

4.0 Trail Development Standards

4.1 The Value of Trails

During the initial Committee meeting, the project team was asked to consider how the value of trails can be quantified as a basis for justifying capital and operational expenditures. A literature review was conducted, and there are numerous studies which have been done on the value of trails by various agencies throughout North America. Some of the groups that have produced published articles on the perceived and unperceived values of trails include: The Canadian Active Living & Environmental Program, National Parks Service, Recreation Canada, National Recreation and Parks Association, Trails and Greenways.org, American Hiking Society.

While there is an economic value that can be easily associated with the building of major recreational or destination trails, there are a number of other value types which can be attributed to trails.⁷ It should be noted that a detailed assessment of the direct monetary benefits of trails in The City of Red Deer was beyond the scope of this study. The following is a summary of some of the basic value benefits associated with trails.

Economic Value

- ◆ Studies in a wide range of urban areas have documented increases in real estate value for residences located near parks and trails.
- ◆ Quality of life is an increasingly important factor in attracting and retaining businesses in a community, and trails are important contributors to the quality of life.
- ◆ Trails have been shown to stimulate economic development by increasing property values, stimulating small business development and tourism.

⁷ Much of the information cited in this section can be found at the following link:
<http://www.americantrails.org/resources/benefits/BenefitsGrnwy.html>, <http://www.railtrails.org/benefits/health/default.asp>,
<http://www.town.bridgewater.ns.ca/trail/trailMain.htm>, <http://dep.state.ct.us/stateparks/greenways/benefits.htm>

Health Value

- ◆ Studies have proven that the cost of health care decreases with an increase in physical activity.
- ◆ Trails provide pleasant places for people to walk, run, bicycle, ski, inline skate, or do other exercises, all of which reduce stress, help control weight, blood pressure and cholesterol levels, build strength and endurance, and help prevent disease.

Educational Value

- ◆ Trails can offer opportunities for outdoor classrooms where children and adults can observe and learn about their natural and cultural environment.
- ◆ Trails can also serve a diverse population that may otherwise have limited opportunities to access natural areas due to financial or transportation constraints.

Community Value

- ◆ Trails can provide a sense of place and a source of community pride. When integrated with features such as historic sites, commercial or residential areas, and parks, they can improve the overall character of a community.
- ◆ Trails offer an opportunity to provide children with outdoor activities and provide safe, healthy after school programs for at-risk kids.

Environmental Value

- ◆ Trails provide people alternative transportation routes that can result in reduced traffic congestion, noise, and air pollution.
- ◆ Trail corridors in natural areas provide important wildlife habitat and movement corridors, and support species diversity (animals, birds, insects, amphibians).
- ◆ Trail corridors provide opportunities for both ornamental and native landscaping as well as the restoration and enhancement of native plant communities.
- ◆ Trail corridors provide opportunities for storm water management, erosion control and the protection and enhancement of creeks and streams.

4.2 Trail Development Principles

There are many existing approved plans and documents which have principles that directly relate to the development of trails. As well, the investigation included key research papers into providing network connections, green / enviro-friendly design,

and crime prevention through environmental design (CPTED) documents. Consultation with these documents allowed the team to create a list of development principles. Certain documents are directly quoted here in regards to guiding principles, while others are unique to this Red Deer Trails Master Plan; both are key regarding the principles used in creating a future trail network. *It is recommended that The City of Red Deer adopt the following principles to guide the planning and development of Red Deer trail network.*

An Integrated Trail Network

- ◆ Develop an integrated trail network by creating continuous linkages from neighbourhood to neighbourhood, from residential areas to the Waskasoo Park Trail network, from residential to the Downtown and other commercial districts, and from residential to adjacent industrial areas.

Linking Neighbourhoods

- ◆ Design a neighbourhood that integrates a safe and convenient trail network for non-motorized travel that links gathering places inside the neighbourhood and connects the neighbourhood with others in the multi-neighbourhood and city level (regional) trails. (*Red Deer Growing Smarter, 2002*)
- ◆ Paved trails should be integrated through neighbourhoods and efficiently connect with sidewalks to minimize walking distance and provide accessibility to transit service. (*Neighbourhood Planning and Design Guidelines and Standards, 2002*)
- ◆ Give higher priority to linear parks that serves to link open spaces within a neighbourhood and one neighbourhood to another. (*Greater Downtown Action Plan, 2000*)

Connecting the Downtown

- ◆ Pedestrian First – all elements of Downtown development should be based on creating an attractive walking environment and calming traffic flows on major arteries through Downtown. (*Greater Downtown Action Plan, 2000*)
- ◆ New pedestrian urban trails through Downtown should be established to link the existing perimeter trail with the heart of the city. (*Greater Downtown Action Plan, 2000*)
- ◆ Develop dedicated and safe Active Transportation routes into and throughout the Downtown.

A Regional Trail Network

- ◆ Partner with other local government and community groups to develop a regional trail network (TransCanada Trail, Blackfalds, and other links).
- ◆ Support and promote the concept of regional recreational trails between Red Deer and Sylvan Lake along the abandoned railway right-of-way, including a trail to Fort Normandeau along the river from Heritage Ranch. (*Community Services Action Plans 2003-2006*)

Meeting User Needs

- ◆ Ensure that future trail development provides for a variety of uses and meets the needs of all users.
- ◆ Ensure that future trail development is carried out with safety as a top priority.
- ◆ Residential street, trail and sidewalk design should facilitate easy and safe access for pedestrians and persons using mobility devices to and from transit services.
- ◆ Design streets to provide for the safe movement of traffic, as well as safe pedestrian and bicycle movement. (*Red Deer Growing Smarter, 2002*)
- ◆ Use educational programs and signage to encourage safe use of the trails and positive trail use etiquette.

Preserving the Natural Environment

- ◆ Preserve and enhance escarpments and natural areas and maximize the provision of green space throughout the community. (*REACT Environmental Action Plan, 1995*)
- ◆ Expand and preserve Waskasoo Park by acquiring escarpment and natural amenity areas through reserve dedication and land purchase. (*Community Services Action Plans 2003- 2006*)
- ◆ Ensure future trail development allows for users to enjoy the natural beauty in and around the city with minimal disturbance to natural areas.
- ◆ Develop programs to highlight natural areas for stewardship, educational and interpretive purposes. (*Canadian Wildlife Services - Habitat Stewardship Program*)
- ◆ Identify and preserve Maskepetoon Park as a significant natural area with interpretive trails, programming, and controlled access.
- ◆ Preserve isolated natural areas throughout the city and incorporate into the trail system. (See Neighborhood Ecological Reserve – Section 4.3.6)

Encourage Active Transportation

- ◆ Provide up-to-date maps and trail information in print, on-line and throughout the trail network.
- ◆ Provide bicycle racks at all destination points along the trails and encourage businesses to provide bicycle racks.
- ◆ Use education programs to encourage Active Transportation.
- ◆ Ensure that future trail development successfully links with public transit stop locations and continue to provide Bicycle racks on all Public Transit Buses in support of the Bike & Ride program. Bicycle racks and a safe bicycle route linkage should be added near the Downtown Transit Terminal and the Alexander Way junction immediately.

Integration with the Transportation Network

- ◆ Bicycle and pedestrian routes should be considered and developed as integral components of the transportation system. (*Neighbourhood Planning and Design Guidelines and Standards 2002*)
- ◆ Trail crossings of arterial roadways should be minimized for improved trail safety. (*Neighbourhood Planning and Design Guidelines and Standards 2002*)
- ◆ Ensure that recommendations and priorities of the RDTMP are integrated with the implementation of the plans and recommendations of The City of Red Deer 2004 Transportation Master Plan.

4.3 Trail Development Standards

As indicated previously, one of the objectives of this study is to define a set of trail development standards which can be applied consistently by all departments and by contractors working for The City. In the following section, a new set of trail development standards is defined based on the following hierarchy of trails⁸:

- ◆ Waskasoo Trails
- ◆ Arterial Trails
- ◆ Collector Trails
- ◆ Bikeways
- ◆ Neighbourhood Trails
- ◆ Nature Trails

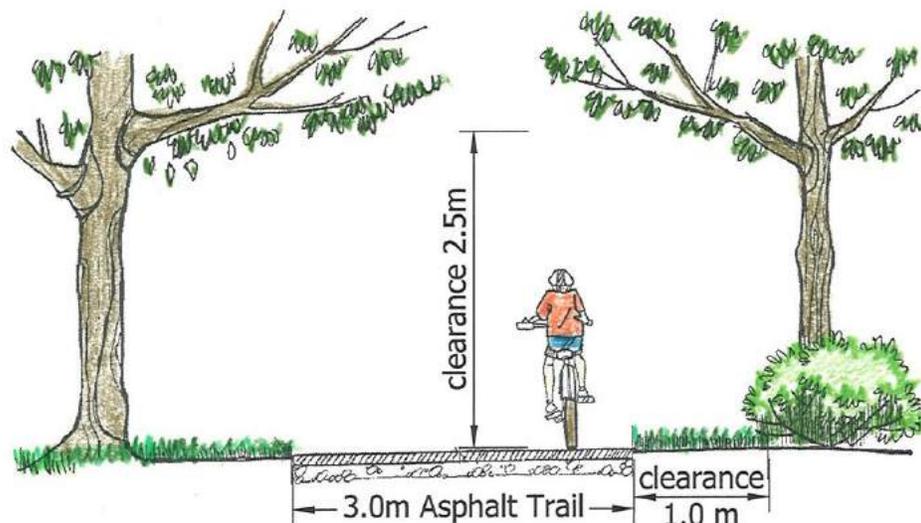
⁸ Note: Equestrian trails, BMX trails and cross country ski trails are all provided at existing facilities in the City and were not included in the preparation of new standards or the development of the Future Trail Network. Maps of these trails are available through the City's website.

Within each class there are specific standards which define trail width, surface material and location, as well as related or supporting standards which define trail amenities and other features. *It is recommended that The City of Red Deer adopt the following standards to guide the planning and development of future trails and the upgrading and operation of existing trails.*

4.3.1 Waskasoo Trails

The Waskasoo Trails are the backbone of the entire Red Deer trail network and include all designated asphalt trails such as the Waskasoo & Devonian trails, and all asphalt trails in destination parks (eg. McKenzie Trail, Three Mile Bend, Heritage Ranch, Bower Ponds). The majority of existing Waskasoo trails are 2.0-2.5 m asphalt and are suitable to maintain the current level of use. The development standards for all future Waskasoo Trails are defined below. Some future Waskasoo Trail development projects should follow an implementation process which includes environmental screening, master plan development, public consultation and detailed design.

- ◆ **Development Responsibility** – Recreation Parks & Culture
- ◆ **Standard** – 3.0 m wide, asphalt TAC geometric design guidelines. Trail intersections 3.0 m radius.
- ◆ **Upgraded Waskasoo Trails** – there are no existing Waskasoo Trails currently designated for upgrading. In the future trails to be upgraded should be upgraded to the standards defined above.



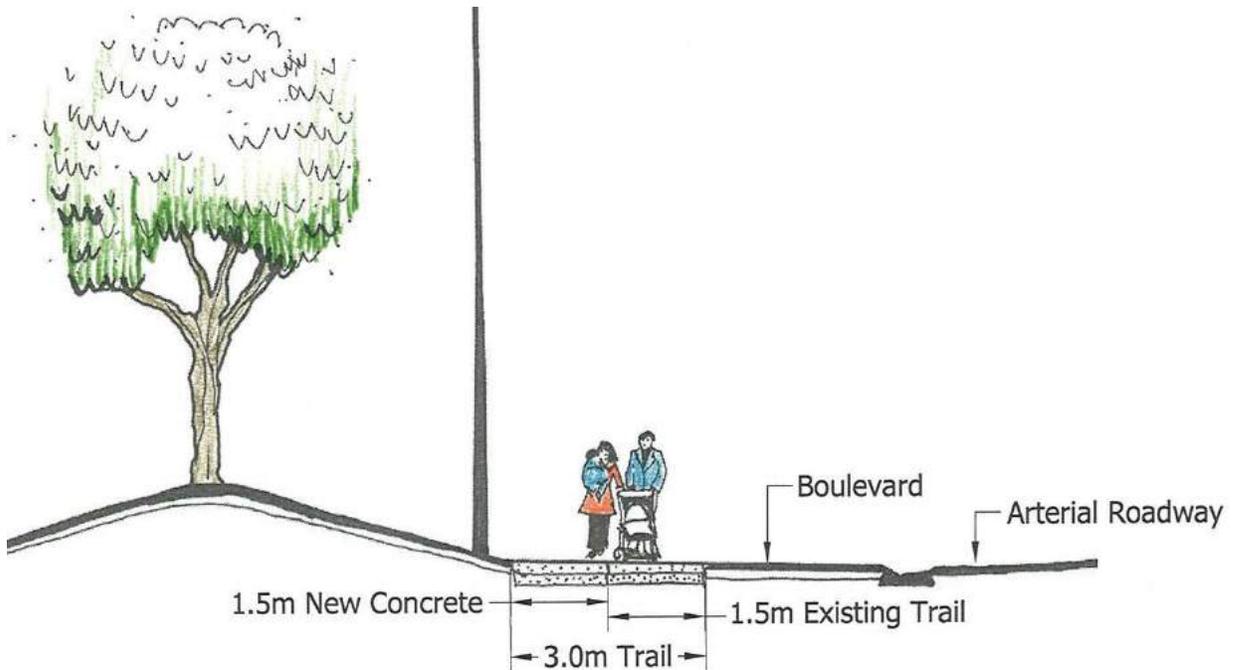
- ◆ **Amenities** – a rest node with a bench and garbage receptacle shall be provided every 1-1.5 km. Other amenities such as bridges, walls, and viewpoints may also be provided as per detailed design.
- ◆ **Signage** - directional/distance signage shall be provided at all trail intersections and destinations. Trail Maps/Information Boards shall be provided at all major trail destinations.
- ◆ **Lighting** – lighting shall be provided at major bridge crossings, trail heads, major trail intersections and parking areas.
- ◆ **Snow Clearing** – one designated Waskasoo trail route will be cleared of snow on a trial basis and evaluated for a three year period. The proposed route runs from 48th Ave., south of the Kinex Arena, north past Barrett Park and Coronation Park to 49th Street.
- ◆ **Public Art** – as defined by the Culture Master Plan.
- ◆ **Maintenance**– regular maintenance activities including garbage removal, amenity repairs, signage repairs, mowing and vegetation clearing. Annual maintenance activities including overlays and root control.



4.3.2 Arterial Trails

Arterial Trails are designated concrete sidewalks or asphalt trails on one side of designated arterial roads throughout the city. All new arterial trails will be constructed as 3.0m wide asphalt trails. All existing concrete sidewalks less than 3.0m in width which are designated as part of the arterial trail system, should be upgraded over time to 3.0m width. It is recommended that the upgrading be completed as part of long term road rehabilitation budgets. The development standards for Arterial Trails are defined below:

- ◆ **Development Responsibility** – Engineering
- ◆ **New Trails** – 3.0 m wide asphalt or concrete (2004 Engineering Standards).
- ◆ **Upgraded Arterial Trails** – upgrade existing 1.2-2.5 m concrete walks to 3.0 m wide with addition of adjacent concrete walk. Where existing concrete walk is in poor condition, remove and replace with 3.0 m wide asphalt trail.

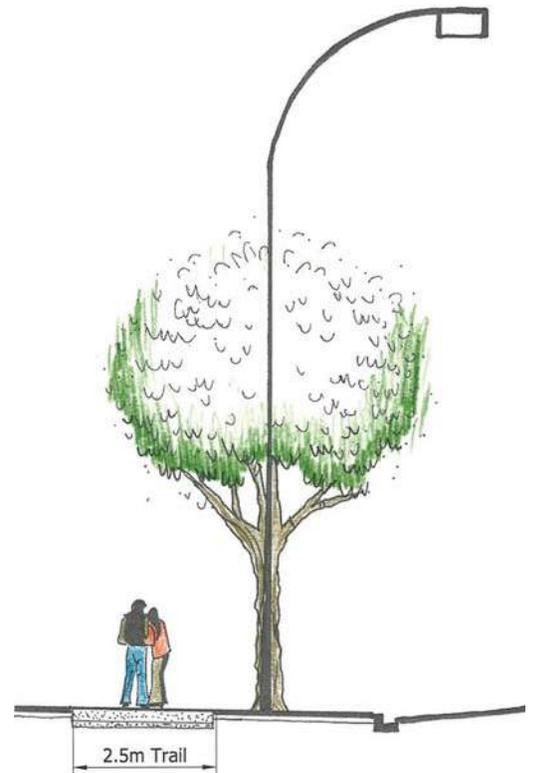


- ◆ **Amenities** – there are no amenities to be installed with Arterial Trails.
- ◆ **Signage** – Yield signs shall be installed at all trail/road intersection locations to indicate to trail users that they do not have the right of way.
- ◆ **Maintenance**– regular maintenance activities including sidewalk sweeping and snow removal. Annual maintenance activities including overlays, crack filling and skin patching at priority locations.

4.3.3 Collector Trails

Residential collector roads provide important connections from arterial roads into neighborhoods. The City of Red Deer recently began requiring a 3.0 m boulevard to ensure that these roads are enhanced with landscaping and improve safety with separation between pedestrians and traffic. Currently, 2.5 m wide concrete sidewalks are required on one side of designated collector road, in new neighbourhoods as outlined in the Engineering Design Guidelines. *It is recommended that 2.5 m wide concrete sidewalks, called Collector Trails, be required on one side of all future collector roads* to provide pedestrian and bicycle connections to the rest of the trail network, to transit, and within and between neighbourhoods. It is important to note that TAC guidelines do not support the mixed use (pedestrians and cyclists) of these types of sidewalks, particularly where there may be a number of access (driveway) crossings. However, these are important connections for families and particularly for children going to school, and so it is important that they be provided as part of the trail network. These mixed use sidewalk trails are made safer with the provision of a boulevard and with a shift in neighborhood planning to having more rear lane access to residences (i.e. less driveways). As defined in section 5.0, some existing sidewalks along collector roads should be upgraded to meet the Collector Trail standards as defined below and illustrated on Figure 4.4:

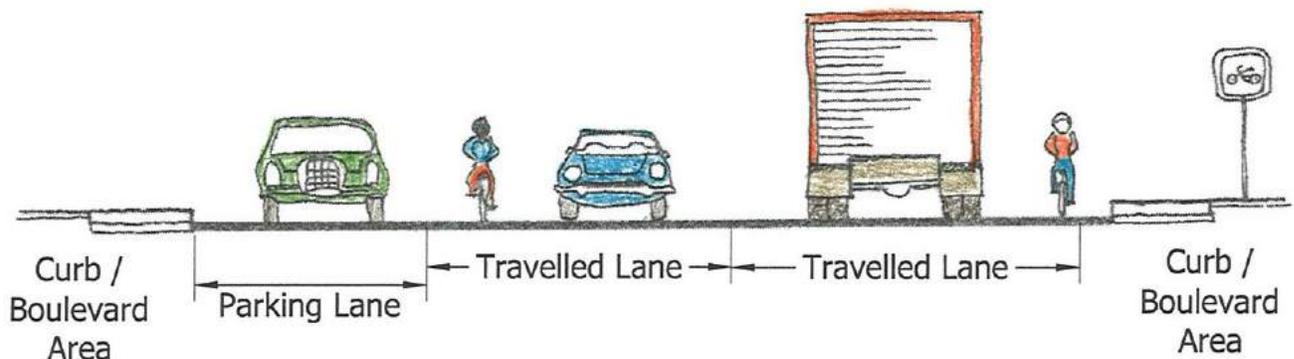
- ◆ **Development Responsibility** – Engineering
- ◆ **New Trails** – 2.5 m wide concrete sidewalk (2004 Engineering Standards).
- ◆ **Upgraded Collector Trails** – upgrade existing 1.5 m concrete walks to 2.5 m wide with addition of adjacent concrete.
- ◆ **Amenities** – there are no amenities to be installed with Collector Trails.
- ◆ **Signage** – there is no trail signage to be installed with Collector Trails.
- ◆ **Maintenance**– regular maintenance activities including sidewalk sweeping and snow removal. Annual maintenance activities including overlays, crack filling and skin patching at priority locations.



4.3.4 Bikeways

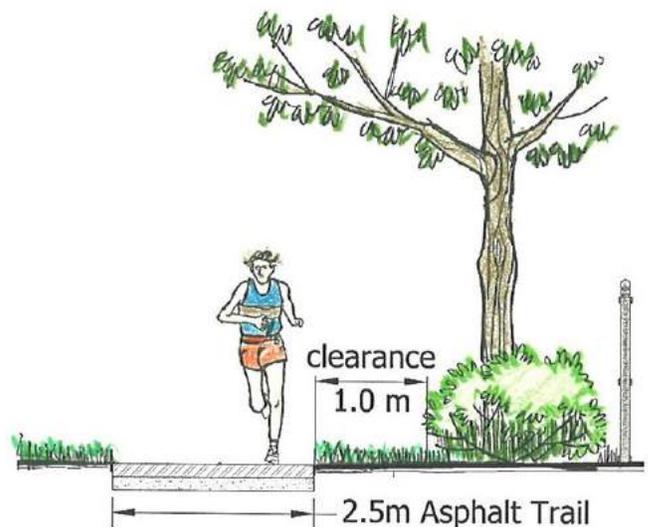
Bikeways are designated bike routes on which bicycles share the roadway with other vehicles traveling in the same direction. Bikeway routes are marked with signage and bikeway symbols stencilled on the roadway. The development standards for Bikeways have been adapted from the TAC Geometric Design Guide. The development standards for Arterial Trails are defined below:

- ◆ **Development Responsibility** – Engineering
- ◆ **Standard** – TAC standards, painted markings indicated bicycle travel.
- ◆ **Amenities** – there are no amenities to be installed with Collector Trails.
- ◆ **Signage** – Bikeway signs provided one per block along the bikeway. Bikeway symbols are to be painted on the road surface approximately every second block along the bikeway.
- ◆ **Maintenance**– regular maintenance activities including street sweeping and snow removal. Repainting of street stencils every 3 years.



4.3.5 Neighbourhood Trails

Neighbourhood Trails are designed to provide links within and between neighbourhoods, to neighbourhood facilities and to the rest of the Red Deer trail network. Neighbourhood Trails are to be located through park sites, linear parks and PUL's. As defined in the *Neighbourhood Planning and Design Guidelines & Standards*, the planning of the neighbourhood trails network will be included as part of all Neighbourhood Area Structure Plans. The majority of existing Neighbourhood Trails are 1.5 m shale and are generally suitable to maintain the current level of use. However, in an effort to provide a continuous hard surface trail route in conjunction with Collector Trails, there are a few neighbourhood trails that are being recommended for upgrading to the new standard (See Section 5.0). The development standards for all future Neighbourhood Trails are defined below:



- ◆ **Development Responsibility** – Subdivision Developer and Recreation, Parks and Culture
- ◆ **Standard** – 2.5 m wide asphalt
- ◆ **Upgraded Neighborhood Trails** – recommend upgrading of some designated 1.5 m wide shale trails to new neighborhood trail standard. Responsibility of Recreation, Parks and Culture.
- ◆ **Amenities** – a rest node with a bench and garbage receptacle shall be provided for every 500 m of Neighbourhood Trail through park sites or linear parks (not in pul's).
- ◆ **Signage** – there is no trail signage to be installed along Neighbourhood Trails.
- ◆ **Trail Controls** – one set of Bollards to be installed at alley and end of PULS.

- ◆ **Maintenance**– regular maintenance activities including garbage removal, amenity repairs, and mowing. Annual maintenance activities including overlays and root control.

4.3.6 Nature Trails

Nature Trails are designated soft surface trails within natural areas and designated reserve sites, which are designed for pedestrian use only. Existing Nature Trails are located throughout Waskasoo Park and associated with major park sites such as Three Mile Bend and River Bend. Future Nature Trails (See Section 5.7) will also be developed in designated municipal reserve sites called Neighbourhood Park Ecological Reserves (NPER). These ecological reserves are natural areas (forest stands, wetlands or a combination of both) located in residential neighbourhoods as well as industrial and commercial areas of the city. By including Ecological Reserves in the trail system, the public will have exposure to many unique features that would otherwise remain unknown. The NPER could also be developed as habitat stewardship sites and nature interpretive sites as part of the Waskasoo Park Interpretive Program and Master Plan (See Section 3.5.2). The development standards for Nature Trails are defined below. All future Nature Trail developments should follow an implementation process which includes environmental screening, development master plan, public consultation and detailed design.



- ◆ **Development Responsibility** – Recreation, Parks & Culture
- ◆ **Standard** – 2.0 m wide wood chip or compacted gravel surface.
- ◆ **Amenities** – a rest node with a bench and garbage receptacle shall be provided every 500 m or at specific view/point of interest locations. Bridges, boardwalks and viewpoints may also be provided as per detailed design.
- ◆ **Signage** – interpretive/directional/distance signage shall be provided throughout Nature Trail routes as per detailed design.
- ◆ **Trail Controls** – fences and gates will be used to control vehicle (road & off-road) access to these sites and trails.
- ◆ **Maintenance** – regular maintenance activities including garbage removal, amenity repairs, signage repairs, mowing and vegetation clearing. Annual maintenance activities including trail grooming and specialized maintenance activities such as closing off shortcuts and reclamation work along trails.

5.0 Future Trail Network

5.1 Overall Trail Network

As indicated previously, the existing trail network map was developed throughout the study through input from the Committee, City staff, stakeholders and the public. Red Deer's future trail network was also designed by giving the community opportunities to indicate where new trail routes and trail links should be developed which would enhance the overall system. Through the various public consultation activities and through discussion between the Committee and the project team, a total of **101.5 km** of new or upgraded trails have been identified and mapped. The overall trail network map has been divided into three separate maps covering the north (Map 1.0), central (Map 2.0) and south (Map 3.0) parts of the city. Full size versions of the three maps (1:4000 scale) are provided in Appendix H. Descriptions of the proposed future trails by category are provided in tables on the following pages and illustrated on the maps. See Section 6.3 for the recommended development priorities.

5.2 Waskasoo Trails

There are approximately 50 km of existing asphalt Waskasoo Trails providing residents of Red Deer with multi-use access to the major park sites, natural areas, river and creek corridors. As defined in Table 5.2 a total of 8.1km of future Waskasoo Trails are being proposed.

Table 5.2: Proposed Waskasoo Trails

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Waskasoo Trails - 3.0 m Asphalt, Furnishings, Signs					
94	1.0	East Bank	Mackenzie Recreation Area to River Bend Golf Course		3860
20	2.0	Kerry Wood Drive	From Maskepetoon Natural Area to West End of Kerry Wood Dr.		1210
25	2.0	Great Chief Park	Fountain Drive		232
26	2.0	To Fort Normandeu	Along South Bank of Red Deer River		N/A
87	2.0	Spruce Dr.	Waskasoo Trail to 35th St.		414
89	2.0	Riverlands to Bower Ponds Bridge	Bower Ponds to Riverlands (47th St.)		155
32	3.0	Red Deer College	Along College Circle to Hwy 2		2256
Total Proposed Waskasoo Trails					8127

5.3 Arterial Trails

Arterial Trails will provide residents with good trail access to connect neighbourhoods to the Waskasoo Trails and to important recreational, commercial and cultural facilities in the city. The Arterial Trails create a network of routes which can support ‘active transportation’ in Red Deer. As defined in Table 5.3 a total of 14.8 km of new Arterial Trails and a total of 9.7 km of upgraded Arterial Trails are being proposed.

Table 5.3: Proposed & Upgraded Arterial Trails

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Arterial Trails - 3.0 Asphalt or Concrete					
95	1.0	Northland Dr.	Hwy 11 to Red Deer River		1850
97	1.0	77th St.	47th Ave. to 40th Ave.		1584
106	1.0	67 St.	Taylor Dr. to Orr Dr.		780
80	2.0	Ross (50th) St.	Donlevy Ave to 20th Ave.		481
126	2.0	40th Ave.	39th St. to Ross St.		760
131	2.0	20th Ave.	32nd St. to 55th St.		3200
35	3.0	Taylor Dr.	28th St. to 19th St.		1180
38	3.0	19th St.	Hwy 2 to 40th Ave.		2211
45	3.0	19th St.	40th Ave. to 30th Ave.		1570
50	3.0	30th Ave.	From 22nd St. to 19th St.		779
113	3.0	Taylor Dr.	32nd St. to College Court		449
Total Proposed Arterial					14844
Proposed Upgraded Arterial Trails - Upgraded to 3.0 m Concrete or asphalt					
61	2.0	32nd St.	40th Ave. to 30th Ave.	1.5 conc.	1575
65	2.0	40th Ave.	39th St. to 32nd Ave.	1.5 conc.	765
66	2.0	32nd St.	Gaetz Ave. to 40th Ave.	2.0 conc.	1753
69	2.0	Ross (50th) St.	Piper Creek to 30th Ave.	1.5-1.8 conc.	2323
90	2.0	Gaetz Ave.	55th St. to 52nd St.	2.0 conc	394
111	2.0	Gaetz Ave.	62nd St. to 58th St.	1.5 conc	533
33	3.0	32nd St.	57th Ave. to Taylor Dr.	2-2.5 conc.	654
67	3.0	40th Ave.	32nd St. to Selkirk Blvd.	1.5 conc.	766
114	3.0	Molly Banister	Taylor Drive to Piper Creek	2.5 conc.	964
Total Upgraded Arterial					9727

5.4 Collector Trails

Collector Trails provide important pedestrian and bicycle connections to the rest of the trail network, to transit, and within and between neighbourhoods. As defined in Table 5.4A, a total of 16.6 km of new Collector Trails have been proposed. Many of

these trails have been designated as part of the Area Structure Plan process and will be constructed when new neighbourhoods are developed.

Table 5.4A: Proposed Collector Trails

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Collector Trails - 2.5 m concrete					
4	1.0	Johnstone Crossing	From Taylor Drive to Johnstone Drive on Kent St.		1073
78	1.0	Kennedy Dr.	Kovac St. to Kelly St.		236
96	1.0	40th Ave.	Northland Dr. to Riverside Dr.		1012
100	1.0	Kingston Dr.	Gaetz to Kerr Cl.		840
104	1.0	Nolan St.	Norton Ave. to 52 Ave.		187
12	2.0	Overdown Dr.	Taylor Drive to bend in Road		1848
13	2.0	Orr Dr.	Oldford Cl. To Kerry Wood Dr.		641
16	2.0	Kerry Wood Dr.	From Bend in Road (#23) to quarter Section line (#15)		1490
24	2.0	Kerry Wood Dr.	Fern Rd. to Fir St.		562
27	2.0	Webster Dr.	Cronquist Drive to Walker Blvd.		548
63	2.0	39th St.	Mitchell Ave. to Maxwell Ave.		339
68	2.0	Ellenwood Dr.	MR near Ellenwood Drive and Davison Drive		86
70	2.0	East Hill	Future Links into Neighborhood		N/A
72	2.0	40th Ave.	50A St. to 51A St.		170
73	2.0	East side of Michener Hill	Ross St. to Conners Cr.		503
77	2.0	55th St.	Cameron Cr. to 30th Ave.		914
79	2.0	55th St.	30th Ave. to 20th Ave.		1182
110	2.0	60th St.	51st Ave. to 54th Ave		288
128	2.0	39th St.	Dodge ave to 20 Ave.		500
36	3.0	22nd St. and Gaetz	University to Taylor Dr. along 22nd St. turn on Gaetz to 19th		1505
115	3.0	Boyce St.	Piper Creek to Gaetz Ave.		727
117	3.0	Inglewood East	Future Collector Road		900
122	3.0	Lancaster Dr.	Lister Cr. To Lawford Ave.		1070
Total Proposed Collector					16621

In reviewing the existing sidewalks and trails it was evident that a number of important links within existing neighbourhoods were made up of 1.5 m wide

concrete sidewalks. It was agreed that over time, these sidewalks needed to be upgraded to the Collector Trails standard. As defined in Table 5.4B, a total of 8.1 km of upgraded Collector Trails have been proposed.

Table 5.4B: Upgraded Collector Trails

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Upgraded Collector Trails - Upgraded to 3.0 m Concrete or asphalt					
7	1.0	59th Ave.	From Grant St. to 67th St.	1.5 conc.	1035
103	1.0	Kent St.	Kendrew Dr. to Taylor Dr.	1.5 conc.	343
105	1.0	Jewel St.	Taylor Dr. to Johnstone Dr.	1.5 conc.	640
18	2.0	59 Ave. & Riverview Ave.	From 67th St. to 59th St.	1.5 conc.	1377
62	2.0	39th St.	Maxwell Ave. to 30th Ave.	1.5 conc.	747
64	2.0	39th St.	44th Ave. to Mitchell Ave.	1.37-1.8 conc	1140
71	2.0	40th Ave.	Ross St. to 50A St.	1.5 conc.	82
74	2.0	Springbett Dr.	Spruce Dr. to 44th Ave.	1.5 conc.	611
76	2.0	55th St.	From Waskasoo Trail North of Cameron Cr. To Waskasoo Trail E of	1.5 conc.	550
91	2.0	53rd St.	Gaetz Ave. to 48th Ave.	1.5 conc.	326
124	2.0	Metcalf Ave.	2 Sections from 39th St. to Park & Park to 32nd St.	1.5 conc.	481
125	2.0	Ellenwood Dr.	39 St. to Excel St.	1.5 conc.	109
116	3.0	22nd St.	Gaetz Ave to near 50 Ave.	1.5 conc.	190
119	3.0	Lampard Cr.	Lancaster Dr. to central MR	1.5 conc.	80
121	3.0	Lees St.	30 Ave to Lockwood Ave	1.5 conc.	411
Total Upgraded Collector					8122

5.5 Bikeways

Bikeways provide on-street bike connections into and through the downtown and in other neighbourhood locations where there is not sufficient room to provide Arterial or Collector Trails but a trail link is important. As defined in Table 5.5 a total of 9.2 km of new Bikeways are being proposed.

Table 5.5: Proposed Bikeways

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Bikeways - Signage and Road Stencils					
3	1.0	Kelloway Cr.	78A to 77 St.		548
9	1.0	52nd Ave.	Niven St. to 62 St.		1671
93	1.0	30th Ave.	67th St. to River Bend Golf Course		3302
21	2.0	Fir St.	Kerrywood Dr. to Fairbank Rd.		90
75	2.0	Cardinal Ave.	55th St. to Cornett Dr.		180
83	2.0	43rd St.	Wiltshire Blvd to 55 Ave.		311
84	2.0	43rd St.	52nd Ave. to 49th Ave.		515
85	2.0	44A St. and 52nd Ave.	From 45th St. to 43th St.		305
86	2.0	55th Ave.	linking Waskasoo Trail to Bikeway		79
88	2.0	47th St.	Bower Ponds to 52nd Ave.		709
90	2.0	53rd Ave. and Taylor Dr.	Connection from Bikeway to Arterial trail at this intersection		39
109	2.0	Howarth St.	From Howarth St. Close to Overdown Dr.		1078
112	2.0	55th St.	Taylor Dr. Ped Bridge to 56 St.		450
Total Proposed Bikeway					9277

5.6 Neighbourhood Trails

Neighbourhood Trails provide links between neighbourhoods, to neighbourhood facilities and to the Waskasoo Park Trails and Arterial Road Trails. In future development of subdivisions, a plan for the network of Neighbourhood Trails will be outlined during the Area Structure Plan process. As part of this master plan, a number of proposed Neighbourhood Trail links or routes in existing neighbourhoods have been proposed. These trails will need to be developed by Recreation Parks & Culture. The majority of existing Neighbourhood Trails are 1.5 m shale (as shown on maps) and are generally suitable to maintain the current level of use. However, in an effort to provide a continuous hard surface trail routes in conjunction with Collector Trails, there are a few neighbourhood trails that are being recommended for upgrading to the new standard. As defined in Table 5.6 a total of 17.3 km of new Neighbourhood Trails are being proposed and a total of 1.0 km of upgraded Neighbourhood Trails are being proposed.

Table 5.6: Proposed Neighbourhood Trails

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Neighbourhood Trails - 2.5 m Asphalt, Furnishings					
5	1.0	Johnstone Crossing			835
6	1.0	52nd Ave. Alignment	77th St. to Niven St.		1129
8	1.0	Johnstone Park	within Municipal Reserve		275
101	1.0	Kingsgate MR	Park site		253
102	1.0	Kennedy Dr.	Kelly St. to N of Kerr Cl.		183
11	2.0	Oriole Park	PUL North of O'Brian Crescent		264
14	2.0	Oriole Park	Through MR near Oak Drive and Overdown Cr.		412
15	2.0	Oriole Park West	Through MR (along quarter section line)		690
19	2.0	Riverside Meadows	North of 60th St. and East of 58th Ave.		605
23	2.0	Oriole Park	within PUL		346
28	2.0	60th Ave.	Cronquist Drive to Wishart St.		209
29	2.0	60th Ave.	Wishart St. to Webster Dr.		321
59	2.0	Devonshire MR	MR near Duston St. and Duffield Ave.		495
60	2.0	Morrisroe Extension	MR near Metcalf Ave.		337
81	2.0	East of Gaetz Lake Sanctuary	N of 55th St. NEPR to 30th Ave. and 67th St. Intersection		1440
92	2.0	Golden Circle (Downtown)	48th Ave to 48th St.		620
127	2.0	39th St.	Connecting PUL to Crossing at Douglas Ave and 39th St.		40
129	2.0	Davenport central MR	From Daykin St. to Dodge Ave. thru MR		330
130	2.0	Davenport north MR	Duval Cr.		180
34	3.0	Waskasoo Creek / Red Deer College	West of Taylor Drive		1177
37	3.0	Red Deer College	North of College Court		237
40	3.0	Sunnybrook Extension	Future 22nd St. Piper Creek to 40th Ave.		845
46	3.0	Inglewood West	Within School Site		316
48	3.0	22nd St.	Inglis Cres. To Section Line		2427
49	3.0	Inglewood West MR	Through MR off Inglewood Drive		215
51	3.0	Anders on the Lake MR	In MR near Addington Dr. and Ainsworth Cres.		268
52	3.0	Aspen Ridge MR	In MR near Addington Dr. and Ackerman Cr.		443

Table 5.6: Proposed Neighbourhood Trails - Continued

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Neighbourhood Trails - Continued					
53	3.0	Anders Park East MR	Between Anquetel St. and Allan St.		488
54	3.0	Anders Park East MR	Between Anquetel St. and Allan St.		483
55	3.0	Anders Park East MR	Between Anquetel St. and Allan St.		138
56	3.0	Lancaster Green MR	in MR near Lancaster Dr. and Langford Cres.		470
57	3.0	Lonsdale	near Lamb Close		333
58	3.0	Lancaster Meadows MR	MR near Lancaster Drive Lawford Ave.		328
118	3.0	Lancaster Green SW MR	Lancaster Dr. to Lampard CR.		94
123	3.0	Lang Cl.	Connecting Lang Cl. To Lanterman Cl.		42
Total Proposed Neighbourhood Trails					17268
Upgraded Neighbourhood Trails - From Shale to 2.5 M Asphalt					
39	3.0	PUL north of Bettenson St.	Barrett Dr. to Waskasoo		606
120	3.0	Lancaster Green central MR	Park site	1.5m	410
Total Proposed Upgraded Neighbourhood Trails					1016

5.7 Nature Trails

Nature Trails are designated soft surface trails within natural areas and designated reserve sites which are designed primarily for pedestrian use and are well suited for nature appreciation and interpretation. As defined in Table 5.7, a total of 16.5 km of new Nature Trails are being proposed. The majority of these trails will be located in Neighbourhood Park Ecological Reserves.

Table 5.6 Proposed Nature Trails

Trail #	Map #	Location	Street Address	Current Width (m)	Length (m)
Proposed Nature Trails - 2.0 m Aggregate, Amenities, Signs, Interpretive, Access Controls					
1	1.0	Edgar Industrial Park (NEPR)	Edgar Industrial Dr. and Edgar Industrial Cr.		410
2	1.0	Edgar Industrial Park (NEPR)	Edgar Industrial Way and Edgar Industrial Link		272
10	1.0	Johnstone Park & Golden West (NEPR)	CPR and Johnstone Drive (near Edgar Athletic Park)		373
98	1.0	Northlands Industrial (NEPR)	South of 77 St.		460
99	1.0	Glendale (NEPR)	69th St. and 63rd Ave.		170
107	1.0	Normandeau (NEPR)	Nully Ave. to 67 St.		370
17	2.0	Maskepetoon Natural Area	Maskepetoon		2190
22	2.0	Fairview (NEPR)	Fern Rd. and Oslo Close		466
30	2.0	West Lake (NEPR)	Wallin Cres. South of Webster Drive		470
82	2.0	Taylor Dr. (NEPR)	North of 32nd St. and West of Taylor Drive		342
108	2.0	Oriole Park West (NEPR)	North of Kerry Wood Dr.		424
132	2.0	College Park	Future Link to East Hill		N/A
133	2.0	Heritage Ranch (NEPR)	within the NEPR at Heritage Ranch		341
31	3.0	West Lake (NEPR)	Wallin Cres. South of Webster Drive		725
41	3.0	Westerner Park (NEPR)	South of 19th Street, West of 40th Ave.		1776
42	3.0	18th St.	Connection from Westerner to Management Facility		615
43	3.0	Waste Management Facility (NEPR)	South of 19th Street, East of 40th Ave.		2089
44	3.0	Waste Management Facility	Circulating Waste Management Facility 40th Ave, Rural Road, 30th		4624
47	3.0	22nd St. and 30th Ave. (NEPR)			390
Total Proposed Nature Trails					16507

6.0 Implementation Framework

6.1 Development Implications

With new standards to guide trail development and a plan for the future trails within each trail category, The City of Red Deer can begin to move forward with the planning, design and development of the future trail network. This portion of the master plan summarizes the Master Plan recommendations, identifies the implementation priorities and creates a long term implementation framework for the future development of Red Deer's trails. In preparing the implementation framework the project team considered a number of development implications which were used in reviewing the merits of recommendations and in the selection of priorities. The key implications include:

- ◆ **Capital Budget** – The City does not currently have a designated capital budget for ongoing trail development. With over 100 km of proposed new and upgraded trails, the implementation framework of the Master Plan has been prepared with yearly capital budgets for the 15 year term of the Plan.
- ◆ **Maintenance** – as indicated previously, it was the opinion of the project team The City (Public Works and Parks Facilities) is doing a good job of maintaining the trails. The biggest issue is coordination between the two departments but it is currently a good working partnership. This coordination (communication, possible sharing of resources) will be critical to the success of the Plan implementation in terms of ensuring trail user satisfaction. With an expanding trail network and increasing costs, the maintenance budget will need to increase at a relative rate and therefore should be evaluated at least every three years of the Plan.
- ◆ **Environment** – environmental issues and concerns related to trail use and development were not a dominant topic during the study. The biggest issue was unregulated use by ATV's in areas like Heritage Ranch and Maskepetoon. Access controls and better enforcement (Park Rangers/voluntary patrols) should assist with reducing these impacts. The other key factor is the development of designated trails in these key areas as well as in the proposed

Neighborhood Park Ecological Reserves. The designate Nature Trails will control access and provide a great interpretive opportunity. During the design development of future trails, it is important that environmental values (pg. 50) and environmental principles (pg. 52) be used to guide decision making.

- ◆ **Land Use & Disposition** – this was another implication that did not become a major focus of the study. The vast majority of proposed trails have no land use or disposition issues. The two primary trail routes which will require land acquisition and ownership review are the East Bank Trail from McKenzie to River Bend, and the long standing priority of a trail to Fort Normandeau.
- ◆ **Trail User Needs** – the Intercept Survey and Stakeholder Interviews provided great information on defining user satisfaction, developing a user profile and understanding specific user needs. The basic needs of the users and some enhanced amenities have been defined as part of the proposed trail standards.
- ◆ **Management & Coordination** – Since the development and operation of trails are the responsibility of both Recreation Parks & Culture and Engineering, coordination between the two departments is critical to effective implementation. Through the Steering Committee, both departments have indicated that they are committed to work together to implement the recommendations of the Trails Master Plan. It has been suggested that a Trails Committee, with representation from the City and a variety of stakeholders would be an effective way of coordinating the detailed planning that would need to take place. A Bicycle Committee was recommended in the 2000 BMP. Rather than a formal committee that meets regularly, *it is recommended that The City manage implementation internally, but provide an annual update for interested stakeholders to provide information on plan development and operational changes.*
- ◆ **Further Reviews and Studies** – the Master Plan has defined several studies which have already been proposed or are needed in the near future as part of the implementation framework. Some of these studies are required prior to capital development (eg. Maskepetoon Natural Area), and some studies are in consideration of potential changes to operational practices (e. snow clearing, trail centerlines). See Section 6.2 and 6.3.3.

6.2 Summary of Recommendations

Based on the work of this study a number of recommendations have been provided to ensure the enhancement and future development of Red Deer’s extensive trail network. The following is a summary of the recommendations which have been defined previously in this report.

Page #	Recommendation	Responsibility
It is recommended that . . .		
33	Parks Maintenance, and Parks Facilities evaluate desire lines on a case by case basis and formalize desire lines (i.e. construct a trail link) in locations where there is a clear desire for use related to access or connection to other trails or community facilities and where increased maintenance, environmental impacts and/or safety issues would not result.	RPC Dept.
34	The City widen the trail to 5.0m at switchback locations on steep hills, mark the centre line and clear vegetation (only as required) to improve sight lines.	RPC Dept.
35	The City remove all existing offset gates as part of future intersection improvements and install “Yield” signs for trail users.	Engineering
35	during the planning of future neighbourhoods, mid-block trail connections to arterial roads should be discouraged to avoid the potential for berm and mid-block crossings.	Planning/ RPC
35	existing locations in which a trail route crosses a berm should not be altered or improved unless safe access can be provided without disruption of berm function.	N/A
36	The City complete a review of all city facilities and implement an ongoing program to install bike racks at all facilities.	RPC Dept.
36	The City should consider amending the Land Use Bylaw, to require new developments to provide bicycle parking, in the same way that automobile parking is required now (Bicycle Master Plan, 2000).	PCPS
36	The City should maintain the bike racks on buses program, and attempt to raise the public awareness of it (Bicycle Master Plan, 2000).	N/A
36	The City install painted centerlines on the existing Waskasoo trail from Kin Canyon to Ross Street, and conduct an evaluation program, including public input, over three years to consider the effectiveness.	RPC Dept.
37	The City complete an inventory and evaluation of existing trail signs and define a program for the installation of additional directional signs, distance markers and information signs and maps to improve trail user experience.	RPC Dept.
38	The City maintain its current approach of providing trail lighting only at major trail bridges, at trail heads and at parking areas and facilities which support the trail system.	RPC Dept.
40	Public Work, Parks Maintenance and Park Facilities have an annual maintenance coordination and review meeting to confirm scope and responsibilities, and to share and manage resources.	RPC Dept. / Public Works

Continued . . .

Page #	Recommendation	Responsibility
It is recommended that . . .		
40	The City undertake snow clearing of one designated trail route (see Section 5.0) for a period of three years and then evaluate all of the implications related to budget, use, and liability.	RPC Dept. / Public Works
44	a master plan be prepared for the Maskepetoon Natural Area to design and implement control measures, parking , access, trails and interpretive programming.	RPC Dept.
47	The City of Red Deer work with the local and the Provincial cycling community (CABC) to make adult bicycle education programs available (Bicycle Master Plan, 2000).	RPC Dept.
47	The City of Red Deer should include information on the safety issues related to sidewalk riding in all existing bicycle education programs and information campaigns (Bicycle Master Plan, 2000).	RPC Dept.
47	The City include trail etiquette and 'rules of the trail' information on future trail maps and directional signs.	RPC Dept.
47	The City undertake an internal review of the cost-benefit of hiring full-time, year round Park Rangers for the entire Waskasoo Parks system.	RPC Dept.
48	The City review trails in Bower Ponds and around Barrett Park and implement amenity improvements as required (signs, benches, rest areas etc.) to meet universal accessibility guidelines. Once implemented these trails can be identified as universally accessible trails as part of the trail network (ie. On map and website).	RPC Dept.
51-53	The City adopt the following principles (Section 4.0) to guide the planning and development of Red Deer trail network.	RPC Dept.
54-60	The City of Red Deer adopt the following standards (Section 4.0) to guide the planning and development of future trails and the upgrading and operation of existing trails.	RPC Dept.
57	2.5 m wide concrete sidewalks, called Collector Trails, be required on one side of all future collector roads.	RPC Dept.
72	The City manage implementation internally, but provide an annual update for interested stakeholders to provide information on plan development and operational changes.	RPC Dept. Engineering

6.3 Development Priorities

With consideration of the development implications and Master Plan recommendations, the project team prepared a list of the trail development priorities for review by the Steering Committee. The first step in preparing the priorities list was to gather input from the public and stakeholders and consider it in the context of the trail network evaluation. The public was asked at the open house to identify their top two priority trails (from a choice of ten) and their top two trail amenities to be developed. These results are defined in Section 2.5 and outlined in Appendix D. The stakeholders, through a series of directed activities at a workshop (See below), were asked to validate the proposed trail development program and clarify potential capital, operational and program items. All of this public and stakeholder input played a key role in shaping the trail development priorities outlined in Section 6.3.2, the other Master Plan priorities defined in Section 6.3.3, as well as the implementation framework defined in Section 6.3.

6.3.1 Stakeholders Workshop

A Stakeholders Workshop was held on Tuesday, November 16, 2004. Twenty representatives from Red Deer businesses, runner's clubs and various City departments participated in the evening workshop. The objectives for this workshop included:

- ◆ To present work completed to date and results
- ◆ To confirm/clarify interpretation of input, results and recommendations
- ◆ To gain common understanding of proposed standards and trail routes
- ◆ To validate proposed trail development program and clarify potential capital, operational and program items
- ◆ To choose some capital and operational priorities

During the workshop the participants were divided into groups and each group had to assess spending priorities for the development of trails. Five areas of development were considered: 1) Trail Upgrades and New Trails, 2) Education and Safety, 3) Environment, 4) Trail Facilities and Amenities, and 5) Operations and Maintenance. Once each group had defined a list of potential capital items with each category, each group was given \$100,000 to spend on priorities in any of the categories. At the end of the exercise a count of the dollars allocated in each category area confirmed the priorities as follows.

1. Trail Upgrading and New Trails	\$ 200,000	40%
2. Operations and Maintenance	\$ 124,000	25%
3. Environment	\$ 110,000	22%
4. Trail Facilities and Amenities	\$ 38,000	8%
5. Education and Safety	\$ 28,000	5%

A more complete summary, including details of all of the proposed capital items and specific priorities can be viewed in Appendix J.

6.3.2 Trail Development Priorities

From the input of the public during the intercept survey and the open house, combined with the specific input provided by stakeholders during the workshop, the project team was able to develop a list of twenty priority trails for development (Table 6.1). The priority trail locations are circled (in red) on the future trail network map. The recommended implementation schedule is defined in the Section 6.3.3. See Appendix K for details on capital cost factors and a complete list of the estimated development cost and responsibility for the entire proposed future trail network.

Table 6.1 Priority Trails for Development

Trail #	Trail Class	Map #	Location	Length (m)	Unit Rate	Capital Cost	Responsibility
25	Waskasoo	2.0	Great Chief Park	232	\$225	\$52,200	RPC Dept.
26	Waskasoo	2.0	To Fort Normandeau	N/A	Requires Master Plan		RPC Dept.
89	Waskasoo	2.0	Riverlands to Bower Ponds Bridge	155	lump sum	\$5,800,000	RPC Dept.
106	Arterial	1.0	67 St.	780	\$200	\$156,000	Engineering
33	Arterial Upgraded	3.0	32nd St.	654	\$90	\$58,860	Engineering
61	Arterial Upgraded	2.0	32nd St.	1575	\$120	\$189,000	Engineering
66	Arterial Upgraded	2.0	32nd St.	1753	\$90	\$157,770	Engineering
69	Arterial Upgraded	2.0	Ross (50th) St.	2323	\$400	\$929,200	Engineering
90	Arterial Upgraded	2.0	Gaetz Ave.	394	\$200	\$78,800	Engineering
18	Collector Upgraded	2.0	59 Ave. & Riverview Ave.	1377	\$300	\$413,100	Engineering
91	Collector Upgraded	2.0	53rd St.	326	\$200	\$65,200	Engineering
3	Bikeway	1.0	Kelloway Cr.	548	\$40	\$21,920	Engineering
9	Bikeway	1.0	52nd Ave.	1671	\$40	\$66,840	Engineering
83	Bikeway	2.0	43rd St.	311	\$40	\$12,440	Engineering
84	Bikeway	2.0	43rd St.	515	\$40	\$20,600	Engineering
85	Bikeway	2.0	44A St. and 52nd Ave.	305	\$40	\$12,200	Engineering
86	Bikeway	2.0	55th Ave.	79	\$40	\$3,160	Engineering
6	Neighbourhood	1.0	52nd Ave. Alignment	1129	\$175	\$197,575	RPC Dept.
17	Nature	2.0	Maskepetoon Natural Area	2190	Requires Master Plan		RPC Dept.
43	Nature	3.0	Waste Management Facility (NEPR)	2089	\$100	\$208,900	RPC Dept.
Total				18406		\$8,443,765	

6.3.3 Other Master Plan Priorities

From the input of the stakeholders, the public, and the committee, the project team was able to develop the following list of other planning and development priorities.

- ◆ **Trails Map** – the trails map produced by The Red Deer Visitor and Convention Bureau should be upgraded this year to reflect the increase in existing routes that were mapped during the study. The new map should include reference to the various trail types and standards, and the location of amenities and other key community features. The map should also include trail etiquette and trail safety information (eg. ‘rules of the trail’). The trails map should then be updated every three years to reflect changes to the trail network and should be made available through City Hall and The City website.

- ◆ **Maskepetoon Natural Area: Development Master Plan** – with damage from unregulated use, and concerns regarding increasing use by new residents of Oriole Park, it is important that a Master Plan be prepared for the Maskepetoon Natural Area. The Plan should include an environmental impact assessment, development program, and design for access control, trails, amenities, parking and interpretive programming.

- ◆ **Heritage Ranch to Fort Normandeau: Trails Master Plan** – a trail link to Fort Normandeau has been a long standing priority and as such a Master Plan should be prepared to assess development potential. The plan will need to address development feasibility including route options and land ownership/acquisition requirements as well as other issues such as funding, operations, partnerships, and safety.

- ◆ **Centrelines** – throughout the study there was mixed opinion on whether centrelines should be part of the trail standard for asphalt trails. Some municipalities have standards that include centrelines. It has been recommended in this Plan that The City install a centerline on an existing, well used trail route and conduct an evaluation program to consider the effectiveness.

- ◆ **Snow Clearing** – unlike centerlines, there was good support for snow clearing on trails. Since there are tremendous budget implications, the Plan is recommending a trial program which will involve having Public Works clear one section of Waskasoo Trail on the west side of downtown for a three year period.
- ◆ **Trail Signage** – In conjunction with the Waskasoo Park Interpretive Program and Master Plan, The City should complete an inventory and evaluation of existing trail signs and define a program for the installation of additional directional signs, distance markers and information signs and maps to improve trail user experience.
- ◆ **Park Rangers** – During the development of this Master Plan discussion involved recommending that The City undertake an internal review of the cost-benefit of hiring full-time, year round Park Rangers for the entire Waskasoo Parks system. This review has been completed by the City and a Park Rangers program will be implemented in 2006.

6.4 Implementation Framework

The implementation framework for the RDTMP has been divided into two sections: Approach and Schedule. The approach defines the general philosophy and the specific parameters which should be used by The City in assessing future trail planning and development decisions, and the schedule defines the specific timeframe for the implementation of the proposed development priorities. *It is recommended that The City adopt the following implementation framework to serve as a guide for the implementation of the Red Deer Trails Master Plan.*

6.4.1 Approach

With over 100 km of proposed future trails to develop, The City will have many choices to make over the next 25 years. In considering the identified priorities, the associated capital costs and the implementation timeline of 5 and 15 years, the project team felt that a flexible approach might be of benefit to The City for both short and long term planning. The proposed approach facilitates the implementation of both major and minor capital projects, while balancing future planning requirements as well as maintenance and operations objectives and capabilities.

- ◆ **Major Trail Projects** – the recommended approach is built around the planning and construction of a major trail development project during every third year of the implementation schedule. The budget for the major trails project will vary depending on the project.
- ◆ **Minor Trail Projects** – throughout the other years of the implementation schedule, The City should commit a designated budget of \$300,000 to complete a range of minor trail projects. Some initial minor projects have been recommended for the first five years of the Master Plan (See 6.4.2).
- ◆ **Other Master Plan Priorities** – the other Master Plan priorities defined in Section 6.3.3 have been worked into the first five years of the implementation schedule.
- ◆ **Maintenance & Operations** – as indicated, with an expanding trail network and increasing costs, the maintenance budget will need to increase at a relative rate and therefore should be evaluated at least every three years of the Plan.

Some of the considerations and benefits to this approach include:

- ◆ Facilitates the major project implementation process of approval, request for proposal, retaining consultants, design, tender and construction.
- ◆ Requires a dedicated budget for trails projects on an annual basis. Budget must be separate from the existing budgets of Recreation Parks & Culture and Engineering. The major projects budget may shift between Recreation Parks & Culture and Engineering (Arterial Road Trails) depending on the project.
- ◆ Utilizes City staff in the implementation of minor projects without the need for consultants (i.e. staff work with the RDTMP standards to tender minor projects to pre-qualified contractors without consultant involvement).
- ◆ Allows for capital to be spent on improving trails on an annual basis (i.e. better/more amenities etc), rather than just spending money on new trails.
- ◆ Provides opportunity for staff and stakeholders to provide ongoing input into trail needs and priorities.

6.4.2 Implementation Schedule

The recommended schedule for implementation of the RDTMP for the next fifteen years from 2005 to 2020 is defined in Table 6.2.

Table 6.2: Implementation Schedule

Year	Trail #	Trail Class	Map #	Location	Capital Cost	Responsibility
2005	RDTMP approval and internal coordination, new maps, updated website, update standards, park wardens review, review maintenance budgets				No designated Budget	RPC & Eng.
2006	106	Arterial	1.0	67th St.	\$156,000	Engineering
	33	Arterial Upgraded	3.0	32nd St.	\$58,860	Engineering
	Trail Centreline & Snow Clearing Programs				\$50,000	RPC & Pb. Wrks
	17	Maskepetoon Natural Area: Master Plan Only			\$55,000	RPC Dept.
2006 Total					\$319,860	
2007	17	Nature	2.0	Maskepetoon Natural Area: Detailed Design & Construction	\$500,000	RPC Dept.
2008	66	Arterial Upgraded	2.0	32nd St.	\$157,770	Engineering
	83	Bikeway	2.0	43rd St.	\$12,440	Engineering
	84	Bikeway	2.0	43rd St.	\$20,600	Engineering
	85	Bikeway	2.0	44A St. and 52nd Ave.	\$12,200	Engineering
	86	Bikeway	2.0	55th Ave.	\$3,160	Engineering
	26	To Fort Normandeau: Master Plan Only			\$60,000	RPC Dept.
	Trail Signage - upgrade directional/distance signage				\$35,000	RPC & Pb. Wrks
2008 Total					\$301,170	
2009	3	Bikeway	1.0	Kelloway Cr.	\$21,920	Engineering
	9	Bikeway	1.0	52nd Ave.	\$66,840	Engineering
	6	Neighbourhood	1.0	52nd Ave. Alignment	\$197,750	RPC & Eng.
2009 Total					\$286,510	
2010	69	Arterial Upgraded	2.0	Ross (50th) Street	\$929,200	Engineering
2011	Minor Projects - to be determined following internal review				\$300,000	
2012	Minor Projects - to be determined following internal review				\$300,000	
2013	18	Collector Upgraded	2.0	59 Ave. & Riverview Ave.	\$413,100	Engineering
2014	Minor Projects - to be determined following internal review				\$300,000	
2015	Minor Projects - to be determined following internal review				\$300,000	
2016	Major Project: Link to Fort Normandeau				Cost determined by master plan	RPC Dept.
2017	Minor Projects - to be determined following internal review				\$300,000	
2018	Minor Projects - to be determined following internal review				\$300,000	
2019	89	Major Project: Riverlands to Bower Ponds Bridge			\$5,800,000	RPC & Eng.

6.5 The Future of Red Deer’s Trail Network

It has been apparent to the project team throughout the study that the Red Deer Trails Network is a tremendous resource that the citizens enjoy and take great pride in. When asked about the trails, users reply with words like ‘awesome’ and ‘excellent’, and comment that The City should “keep up the good work”. It is clear that trails are one of the elements that make Red Deer a successful city and a place that people want to live.

One of the great values of trails is that they are a free facility that can be enjoyed by all citizens and visitors alike. That is one of the reasons that it is important for The City to plan and budget for the development and operations of trails and trail network features and amenities.

Through the preparation of this Master Plan, the City of Red Deer is continuing its longstanding commitment to having a great trail network which is integrated throughout the neighbourhoods and natural areas of the city. In implementing the Plan, The City will ensure that the trails meet the needs of all trail users now and into the future.

7.0 Appendices (not included with this draft)

Appendix A: Work Cited

Appendix B: Intercept Survey Summary

Appendix C: Stakeholder Interview Summary

Appendix D: Public Open House Summary

Appendix E: Trail Network Evaluation

Appendix F: Downtown Routes Evaluation

Appendix G: Offset Gates Review

Appendix H: Future Trail Network Map

Appendix J: Stakeholders Workshop Summary

Appendix K: Trail Development Costs & Responsibilities

Appendix A: Work Cited

Appendix B: Trail User Survey

Appendix B: Trail Survey Summary

Appendix B: Press Release

Appendix C: Stakeholder Interview Summary

Appendix D: Open House Display Boards

Appendix D: Public Open House Exit Survey

Appendix D: Public Open House Summary

Appendix E: Trail Network Evaluation

Appendix F: Downtown Routes Evaluation

Appendix G: Offset Gates Review

Appendix H: Future Trail Network Map

Appendix J: Stakeholders Workshop Summary

Appendix K: Trail Development Costs & Responsibilities

Trail Development Costs & Responsibilities

The following table includes the estimated cost for each of the proposed trails detailed in the Future Trail Network. These prices are based on 2005 construction prices. Those trails that are highlighted in yellow are priorities that have been identified in the Master Plan report.

Each of the five trail types, as outlined in the Master Plan, have different set of development costs, due to the construction standard, or amenities provided. The unit rates reflect these differences. The following lists what is included in the unit rates.

Waskasoo Trails include:

- 3.0m wide asphalt
- rest node of a bench and garbage receptacle every 1.5 km
- directional signage at all trail intersections and destinations
- trail maps / information boards at all major trail destinations

Arterial Trails include:

- 3.0m wide asphalt or concrete
- Yield signs installed at all trail/road intersection locations
- Upgraded Arterial trails require additional asphalt or concrete to create 3.0m wide trail.
- Special unit rates have been applied to trails where special construction (eg. Retaining walls) will be required.

Collector Trails include:

- 2.5m wide concrete
- Upgraded Collector trails require additional concrete to create 2.5m wide trail.

Bikeways include:

- Bikeway signs provided one per blocks along the bikeway.
- Bikeway symbols are to be painted on the road surface approximately every second block along the bikeway.

Neighbourhood Trails include:

- 2.5m wide asphalt
- rest node with bench and garbage receptacle for every 500m of Neighbourhood Trail through park sites or linear parks
- one set of Bollards to be installed at alley and end of PULs for trail control
- Upgraded Neighbourhood trails require the conversion of 1.5m shale trails into 2.5m wide asphalt.

Nature Trails include:

- 2.0m wide wood chip or compacted gravel
- rest node of a bench and garbage receptacle every 500m or at a specific view / point of interest.
- Interpretive / directional / distance signage
- fences and gates will be used to control vehicle access