure.	Apply CPTED (Crime Prevention through Environmental Design) principles to the location, design and ongoing maintenance of the greenway network, including: <ul style="list-style-type: none"> • Eliminate encroaching vegetation; • Maintain unobstructed sight lines for users; • Security lighting at key locations, where appropriate; • Prospect and Refuge considerations (visibility of others, visibility by others, choice and control, site awareness, and solitude without isolation). 	Ongoing	Park Plan Trans Plan Area Plan Com Plan
	Wherever possible, provide off-street greenway routes that take advantage of existing public land corridors in order to improve user safety and reduce exposure to traffic noise and pollution.	Ongoing	Park Plan Trans Plan
	Review all greenway road crossings for potential enhancement.	Ongoing	Trans Plan Traffic Ops
	Consider the needs of all users, including children, seniors and people with disabilities when planning and designing greenways.	Ongoing	Park Plan Trans Plan
	Work with the Crime Reduction Office and the RCMP to make immediate physical or operational changes that improve user safety wherever a safety concern has been identified.	Ongoing	Parks Transp RCMP
	Update the Greenway Proximity Study (2001) regarding the impact of greenways on crime and property values in adjoining neighbourhoods.	New	Park Plan Trans Plan
	Adopt universal access design criteria for the greenway network. Use furniture that is universally accessible and of high quality.	New	Park Plan Trans Plan

OBJECTIVE	ACTIONS FOR CHANGE	NEW OR ONGOING	WHO
	Publicize the greenway user Code of Behaviour.	New	Park Plan Trans Plan CRS Div Market
	Consider the incorporation of centre-line markings at high-use greenway segments.	New	Park Plans Trans Plan
4b) Promote excellence in greenway management and design.	Continue to improve the look and beautification of the greenways by using innovative treatments, more and bigger trees, decorative paving, Public Art and high-quality materials and finishes in town centres and high profile locations.	Ongoing	Parks Ops Eng Ops PC Art Beaut
	Adopt a landscape policy to ensure that all greenway projects use some landscaping for a green look that distinguishes them as greenways.	New	Trans Plan Park Plan E D & Constn Park Dev Beaut
	Compile and review design standards for all greenway components (paving materials, width, gradient, offsets, furnishings, rest areas etc) including variations for certain greenway situations (eg., urban vs suburban) based on a review of best practices in greenway design (including sustainable design practices).	New	Park Plan Trans Plan E D & Constn Park Dev Area Plan Beaut
	Review best practices and initiate discussion with the utility companies to allow some landscaping in utility rights-of-way.	New	Park Plan Trans Plan
	Examine and update greenway maintenance standards, particularly related to brush removal, pathway edge mowing frequencies, sight lines, pavement inspection and repairs, vandalism and complaint response times. Balance user safety practices (path edge mowing, brush removal) with the need to maintain and enhance habitat diversity. Clarify responsibilities among departments.	New	Parks Ops Traffic Ops Eng Ops

OBJECTIVE	ACTIONS FOR CHANGE	NEW OR ONGOING	WHO
4c) Create attractive, identifiable and informative rest areas.	Continue to use Public Art along the greenway network, particularly at each special, distinct community Town Centre rest area.	Ongoing	Park Plan Trans Plan PC Art
	Provide benches and litter receptacles adjacent to greenways at regular intervals, at rest stops and at some road intersections.	New	Park Plan Park Ops Trans Plan Eng Ops
	Incorporate interpretive learning themes for all ages into the design of the rest areas in order to add interest and variety to the greenway network. Take advantage of local social history, natural history, and the biophysical features of each site to develop interpretive learning themes.	New	CRS Div Park Plan



Bear Creek Greenway (140st)

OBJECTIVE 4A: CREATE AND MANAGE A GREENWAY ENVIRONMENT THAT IS ACCESSIBLE, SAFE AND SECURE.

PROPERTY VALUES, USER SAFETY AND CRIME

- “Our study ... clearly supports the inference that a typical greenway border increases the value of single-family property.”
- “... property with a greenway border does, on average, sell more quickly than a comparable property without a greenway border.”

Greenway Proximity Study, A Look at Four Neighbourhoods in Surrey, B.C., 2001

Sometimes it is assumed that the introduction of a new trail into an existing neighbourhood will have a negative effect on property value and generate crime. However, many studies, including The Greenway Proximity Study (Surrey, 2001), have confirmed that property values generally increase slightly and crime activity does not change when a multi-use pathway is established in a community.

A greenway that meanders through a park-like corridor (utility corridor, natural area or park) creates a more enjoyable experience than a greenway that is adjacent to (but separated from) a roadway. However, many of the obvious greenway routes through wide, park-like lands have been completed. As future greenway routes are incorporated into existing neighbourhoods to fill gaps, there will be a growing number of situations where greenways are proposed in narrow corridors of vacant or under-utilized public land. These situations may raise questions about crime and property values from the adjoining residents.

The Greenway Proximity Study should be updated in order to generate more current data related to the impact, if any, on the adjacent neighbourhood in terms of crime and property values associated with the introduction of a greenway. To date, studies in communities throughout North America indicate that, counter to residents' early anxieties, there is no significant increase in crime for those living next to a greenway or linear park. However, user safety and crime prevention must guide the greenway design process and are of prime importance to the ongoing success of the greenway initiative.



ACTIONS FOR CHANGE

- Wherever possible, provide off-street greenway routes that take advantage of existing public land corridors in order to improve user safety and reduce exposure to traffic noise and pollution.
- Apply CPTED (Crime Prevention through Environmental Design) principles to the location, design and ongoing maintenance of the greenway network, including:
 - Eliminate encroaching vegetation;
 - Maintain unobstructed sight lines for users;
 - Security lighting at key locations, where appropriate;
- Prospect and Refuge considerations (visibility of others, visibility by others, choice and control, site awareness, and solitude without isolation).
- Work with Surrey's Crime Reduction Office and the RCMP to make immediate physical or operational changes that improve user safety wherever a safety concern has been identified.
- Update the Greenway Proximity Study (2001) regarding the impact of greenways on crime and property values in adjoining neighbourhoods.



Narrow Greenway Corridor



LIGHTING

Parks, natural areas and the greenways therein are generally closed to public use between dusk and dawn. In addition, there is a long-standing park policy not to provide lighting in parks and natural areas, except for special-use facilities such as sport fields and tennis courts. It is often assumed that lighting can improve the safety and security of a park or natural area; however, many studies have shown that lighting can attract crime, loitering and graffiti. The occasional light in a park may actually lure a person into an otherwise dark area. Generally, the research indicates that lighting should either be effective and comprehensive or it should not be used at all. Thus, where the off-road greenways travel long distances through a park or natural corridor, lighting should not be considered. There may be short sections of greenway that can be fully illuminated and made safe for evening use. These opportunities should be identified.



INCREASING ACCESSIBILITY

The greenway network is intended for all users, including people with varying degrees of mobility. Users pushing strollers, children on scooters and in-line skaters tend to be extremely sensitive to minor bumps and grade changes. For users with vision impairments, the use of textured surfaces at grade changes and the use of highly visible barriers improve their greenway experience. In order to make the greenways accessible for all users, strict compliance with Universal Design principles is required. Maximum gradients should not exceed those recommended for universal access; and travel surfaces generally should be paved or well compacted and firm. Universal Design principles and accessibility standards should be incorporated into the Greenway Design Standards.

ACTIONS FOR CHANGE

- Adopt universal access design criteria for the greenway network and modify the various department Construction Standards accordingly. Use furniture that is universally accessible and of high quality.
- Consider the needs of all users, including children, seniors and people with disabilities when planning and designing greenways.



SAFE ROAD CROSSINGS

- “Can’t stress enough that, if greenways are to cross streets, it must be made safe to cross.”
- “Safer connection needed across Fraser Highway at 96th Ave; pave path & provide signage to detour around the traffic light to allow a safe crossing.”
- “Greenways crossing major roads need a centre median refuge.”

Greenways in open space corridors are perceived as safer than road edge sidewalks and bike lanes because they are separated from vehicular traffic. However, where a quiet greenway corridor crosses a busy road corridor, a potentially hazardous situation may ensue. As this usually occurs at a mid-block location, where traffic is not slowing down for a control device (a light or a stop sign), some users may feel uncomfortable at these crossings. A number of comments have been received about the safety of greenway road crossings. Many design changes at greenway road crossings have been recently adopted, including: warning signs on the road; stop signs for path users at the road; refuge islands; and greenway name signs that are visible to drivers. Other improvements are anticipated. The design standards for greenway, mid-block road crossings should continue to be reviewed on a regular basis.

ACTIONS FOR CHANGE

- Review all greenway road crossings for potential enhancement.



A Typical Greenway Road Crossing

GREENWAY USER TYPES

- “A greenway trail system with no separated or marked trails for pedestrians and cyclists that has a high volume of pedestrian traffic in busy city areas is of little use for cycling.” (2011 Bike to Work Week participant)
- “Must have a line on all greenways down the middle like most other major cities; signs to keep right, pull left to pass.”
- “Need trails separated for bikes and pedestrians in areas where there is lots of population and use.”

As long as there are low volumes of greenway users, the number of conflicts between various greenway user types is low. However, as popularity and user volumes increase, the risk of conflicts between slow moving users (children, the elderly, baby strollers) and fast moving users (in-line skaters and cyclists) becomes more likely. To date, greenway construction standards have not included the use of a centre line nor signage regarding behaviour. In the future, when building greenway segments in areas where high use is anticipated (e.g. City Centre) centre line markings should be considered.

A greenway user Code of Behaviour is fairly well established and has been published on the website and in the Bike Map. Although it is intended primarily for off-street cyclists, (cyclists must alert others to their approach and then pull left to pass) it also contains appropriate behaviours for pedestrians and in-line skaters (dogs must be on leash, slower users must keep right). Without a constant reminder of the appropriate behaviour that applies to greenway use, it is possible for misunderstandings to exist among users and for tensions to develop that can escalate to threaten the multi-use functionality of the Greenway Network. It is a multi-user system and the users need to be reminded of that. Cyclists are passionately upset when groups of pedestrians wander casually across the entire greenway width. Pedestrians, particularly family groups, are frightened and upset when fast moving cyclists dart past without warning. Both behaviours are unacceptable: users need to know what is expected of them. The Greenway Code of Behaviour should be communicated more comprehensively through signage and markings along each greenway and in any future publications related to Surrey’s Greenways.



ACTIONS FOR CHANGE

- Publicize the greenway user code of behaviour.
- Consider the incorporation of centre-line markings at high-use greenway segments.

OBJECTIVE 4B: PROMOTE EXCELLENCE IN MANAGEMENT & DESIGN



ACTIONS FOR CHANGE

- Continue to improve the look and beautification of the greenways by using innovative treatments, more and bigger trees, decorative paving, public art and high-quality materials and finishes in town centres and high profile locations.
- Compile and review design standards for all greenway components (paving materials, width, gradient, offsets, furnishings, rest areas etc) including variations for certain greenway situations (eg., urban vs suburban) based on a review of best practices in greenway design (including sustainable design practices).

DESIGN DETAILS

Enhancing Surrey's greenways and public spaces can be done in many ways. In some places, it may be as simple as landscaping a disturbed area. Sometimes a change in maintenance procedures at a highly visible location can dramatically improve the look and perceived quality of that greenway. In some cases, the construction of a vibrant public space can be a very large initiative that requires significant capital funds to create a welcoming public gathering place. To achieve the maximum benefit of these initiatives, it is important to recognise that attention to detail matters. Design details for each greenway component should be multi-functional (eg., incorporate bike rack and lock-up hardware into bench and shelter design details). The quality of materials and the quality of construction have an impact on the usability, enjoyment, and the general experience associated with the greenway.

Design standards need to be prepared for the various greenway components in order to create a consistent image and character for the greenway network. However, it is also important that there be a certain amount of flexibility incorporated into the standards for various typical situations. For example, greenways in the Town Centre are in an urban environment that requires details that are different from a greenway in a utility Right-of-Way. Design standards must also be based on a review of current best practices to ensure accessibility, sustainability and affordability.



MAINTENANCE

- “The biggest issue... is the garbage that is allowed to lie discarded for a long time.”
- “If the bush and grass was cut more often so the view of oncoming bikes and people was better, it would be less unnerving to walk alone.”
- “Any greenway bike route must be free of debris, leaves, tree roots and be well marked as a cycle route for it to be functional.” (2011 Bike to Work Week participant)

One of the intended positive results of the Greenways Plan is the construction of more greenways. While this remains a core need, it must be recognised that this growing City asset must be maintained. Not only will more greenways be added each year but also the current inventory (generally new and in good condition) will get another year older. One challenge that the City faces is the short lifecycle of asphalt paths and the need to repair and replace the surface on a regular basis. Other maintenance elements include: watering and weeding landscaped areas; garbage collection; and maintaining sightlines along pathways by trimming grass, bushes and trees on a regular schedule.

Greenway cyclists are particularly vulnerable to potholes, uneven pavement, grit, glass, leaves and garbage on the paved surface. Proper care and maintenance ensures the ongoing functionality of the greenway; beyond that, a well-maintained greenway demonstrates the City’s commitment to, and support for, alternate modes of transport and fosters civic pride within communities. The budget challenges and resource allocations associated with greenways management and maintenance will become increasingly important over the next several years.

ACTIONS FOR CHANGE

- Examine and update greenway maintenance standards, particularly related to brush removal, pathway edge mowing frequencies, site lines, pavement inspection and repairs, vandalism and complaint response times. Balance user safety practices (path edge mowing, brush removal) with the need to maintain and enhance habitat diversity. Clarify responsibilities among departments.



ACTIONS FOR CHANGE

- Adopt a landscape policy to ensure that all greenway projects use some landscaping for a green look that distinguishes them as greenways.
- Review best practices and initiate a discussion with the utility companies to allow some landscaping in utility rights-of-way.

AESTHETICS AND SEPARATION FROM TRAFFIC

Greenway survey respondents value the separation from traffic that is provided by greenways. This separation from traffic increases the comfort of walkers and cyclists and improves their sense of safety. Separation and buffers from traffic can be achieved by developing more off-street greenways on various public lands and also by ensuring that the greenways that are adjacent to road Rights-of-Way contain a landscaped buffer between the user and the vehicular traffic.

Although space and funding may be limited, Greenways need to be more than paving projects or they will not have the aesthetic character that residents associate with the term greenway. Aesthetics – the look and feel of the greenway project – must be an important consideration to ensure that the greenway adds value to the community. Vast expanses of pavement do not create interesting spaces; pavement needs to be interrupted, visually, with curves and plant material. Incorporate gentle curves and use landscaping not only to enhance the character of the greenway, but also to provide a physical and psychological traffic barrier. A user's perception of safety can be greatly enhanced by gently curving paths and with landscaping in the space between the greenway and the roadway.

Some recent greenway projects constructed on utility Rights-of-Way are not particularly attractive due to a rigid prohibition by the utility company to install any landscaping whatsoever. Although it is recognized that some forms of landscaping can have a detrimental effect on the utility, it is possible to make these greenways more attractive and interesting without compromising the safety, performance or the operating costs for the utility by introducing some landscaping. An initiative to educate the utility companies on the benefits of landscaping should be undertaken so that the City can improve the appearance of existing and future greenways built on these Rights-of-Way.



Rosemary Heights Greenway Connector

OBJECTIVE 4C: CREATE ATTRACTIVE, IDENTIFIABLE AND INFORMATIVE REST AREAS



ACTIONS FOR CHANGE

- Provide benches and litter receptacles adjacent to greenways at regular intervals at rest stops and at some road intersections.
- Incorporate interpretive learning themes for all ages into the design of the rest areas in order to add interest and variety to the greenway network. Take advantage of local social history, natural history, and the biophysical features of each site to develop interpretive learning themes.

DISTINCTIVE REST AREAS

- “There should be flowers and rest stops with a water fountain and park benches.”
- “Allocate specific areas where art works can be presented, paint garbage cans, decorate picnic tables and add more lighting.”
- “Add some gazebos or something along the paths for reading or relaxing.”

As a minimum, benches and litter receptacles should be provided at regular intervals along the greenway network simply to provide an opportunity for users to stop and rest. More elaborate rest areas can enhance the greenway experience by introducing a spot along the way that is special and different. The network section of this Greenways Plan recommends that at least one special greenway rest area be provided in each distinct community. This local rest area is an important component of the greenway network. It must be well designed and reflect the character of the local community.

Greenway design standards will ensure that each rest area has a consistent character. However, the layout of each rest area and the amenities that it contains should vary based on site-specific conditions. Amenities at these rest areas may include: washrooms, benches, bike racks, water fountains, garbage cans, emergency call boxes and a map or sign showing the surrounding greenway network. These rest spots provide an opportunity to introduce other amenities such as: an interpretive display related to the history, culture or natural features of the area; learning themes for children; landscaping; and a picnic shelter or kiosk for small gatherings.

PUBLIC ART

- “Add some more public art ... it makes it interesting.”

The expectation for public art in Surrey is that it will contribute significantly to the landscape and character of the city. Public Art is intended to develop community identity through the creation of landmarks that reflect the character of the surrounding community’s geography, history and culture. (Cultural Plan, 2011) The greenways, and the greenway rest areas in particular, are ideal locations for public art. This is supported by both the Cultural Plan and the Public Art Master Plan. Each Town Centre has a unique character, geography and history. Public art that reflects the unique character of each community should be incorporated into its greenway rest area. In addition, the Public Art Working Master Plan supports the creation of a linear sculpture park by using greenways as sites for public art throughout Surrey. Public art can help make greenways very interesting places.

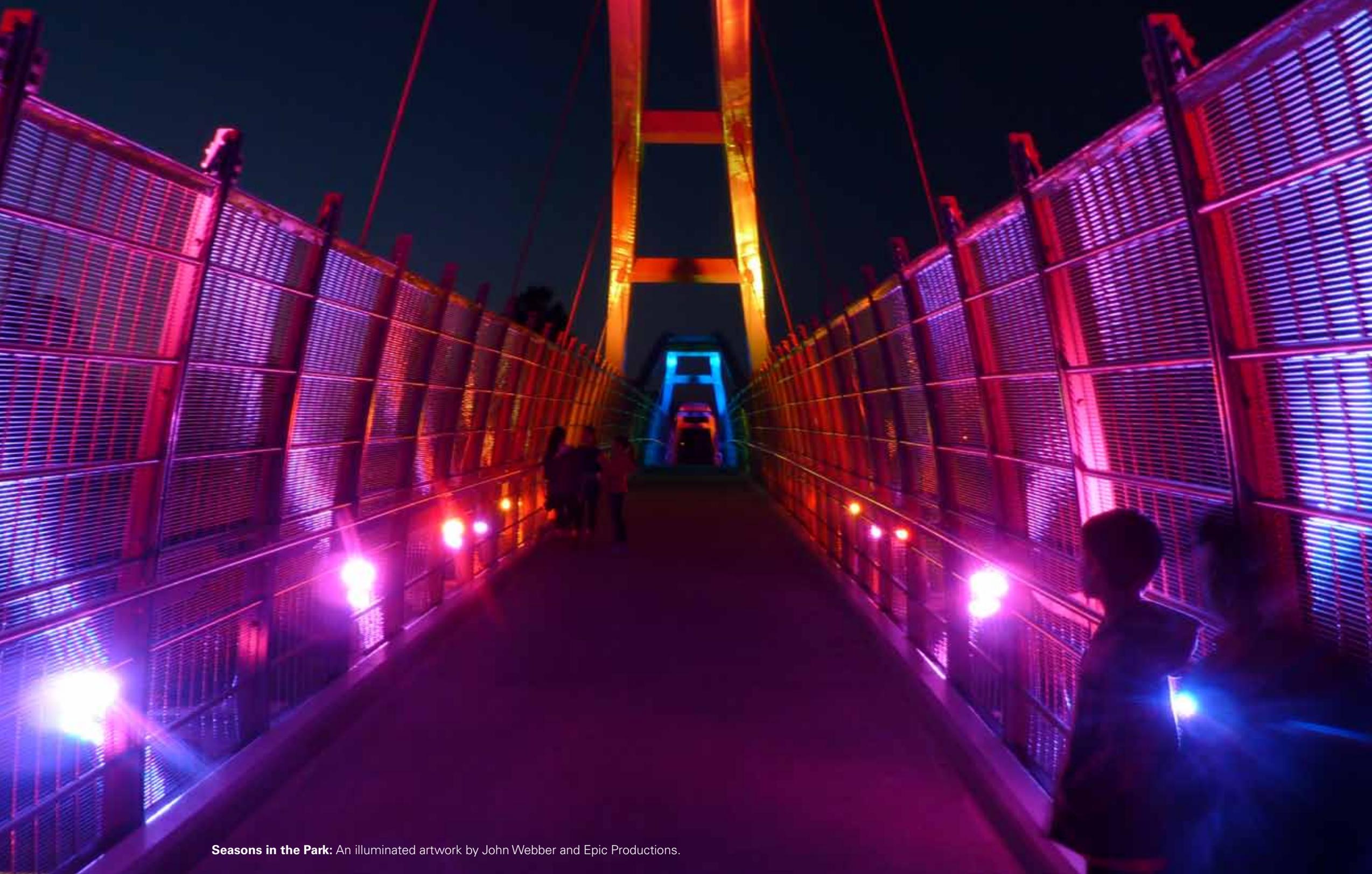


ACTIONS FOR CHANGE

- Continue to use public art along the greenway network, particularly at each special, Town Centre rest area.



Continuum: From Seed to Shelter
(detail) by Eric Robertson.



Seasons in the Park: An illuminated artwork by John Webber and Epic Productions.

MEASURING SUCCESS

than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In fact, Surrey's walking and cycling trails are used more often than any other type of recreational facility provided by the City. Trails are popular, the public has asked for more of them and they are less costly to build than other recreational facilities.



NEIGHBOURHOOD GREENWAYS
LOOPS + CONNECTORS
PURPOSE OF THE GREENWAYS PLAN

DEVELOPING THE PLAN
THE GREENWAYS VISION

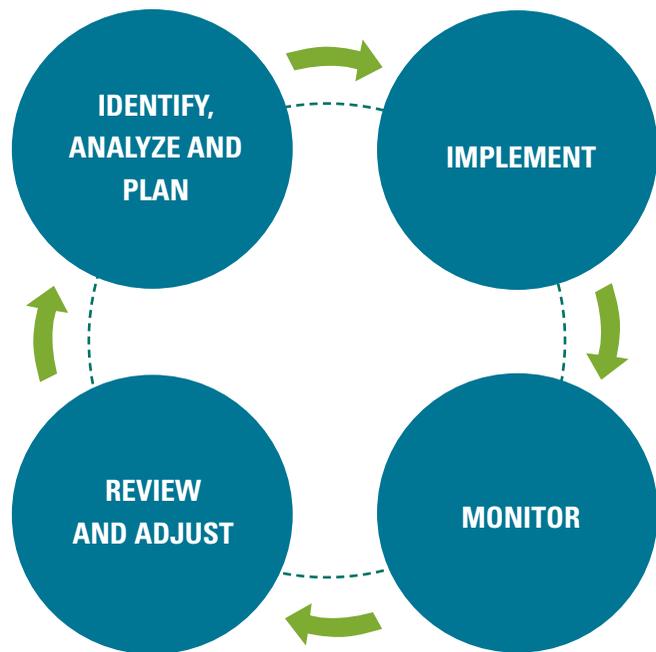


Many people make some sort of walking trip every day, whether to go to work, school, shopping,

Many people make some sort of walking trip every day, whether to go to work, school, shop or to visit friends. Cycling is less common in Surrey than walking but it is a viable, sustain

MEASURING SUCCESS

In order to achieve the objectives of this Plan, it is important that the Plan remain relevant and adhered to, as well as be regularly updated and added to. Continuous improvement is a feedback cycle. The four steps in the cycle are:



This Greenways Plan identifies many Actions for Change, and some of them are already part of Surrey’s approach. Others are well on their way to being implemented, and the rest will be applied over the course of this Plan. 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 on achievements and progress. These indicators can help us determine whether:

- Goals are being achieved.
- Actions for Change need to be reviewed.
- A change in approach is needed.
- Performance indicators need to be revised.

This Plan deliberately promotes small-scale solutions in addition to big-picture changes. While big-picture issues such as budget allocation are important, often the resolution of little issues or the implementation of a minor capital facelift for a tired greenway in an older part of town can be just as important. These seemingly small improvements can have a great effect on accessibility, walkability, and public satisfaction with the greenways network.

It can be difficult to measure success. The real success of the greenway network will occur when more and more people use the network. However, this simple and straightforward measurement is a challenge. Currently there is an absence of usage data. Some method to measure and record greenway use must be put in place. This will involve a few counters at key locations and surveys that measure useage and public opinion on a regular basis. In addition to user counts, this Plan includes several other performance indicators that will give a good indication of how well the city is performing in its implementation of the Greenways Plan.

With this in mind, here are our performance indicators, measured on an annual basis:

INDICATOR	UNIT OF MEASURE
Capital greenway program	Number of projects
	Km constructed
Missing links	Number of gaps filled
Road crossings implemented or improved	Number introduced
	Number improved
Greenway Improvements	# of minor capital projects
Greenway Useage	# of users



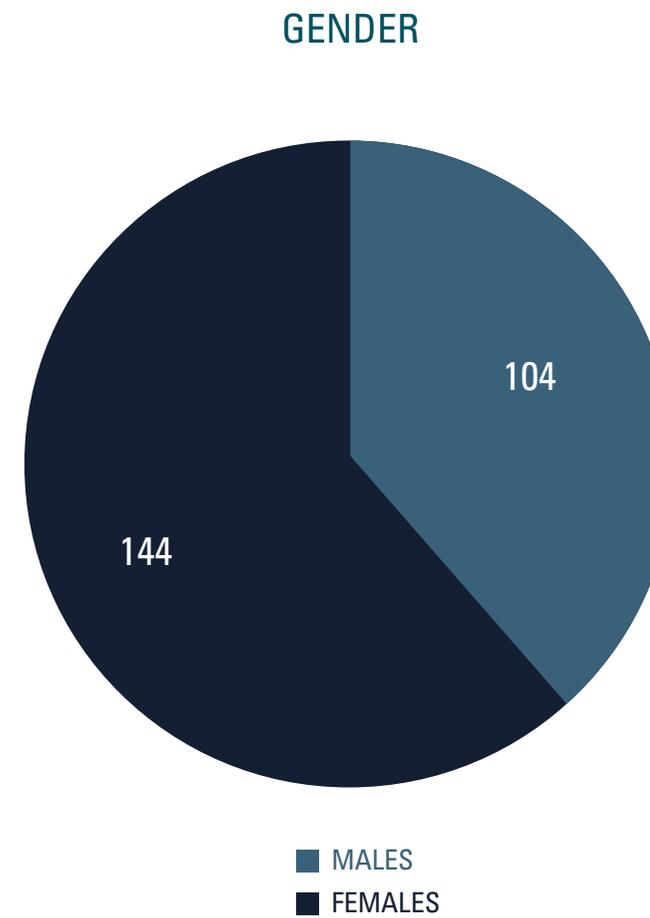
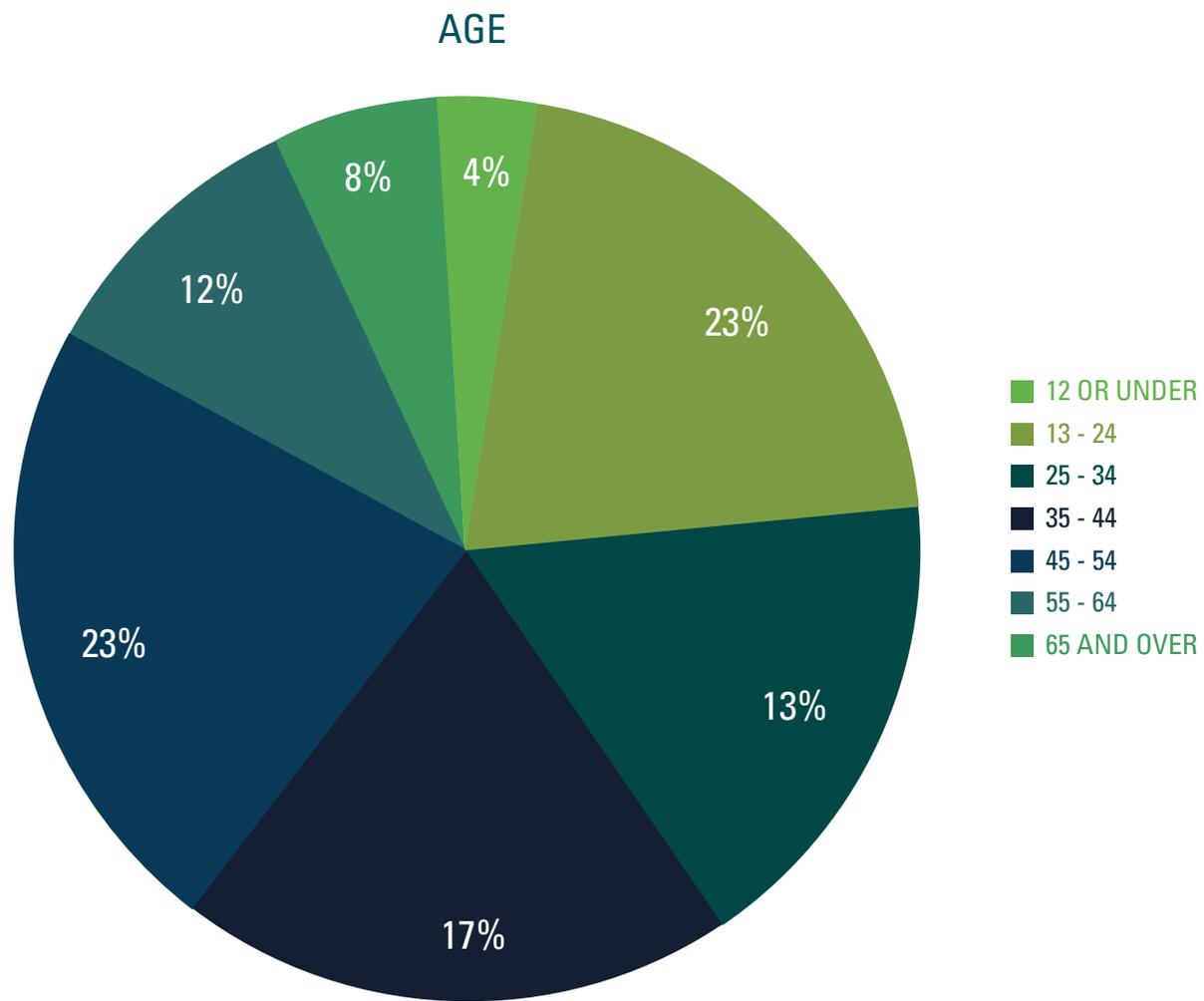


APPENDICES

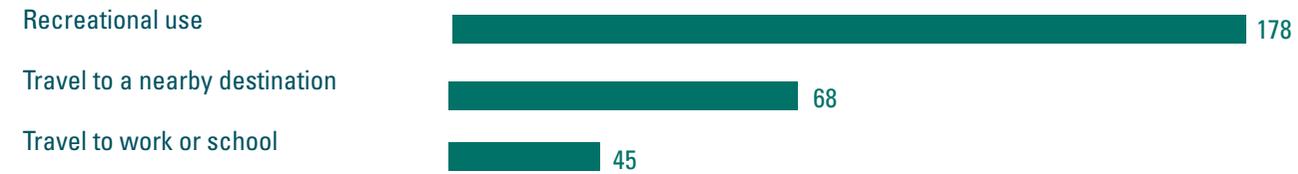




GREENWAYS PLAN ON-LINE SURVEY (2011) RESULTS



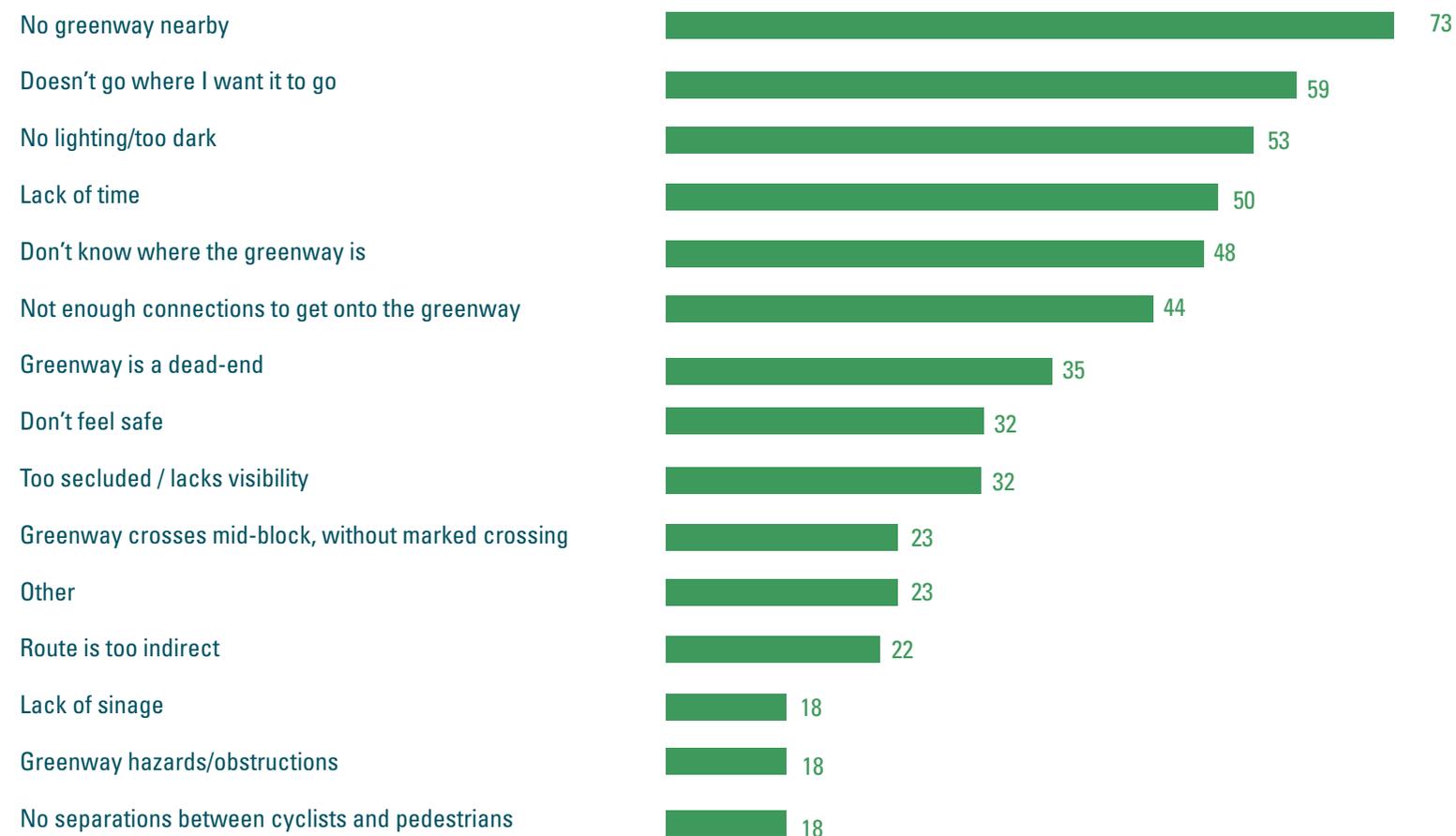
WHAT DO YOU USE THE GREENWAYS FOR?



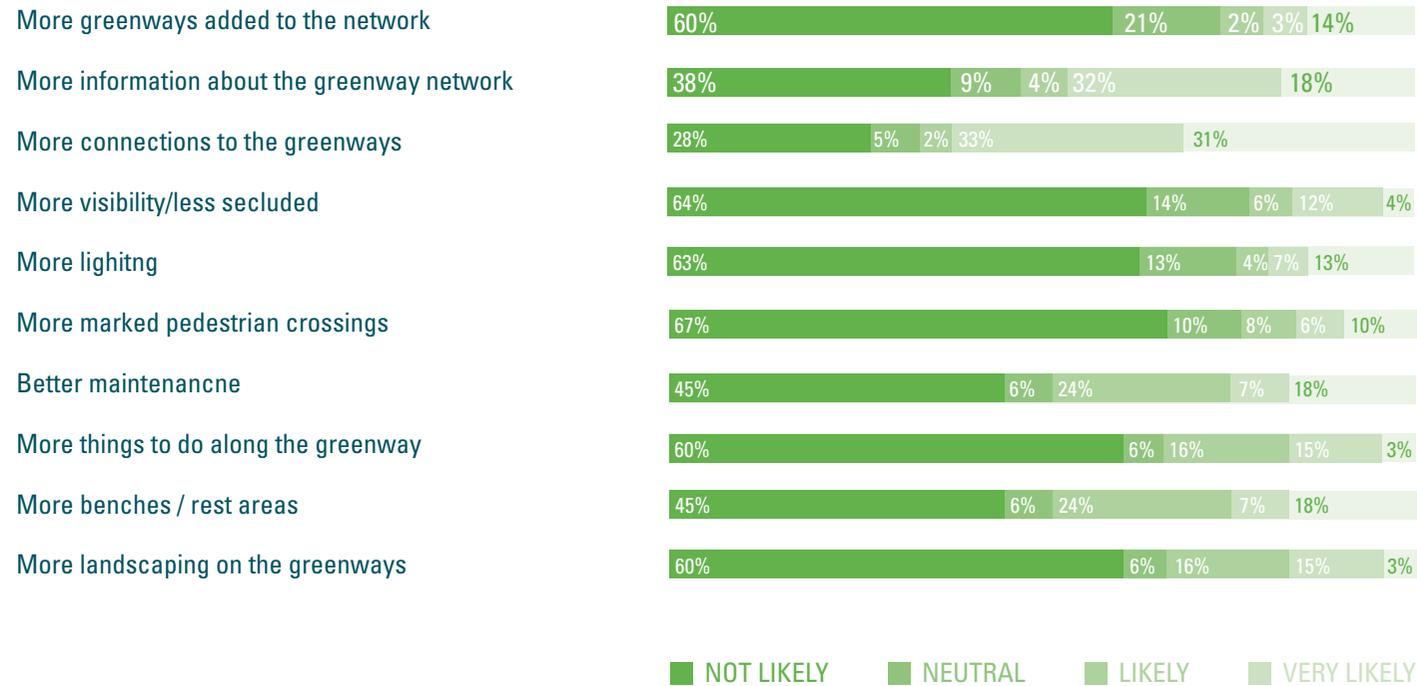
HOW OFTEN DO YOU USE SURREY'S GREENWAY NETWORK?



HOW OFTEN DO YOU USE SURREY'S GREENWAY NETWORK?



HOW LIKELY IS IT THAT THE FOLLOWING IMPROVEMENTS WOULD RESULT IN YOUR MORE FREQUENT USE OF GREENWAYS?:



GENERAL COMMENTS (FROM THE GREENWAYS SURVEY 2011 - EDITED FOR RELEVANCE):

1. Add some more public art as well, it makes it interesting.
2. Police patrols, neighbourhood patrols, safety, garbage can, dog waste cans, fun signs like Langley uses (catch more flies with honey).
3. More funding will bring more use.
4. Uncontrolled dogs & bikes inhibit use and enjoyment.
5. a. Widen pathways to effectively enhance fire services protection of "Greenways" investment from wildfire potential - and with suitably sited hydrants.
6. b. Do not install "marked pedestrian" crossings on 24th Avenue west of 152nd.
7. Update "Greenways Proximity Study" (Don Hunter days, 2002).
8. It would be helpful for someone from the planning dept to ride their bike along the hydro green way. I do not ride my bike there anymore because of the shocks that are produced from the hydro lines.
9. I live on a green way and I want you to know that the path is very well used between 184th and 64th. It is wonderful to see it being enjoyed by so many people. However, this winter it was extremely hazardous because of the lack of maintenance in regards to water that runs over the path and the many freezes that we had. I am surprised that no one fell and sued you all! I see that a little maintenance has been done to this end, but further down there is still standing water on the path that needs to be addressed.
10. I would like to have non-concrete pathways everywhere it's possible to put them!
11. Before asking for government money, please ask to get the residents of the area involved in the planning, building and payment process....
12. It's nice to have so many choices for walking or using my wheelchair. Paved paths are easier for me to walk on as well as being wheeled on.
13. My neighbourhood has several greenways and I love using them during the day. I would especially appreciate having benches along them to better appreciate their beauty (and to rest sore feet :-)).
14. Better maintenance: The greenway beside my house has had a gate broken for the last year
15. Bike lanes needed along 96 Avenue between Scott Road and 168th all the way through to match delta's lanes. There needs to be more east west connection
16. My little neighbourhood near the corner of Hwy 10 and 152 is very dense and very lacking in green space. Development seems to continue without allocation of proper green space.
17. We live in Morgan Creek and use the golf course before and after golfing hours (or on snowy days when no golfing). I wish there were more areas within our community and connecting to Rosemary, up to Grandview where we could walk/jog/cycle.
18. I like greenways that have safe pathways for walking, jogging, and cycling. Cycling needs its own area, there are not enough safe cycle commuter lanes and almost no safe cycle paths for kids.
19. I would love a complete network of greenways that connect all major parks in Surrey!
20. My wife and I are most appreciative of the greenways and make a lot of use of them.
21. We have excellent access to the greenways in Green Timbers, however some of the trails are dangerous especially the most direct route between the two 92nd Aves. We would like to see safer walkways.

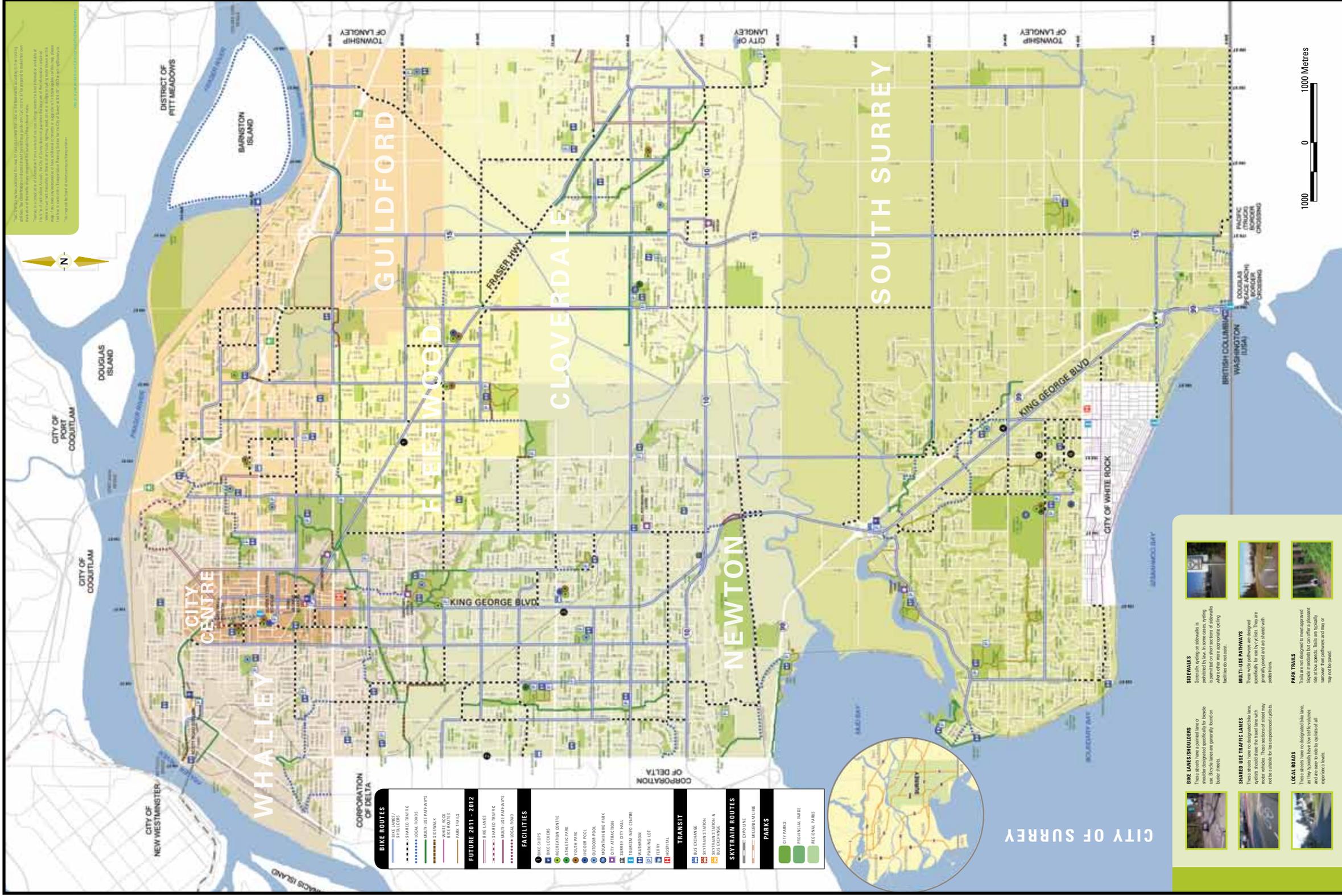
22. Having greenways keeps Surrey green and adds much to improve our quality of life.
23. We usually drive to a greenway spot, such as a park, to walk.
24. I love the job Surrey is doing already with our current parks and paths. The maintenance is terrific. I would just really like to see safe options for future use of cycling, walking or whatever, using foresight for my great grandchildren.
25. Need a mix of paved trails, gravel trails for mixed use, hiking trails and mountain bike trails. Also minimize impact - erosion, noise, litter - and replace non-native plants.
26. I would like to see more interesting trees in our greenways.
27. I use the Semiahmoo trail most days of week and the new continuation along waterfront. I am a member of the Friends of Semiahmoo trail and we do what we can to keep this trail weed free but it often has large puddles and poor drainage that only the municipality can maintain.
28. Build the continuous network as soon as possible. Add local street routes that will compliment and connect to the greenway routes that allows for low volume road connections all around the city. High quality bike routes with lanes can fill in the gaps. (bike lanes 1.8m std.) . Greenway routes should be as direct as possible. Using low volume streets is ok.
29. Key things we feel are needed ASAP, with the Greenway network, centre lines on all greenway trails, signage to keep right, and faster users pull left to pass. It would be helpful if Dog walkers and pedestrians respected cyclists by keeping right and not occupying the whole trail, dogs on leash) - KEEP RIGHT - Pedestrians keep right cyclists pass on left signs .
30. Greenways in very busy areas need separate walking and biking pathways with signs indicating uses.
31. Important greenways need to have connections. Need a completed connection from King George Skytrain station to the Green Timbers Greenway network. Connections needed from Central City area to the network, complete network around the City centre. Connection needed across Fraser Highway; pave path and provide signage to detour around the traffic light at Fraser Highway and 96 Ave to allow a safe crossing.
32. Signage on Greenways should show destinations end to end (EG: Guildford - Newton, Whalley - Bear Creek Park etc.) Current names are confusing.
33. Raised sloped centres to Greenways passing major roads with a centre median refuge; this sheds water and debris (flat centre medians refuge areas hold water and debris). Better view lines at these areas some are obscured by median bushes and trees does not allow a safe clear view of oncoming traffic or for motorists to see people in the median easily
34. Running trails are fabulous in the South Surrey arena forest. Fewer areas where you have to cross the roads - overpasses would be awesome. There is less traffic to compete with.
35. Info on the length of route and whether transit nearby for return trip.
36. This area of Surrey is really left out of the planning. The small park we have is too secluded and not lit at all. There are no sidewalks in our area and lighting is practically non-existent.
37. There are way too few cycling routes that would enable one to spend a day cycling through Surrey in a safe manner and through connected greenways. If safe cycling routes could be provided (actually joint cycle/ pedestrian) that would include extensive greenway it is my belief that the overall health of the citizens would greatly improve, especially that of kids.
38. It is unpleasant and dangerous to walk or ride bikes on, or right beside, the major traffic arteries, so Greenways should always offer alternatives to that.

39. Please promote user friendliness I think if people felt safe using greenways they would do so, resulting in a better feeling of "community" [and] a better place for all to live.
40. The development of greenways would improve health and decrease the stress on our health care system
41. So far so good: Greenways are well taken of. I live in Cloverdale so the progress is great!
42. We need more Parks!!
43. More lighting
44. I use the central valley greenway to van. Packed fine gravel/sand fine for cycling. Paved parking lots - paths, more natural is better. Better entrance to Green Timbers on the 100th Ave turn lane needed Poor North-South Routes
45. Keywords on website in laymen terms to find info easily.
46. A trail map with a bike route map would be very helpful
47. I like the naturalness, so don't landscape. Lighting isn't so much a problem for me - I bring a light.
48. You need more connections throughout the city to make it more accessible to the public
49. More greenways interconnecting parks
50. Don't cut blackberry bushes
51. I would just like it to go where it takes me for recreational purposes
52. I live in the Whalley area and I am not aware of greenways close by except Holland Park where we often walk to for events.
53. The greenways are a great way to get around however I don't consider them "natural" areas because they can never have large trees growing under the power lines. I don't want to see them "landscaped" either which would make the too sterile and polished. I'm pleased with my local greenway because it's a great place to take the dog for a walk however it doesn't connect up very well with my local shopping area, Cloverdale Crossing.
54. ... there's no way I would ever put my life on the line by riding on the road with cars, unless there is a physical barrier. I rarely see people use some of the bike lanes that have been around for years like the ones on 140th St. It's just not safe enough. I would ride my bike or go roller blading on greenways however, but the curbs going onto the streets are not smooth enough for roller blading, and in fact I've wiped out on the lips of the curbs a couple of times, and there aren't many cross walk signals at existing greenways. The pathways for these greenways should also be made a bit wider.
55. My main mode of transport is by bike, so any improvement to the greenway trail system is welcome. But, where the trails end if a bike path or bike route was available to fill in the gaps would be very helpful.
56. Better connections from 108th skytrain station and Guildford mall between 108th and 104th.
57. MORE GREENWAY PLEASE!!!
58. New pedestrian/cycle bridge going up over Hwy 1 at 168th St. How about a connection south along 168th to Fraser Greenway (Rte 32)? Some expense in widening 168th between 96th and 88th, but only 0.8 km of residential until 64th Ave., and that stretch already has bike lanes.
59. Add off leash dog park. Add really big slide. Add washrooms. Add water fountain.
60. Add more greenways and space. Also allocate a specific area where art works can be presented, paint garbage cans, decorate picnic tables, add more lighting.
61. Add some gazebos or something along the paths for reading or relaxing or something.
62. Green ways need to be nice enough and open enough to feel nice to walk through.

63. More flowers :) ice cream truck :) rest stop with a water fountain :)
64. They're nice if safe and lighted
65. I like greenways
66. Great idea and project! I can't wait to see more greenways where I live.
67. I don't really know where they are and I do worry about my safety in this area. Previous to this address I lived in the postal code of V4B 3X5 and I used the paths for recreational much more. I was happy with the variety and all aspects of them there.
68. Garbage cans - even if some don't use - others will, maps of area - even if printed on those image wraps they use on utility boxes
69. Would like to see a greenway down 136 st to Bolivar park and a crosswalk at 136 and 112th.
70. Many residents and cyclists I chat with would like to see a walking trail along the beach front from Crescent Beach to the promenade in White Rock. We all realize that with the active rail travel currently that is not feasible; however if a connecting ped/bike route can be identified using Crescent Rd / Ocean Park Rd, connecting with Marine, and providing view points where feasible, it may become popular.
71. There should be flowers and maybe some rest stops with a water fountain and park benches.
72. Better landscaping please :) .. And more seating areas
73. I didn't even know there were greenways located in Surrey. Letting the public be more aware of the greenways in Surrey would be beneficial. I believe connecting schools to shopping centres and bus loops is the most important.
74. Add more greenways! A LOT more greenways!
75. I am interested in the Surrey greenways because I like to ride my bike but do not like riding on busy streets because I feel unsafe. I really like the proposed greenways I saw in the map on the website because I feel that it connects the greenways to all of the places I would like to go.
76. My biggest complaint about the greenways is that they are currently very fragmented and they are hard to find. It would be nice if some of the existing greenways were extended and joined to make longer continuous sections. Also more maps and information about greenways would be very helpful.
77. I like greenways near water
78. I would also like to see wild flowers along the routes and benches and garbage cans intermittently.
79. More trees along roads
80. It would be nice to see more garbage cans throughout the greenway, collected on a regular basis.
81. We should not just look to Greenways under power lines as routes it is safer and better to have safe family cycle routes on quiet side roads that have little traffic low traffic speeds and volume, more people around and lighting safer. Greener under trees in many neighbourhoods.
82. Need some safe north south routes through Surrey. King George and 152 St too dangerous for families to ride a bike on.
83. Need passage ways between cul-de-sacs.
84. Greenway crossings need to be completed. Wild Flower east to Green Timbers pave trail to intersection from Greenway just south of the Fraser highway / 96 intersection. to allow a safe crossing to get east on Green Timbers Greenway short section to open trees and pave for safe crossing of Fraser Highway. 140 St crossing is dangerous as is 72 Ave on Greenways in center median as the shrubs trees block view to road for people crossing. Finish Greenway from Wild flower to Skytrain. No greenway from 140 St to Surrey City Centre?? 102 Ave is too busy to ride a bike and too noisy for pedestrians too much traffic.
85. Must have a line on all trails down middle like most other major cities, signs keep right pull left to pass! Dogs must be on a leash - too many problems with dogs running in front of or chasing bikes. Need trails separated between bikes and pedestrians in areas where lots of population and use, too many conflicts with dogs people walking blocking whole trail and bikes.

86. Green Timbers Greenway needs to be fixed east from 152 to 160 St, the bumps are really big crossing all the lanes and roads not safe. Smooth bumps, put stop signs for cars in back lanes not bikes and huge speed bumps for cars before greenway crossing and mark on the road the crossing on back lanes.
87. Centre median box crossings need to be raised and tapered so the debris will not build up in them; flat design results in debris build up and flat tires and ice. Curved surface highest in centre of crossing will shed rain and debris. Gives folks crossing a better view of traffic.
88. Wood posts get broken need cement curbs. Green timbers greenway needs tall grass and trees cut back from trails between Fraser Highway and 148 St to be safe to use! Need crossing trail north into Green Timbers park crossing 96 Ave.
89. Need signage at street crossings so you know where you are and maps on posts.
90. I like to use the walking trail under the power lines behind my house and the biggest issue that I have is the garbage that is allowed to lie discarded for a long time. Also, if the brush and grass was cut more often so the view on oncoming bikes and people was better, it would be less unnerving to walk alone.
91. Consider topography, avoid steep grades. Plan a level route from Guildford to Golden Ears Way.
92. We need more connections between greenways
93. Just more! Please! Safety first.
94. Can't stress enough that, if greenways are to cross streets, it must be made safe to cross
95. Congratulations to Surrey for the existing Greenway Network and initiative to expand it.
96. Would be cool to have some ... recharge stations for electric bikes. Need more interesting places, chain stores just don't cut it.
97. I think access to washroom facilities is important.
98. I noticed the pipeline is not on your map but it is a popular greenway and would be great if it could be connected together so a bit more continuous. Would be a spectacular draw for Surrey.





This study was prepared for use by the City of Surrey and is intended to provide information to the public. It is not intended to be used for any other purpose. The City of Surrey does not warrant the accuracy or completeness of the information contained herein. The City of Surrey is not responsible for any errors or omissions in this document. The City of Surrey is not responsible for any damages, including consequential damages, arising from the use of this document. The City of Surrey is not responsible for any legal liability arising from the use of this document. The City of Surrey is not responsible for any other damages, including consequential damages, arising from the use of this document. The City of Surrey is not responsible for any legal liability arising from the use of this document. The City of Surrey is not responsible for any other damages, including consequential damages, arising from the use of this document.

- BIKE ROUTES**
 - Bike Lanes
 - Shoulders
 - Shared Traffic
 - Local Roads
 - Multi-Use Pathways
 - Sidewalks
 - White Rock
 - Park Trails
- FUTURE 2011 - 2012**
 - Bike Lanes
 - Shared Traffic
 - Multi-Use Pathways
 - Local Road
- FACILITIES**
 - Bike Shops
 - Bike Lockers
 - Recreation Centre
 - Leisure Park
 - Footy Park
 - Indoor Pool
 - Outdoor Pool
 - Mountain Bike Park
 - City Attraction
 - Surf City Mall
 - Four Seasons Centre
 - Classroom
 - Parking Lot
 - Terrace
 - Hospital
- TRANSIT**
 - Bus Exchange
 - Strains Station
 - Strains Station &
 - Bus Exchange
- SKYTRAIN ROUTES**
 - Millennium Line
 - Expo Line
- PARKS**
 - City Parks
 - Provincial Parks
 - Regional Parks



SIDEWALKS
Generally, cycling on sidewalks is prohibited by law. In some cases, cycling is permitted on short sections of sidewalks suitable for use.

MULTI-USE PATHWAYS
These wide pathways are designed specifically for use by cyclists. They are generally paved and are shared with pedestrians.

PARK TRAILS
Bike routes designed to meet approval for use by cyclists. They are generally paved and are shared with pedestrians. Trails are typically narrower than pathways and may or may not be paved.

BIKE LANES/SHOULDER
These streets have a painted lane or shoulder designated specifically for bicycle use. Bicycle lanes are generally found on busier streets.

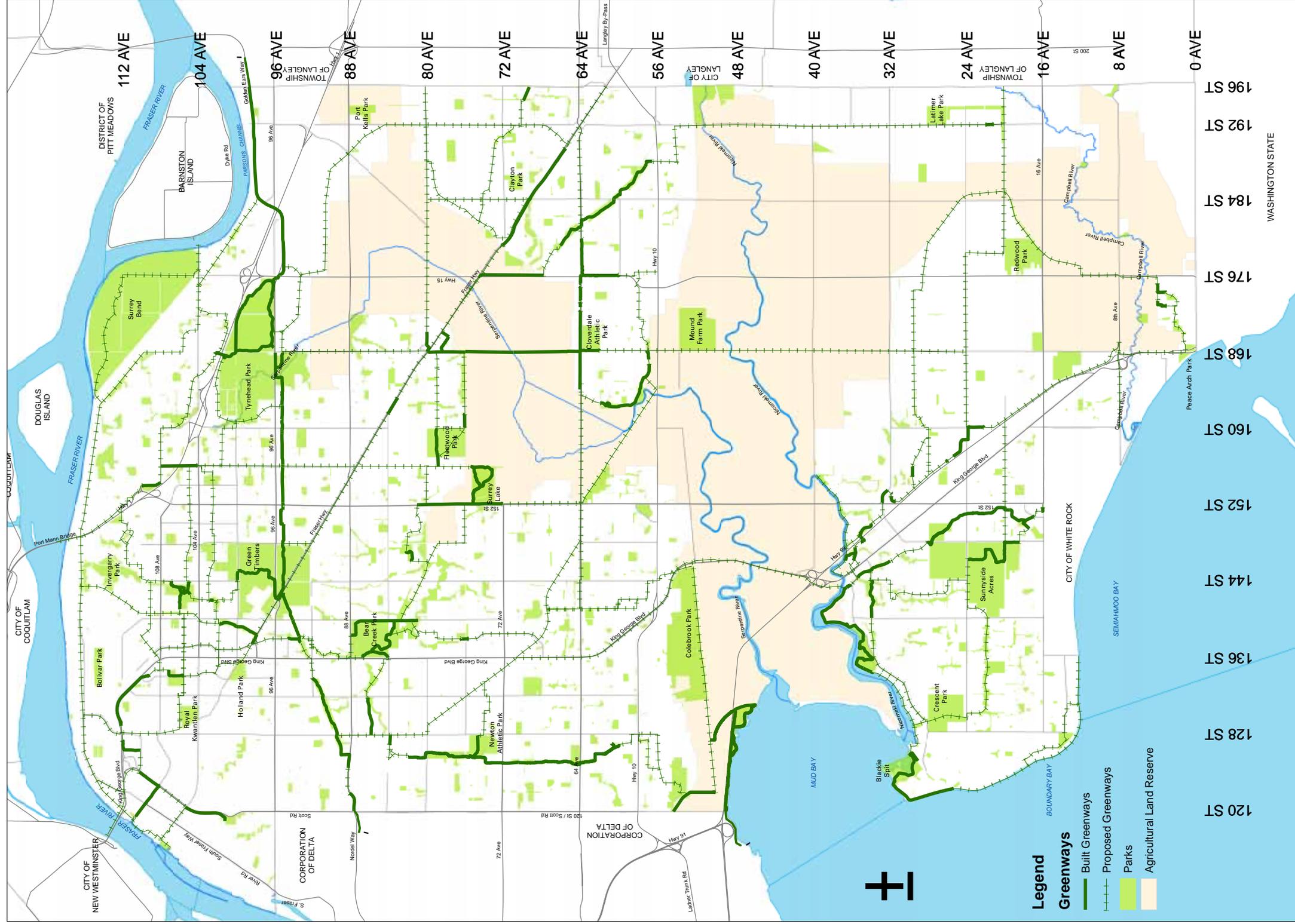
SHARED USE TRAFFIC LANES
These streets have no designated bike lane, but cyclists should share the travel lane with motor vehicles. These streets may not be suitable for less experienced cyclists.

LOCAL ROADS
These streets have no designated bike lane, but cyclists should share the travel lane with motor vehicles. These streets may not be suitable for less experienced cyclists.



CITY OF SURREY





City Greenways Plan

Updated March 2012



This data provided is compiled from various sources and is NOT warranted as to its accuracy or reliability by the City of Surrey. This information is provided for information and convenience purposes only. Lot lines and legal descriptions must be confirmed at the Land Title Office.

J:\PARK-REC\Planning\General\PROJECTS\Greenways

The Greenways Map is subject to continuous revision. Please refer to www.surrey.ca/greenways for the latest version of the Greenways Map.

FACTORS THAT INFLUENCE NEIGHBOURHOOD GREENWAY USAGE

Many people make some sort of walking trip every day, whether to go to work, school, shopping, or to visit friends. Cycling is less common in Surrey than walking but it is a viable, sustainable and growing alternative to the car. For most residents, walking and cycling are primarily recreational activities. In fact, Surrey's walking and cycling trails are used more often than any other type of recreational facility provided by the City. Trails are popular, the public has asked for more of them and they are less costly to build than other recreational facilities.

CONNECTING COMMUNITIES

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CONNECTORS),
PURPOSE OF THE GREENWAYS PLAN

PURPOSE OF THE GREENWAYS PLAN



PURPOSE OF THE GREENWAYS PLAN INFLUENCES & CHALLENGES

WHAT IS A GREENWAY?

NEIGHBOURHOOD GREENWAY USAGE

City Greenways, consisting of loops and connectors, are the subject of this Greenways Plan. City Greenways form the skeleton of the Greenways Network. They provide the main, multi-use pathways around each of the town centres for the six distinct communities in Surrey (loops) and they provide the primary multi-use pathway connectors between these various town centres (connectors).

MEASURING SUCCESS

Many people make some sort of walking trip every day, whether to go to work, school, shopping, or to visit friends. Cycling is less common in Surrey than walking

INFLUENCES & CHALLENGES



A SHARE RESPONSIBLY

A HIERARCHY OF GREENWAYS PRINCIPLES AND ACTIONS FOR CHANGE



CITY OF SURREY PURPOSE OF THE GREENWAYS PLAN
GREENWAYS MAP

Creating and maintaining a city where people have a choice of modes of transportation is a challenge. With tradition and modernity, only 6.5% - cycle t



CHANGE

THE GREENWAYS PLANNING PROCESS



11881



PURPOSE OF THE GREENWAYS PLAN INFLUENCES & CHALLENGES

WHAT IS A GREENWAY?

NEIGHBOURHOOD GREENWAY USAGE



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CITY OF SURREY PURPOSE OF THE GREENWAYS PLAN

www.surrey.ca