AECOM

District of Kent

Active Transportation Plan

Prepared by:

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Date:

March 2009

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March 31, 2009 Project Number: C832-014-00-01

Mr. Kerry Hilts
District of Kent
PO Box 70
7170 Cheam Avenue
Agassiz, BC V0M 1A0

Dear Kerry:

Re: Active Transportation Plan

Attached is the completed Active Transportation Plan for the District.

Thank you for the opportunity to undertake this work on the District's behalf.

Sincerely,

AECOM Canada Ltd.

Leah Libsekal
leah.libsekal@aecom.com

LAR/LGL:cla
Encl.

Revision Log

Revision #	Revised By	Date	Issue / Revision Description
A	LAR/LGL	February 20, 2009	Draft Report Issued for Review
B	LAR/LGL	March 26, 2009	Updated Report for Client Review
C	LAR/LGL	March 30, 2009	Final Report

Signature Page

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1. Introduction

1.1 Philosophy

With increased awareness of health problems associated with an inactive lifestyle such as obesity, heart and lung disease and diabetes, there has been a focus within the urban planning community on how the built environment contributes to a healthy, active lifestyle. Researchers in North America, such as Larry Frank at the University of British Columbia, have found relationships between healthy communities and people's propensity to use human powered transportation rather than vehicular transportation. Indeed, in communities where human powered transportation modes such as walking and cycling are commonly used, a person's overall level of health is frequently higher than in communities where the private automobile is used almost exclusively for all trips.

In addition to the community health benefits afforded to active communities, researchers have found that communities where active transportation modes are commonly used are often pleasant places to be. Communities, which are walking and cycling friendly, are attractive to residents and visitors alike, and are key elements in the overall quality of life. Human powered transportation has the added benefit of releasing fewer, if any, greenhouse gases when compared with more traditional transportation modes such as the private automobile.

With this knowledge the BC Government, has developed funding initiatives for communities to develop active transportation plans to help them develop and achieve healthier, greener and more active communities. The goals of the Active Transportation Plan is to provide a document that can enable the District of Kent to foster community partnerships, opportunities and Active Transportation Capacity. The new Active Transportation Plan will be guided by the Community Services' vision of serving users of all ages, abilities and stages.

The District of Kent engaged AECOM to provide planning and engineering services to prepare an Active Transportation Plan for the District illustrated in Figure 1. The study area (inside the red boundary line) includes all of the District of Kent and the Village of Harrison Hot Springs. Active transportation is defined as:

> *…any form of human-powered transportation. …including walking, cycling, wheeling, in-line skating, skateboarding, ice-skating (e.g. on a canal). Walking and cycling are the most popular forms of active transportation. It can also involve combining modes such as walking/cycling with public transit.*[1]

1.2 Historical Active Transportation Plans in the District

In 2002, the District developed a Bicycle Network Plan, which outlined a new on and off-street bicycle network that the District would be able to establish over time. However, the plan was not implemented

[1] *Public Health Agency of Canada, available at http://www.phac-aspc.gc.ca/pau-uap/fitness/active_trans.htm*

due to a lack of funding from the District and other funding sources. More recently, some funding sources have been identified from the BC provincial government that could be used for the construction and implementation of transportation facilities for alternative transportation modes. These modes could include:

- Bicycling
- Walking / hiking
- Transit
- Carpooling
- Canoeing / kayaking

One of the requirements for provincial funding is the presence of a current active transportation plan. As the District's existing plan is six years old, an update is required to address current issues and considerations. In addition, the existing plan only considered bicycling whereas current funding is available for infrastructure projects for other modes of active transportation. The new Active Transportation Plan (herein called the AT Plan) will contain an update of the bicycle network plan as well as develop plans for other transportation modes.

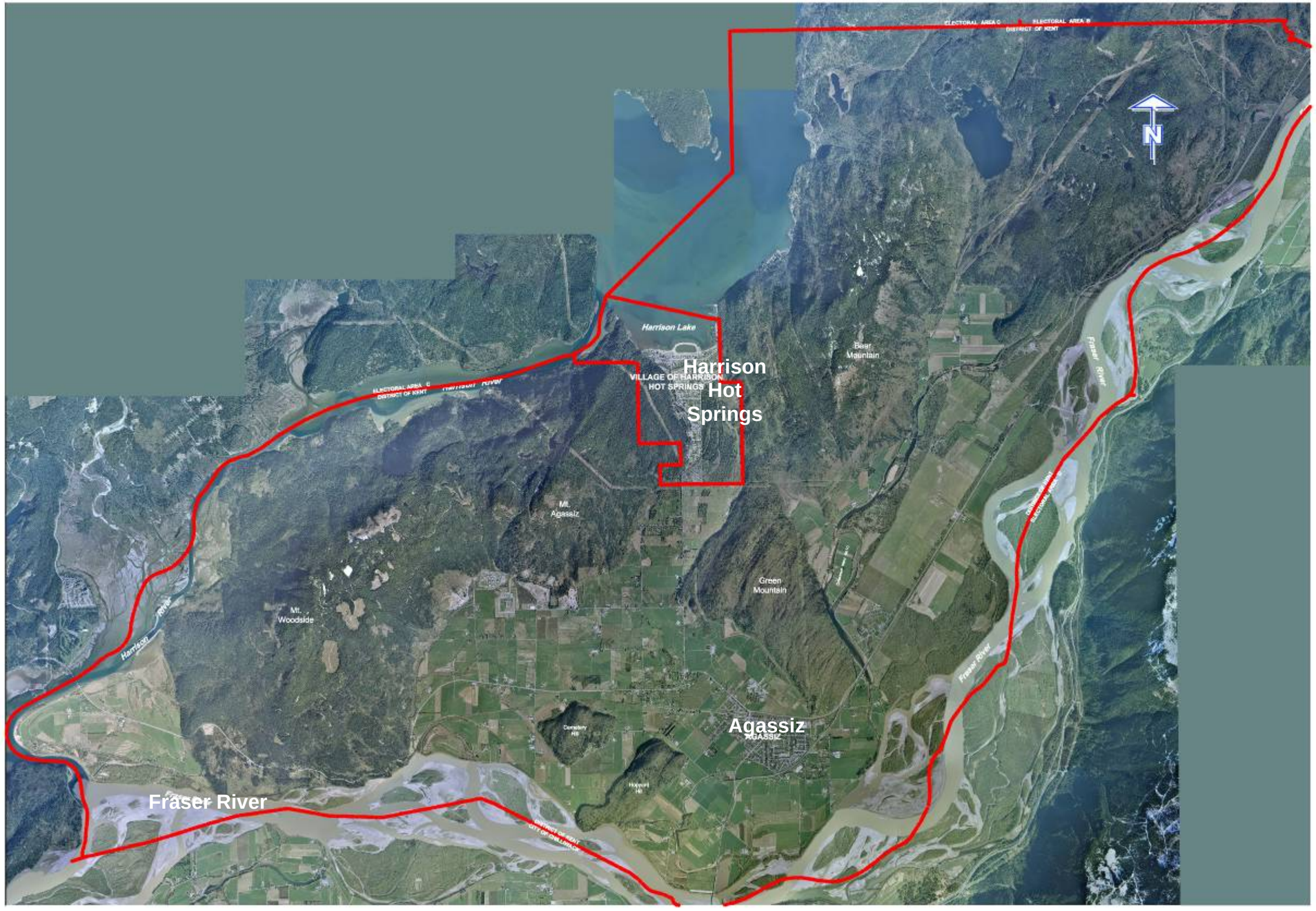
The AT Plan is divided into two parts; the first part contained in Section 1 through Section 3, includes the background and process information used to develop the AT Plan for the District of Kent. The second part contains AT Plan policies in Section 4 and a possible implementation plan in Section 5.

1.3 Plan Objectives

The AT Plan's objectives include the following:

- Promotes transportation modes other than the personal vehicle
- Identifies existing and future active transportation infrastructure and assets
- Provides for a reduction of barriers to active transportation including increased accessibility to walking, cycling, canoeing, etc. and transit usage
- Promotes active transportation (primarily walking and cycling) for more than recreational uses
- Plans for active transportation with a vision of serving users of all ages, stages and abilities
- Develops a transportation system that provides a safe, efficient and connected network for all modes of active transportation travel
- Defines standards for facilities that includes promoting active transportation
- Outlines policy recommendations regarding active transportation for adoption in the Official Community Plan and other relevant plans
- Identifies possible resources to implement active transportation improvements
- Identifies priority projects

Figure 1 Study Area



Aerial Photography Source: District of Kent

2. Active Transportation Modes

2.1 Current Inventory

An inventory of existing active transportation modes and facilities available within the District of Kent was undertaken, focusing on transit, carpooling, cycling, walking and water travel. Existing active transportation assets in the District include, but are not limited to, the following:

- Non formal cycling routes
- Promenade in Harrison Hot Springs
- Sidewalks within Agassiz
- Trails and canals
- The Fraser River and Harrison Lake

2.1.1 Transit

Transit services in the District of Kent are provided by five partner agencies that include BC Transit, the City of Chilliwack, the District of Kent, the Village of Harrison Hot Springs and the Fraser Valley Regional District. These partners share the costs associated with providing the transit services based on a cost sharing agreement made at the start of the transit service to the District. Farwest Transit Services Inc. operates the transit system in Chilliwack and District of Kent.[2]

Currently, there is one transit route, called Route 11 that services the District of Kent as shown in Figure 2 using a 20 foot mini-bus. Route 11 travels from the District to the City of Chilliwack Downtown Transit Exchange via Rosedale on Old Yale Road. Regular passengers and handyDART passengers share the same bus. If a registered handyDART transit user is on the bus, they may request a stop location off the transit route within Agassiz and Harrison Hot Springs. The bus currently operates at two-hour headways between the hours of approximately 6:50 am to 6:00 pm. [3]

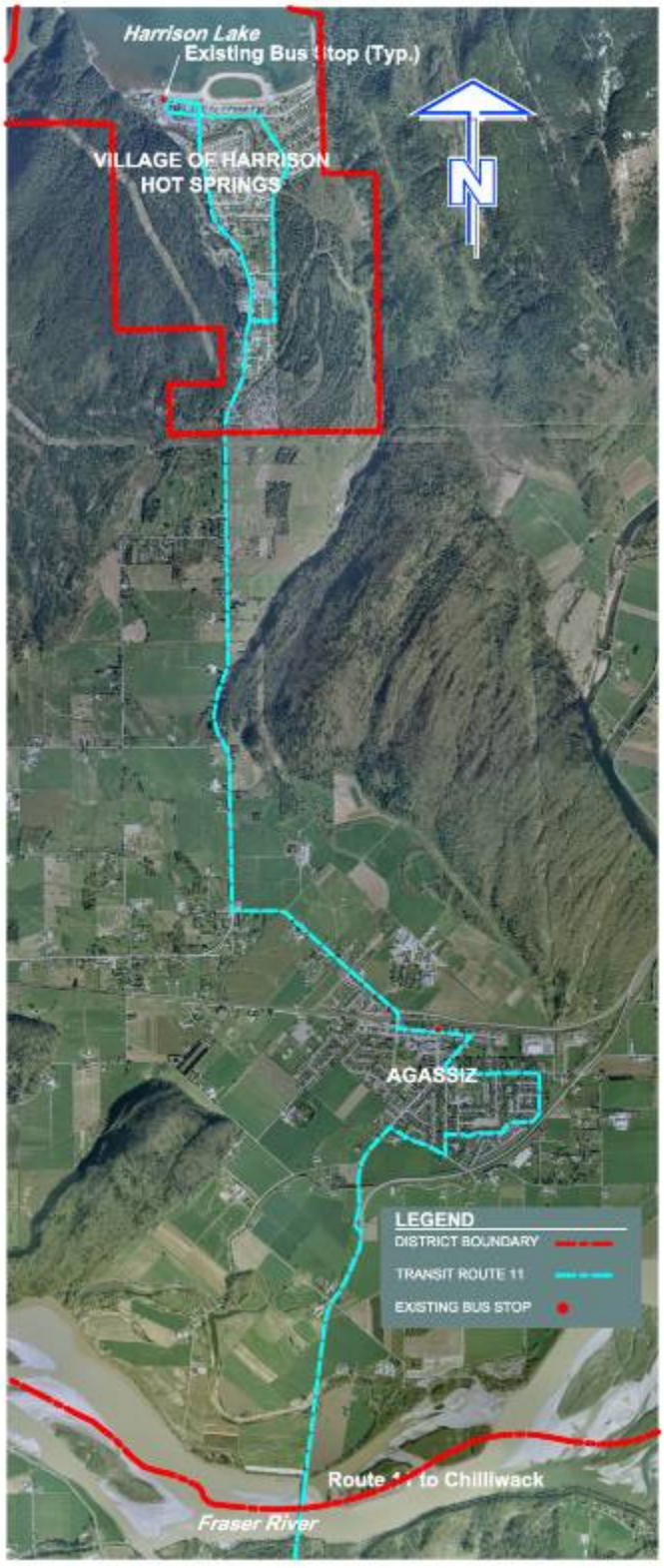
BC Transit completed an assessment of the existing transit service to the District, including a ridership survey, which was conducted in November 2008. Transit ridership in the District has increased 28% over the 2006 transit ridership. With the increased ridership, the bus is often filled in the 6:50 am trip to Chilliwack and the 3:20 pm trip to Harrison Hot Springs. During these periods, passengers waiting at bus stops were passed by because the bus was filled. A short-term solution was reached such that whenever passengers cannot get on the bus a taxi is provided for the passenger(s) passed by. Over-capacity buses were identified as a significant issue in the report.

The ridership survey found:

- Most of the transit system users are commuters going to and from school and work.
- Most people are travelling to Chilliwack
- About 90% of the respondents were regular transit users; with roughly one third of the transit users taking the bus every weekday
- Nearly 75% of transit users do not have access to a private auto; thus, they are captive to the transit service provided

[2] *BC Transit, Agassiz-Harrison Transit System Update Report, December 17, 2008*
[3] *BC Transit, available at http://www.transitbc.com/regions/chw/?p=2.list*

Figure 2 Transit Routes in the District of Kent



Aerial Photography Source: District of Kent

The cost-sharing agreement between the transit partners has not been changed since the start of the transit service in the District. BC Transit notes in their report that there are several ways of determining how transit costs should be shared; the most commonly used method is based on service hours. The report provides a new cost-sharing scheme based on the service hour percentages.

Several proposals were made for short-term and longer term options for providing transit services in the District as noted below.[4]

Short-Term

- Maintain the status quo by keeping the bus service at the same service interval and utilize taxi services when the bus is full.
- Replace the existing bus with a larger bus. Currently, the transit service provided in the District is always accessible; therefore, this option would be problematic if the larger bus did not meet the same accessibility standards.
- Provide another bus for overloaded trips, which is typically the 3:20 pm trip to Harrison Hot Springs. Since transit demand varies somewhat, determining when to deploy the extra bus could be difficult.

Longer Term

- Develop a dedicated handyDART service and a separate fixed-route for the District, which would help to maintain the transit schedule but it would not help the transit capacity concerns. Since the number of handyDART passengers is low, this option was not recommended in the BC Transit report
- Share the handyDART system with the Chilliwack Transit System. The Chilliwack handyDART system needs a new vehicle, which might provide sufficient capacity to provide these services to the District of Kent as well. This option would not likely change the transit capacity concerns in the District.
- Expand the transit service to an hourly system during the weekdays. While this option may not directly address the capacity problems associated with the 3:20 pm transit service trip, it provides other transit options for people around the afternoon peak hour. This option corresponds with the District's desire for hourly transit service in the community

2.1.2 Carpooling

No formalized carpooling facilities, such as dedicated parking lots exist in the District to facilitate carpooling. Some people will use the parking lot at the visitor information sign located at the "teacup" intersection on Highway 9 as a park-and-ride lot.

The Jack Bell Foundation, which provides carpooling vehicles and identifies people interested in carpooling, provides carpool-matching services throughout the Lower Mainland and Fraser Valley. For a monthly fee, the Foundation provides a carpooling vehicle, which enables a group of people to carpool to work. These carpools work the best when everyone in the carpool lives in the same area, has similar work destinations and has the same hours of work. Formalized car pools are added whenever there is sufficient interest. The Foundation maintains a registry of casual ride sharing, where carpoolers use their own vehicles. Registered users can access information from the casual riding-sharing database.[5]

[4] *BC Transit, Agassiz-Harrison Transit System Update Report, December 17, 2008*
[5] *Jack Bell Foundation, available at http://online.ride-share.com/en/my/*

2.1.3 Cycling

Cycling is a popular pastime and activity in the District. However, no formal bicycle routes exist in the District, although some people cycle on the existing shoulders of the provincial highways, on the local roads (i.e. roads that do not have much vehicle traffic) and on some of the existing off-road paths throughout the District. In the 2002 Bicycle Network Plan a series of bicycle routes were planned on local roads and existing road shoulders. One new on-highway route between Agassiz and Harrison Hot Springs was also planned. However, the signage for the routes on existing facilities or the new route on Highway was not constructed due to a lack of funding. Figure 3 shows the proposed routes in the 2002 Bicycle Network Plan.

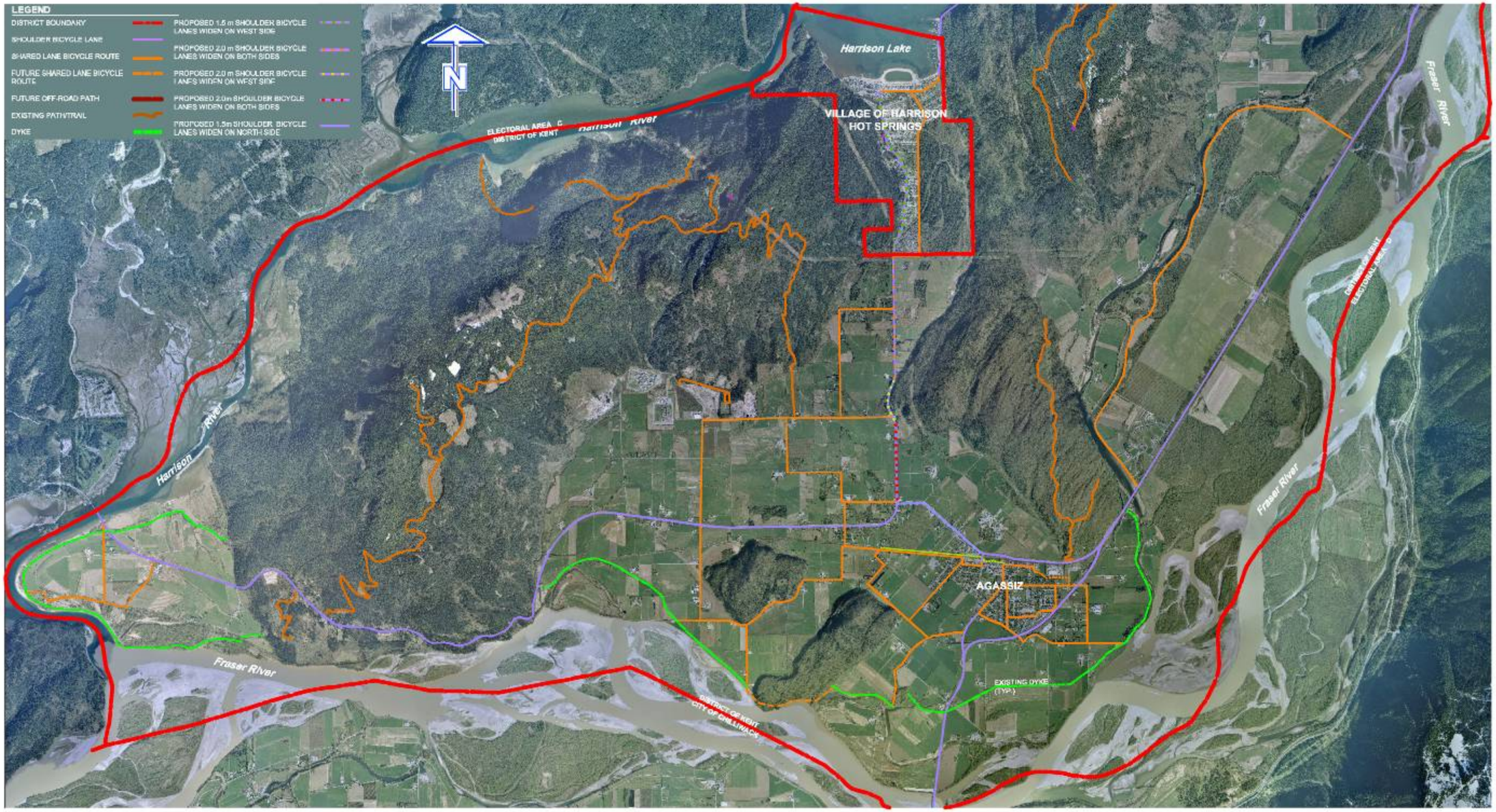
Cycling on numbered provincial highways is frequently accommodated on the shoulders, which are generally wide enough for directional cycling. There are however several exceptions where discontinuity of adequate shoulder width prevail on the highways as well as the local roads.

- Highway 9 Bridge over the Fraser River: The existing sidewalks are very narrow and are further reduced bystreet lights located in the sidewalks
- Highway 9: Hot Springs Road between Agassiz and Harrison Hot Springs: Shoulders on this section of roadway are very narrow. Cyclists that do use it as a route between Agassiz and Harrison Hot Springs find it difficult to cycle on and rarely use it more than once or twice
- Highway 7 near Mount Woodside: This section of roadway is characterized by very narrow shoulders. The BC Ministry of Transportation and Infrastructure (BC MoT) has recently widened the shoulders through this area as much as possible without the construction of a retaining wall or excavation into the mountainside.
- Rockwell Drive: This facility, which travels along the eastern edge of Harrison Lake to Sasquatch Provincial Park also has no shoulders. The road can get very busy during the summer months, when tourists travel to the provincial park, and illegal parking further reduces the safety of the road users.

2.1.4 Walking

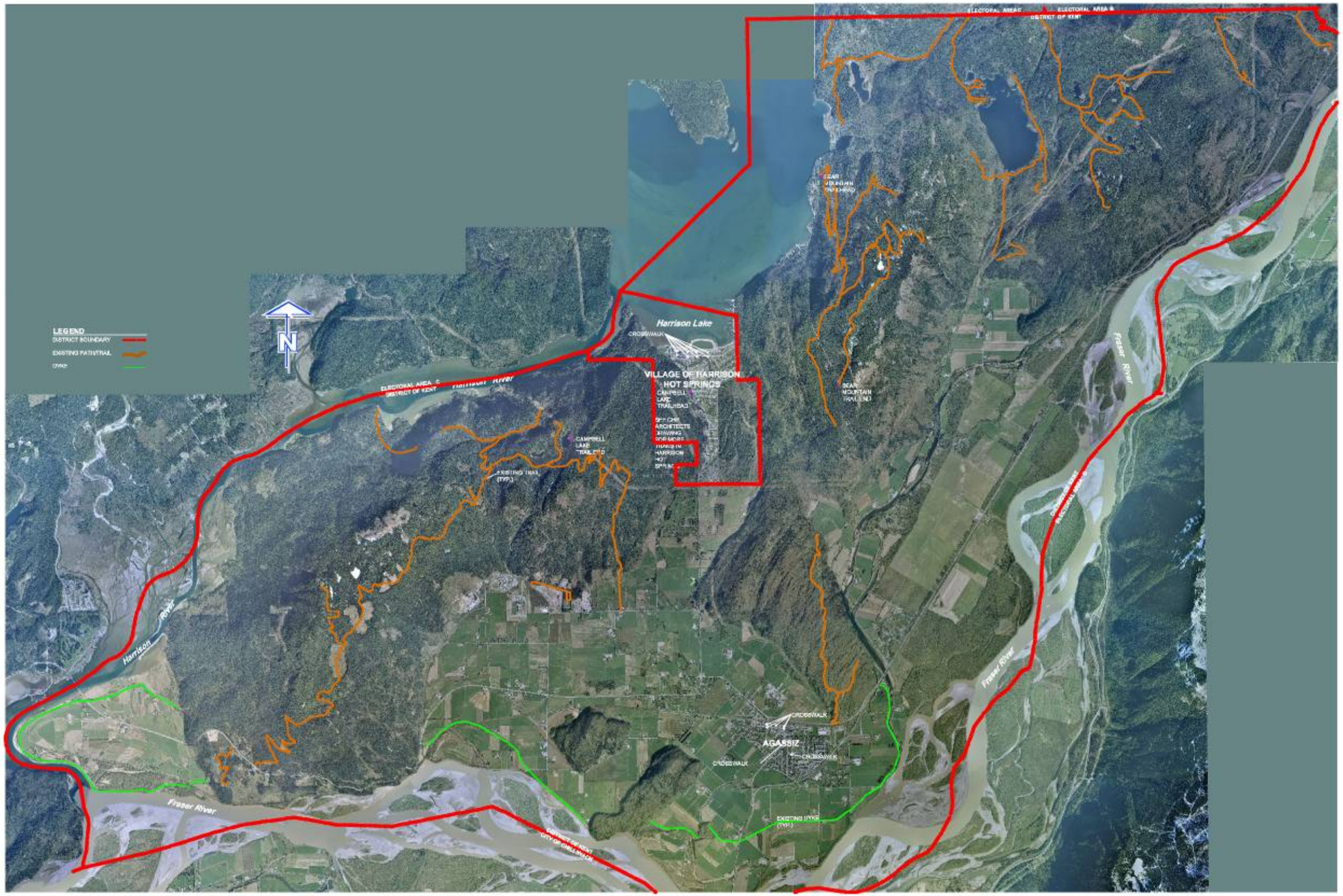
Within the Agassiz Town Site, there are some sidewalks adjacent to the roads. These facilities range from good condition to poor condition. In particular, it was noted that sections of sidewalks on Pioneer Avenue, west of Highway 9, are in poor condition.

Figure 3 Proposed Bicycle Routes from 2002 Bicycle Network Plan



Aerial Photography Source: District of Kent

Figure 4 Walking Routes



Aerial Photography Source: District of Kent

There are numerous hiking and walking paths throughout the District. They range from hiking trails in the mountains such as the Campbell Lake Trail and the Bear Mountain Trail to short trails in Harrison Hot Springs and in Agassiz. The mountain trails are often old forestry roads. Most of the hiking trails are not well maintained and some of the trails shown in orange on Figure 4 may be completely overgrown, making them unavailable for walking and hiking purposes. We understand that the Campbell Lake Trail, in particular, is impassable as the bridges over the creek crossings are no longer usable. Trail maintenance and even access can be difficult when part of the trail is located on private property. While previous landowners may have permitted hikers to use the trails on their land, over time, and with changes in ownership landowners may become less amenable to allowing public access to the trails, particularly in light of security and liability considerations.

In the Village of Harrison Hot Springs, walking and hiking trails are well defined and mapped, as shown in Appendix A. A recent mapping exercise by CHP Architects for the village included geo-referenced mapping of trails, some of which are located on private property.

2.1.5 Blueways

Natural watercourses, or blueways, exist throughout the District, as shown in Figures 1, 3 and 4. The major natural watercourses include:

- The Fraser River immediately South of the District is considered navigable by human-powered boats West of the District. East of this point, the river currents are difficult to navigate.
- The Harrison River is navigable in the downstream direction (i.e. towards the Fraser River) for human-powered boats. It is commonplace for canoes and kayaks to make this trip, often from Harrison Lake to Kilby.
- Harrison Lake often has heavy winds, which makes it difficult for canoeists and kayakers to use. However, experienced sailors and wind surfers can use these winds to their advantage; making the lake a desirable location for sailing and wind surfing.
- Miami Slough has, in the past, been navigable between Harrison Lake and the Harrison Resort Golf Course during high water flow seasons by kayaks and canoes. It likely would require some maintenance and cleaning to maintain the watercourse for users in the future.

2.1.6 Greenways

Greenways, linear open spaces (corridors) composed of natural vegetation, are often used to create a connected network of open spaces that include traditional parks and natural areas. Currently, there are no formalized greenways in the District. In Harrison Hot Springs, the promenade area at the lakeshore acts as a linear park, although not formally considered as one (see CHP Architects drawing in Appendix A). The 2002 Bicycle Network Plan recommended an off-street trail within Pioneer Park in Agassiz.

The District is currently in the process of formalizing two pathways that can be used primarily by walkers. The first path begins at the Southeast corner of the Fitness / Activity centre parking lot and extends South along the property line to Mountain View Road. The land dedicated for the trail will be 1.5 m wide. The second path connects Tuyttens Road along the property line that runs parallel to Highway 9, this path will connect to Highway 9 at the intersection of MacDonald Road. Figure 5 shows the two pathways.

Figure 5 New Pathways

Aerial Photography Source: District of Kent

The Fraser Valley Regional District (FVRD) is currently working to develop a trail guide for the FVRD. The guide is expected to show existing, documented (i.e. known by government agencies and tourism / community groups) trails.

2.2 Existing Active Transportation Policies

A review of the following existing documents was made for reference to active transportation policies in the District of Kent.

- District of Kent Official Community Plan (2001)
- District of Kent Leisure Needs Assessment (Draft 2008)
- District of Kent Area Agricultural Plan (in progress)
- District of Kent Bicycle Network Plan (2002)

2.2.1 Official Community Plan

Prepared for the District in June 2001, the Official Community Plan (OCP) was an update of the 1994 OCP documents. The OCP provides *"…a long range, comprehensive, general policy guide for using land, which, in turn, is used to prepare for future growth in the District of Kent. The intent of an OCP is to guide decisions in relation to policies for residential and commercial development, industrial activity, transportation infrastructure, and environmental considerations. Furthermore, an OCP outlines where future development should occur, including utility servicing, within the area specified by the Plan."*[6]

[6] *UMA Engineering Ltd., District of Kent Official Community Plan, June 2001*

District residents were invited to attend various public consultation meetings as part of the development of the 2001 OCP, and provide insight. Through the process several active transportation needs for the District were identified. They include:

- The need for a bicycle path network, in particular from Agassiz to Harrison Hot Springs,
- Improve the Agassiz-Rosedale Bridge on Highway 9 for cyclists and
- Make the dykes available for walking, cycling, etc.

The OCP contains several transportation policies, although not all are related to active transportation. The policies, which could be considered related to active transportation, are paraphrased below:

- The land uses in the District should be provided with safe and adequate access in keeping with the level of traffic generated and that are required for emergency vehicle access.
- Within the Agassiz town site, an urban design standard should be used, which includes sidewalks and wheelchair accessible curb letdowns as required. This standard should be used for all new residential and commercial developments.
- Development of a District-wide cycling network plan to address both commuter and recreational cyclist needs. The plan should include lake and dyke access, road network links and an off-road path from Agassiz to Harrison Hot Springs.
- Possibility of developing municipal design standards for roads, which would consider the accommodation of pedestrians, cyclists, transit vehicles, trucks, farm equipment, private automobiles and other road users. Cyclists could be accommodated by providing bicycle lanes or paved shoulders along designated commuter, school and tourist routes.
- Review with the BC MoT the potential to provide separate bicycle and pedestrian paths on the Agassiz Rosedale Bridge that are separate from vehicular traffic and review the location of the existing light standards.
- Rockwell Drive should be upgraded in stages by BC MoT to improve user safety. Development plans should not conflict with the planning process. The District has requested that BC MoT provide a paved shoulder on one side of the road for pedestrian and cyclist use between the Harrison Hot Springs boundary and Sasquatch Provincial Park.

OCP (2001) supports the development of active transportation

Some of the recreational policies in the OCP are related to active transportation. These policies are contained in the bullet points below.

- Linear parks and trails can be considered under the park acquisition and dedication process
- The creation of a dyke based recreational trail system should be supported for non-motorized uses such as walking, cycling and horse riding where considered appropriate. Motorized transportation modes on the dykes are considered undesirable.
- Non-motorized recreation use of the Fraser River dyke system should be supported when these uses are compatible with and protect the agricultural lands they are adjacent to. The trails should also support the use of farm vehicles movements as required.

- The development of recreational trails for active transportation modes on publicly owned lands within the District should be supported.
- Develop a bicycle path between Agassiz and Harrison Hot Springs with the cooperation of the Village of Harrison Hot Springs and the Fraser Valley Regional District.

2.2.2 The Leisure Needs Assessment

In 2008, the District engaged Jennifer Wilson Consultants Ltd. to prepare a Leisure Needs Assessment study, which investigated the District's leisure programs, activities and facility needs. The study had a public consultation component in which the leisure needs of the community were assessed through a random community-wide survey, focus groups, special meetings and steering committee meetings. The study found that participation in leisure activity is fairly strong with all age groups indicating a generally active community. Findings from the study indicate that generally, the District was meeting identified leisure needs and that continued support of services is required. For those needs not currently being met, there is public support for the District providing support for these needs.

The Leisure Needs Assessment determined that one of the key areas warranting the District's attention is investment in the development of an accessible system of multi-use paths and trails for pedestrian and human powered wheeled movement (i.e. strollers, skateboards, etc.) This need overlaps with the needs of the Active Transportation Plan. The public saw the trail system both as recreational facility and as an active transportation facility and indicated a willingness to pay for these improvements. The study also found that people did not feel safe walking in some areas because of heavy traffic or aggressive dogs.

The Leisure Needs Assessment found:

1. **People are willing to pay for better active transportation services**
2. **Priority investment is accessible system of multi use paths and trails**

2.2.3 Agricultural Area Plan

There appears to be a conflict between some of the recreational uses in the District on the dykes and trails, and agricultural land uses. Some of the findings in the OCP and the Leisure Needs Assessment project centered around the development of multi-use trails throughout the District and on the dykes are often in direct conflict with surrounding agricultural land uses. Farmers are concerned about trespassing, vandalism and contamination of their lands by recreational users. In addition, they are concerned with off-leash dogs straying into fields, chasing livestock and damaging crops. The Agricultural Area Plan is currently being developed by Don Cameron & Associates and is expected to be completed in the spring of 2009. It may be possible to develop trails within agricultural areas by providing buffer zones between the trail and the agricultural areas. The type of agricultural land use will determine the type and size of the buffer zone required between the trail/recreational use and the agricultural land. For example, with open range or sensitive agricultural operations (such as for green houses or poultry barns) a large physical separation reduces the likelihood of encroachment and vandalism of sensitive agricultural operations.

see Figure 11

Considerable work will be necessary to achieve community consensus for future Active Transportation projects that involve development of trails running through and adjacent to agricultural lands, including the use of dykes for multi-use trails. In addition, lands currently in the Agricultural Land Reserve (ALR)

required for road widening, trails and other transportation uses will need to be removed from the ALR.[7] Historically, it has been very difficult to get the Agricultural Land Commission (ALC), who oversees the ALR, to remove lands from the ALR for transportation purposes. Section 5 of this document contains some information regarding the process for removing lands from the ALR for transportation and recreational trail purposes.

2.2.4 2002 Bicycle Network Plan

UMA Engineering Ltd. developed the 2002 Bicycle Network Plan in response to objectives in the District's OCP and the Healthy Community Initiatives. The purpose of the 2002 plan was to encourage cycling as a means of transportation as well as recreation. It contains a vision for the future, objectives and design guidelines to assist in the implementation of the plan and development of the recommended cycling facilities.

The backbone of the plan was the development of the bicycle network, which is shown in Figure 3 of the previous report section. Three main types of bicycle routes were included in the plan:

a) Shoulder bicycle routes,
b) Shared road bicycle routes, and
c) Off-street bicycle routes

The shoulder routes are considered "direct" routes and may be favoured by commuters, as they would provide the shortest, most direct route between origin and destination. The shoulder bicycle routes in the 2002 Plan were primarily located on provincial highway routes.

The shared road bicycle routes were primarily located on lower volume local and collector roads. These routes may not provide as direct a route to various destinations within the District but the lower traffic volumes may make them more comfortable for recreational and less experienced cyclists. The shared road routes can also be used as looping routes.

The off-street facilities such as multi-use paths, were recommended on the North side of Pioneer Avenue West of Highway 9 and within Pioneer Park.

As much of this document remains relevant in 2009, the 2002 Bicycle Network Plan is incorporated into the 2008 Active Transportation Plan.

[7] *Agricultural Land Commission, available at http://www.alc.gov.bc.ca/alr/Application_Trans-Util.htm*

3. Public Consultation

The public consultation process consisted of several stakeholder meetings and a public open house as described in the paragraphs below.

3.1 Stakeholder Consultation

The stakeholder consultation consisted of a steering committee with members from the District of Kent, Harrison Hot Springs and residents of the public. Two stakeholder meetings were held prior to the public open house, which provided feedback for inclusion in the development of the Active Transportation Plan materials for the public open house.

3.2 Public Open House

A public open house was held on January 22, 2009 at the District of Kent Municipal Hall between the hours of 4:00pm and 7:00pm. Approximately 20 people attended the event. The open house provided attendees with four panels showing active transportation modes within the District overlayed on an aerial photograph of the District. The first panel showed the existing transit route through the District and another potential future route that was identified during the stakeholder consultation. The second panel showed the existing off-road trails and bicycle routes that were identified in the 2002 Bicycle Network Plan as well as some additional off-road routes that were identified during the stakeholder meetings. It also showed the existing dykes, which have the potential to be used as off-road walking and bicycling trails. The third panel showed the blueways, existing dykes, existing marinas and boat launches. The final panel was developed for the public to provide comments on facilities that were missed or general comments.

3.2.1 Questionnaire Responses

After attendees had viewed the panels, they were requested to fill out a questionnaire on active transportation modes in the District. A copy of the questionnaire can be found in Appendix B. Thirteen people completed and returned questionnaires. The following summarizes the demographic findings from the questionnaires:

- Eight of the respondents live in Agassiz, three live in Harrison Hot Springs, one lives elsewhere in the District and one lives outside the District
- One respondent is between 19 – 34 years of age, ten people are between 35 – 69 years of age and two people are over 70 years of age
- Two respondents live within 2 km of their workplace, two people live 2 – 5 km of their workplace, three people live 5 – 10 km from their work, three people live 10 – 25 km from their workplace and one person lives more than 25 km from their workplace.
- Six people drive to work alone, one person carpools, one person bikes or walks, one person bikes, walks or drives a motorcycle to work, two people either drive alone, bike or walk to work and two people do not work (retirees).

Open House attendees were asked to rate some decision factors in response to their transportation mode choice to work. Table 1 shows the decision factor and how important it was based on the average ranking. The questionnaire asked people to rank each decision factor; however, not everyone completed the ranking the same way and not everyone responded to this question. Some people ranked each decision factor from one to ten (with one as the highest ranking and ten as the lowest ranking) and others ranked some or all of the decision factors between one and ten with some criteria receiving the same ranking. In spite of the fact that respondents answered the questions differently, the information provided in the returned questionnaires provides insight into people's opinions on active transportation modes.

Table 1 Ranking of Mode Choice Decision Factors

Decision Criteria	Number of Respondents	Sum of Respondent Scores	Average Score	Rank
Distance	9	30	3.33	4
Cost	8	50	6.25	10
Comfort	9	42	4.67	8
Physical Ability	7	29	4.14	6
Weather	8	42	5.25	9
Time	9	29	3.22	3
Convenience	9	27	3.00	2
Safety	9	20	2.22	1
Environmentally Friendly	7	24	3.43	5
Season	7	31	4.43	7

The questionnaire asked Open House attendees to rank the obstacles that prevented them from using active transportation modes. Table 2 shows how the barriers to active transportation modes were ranked. The ranking was done in a similar manner as noted in the paragraph above except that the barriers were ranked between one and eight, where one was the most important and eight was the least important.

Table 2 Ranking of Active Transportation Barriers

Decision Criteria	Number of Respondents	Sum of Respondent Scores	Average Score	Rank
Frequency of transit service	10	33	3.30	3
Accessibility to transit (greater than 5 min walk)	8	34	4.25	6
Too many transfers using transit	8	39	4.88	8
Lack or inadequate end of use facilities (bike racks, change rooms, etc.)	7	29	4.14	5
Lack of bike lanes or paved shoulders	12	19	1.58	1
Lack of sidewalks	7	23	3.29	2
Condition of roads	9	33	3.67	4
Condition of sidewalks	5	23	4.60	7

Opinions on the blueways, transit, carpooling, cycling and pedestrians were asked on the questionnaire. As in the opinions from the previous two questions, respondents were asked to rank the importance of various criteria from one to ten, with one as the most important and ten as the least important. Table 3 shows the ranking for blueways.

Table 3 Blueways Responses

Criteria	Number of Respondents	Sum of Respondent Scores	Average Score	Rank
Is public access to waterways important	8	15	1.88	1
Is access to a continuous waterfront network important	7	21	3.00	2
Importance of Harrison River & Fraser River as a transportation mode	7	44	6.29	3

The questionnaire asked attendees whether they thought that there was sufficient docks for boat launching; four people indicated yes, three people said no and six had no answer.

Responses to current transit services are noted below and in Table 4. Many people thought that with the current service levels, transit was not a viable mode choice for most people.

- If transit service were improved, two people would be very likely to use it, two people would be likely to use it, two people would be somewhat likely to use it, one person would be very unlikely to use it and six people did not answer.
- Destinations that people indicated they would take transit to nine people said they would go to Chilliwack, two would go to Vancouver, two to Mission, two to Agassiz and one to work. Some people indicated they would go to more than one destination.

Table 4 Transit Service Responses

Criteria	Number of Respondents	Sum of Respondent Scores	Average Score	Rank
Transit connection to West Coast Express	9	28	3.11	2
Park and Ride facilities in increasing your use of transit or carpooling	8	30	3.75	3
Expansion of existing service (longer hours, more frequency) in increasing your use of transit	10	26	2.60	1

The final section of the questionnaire was on pedestrian and cycling services and facilities. The following points and Table 5 summarize the responses that were received.

- People were asked if there was a safe and direct cycling route available to work or school would they use it; eight people indicated that they would be very likely to use it, two said they would be likely to use it, one person was somewhat likely to use it and one person indicated they would not use it.
- If people were to cycle to work they would go to the following: four people would go from Agassiz to Harrison Hot Springs, two people from Rockwell Drive to Agassiz, two people would go to Chilliwack, one to work and four people did not respond.
- All but three of the respondents wanted the District to focus on some aspect of the bicycle route from Agassiz to Harrison Hot Springs. Two people wanted a shoulder added to Highway 9 between Golf Road and McPherson Road, four people wanted improvements to Pioneer Avenue, four people were

not specific about the route or where improvements should be focused, two people wanted a route on the local roads with specific roads targeted for improvements:

- The targeted improvements mentioned were as follows one person thought the District should focus on improvements to walking trails in town (Agassiz). One person wanted improvements to the Agassiz – Rosedale Bridge. One person wanted all recreational and arterial cycling routes. One person wanted all roads to be maintained for cycling and two people wanted Rockwell Drive improvements.

Table 5 Cycling and Pedestrian Responses

Criteria	Number of Respondents	Sum of Respondent Scores	Average Score	Rank
On road shared bicycle lane	9	30	3.33	4
Off road bicycle path	9	13	1.44	1
On road shoulder bicycle lane	9	19	2.11	2
Off road multi-use trail	9	20	2.22	3

In summary, the following can be determined from the questionnaire responses:

- Most people drive their own private vehicle to work
- If transit services were improved, some people would be inclined to take transit to work or for other trips such as shopping
- Expansion of existing transit services was favoured over a new transit link to the West Coast Express or improved carpooling infrastructure
- If bicycle infrastructure, such as bicycle lanes or trails were provided many people would be inclined to ride their bicycle more frequently to school or to work
- The majority of the people expressed an interest in development of a bicycle route between Agassiz and Harrison Hot Springs. However, there did not appear to be a distinct preference for a particular route option (i.e. on the shoulder of Highway 9, on the local street network wherever possible, or on a combination of local roads and off-road trails)
- In contrast to the statement directly above, there appears to be a preference for off-road bicycle only trails
- Bicycle facility improvements to other roads (outside of the Agassiz to Harrison Hot Springs route) were important to many people

Pedestrian & Cycling Findings

- ✓ **Expand existing transit**
- ✓ **Better cycling infrastructure is important to more frequent usage**
- ✓ **Priority of a bicycle route between Agassiz & Harrison Hot Springs**

4. Active Transportation Plan

The sections below contain the District of Kent's Active Transportation Plan; this document should be considered a "living" document. As the needs of the community change, the plan should be updated to reflect those needs. In a mature Active Transportation Plan, the following components are included:

- Goals and objectives
- A facilities network plan
- Design guidelines
- Maintenance policies and procedures
- End-of-trip facilities
- A capital expenditure plan
- Supporting program information, and
- Monitoring plan

This first edition of the District's Active Transportation Plan focuses on the first three elements development of objectives, development of a network plans and the provision of design guidelines with typical cross-sections (where appropriate). It is recommended that future Active Transportation Plan updates incorporate remaining plan components including a maintenance plan, end-of-trip facilities, capital expenditure plan, supporting programs and a monitoring plan.

4.1 Planning Objectives

The objectives of the Plan are to provide the District with some direction as to how to include additional active transportation facilities in the District.

4.1.1 Bicycle Planning Objectives

Six objectives of the Bicycle Network Plan for the District of Kent were established. These form the foundation for preparing the plan and serve to guide decision-making where recognized standards may not apply and where an interim strategy or creative application of bicycle facilities may be required.

1. Every street, existing or planned, should be considered a cycling street.
    - Bicycle facilities should be treated as part of the transportation network and considered with any planning decision
    - Plan ahead for changes to the system (i.e. impacts from new or redevelopment, utility or road construction)
    - Introduce specific bicycling related policies into the development process to ensure that all new developments will accommodate bicycle use.

2. A continuous network of safe and direct bicycle facilities is essential to make routes more effective and attractive to the cyclist.
    - Connections between the District of Kent and Harrison Hot Springs, the surrounding areas and provincial facilities must be achieved to ensure an integrated system which would attract new cyclists

3. The planning and design of bicycle facilities should accommodate persons of all ages and cycling abilities. This can be achieved by:
    - Making use of lower volume local and collector roadways
    - Balancing the use of off-street pathways to better accommodate younger and less experienced riders with the provision of more direct routes for commuter cyclists
    - Avoiding steep hilled routes where feasible
    - Making the network and use of the facilities well connected and easy to understand

4. Adequate end-of-trip facilities should be provided at major destinations such as parks, shopping centres, employment areas and schools and incorporated into policies aimed at re-development.
    - End-of-trip facilities at workplaces include showers, change rooms, and parking areas
    - Other end-of-trip facilities include bike racks and lockers
    - Cycle information guides and maps provided at community centres, bulletin boards, schools and on the District's web site

5. To ensure needs are met, community representatives should be involved in the planning, design and implementation of bicycle facilities. Community input:
    - Provides a knowledge resource regarding cycling needs and barriers
    - Allows for options in the planning and design phase
    - Provides a potential funding source
    - May assist in the development of complementary programs that foster awareness and education

6. Standards for the design, location and maintenance of bicycle facilities, such as routes, parking facilities and other end-of-trip facilities should be adopted
    - Facilities should be designed to allow cyclists to ride with traffic by providing identical facilities on both sides of the roadway
    - Use of adequate road cross-sections and side-mounted gutters
    - Appropriate signage

These planning objectives support the District's Active Transportation Plan in the following manner

Meets the Active Transportation Plan Objectives

- Increases community connectivity by adding future cycling facilities that link Agassiz and Harrison Hot Springs, better shoulder bicycle facility on Highway 7 linking to communities west of the District, North of the Fraser River; also increases connectivity with better cycling facilities on the Agassiz Rosedale Bridge linking to communities south of the Fraser River, however this may be a challenging endeavour given the existing structural and physical limitations of the bridge
- Increase opportunities for people to commute to work on bicycle
- Provide a system that meets the needs of users of all ages, stages and abilities
- Reduces barrier to active transportation by providing for safe and convenient facilities particularly between existing active transportation assets (Village of Agassiz and promenade at Harrison Hot Springs)

4.1.2 Walking and Hiking Planning Objectives

The objectives of the Walking and Hiking Plan are listed below. These objectives form the basis of the walking portion of the Active Transportation Plan and may serve to guide decision-making where recognized standards may not apply and where an interim strategy or creative application of pedestrian and hiking facilities may be required.

1. Every urban street, existing and planned, should be designed as part of the pedestrian network. In addition, rural streets that are part of rural subdivisions should be designed as part of the pedestrian network.
    - Pedestrian facilities should be treated as part of the transportation network and considered with any planning decision
    - Plan ahead for changes to the system i.e. impacts from new or redevelopment, utility or road construction, so that existing substandard facilities can be planned for upgrading
    - Introduce specific pedestrian related policies into the development process to ensure that all new developments will accommodate pedestrian use.

2. A continuous network of safe and direct pedestrian facilities is essential to make routes more effective and attractive.
    - Controlled crossings, such as crosswalks and traffic signals should reflect the nature of pedestrian desire lines, i.e. the shortest path between destinations

3. The planning and design of pedestrian facilities should accommodate persons of all ages and walking abilities. This can be achieved by:
    - Making intersections accessible by providing curb letdowns at intersection corners

- Providing street furniture such as benches, refuse containers and points of interest to make the walking trip more enjoyable
- Providing well-lit pedestrian facilities where people can feel safe using them during night time hours
- Making the network and use of the facilities well connected and easy to understand

4. Adequate end-of-trip facilities should be provided at trail ends and at parks. Wherever possible end-of-trip facilities should be incorporated into policies aimed at recreational opportunity development.
   - End-of-trip facilities at trail ends include parking lots, trail information board and sign-in sheet (for rugged mountainous trails) and pubic toilets
   - Walking and hiking information guides and maps provided at community centres, bulletin boards, schools and on the District's web site.

5. To ensure needs are met, community representatives should be involved in the planning, design and implementation of pedestrian and hiking facilities. Community input:
   - Provides a knowledge resource regarding walking needs and barriers
   - Allows for options in the planning and design phase
   - Assists in resolving conflicts between parties that are perceived to have competing interests such as trails through agricultural areas and on river dykes.
   - Provides a potential funding source
   - May assist in the development of complementary programs that foster awareness and education

6. Standards for the design, location and maintenance of pedestrian and hiking facilities, such as sidewalks, trails, parking facilities and other end-of-trip facilities should be adopted.
   - Use of adequate road and trail cross-sections
   - Appropriate signage

   These planning objectives support the District's Active Transportation Plan in the following manner.

Meets the Active Transportation Plan Objectives

- Increases community connectivity and accessibility by providing walking and hiking facilities to active transportation and commuter assets throughout the District, including between commercial, recreational and residential uses
- Increase opportunities for people to walk to school, work and recreational activities
- Reduces safety barriers to active transportation by providing separated walking facilities away from mixed traffic and controlled crossing locations
- Provides a continuous, consistent surface for users of all ages and abilities including mobility challenged users

4.1.3 Transit and Carpooling Planning Objectives

The objectives of the transit and carpooling plan are listed below and form the basis of the Transit and Carpooling portion of the Active Transportation Plan. They may serve to guide decision-making where recognized standards may not apply and where an interim strategy or creative application of facilities may be required.

1. Every urban area, existing and planned, should be designed to facilitate transit usage. Wherever possible, rural areas that are part of rural residential subdivisions should be planned to have future transit access.
    - Safe access to transit stops should be considered part of the transportation network
2. A continuous network of safe and direct pedestrian facilities is essential to make transit routes more effective and attractive.
    - Controlled crossings, such as crosswalks and traffic signals should reflect the nature of pedestrian desire lines; i.e. the shortest path between destinations
3. The planning and design of transit facilities should accommodate persons of all ages and walking abilities. This can be achieved by:
    - Providing street furniture such as benches and refuse containers at transit stops and exchange sites
    - Providing well-lit facilities where people can feel safe using them during night time hours
    - Making the network and use of the facilities well connected and easy to understand
    - Providing transit route maps and information guides at community centres, bulletin boards and schools, as well as links to on-line transit and carpool information provided on the District's web site
4. To ensure needs are met, community representatives should be involved in the planning, design and implementation of transit and carpooling facilities. Community input:
    - Provides a knowledge resource regarding transit needs and barriers
    - Allows for options in the planning and design phase
    - Provides a potential funding source
    - May assist in the development of complementary programs that foster awareness and education
5. Standards for the design, location and maintenance of transit facilities, such as accessible stops, parking facilities and other end-of-trip facilities should be adopted
    - Use of adequate road cross-sections
    - Appropriate signage

These planning objectives support the District's Active Transportation Plan in the following manner.

Meets the Active Transportation Plan Objectives

- Increase opportunities for people to commute to work on all modes including carpooling and transit
- Develops a transportation system that meets the needs of users of various ages, stages and abilities
- Encourages modes of travel other than personal vehicles
- Reduces barriers to active transportation by providing for safe access to transit services, i.e. stops and controlled crossings

4.1.4 Blueways Planning Objectives

The objectives of the blueways plan are noted below, which will form the basis of the Blueways Section in the Active Transportation Plan.

1. All waterfront areas should be treated as a public good
    - Public access to waterways is important
    - Maintenance of continuous waterfront access is important

2. The planning and design of facilities should accommodate persons of all ages and abilities. This can be achieved by:
    - Providing safe accessible boat launches
    - Provide appropriate end-of-trip facilities such as parking lots and bicycle racks at boat launches, marinas and other marine destinations
    - Making the blueways facilities well connected to the community
    - Providing maps and information guides at community centres, bulletin boards, schools with links to on-line waterways and boating information provided on the District's web site

3. To ensure needs are met, community representatives should be involved in the planning, design and implementation of blueway facilities. Community input:
    - Provides a knowledge resource regarding community needs and barriers
    - Allows for options in the planning and design phase
    - Provides a potential funding source
    - May assist in the development of complementary programs that foster awareness and education

4. Standards for the design, location and maintenance of blueway facilities, such as boat launches, parking facilities and other end-of-trip facilities should be adopted
    - Appropriate signage directing users to boat launches, etc.

These planning objectives support the District's Active Transportation Plan in the following manner.

Meets the Active Transportation Plan Objectives

- Increases recreational opportunities for people
- Provides access to active transportation assets and includes sloughs, creeks, Harrison Lake, Harrison River and Fraser River
- Provides a unique transportation system element

4.2 Network Plans

Network plans were developed for the following modes:

- Bicycles
- Pedestrian and hiking
- Transit and carpooling
- Blueways

4.2.1 Bicycle Network Plan

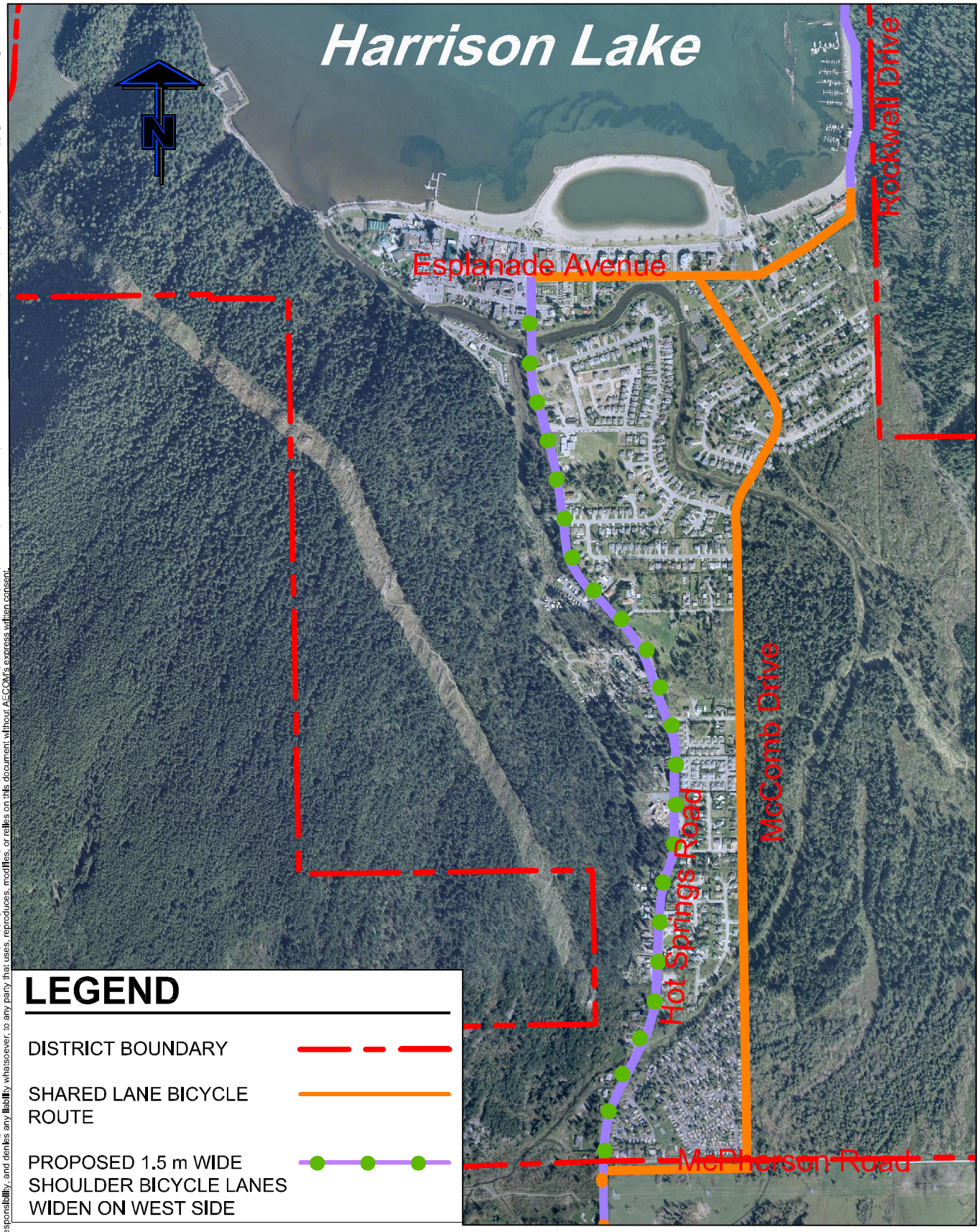
This Bicycle Network Plan is intended to be a long-range vision for the District of Kent. Since the BC MoT has jurisdiction over many of the roadways in the area, it is critical that they be included in the planning and implementation process.

The layout of the Bicycle Network Plan incorporates both direct and looping routes in an attempt to accommodate both commuter and recreational cyclists. Panel Drawing 1 in Appendix C illustrates the overall Network, while Figure 6 and Figure 7 illustrate details of the Networks specific to Harrison Hot Springs and the Agassiz townsite. Where existing streets are used, the Bicycle Network Plan integrates bicycles with motor vehicles in a manner consistent with motor vehicle regulations and in a predictable manner, thereby maximizing safety. It should be noted that designation of a street as a bicycle route does not exclude the use of other streets by cyclists. In fact, all roads within the District and Harrison Hot Springs should be considered bicycle streets.

Bike Plan

✓ **Accommodates commuters and recreational users**

✓ **Provides direct and loop routes**



District of Kent
Active Transportation Network Plan 2008

Harrison Hot Springs Bicycle Network

AECOM

Figure 6

Else Road

Hot S

McRae

Ashton Road

Wilson Road

McCaffrey Rd

Holly Road

Pioneer Avenue

Lougheed Highway

Agassiz Avenue

Mountain View

Morrow Rd

McDonald Rd

Haig

Highway

LEGEND

- SHOULDER BICYCLE LANE
- SHARED LANE BICYCLE ROUTE
- OFF-ROAD BICYCLE PATH
- FUTURE SHARED LANE BICYCLE ROUTE
- FUTURE OFF-ROAD PATH
- PROPOSED 1.5 m SHOULDER BICYCLE LANES WIDEN ON NORTH SIDE
- PROPOSED 2.0 m SHOULDER BICYCLE LANES WIDEN ON BOTH SIDES

AECOM

District of Kent
Active Transportation Network Plan 2008

Agassiz Town Site Bicycle Network

Figure 7

The looping routes primarily place cyclists on lower volume collector and local streets whereas the more direct commuter routes are located along the provincial highway corridors. For looping routes, streets on which traffic volumes are lower and which provide adequate width to safely accommodate cyclists were typically favoured over streets with higher traffic volumes or narrower width. In some cases, however, higher volume or narrow streets provide the only available link between two areas. In these situations, appropriate measures are required so that both cyclists and motorists are able to share the roadway effectively. This shared roadway approach also provides affordable cycling facilities that can be implemented within a reasonable timeframe.

The commuter routes provide direct access to destinations, minimizing delays wherever possible. These routes connect Harrison Hot Springs with the townsite of Agassiz, as well as, local area trips with the broader provincial transportation network and adjacent First Nations lands.

The Bicycle Network Plan recommended identifies a broad framework of alignments for bicycle routes and also provides complementary connections with off-street multi-use pathways and trails for both commuter and recreational cycling opportunities. It also has incorporated the popular cycling routes. These routes provide optimal alignments for providing access in and around the Agassiz townsite, Harrison Hot Springs, Harrison Mills, Seabird Island and the surrounding dykes.

Three types of bike facilities are recommended in this Plan and they are listed below. Details of each type are discussed in Section 4.3 of this document.

- Paved Shoulder
- Signed Bicycle Routes
- Off-Street Multi-use Pathways

4.2.1.1 Agassiz to Harrison Hot Springs Route

see Figure 12

An important component of the Plan is the link between Agassiz and Harrison Hot Springs. The need for a safe route between the two communities has been identified to be a priority. There are three options for this critical link.

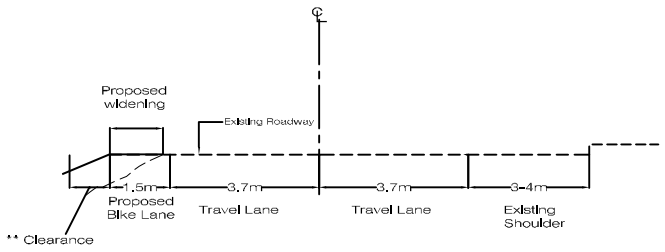
1. Direct route along Highway 9 (Hot Springs Road) – Paved Shoulder from Agassiz to Harrison Hot Springs. This route is illustrated in Figure 8.
2. Indirect route starting in the South at the intersection of Highway 9 at Highway 7 followed by Else Road, Birch Road, McCallum Road, Hardy Road, Golf Road, Hot Springs Road (Highway 9), finally along McPherson into Harrison Hot Springs. This route combines on-street signed facilities with paved shoulder facilities.

see Figure 9

3. Off-Street Route beginning at the South end of the BC Hydro right of way (at Highway 7) along the base of Green Mountain towards to the North to the intersection of Highway 9 and McCallum Road, along the local streets of Hardy and Golf to Hot Springs Road and onto McPherson into Harrison Hot Springs. This route combines an off-street path with on-street signed facilities and paved shoulder bicycle facilities.

SECTION 5

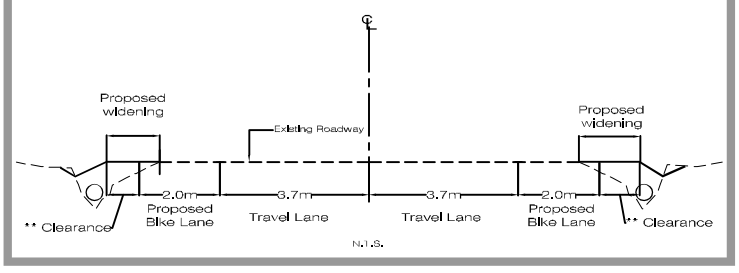
DESCRIPTION	BICYCLE FACILITY	SEGMENT LENGTH	POSTED SPEED
Highway 9 From McPherson to Esplanade	1.5 m Paved Shoulder	2.5 km	60 km/h



N.T.S.

SECTION 4

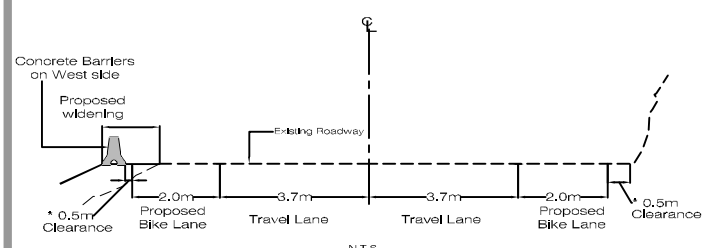
DESCRIPTION	BICYCLE FACILITY	SEGMENT LENGTH	POSTED SPEED
Highway 9 Striker's Corner to McPherson Road	2.0 m Paved Shoulder	1.75 km	80 km/h



N.T.S.

SECTION 3

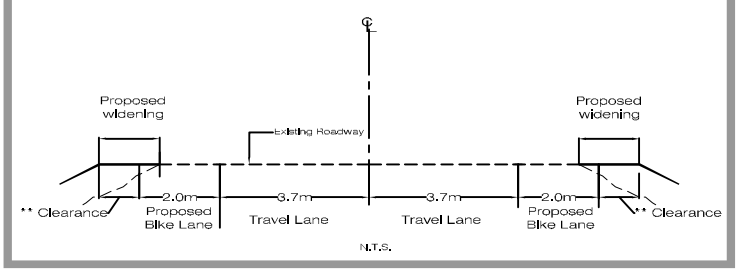
DESCRIPTION	BICYCLE FACILITY	SEGMENT LENGTH	POSTED SPEED
Highway 9 From McCallum Road to North of Striker's Corner	2.0 m Paved Shoulder	0.7 km	80 km/h Warning 60 km/h



N.T.S.

SECTION 2

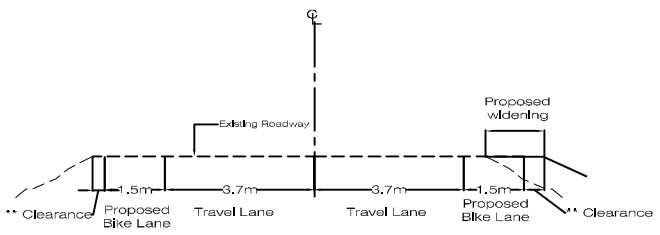
DESCRIPTION	BICYCLE FACILITY	SEGMENT LENGTH	POSTED SPEED
Highway 9 From Highway 7 to McCallum Road	2.0 m Paved Shoulder	1.3 km	80 km/h



N.T.S.

SECTION 1

DESCRIPTION	BICYCLE FACILITY	SEGMENT LENGTH	POSTED SPEED
Highway 7 From Evergreen Dr. to Else Rd.	1.5 m Paved Shoulder	1.5 km	60 km/h



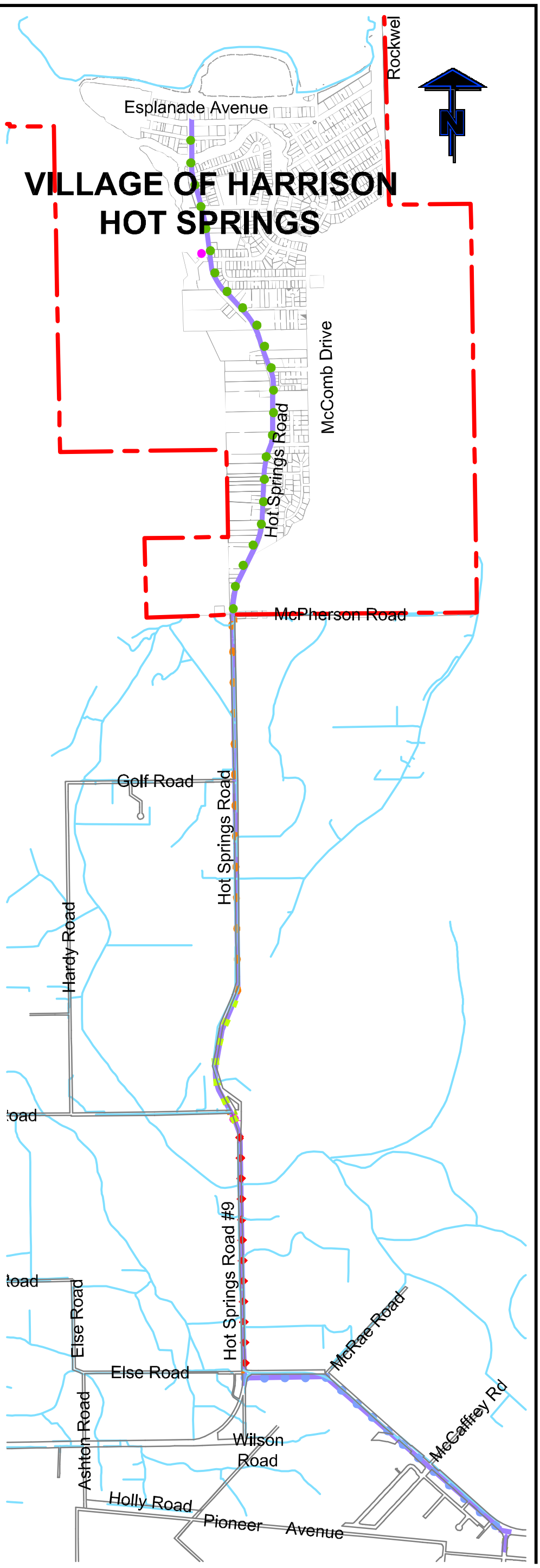
N.T.S.

** Minimum Clearance required :
0.2 m from any object exceeding 150 mm in height OR
1.0 m from the edge of unfenced drop-off.

LEGEND

- DISTRICT BOUNDARY
- ROAD RIGHT OF WAY
- RAILWAY RIGHT OF WAY
- UTILITY RIGHT OF WAY
- TRAILS
- CREEKS, DITCHES, SLOUGH
- TRAILHEAD / TRAIL END

- PROPOSED 1.5 m SHOULDER BICYCLE LANES WIDEN ON WEST SIDE
- PROPOSED 2.0 m SHOULDER BICYCLE LANES WIDEN ON BOTH SIDES
- PROPOSED 2.0 m SHOULDER BICYCLE LANES WIDEN ON WEST SIDE
- PROPOSED 2.0m SHOULDER BICYCLE LANES WIDEN ON BOTH SIDES
- PROPOSED 1.5m SHOULDER BICYCLE LANES WIDEN ON NORTH SIDE



District of Kent
Active Transportation Network Plan 2008

Highway 9 Bicycle Route

AECOM

Figure 8

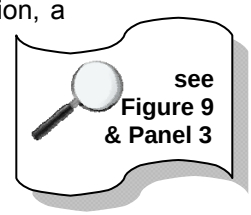
Of the three options, the Highway 9 link is most direct and would better serve commuter-oriented cyclists; however, some parts of the highway are currently considered unsafe particularly at Striker's Corner. Other issues, which affect cyclists, include speeding traffic, heavy trucks, narrow shoulders, utility poles and deep ditches.

The indirect route is recommended to be a combination of on-street signed and paved shoulder bike facilities. Else, Birch, McCallum, Hardy, Golf and McPherson Roads are good local roads, and due to good sight lines and low traffic volumes, they can accommodate cyclists in a safe manner. The route is intended to be served primarily by on-street signed facilities, but between Golf and McPherson Roads, a short section of a paved shoulder type facility would be required along Highway 9.

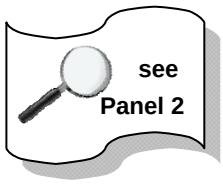
To implement any of the options requires further discussions with the Ministry of Transportation as all routes include sections of Highway 9 requires construction of new paved shoulders.

4.2.1.2 Agassiz Town Site

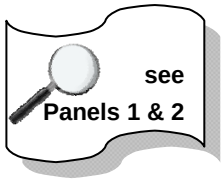
The recommended Bicycle Network Plan for the townsite is shown in Figure 7. This plan includes planned future routes, as well as routes along existing roads. Most of the routes are designated to be On-Street signed routes while there are several places where an Off-Street Pathway is recommended. One location is at Pioneer Park. Pioneer Road, between Evergreen Drive and Highway 9 is a busy commercial area with angled parking on the south side of the road. Vehicles pulling in and out of these parking stalls create the potential for conflict with cyclists. In order to avoid this situation, a bike pathway through Pioneer Park is recommended. Also along Pioneer Road, but further West by the Agassiz Fairgrounds, is another location where an off-street pathway may be established. The pathway would have to be located in the CP Rail right-of-way; therefore, discussion with CP Rail is required in order to implement this option.



Most of the cycling routes placed on local streets have sufficient width and can be designated as On-Street signed routes. One exception is on Fir Road where it connects onto Mountainview Road, where speeding traffic is a common problem. Since it is a route preferred by cyclists, traffic calming measures could be implemented at this location to help slow down vehicular traffic. When implementing this route warning signs advising motorists to "Share the Road" are recommended.



The main road through town is Highway 9. This route is recommended to be an On-street signed route. However, rising traffic volumes may warrant, in the future, the implementation of a different type of facility such as a wide curb or bike lane. Details regarding bike lanes are provided in Section 4.3.1.



4.2.1.3 Agassiz-Rosedale Bridge

The Agassiz-Rosedale Bridge located on Highway 9, provides the only access from Highway 1 to Agassiz across the Fraser River. The community has deemed the route a desirable link, but the bridge is potentially hazardous for cyclists.

It is currently the Ministry's policy to make "provisions for cyclist on all new and upgraded provincial highways".[8] It is also stated in the Ministry's Cycling Guide that there are no bicycle restrictions on the Agassiz-Rosedale Bridge. However, due to the narrow travel lanes on the bridge deck, it is hazardous for cyclists to ride alongside vehicular traffic. Furthermore, there is insufficient space on the existing concrete curb on the bridge structure to accommodate pedestrians and/or cyclists. Although there are warning signs alerting motorists to the presence of cyclists, a cyclist activated warning signal is recommended. It is recommended further study, in conjunction with the Ministry of Transportation and Infrastructure, be provided to make this bridge more bicycle and pedestrian friendly; options may include investigation of a separate structure to accommodate these users.

4.2.1.4 Rockwell Drive

Rockwell Drive (under provincial jurisdiction) is the only access to Sasquatch Park – a popular destination for both tourists and local residents. In addition, this route provides the only access for logging trucks to the East Harrison Forest Service area. The road has many sharp curves in addition to steep to moderate grade changes. The road pavement width is narrow with shoulders ranging from nothing to less than half a meter in width. Combined with a rock face adjacent to the edge of pavement, and traffic that includes logging trucks and recreational vehicles, it makes quite a challenge for cyclists of all skill levels.

BC MoT notes the road is in poor condition, but has indicated it is classified as a low volume roadway and is therefore not deemed a major priority for upgrading. In light of the numerous hazards, and desire to safely accommodate cyclists, the plan recommends the road be widened to implement paved shoulders. Promoting this route as a cycling facility is not recommended until this work is completed and the road is upgraded.

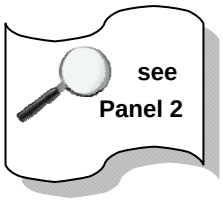
4.2.1.5 Lougheed Highway near Mount Woodside

Lougheed Highway west of Agassiz is the main route leading into Harrison Mills and Mission. This route is mainly a recreational route used by more experienced riders since there are portions where the grades are steep. The route is recommended to be part of the Bicycle Network Plan in the form of a paved shoulder route. Currently, the highway is unsafe for cyclists in the Mount Woodside area. Shoulder widths are quite narrow and non-existent in some places. On the north side of the highway there are steep rock faces blocking sightlines, while the south side of the road has steep drop offs. The grade and design of the road make this route very difficult to ride. As the corridor is under BC MoT jurisdiction, their involvement is required to make this route a safe corridor for cyclists. BC MoT has recently widened the shoulders through this area as much as possible without construction of a retaining wall or cutting into the mountainside. They have indicated, that based on priority, further improvements to this corridor may not be implemented for some time.

[8] *UMA Engineering Ltd., District of Kent Bicycle Network Plan, 2002*

4.2.1.6 Looping Routes

Looping routes are generally located on local rural roads where traffic volumes are low. These routes should be designated as On-Street Signed routes and are intended for recreation and destination oriented uses. One of the looped routes is around Cemetery Mountain. Due to the curve on the road and the proximity to the mountainside, sightlines are often blocked for road users. When implementing this route, additional "Share the Road" signage is recommended to warn motorists.



Many shared road routes could be turned into looping routes throughout the District, which are too numerous to list in this document. However, the looping routes could be developed based on the following factors:

- Length of the looping route the cyclists want to do
- Origin of the looping route
- Tolerance for traffic and difficult sight lines
- Intermediate destinations during the looping route, i.e. farmers market, dyke, museum etc.

The looping routes also provide access to the dykes at the following locations:

- Kilby (Harrison Mills), at the Western edge of the District
- Limbert Road, West of Cemetery Hill
- McDonald Road South, at the Eastern edge of the District not far from Seabird Island

4.2.1.7 Harrison Hot Springs

Figure 6 shows the recommended Bicycle Network Plan for Harrison Hot Springs. The main route into Harrison Hot Springs is via Highway 9 or Hot Springs Road. In general, Highway 9 in Harrison Hot Springs has enough space to accommodate a paved shoulder route. South of Miami Creek culvert, there is a wide shoulder on the east side of the road. It is recommended that Harrison Hot Springs work with BC MoT to facilitate paved shoulders for bicycle use for both sides of the road.

To compliment the main route through Harrison Hot Springs, McCombs Drive is recommended as an On-Street Signed route for local and recreational use. For the less experienced riders McCombs Drive, being a low volume road, serves as an alternative to Hot Springs Road.

To complete the Network in the Harrison Hot Springs village, Lillooet Avenue, an on-street route serves east-west cyclists through the village centre and provides access to Esplanade Avenue and Rendall Park, which are bicycle friendly destinations. It is recommended that bicycle racks be place near Esplanade Avenue to encourage cyclists to dismount and walk through the resort area. This route serves as a link to Rockwell Drive to the north of the village, to Rendall Park and provides access to the trail systems located off Mount Road and along Miami Creek.

Key Bike Plan Elements

District of Kent
- Direct Cycling link between Agassiz & Harrison Hot Springs
- Paved Shoulder Route on Lougheed Highway (west of Agassiz)
- Looping Cycling Routes

Agassiz
- On-Street Signed routes in Agassiz
- Off-Street Pathways at Pioneer Park, and along Pioneer Road (CP right-of-way)
- Fir Road to Mountainview Road – traffic calming and Share the Road signage
- Cyclist activated warning signal for Agassiz – Rosedale Bridge, and further study on improving cyclist and pedestrian friendliness of the bridge

Harrison Hot Springs
- On-Street Signed Route - McCombs Drive
- Cyclist facilities near Esplanade Avenue

4.2.2 Pedestrian and Hiking Network Plan

The Pedestrian and Hiking Network Plan is shown on Panel Drawing 1 Appendix C. The plan shows that in Agassiz the following new pedestrian facilities are planned:

- New mid-block crosswalk on Cheam Avenue between Highway 9 and Evergreen Drive
- New mid-block crosswalk Highway 9 between Cheam Avenue and Morrow Road
- New walking path between the Fitness / Activity Centre parking lot and Mountainview Road, along an existing property line
- New walking path between Tuyttens Road and Highway 9, along existing property lines

In the rural agricultural areas, two new multi-use paths have been proposed. Since each trail is adjacent to active agricultural land, additional space will be required for the development of a buffer zone between the trail and the agricultural area. These trails are described as noted below:

- An Off-Road trail between the intersection of McCallum Road and Hardy Road and the northern-most 90° bend in Else Road.
- An Off-Road trail along the edge of Green Mountain in the BC Hydro right of way between the intersection of Highway 9 and McCallum Road and Highway 7.

Key Pedestrian and Hiking Plan Elements

District of Kent
- An Off-Road trail (McCallum Road/ Hardy Road and Else Road).
- An Off-Road trail in BC Hydro right-of-way (edge of Green Mountain

Agassiz
- New mid-block crosswalk on Cheam Avenue (Highway 9 and Evergreen Drive)
- New mid-block crosswalk Highway 9 (Cheam Avenue and Morrow Road)
- New walking path between the Fitness / Activity Centre parking lot and Mountainview Road
- New walking path between Tuyttens Road and Highway 9

4.2.3 Transit and Carpooling Network Plan

The future Transit and Carpooling Network Plan can be found on the Panel Drawing 2 in Appendix C. The Plan shows a potential new transit route on Highway 7 from Agassiz to Mission where it would connect with the West Coast Express. New stops are proposed at the new residential development at Mount Woodside and at Harrison Mills.

In the future, the District may wish to designate the parking lot associated with the Fitness / Activity Centre and playing fields off Pioneer Road as a carpooling lot during the weekday, as it does not appear to be well used during that time. Several other potential carpooling locations are found throughout the District include:

- At the tourist information at the “teacup” intersection on Highway 9
- Immediately North of the CP Railway between the railway and Highway 7 and West of Highway 9
- In Harrison Hot Springs, off Highway 9 near Miami River Drive

Key Transit & Carpool Plan Elements

- New transit stops (Mount Woodside and Harrison Mills)
- Carpooling lots throughout the District

4.2.4 Blueways Plan

The future Blueways Plan is shown on Panel Drawing 3 in Appendix C. The Plan shows a new proposed boat launch on the Harrison River midway between Harrison Lake and the Fraser River. It is shown as a community boat launch for the existing and future development immediately adjacent to the Harrison River.

Key Blueway Plan Elements

* Harrison River Community boat launch

4.3 Design Guidelines

This section outlines some of the design guidelines available to assist planners, designers and engineers with the planning and design of community transportation facilities. The lists contained in this section are by no means exhaustive and it is suggested that planners, designers and engineers complete their own search of the guidelines as these documents are being continuously developed and updated. Wherever possible, we have included the pertinent British Columbia and Canadian guidelines.

4.3.1 Bicycle Design Guidelines

It is important to provide bicycle facilities that are based on accepted design standards. Consistent application of these standards ensures that bicycle facilities in the District of Kent and Harrison Hot Springs provide maximum safety and effectiveness, attracting as many cyclists as possible. The following design guidelines are based on the material from a number of sources, including:

- Bikeway Traffic Control Guidelines for Canada, published by the Transportation Association of Canada (TAC), December 1998
- Cycling Guide, Ministry of Transportation and Highways, April 2000
- Manual on Uniform Traffic Control Devices (MUTCD), published by the Transportation Association of Canada (TAC), September 1998
- Canadian Guide to Neighbourhood Traffic Calming, published by the Transportation Association of Canada and the Canadian Institute of Transportation Engineers, December 1998
- Geometric Design Guide for Canadian Roads, published by the Transportation Association of Canada (TAC), September 1999
- BC Supplement to TAC Geometric Design Guide 2007 Edition, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm
- Manual of Standard Signs and Pavement Markings, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm

Although not recommended for use at this time, Sections 4.3.1.4 and 4.3.1.5 discuss two additional bicycle facility types for wide curb lanes and bicycle lanes. These sections are provided in this document to assist the District in planning for future bicycle facilities.

4.3.1.1 Signed Bicycle Routes

Signed Bicycle Routes are one of the most cost effective ways of encouraging cycling. Signed Bicycle Routes make use of low volume roads. Because fewer motor vehicles use these roads,

see Panel 2

bicycles do not require any extra width or distinct lanes to separate the two modes. Thus, implementing signed bicycle routes does not involve any specific cross-section or pavement marking guidelines. In addition to signing, other traffic calming measures may be considered for these routes to ensure that motor vehicle traffic is not increased, and where possible, reduced along these routes.

In addition to Bicycle Route signs, "Share the Road" warnings signs may be installed along Signed Bicycle Routes. The "Share the Road" sign is used to warn motorists they are to provide adequate clearance space for cyclists. The figure below shows the "Share the Road" sign.

Share the Road signage

MUTCD W16-1 Sign

BCMoT W-130 Sign

Installing "Share the Road" signs would be appropriate when implementing the Fir Road route and the Cemetery Road loops. At higher volume intersections and locations with reduced visibility, "Bicycle Crossing Ahead" signs should be installed on the cross streets. Details regarding these signs and the use of these signs can be found in the *Bikeway Traffic Control Guidelines for Canada.*

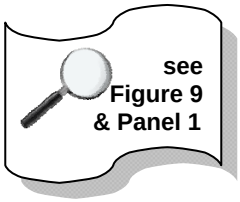
Bicycle Crossing Ahead signage

MUTCD WC-7 Sign

4.3.1.2 Paved Shoulders

On roads with rural cross-sections, where there are no curbs or gutters, cyclists may travel on paved shoulders. In urban areas, roads with paved shoulders are uncommon. Paved shoulders are typically

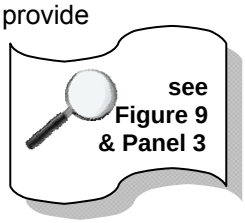
demarcated with a solid white line on higher order facilities such as rural collector or arterial roads. They provide cyclists with an asphalt facility to cycle on adjacent motor vehicle travel lanes. Figure 9 illustrates recommended dimensions for Paved Shoulder facilities for roadways with and without shoulder barriers. Current road design standards apply for the construction of paved shoulders, as well as the following specific guidelines:



- Shoulders should be paved and free of obstructions, such as drainage aprons
- Non-emergency parking or stopping should be prohibited on the shoulder at all times
- Where possible, shoulders should be continuous between intersections
- Where paved shoulder ends and cyclists must ride within the traffic lane, a warning sign should be posted in advance to advise cyclists that the shoulder ends, and to advise motorists that cyclists may be present on the roadway

4.3.1.3 Off-Street Cycle Paths

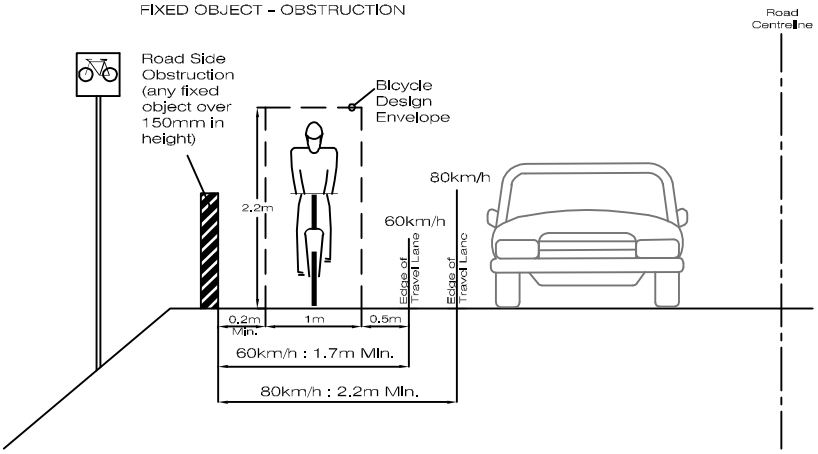
All Off-Street Cycle Paths should be multi-use pathways, which are Off-Street facilities, segregated from motor vehicle traffic, except where pathways intersect roads. Off-Street pathways provide transportation and recreational opportunities for many users including cyclists, pedestrians, wheelchair users, in-line skaters and others. Figure 9 provides a cross-section with recommended widths; however, multi-use pathways should be a minimum of 3.0 m wide. The following list provides recommendations regarding design and construction details:



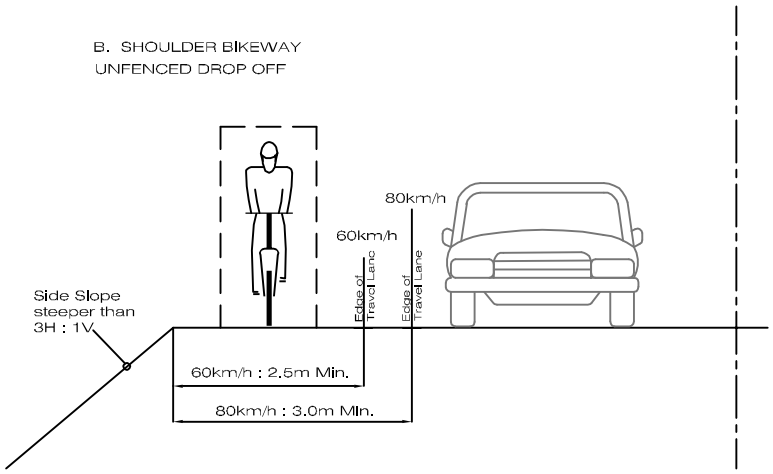
- Pathways should be designed for two-way travel
- Pathway surfaces should incorporate a 2% cross-slope in order to provide positive drainage
- Maximum uphill grades should not exceed 3% for sustained sections, or 5% for more than 30 m, or 10% for more than 15 m.
- The preferred surface material for off-street cycle paths is asphalt, except in areas where high speeds will be promoted by asphalt or where the natural environment promotes a natural surface. In such areas, hard-packed gravel or limestone is recommended.
- Where a trail is located close to trees and large shrubs, a 300 mm deep metal root barrier should be placed in the ground between the tree and the path, to prevent roots from heaving and cracking the pathway.
- In corridors that serve a utility function, such as for commuting to and from work or school or travelling to a commercial centre, lighting should be provided to improve the safety of bicyclists during non-daylight hours. A minimum of 6 lux should be provided, increasing to 20 lux at intersections with roadways.
- Where access to multi-use pathways requires that pedestrians and cyclists cross a major road, a pedestrian/bicycle crossing may be warranted. Options for crossings include a simple marked crossing, a crossing with a median refuge allowing users to cross only half the road at a time, and a signalized crossing.
- Where cyclists would be required to climb or descend stairs, a ramp should be provided on one side of the stairs to enable cyclists to roll their bicycles up and down the stairs. The ramp should not be placed closer than a half a metre to any hand-rail or rail, to avoid catching handlebars

PAVED SHOULDER

A. SHOULDER BIKEWAY
FIXED OBJECT - OBSTRUCTION

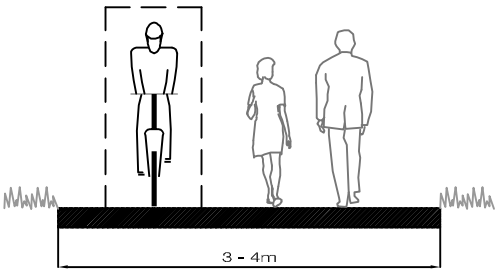


B. SHOULDER BIKEWAY
UNFENCED DROP OFF



OFF-STREET BIKE PATH

2 WAY OFFSTREET, SHARED WITH PEDESTRIANS



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Bicycle Cross Sections

AECOM

Figure 9

- Bicycle baffles or gates should not be used at pathway access points; instead, bollards in groups of one, three or five should be used.

Additional details to assist in the design multi-use pathways can be found in the *Geometric Design Guide for Canadian Roads.*

4.3.1.4 Wide Curb Lanes

Marked wide curb lanes are used on urban collector and arterial roads where it is desirable to provide space for bicycles but there is not sufficient space to construct a separate bicycle lane. The additional lane width provides sufficient space for a motor vehicle to safely overtake a cyclist without crossing into the adjacent lane. Marked wide curb lanes should be at least 4.0 m wide exclusive of the road gutter pan. Where this is achievable, the lane may be marked with a bicycle stencil. Where parking is desired, a total of 6.7 m is required to accommodate the travel portion for cyclists and parking, where the parking lane is 2.4 m wide plus a 4.3 m wide travel lane. Applications for using marked curb lanes should meet the following conditions:

- Urban cross-section i.e. with curb and gutter
- Posted speed 50 km/h
- Moderate traffic volumes
- Frequent turning vehicles
- Frequent stopping buses
- On-street parking

4.3.1.5 Bicycles Lanes

Bicycle lanes are separate travel lanes designated for the exclusive use of bicycles. In most cases, they are located on the right side of the road. Bicycle lanes range from 1.2 m to 1.8 m in width with 1.5 m width recommended in urban areas. As with wide curb lanes, these dimensions exclude the width of the gutter pan. Bicycle lanes should be marked with a white line, solid between intersections and dashed 15 m in advance of an intersection. The dashed segment should consist of 1.0 m long dash and 1.0 m long space. Bicycle lanes may also be identified with a painted bicycle symbol and an arrow indicating the direction of travel. Bicycle lanes should be continuous on both sides of the street and should be designated for one-way travel only. Bicycle lanes should be provided only on roads where most or all of the following conditions are met:

- Urban cross-section i.e. curb and gutter
- Posted speed 60 km/h or more
- High traffic volumes
- Few turning vehicles; details are available for intersection markings with right turn lanes
- Few stopping buses
- No on-street parking

Bicycle lanes are generally marked on higher order streets such as arterials; local or collector streets lend themselves as shared road facilities. Bicycle lanes in commercial areas where on-street parking is

provided should be carefully considered on a case by case basis, as there is potential for collisions between cyclists and parked vehicles. The use of an alternative bicycle route may be preferable.

4.3.1.6 Signs and Pavement Markings

Applicable to both on-road and off-road bicycling facilities, correctly installed signs and pavement markings will provide consistent and clear information for cyclists and the motoring public. Signage promotes an awareness of cycling and contributes toward the education of all road users as to the cyclist's legal right to share the roadway. Three important types of signs are:

- Regulatory signs indicate traffic regulations. These include stop, yield and other signs such as 'No Parking'.
- Warning signs advise pedestrian, cyclists and motorists of potential hazards or significant changes in conditions on roads and pathways. Warning signs are also important to inform motorists of approaching bicycle and pedestrian crossings.
- Guide signs provide direction and information for pedestrians, cyclists and other facility users. These signs are directional in nature, indicating routes to major destinations, continuation of bicycle routes and bicycle parking areas.

Details regarding the shape, colour, content, use, application and installation of these signs can be found in more detail in the *Bikeway Traffic Control Guidelines for Canada.*

4.3.2 Pedestrian and Hiking Design Guidelines

Urban pedestrian facilities and pedestrian crosswalk locations should be designed in accordance with accepted design standards, which can help to minimize conflicts pedestrians have with vehicles, cyclists and other road and path users. Pedestrians are the most vulnerable of all road and path users and careful consideration should be given to their safety. In addition, pedestrians can be vulnerable to attacks and therefore the use of environmental design principals to increase personal security measures is recommended. Some design guides for urban pedestrian networks include:

- Geometric Design Guide for Canadian Roads, published by the Transportation Association of Canada (TAC), September 1999
- Pedestrian Crossing Control Manual for British Columbia, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm
- Manual on Uniform Traffic Control Devices (MUTCD), published by the Transportation Association of Canada (TAC), September 1998
- Canadian Guide to Neighbourhood Traffic Calming, published by the Transportation Association of Canada and the Canadian Institute of Transportation Engineers, December 1998
- BC Supplement to TAC Geometric Design Guide 2007 Edition, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm
- Manual of Standard Signs and Pavement Markings, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm

4.3.2.1 Urban Sidewalks

In urban areas, sidewalks are typically located adjacent to the roadway or separated from the roadway by a paved or landscaped boulevard. Sidewalks can vary in width, ranging from a minimum of 1.5 m to over 3.0 m, however to accommodate the increase in scooter usage in many urban areas, it is recommended that a minimum 1.8m to 2m width be adopted.. Expected pedestrian volumes, adjacent land use, the type of sidewalk activities, street furniture and municipal utilities that will be found in the sidewalk and / or boulevard will determine sidewalk or combination sidewalk and boulevard width. To maintain drainage, a crossfall of 2% is typically maintained across a sidewalk. Figure 10 shows a variety of typical urban sidewalk cross sections.

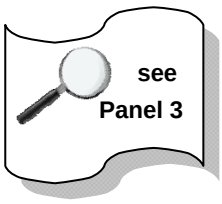
Sidewalks in residential areas are often the minimum 1.5 m in width and can be located on one side or both sides of the roadway. They are sometimes separated from the roadway by a boulevard strip, which can be paved or landscaped.

Sidewalks adjacent to commercial or institutional land uses, especially in the downtown, are frequently wider than sidewalks elsewhere to accommodate a range of activities and higher pedestrian volumes than other urban areas. Sidewalks are usually required on both sides of the road at these locations. In addition, the sidewalk is frequently separated from the roadway by a paved or landscaped boulevard strip. Sidewalk activities sometimes overlap into the paved boulevard and they could include:

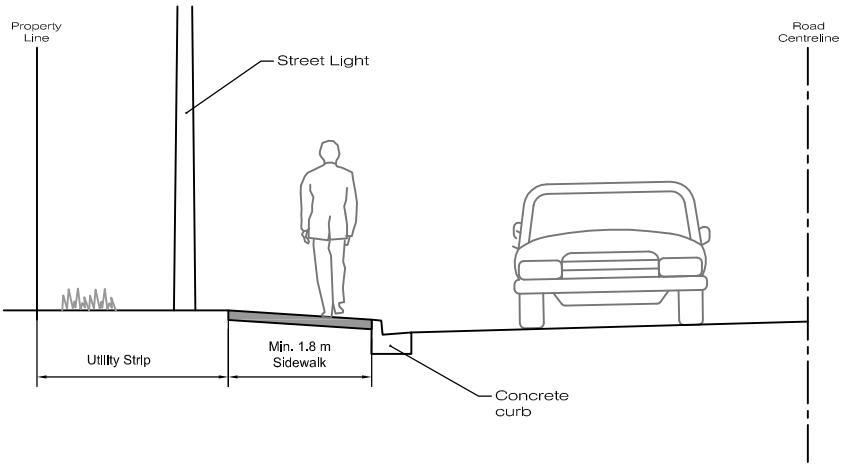
- Space for pedestrians, strollers and wheelchairs; space for street furniture such as benches, garbage containers, bicycle storage racks, newspaper boxes, mailboxes and parking meters
- Space for commercial activities such as restaurant patios, retail displays and commercial signage
- Space for municipal utilities such as street lighting, fire hydrants and utility poles
- Space for transit stops, shelters and queuing passengers

4.3.2.2 Multi-Use Paths

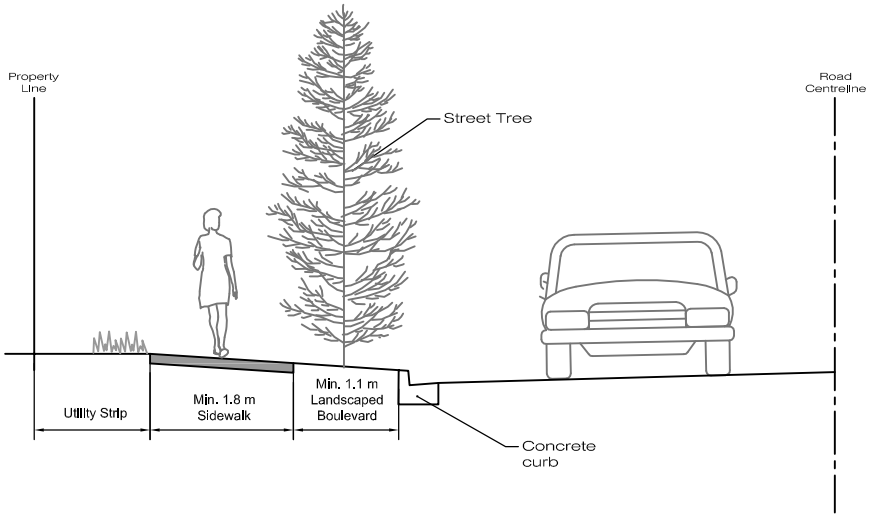
Hiking and walking paths will often follow the characteristics described in Section 4.3.1.3. However, in rural and suburban areas other considerations are important such as the provision for parking facilities and interaction between agricultural land-uses and recreational users. Buffer zones between agricultural land uses and multi-use paths and trails can be an effective means of limiting the undesirable impacts on the agricultural lands. Figure 11 shows some landscaped buffer zones separating trails from agricultural lands.



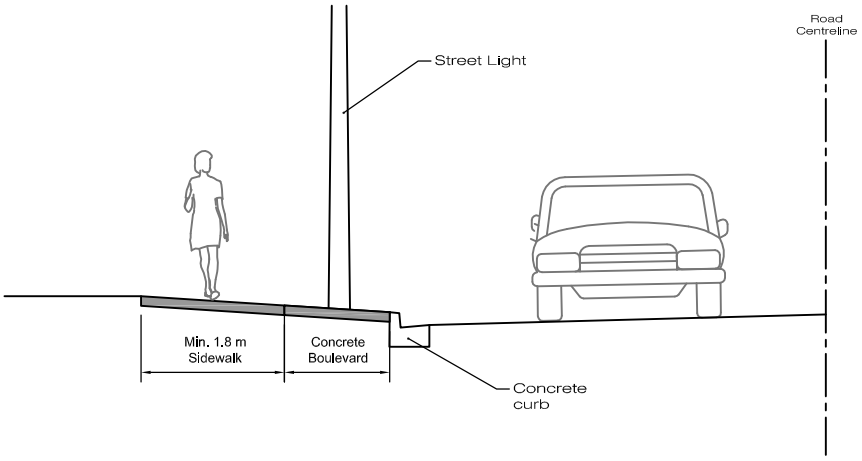
Sidewalk Cross Section



Sidewalk with Landscaped Boulevard Cross Section



Sidewalk with Boulevard Cross Section



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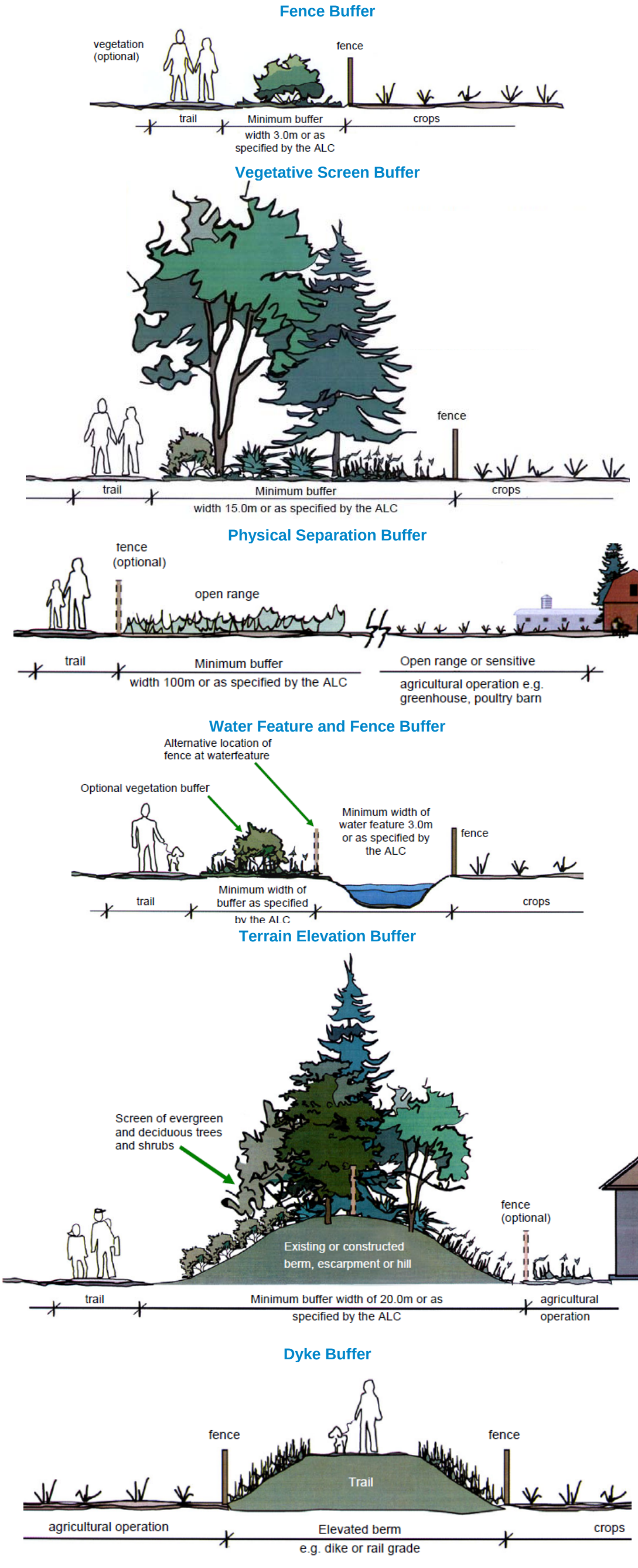
Sidewalk Cross Sections

AECOM

Figure 10

Figure 11 Buffer Zones for Trails in Agricultural Areas



Source: BC Ministry of Agriculture and Lands, A Guide to Using and Developing Trails in Farm and Ranch Areas

Some design guides that may assist in the planning and design of trails and paths include:

- Geometric Design Guide for Canadian Roads, published by the Transportation Association of Canada (TAC), September 1999
- Pedestrian Crossing Control Manual for British Columbia, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm
- Manual on Uniform Traffic Control Devices (MUTCD), published by the Transportation Association of Canada (TAC), September 1998
- A Guide to Using and Developing Trails in Farm and Ranch Areas, published by BC Ministry of Agriculture and Lands. Available at www.agf.gov.bc.ca/resmgmt/sf/trails/index.htm
- Safety Design Guidelines for Parking Facilities, a Recommended Practice, First Edition, published by the Insurance Corporation of British Columbia, September 1998
- BC Supplement to TAC Geometric Design Guide 2007 Edition, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm
- Manual of Standard Signs and Pavement Markings, published by BC MoT. Available at http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm

4.3.3 Transit and Carpooling Design Guidelines

For transit to be considered a viable option for people, it is desirable to have a transit stop within 400 m of all urban areas. This distance is considered the maximum that people, who have a choice of transportation modes, will walk to transit. When new development occurs in the District, a transit route and stop should be within 400 m of the development. New transit stops or adjustment to the transit route may be required to provide desirable walking distance to a transit stop.

Bus stops are one of the main transit facilities in the District of Kent. The following publications are BC Transit guidelines for the design bus stops.

- Design Guidelines for Accessible Bus Stops. Available at http://www.bctransit.com/corporate/resources/
- Transit Stop Installation Checklist. Available at http://www.bctransit.com/corporate/resources/

The design of carpooling facilities in the District would likely be limited to the construction of parking facilities. Some guidelines for the construction of parking lots include:

- Safety Design Guidelines for Parking Facilities, a Recommended Practice, First Edition, published by the Insurance Corporation of British Columbia, September 1998

4.3.4 Blueways Design Guidelines

Connections to waterways such as boat launches and marinas require different considerations than those for other transportation modes. There are numerous federal and provincial acts, which govern the design, construction and use of boat launches and marinas. New construction and alterations to existing launches are governed by the following provincial and federal regulations. As new regulations and

changes to existing legislation are made on a continuous basis, a search of all the pertinent legislation is recommended.

Provincial Legislation

- BC Water Act and Its Regulations. See *Water Management – A Users Guide to Working In and Around Water*. Available at http://www.env.gov.bc.ca/wsd/water_rights/licence_application/section9/index.html
- BC Land Act. See http://www.agf.gov.bc.ca/clad/tenure_programs/index.html
- BC Wildlife Amendment Act, 2004. See http://www.legis.gov.bc.ca/37th5th/1st_read/gov51-1.htm Additional information regarding the BC Wildlife Act is available at http://www.qp.gov.bc.ca/statreg/stat/W/96488_01.htm
- Riparian Areas Regulations, 2004. See http://www.env.gov.bc.ca/habitat/fish_protection_act/riparian/riparian_areas.html
- The Local Government Act may have some applicable legislation. Local bylaws may amplify federal and provincial legislation. See http://www.qp.gov.bc.ca/statreg/stat/L/96323_00.htm
- Construction and maintenance of boat launches may have other provincial legislation that are applicable. See BC MoE publication *Standards and Best Practices for Instream Works (March 2004)*. See http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf

Federal Legislation

- Fisheries Act, which is found online at http://laws.justice.gc.ca/en/F-14/. Also check http://www-heb.pac.dfo-mpo.gc.ca/publications/publications_e.htm
- Species at Risk Act. See http://www.env.gov.bc.ca/atrisk/ and http://www.speciesatrisk.gc.ca/legislation/default_e.cfm
- Navigable Water Protection Acts. See http://www.tc.gc.ca/marinesafety/Ships-and-operations-standards/nwp/menu.htm

In addition to the marine facilities, end-of-trip facilities such as parking lots may also be required. Some design guidelines for parking lots can be found at:

- Safety Design Guidelines for Parking Facilities, a Recommended Practice, First Edition, published by the Insurance Corporation of British Columbia, September 1998

5. Plan Implementation

Implementation of the District of Kent's Active Transportation Plan will be to some degree dependant upon funding from external sources, such as provincial or federal funding programs for active transportation. The order in which specific elements of the Active Transportation Plan are implemented will be somewhat dependant on program requirements i.e. which active transportation modes are being funded. In addition, the District may wish to discuss with other regional organizations, such as adjacent communities or regional governments, the potential for developing joint active transportation projects. To these ends, a list of Active Transportation projects was developed that could be used to apply for funding.

5.1 Development of Active Transportation Project Options

As part of the Active Transportation Plan, some potential active transportation projects were developed and evaluated in terms of their ability to attract trips away from the automobile. These trips will not likely be recreational trips (currently being made by walking or cycling, for example around the neighbourhood), but will rather be short purpose driven vehicle trips that can potentially be made by walking or cycling. These include trips to work, school or shopping trips that are currently made by car. It is highly unlikely that these types of trips would be made by canoe or kayak.

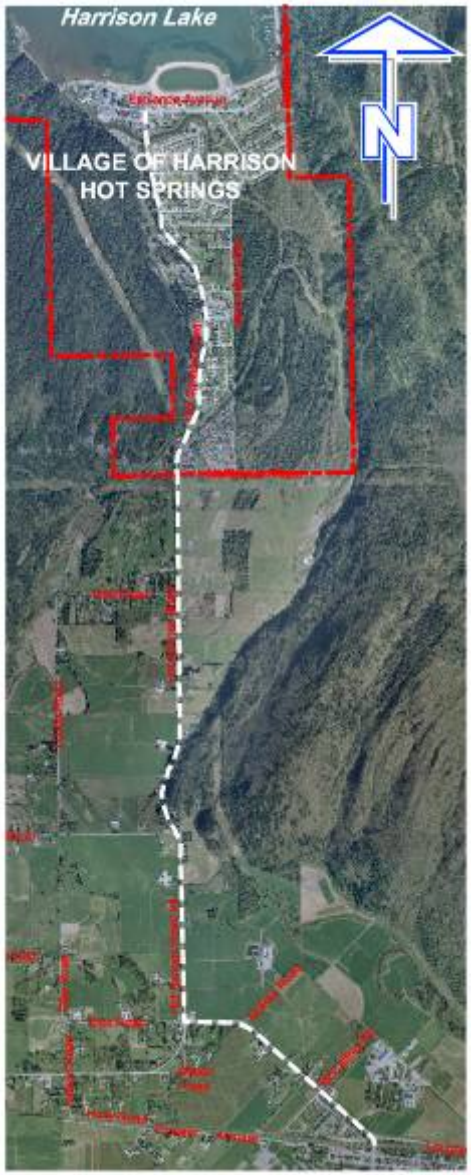
Transit service is often thought of as transportation mode to help reduce the number of automobile trips. BC Transit is currently reviewing the service and preparing future transit service plans with the District of Kent and the City of Chilliwack. Prior to the completion of BC Transit's work, it would be premature to develop transit service enhancements as part of the Active Transportation Plan at this time. Future editions of the Active Transportation Plan may wish to include potential projects to enhance transit service in the District.

During the research phase of the project, it was noted that most in the District people have historically had relatively long work-based commutes, making projects that were based on the walking transportation mode less desirable in terms of reducing the number of vehicles. With this in mind, and based on stakeholder input it was decided that the active transportation project would focus on bicycle trips between Agassiz and Harrison Hot Springs. Three options were developed between Agassiz and Harrison Hot Springs as described below. Each option is illustrated in Figure 12.

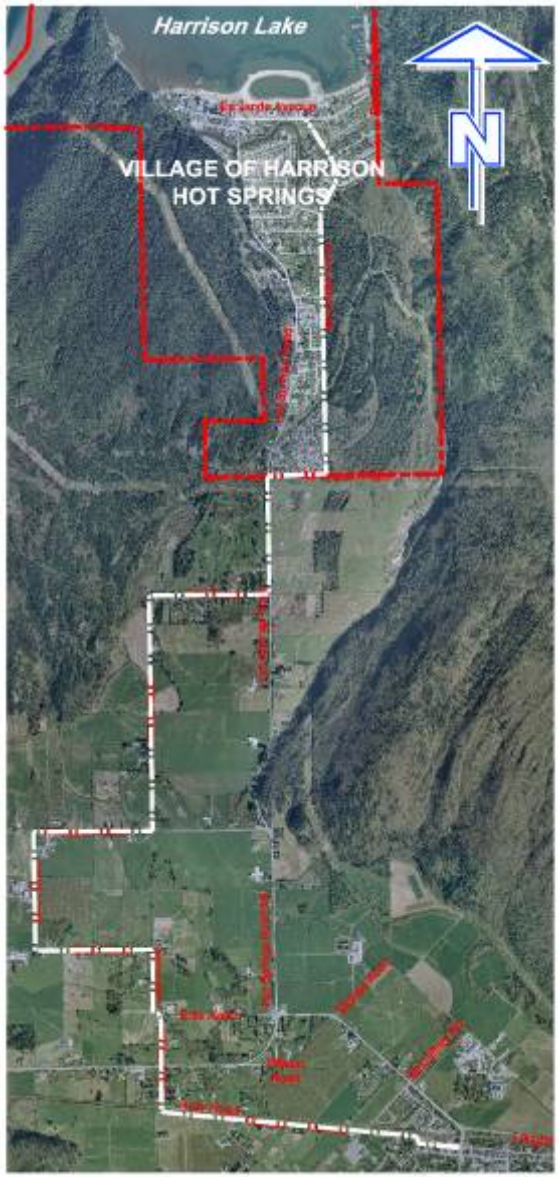
- Option 1 - Direct route along Highway 9 (Hot Springs Road) – Paved Shoulder from Agassiz to Harrison Hot Springs.
- Option 2 - Indirect route starting in the South at the intersection of Highway 9 at Highway 7 followed by Else Road, Birch Road, McCallum Road, Hardy Road, Golf Road, Hot Springs Road (Highway 9) and finally along McPherson Road into Harrison Hot Springs. This route combines On-Street signed facilities with Paved Shoulder facilities.
- Option 3 - Off-Street Route beginning at the South end of the BC Hydro right of way (at Highway 7) along the base of Green Mountain towards to the North to the intersection of Highway 9 and McCallum Road, along the local streets of Hardy Road and Golf Road to Hot Springs Road and onto McPherson Road into Harrison Hot Springs. This route combines an Off-Street path with On-Street Signed facilities and Paved Shoulder bicycle facilities.

Figure 12 Bicycle Route Options Harrison Hot Springs to Agassiz

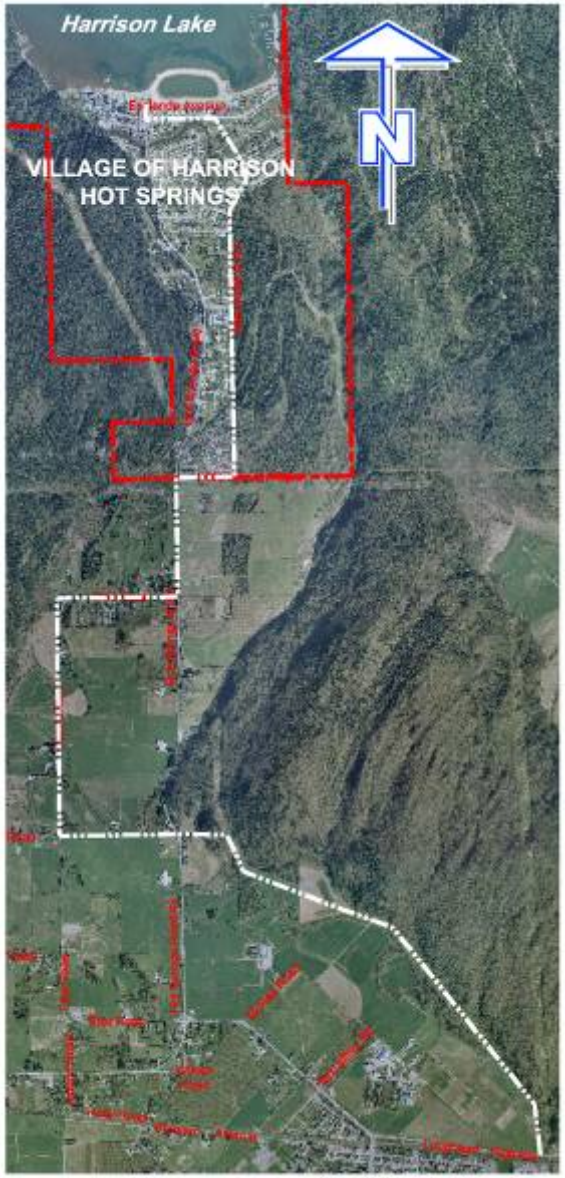
Option 1 – Highway 9 Route



Option 2 – Indirect Route



Option 3 – Off-Street Route



5.2 Evaluation of Active Transportation Project Options

The evaluation of the project options was completed using a relative, qualitative evaluation matrix. The evaluation is shown in Table 6. Discussion of the evaluation of each criterion is noted below.

Table 6 Option Evaluation

Evaluation Criteria	Option 1	Option 2	Option 3
Estimated Cost	$$$	$	$$
Travel Time Between Agassiz & Harrison Hot Springs	○	⊙	◘
Number of Vehicles Eliminated from the Network	○	⊙	◘
Estimated Elimination of Greenhouse Gas	○	⊙	◘
Estimated Economic Savings from Potential Fuel Savings	○	⊙	◘
Estimated Impact to Existing Utilities	●	○	⊙
Estimated Impact to Environment (water courses & habitat loss)	●	○	◘
Estimated Impact to the ALR	●	⊙	◘
Estimated Impact to Private Property	●	○	⊙
Community Connectivity	⊙	⊙	⊙
Ease of Implementation	●	○	◘
Accommodation of Commuter Cyclists	○	⊙	◘
Accommodation of Recreational Cyclists	●	⊙	○
Supports the Goals of Healthy Living by Providing Active Transportation Opportunities	⊙	⊙	○
Barrier Reduction to Active Transportation	◘	⊙	○

Notes: ● *Indicates negative impact or poor*
◘ *Indicates somewhat negative impact or fair*
⊙ *Indicates somewhat positive impact or good*
○ *Indicates positive impact or very good*
$$$ *Indicates expensive project cost*
$$ *Indicates moderate project cost*
$ *Indicates inexpensive project cost*

Estimated Costs

The estimated costs were based on the anticipated construction, property acquisition, utility relocation and project management costs. Option 1 involves the construction of shoulders on Hot Springs Road and the addition of signs and pavement markings along the bicycle route. It is expected that existing utility poles will require relocation and that in some places new ditches will be required. With the construction of the new ditches, some environmental mitigation will also be required. BC MoT requires that all ditches and fill slopes from the highway be located within the road right-of-way. With the widening of Highway 9 between Highway 7 to Harrison Hot Springs, it is expected that right-of-way will be required along this

corridor, although a continuous strip of property may not be required to be taken the entire length of the new shoulder bicycle lane.

Of all the options evaluated, Option 2 has the least amount of construction and therefore the construction, property acquisition, utility relocation and environmental mitigation costs are expected to be the lowest of all the options. Widened shoulders are required between McPherson Road and Golf Road on Highway 9 in this option. For the remainder of the bicycle route, new signs are required but no other construction. Some environmental mitigation, property acquisition and utility pole relocation may be required between McPherson Road and Golf Road in Option 2, but the quantity of poles relocated, right-of-way required and mitigation required should be the least of all the options

Option 3 requires the construction of new shoulders on Hot Springs Road between McPherson Road and Golf Road, as per Option 2, new signage on the existing road network and the construction of the Off-Road Trail adjacent to Green Mountain. In addition to the relocations, property acquisition and mitigation required for Option 2 (McPherson Road and Golf Road), it is expected that some utility poles will require relocation near Hot Springs Road and some environmental mitigation required with the construction the off-road trail. Some property acquisition may be required where the Off-Road Trail intersects with Hot Springs Road at McCallum Road.

Travel Time

The travel time is based on the distance between Agassiz and Harrison Hot Springs as calculated for each option. Cyclists will be able to travel as quickly as they like on the Shoulder and Shared Road Bicycle routes. These routes tend to be flat; therefore, steep upgrades will not be slowing cyclists down. We have assumed that the average commuter cyclist will be able to travel at 25 km/h on the shoulder and shared road bicycle routes[9]. On the Off-Street paths, which are intended to be Multi-Use Paths, the maximum speed would be posted at 15 km/h for cyclists. The slow speed is used to help reduce potential conflicts between the different types of path users. This is a common speed limit posted on other Multi-Use Paths throughout the Lower Mainland. Table 7 shows the length of each option and estimated travel time for a commuter cyclist using each option.

Table 7 Cyclist Travel Time for Each Option

Option	Distance by Facility Type (km)			Travel Time by Facility Type (min)			Total Time (min)
	Shoulder	Shared	Off-Street	Shoulder	Shared	Off-Street	
1	7.9	0	0	19.0	0	0	19.0
2	0.8	10.9	0	1.9	26.0	0	27.9
3	0.8	6.1	3.6	1.9	14.7	14.4	31.0

The commuter cyclist travel time is expected to be the fastest with Option 1 and the longest travel time is expected with Option 3, which includes the Off-Road Trail. The commuter cyclist travel time for Option 2 is expected to be nearly the travel time of Option 3 because of the longer route length.

[9] *John Forester in his book Bicycle Transportation: A Handbook for Cycling Transportation Engineers (1994), notes that typical California commuting cyclist has an average speed of 16mph (25kmph)*

Vehicles Eliminated from the Network

BC MoT has conducted short-term traffic counts on Highway 7 and on Highway 9 in the District of Kent. Counts were conducted on Highway 7 east and west of Highway 9 and on Highway 9 north of Highway 7 and south of McPherson Road. These counts were completed in August 2007 and November 2003. Traffic volumes on the two highways in the District are seasonal, with the highest traffic volumes recorded during the summer months. Table 8 shows the average values from the August 2007 short-count traffic volumes. The 2007 traffic volumes were assumed to be similar to 2009 traffic volumes.

Table 8 2007 Traffic Volumes

Location	AM Peak Hour	PM Peak Hour	Daily
Highway 7 West of Highway 9	239	296	3,203
Highway 7 East of Highway 9	656	793	8,830
Highway 9 North of Highway 7	561	654	7,200
Highway 9 South of McPherson Road	502	580	6,303

Source: BC MoT Traffic Volumes, available at http://www.th.gov.bc.ca/trafficData/tradas/tradas.asp.

It was assumed that with the construction of any of the three options, more people would choose to use their bicycle as a transportation mode to travel to work, school or shopping (i.e. non-recreational trips). We also assumed that these non-recreational trips would have previously been made by car. Up to three percent of the morning peak hour traffic volume, which amounts to approximately 15 trips, on Highway 9 at McPherson Road was assumed to be willing to shift to the bicycle mode with the construction of any one of the three options. An additional two percent of the morning peak trips on Highway 9 at McPherson Road were assumed to switch to cycling based on the travel time, which amounts to approximately 10 trips. It was assumed that all 10 trips would shift to cycling if Option 1, the shoulder bicycle route were constructed. It assumed that none of the 10 trips would shift to cycling if Option 3, the slowest commuter route, were constructed. Based on a proportioning of the difference in travel time for Option 2 as compared to the other two options, it was assumed that one additional trip would be attracted to cycling during the morning peak. The trips that shifted to cycling were assumed to be taken every morning and afternoon peak hour. Table 9 shows the number of trips that were calculated to shift to cycling for each option.

Table 9 Estimated Trips Shifted to Cycling

Option	AM Peak Hour	PM Peak Hour	Daily
1	25	25	50
2	18	18	36
3	15	15	30

Reduction of Greenhouse Gases

Based on the number of trips that are expected to shift to cycling from Table 9, the greenhouse gases (GHG) reduced by each were calculated. There are several GHG calculators available; however to calculate GHG emissions the following assumptions were made:

- Vehicle trip length of 15 km/h each way five days per week
- Fuel economy of 10 km/L or 10 L/100 km
- Number of vehicles no longer making the trip as noted in Table 9

Table 10 estimates the GHG savings based on the assumptions above.

Table 10 Estimated Greenhouse Gas Emissions Savings

Option	Trips Saved per Day	Distance per Trip (km)	CO_2 Emissions per Month (kg)
1	50	30	16,505
2	36	30	11,556
3	30	30	9,630

Source: Emissions calculator available at http://www.safeclimate.net/calculator/ind_calc_form1.php

Estimated Economic Impact from Potential Fuel Savings

Continuing with the assumptions used to estimate the GHG savings, the estimated cost savings from the shift from passenger vehicle to cycling is noted in Table 11. Fuel costs were based on an average gasoline price of $0.986/L for the week of March 23, 2009.[10]

Table 11 Estimated Fuel Cost Savings

Option	Daily Travel Distance Saved (km)	Fuel Saved per day (L)	Fuel Cost Savings per day
1	1,500	150	$147.50
2	1,080	108	$106.50
3	900	90	$88.70

Estimated Impact to Existing Utilities

As noted in the explanatory section on the option cost, Option 2 has the least amount of construction. As a result, it is expected to have the least impact on existing utilities, such as existing utility poles, or underground utilities. The amount of road widening in Option 3 is the same as Option 2 but this option also has the Off-Road Trail construction in the BC Hydro right of way adjacent to Green Mountain. It is expected that there would be some impact to existing utilities as the Off-Road Trail is in the BC Hydro right-of-way. With the widening of Highway 9 from Agassiz to Harrison Hot Springs, Option 1 is expected to have the greatest impact on existing utilities when compared with either Option 2 or Option 3.

Estimated Impact to the Environment

Option 2 has the least amount of construction and it is expected to have the least impact to the watercourses and habitat adjacent to the bicycle routes. Option 1 has a considerable amount of construction often near roadside ditches. Roadside ditches sometimes have aquatic life and are often considered to be habitat, which requires compensation if altered or destroyed. Option 1 is expected to

[10] *Government of Canada, Average Fuel Prices by City, available at http://www2.nrcan.gc.ca/eneene/sources/pripri/prices_bycity_e.cfm?PriceYear=0&ProductID=1&LocationID=66,2&dummy=#DataTable*

have the greatest impact on the environment. Option 3 has a similar amount of road construction to Option 2; however, it also has the construction of the off-road trail adjacent to Green Mountain in the BC Hydro right of way. Therefore the impact of Option 3 on the environment is expected to be somewhere between Option 2 and Option 1.

Estimated Impact to the ALR

All of the options have the potential to require that land / right-of-way be taken from the ALR for construction to occur. A more detailed engineering design is required to determine what if any lands are required. It should be noted that the Off-Road Trail proposed in Option 3 traverses ALR lands, which will require removal from the ALR. The road widening on Highway 9 is likely to require property acquisition for at least part of the distance between Highway 7 and McPherson Road. Option 2 is expected to have the least impact on the ALR as only a short segment of road widening on Highway 9 is required between McPherson Road and Golf Road.

Estimated Impact to Private Property

In Option 1, additional right of way is required along Hot Springs Road to accommodate the wider shoulders that would be constructed. Option 1 is expected to require the most new right-of-way. In Option 2, the only segment of road that requires widening is the section of Hot Springs Road between Golf Road and McPherson Road. This option is expected to require the least amount of right-of-way. In Option 3 as in Option 2, the only road widening is between Golf Road and McPherson Road; however, additional right-of-way is expected to be required at the north end of the Off-Road Trail.

Community Connectivity

Each of the three options provides a new bicycle connection between Agassiz and Harrison Hot Springs and therefore each option was rated the same for this criterion.

Estimated Ease of Implementation

The ease of implementation is based on how difficult it is expected to be to obtain approvals to construct the option and construct the works. Options with greater impacts to the environment, existing underground and overhead utilities, ALR lands, private property, etc. will be more difficult to obtain approvals and complete the construction. The Shared Road Route in Option 2 is estimated to be the simplest of the three options to obtain approvals for since construction is limited to the widening of Highway 9 between McPherson Road and Golf Road. The Off-Road Trail and Shared Road proposed in Option 3 is expected to be the next easiest to construct. However, approval will be required to remove some land from the ALR to construct the Off-Road Trail. The most difficult option to implement is expected to be Option 1 since it requires a new Shoulder Bicycle Route the entire length of the project. It is expected that land will be required from the ALR, there will be many utility poles relocations and environmental approvals will be also required.

Accommodation of Commuter Cyclists

In Option 1, which is the Shoulder Bicycle route, commuter cyclists are best accommodated, as it is the most direct route between Agassiz and Harrison Hot Springs. Option 3 is the least preferred route for commuter cyclists as part of the route is on an off-road path where commuter cyclists are expected to

have to reduce their travel speeds. Option 2, which is the Shared Road route, is a less direct route than Option 1 but it is not as indirect as Option 3.

Accommodation of Recreational Cyclists

Option 3 is considered the best route for recreational cyclists between Agassiz and Harrison Hot Springs as the Off-Road Trail can best accommodate cyclists of all abilities. The Off-Road Trail bypasses some of the more difficult and busy sections of the Shared Road Route found in Option 2. Recreational cyclists in Option 2 are accommodated well when compared with the Shoulder Bicycle Route in Option 1 but not as well as in Option 3.

Supports the Goals of Healthy Living

For this criterion, the option that will encourage greatest number of cyclists will be the preferred option. It is expected that the number of recreational cyclists will outnumber the commuter cyclists using the bicycle route between Agassiz and Harrison Hot Springs. Option 3 was considered the best route for recreational cyclists and while it would not attract as many commuters as the other options, it would likely attract the greatest number of recreational cyclists. In addition, the Off-Road Trail segment in Option 3 would allow pedestrians to use the Off-Road Trail, whereas none of the other options provides a viable route for pedestrians or other trail users.

Option 1, which is the preferred route for commuter cyclists, would be expected to attract the fewest total number of cyclists because many recreational cyclists do not feel safe on the shoulders of Highway 9. The Shared Road Route in Option 2 would be expected to attract more recreational riders than Option 1 but fewer than Option 3; and therefore, would be rated somewhere between Option 3 and Option 2.

Reduction in Barriers to Active Transportation

Option 3 is considered the best route to reduce active transportation barriers for cyclists between Agassiz and Harrison Hot Springs as the Off-Road Trail can best accommodate cyclists of all abilities and other active transportation modes such as walking. The Off-Road Trail bypasses some of the more difficult and busy sections of the Shared Road Route found in Option 2. Cyclists of all abilities in Option 2 are accommodated well when compared with Option 1 but not as well as in Option 3.

5.3 Recommended Implementation Plan

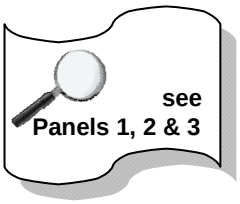
5.3.1 Recommended Bicycle Route Option

Based on our analysis of the three bicycle route options between Agassiz and Harrison Hot Springs, we recommend that the District begin with the implementation of Option 2 first, followed by Option 1 and Option 3. Option 2 was chosen to be completed first, as it is the least capital intensive of all of the projects and both commuter and recreational cyclists can use it. It also requires the least amount of construction to implement the route.

5.3.2 Priority Projects and Recommendations

In addition to the recommended bicycle route options noted in 5.3.1, the following projects were identified through the public consultation and research process, and constitute a small sample of potential future projects.

Cycling Infrastructure Recommendations



District of Kent

- Looping Cycling Routes

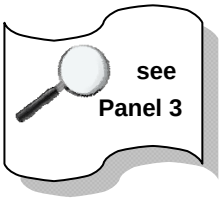
Agassiz

- On-Street Signed routes in Agassiz
- Off-Street Pathways at Pioneer Park, and along Pioneer Road (CP right-of-way)
- Fir Road to Mountainview Road – traffic calming and Share the Road Signage
- Cyclist activated warning signal for Agassiz – Rosedale Bridge, and further study on improving cyclist and pedestrian friendliness of the bridge

Harrison Hot Springs

- On-Street Signed Route - McCombs Drive
- Cyclist facilities near Esplanade Avenue

Pedestrian and Hiking Facility Recommendations



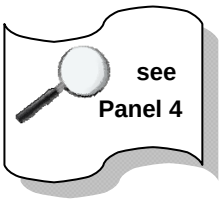
District of Kent

- An Off-Road Trail (McCallum Road / Hardy Road and Else Road)
- An Off-Road Trail in BC Hydro right-of-way (edge of Green Mountain)
- Dyke trails throughout the District

Agassiz

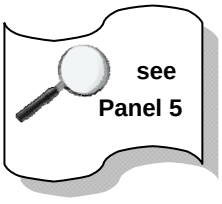
- New mid-block crosswalk on Cheam Avenue (Highway 9 and Evergreen Drive)
- New mid-block crosswalk Highway 9 (Cheam Avenue and Morrow Road)
- New walking path between the Fitness / Activity Centre parking lot and Mountainview Road
- New walking path between Tuyttens Road and Highway 9

Transit & Carpool Facility Recommendations



- New transit stops at emerging development (Mount Woodside and Harrison Mills)
- Carpooling lots throughout the District

Blueway Infrastructure Recommendations



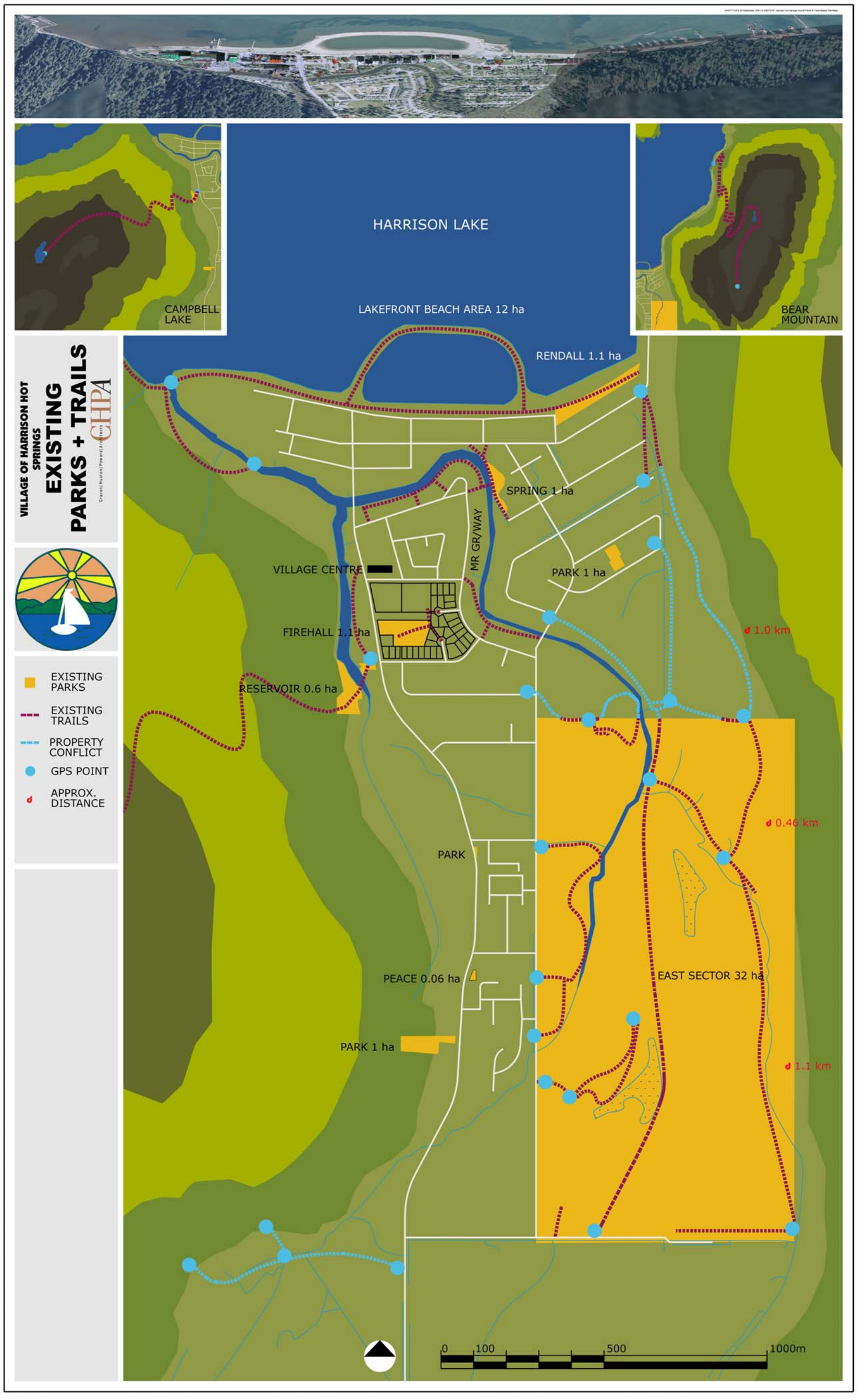
- Harrison River Community boat launch

5.3.3 Other Implementation Recommendations

A short list of other implementation recommendations is included to assist the District with the implementation of the Active Transportation Plan.

1. When the District updates its OCP in the future, consideration and importance should be given to incorporating the objectives and outcomes of the Active Transportation Plan within the future fabric of the OCP. This may include updating the language in the OCP to reflect active transportation policies and plans.
2. The District should continue to look for funding sources for active transportation projects. There may be opportunities to work with other municipalities or organizations to develop active transportation facilities. Funding programs are largely opportunistic, thus it follows that the District may want to apply for grants and other project funding even if the program does not exactly match the District's Active Transportation Plan priorities.
3. Continue to work with BC Transit and the other funding partners on providing expanded transit services to the District of Kent. The community consultation found that most people believe the transit system capacity and service frequency are inadequate to serve the District's needs. Until transit service levels are increased sufficiently to meet demand, Active Transportation funding directed to transit services should focus on increasing service levels rather than on increasing transit infrastructure, such as construction of bus shelters.
4. The District should consider providing trail, cycling and blueways information in various formats (i.e. hard copy and electronic formats) so that residents and tourists are able to navigate their way through the local road, trail networks and waterways. It may be possible to collaborate with other agencies, municipalities and organizations to develop, publish and post on the internet.
5. Within urban areas, pedestrian infrastructure needs in the most heavily used areas should be given the first priority for Active Transportation project funding. An example would be upgrading the existing sidewalks and/or construction of new sidewalks on Pioneer Avenue, which is heavily used by a variety of road users. Another example would be the construction of the proposed crosswalks in the downtown area. Development of a fund that is available for use when opportunities for sidewalk construction or repair and installation of curb cuts at intersections are become available due to utility reconstruction or development of adjacent lands.
6. Trail development in rural and agricultural areas will be more difficult to achieve due to the conflicting interests of recreational and agricultural land uses in the same area. It is expected that extensive community consultation will be required for Active Transportation projects that are in or next to ALR lands. One opportunity for developing synergy is through the Area Agricultural Plan whereby dykes can be considered for trail development.
7. Should land be required from the ALR for either a road widening or the Off-Road Trail, then an application to the ALC to remove the lands from the ALR is expected to be required. Under current regulations, the District would be required to complete the following steps:
   - Fill out the Application for Transportation, Utility and Recreational Trail Uses in the ALR form, available at http://www.alc.gov.bc.ca/alr/Forms.htm
   - Notify all of the landowners affected by the proposed project
   - Submit the application form, the necessary background documents and a $400.00 fee to the ALC
8. With properly designed trails, effective trail rules, public education and respect, multi-use recreational trails within agricultural lands can be developed. Trails that are buffered from the agricultural lands may help limit contamination, trespassing and vandalism. The District should continue to work with the community and other organizations to help develop the existing dykes into multi-use paths without disturbing the agricultural lands.
9. The multiple account evaluation used in the Active Transportation Plan, could be used by the District to evaluate future active transportation projects.

Appendix A
Existing Harrison Hot Springs Trail Network


VILLAGE OF HARRISON HOT SPRINGS
EXISTING PARKS + TRAILS
CHPA
EXISTING PARKS
EXISTING TRAILS
PROPERTY CONFLICT
GPS POINT
APPROX. DISTANCE
HARRISON LAKE
CAMPBELL LAKE
LAKEFRONT BEACH AREA 12 ha
BEAR MOUNTAIN
RENDALL 1.1 ha
SPRING 1 ha
MR GR/WAY
VILLAGE CENTRE
PARK 1 ha
FIREHALL 1.1 ha
1.0 km
RESERVOIR 0.6 ha
PARK
0.46 km
PEACE 0.06 ha
EAST SECTOR 32 ha
PARK 1 ha
1.1 km
0
100
500
1000m

Appendix B
Open House Questionnaire

Active Transportation Open House

Welcome!

You are invited and encouraged to participate today by viewing, discussing and commenting on the posted panels focusing on Active Transportation infrastructure in our community.

Please take a moment to fill out this comment sheet as it will help us to capture your input.

Are you a resident of the District? ☐ Yes ☐ No

If yes, do you live in ☐ Agassiz ☐ Harrison Hot Springs ☐ Seabird Island ☐ Other

Which age group do you belong to?

☐ 12 years and less ☐ 13-18 years ☐ 19-34 years

☐ 35-69 years ☐ 70 years of age and better

What is the approximate distance from your home to work/school?

☐ 0-2 km ☐ 2-5 km ☐ 5-10 km ☐ 10-25 km ☐ More than 25 km

What is the main/primary mode you use for these trips?

☐ Drive alone ☐ Car pool (2-6 people) ☐ Van pool (7-15 people)

☐ Take transit ☐ Bicycle ☐ Walk

☐ Motorcycle or moped ☐ Mobility Scooter ☐ Other (please describe): _____

Regarding your choice of mode of transportation for these trips, please rate the following decision factors from greatest to least importance (1 = most important, 10 = least important)

_____ Distance _____ Time

_____ Cost _____ Convenience

_____ Comfort _____ Safety

_____ Physical ability _____ Environmentally friendly (i.e. level of pollution)

_____ Weather _____ Season (i.e. summer versus winter)

In terms of barriers that prevent you from using Active Transportation, rate the following obstacles from greatest to least importance (1= most important/biggest obstacle, 8 = least importance/not obstacle)

_____ Frequency of transit service

_____ Accessibility to transit service (i.e. longer than a 5 minute walk to transit service)

_____ Too many transfers between starting point and final destination using transit

_____ Lack of or inadequate end-use facilities (i.e. bike racks, storage lockers, change rooms)

_____ Lack of bike lanes or paved shoulders

_____ Lack of sidewalk

_____ Condition of roads

_____ Condition of sidewalk

Please turn page over

Active Transportation Open House

Comments on the Boards

Blueways Board

Please rate the following (1 = most important, 10 = least important):

_____ Is public access to waterways important?
_____ Is access to a continuous waterfront network important?
_____ How important is use of the Harrison and/or Fraser Rivers as a transportation mode?

Are there sufficient docks for boat drop offs/pick ups? ☐ Yes ☐ No

Please provide any general comments you may have on Blueways:

_____

_____

Transit & Carpooling Board

Please rate the following (1 = most important, 10 = least important):

_____ A transit connection to the West Coast Express?
_____ Park-n-ride facilities in increasing your frequency in carpooling or using transit?
_____ Expansion of existing service (more frequency, hours of service) in increasing your use of transit

If transit were improved how likely are you to take it to work?

☐ very likely ☐ somewhat likely ☐ likely ☐ somewhat unlikely ☐ very unlikely

If you were to use transit, were would you most likely go? (Please be specific.) _____

Please provide any general comments you may have on Transit:

_____

_____

Cycling and Pedestrians Board

Please rate the following types of cycling components in order of preference (1 = most important, 4 = least important):

_____ On road shared bicycle lane _____ On road Shoulder bicycle lane
_____ Off road bicycle path _____ Off road multi-use trail

If a safe and direct cycling route was available, how likely would you be to cycle to work or school?

☐ very likely ☐ somewhat likely ☐ likely ☐ somewhat unlikely ☐ very unlikely

If you were to cycle to work, where would you go? _____

In terms of priorities, what cycling or pedestrian route components should the District focus on? (Please be specific.)

_____

What areas or streets in the District do you feel would increase your use of Active Transportation if improved? (Please be as specific as possible.)

_____

_____

One last thing, on the large comment map please mark, using the post-its provided, any other Active Transportation options of importance not provided for in the display boards.

Please return your completed form to the desk before you leave.

And thank you for your input!

Appendix C
Future Transportation Network Drawings

These are posted as separate files, as follows:

Report Panel Figure 1 – Shoulder Bike Routes
Report Panel Figure 2 – Shared Bike
Report Panel Figure 3 – Off Street Paths
Report Panel Figure 4 – Transit
Report Panel Figure 5 - Blueways