City of Rossland

Active Transportation Plan

January 2009

Prepared for
Corporation of the City of Rossland
Box 1179 Rossland BC V0G1Y0
Tel. 250-362-7396
www.rossland.ca

Prepared by
Stewart Spooner
Recreation Planning & Design
Box 1701 Rossland BC V0G1Y0
Tel. 250-362-5905
stewspooner@telus.net
Table of Contents

Executive Summary ................................................................. 5
Introduction.......................................................... 6
   The Case for Active Transportation................................. 6
   Background........................................................................ 7
Active Transportation Routes ........................................ 9
   Methodology .................................................................. 9
Route Assessments .................................................. 12
   Establishing Priorities..................................................... 13
Routes .................................................................................. 14
   Summary .......................................................................... 14
   Active Transportation Map............................................... 15
   Major Active Transportation Drivers Map....................... 16
   Legend .............................................................................. 17
1. Centennial Trail ............................................................... 18
2. Centre Star Gulch ................................................................ 21
3. Third Avenue – Highway 3B (Third Ave)............................ 24
4. Columbia Avenue – Casa Alpina.......................................... 26
5. First Avenue – Columbia Avenue (Davis St)......................... 29
6. Miner’s Hall – Nevada Street (Columbia/Le Roi Alley)........ 31
7. Nevada Street – Mining Museum ........................................ 34
8. Upper Trail Creek ........................................................... 37
9. Lower Rossland Sidewalks ................................................ 39
10. Le Roi Hollow ................................................................. 42
11. Campbell Avenue .......................................................... 45
12. Victoria Avenue Trails ...................................................... 48
13. Lower Trail Creek Trails .................................................. 51
14. Pinewood – Columbia Avenue .......................................... 54
15. Pinewood – Downtown ..................................................... 57
16. Columbia Avenue Sidewalk ............................................... 60
17. Butte Street - Kootenay Avenue ........................................ 63
18. Old Railgrade Road – Butte Street (Railgrade Cutting)...... 65
19. St Paul Street Sidewalk (1st Ave – 7th Ave)....................... 68
20. Second Avenue – Third Avenue (Queen St)....................... 71
21. Fifth Avenue – Railway St (Monte Christo St).................... 74
22. Eighth Avenue - Columbia Kootenay Road (Eighth Ave).... 77
23. Elmore Avenue – McLeod Avenue (Elmore Ave).............. 78
24. McLeod Avenue – Elmore Avenue (Queen St)................. 80
Downtown Upgrades .................................................................................. 82
  Widening the Sidewalk ........................................................................ 82
  Traffic Control .................................................................................... 82
  Bump-outs and Crossings ................................................................... 82
  Bike Racks .......................................................................................... 83
  Information Kiosk ................................................................................ 83
  Bike Wash ............................................................................................ 83
Additional Considerations & Initiatives .................................................. 84
  Public Transportation ........................................................................... 84
  On-Street Parking ................................................................................ 85
  Status of Roads and Alleys ................................................................ 85
  The Railgrades .................................................................................... 85
  Planning for Le Roi Hollow ................................................................. 86
  Jubilee Park Loop ............................................................................... 86
  Recreational Lake / Public Beach at the Star Gulch Reservoir ....... 87
  Winter Use .......................................................................................... 87
  Furnishings .......................................................................................... 87
  Signs ..................................................................................................... 88
  Lighting ................................................................................................ 88
Implementation Strategy ........................................................................ 89
  1. Maintaining the Existing Infrastructure ....................................... 89
  2. Obtaining Legal Access across Private land ............................... 90
  3. An Initial Project ............................................................................ 90
  4. Measuring Success ........................................................................ 90
  5. Community Education and Engagement .................................... 90
References ............................................................................................... 92
Appendices ............................................................................................. 93
  Appendix # 1 – Pedestrian Safety Issues .......................................... 93
  Appendix # 2 – Obtaining Legal Access across Private land .......... 94
  Appendix # 3 – Physical Characteristics Classification .................. 95
  Appendix # 4 – Construction Costs Estimates ................................... 97
  Appendix # 5 – Funding Resources ................................................... 98
  Appendix # 6 – Display Map ............................................................... 98
  Appendix # 7 – Route Assessments .................................................... 98
  Appendix # 8 – Photos ....................................................................... 98
  Appendix # 9 – Digital Files of ATP Map .......................................... 99
  Appendix # 10 – Digital Files of AT Plan .......................................... 99
Executive Summary

The residents of Rossland enjoy and value an active outdoor lifestyle. The purpose of an Active Transportation Plan for Rossland is to provide recommendations for improving conditions for walking, cycling and other active modes of transportation within the City. This plan identifies and prioritizes opportunities to enhance and develop the Active Transportation infrastructure, including detailed assessments of existing and potential Active Transportation routes (paths, trails, sidewalks etc.), suggests a variety of related practical and policy initiatives, and provides an implementation strategy to move forward.

It is anticipated that an Active Transportation Committee will be established to ensure that realistic targets are set, appropriately resourced and achieved. With this plan providing both the technical information and the rationale, increasing opportunities for funding can be utilized to realize specific projects.

Recognizing the magnitude and complexity of the challenges to be faced in implementing such a plan, it is important to adopt an approach that is innovative, adaptable and responsive to evolving circumstances. An adaptive management approach is essential and must include a monitoring function to evaluate the effectiveness of initiatives, modify actions as required, and incorporate new approaches and decision-making processes if necessary.
Introduction

Built Environment and Active Transportation (BEAT) is a joint initiative of BC Recreation and Parks Association (BCRPA) and the Union of BC Municipalities (UBCM). The City of Rossland, with the assistance of the Kootenay Columbia Trails Society (KCTS), applied for and received a Community Planning Grant from BEAT, to develop an Active Transportation (AT) plan for the City. The City contracted Stewart Spooner Recreation Planning and Design to prepare this Active Transportation Plan. The document is intended as a resource for municipal staff and political representatives, to assist in identifying, prioritizing and budgeting for missing components of a comprehensive Active Transportation network.

The Case for Active Transportation

Active transportation involves using modes of travel that are self-propelled alternatives to the automobile, such as walking, cycling, and cross-country skiing. Active Transportation planning is important to the City of Rossland for the following reasons.

Health - Significant health benefits can be realized by using active modes of transportation daily - to commute to work or school, or simply walking around the neighborhood after dinner every night.

Safety - People who choose not to walk or bike often identify safety concerns as the main reason. Roads designed just for cars create situations where walkers and cyclists may be putting their safety at risk due to high traffic volume or speed, or pedestrian road crossings that are ambiguous, confusing (for drivers and pedestrians) or non-existent.

Economy - Trails and walking facilities add to the local economy by providing jobs, increasing access to retail and cultural attractions and by supporting tourism. Creating a walking and cycling friendly community also enhances quality of life, an important feature for attracting new residents and business.
Environment - As public awareness of climate change continues to grow, municipal leaders will be expected to remove barriers to local activities that curb greenhouse gas emissions. Active Transportation infrastructure provides a relatively low-cost means to decreasing auto dependence and related emissions.

Fairness & Dignity - Access to transportation is important to everyone. Our public resources need to ensure all members of society including children, youth, seniors and people with disabilities can move about safely and efficiently without a car.

Background

For an Active Transportation plan to be effective it must be grounded in an assessment of where people are coming from and where they want to go. This initial exercise of identifying transportation drivers is explained under methodology in the next section, however user needs were a constant consideration throughout the entire planning process.

Rossland’s vertical topography and arbitrary street layout pose a particular challenge to conceiving an effective Active Transportation Plan. Beyond the usual barriers to use of distance and safety that exist in most communities, the sheer physical effort of riding or walking Rossland’s precipitous grades makes driving the only practical option for many people and tasks.

However, given that Rossland residents have a demonstrated propensity for active recreation and progressive environmental values, it is reasonable to expect that improvements to Rossland’s Active Transportation infrastructure would be well used and appreciated.

The existing formal Active Transportation infrastructure within the community is antiquated, unplanned, and does not adequately address current Active Transportation needs. It consists of an incomplete network of side-walks in and around the down-town core, and several covered staircases.
Most of the secondary roads within Rossland receive a low volume of slow moving vehicle traffic, and so are regularly and safely used as pedestrian and cycling routes. There are however particular locations that have been identified as safety concerns (see Appendix #1), and identifying alternative routes to these has been a focus of this plan.

Additionally, there is an informal network of well used pedestrian paths within the community that exist because they provide safe efficient experiences that enable people to get to where they need to. Assessing the feasibility and quantifying the benefits of authorizing and upgrading such paths has been another focus.

Thirdly, developing new dedicated pedestrian connections within the community clearly has huge potential to enhance the active outdoor lifestyle that Rossland is renowned for, and identifying and quantifying the benefits of such connections has been the third focus.

As part of a broad consideration of what could be done to encourage Active Transportation, various other complimentary initiatives have also been suggested.

With Red Mountain ski resort in their backyard, it is easy for Rossland residents to remain active during winter, however, getting there almost always involves driving.
Active Transportation Routes

Following direction from City planning staff, the focus of this plan has been a complete inventory and assessment of the existing informal and potential new Active Transportation routes within the community. The result is a plan which can guide the City towards the creation of a complete sidewalk, paths and trails network.

Methodology

Step #1

An effective plan must respond to the real Active Transportation needs of local residents. To achieve this, the major Active Transportation drivers in the community were identified and assessed:

- Downtown.
- Schools.
- Sports fields.
- Trailheads.
- Churches.
- Red Mountain Base Area.
- Mining Museum.
- Redstone neighborhood.

In general terms, given that the population of Rossland is distributed evenly throughout the urban area, and that most existing and potential commuting activity occurs between individual residences and Downtown, identifying the opportunities to address this need primarily informed route selection. Another significant commuting activity occurs between individual residences and the schools, however given the school's proximity to Downtown, these needs can be addressed concurrently. Most other Active Transportation activity within the community can be categorized as recreation, as opposed to commuting, and addressing these opportunities was a secondary, although still significant consideration.
Step #2

A preliminary identification of the existing and potential Active Transportation routes within the community was completed. Twenty residents attended and contributed to an advertised community consultation session, held Tuesday September 16th 2008 at the Miner’s Hall. The feedback received, combined with extensive preliminary field assessments, a review of the land access status (using data collected by students from Selkirk College), and the knowledge base of the consultant, enabled a complete compilation of the routes which might enhance Active Transportation in the community.

Step #3

A thorough physical assessment of 45 Routes was completed, including:

- GPS mapping.
- Photos.
- Measurement of grades.
- Current condition and use.
- An assessment of the work required to upgrade to an effective condition.

Step #4

A thorough data acquisition and vetting process was completed. 25 residents attended and contributed to an advertised Community Consultation session, held Tuesday November 25th 2008 at the Miner’s Hall. A draft map was made available on the City’s website, and detailed feedback was provided by several residents. Consultations were held with City staff and various stakeholders, including:

- Mike Maturo (City Planner).
- Stacey Lightbourne (Assistant City Planner).
- Mike Thomas (City Engineer).
- Darren Albo (City Works Manager).
- Robin Hethey (Rossland Recreation).
- Kim Deane (Kootenay Columbia Trails Society).
- Pat Thompson (Rossland Seniors Association).
- Robert Felch (Redstone Golf Resort).
- Rob Fershau (Nowell 2 Land Design / Red Resort).
- Deanne Steven (Tourism Rossland).
- Dave Diplock (Bear Environmental).
- Rachel Russin (Bear Aware).
A draft plan was provided to City staff for review and comment.

**Step #5**

The list of routes was reviewed and consolidated to 24. Display maps were prepared for each route. The construction costs estimates were researched and completed. Additional information was sourced, and the presentation finalized. Twenty Four individual routes have been identified based on existing use, and envisaged potential linkages within the limitations of topography and land access.

The actual assessment sheets, annotated photos, sketches (Appendix # 7) and photographs (Appendix # 8) of the routes are compiled in a separate binder and on a compact disc. This detailed source material may be required for funding applications and for the implementation of specific projects.
Route Assessments

The AT routes have been assessed based on the following criteria:

**Estimated amount of Use**
Rated on a relative scale of 1-5 (5 being highest use) if developed as specified.

**Utility as a Proximity Connection**
Rated on a relative scale of 1-5 (5 being highest utility) if developed as specified. It attempts to quantify the value of a route as a connection within a neighborhood.

**Utility as a Transportation Route**
Rated on a relative scale of 1-5 (5 being highest utility) if developed as specified. It attempts to quantify the value of a route as a connection between a significant neighborhood population and a significant destination (transportation driver) within the community.

**Utility as an Experience Trail**
Rated on a relative scale of 1-5 (5 being highest utility) if developed as specified. It attempts to quantify the value of a route as a recreational experience in and of itself.

**Current Utilization**
Rated on a relative scale of 1-5 (5 being highest use). It attempts to quantify how much use it’s receiving in its’ current condition.

**Legal Access to Land**
Rated on a relative scale of 1-5 (5 being no issues). It attempts to quantify the difficulty of obtaining dedicated legal access to the necessary land.

**Construction Costs Estimates**
Detailed construction estimates have been provided for each potential route. Actual costs may vary.
The basis for the estimates is detailed in Appendix # 4.

The categories classifying (Types 1, 2, and 3) the physical characteristics of the sections of each route are detailed in Appendix # 3.
Support from Adjacent Residents
Rated on a relative scale of 1-5. (5 being no anticipated issues). Estimation based on observation and limited consultation. Actual support may vary.

Cycling Use
Rated on a relative scale of 1-5 (5 being highest anticipated use), estimated based on the physical characteristics of the route.

Winter Use
Rated on a relative scale of 1-5 (5 being highest anticipated use) estimated based on the physical characteristics of the route and the anticipated winter maintenance (snow-clearing etc.).

Safety Issues Addressed
Rated on a relative scale of 1-5 (5 addressing the most significant issues). Locations which have been identified as being of concern from the standpoint of pedestrian safety are detailed in Appendix # 1.

Establishing Priorities
Following the completion of the individual assessments, a value as to the overall priority of each route as a percentage was established using a weighted formula: (Potential Use x 3) + (Proximity Use + (Active Transportation x 3) + Experience + Land Access + Resident’s support + Cycling + Winter Use + (Safety x 2). Those routes which scored over 75% were rated as high priority, over 60% as medium, and the rest as low. Note that only the most promising routes were included in this document (original assessment forms for all routes assessed are included in Appendix # 7).
## Routes

### Summary

<table>
<thead>
<tr>
<th>Route Description</th>
<th>Potential Use</th>
<th>Proximity Use</th>
<th>Transportation Experience</th>
<th>Experience</th>
<th>Land Access</th>
<th>Residents</th>
<th>Current Use</th>
<th>Cycling</th>
<th>Winter Use</th>
<th>Safety</th>
<th>Ranking %</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Centennial Trail</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>80</td>
<td>H</td>
</tr>
<tr>
<td>2 Centre Star Gulch</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>76.7</td>
<td>H</td>
</tr>
<tr>
<td>3 Third - Hwy 3B</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>L</td>
</tr>
<tr>
<td>4 Columbia Ave - Casa Alpina</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>65</td>
<td>M</td>
</tr>
<tr>
<td>5 First Ave – Columbia Ave</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>55</td>
<td>L</td>
</tr>
<tr>
<td>6 Miners Hall - Nevada</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>86.7</td>
<td>H</td>
</tr>
<tr>
<td>7 Nevada - Mining Museum</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>78.3</td>
<td>H</td>
</tr>
<tr>
<td>8 Upper Trail Creek</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>60</td>
<td>M</td>
</tr>
<tr>
<td>9 Lower Rossland Sidewalks</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>78.3</td>
<td>H</td>
</tr>
<tr>
<td>10 Le Roi Hollow</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>71.7</td>
<td>M</td>
</tr>
<tr>
<td>11 Campbell Ave</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>60</td>
<td>L</td>
</tr>
<tr>
<td>12 Victoria Ave Trails</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>61.7</td>
<td>M</td>
</tr>
<tr>
<td>13 Lower Trail Creek</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>65</td>
<td>M</td>
</tr>
<tr>
<td>14 Pinewood - Columbia Ave</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>68.3</td>
<td>M</td>
</tr>
<tr>
<td>15 Pinewood - Downtown</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>81.7</td>
<td>H</td>
</tr>
<tr>
<td>16 Columbia Ave Sidewalk</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>76.7</td>
<td>H</td>
</tr>
<tr>
<td>17 Butte - Kootenay</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>46.7</td>
<td>L</td>
</tr>
<tr>
<td>18 Old Railgrade - Butte</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>45</td>
<td>L</td>
</tr>
<tr>
<td>19 St Paul Sidewalk</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>78.3</td>
<td>H</td>
</tr>
<tr>
<td>20 Second -Third</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>63.3</td>
<td>M</td>
</tr>
<tr>
<td>21 Fifth - Railway</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>58.3</td>
<td>M</td>
</tr>
<tr>
<td>22 Eighth - Columbia Kootenay</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>58.3</td>
<td>L</td>
</tr>
<tr>
<td>23 Elmore - McLeod</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>50</td>
<td>L</td>
</tr>
<tr>
<td>24 McLeod - Elmore</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>61.7</td>
<td>M</td>
</tr>
</tbody>
</table>
City of Rossland Active Transportation Map

The Routes are also represented visually on the attached full-sized display map in Appendix # 6.
The Routes are also represented visually on the attached full-sized display map in Appendix #6.
Legend - Route Assessment Maps

- - - - Proposed Route - Type 1 Trail
- - - Proposed Route - Type 2 Trail
- - - - Proposed Route - Type 3 Trail
- - - - Proposed Road Crossing
$ Sign Installation
Existing KCTS Trail
Existing Covered Stair
Existing Sidewalk

The purpose of this Active Transportation Plan is to increase the demand for non-motorized movement within the urban environment of Rossland B.C.
1. Centennial Trail

Priority – High (80%)

The Centennial trail is a wide, moderate-angled, multi-use trail connecting Rossland to Red Mountain Resort. It is suitable for all non-motorized activities, provides links to the adjacent network of walking and mountain biking trails, and is groomed for cross-country skiing in winter. Providing a dedicated trail corridor of appropriate specifications along its entire length is an urgent priority.

Estimated amount of use – 4/5
It would receive a high level of mainly recreational use.

Utility as a Proximity Connection – 1/5
There are currently few adjacent residents, although this may change with development.

Utility as a Transportation Route – 3/5
It is the primary Active Transportation corridor between Rossland and Red Resort. There is much potential to increase the number of active commuters.

Utility as an Experience Trail – 5/5
It is a wide, scenic trail on undulating terrain that attracts many recreational users.
Current Utilization – 4/5
It is Rossland’s most popular recreational trail.

Legal Access to Land – 4/5
Most of the trail is located on property owned by the City of Rossland, Red Resorts and Teck. When duplicating the trail along O’Flanagan’s Rd there may be a need to cross Lot A Plan NEP62765.

Support from Adjacent Residents - 4/5
There is some potential for concerns from adjacent residents regarding duplicating O’Flanagan’s Rd.

Cycling Use - 5/5
It is suitable for cyclists of all abilities

Winter Use - 5/5
It receives high amounts of winter activity from walkers, snow-shoers and cross country skiers, for which it is groomed and often track-set (current issues notwithstanding).

Safety Issues Addressed - 5/5
It diverts most pedestrian and cycling activity away from the busy shoulder of Hwy 3B.

Construction Costs Estimate
The goal of the recommended upgrades is to establish a dedicated route at an acceptable grade for the entire distance of the trail, with a view towards surfacing the trail when demand and resources justify such expenditure. Gravel surfacing will maintain consistency with the rest of the trail. An excavator, dump-truck, and skid-steer will be required to complete the work.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>35m of Type 1 trail adjacent to the Water Treatment Plant access road</td>
<td>$1500</td>
</tr>
<tr>
<td>Designated crossing of the Water Treatment Plant access road</td>
<td>$1000</td>
</tr>
<tr>
<td>Infill and reduce the grade (currently 14%) of 20 m of Type 1 trail, climbing North East from the Water treatment plant access road.</td>
<td>$5000</td>
</tr>
<tr>
<td>Create a designated and safely managed (install warning sign for traffic) crossing of the Old Red Mountain Road.</td>
<td>$1000</td>
</tr>
<tr>
<td>Construct 300 m of Type 1 trail adjacent to O’Flanagan’s Rd.</td>
<td>$5000</td>
</tr>
<tr>
<td>Gravel Surfacing (355m x 1.25m x 0.1m)</td>
<td>$5000</td>
</tr>
</tbody>
</table>
Install 10 signs. $5000
Project Management $2300
Total: $25,800

**Additional Information**

- Access across Lot A Plan NEP62765 may be required depending on the final layout.
- All completed sections should meet the requirements for winter grooming. Consulting with Blackjack and Red Resorts is appropriate.
- Managing a crossing of Old Red Mountain Rd is unlikely (based on conversations with the area manager) to receive the cooperation of the Ministry of Transportation and Infrastructure.
- Providing a dedicated trail corridor of appropriate specifications along the trail’s entire length is a prerequisite for paving the entire length of the trail, which may be appropriate as the Red Mountain base area develops further.
2. Centre Star Gulch

**Priority – High (76.7%)**

There is the potential to construct a major new urban path connecting Downtown to Upper Rossland and the Centennial trailhead. Some of the route follows what was a popular neighborhood trail (until construction blocked access) however a much more significant and accessible pathway is envisaged.

**Estimated amount of Use – 4/5**

It would receive a high level of both recreational and commuting use.

**Utility as a Proximity Connection – 4/5**

It would create significant new linkages within the adjacent neighborhoods.

**Utility as a Transportation Route – 4/5**

It would provide a major connection between Upper Rossland neighborhoods and Downtown, and between Downtown and the Centennial trailhead, Nickleplate Park and the Arena. It would provide a stroller and bike friendly alternative to the covered stairs, and could be well utilized by seniors in the Esling Park Lodge.

**Utility as an Experience Trail – 4/5**

It would provide an appealing experience in a natural setting within the built environment of the City.
Legal Access to Land – 3/5
Most of the path would be located on City owned land, however it will require obtaining a legal easement of some sort across either 1807 or 1840 Planer Ave, and across 1840 3rd Ave.

Support from Adjacent Residents – 2/5
The path does skirt the rear boundary of several private properties so privacy concerns from some adjacent residents would be expected.

Current Utilization – 1/5
Although previously a popular route, recent construction has blocked access.

Cycling Use – 3/5
Although too physically demanding a climb for novices, it would be a popular and easy to navigate connection for cyclists between downtown and the Centennial trailhead.

Winter Use – 3/5
It would be used year round. It should be periodically cleared of snow and sanded to maximize safety and usability.

Safety Issues Addressed – 4/5
It would divert a significant amount of pedestrian and cycling traffic off the shoulder of Upper Washington and Plewman Way.

Construction Costs Estimate
The goal is to construct as wide and moderate graded trail as the very challenging terrain allows. A mini-excavator should be used where possible, although manual construction will be required on parts of 2B. A full sized excavator would be useful to install the culvert on 2D. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2A) Construction of 220 m of Type 2 trail on forested sidehill.</td>
<td>$2000</td>
</tr>
<tr>
<td>Road crossing on Kirkup Ave (should addressed as part of redesigning this</td>
<td>$250</td>
</tr>
<tr>
<td>intersection - Mike Thomas).</td>
<td></td>
</tr>
<tr>
<td>(2B) Construction of 165 m of Type 2 trail on a steep and rocky side-hill.</td>
<td>$6000</td>
</tr>
<tr>
<td>Will require retaining walls and felling of dangerous trees.</td>
<td></td>
</tr>
<tr>
<td>(2C) Construct 80 m of Type 2 trail across a flat open area.</td>
<td>$1000</td>
</tr>
<tr>
<td>Road crossings on 2nd Ave and 3rd Ave.</td>
<td>$500</td>
</tr>
<tr>
<td>(2D) Construct 220 m of Type 2 trail on steep forested and open terrain.</td>
<td>$5000</td>
</tr>
</tbody>
</table>
(2D) Construction of a major bridge or culvert. $5000
Gravel Surfacing (685m) $11500
Install 10 signs $5000
Bench $1000
Project Management (10%) $3600

Total $40,850

Additional Information
- Local residents describe this area as a bear movement corridor.
- An alternative location would need to be found for dumping snow off Planar Ave.
- The location of the trail seems to be a popular place to dump garden waste. A central location to dump garden waste within Rossland seems necessary to prevent continued dumping.
- The hill behind the Esling Park Lodge does receive some use in winter for tobogganing, and which would be compromised by the proposed path.

Route 2C follows the perimeter of the Arena parking lot.
3. Third Avenue – Highway 3B (Third Ave)

Priority – Low (51.7%)
There is an existing steep and rough trail extending from the dead-end of 3rd Ave up onto Hwy 3B. There is the potential to reroute this trail with a more moderate grade and to relocate the access point onto Hwy 3B adjacent to the Museum trailhead.

Estimated amount of Use – 3/5
It would receive a moderate amount of recreational use.

Utility as a Proximity Connection – 0/5
Not applicable.

Utility as a Transportation Route – 3/5
It connects upper Rossland to Hwy 3B and the Museum trailhead (when re-opened).

Utility as an Experience Trail – 1/5
It accesses the experience trail.

Legal Access to Land – 4/5
It is situated on an unused road allowance, however, the land could be required to access an undeveloped lot that is currently listed for sale.

Support from Adjacent Residents – 3/5
Two residents use the road allowance for property access, with the potential for further, more disruptive access in the future.

Current Utilization – 3/5
It provides the main access to Hwy 3B and Museum trailhead (when re-opened) for residents of the adjacent neighborhood. It appears to be well used.

Cycling Use – 3/5
It is currently well used for access to Highway 3B and the Museum trailhead, although its steepness dissuades novice riders. Reducing the grade would make the trail suitable for more cyclists and would increase use.

Winter Use – 2/5
There would be some year round use.
Safety Issues Addressed – 3/5
It will focus pedestrian traffic at a defined crossing on Hwy 3B and direct it towards the Museum trail (rather than the highway itself).

Construction Costs Estimate
The goal is to eliminate the steep and loose climb up onto Hwy 3B, and to relocate the access point onto the highway adjacent to the Museum trailhead. Manual trail building techniques would be recommended.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct 50 m of new Type 3 trail</td>
<td>$500</td>
</tr>
<tr>
<td>Crossing of Hwy 3B.</td>
<td>$250</td>
</tr>
<tr>
<td>Install two signs</td>
<td>$1000</td>
</tr>
<tr>
<td>Project management</td>
<td>$175</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>$1,925</strong></td>
</tr>
</tbody>
</table>

Additional Information
- It seems unlikely that the Ministry of Transportation and Infrastructure will cooperate with creating and managing a formal crossing of Hwy 3B.
4. Columbia Avenue – Casa Alpina

**Priority – Medium (65%)**

There is the potential to construct a new route linking Columbia Ave at the Miners Hall, through to the Casa Alpina Motel and the Mining Museum, with a branch connecting to the Horizon view Apartments. It would utilize both the used and unused sections of the Columbia/1st alley, and the remains of the Red Mountain railgrade. While it does not have the same potential for high use as some other routes, it is very scenic and provides great connectivity.

**Estimated amount of Use – 2/5**

It would receive a low to moderate amount of recreational and commuting use.

**Utility as a Proximity Connection – 0/5**

Not applicable.

**Utility as a Transportation Route – 3/5**

It would create a significant new connection between Rossland and the Mining Museum area.

**Utility as an Experience Trail – 4/5**

It would be a very scenic and dramatically situated trail, and would create multiple walking loops close to town.
Legal Access to Land – 4/5
It’s mostly situated on City owned land. Access would be required to Casa Alpina’s property, however given the obvious benefit to them, their cooperation can be assumed. The Columbia/1st alley provides vehicle access to several properties, so could be signed but not dedicated for pedestrian use.

Support from Adjacent Residents – 4/5
There is some potential of privacy and security concerns from residents of the Horizon View apartments, as the trail (4.1) will encourage public access to their parking area. Adjacent residents have landscaped the unused section of the Columbia/1st alley, which will be required for the path.

Current Utilization – 2/5
The Columbia/1st alley is well used by pedestrians and for some property access.

Cycling Use – 3/5
As a wide, moderate angled trail it would be very suitable for cycling.

Winter Use – 2/5
As a wide, moderate angled trail it would be very suitable for year round use, potentially including cross-country skiing.

Safety Issues Addressed – 4/5
It would divert pedestrians from using the shoulder of Columbia Ave and Hwy 3B to access the Mining Museum area.

Construction Costs Estimate
The goal is to establish as wide and moderate graded trail as the terrain allows. A mini-excavator should be used, and should make easy progress once vegetation is cleared manually from the old railgrade. Some engineering might be required to cross the 100m section of very steep and unstable ground. Sign 210 m of low vehicle use unpaved alley as a route. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. Establish a signed crossing on Columbia Ave.
Construction of 330 m of Type 2 trail on an existing overgrown railway bed. $2000

Construction of 100 m of Type 2 trail across a very steep and unstable slope. $5000

(4.1) Construct 70 m of Type 2 trail on a steep forested side-hill. $700

Construct 100 m of Type 2 trail on a cleared, moderate angled, unused alley. $500

Gravel surfacing (500m) $8750

Install 8 signs $4000

Pedestrian crossing on Columbia Ave. $1,000

Project management $2150

Total $24,100

Additional Information

• There may also be an opportunity to link through to the Nickleplate Apartments along the perimeter of the lot that is being developed.

• The proposed route would provide such an obvious benefit to the Casa Alpina Motel that some public/private funding partnership seems appropriate.

• Regardless of whether this route is created or not, a crossing should be established on Columbia Ave adjacent to the Miner’s hall, as it is an existing safety concern.
5. First Avenue – Columbia Ave (Davis St)

**Priority – Low (55%)**

There is an existing, very steep path linking First Ave, along the unused Davis St road allowance down towards the Miner’s Hall and Columbia Ave. There is potential to upgrade this path to a sustainable standard.

**Estimated amount of Use – 3/5**

It would receive a moderate amount of commuting use (it only services a small neighborhood).

**Utility as a Proximity Connection – 4/5**

It would be a useful shortcut to the Miner’s Hall and Nickleplate Park.

**Utility as a Transportation Route – 2/5**

It only services a relatively small neighborhood.

**Utility as an Experience Trail – 2/5**

The trail descends through forested terrain and is modestly scenic, but isn’t long enough to be a destination in its own right.

**Legal Access to Land – 5/5**

It’s entirely situated on an unused road allowance.

**Support from Adjacent Residents – 5/5**

No issues are anticipated.

**Current Utilization – 2/5**

There is evidence of consistent low use.

**Cycling Use – 1/5**

It would be far too steep to be suitable for cycling, however would receive some use for descending.

**Winter Use – 2/5**

Although steep and slippery (warning signs required) during winter it would see some year round use.

**Safety Issues Addressed – 1/5**

The trail itself is a hazard in its current condition.
Construction Costs Estimate
The goal is to create a moderate angled and sustainable trail using manual trail-building construction methods.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct 90 m of Type 3 trail on very steep forested terrain, with multiple switch-backs.</td>
<td>$1000</td>
</tr>
<tr>
<td>Install 2 signs.</td>
<td>$1000</td>
</tr>
<tr>
<td>Project management</td>
<td>$200</td>
</tr>
<tr>
<td>Total:</td>
<td>$2,200</td>
</tr>
</tbody>
</table>

Route 5 provides a useful connection within the neighborhood.
6. Miner’s Hall – Nevada Street (Columbia/Le Roi Alley)

Priority – High (86.7%)

A potential important new route from the termination of the pavement on Columbia as it heads west past the Miner’s Hall, down onto the Columbia/Le Roi alley, then along the alley as far as Nevada St, with a short, steep branch down onto Le Roi Ave. It would provide a safe and practical route to and from downtown for a significant neighborhood.

Estimated amount of Use – 5/5
It would receive a high amount of both recreational and commuting use.

Utility as a Proximity Connection – 3/5
Would provide some additional connectivity.

Utility as a Transportation Route – 5/5
Would serve as the major connection from the western sector of Lower Rossland to Downtown and the schools.

Utility as an Experience Trail – 3/5
Connects with Route #7 to create an entirely off-road connection between Downtown and the Museum area.

The alley provides a wide and level pedestrian route.
Legal Access to Land – 5/5
It is situated on alley and road allowances.

Support from Adjacent Residents – 2/5
There is a high likelihood of privacy concerns from adjacent residents. Some adjacent residents have landscaped and installed concrete barriers on the alley. Ideally the route would be dedicated for Active Transportation use, in which case there is a high likelihood of concerns from residents impacted from loss of rear access to their property, specifically at:

• 1585 Columbia Ave.
• 1603 Columbia Ave.
• 1641 Columbia Ave.
• 1481 Columbia Ave.
• 1449 Columbia Ave.

Current Utilization – 1/5
Minimal due to encroachment.

Cycling Use – 4/5
The level grade would make it suitable for most users.

Winter Use – 5/5
Very high, especially if resources were found to clear it of snow.

Safety Issues Addressed – 5/5
Addresses a major (the most regularly identified in consultations) safety issue at the termination of the sidewalk on Columbia Avenue.

Construction Costs Estimate
The goal is to create a wide smooth easy angled trail. Use an excavator and loads of fill to construct the raised ramp. Use a skid-steer to clear and grade the unused alley. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. 6.1 can be built using manual construction.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction 50 m of Type 2 trail on a raised ramp angling down from Columbia Ave onto the alley.</td>
<td>$2000</td>
</tr>
<tr>
<td>Close vehicle access onto Cliff St from Columbia Ave.</td>
<td>$1000</td>
</tr>
<tr>
<td>Construction of 100 m of Type 2 trail on a level unpaved low vehicle use alley.</td>
<td>$500</td>
</tr>
</tbody>
</table>
Construction of 100 m of Type 2 trail on a level cleared unused alley. $1000

(6.1) Re-route 40 m of Type 3 trail. $500

Install 6 signs. $3000

Gravel Surfacing (250m) $4000

Project Management $1200

Total $13,200

Additional Information

- Closing vehicle access from Columbia Ave onto Cliff St would be contentious, but would greatly enhance the possibilities for creating a functional pathway.
- Closing the entire alley to vehicles would be controversial to affected, local residents, but a dedicated pedestrian corridor would be far more appealing to potential users.

An excavated ramp will be required to access the alley from Columbia Ave.
7. Nevada Street – Mining Museum

Priority – High (78.3%)

A potential new route linking Nevada St through to Centennial park and the Mining Museum, with spur linkages to the Lions campground, Seven Summits Service, and the Drakes trailhead. It would link with Route #6 to create an entirely off-road route from Downtown to the Mining Museum.

Estimated amount of Use – 3/5

It would receive a moderate amount of mainly recreational use.

Utility as a Proximity Connection – 2/5

Some local connectivity.

Utility as a Transportation Route – 4/5

Would function as a major connection between Downtown, the Lions Campground, Paradise Mountain Trailer Park, the Museum area, Drakes and Museum trailheads. Also as a seasonal connection from between the Lions Campground and 7 Summits Service.

Utility as an Experience Trail – 5/5

A highly attractive and scenic trail in a unique setting within city limits.
Legal Access to Land – 5/5

It is located on City owned land, and within the Dunn Crescent road allowance.

Support from Adjacent Residents – 4/5

There is a potential issue with replacing the retaining wall at 1340 Dunn Crescent.

Current Utilization – 1/5

Some existing sections are currently in use.

Cycling Use – 5/5

It would serve as a major connection for cyclists, especially to access and navigate to the Museum and Drakes trailheads.

Winter Use – 4/5

It would be a moderate angled trail suitable for four season use. It could be suitable for XC skiing, with some potential for track setting.

Safety Issues Addressed – 4/5

It would divert pedestrian and cycling traffic off the shoulder of the steep hill at the eastern end of Columbia Ave.

Construction Costs Estimate

The goal is to construct a moderate angled multi-use trail. A mini-excavator should be used (manual construction for 7.1). Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. Replace the retaining wall on Dunn Crescent to allow a path below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction of 450 m of Type 2 trail on moderate angled open ground.</td>
<td>$2500</td>
</tr>
<tr>
<td>Construction of 500 m of Type 2 trail on steep and very steep side-hill, open and forested terrain.</td>
<td>$4000</td>
</tr>
<tr>
<td>Reconstruction of the retaining wall at 1340 Dunn Crescent to include space for Type 2 trail along the perimeter of Dunn Crescent.</td>
<td>$5000</td>
</tr>
<tr>
<td>(7.1) Minor upgrades to 100m of existing single-track.</td>
<td>$500</td>
</tr>
<tr>
<td>Gravel Surfacing (950m)</td>
<td>$15,000</td>
</tr>
<tr>
<td>Crossing on Nevada St, Dunn Crescent, and Highway 22 (at the Museum) Crossing of Columbia Ave.</td>
<td>$1000</td>
</tr>
</tbody>
</table>
Install 9 Signs.  
$4500

Project Management  
$3250

Total  
$35,750

Additional Information

- The retaining wall on Dunn Crescent could be budgeted separately, as it appears to be in urgent need of repair.
- The crossing of Columbia Ave to Seven Summits Service should be addressed as part of the planned intersection redesign (Mike Thomas).

Additional planning is required for parking and vehicle access to Centennial Park.
8. Upper Trail Creek

Priority – Low (60%).

There is potential to create a new route linking Nevada St to Dunn Crescent along Upper Trail Creek, with a branch connecting to the terminus of Cooke Ave.

Estimated amount of Use – 3/5

It would receive a moderate amount of mainly recreational use.

Utility as a Proximity Connection – 2/5

It would serve as a useful short-cut for residents in the proximity.

Utility as a Transportation Route – 2/5

It would only be useful to the upper Dunn Crescent neighborhood, as a connection to the rest of Rossland.

Utility as an Experience Trail – 4/5

It is situated in a beautiful natural setting adjacent to Trail Creek.

Legal Access to Land – 5/5

It is situated on City owned land.

Support from Adjacent Residents – 4/5

There is some potential for privacy concerns from adjacent residents.

Current Utilization – 0/5

There is no evidence of current use.
Cycling Use – 4/5
It would create a moderate angled cycling route.

Winter Use – 4/5
It would function as a year round connection.

Safety Issues Addressed – 1/5
Would divert some pedestrian traffic off Dunn Crescent

Construction Costs Estimate:
The goal is to construct a moderate angled singletrack trail. Manual construction should be used.

<table>
<thead>
<tr>
<th>Construction</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction of 320 m of Type 3 trail on forested side-hill.</td>
<td>$3200</td>
</tr>
<tr>
<td>(8.1) Construction of 130 m of Type 3 trail on moderate angled brushy ground.</td>
<td>$1300</td>
</tr>
<tr>
<td>Construction of two bridges.</td>
<td>$4000</td>
</tr>
<tr>
<td>Install 4 signs.</td>
<td>$2000</td>
</tr>
<tr>
<td>Project management</td>
<td>$1000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$11,500</strong></td>
</tr>
</tbody>
</table>

Additional Information
• Construction within a riparian area might impose limitations on construction techniques.
9. Lower Rossland Sidewalks

Priority – High (78.3%)

Le Roi Ave, Davis St, and Thompson Ave provide the obvious moderate angled access route from Lower Rossland to Downtown, for both vehicles and pedestrians. Installing dedicated pedestrian sidewalks on these roads seems an obvious priority.

Estimated amount of Use – 5/5
They would receive a high amount of commuting use.

Utility as a Proximity Connection – 5/5
Highest use.

Utility as a Transportation Route – 5/5
Connects much of lower Rossland to downtown. Provides connectivity through to the Railgrade trailhead and Redstone.

Utility as an Experience Trail – 1/5
Perhaps to some.

Legal Access to Land – 5/5
Within existing road allowances.

Support from Adjacent Residents – 2/5
There is good likelihood of parking and access concerns from adjacent residents. Residents have appropriated the road allowance for parking stalls, such as at 1875 Le Roi Ave.
Current Utilization – 0/5
People currently walk on the shoulder/ side of the road.

Cycling Use – 1/5
Most cyclists would use road.

Winter Use – 4/5
Would be well used if kept clear of snow and gravelled.

Safety Issues Addressed – 4/5
Would keep pedestrian traffic off these relatively busy roads.

Construction Costs Estimate
Construction of concrete sidewalks, with curbs to provide physical separation from the road surface. Marked road crossings.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(9A) Construction of 250 m of sidewalk with curb</td>
<td>$62,500</td>
</tr>
<tr>
<td>Crossing on Thompson Ave at Davis St intersection.</td>
<td>$250</td>
</tr>
<tr>
<td>(9B) Construction of 280 m of sidewalk with curb</td>
<td>$70,000</td>
</tr>
<tr>
<td>Crossings on Cooke Ave, Kootenay Ave and Le Roi Ave.</td>
<td>$500</td>
</tr>
<tr>
<td>(9C) Construction of 250 m of sidewalk with curb.</td>
<td>$62,500</td>
</tr>
<tr>
<td>Install 5 Signs</td>
<td>$2500</td>
</tr>
<tr>
<td>Project management</td>
<td>$20,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$218,250</strong></td>
</tr>
</tbody>
</table>

Additional Information
- The 12% grade on Thompson is particularly steep.
- The stability of the steep bank below Le Roi Ave has not been established and may require a retaining wall.
- The positioning of the sidewalk in relation to existing signs, trees, poles etc. has yet to be established.
- There does seem need for some planning for the area above the Cooke park, currently used as a parking area and school bus pick-up point, which could be integrated with the proposed sidewalk.
A sidewalk on Davis St will service much of Lower Rossland.
10. Le Roi Hollow

Priority – Medium (71.7%)

In the absence of any known established terminology, I’m using Le Roi Hollow to refer to the area undeveloped land behind and below Ferraro Foods. This area of City owned land and unused road allowances, is bound at the top by a steep loose embankment, has a flat area at its centre, currently being used to dump waste material and dirt, and at the bottom a forested draw extending down to Cooke Ave. There does seem a great opportunity for the City to develop a comprehensive management plan for the area, which might consist of some sort of park with trails, including covered stairs to replace the steep ‘goat-path’ that currently exists, and a moderate angled route traversing across the whole slope.

Estimated amount of Use – 3/5
They would receive a moderate amount of recreational and commuting use.

Utility as a Proximity Connection – 4/5
High use by neighborhood in the vicinity of Kootenay Ave and Washington St.

Utility as a Transportation Route – 3/5
Connects lower Rossland to Downtown.

Le Roi Hollow is currently being used as a dump site for dirt and waste.

The top of existing Route 10A is particularly steep and rough.
Utility as an Experience Trail – 4/5
Could be a very desirable experience if cleaned up and developed as a park.

Legal Access to Land – 5/5
City owned land.

Support from Adjacent Residents – 5/5
No anticipated issues

Current Utilization – 3/5
Limited by the steep grade and poor condition of the trail following the construction of Ferraro Foods.

Cycling Use – 1/5
(10A) – stairs unsuitable for bikes. (10B) – would receive limited use by cyclists.

Winter Use – 4/5
Would receive year round use.

Safety Issues Addressed – 4/5
Existing trail is steep and difficult all year round, but especially in winter.

Construction Costs Estimate
It is very difficult to prepare a budget until a comprehensive plan for this entire area is developed, however the following figures will serve as a preliminary estimate.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>10A - Construction of Covered stairs for 30 m down a 30% grade.</td>
<td>$12000</td>
</tr>
<tr>
<td>10A - Upgrading of 150 m of existing rough trail to Type 2 trail</td>
<td>$500</td>
</tr>
<tr>
<td>(steep 18-20% grade)</td>
<td></td>
</tr>
<tr>
<td>10B - Construction of 200 m of Type 2 trail across a steep and unstable</td>
<td>$5000</td>
</tr>
<tr>
<td>partially forested slope.</td>
<td></td>
</tr>
<tr>
<td>Gravel Surfacing (450m)</td>
<td>$8000</td>
</tr>
<tr>
<td>Environmental Assessment.</td>
<td>$10000</td>
</tr>
<tr>
<td>Major clean-up and landscaping (stabilization and rehabilitation) of</td>
<td>$25,000</td>
</tr>
<tr>
<td>entire area required.</td>
<td></td>
</tr>
<tr>
<td>Install 4 Signs</td>
<td>$2000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$6250</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$68,750</strong></td>
</tr>
</tbody>
</table>

Route 10B - an existing road leads into Le Roi Hollow from Kootenay Ave.
Additional Information

• This area does not seem to be managed in any way, with refuse of all sorts dumped in a random fashion. The costs to assess and clean-up this site are purely speculative.
• The City Works Department is dumping dirt on the site with the expressed intention (although not part of any formal plan) of eventually linking Kootenay Ave through the area.

Route 10B - additional planning is required for this area.
11. Campbell Avenue

Priority – Low (60%)

The unused Campbell Ave road bed parallels Hwy 3B, and appears to offer great potential to create a route linking Thompson Ave and the eastern end of lower Rossland to Downtown. However, direct questioning of residents did not indicate that it would be well used. It seems that the major elevation gain is currently a significant deterrent, walking to and from downtown, and the only available access point would require people to back-track from the on-road pedestrian route now in use. While not meeting an immediate need, if it were built it would deliver a quality experience and so would generate increased use over time.

Estimated amount of Use 2/5
It would receive a moderate amount of mainly recreational use.

Utility as a Proximity Connection – 2/5
Moderate

Utility as a Transportation Route – 3/5
Connects residents of the eastern end of lower Rossland to Downtown. Provides access to Ross Glen Park and the Bike Skills Park.

Utility as an Experience Trail - 4/5
Provides beautiful views, and a bucolic experience within the urban environment.

A high quality trail service will encourage people to walk rather than drive.

Route 11 provides panoramic views over Lower Rossland.
Legal Access to Land – 5/5
Situated on an existing road allowance and City owned land.

Support from Adjacent Residents – 2/5
Likelihood of privacy and access concerns from adjacent residents. There is significant encroachment by adjacent residents, including 2476 Thompson Ave, and others who have landscaped and installed sheds on the road allowance.

Current Utilization - 1/5
Minimal use.

Cycling Use - 3/5
Would provide convenient access to the Bike skills park. Could link with route #10B.

Winter Use - 3/5
Potential for year round use.

Safety Issues Addressed – 5/5
Diverts pedestrians off Hwy 3B.

Construction Costs Estimate
The goal is to construct a moderate angled multi-use trail. A mini-excavator should be used. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. A dump truck may be necessary to remove the accumulated garden waste.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct 200 m of Type 2 trail on steep forested side-hill</td>
<td>$2000</td>
</tr>
<tr>
<td>Upgrade 310 m of existing unused overgrown road-bed to Type 2 trail.</td>
<td>$3000</td>
</tr>
<tr>
<td>Removal of substantial amounts of garden waste.</td>
<td>$1000</td>
</tr>
<tr>
<td>Gravel Surfacing (200m)</td>
<td>$3600</td>
</tr>
<tr>
<td>Install 4 signs.</td>
<td>$2000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$1150</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$12,750</strong></td>
</tr>
</tbody>
</table>
**Additional Information**

- The location of the trail seems to be a popular place to dump garden waste. A central location to dump yard waste within Rossland seems necessary to prevent such future activity.
- The legality and safety of using Campbell Ave to access the rear of properties from Hwy 3B is unclear, and should be established prior to constructing a path.

Rosslanders of all ages enjoy being active regardless of the season.
12. Victoria Avenue Trails

Priority – Medium (61.7%)

The opportunity is to improve one existing (12B) and develop two new, short trails, all extending from the corner of Victoria Ave and Spokane St, that would provide important pedestrian and bicycle linkages. 12B is already fairly well used. 12A effectively extends the Railgrade trail to a safer and more accessible location. 12C connects two major trail corridors to create a loop trail experience.

Estimated amount of Use – 3/5
They will receive a moderate amount of commuting and recreational use.

Utility as a Proximity Connection – 2/5
12B provides an important neighborhood short-cut.

Utility as a Transportation Route – 3/5
12A would provide an important connection from lower Rossland through to the Railgrade trailhead.
12C would connect with the proposed Trail Creek trail to create a larger connection between Redstone to Downtown, and create loop trail experience with the Trail Creek trail, the Rubberhead trail, the Railgrade, and 12A.
12B connects Lower Rossland to Spokane Ave heading towards Southbelt.
Utility as an Experience Trail – 2/5
These routes are attractive, but are too short to provide a significant experience in and of themselves.

Legal Access to Land – 5/5
They are all situated on unused road allowances and City owned property.

Support from Adjacent Residents – 4/5
There is some potential for privacy concerns by adjacent residents. There is significant encroachment on the proposed route of 12A, at 1968 Union Ave where a deck and landscaping are situated on City owned property.

Current Utilization – 3/5
12B receives regular use by pedestrian traffic and some bike usage.
12A has no trail and no evidence of use.

Cycling Use – 3/5
Both 12A and 12C have good potential for cycling use. 12B is too steep.

Winter Use – 3/5
12A would receive a considerable amount of winter use, 12B and 12C less so.

Safety Issues Addressed – 3/5
12A would divert pedestrian and cycling activity (too and from the Railgrade trail) from a busy section of Union Ave.

Construction Costs Estimate
Utilize a mini-excavator for the Type 2 trail, and manual techniques for the type 3 trail. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor.

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>12A</td>
<td>Construction of 120 m of Type 2 trail on a level heavily forested alley</td>
<td>$2000</td>
</tr>
<tr>
<td>12B</td>
<td>Upgrading 60 m of existing trail to sustainable Type 3 trail.</td>
<td>$800</td>
</tr>
<tr>
<td>12C</td>
<td>Construction of 120 m of Type 2 trail across a moderate angled grassy field.</td>
<td>$1500</td>
</tr>
</tbody>
</table>
Gravel surfacing (240m) | $4000
Install 6 signs. | $3000
Project Management | $1100

Total | $12,400

Additional Information

- Overall usage of 12B would decrease with the construction of route 12A, which would divert most Railgrade users.
- The feasibility of 12C is largely dependent on route 13 being built, which would significantly increase AT traffic in the area.
13. Lower Trail Creek trails

Priority – Medium (65%)

There is an opportunity to link some poorly maintained existing trails with new trail construction to create a comprehensive network of trails utilizing a significant amount of City owned land to connect Lower Rossland with the Redstone subdivision. These could conceptually function as commuting trails, but their real value would be to provide high quality recreational experiences within walking distance of many residents, encouraging them to be active and not drive.

Estimated amount of Use – 4/5
They would receive a high amount of mainly recreational use.

Utility as a Proximity Connection – 2/5
Some new local linkages would be created.

Utility as a Transportation Route – 3/5
It would create an important connection between Redstone Resort and Lower Rossland, as well as connecting to the KCTS trail network. It would significantly reduce the incidence of people driving to the Centennial trial for an equivalent experience.

Utility as an Experience Trail – 5/5
It would be a very scenic and significant trail experience, creating what would be a popular and accessible loop with the Rubberhead and Railgrade trails.
Legal Access to Land – 3
Much of the trails are located on City Property, however obtaining legal access across private property will be required:
• 1085 Esling Ave (the owners have indicated their support).
• 888 Esling Ave (the owners have indicated their support).
• Proposed Chinese Gardens sub-division (owners currently in negotiation with the KCTS).

Support from Adjacent Residents – 3/5
There is some potential of privacy concerns from adjacent residents. A section of 13B appears but is not actually on the property at 1444 Queen St.

Current Utilization – 1/5
There is some use of 13B, and an existing section of 13A.

Cycling Use – 4/5
The trails would create a popular cycling link through to the Rubberhead Trail and would access the Bike Skills Park.

Winter Use – 4/5
The trails would receive year round use, and could be used for XC skiing.

Safety Issues Addressed – 2/5
The trails would divert some pedestrian and cycling activity from Thompson Ave and from a busy section of Union Ave.

Construction Costs Estimate
The goal would be to construct moderate angled multi-use pathways. A mini-excavator should be used wherever possible, although manual techniques will be required in close proximity to Trail Creek. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. A bench should be added at a scenic viewpoint.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>13A - Construction of 740 m of Type 2 trail on a variety of forested and open terrain adjacent to Trail Creek</td>
<td>$10,000</td>
</tr>
<tr>
<td>13B - Upgrade existing rough trail to 550 m of sustainable Type 2 trail, across moderate angled, open, but boggy terrain. Includes significant drainage features.</td>
<td>$5,000</td>
</tr>
<tr>
<td>Gravel Surfacing (1290m)</td>
<td>$22,000</td>
</tr>
<tr>
<td>Install 1 bench.</td>
<td>$1000</td>
</tr>
<tr>
<td>Install 8 signs.</td>
<td>$4000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$4200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$46,200</strong></td>
</tr>
</tbody>
</table>
Additional Information

• Construction within a riparian area might impose limitations on construction techniques.
• If the trail proves as popular as expected, there may be a need to provide parking at the trailhead.
14. Pinewood – Columbia Ave

Priority – Medium (68.3%)

There is an opportunity to create a potential new trail connecting the Pinewood neighborhood and Columbia Ave. This would provide a defined attractive, and safe to route for the children of Pinewood to walk too and from the schools, and a useful Active Transportation corridor for all residents of Pinewood.

Estimated amount of Use – 3/5
It would receive a moderate amount of commuting and recreational use.

Utility as a Proximity Connection – 3/5
It would add some connectivity within the neighborhood.

Utility as a Transportation Route – 4/5
It would connects residents of the Pinewood to Downtown (although route #15 is more direct), the Tennis courts, the churches and the schools.

Utility as an Experience Trail – 3/5
It would be an attractive, treed off-road experience with some views.

The section of View St below Kootenay Ave is steep, wide and rough.

The unused View St road allowance provides an obvious AT route.
Legal Access to Land – 5/5
It’s situated on an unused road allowance.

Support from Adjacent Residents – 3/5
There is some potential for privacy concerns from adjacent residents. There is some minimal encroachment (landscaping) on the road allowance.

Current Utilization – 1/5
Minimal use, primarily by Pinewood children as a short-cut to schools.

Cycling Use – 2/5
It’s a very steep climb, so would mostly used to descend.

Winter Use – 3/5
It would receive year round use, although snow clearing and sanding would be required. It is currently used as a tobogganing hill.

Safety Issues Addressed – 4/5
It would divert most pedestrian traffic off the very steep section of Park St, which is particularly hazardous in winter.

Construction Costs Estimate
Create a wide moderate angled path within the available corridor, using a mini excavator. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>270 m of machine built Type 2 trail on a steep to moderate, cleared, unused road allowance.</td>
<td>$2000</td>
</tr>
<tr>
<td>70 m of Type 2 trail on a railgrade and down a steep embankment.</td>
<td>$500</td>
</tr>
<tr>
<td>Gravel surfacing (340m)</td>
<td>$5000</td>
</tr>
<tr>
<td>Crossings on Park St and Columbia Ave.</td>
<td>$1000</td>
</tr>
<tr>
<td>Install 6 signs</td>
<td>$3000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$1000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$9,000</strong></td>
</tr>
</tbody>
</table>
**Additional Information**

- This route will only provide the functional connections that would justify its construction once a sidewalk has been installed on Columbia Ave (Route #16)
- The Le Roi Ave section doesn’t receive enough vehicle traffic to require a dedicated pedestrian path.
- The section of path closest to Pinewood is shared with Route #15, although it has budgeted for in both construction costs estimates.

Priority – High (80%)

An undeveloped section of the Columbia & Western railgrade is currently utilized as a neighborhood path connecting Kootenay Ave to Hwy 3B. There is an opportunity to extend this path up adjacent to Hwy 3B to Columbia Ave, and down the Kootenay / Cooke alley and the View St road allowance to Pinewood. Such a route would provide an important Active Transportation connection between Pinewood and the adjacent neighborhoods, and Downtown.

Estimated amount of Use - 4/5
It would receive a high amount of commuting and recreational use.

Utility as a Proximity Connection – 3/5
It would provide significant connections within the adjacent neighborhoods.

Utility as a Transportation Route – 4/5
It would connect residents of Pinewood and adjacent neighborhoods to Downtown, and the schools.

Utility as an Experience Trail – 4/5
It would provide an attractive and historically significant off-road experience, with spectacular views.
Legal Access to Land – 4/5
It is located mostly within City owned property, road allowance, and alley. The section within the Hwy 3B road allowance and on Provincial lots would require negotiation with the administering authorities.

Support from Adjacent Residents – 3/5
There is potential for privacy and access concerns and from some adjacent residents.
There is significant encroachment on the proposed route:
• 2207 Columbia Ave - existing access stairs and path are located within the Hwy 3B road allowance.
• 2242 Le Roi Ave – landscaping on the alley.
• 2680 Cooke Ave - Resident has landscaped the entire adjacent City owned lot.
• Vehicle storage in the Kootenay / Cooke alley.

Current Utilization – 3/5
The Railgrade section receives moderate use.

Cycling Use – 4/5
Its’ moderate grade would make it ideal for users of all abilities, so high use would be expected.

Winter Use – 4/5
It’s suitable for year round use. It could be periodically cleared of snow to maximize usability.

Safety Issues Addressed – 5/5
It would divert pedestrian traffic off the steep section of Park St, and prevent an otherwise necessary crossing of Hwy 3B.

Construction Costs Estimate
Create a wide moderate angled path within the available corridor, using a mini excavator. Retaining walls may be required adjacent to Hwy 3B Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. Install a bench at view-point and historical interpretive signs on the C&W railgrade.
140 m of Type 1 trail within the Hwy 3B road allowance and on Provincial land. Complicated construction, retaining walls etc.  
$5000

320 m of Type 1 trail on existing railgrade.  
$500

160 m of low-vehicle-use alley.  
$500

50 m of Type 2 trail on unused alley right-of-way.  
$500

Road crossing on Park St.  
$500

Gravel Surfacing (570m)  
$10,500

Install 8 signs  
$4000

Install historical interpretive signs.  
$500

Install Bench.  
$1000

Project Management  
$2300

Total  
$25,300

Additional Information

• The section adjacent to Hwy 3B will require negotiating access with Ministry of Transport, and creating a design to provide an access ramp up onto Columbia Ave without compromising access to 2207 Columbia Ave.

The existing trail is a popular connector for residents of Rossland’s east side.
16. Columbia Ave Sidewalk

Priority – High (76.7%)

Columbia Ave is the main Active Transportation route into downtown for residents in the adjacent neighborhoods. Installing a sidewalk on the north side of the road would significantly increase the safety and appeal of this route. Identifying the path around the Catholic Church into the Monte Christo / Butte alley would, when linked with Route #14, provide a major route accessing the schools for adjacent neighborhoods down to Pinewood.

Estimated amount of Use – 5/5
It would receive a high amount of commuting and recreational use.

Utility as a Proximity Connection – 4/5
It would provide important connections within neighborhoods.

Utility as a Transportation Route – 4/5
It would connect residents from Pinewood and eastern Rossland to Downtown, the churches, and the schools.

Utility as an Experience Trail – 3/5
It’s situated on an attractive section of road, with little traffic, and great views.
Legal Access to Land – 4/5
It’s mostly located within the road allowance, however, access would be required across the Sacred Heart Catholic Church property at 2414 Columbia Ave.

Support from Adjacent Residents – 5/5
No issues anticipated.

Current Utilization – 0/5
Residents are currently walking on the road.

Cycling Use – 1/5
Most cyclists will continue to use the road.

Winter Use – 4/5
It would be used year round. Snow clearing would be required.

Safety Issues Addressed – 3/5
It would remove pedestrian traffic from the shoulder of Columbia Ave.

Construction Costs Estimate
Construction of standard sidewalk would be contracted out. The short section of new trail should be built using a skid-steer. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. Identify 70 m of low-vehicle-use alley (16.1) as a pedestrian route.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct 280 m of sidewalk and curb.</td>
<td>$70,000</td>
</tr>
<tr>
<td>50 m of Type 2 trail on Catholic Church lawn (2414 Columbia Ave).</td>
<td>$500</td>
</tr>
<tr>
<td>Gravel Surfacing (50m)</td>
<td>$800</td>
</tr>
<tr>
<td>Crossings on Monte Christo St, Butte St, and Georgia St.</td>
<td>$750</td>
</tr>
<tr>
<td>Install 5 signs</td>
<td>$2500</td>
</tr>
<tr>
<td>Project Management</td>
<td>$7500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$82,050</strong></td>
</tr>
</tbody>
</table>

Route 16.1 - The alley would be signed for pedestrian use.
Extending the sidewalk up Columbia Ave will provide a major thoroughfare to Downtown.

**Additional Information**
- There is a particularly steep grade (15%) on the last section of Columbia Ave. before Park St.
17. Butte Street - Kootenay Avenue

Priority – Low (46.7%)

A short, steep existing trail connects the dead-end of Butte St through to the dead-end of Kootenay Ave. Formalizing it land access status, signing the trail, and completing minor upgrades would maximize it's utility.

Estimated amount of Use – 2/5
It would only ever receive a moderate amount of commuting use, and perhaps less if Route #15 is developed.

Utility as a Proximity Connection – 3/5
It’s an important short-cut for residents of Kootenay Ave.

Utility as a Transportation Route – 2/5
It connects residents of Kootenay Ave to Downtown, the churches and the schools.

Utility as an Experience Trail – 2/5
It’s short, but very scenic.

Legal Access to Land – 3/5
Obtaining legal access across private property at 1833 Butte St will be required. (the owner has indicated their support).

Support from Adjacent Residents – 3/5
See above.

Current Utilization – 3/5
It receives regular use.

Cycling Use – 3/5
Minor upgrades would increase the suitability for cycling.

Winter Use – 2/5
It’s slippery and narrow, but still used during the winter (warning signs necessary).

Safety Issues Addressed – 2/5
It keeps pedestrians on roads which receive little traffic.
Construction Costs Estimate
The trail could be upgraded to a sustainable standard using manual techniques.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 m of Type 3 trail, requires only minimal upgrades to existing trail, using manual trail building construction.</td>
<td>$500</td>
</tr>
<tr>
<td>Install 2 signs</td>
<td>$1000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,700</td>
</tr>
</tbody>
</table>

Additional Information
- Obtaining long-term legal access across the private land (1833 Butte St.) should be a priority.

Access across 1833 Butte St has to be resolved.
18. Old Railgrade Road – Butte Street (Railgrade Cutting)

Priority – Low (45%)

The pronounced rock-cutting built for the Columbia & Western Railgrade is an interesting historical feature, and there is potential to use it to create a path linking Butte St at the 2nd /3rd Alley through to the end of 2nd Ave and down onto Old Railgrade Rd.

Estimated amount of Use – 3/5
It would receive a moderate amount of mainly recreational use.

Utility as a Proximity Connection – 3/5
It would provide a useful short-cut within the local neighborhood.

Utility as a Transportation Route – 1/5
It doesn’t really help, perhaps to access the tennis courts and the MacLean School for some residents.

Utility as an Experience Trail – 4/5
The rock-cut is an important historical and scenic feature, and providing access would also create a minor rock and ice-climbing area.

Implementing Route 18 will require resolving complicated land access issues.

Cleaning up the Rock-cutting will create a scenic and historic focal point within the community.
Legal Access to Land – 1/5
Some of it is located on an unused alley and City owned land, however it would require crossing three sections of privately owned, which may be difficult to negotiate:

- 2417 Third Ave.
- 2193 Old Railgrade Rd.
- Lot A Old Railgrade Rd.

Support from Adjacent Residents – 1/5
There would be major access issues (see above).

Current Utilization – 1/5
It receives minimal use. A short, light trail exists below Georgia/2nd Ave.

Cycling Use – 3/5
It could be an important cycling connection if constructed at a reasonable grade.

Winter Use – 3/5
It would be used year-round.

Safety Issues Addressed – 2/5
It would divert pedestrians from the surrounding roads.

Construction Costs Estimate
Use an excavator and dump-truck to clean up the rock-cut, a mini-excavator to build the trail through the rock-cut. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor. Use manual techniques to build the type 3 trail (and to minimize impact on adjacent residents).

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 m of Type 2 trail through the historic rock-cut.</td>
<td>$1500</td>
</tr>
<tr>
<td>Major clean-up of rock-cut – boulders, logs, and garden waste.</td>
<td>$1000</td>
</tr>
<tr>
<td>Gravel surfacing (120m x 1.25m x 0.1m)</td>
<td>$2000</td>
</tr>
<tr>
<td>120 m of Type 3 trail on a steep embankment.</td>
<td>$2000</td>
</tr>
<tr>
<td>Install 4 signs</td>
<td>$2000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$850</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$9,350</strong></td>
</tr>
</tbody>
</table>
Additional Information

- Obtaining long term legal access could be difficult due to the proximity of the proposed trail to the homes.
- Constructing just the rock-out section, where there are no access issues, doesn't deliver any functional connectivity.
19. St Paul Street Sidewalk (1st Ave – 7th Ave)

Priority – High (78.3%)

St Paul St is a major Active Transportation route into downtown and to the schools for residents in the adjacent neighborhoods. Installing a sidewalk on the east side of the road would significantly increase the safety and appeal of this route.

Estimated amount of Use – 5/5
It would receive a high amount of commuting use.

Utility as a Proximity Connection – 5/5
It would add significant connectivity within the neighborhood.

Utility as a Transportation Route – 5/5
It would serve as a major connection for residents of the eastern sector of upper Rossland to Downtown, the schools, and churches. It would also provide access towards the Iron-colt and Centennial trailheads.

Utility as an Experience Trail – 2/5
It would have minimal value.
Legal Access to Land – 5/5
It’s located within the road allowance.

Support from Adjacent Residents – 2/5
There would likely be concerns from residents currently encroaching on the road allowance, such as at 2480 St Paul St.

Current Utilization – 0/5
Residents currently walk on the road.

Cycling Use – 1/5
Most cyclists would continue to use the road.

Winter Use – 4/5
It would be used year round. Snow clearing would be required.

Safety Issues Addressed – 4/5
It would divert pedestrians from the shoulder of the (relatively) busy road.

Construction Costs Estimate
Construction of standard sidewalk would be contracted out.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction of 530 m of sidewalk with curb ($250 p/m)</td>
<td>$132,500</td>
</tr>
<tr>
<td>8 Crossings - 1st Ave/St Paul St (2), 2nd Ave/St Paul (2), 3rd Ave/St Paul, 4th Ave/St Paul, 5th Ave/St Paul, and 6th Ave/St Paul. ($250 per crossing)</td>
<td>$2000</td>
</tr>
<tr>
<td>Install 4 signs @ $500 each</td>
<td>$2000</td>
</tr>
<tr>
<td>Project Management (10%)</td>
<td>$13,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$148,000</strong></td>
</tr>
</tbody>
</table>
Additional Information
• A more thorough needs assessment should resolve whether locating the sidewalk on the west or east side of the road is the most appropriate.

A sidewalk along St Paul St will provide a safe access route for Jubilee Park users.
20. Second Avenue - Third Avenue (Queen St)

Priority – Medium (63.3%)

An existing path through the undeveloped property on the 2100 block of 3rd Ave is well used by high school students. Access to this path will not be possible when this property is developed, however it seems there is potential to create a new path linking 2nd Ave to 3rd Ave on the alignment of Queen St, which would be even more functional and well used. The connection through to 3rd Ave would be upgraded.

Estimated amount of Use – 5/5
It would receive a high amount of commuting use, especially by Rossland Secondary School (RSS) students.

Utility as a Proximity Connection – 5/5
It would provide a major new connection within the neighborhood.

Utility as a Transportation Route – 5/5
It would connect upper Rossland and the high school to Downtown.

Utility as an Experience Trail – 2/5
It could be landscaped to create a short appealing path.

Route 20B connects sections of 3rd Ave.

Route 20A would connect RSS to Downtown and have a significant impact on pedestrian traffic flow for Upper Rossland.
Legal Access to Land – 0/5
Obtaining legal access across private property would be required.
• 2099 3rd Ave (currently listed for sale).
• 2096 2nd Ave.
The connection through to 3rd Ave is on the road allowance.

Support from Adjacent Residents – 0/5
See above.

Current Utilization – 0/5
None. (for 20A)

Cycling Use – 4/5
Well suited for cycling.

Winter Use – 5/5
Year-round use.

Safety Issues Addressed – 1/5
It would divert pedestrian traffic from 3rd Ave.

Construction Costs Estimate
It’s difficult to calculate what would be possible until negotiations are completed to obtain access across the private property, however, a wide and moderate angled path is the goal. The connection through to 3rd Ave would require a mini-excavator, and the whole area should be landscaped. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>20A - 70 m of Type 2 trail.</td>
<td>$2000</td>
</tr>
<tr>
<td>Fencing (to address private land issues).</td>
<td>$3000</td>
</tr>
<tr>
<td>20B - 35 m of Type 2 trail.</td>
<td>$500</td>
</tr>
<tr>
<td>Gravel Surfacing (105m)</td>
<td>$1800</td>
</tr>
<tr>
<td>Landscaping of the adjacent area.</td>
<td>$3000</td>
</tr>
<tr>
<td>Crossing on 2nd Ave</td>
<td>$250</td>
</tr>
<tr>
<td>Install 3 signs</td>
<td>$1000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$1100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$12650</strong></td>
</tr>
</tbody>
</table>
Legal access issues remain the greatest impediment to Route 20A.

**Additional Information**
- Obtaining legal access across private property should be a high priority.
- There may be toxicity issues on the property at 2099 3rd Ave.
21. Fifth Avenue – Railway St (Monte Christo St)

Priority – Low (58.3%)
A short, steep path currently exists connecting 5th Ave down onto Railway St. It could be upgraded to a sustainable standard.

Estimated amount of Use – 3/5
It would receive a moderate amount of commuting and recreational use.

Utility as a Proximity Connection – 4/5
It is a well used neighborhood connection.

Utility as a Transportation Route – 3/5
It is an important connection between the Monte Christo St and 6th Ave neighborhood, and the MacLean School.

Utility as an Experience Trail – 3/5
It is located in an attractive natural setting with views. Adding a bench at the viewpoint would add to its’ appeal.

Legal Access to Land – 5/5
It’s situated on an unused road allowance.

Support from Adjacent Residents – 4/5
There is potential for privacy concerns from an adjacent resident (2285 5th Ave) although they seem supportive.

Current Utilization – 2/5
The existing path receives low but regular use.

Cycling Use – 1/5
The unavoidably steep grade makes the route only suitable as a descent (intermediate-advanced level riders only).

Winter Use – 2/5
It would be steep and slippery (warning signs required) but would receive year-round pedestrian use.

Safety Issues Addressed – 2/5
It would divert some pedestrians from the steep section of road connecting 4th Ave to 5th Ave.
Construction Costs Estimate:
The path would be constructed using manual techniques.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>50m of new type 3 trail</td>
<td>$1000</td>
</tr>
<tr>
<td>Install a bench at view point.</td>
<td>$1000</td>
</tr>
<tr>
<td>Install 2 signs</td>
<td>$1000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,300</strong></td>
</tr>
</tbody>
</table>

Additional Information
• There is a raised sewer line through this area to be managed for.
22. Eighth Avenue - Columbia Kootenay Road (Eighth Ave)

Priority – Low (58.3%)

There is a rough steep existing trail in place which is signed as closed across private land, however there is potential to create a new path linking 8th Ave down onto Charleston Crescent and down onto Columbia Kootenay Rd, situated on public land.

Estimated amount of Use – 3/5
It would receive a moderate amount of mainly recreational use.

Utility as a Proximity Connection – 2/5
It would provide some new connectivity within the neighborhood.

Utility as a Transportation Route – 3/5
It would connect upper Rossland to Columbia Kootenay Ave and the Mining School trailhead.

Utility as an Experience Trail – 3/5
It would be an attractive trail in a natural setting.

Legal Access to Land – 5/5
It is situated entirely on unused road/alley allowances.

Support from Adjacent Residents – 4/5
There is potential for privacy concerns from adjacent residents.

Current Utilization – 1/5
There is some use of the existing trail.
Cycling Use – 3/5
The steep grade will make it mostly suitable as a descent, but it would still receive considerable use to access the trails.

Winter Use – 2/5
It would be steep and slippery in the winter, but would still be used by pedestrians.

Safety Issues Addressed – 2/5
It will divert some pedestrian traffic off the surrounding roads.

Construction Costs Estimate
The path would be constructed using manual techniques.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 m of Type 3 trail on a cleared moderate angled unused road allowance (22A)</td>
<td>$750</td>
</tr>
<tr>
<td>130 m of Type 3 trail on steep forested terrain (22B)</td>
<td>$1500</td>
</tr>
<tr>
<td>Install 4 signs</td>
<td>$2000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$450</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$4,700</strong></td>
</tr>
</tbody>
</table>

Additional Information
- The trail will need to be cut into a steep embankment below Charleston.
- The location of the trail may impact snow clearing.

Route 22A follows an unused road allowance.
23. Elmore Avenue – McLeod Avenue (Elmore Ave)

Priority – Low (50%)

There is potential to create a path connecting the end of Elmore St through to the Iron Colt subdivision.

Estimated amount of Use – 2/5
It would likely receive low amount of commuting and recreational use, however there is potential for increased use as the Iron Colt and upper McLeod Ave neighborhood develops further.

Utility as a Proximity Connection – 2/5
It would add some connectivity within the neighborhood.

Utility as a Transportation Route – 3/5
It would provide a connection to Downtown for residents of Iron Colt area, and a general connection to the Kootenay Columbia (KC) access trailhead.

Utility as an Experience Trail – 2/5
It’s just a short path in an attractive setting.

Legal Access to Land – 5/5
It’s situated on City owned land.

Support from Adjacent Residents – 4/5
There is some potential for privacy concerns from adjacent residents.
Current Utilization – 0/5
Not currently used.

Cycling Use – 1/5
A parallel path, only suitable for descending on a mountain bike, will be established by users.

Winter Use – 2/5
It would be steep and slippery in the winter (warning signs required), but would still be used.

Safety Issues Addressed – 2/5
It would divert some pedestrian traffic from busier surrounding roads.

Construction Costs Estimate
The path and steps would be constructed using manual techniques.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 m of Type 3 trail, with steps, up a steep (40%) embankment.</td>
<td>$1000</td>
</tr>
<tr>
<td>Timber for step construction</td>
<td>$500</td>
</tr>
<tr>
<td>Install 2 signs</td>
<td>$1000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$250</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,750</strong></td>
</tr>
</tbody>
</table>

Elmore Ave is a quiet street suitable for pedestrian traffic.

Access to KC Trail

Steep slope, 40% grade

Step construction

City of Rossland

ACTIVE TRANSPORTATION PLAN

January 2009

Stewart Spooner - Recreational Planning & Design

79
24. McLeod Avenue – Elmore Avenue  (Queen St)

Priority – Medium (61.7%)  
There is a very steep existing path dropping from McLeod Ave down to Elmore Ave. There is potential to install covered stairs to create a safe and useable connection.

Estimated amount of Use – 3/5  
It would receive a moderate amount of commuting use.

Utility as a Proximity Connection – 4/5  
It would create an important connection within the neighborhood.

Utility as a Transportation Route – 3/5  
It would provide a connection to Downtown and the schools for residents of the McLeod neighborhood, and a connection to the Centennial trailhead for the Jubilee Park neighborhood.

Utility as an Experience Trail – 2/5  
It’s just a short, although scenic, connection.

Legal Access to Land – 5/5  
It’s situated on an unused alley allowance.

Support from Adjacent Residents – 5/5  
No issues are anticipated.

Current Utilization – 1/5  
The existing trail receives a small amount of use (limited due to its’ steep rough condition).

Cycling Use – 1/5  
A parallel path, only suitable for descending on a mountain bike, will be established by users.

Winter Use – 3/5  
The proposed improvements would create a year-round transport route, rather than it being current impassable under snow.

Safety Issues Addressed – 3/5  
It would divert some pedestrian traffic off the surrounding roads.
Construction Costs Estimate
Covered stair construction to be put out to bid to local contractors. Use a skid-steer to clear the alley. Spread gravel using a skid-steer, with manual assistants, and compact with a walk-behind compactor.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 m of covered stairs required from McLeod Ave down.</td>
<td>$4000</td>
</tr>
<tr>
<td>40 m of Type 2 trail on cleared, unused alley.</td>
<td>$500</td>
</tr>
<tr>
<td>Gravel surfacing (40m)</td>
<td>$800</td>
</tr>
<tr>
<td>Install 2 signs</td>
<td>$1000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$630</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$6,930</strong></td>
</tr>
</tbody>
</table>

Additional Information
- The exact location in relation to private land boundaries is yet to be determined.


## Downtown Upgrades

The downtown core of Rossland, essentially that section of Columbia Ave between Spokane and St Paul streets and the first block of Washington St, is the primary (transportation driver) destination within the community, and clearly a priority for amenity upgrades to enhance its usability and attractiveness for pedestrians and cyclists. Any upgrades should be planned to coincide with the proposed resurfacing of Columbia Ave in 2010.

### Widening the Sidewalk

Creating a dedicated bike lane is a common Active Transportation measure, and the so called Copenhagen solution, which involves creating a bike lane adjacent to the sidewalk with a physical barrier to outlying parking, could be applied. However given that Columbia Ave is not a high volume commuting thoroughfare (more of a destination) speed and efficiency are less of a concern than safety and access. Increasing the width of the sidewalk and encouraging slow speed bicycle traffic on it, seems a more appropriate strategy. Changing the parking configuration from diagonal to parallel, would enable extending the curb out another 1 m to create a 2 m wide bike friendly sidewalk between the line of planted trees and the new curb. Parallel parking would necessarily slow traffic flow and create a disincentive to driving for trivial trips, contributing to cyclist’s and pedestrian’s sense of safety and benefit. Such a modification could be made on the northern (sunny) side of Columbia Ave between Spokane St and St Paul St.

### Traffic Control

Lowering the speed limit from 60km/h to 40km/h and minimizing truck traffic on Columbia Ave would greatly enhance cyclist’s and pedestrian’s sense of safety promote pedestrian culture in Downtown. Regional initiatives to upgrade the Columbia River valley route through Waneta to a standard which will handle truck traffic to and from the USA should be vigorously supported.

### Bump-outs and Crossings

A downtown that encouraged bikes and pedestrian traffic would include bump-outs and well marked crossings at every corner.
Bike Racks

Installation of functional bike storage racks at most major destinations would be an effective and achievable way to encourage cycling within the community. The City should take the lead by installing bike racks at public institutions – City hall, the library, and the Post Office. Local businesses should be financially encouraged to install bike racks. Promoting artistic expression in the design of racks would contribute towards the nurturing of bicycle culture, and there are many examples of communities holding design competitions which could be emulated. Such as: http://nycityracks.wordpress.com/.

Information Kiosk

A display map of the local trail network is currently located in Pioneer Park. A more comprehensive map incorporating Active Transportation routes should be displayed in a more prominent position on Columbia Ave (perhaps in Town Square).

Bike Wash

Tourism Rossland has proposed that a bike wash facility be created on Columbia Ave as an amenity for both local and visiting cyclists. Such a facility would certainly help to promote cycling culture.
Additional Considerations & Initiatives

Public Transportation

A cursory study of the strategies that other steep and mountainous communities have adopted, leads quickly to the conclusion that establishing dedicated pedestrian and cycling routes will only ever achieve incremental change, and that a revolutionary change towards creating a culture of universal Active Transportation would require major investment in some form of complimentary fixed in place public transportation infrastructure.

This could take the form of a funicular railway running from the bottom to the top of town, however, the funding challenges of such a project seem insurmountable at this time. A more affordable though by no means inexpensive alternative could be a covered conveyor belt or ‘Magic Carpet’ style system.

Buck Hill Resort in Minnesota recently installed a 900ft long ‘Magic Carpet’ designed to transport people at 200 ft per minute year round, including an extended over-pass, for a total budget of approximately $500,000, roughly equivalent to what would be required to connect Thompson Ave to Columbia Ave.

Any such concept would radically change the movement patterns of residents, however given the major financial investment required and uncertain community and political support, this plan is based only on current behaviors and potential.
On-Street Parking

Both Thompson Ave (between Washington St and Hwy 3B) and McLeod Ave are both well used pedestrian routes with relatively high vehicle traffic volume that would otherwise justify the creation of dedicated pedestrian sidewalks. However in both cases so many residents have either developed parking infrastructure within the road allowance, or are parking permanently on the road (both in contravention of unenforced bylaws) that a practical solution seems elusive. A practical and enforceable strategy to address on-street parking and road allowance encroachment seems necessary, both for these highlighted areas of concern, and more generally.

Status of Roads and Alleys

Some of the routes identified are contingent on the usage status of the designated alleys or roads on which they are located. For example, whether an alley is completely undeveloped, is used infrequently for rear access by a resident or two, or is the primary access for a home, is managed reactively, based on whatever a resident asks for rather than any plan. Effective Active Transportation routes require long term dedicated access to the land. Designated alleys and roads should be assessed and classified, and a process established for any necessary or requested changes.

The Railgrades

The Columbia & Western Railgrade would, had not it been broken up and sold, have provided a wide moderate grade route through the community, as would have the Red Mountain Railgrade (to Patterson). It has been speculated that the properties on the Columbia & Western rail-grade could be purchased over time, and the route re-established as a pedestrian route. It is an attractive vision, however given the large number of properties involved, and that significant sections are now functioning as part of the City’s road network, the magnitude of the budget which would be required is simply not achievable given the limited resources conceivably available for Active Transportation. Some significant remnants of the Railgrades have been utilized as part of the routes identified in this plan.
Planning for Le Roi Hollow

In the absence of any known established terminology, I’m using Le Roi Hollow to refer to the area undeveloped land behind and below Ferraro Foods. This area of City owned land and unused road allowances, is bound at the top by a steep loose embankment, has a flat area at its centre, currently being used to dump waste material and dirt, and at the bottom a forested draw extending down to Cooke Ave. This area does not seem to be managed in any way, with refuse of all sorts dumped in a random fashion, although the City Works Department is dumping the dirt on-site with the expressed intention (although not part of any formal plan) of eventually linking Kootenay Ave through the area. There does seem a great opportunity for the City to develop a comprehensive management plan for the area, which might consist of some sort of park with trails, including but not limited to Routes #10A & 10B in this plan.

Jubilee Park Loop

A level soft surfaced walking and running loop trail around the perimeter of Jubilee park would integrate well with Active Transportation routes identified within this plan, as well as providing an otherwise unavailable recreational experience within the community. It could be well utilized by Rossland Secondary School, and track set in winter for cross-country skiing.
Recreational Lake / Public Beach at the Star Gulch Reservoir

During the summer months, residents of Rossland drive away from the community to access swimmable lakes and rivers. According to City staff, following the completion of the Ophir Reservoir, the existing Star Gulch Reservoir will only be required as a back-up water supply, and so could be utilized for recreation without any threat to the City's water quality. A public beach could be constructed at the northern end of the reservoir, and various types of recreation, such as paddling could be encouraged. This would significantly contribute towards Active Transportation objectives, by encouraging walking and cycling rather than driving. The Active Transportation routes identified within this plan (routes #1 & 2) would provide convenient access to this location.

A sketch diagram of a public beach at the northern end of the Star Gulch Reservoir is included in Appendix # 7.

Winter Use

The implications on the City’s snow removal procedures should be fully considered and managed prior to the creation of any new route.

A risk management plan should include consideration of winter use, if snow clearing and/or sanding the route is appropriate and how that will be resourced, or if “use at your own risk” warning signs are required.

Furnishings

Additional features such as benches and bear-proof garbage bins can be installed where appropriate. The Bear Aware organization has funding for the bear-proof garbage bins and should be supported to identify sites and install the bins in suitable locations. Suitable sites for benches have been identified and should be advertised as available to those who are looking to donate towards the installation of a memorial bench, which seems a popular practice.
Signs

Given the recent efforts that have gone into creating the Rossland Signage Manual, it seems sensible to adapt these existing design guidelines to use on Active Transportation routes. Specifications for an Active Transportation sign should be developed and added to the Rossland Signage Manual. The specifications should include a stand-alone post, and a budget including installation should be calculated (construction cost estimates in this plan are based on an estimate of $500 per sign). As shown on the maps, signs should be installed at the start, finish and at all significant intermediary points along routes, with clear information provided about destinations, including distances. Information about Active Transportation routes should be incorporated into all signage (such as on Columbia Ave) where appropriate. Issues with user behavior and risk management should be anticipated and managed with clear and simple signs. As resources allow, consideration should be given to installing historical interpretive signs to enhance the user’s experience.

Lighting

It was not within the capacity of this plan to assess the availability and potential need for lighting on popular routes. The proposed routes will always receive most use during day-light, however to encourage pedestrian use at night, an assessment could be completed at a later stage. Educating users to utilize headlamps on poorly lit routes may be an effective interim measure.
Implementation Strategy

The list of recommendations in this plan is extensive and implementation will take time, commitment and significant resources.

There are some immediate first steps required to ensure success:

1. The Active Transportation Plan should be formally adopted by Council.

2. An Active Transportation Committee should be established to set priorities and quantifiable goals, identify funding opportunities (several programs are identified in Appendix # 5), oversee implementation, and review progress. An effective committee should include representation from:
   - City Planning.
   - City Engineering.
   - Public Works.
   - City Council.
   - The Kootenay Columbia Trails Society.

3. A budget should be dedicated to serve as seed money towards funding opportunities.

4. Consideration of Active Transportation objectives should be incorporated into all planning and development processes.

5. Developing policies to address the issues of unused alleys and on street parking, that are raised in this plan.

Other key priorities might include:

1. Maintaining the Existing Infrastructure

A thorough physical assessment of the existing Active Transportation infrastructure (sidewalks and covered stairs), and a review of the maintenance and upgrading schedules should be completed. Rossland's senior citizens have very specific concerns that should be addressed as a priority.

Some of the routes identified will not be feasible until access across key sections of private land is negotiated. Securing long term access to key sections of private property should be prioritized. Negotiating each situation will require a unique and considered approach.

Options include:
- Granting an easement or right-of-way.
- A land swap.
- Outright purchase

An inventory of access issues to be resolved is included in Appendix #2.

3. An Initial Project

Creating a tangible benefit by completing and initial project within a reasonable time-frame is critical first step to maintaining (assuming that the release of the plan stimulates interest) political and community support for investing in Active Transportation infrastructure over time.

With the background work completed as part of this plan, the necessary construction specifications and budget to move forward with an initial project can be quickly finalized by planning staff with the assistance of the consultant (planning staff have already submitted an application for funding to complete Route #2). The priority ratings provided can serve as a starting point for determining which projects best match available funding, however an adaptive management approach will enable the Active Transportation Committee to modify actions as required, and incorporate new approaches and decision-making processes if necessary.

A successfully completed and well utilized project will create the momentum to move forward with other priorities identified within the plan.
4. Measuring Success

A monitoring function should be established to evaluate the effectiveness of initiatives, modify actions as required, and incorporate new approaches and decision-making processes if necessary. Measuring public Active Transportation patterns through periodic surveys would enable the setting of goals based on targets for increased usage.

5. Community Education and Engagement

The ultimate goal of this initiative is to modify individual’s behavior, such that more often than previously they choose Active Transportation modes rather than vehicular transportation. The community must be educated and encouraged to utilize the increasing opportunities as they are made available.

This can be achieved by:

- Distributing a summary of the Active Transportation Plan to the community via a mailbox drop, making the plan downloadable from the City’s website, and providing a summary of the plan as a Press Release to local media.
- Developing an incentive education program to encourage Active Transportation by school children. Robin Hethey from Rossland Recreation has experience and ideas for how this might be achieved.
- Establishing a protocol to encourage and facilitate volunteer initiatives to develop Active Transportation infrastructure within neighborhoods.
- Developing an ongoing public education campaign (maps, brochures, posters etc.) to inform the community of the advantages of and opportunities for Active Transportation within Rossland.
- Participating as a community in provincial and nationwide public health campaigns such as Spirit of BC Week, Move for Health Day and Healthy Workplace Month. Grants are available for this at: http://www.activecommunities.bc.ca/wp/
References


Trails Design and Management Handbook – Open Space and Trails Program, Pitkin County Colorado (Jan 2004).

Rossland Transportation Corridors – GIS data obtained by Selkirk College Students (2008).

An Active Transportation Plan for Minden – Paul Young (July 2008)

Active Transportation includes any type of non-motorized transportation and offers significant health and environmental benefits.
Appendices

Appendix # 1 – Pedestrian Safety Issues

The following sections of road and road crossings have been identified as a safety issue for the volume of pedestrian traffic due to one or more of the following issues – volume, speed and lack of control (especially in winter) of vehicle traffic:

1. Columbia Ave - where the sidewalk terminates at Cliff St.
   • Pedestrians are forced out onto Columbia Ave at the termination of the sidewalk.

   • Pedestrians walk the shoulder of this steep, relatively busy section of road. Due to the steep grade and corner, it is especially hazardous during winter.

3. Hwy 3B – between Thompson Ave and Columbia Ave.
   • Pedestrians walk on the shoulder of the busy highway.

4. Davis St – between Le Roi Ave and Thompson Ave.
   • Pedestrians walk on the shoulder of this relatively busy section of road.

5. Thompson Ave – between Hwy 3B and Davis St.
   • Pedestrians walk on the shoulder of this relatively busy section of road.

6. Le Roi Ave – between Davis St and Spokane St.
   • Pedestrians walk on the shoulder of this relatively busy section of road.

7. Park St – Between Pinewood and Columbia Ave.
   • Pedestrians walk the shoulder of this steep, relatively busy section of road. Due to the steep grade and corner, it is especially hazardous during winter.

8. Crossing Old Red Mountain Road at the Centennial Trail.
   • Pedestrians and cyclists are at risk on this unmarked crossing, particularly in winter when road conditions make it difficult for vehicles to brake.

9. Crossing Hwy 3B at Le Roi Ave.
   • Pedestrians following the existing railgrade cross this busy section of Hwy 3B at an unmarked crossing.

10. Crossing Columbia Ave at the Miners Hall.
    • Pedestrians regularly cross at this busy section of Columbia Ave.
Appendix # 2 - Obtaining Legal Access Across Private Land.

Some of the routes identified will not be feasible until/unless access across key sections of private land is negotiated.Securing long term access to key sections of private property should be prioritized. Negotiating each situation will require a unique and considered approach.

Options include:
- Granting an easement or right-of-way.
- A land swap.
- Outright purchase

The sections of private land over which access is required include:

• Route #1
  - Lot A Plan NEP62765.
• Route #2
  - 1807 or 1840 Planer Ave.
• Route #4
  - 1199 Hwy 3B - Casa Alpina Motel.
• Route #13
  - 1085 Esling Ave (the owner has indicated their support).
  - 888 Esling Ave (the owner has indicated their support).
  - Proposed Chinese Gardens sub-division (owners currently in negotiation with the KCTS).
  - 1085 Esling Ave (the owner has indicated their support).
• Route #15
  - 2207 Columbia Ave - Alpine Grind (commercial retail business would likely encourage pedestrian traffic).
• Route #16
  - 2414 Columbia Ave - Sacred Heart Church.
• Route #17
  - 1833 Butte St. (the owner has indicated their support).
• Route #18
  - 2417 Third Ave.
  - 2193 Old Railgrade Rd.
  - Lot A Old Railgrade Rd.
• Route #20
  - 2099 3rd Ave,
  - 2096 2nd Ave.
Appendix # 3 – Physical Characteristics Classification.

The envisaged physical characteristics of the sections of each Route have been classified into the following categories:

Sidewalk
- 1.5 m wide with standard concrete curb to provide physical separation from the road surface.

Covered Staircase
- Assuming identical specifications to Rossland’s existing covered stairs.
- Costs based on an estimate of $375 per running meter (Darren Albo).

Type 1 Trail
- Adapted from the Whistler Trail Standards to suit local and site specific requirements.
- Use crusher fines surfacing as a precursor to a hard surface trail (adapt technical specifications from Trails Design and Management Handbook).
- Clear width to tread width plus 0.6 m gravel shoulder and adequate drainage on each side.
- Clear height to 3.0 m.
- Provide 2-3 m tread width.
Type 2 Trail
- Adapted from the Whistler Trail Standards to suit local and site specific requirements.
- Plan as a surfaced single-track trail.
- Machine built.
- Remove all embedded trail obstacles.
- Use crushed limestone with fines, well-compacted gravel, or existing old roadbeds.
- Clear height to 2.4 m
- Provide 1.25 m tread width.
- Suitable for strollers.

Type 3 Trail
- Adapted from Whistler Trail Standards to suit local and site specific requirements.
- Plan as unsurfaced single-track trail.
- Hand built.
- Clear width to 1.5 m.
- Clear height to 2.4 m.
- Provide 50-70 cm tread width on native soil.
Appendix # 4 - Construction Costs Estimates

The following figures are the basis for the construction cost estimates contained within the AT Plan.

Constructing 1.25 m wide Type 2 trail.
• Estimates from Alpine Contracting.
• Mini-excavator and operator - $110 per hour, $880 per day.
• Assistant (clearing, raking) - $30 per hour, $240 per day.
• Total - $1120 per day.
• Estimated productivity +/- 200m per day.

Spreading Gravel on Type 2 trail.
• Estimates from Alpine Contracting.
• 5 yards of gravel per 100m of trail ~ 4’ wide & 3” thick.
• Gravel - $140 delivery, plus $15 per yard.
• Mini-bobcat and operator - $140 per hour, $1120 per day
• 2 Assistants - $60 per hour, $480 per day.
• Compactor rental - $55 per day.

Manual Construction
• Estimates from KCTS.
• Type 3 trail - $1000 per 100m for an experienced crew.

Sidewalk
• 1.5m concrete sidewalk - $150 per linear meter (Mike Thomas)
• Standard curb - $100 per linear meter (Mike Thomas)

Covered Stairs
• Covered stair construction - $375 per running meter (Darren Albo).

Benches
• As per Centennial trail – $1000 (Stacey Lightbourne).

Signs
• Specifications to decided upon - $500 (Mike Thomas).

Crossings
• Basic painted crossings - $250 (Mike Thomas)
Appendix # 5 – Funding Resources

There are increasing funding opportunities for Active Transportation. There are funding programs dedicated for Active Transportation, cycling infrastructure, general municipal infrastructure, tourism development, job creation, and greenhouse gas emission reduction, all which should be investigated. A cursory search identified the following opportunities:

- http://www.activecommunities.bc.ca/wp/grants/active-communities-grants/
- http://www.activecommunities.bc.ca/wp/grants/additional-funding-sources/
- http://www.th.gov.bc.ca/BikeBC/CIPP.html (Jan 30th 2009 deadline)
- http://www.civicinfo.bc.ca/181.asp?grantid=106

Appendix # 6 – Display Map

A folded full sized printed map of all the routes is located in the sleeve of the binder.

Appendix # 7 – Route Assessments

The original copies of the assessment sheets for the initial 45 routes assessed, including annotated photos and sketches are included at the rear of the binder.

Appendix # 8 - Photos

Digital copies of the photos taken during the assessments of the routes assessed are provided on the compact disc located in the sleeve of the binder.
Appendix # 9 - Digital Files of ATP Map

Digital versions (both PDF and ArcMap files) of the map on compact disc are located in the sleeve of the binder.

Appendix # 10 - Digital Files of the AT Plan

A digital copy of the Active Transportation Plan in pdf format is included on the compact disc in the sleeve of the binder.