4.2 PARK DEVELOPMENT-GUIDELINES AND STANDARDS

Guidelines and Standards have been developed for:

- recreational trails.
- park utilities, buildings, access roads and parking areas.
- park amenities (decks, viewpoints, lighting, water features, park furniture).
- pedestrian bridges..
- landscaping and restoration.
- signage
- daycamp facilities

Each section is prefaced by the appropriate principle from the Vision Statement.

RECREATIONAL TRAILS

Trails will provide continuous access through the valley. Trail width, surfacing and location will be selected to minimize impact on the environment.

The river valley trails system is one of the most heavily used in North America. The system reflects expressed needs for places to engage in a wide range of activities: bicycling, hiking, dog walking, strolling, jogging, cross-country skiing, snowshoeing, and horseback riding. Since some of these activities conflict with each other, and it is impractical to construct completely separate systems, it is important to limit areas of conflict and recommend ways to accommodate all potential activities on appropriate portions of the system.

Three trail classes are proposed as part of the development plan. The width, appropriate recreation uses, surfacing, application and design treatment is different in each class. The application of these standards, and guidelines has some flexibility, however for reasons of safety and access for emergency and park maintenance vehicles, certain widths and surfacing are recommended.

Figure 8 outlines the general trail guidelines and specific construction standards to be applied to the trails system. Class 1 trail guidelines and standards are within the range identified by Roads and Transportation Association of Canada (RTAC) "Guidelines for the Design of Bikeways", 1983. All trails will be aligned to avoid extremely hazardous areas. Where long grades are unavoidable, frequent wide level areas should be provided where users can move off the trail.

Figure 8

GENERAL TRAIL GUIDELINES AND CONSTRUCTION STANDARDS

	Class 1	Class 2	Class 3
General Uses	Multi purpose.	Pedestrian/cycling	Pedestrian/Hiking
Application	Major routes and access trails	Circular loops within main river valley.	Secondary routes, main loops and local access
Surface Material	ASPHALT (Paved)	GRANULAR (Crushed rock)	GRANULAR
Tread: Width	2.5 - 3.4 m	2.0 - 2.5m	1-1.8m
Base Treatment	Compacted to 100% proctor	Compacted and rolled	Rolled
Max. Clearing Limit: Width of maintained or cleared edge	Width .75m each side 1m on inside curve	.5m each side, 1.0m on inside curve	.5m each side
Shoulder & Margin Treatment	Grade, reseed to match adjacent vegetation. Maintained grass.	Maintain natural vegetation,low maintenance or native grasses	Natural grass seed or natural regeneration. No maintenance.
Branch Height	3.5m	2.5m-3.5m	2.5m
Max. Gradient: Sustained	8%	10%	10%
Short pitches	10%	15%	15%
Surface Drainage	Crowned or 2% crossfall	2% crossfall	2% crossfall
Accommodation of Disabled	Barrier free	Barrier free where possible	Barrier free where possible
Degree of difficulty	Easy to intermediate	Easy to intermediate	Intermediate to difficult
Vehicular Service Access	Frequent	Frequent to occasional	Frequent to occasional
Safety Protection	Full protection	Partial	Partial
Formal Rest areas and Viewpoints	Frequent	Frequent	Occasional
Drainage course and Stream Crossing	Full scale, free span bridge; steel or wood truss.	Low scale crossings	Small scale prefabricated wood platform bridges.
Remarks	Clear as required. Align to avoid large trees but maintain curvature and sight lines. Install drainage structures where required.	Maintain natural setting as much as possible to slow speeds and avoid large trees, install drainage structures.	Bend trail sharply to avoid large trees. Install drainage structures or boardwalks as required.

The fully developed trail system would make most parts of the river valley accessible, even for wheelchairs. Opportunities are provided for short, relaxed strolls and for longer, physically demanding all-day hikes or bicycle trips.

Certain elements are essential to the success of the overall trail system. Stairs, signage, circulation control, and in some areas, retaining walls are essential to construct a high standard, safe and continuous trail system.

The land management unit in which the trail is to be developed dictates the extent of development. The guidelines in Figure 9 identify trail elements by land management unit:

Figure 9

TRAIL ELEMENTS

	PRESERVATION	CONSERVATION	EXTENSIVE USE
SURFACE			
- Asphalt	not appropriate	conditional	appropriate
- Granular	conditional	appropriate	conditional
- Natural	appropriate	appropriate	not appropriate
- Other(Mulch)	conditional	appropriate	not appropriate
SIGNAGE			
- Information	conditional	appropriate	appropriate
- Directional	conditional	appropriate	appropriate
- Regulatory	conditional	appropriate	appropriate
CIRCULATION CONTROL			
- Bollards	appropriate	appropriate	appropriate
- Warning Strips	not appropriate	conditional	appropriate
- Speed Bumps	not appropriate	conditional	appropriate
- Gates	conditional	appropriate	appropriate
- Bike Baffles	not appropriate	appropriate	appropriate

Natural surface (unimproved) trails exist throughout the river valley. These trails will remain as they currently exist unless identified for upgrading or removal in the plan. Specific management of the unimproved trails will be examined on an individual basis.

Granular Cycling Trails (Class 2 Trails)

The Class 2 trail (granular multi-purpose) was developed to provide an alternative to the paved main trail. The intention is to provide some areas where cycling is permitted on granular trails to accommodate some mountain bike activity, while also providing options for other users.

A process to identify which trails should be designated Class 2 and Class 3 (granular pedestrian-only) is required. Consistent with the vision, planning principles and public input, two criteria provide a preliminary screening to determine potential areas for Class 2 trail designation.

1. The area must accommodate the activity within existing environmental constraints.

    - Preservation is the first priority of the master plan. Therefore no cycling will be permitted in a preservation area or in an environmentally sensitive area.

2. The area must accommodate the activity in a safe manner without significant modification/alteration to the trail.

    - To safely accommodate both pedestrian and cycling traffic, clear and suitable horizontal and vertical sight-lines and suitable width must be achievable.

The preliminary screening of priority 1 planning areas identified three suitable locations for Class 2 trail development: Buena Vista Park, Hermitage Park and Hawrelak Park from the proposed pedestrian bridge to Groat Road.

Further input should be sought from a variety of stakeholders at the site planning stage to determine if these areas can have Class 2 trails designated. All other trails will be designated Class 3. In future a similar review of the existing CCRP should be undertaken to determine if some trails could be designated Class 2. When site planning for Priority 2 areas is undertaken this screening process should continue.

Each trail designated Class 2 should be monitored and evaluated after one full operating season to determine whether the designation should be retained or revert to Class 3.

PARK UTILITIES, BUILDINGS, ACCESS ROADS AND PARKING

New or expanded facilities will be those which enhance recreation opportunities, are compatible with conservation and will be located in areas which are already disturbed or where environmental impact will be low.

AMENITY BUILDINGS AND UTILITIES

Amenity buildings are intended to consolidate basic support services for park and trail users in an orderly and unobtrusive way. The buildings should contain a consistent range of services and be spaced at regular intervals so the user can anticipate facilities. Public comment indicates support for basic facilities. Building size and appearance should be very controlled so that it does not overwhelm the setting and provides a level of service consistent with the natural character of the park.

The following factors were used to select general locations for amenity areas. Detailed siting is subject to further review.

1. Identify locations of washrooms in developed park areas or at major facilities.

2. Sites where trail systems intersect, where low intensity recreation is proposed (such as picnic sites), and proximity to vehicle access for users and servicing.

3. Sites of low to moderate biologic sensitivity (Extensive Use).

Three amenity building locations are proposed in the Priority 1 construction area, in Buena Vista, Hermitage and Whitemud Parks. It is proposed all facilities be winterized.

Each structure is proposed to be wheelchair accessible, contain washrooms, a drinking fountain and a telephone. An enlarged entryway will serve as a informal warm-up space for winter users.

Each building must be designed to blend with the natural environment, and be low scale. Parking areas and access roads should be minimal, however they need to be carefully located to enhance access to the park system. A uniform architectural style should be developed so that users will readily recognize the building's function. Materials should be resistant to vandalism.

The guidelines in Figure 10 are proposed for park utilities, buildings, access roads and parking areas within the three management units:

Figure 10

PARK AND BUILDING ELEMENTS

UTILITIES	PRESERVATION	CONSERVATION	EXTENSIVE USE
- Water	not appropriate	conditional	appropriate
- Sanitary	not appropriate	conditional	appropriate
- Storm	not appropriate	conditional	appropriate
- Power	not appropriate	conditional	appropriate
- Telephone	not appropriate	conditional	appropriate
LIGHTING			
- Pedestrian	not appropriate	not appropriate	conditional
- Parking Lot	not appropriate	not appropriate	appropriate
- Safety/Security	not appropriate	conditional	appropriate
- Aesthetic	not appropriate	not appropriate	appropriate
SHELTERS			
- Concessions	not appropriate	not appropriate	appropriate
- Program Space	not appropriate	not appropriate	appropriate
- Washrooms	not appropriate	not appropriate	appropriate
- Fireplace	not appropriate	not appropriate	appropriate
- Amphitheatre	not appropriate	not appropriate	appropriate
- Privies	not appropriate	appropriate	not appropriate
ACCESS ROADWAYS			
- Asphalt	not appropriate	not appropriate	appropriate
- Gravel	not appropriate	conditional	conditional
PARKING LOTS			
- Asphalt	not appropriate	not appropriate	appropriate
- Curbs & Gutters	not appropriate	not appropriate	appropriate
- Gravel	not appropriate	conditional	conditional
SIGNAGE			
- Informational & Directional	conditional	appropriate	appropriate
- Regulatory	conditional	appropriate	appropriate

PARK AMENITIES

New or expanded facilities will be those which enhance recreation opportunities, are compatible with conservation and will be located in areas which are already disturbed or where environmental impact will be low.

Viewpoints, decks, benches, etc., enhance the visitor's experience and often provide a focus of activity. In most areas the amenities will be located in extensive use areas or on the perimeter of a conservation area. Amenities will be situated in the most heavily used areas easily accessible to parks maintenance and operations. The guidelines in Figure 11 are proposed for park amenities.

Figure 11

PARK AMENITY ELEMENTS

AMENITIES	PRESERVATION	CONSERVATION	EXTENSIVE USE
DECKS/STAIRS/VIEWPOINTS - Wood	Conditional (Access only)	appropriate	appropriate
- Concrete	not appropriate	not appropriate	appropriate
- Other	not appropriate	conditional	conditional
ACTIVITY PADS - Asphalt	not appropriate	appropriate	appropriate
- Concrete	not appropriate	not appropriate	appropriate
- Shale/Gravel	not appropriate	appropriate	conditional
PARK FURNITURE - Waste receptacles	Conditional	appropriate	appropriate
- Stoves/Firepits	not appropriate	conditional	appropriate
- Gazebos	not appropriate	not appropriate	appropriate
- Picnic Tables: - Concrete - Wooden	Not appropriate Not Appropriate	Not appropriate conditional	appropriate appropriate
- Benches	not appropriate	appropriate	appropriate
FOUNTAINS - Drinking	not appropriate	not appropriate	appropriate
- Aesthetic	not appropriate	not appropriate	appropriate
PONDS - Natural	appropriate	appropriate	appropriate
- Storm Retention	not appropriate	not appropriate	appropriate
- Formal	not appropriate	not appropriate	appropriate

PEDESTRIAN BRIDGES

New or expanded facilities will be those which enhance recreation opportunities, are compatible with conservation and will be located in areas which are already disturbed or where environmental impact will be low.

Trails will provide continuous access through the valley. Trail width, surfacing and location will be selected to minimize impact on the environment.

Pedestrian bridges are essential to the continuous trail network. Major river crossings have been strategically located to minimize the number of bridges required, to avoid environmentally sensitive areas and enable users to move freely through the parks. Within the ravines the bridges will enhance the pedestrian trail system and improve access for park operations or emergency service. Continuous access may not be provided. Bridges should be designed to match the character of the area as well as meet hydrological and engineering requirements. Detailed bridge engineering studies will be required for all proposed river crossings and major creek crossings. The guidelines in Figure 12 are proposed for pedestrian bridges.

Figure 12

PEDESTRIAN BRIDGE ELEMENTS

BRIDGES	PRESERVATION	CONSERVATION	EXTENSIVE USE
- Major River Crossings	Not appropriate	conditional	appropriate
- Major creek crossing	conditional	appropriate	appropriate
- Low scale (prefabricated)	appropriate	appropriate	appropriate

LANDSCAPING AND RESTORATION

The major portion of the river valley will remain in a natural state. Certain areas of habitat will be highly protected to ensure existence of native vegetation and wildlife communities and to limit the intrusion of humans.

The natural vegetation which has been preserved within the river valley is one of the major reasons why it is a special place. Wherever possible, the natural vegetation should be enhanced through landscaping, naturalization and restoration programs. Careful attention must be paid to the methods of work used so the existing natural species are enhanced and managed.

Formal application of landscaping, ornamental and decorative paving should be limited to extensive use areas. Because major park areas attract large numbers, a more formal landscaping and maintenence is appropriate. Preservation and conservation areas are to be left in a natural condition and landscape enhancement must fit with existing conditions. The guidelines in Figure 13 are proposed for landscaping.

Figure 13

LANDSCAPING AND RESTORATION ELEMENTS

LANDSCAPING AND RESTORATION	PRESERVATION	CONSERVATION	EXTENSIVE USE
LANDSCAPING (Trees and shrubs)			
- Natural style	appropriate	appropriate	appropriate
- Informal style	not appropriate	conditional	appropriate
- Formal style	not appropriate	not appropriate	appropriate
GROUND COVER/GRASS - Not-Maintained	appropriate	appropriate	appropriate
- Maintained	not appropriate	conditional	appropriate
DECORATIVE PAVING - Concrete	not appropriate	not appropriate	appropriate
- Interlocking Pavers	not appropriate	not appropriate	appropriate
- Wood	not appropriate	appropriate	appropriate
- Other	not appropriate	conditional	conditional

Restoration of eroded slopes and river banks or construction of retaining walls is very expensive and must be planned very carefully. Development will avoid these areas wherever possible. In most areas of the river valley natural erosion processes are left alone unless there is a threat to city infrastructure (utilities, roadways, bridges, or recreational facilities).

The guidelines in Figure 14 are proposed for restoration works.

Figure 14

STABILIZATION ELEMENTS

EROSION CONTROL/BANK STABILIZATION	PRESERVATION	CONSERVATION	EXTENSIVE USE
- Bioengineering	not appropriate	appropriate	appropriate
- Geomats & Filter Cloths	not appropriate	appropriate	appropriate
- Gabions	not appropriate	conditional	appropriate
- Concrete Walls	not appropriate	conditional	appropriate
- Armour Plating	not appropriate	conditional	appropriate
- Rip- Rap	conditional	appropriate	appropriate
RETAINING WALLS - Wood	not appropriate	appropriate	conditional
- Concrete	not appropriate	not appropriate	appropriate
- Other	not appropriate	conditional	appropriate

SIGNAGE

Programs will increase awareness of natural and human history; encourage an environmentally responsible attitude toward the valley and promote respect for other valley users.

Signs are necessary to help direct park users within the system, as well as educate and inform them of a proper code of behaviour. The major types of signs are:

- Directional - provides orientation to park users.
- Informational - provides overall information and interpretation on the features within a park; identifies location of facilities.
- Regulatory - provides guidelines for appropriate or inappropriate behaviour/use.
- Access Road - provides direction to visitors coming to the park by vehicles.

Signs are found throughout the park system; along the trails, within the major parks, adjacent to access points, and at parking areas. Although signs are important, they must be placed strategically throughout parks to avoid detracting from the experience. Signs are very important along the multipurpose trails. Because of the heavy use these trails experience, safety must be planned into the sign program. Less travelled pedestrian trails may require neighbourhood entrance signs and occasional directional signs. The existing standards for signs will be continued throughout the river valley. This makes replacement and maintenance easier. Guidelines for signs have been incorporated in Figures 9 and 10.

Signs will be a priority for the overall development of additional trails and facilities. Signs must be in place very early in the development process so that the public understands how an area is to be used. This will discourage inappropriate uses from becoming established as the park extension is completed.

DAYCAMP FACILITIES

Programs will increase awareness of natural and human history; encourage an environmentally responsible attitude toward the valley and promote respect for other valley users.

Daycamps programs are seasonal, short in duration and primarily for young children. Facility requirements are minimal and programs can operate effectively with temporary facilities. Facility locations (six to ten per year) can move easily depending on attendance and need. Programs and areas are allocated through the Operations Branch, River Valley Parks.

Future locations will be identified in the river valley according to the following guidelines:

1. Access for drop-off be via a road or parking lot
2. Emergency vehicles access the daycamp location via a suitable trail or road
3. Natural vegetation or water (pond or stream) be within walking distance
4. The camp site not be in a preservation area
5. Rainout indoor facility within close proximity
6. Area can be easily monitored to reduce vandalism
7. Fire ring available