

North Saskatchewan
River Valley and
Ravine System
Master Plan

RIBBON
GREEN

*Approved By Edmonton City Council
July 28, 1992 (as Amended)
Prepared by: Edmonton Parks & Recreation*

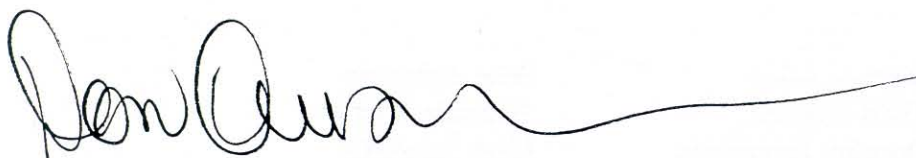
December, 1992

To the Citizens of Edmonton:

We are very pleased to provide the "Ribbon Of Green" North Saskatchewan River Valley and Ravine System Master Plan for your information. This document provides the planning framework for open space development in the river valley into the year 2000.

The Master Plan emphasizes the continuation of an integrated trail system and the development of natural parks utilizing existing or restored resources to their best advantage. The plan is to recreate a natural preserve and re-establish a viable ecology while minimizing any additional development which may be contrary to the parks' primary use.

Preparing a plan of this magnitude requires the dedication, knowledge and efforts of many people. Edmonton Parks and Recreation wishes to thank all those Edmontonians who participated in preparing this Master Plan. We welcome your continued involvement as the site plans are finalized, and as projects are constructed.



D.S. Ausman
General Manager

EXECUTIVE SUMMARY

The Provincial Urban Parks Program Phase II (an Alberta Heritage Savings Trust Fund program) identified the City of Edmonton as being eligible for up to \$15 million in grant funding to develop its' urban parks. This provided Edmonton with an opportunity to consider the North Saskatchewan River Valley System as a whole and to establish publicly accepted goals for how it should be developed and managed. In 1990 the Parks and Recreation Department established a project team to prepare the required documentation to access the grant. This process involved preparation of a Concept Plan, Master Plan, and Site Plans.

The Ribbon of Green Concept Plan was subsequently prepared and approved by Council on November 27, 1990. It presented a collective public vision for the valley and established the general framework for the Master Plan.

The Master Plan expands on the Concept Plan and establishes policy guidelines for the long-term development, use and care of the entire valley. It provides a data base and criteria on which decisions can be made. It provides standards and guidelines, thereby encouraging a consistent management approach to the entire river valley system. It presents a sequence for planning to synchronize public input, public expectation and construction. It establishes the urban park boundary, with site plans to be completed as development funds come available.

The grant program allocates funding until 1998/99. The Parks and Recreation Department prepared a public consultation process designed to avoid encouraging premature public expectation for development. A sequential process was developed with each level of input building on the previous, refining proposals from general intent to specific detail, and narrowing the scope of target public from the very broad general citizenry to a more local community stakeholder-user.

Over 1000 citizens participated in the preparation of the Master Plan, and 900 citizens placed their name on a "to be kept informed" mailing list. Six public meetings were held during the master plan development process as well as a number of meetings with special interest groups.

The Master Plan, while an extension of the Vision Statement and the Concept Plan, bases decision making on the environmental sensitivity and resource constraints of an area. Through analysis of the biophysical resources three Land Management Units were identified (Extensive Use Areas, Conservation Areas, Preservation Areas). The biological sensitivity of an area (vegetation and wildlife habitat) was overlaid on the physical resource factors of an area (slope, hydrology, geology, etc.) to create a Resource Classification System, which supports the Land Management Unit

classifications. Suitable recreation activities, construction practises, and management practises within each of the units was also identified.

With the exception of identified park nodes, the Master Plan limits development to an integrated trail system, which makes the river valley accessible to the public, yet protects the natural landscape and wildlife habitat areas. The plan outlines general planning objectives and specific area planning objectives. It identifies the current state and the desired future state of each area. It identifies the potential impacts of development projects and the type of environmental review required for each project.

The Master Plan funding for development of the urban park will come over a seven year time frame (1992 through 1998). Construction cost is estimated to be \$13.25 million (1990 dollars), with financing coming from the province. The development priorities have been proposed, based on a number of criteria. This will be reviewed annually by City Council as part of the normal capital budget review process. Should financing not meet projected annual requirements, projects will be recommended in their rank order of priority to the level of available funding.

The Urban Parks Program Phase II has established an Operations and Maintenance Fund (3% of Planning & Design and Construction funds expended). A detailed estimate and strategy will be prepared to best access these funds, as the availability of operating funding will be determined for five year periods, commencing in 1990.

More and greater demands are being placed on the river valley. Recognizing this, the Department recently identified the River Valley Parks unit to operate and maintain the river valley and ravine system. This will ensure the valley is managed in a holistic and consistent manner throughout the City.

NORTH SASKATCHEWAN RIVER VALLEY AND RAVINE SYSTEM

MASTER PLAN

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RECOMMENDATIONS

Master Plan Implementation

1. That the North Saskatchewan River Valley and Ravine System Master Plan be adopted.
2. That the Resource Analysis and Classification System (Section 2.3) and Construction and Project Management Guidelines (Section 4.3) be applied to all lands in the North Saskatchewan River Valley and Ravine System.
3. That the Environmental Review Model outlined in Section 4.4 be approved to fulfill the environmental assessment requirements of Bylaw #7188.
4. That the Province be requested to expand the boundary of the existing CCRP to include areas between the present CCRP boundary and the Priority 1 and 2 areas.
5. That the boundary of the urban park for the purposes of the Urban Parks Program, Phase II be established as the Priority 1 and 2 areas.
6. That Bylaw #2202, the Parks and Recreation Bylaw, be amended as required to reflect the proposals of the Master Plan.

Further Review and Approvals

7. That further public review be obtained to complete Detailed Site Plans for Priority 1 amenity areas.
8. That plan proposals be reviewed with advisory groups representing disabled persons to ensure barriers to disabled users are minimized within environmental constraints.
9. That a public review be initiated to determine which granular trails could be designated Class 2, following the criteria identified in Section 4.2.
10. That public input be obtained to complete Site Development Master Plans for Priority 2 areas at a time appropriate to anticipated construction.
11. That when future conditions dictate a review of the Master Plan, any proposed revision be subject to public input prior to consideration by City Council.

River Valley Operations

12. That education and awareness programs be implemented to improve public safety, promote courteous use of the trails, and increase awareness of the unique value of the river valley.
13. That an inventory of all areas posted 'No Dogs' be conducted and that revisions be made to ensure people walking dogs on leash have continuous access through the trail system.
14. That various operational changes be piloted to improve public safety on the trails, eg. contraflow lanes, reduce speed.

Interdepartmental Coordination

15. That Parks and Recreation continue to work with the Transportation Department to synchronize development of river valley trails and the bicycle route system.
16. That Parks and Recreation work with other departments to improve linkage opportunities between distant neighbourhoods and the river valley or other natural areas.
17. That Parks and Recreation work with the Planning and Development Department and the Office of the Environment to protect environmentally sensitive and natural areas outside the river valley.

CHAPTER 1 - INTRODUCTION

The North Saskatchewan River is a ribbon of green winding through the City of Edmonton.

The North Saskatchewan River winds its way through the City of Edmonton for 48 kilometres in a southwest-northeast direction. The river valley system also includes three major ravines, 19 secondary ravines and numerous tributaries for a total length of over 103 kilometres of ravines. It flows through residential districts, the commercial core of downtown, industrial lands and on into the rural landscape of Alberta. It is the largest and most continuous area of urban parkland in North America, encompassing over 7400 hectares of land.

The topographic relief provided by the North Saskatchewan River Valley greatly enhances the basically flat nature of the Edmonton area. Physical, biological, climatic and scenic variation increase the recreation potential to a level rarely found in major metropolitan areas.

The natural condition of the North Saskatchewan River Valley and Ravine System is also unique. Few other people can boast as can Edmontonians of their river valley. The backdrop it provides emphasizes the downtown core and its natural state is as close to wilderness as any city. While River systems in other cities have been subjected to heavy industrial use the North Saskatchewan River, largely due to the farsightedness of Edmonton's City Fathers, has remained 'park like'. There are few other cities that can match this record. The City has been developing parks in the river valley for many years. Major park development in the eastern part of the river valley was initiated in the late 1970's by the Provincial Government.

The 1989 announcement by the Provincial Government of Phase II of the Urban Parks Program Grant (an Alberta Heritage Savings Trust Fund program) and the eligibility of the City of Edmonton for up to \$15 million over a ten-year period provided Edmonton with an opportunity to consider the North Saskatchewan River Valley System as a whole and to establish publicly accepted goals for its development and management.

In 1990 Edmonton Parks and Recreation established a project team for the purpose of preparing plans and documentation required to access the UPP Phase II grant consisting of a Concept Plan, a Master Plan, and Site Plans leading to construction. Appendix 1.0 outlines the grant process.

VISION STATEMENT

The North Saskatchewan River Valley and Ravine System is a ribbon of green running through the City of Edmonton. The natural features, wildlife, vegetation, and cultural heritage of Edmonton will be conserved for present and future generations by management of these resources to prevent exploitation, destruction or neglect. Trails, paths and parks will tie Edmonton together providing a change from urban living and an opportunity for recreation in the tranquillity of nature.

Basic Principles:

1. CONSERVATION

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.

2. RECREATION

Recreation activities must be compatible with conservation of existing natural areas and must require the valley's natural setting.

3. DEVELOPMENT

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.

4. TRAILS

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

5. EDUCATION

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

1.1 THE RIBBON OF GREEN CONCEPT PLAN - A VISION FOR EDMONTON'S RIVER VALLEY.

The Ribbon of Green Concept Plan was prepared in 1990 by Edmonton Parks and Recreation.

The plan preparation was composed of three streams of work which occurred simultaneously:

- A **vision stream** which developed and confirmed a publicly supported philosophy for the river valley. (Figure 1)
- An **environmental stream** which examined the opportunities and constraints imposed by the valley's physical characteristics and adjacent land uses.
- A **resource management stream** which established a model for how the park will be operated.

These three streams were combined to develop the following products:

- A statement of Vision and planning principles.
- A general program statement for the North Saskatchewan River Valley and Ravine System.
- Overview of proposed or potential development opportunities.
- A preliminary development program itemizing potential work and costs in 1990 dollars.
- Criteria for priority setting.
- Identification of future planning processes.

The Concept Plan proposed tripling the present urban park to include the entire length of the North Saskatchewan River Valley and Ravine System (7400 hectares). It presented a preliminary cost estimate of \$67 million, of which \$22 million was for the upgrading of major park facilities and the restoration of the Clover Bar Landfill and \$45 million was for open space development.

The Concept Plan represented a collective public vision for the future of the river valley system. This process confirmed that as the City continues to grow the river valley system will be subjected to increased pressure from competing uses and can no longer be all things to all people. It is clear that citizens of Edmonton want the valley protected and expect development and management to be conducted in a careful and conscientious manner. The Concept Plan was approved by City Council on November 27, 1990, thereby establishing a planning, development and management philosophy for the entire river valley system.

1.2 MASTER PLAN PRIORITIES AND STUDY AREA

In preparing the Ribbon of Green Concept Plan the underlying assumption was that the entire system would ultimately be built. However, the magnitude of the area under study dictated that development be phased.

In order to ensure public expectation for development was not raised prematurely it was considered essential to phase the planning process by ranking areas based on acceptable criteria. This ranking system was used to establish the sequence of development, thereby synchronizing availability of funds with public input, public expectation and development.

The following sequence for planning was approved by City Council on November 5, 1991, and is displayed on Map 1. The criteria and weighting system used is shown in Appendix 1.1.

PRIORITY 1:

MacKenzie / Buena Vista / Government Hill
Kinsman / Ft. Edmonton / Whitemud Phase I (balance)
Patricia / Wolf Willow
North Hermitage / Kennedale
Upper Mill Creek

PRIORITY 2:

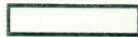


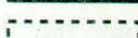
Whitemud Creek Phase II
Edmonton Golf & Country Club
Terwillegar
Twin Brooks

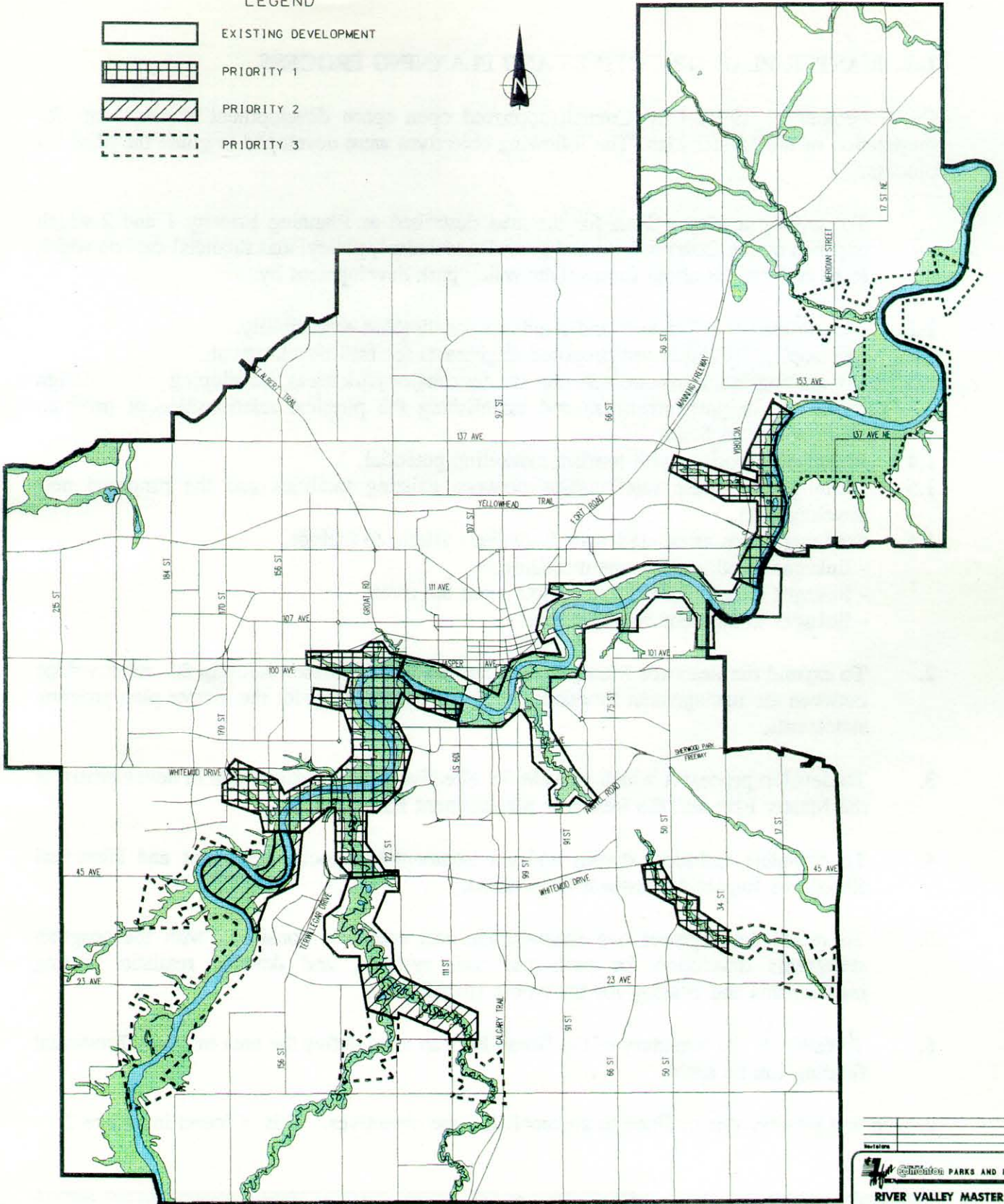
PRIORITY 3:


Terwillegar to Big Island
Wedgewood
Clover Bar/Oldman Creek
Horsehills
Big Island to Devon
Hermitage to Horsehills
Horsehills to Ft. Saskatchewan

The Master Plan study area boundary supported by City Council is the Priority 1 and 2 areas.

LEGEND

-  EXISTING DEVELOPMENT
-  PRIORITY 1
-  PRIORITY 2
-  PRIORITY 3



 EDMONTON PARKS AND RECREATION RIVER VALLEY MASTER PLAN STUDY AREA BOUNDARY			
Date: May 1992 Title:	Supervisor Design:	Drawing No.: 1	Design File Name: rap_Ldgs
Designer: b2 Supervisor:	Checker:	Date:	Title:

1.3 MASTER PLAN OBJECTIVES AND PLANNING PROCESS

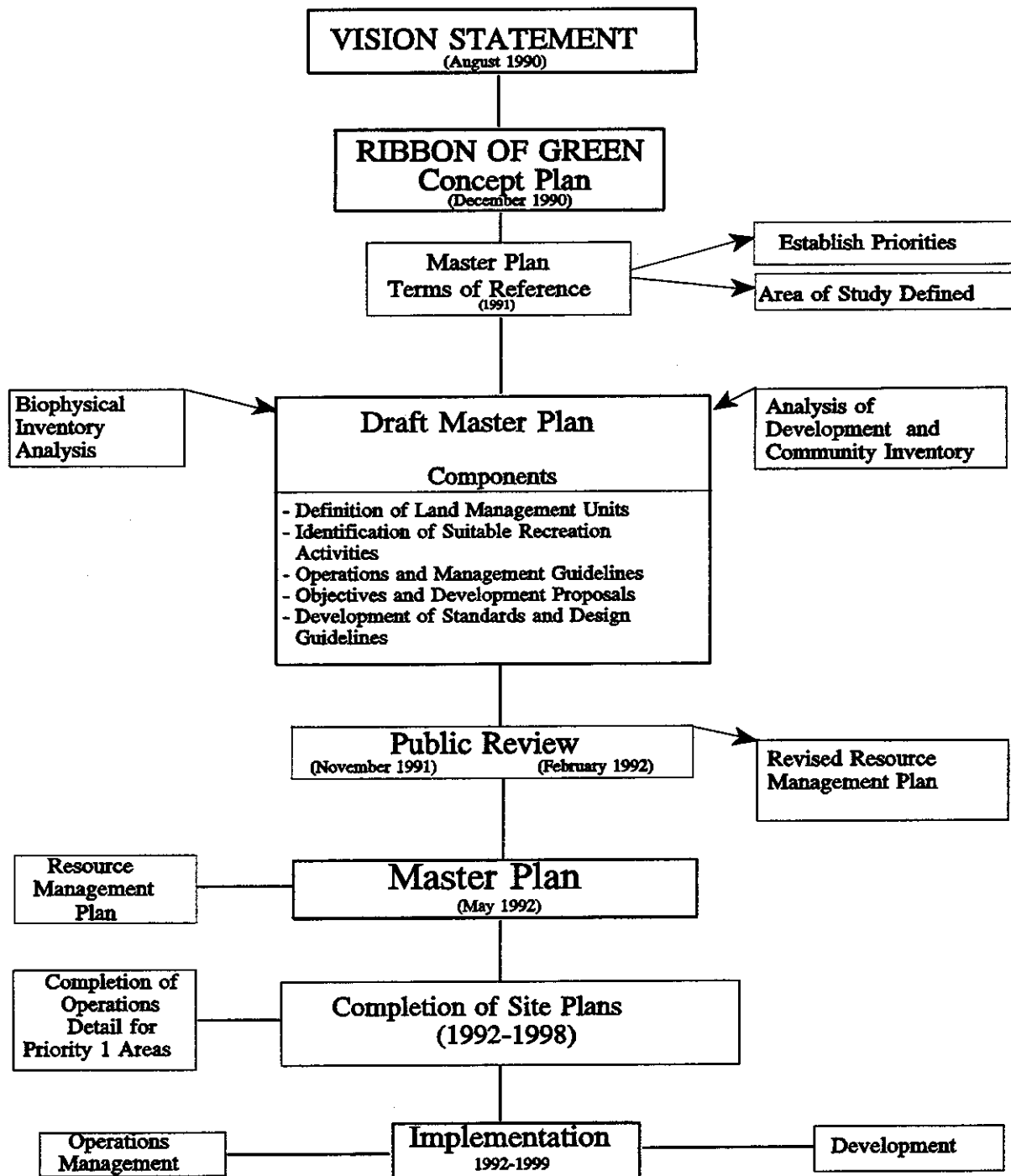
On November 5, 1991, City Council approved open space development as the focus for preparation of the Master Plan. The following objectives were developed to guide the planning process.

1. To develop a Master Plan for the area described as Planning Priority 1 and 2 which expands on the Concept Plan and provides technical, policy, and financial data on which to base decisions about future river valley park development by:
 - 1.1 Determining requirements and standards for disabled accessibility.
 - 1.2 Developing standards and proposed alignments for trail development.
 - 1.3 Completing program statements for the four major park areas, developing design standards for park amenities and establishing the physical relationships of program elements for each site.
 - 1.4 Identifying projects with tourism marketing potential.
 - 1.5 Defining the future relationships between existing facilities and the proposed new developments.
 - 1.6 Studying issues associated with the valley system, to include:
 - linkages to other department facilities,
 - linkages to residential areas remote from the river,
 - linkages to adjacent municipalities.
2. To expand the Resource Management Plan concept by further defining the relationships between the management functions to a level compatible with the master plan program statements.
3. To develop processes which provide for effective public participation in development of the Master Plan and the Resource Management Plan.
4. To complete technical studies and Environmental Impact Assessment and Historical Resources Impact Assessment as required.
5. To refine development and maintenance cost estimates consistent with the program statements developed for park and trail systems, and develop realistic funding mechanisms and phasing for the works identified.
6. To establish the boundary of the Urban Park so as to define the area in which Provincial funding can be spent.

A planning process was outlined to accomplish these objectives. This is found in Figure 2.

Figure 2

MASTER PLAN DEVELOPMENT PROCESS



CHAPTER 2 - DATA ANALYSIS

This chapter describes the data used in preparation of the Master Plan. The Concept Plan established three streams of data collection which have been expanded in the Master Plan.

- an Environmental stream examining opportunities and constraints, characteristics and land uses. These are described in Sections 2.1 and 2.2.
- a Resource Management stream which is expanded in Section 2.3 and 2.4 and
- a Vision stream which addresses public issues and preferences and is expanded in Section 2.5.

2.1 DEVELOPMENT INVENTORY

Maps 2 to 6 show the existing development state of the Priority 1 areas.

2.1.1 Land Use in the River Valley

The lands within the river valley (with the exception of Rossdale, Cloverdale, Lavigne and Riverdale communities) have been designated for recreational use. This policy dates to the Todd and Morrell reports prior to 1914. The most recent statement of City policy on river valley land use is contained in the North Saskatchewan River Valley Bylaw #7188, (1985).

Land use districting for the river valley is established through the Land Use Bylaw #5996 (as amended). Several land use districts are relevant to river valley lands. The most common land use district in the river valley is "A-Metropolitan Recreation". The purpose of this district is: "To preserve natural areas and parkland along the river, creeks and ravines and other designated areas for active and passive recreational uses and environmental protection".

Other districts are applied in site specific situations. The "AP Public Parks District" is applied "to establish an area of public land for active and passive recreational uses and landscaped buffers". This district is usually applied to neighbourhood and district level parks, playing fields, schools and community league sites.

The "US Urban Services District" provides a district for "public and privately owned facilities of an institutional or community service nature". This includes community recreation services and cultural exhibits.

The "PU Public Utility District" provides a district for public utility installations, services and facilities", including major and minor impact utility services, protective and emergency services and public parks.

Roadways within the river valley are not districted. Residential areas within the river valley are districted in the appropriate residential categories.

2.1.2 Land Ownership

The City currently owns the majority of lands within the North Saskatchewan River Valley and Ravine system within the developed residential portions of the City. Some exceptions exist where development preceded Environmental Reserve provisions of the Planning Act or where specific policies were adopted (ie. for Central River Valley communities). In rural areas of the valley where subdivision has not occurred the majority of lands are privately owned. Where portions of the valley are privately owned some development restrictions are in place as a result of Bylaw #7188. The City cannot, however, control the actions of private land owners unless their proposals require development approval from the City.

In the long term, lands in the river valley and ravine system will come into municipal ownership at subdivision as Environmental Reserve or possibly as Municipal Reserve. The timing of acquisition through subdivision is dependent on the plans of the individual owners, which in turn depend on market forces and land development economics. The City projects that the greatest development will occur in the West Jasper Place and Riverbend areas, followed by Millwoods (Burnewood) and Castledowns Extension. The Riverbend area gives the greatest potential for municipal ownership of lands along the river south of 23 Avenue to the Outer Ring Road and along Whitemud Creek in the same area. Lands to the northeast of Clareview are anticipated as very long term acquisition through subdivision. The lands in Millwoods/The Meadows along Mill Creek east of 34 Street are expected to develop over the next ten years.

Isolated sites within the presently developed portion of the river valley which are privately owned are identified on Maps 2 through 6.

2.1.3 Cultural Resources

An inventory of historical and prehistoric resource sites in the North Saskatchewan River Valley Ravine System was completed in the 1980 Biophysical Study. The lists of sites located either through archival or field work is too extensive to identify in this Plan and includes known agricultural sites, churches and cemeteries, coal mines, fur trading posts, historic Indian camps, industrial sites, recreational areas, residential areas, steamboat and ferry landings, trails, road, fords, bridges, railroads and prehistoric sites. The conclusions of this inventory are: *" Almost all river terrace areas have high potential to contain both historic and prehistoric sites. The river banks have moderate potential because they were the locations of most early historic mining activity. The top of bank areas were determined to be of high potential, as they could contain both prehistoric and historic sites. In general, there are very few low potential areas where no sites exist."*

The inventory further notes: *"Activities normally associated with parks usage - walking, games and picnicking are compatible with historical resources preservation. However, any modification of the land surface -- natural erosion, trail construction, landscaping, gravel removal, vegetation clearing, road construction, building construction, affects the physical remains of archaeological or historical interest. These same agents can irreparably (sic) damage important contextual data that could be used for interpretative programmes"*.

When the Master Plan is submitted to the Province areas requiring Historical Resources Impact Assessment (HRIA) will be identified by Alberta Culture.

2.1.4 Transportation Corridors

The river valley presents a significant impediment to the free movement of traffic through the City of Edmonton. A number of vehicular bridges have been developed along major movement corridors. Within the study area these include: Beverly Bridge (2 spans) and the CNR bridge on the Yellowhead Trail/Highway 16 corridor; the Groat Bridge on the Groat Road/St. Albert Trail corridor and the Quesnell Bridge on the Whitemud Drive corridor. Because of the sensitivity of the river valley system future transportation corridor development is restricted to direct crossings by policies of the River Valley Bylaw #7188. Two additional river crossings are proposed in development of the Outer Ring Road, one south of Terwillegar Park and the other northeast of Hermitage Park. The Outer Ring Road also is proposed to cross Whitemud and Blackmud Creeks south of 11 Avenue.

The existing and proposed river valley parks system is well served by major transportation corridors, providing easy automobile access to major parks areas.

2.1.5 Utility Corridors

For most of Edmonton's past the river valley was viewed as an appropriate and convenient corridor for a variety of utility and municipal infrastructure developments. Most commonly, storm sewer outfalls were designed to lead into ravines or the river. As a result many ravines have been disturbed by storm sewer construction (Mill Creek, Kennedale, McKenzie, Whitemud). Power duct lines, water mains, major power transmission lines, and pipelines commonly cross or follow the river valley. In addition to their construction, these utilities periodically require repair or upgrading, interrupting the restoration process. The undeveloped park areas most seriously affected by utility development are Hermitage, Buena Vista, and Terwillegar.

Among known future utility plans the most serious impact could come from the E.L. Smith to Rosedale Water Intake Project if a river valley route is chosen. A final selection of routes will not be made until 1993.

2.2 SITE INVENTORY

2.2.1 SOUTHWEST EXTENSION AREA:

Fort Edmonton Park, Whitemud Park, Whitemud Ravine Nature Reserve, Hawrelak Park, Kinsmen Park

Existing development is shown on Maps 2, 3, and 4.

This segment of the river valley park extension proposal stretches along the south bank of the river from the downtown area through the west central river valley. The area is composed of several existing developed park areas, and specialized city-wide facilities. These are Fort Edmonton Park, the John Janzen Nature Centre, Rainbow Valley campground, Snow Valley Ski Club, the Whitemud Equine Centre, Hawrelak Park, the Mayfair Golf and Country Club, Emily Murphy Park and Kinsmen Park. A variety of granular trails presently connect these facilities, and many casual, unimproved trails link the river valley to adjacent neighbourhoods. Planning has been completed for the portion of the Whitemud Ravine Nature Reserve between Fox Drive and Whitemud Freeway, with construction of granular trails and pedestrian bridges scheduled for 1992/93. In the longer term it is proposed to extend top-of-bank trails south of 23 Avenue along Blackmud Creek to 111 Street. These trails will ultimately link to the Twin Brooks district park at 119 Street and 15 Avenue. The section of Whitemud Creek between its junction with Blackmud and the RDA alignment is a forestry preserve area.

The communities adjacent to this section of the river valley are predominantly mature single family neighbourhoods, with fully developed community facilities. The University of Alberta campus is immediately adjacent to this area and is a significant consideration in planning trails for the area. Future projects affecting this area include west LRT extension and the proposed closure of Keillor Road, and the Rosssdale Water Intake Project.

A broad range of recreation opportunities and activities are presently available in this section of the river valley. Most activities are focused around the one-of-a-kind facilities presently existing, and are both extensive and intensive. These activities include historic and natural science programs and interpretation, camping, downhill and cross country skiing, horseback riding, fishing, picnicking, aquatics, sports, children's day camps and boating. Although the existing trails in this sector are not developed to a high standard they support a wide variety of casual trail based activities including walking, jogging/running, cycling, nature observation, dog walking, berry picking and photography.

A detailed description of the trail system in this area is included in Appendix 2.1.

2.2.2 NORTHWEST EXTENSION AREA:

**Patricia Ravine, Wolf Willow Ravine,
Laurier Park, Buena Vista Park, McKenzie Ravine, MacKinnon Ravine**

Existing development is shown on Maps 2 and 4.

This segment of the river valley park extension proposal includes the north bank of the river from MacKinnon Ravine south and west toward Patricia and Wolf Willow Ravines. The most prominent features of the area are the large flat river terrace in Buena Vista Park and the steep and narrow river and ravine banks in the north and west ends of the area. Several large ravines, McKenzie, Patricia and Wolf Willow, join the main river valley in this section.

Much of the park and ravine areas are informally developed, and evidence of human disturbance is common. Granular trails extend around the river edge perimeter of Buena Vista and Laurier Parks. Many narrow unimproved trails provide access from adjacent neighbourhoods to this river edge granular trail. The extensive network of hard packed earth footpaths in Buena Vista Park connecting the neighbourhoods to the river edge are evidence of the desire for access. There are casual unimproved trails in the upper portion of Patricia Ravine, linking into the Old Country Club Road. In Westridge trails are limited to the Old Country Club Road and top-of-bank walks. In the area adjacent to Rio Terrace are remnants of roads leading to an abandoned picnic ground. Human disturbance includes utility development and farmsteads, service buildings, casual roads and material stockpiles. Portions of the Great Meadow in Buena Vista have served as a dump site for soil and debris.

The formally developed park areas are found in Laurier Park. The area east of Buena Vista Road contains the canoe and rowing clubs and a parks maintenance yard. A hard packed earth trail extends the length of McKenzie Ravine linking to the river valley granular trails. Further north, between McKenzie and MacKinnon Ravines, a hard packed earth trail presently provides access into the existing trail system.

The communities adjacent to this section of the river valley are mature predominantly single family neighbourhoods, with fully developed community facilities. The west portion of the area adjacent to the Edmonton Golf and Country Club is still developing. The major physical constraints in planning for this area are the steep and narrow banks which prevent continuous access along the river edge, areas of sensitive wildlife and vegetation and unstable slopes. The continuity of the park and river bank is further interrupted by the Whitemud Freeway/Quesnell Bridge. Future projects which may affect this area include the west LRT extension and one alternative alignment of the Rosedale Water Intake project.

Formalized recreation activities are limited to the Valley Zoo and the Laurier Park picnic grounds. Amenities include ball diamonds, a small playground, a boat launch and washrooms. A day camp is located at the bottom of "Melton Road" in Buena Vista Park. Government House Park contains a sliding hill, approximately ten picnic sites along the trail

and toilets. Renovation of the Government House Park area is proposed, adding approximately 15 picnic sites, removing abandoned roads and landscape restoration. A site for a future amenity shelter has been identified at Government House Park.

Other existing recreation activities are casual and trail based including: cycling, walking, jogging/running, nature observation, dog walking, photography, berry picking, etc.

A detailed description of trails in this area is included in Appendix 2.1.

2.2.3 NORTHEAST EXTENSION AREA:

Rundle Park, Hermitage Park, Kennedale Ravine, Kernohan Ravine

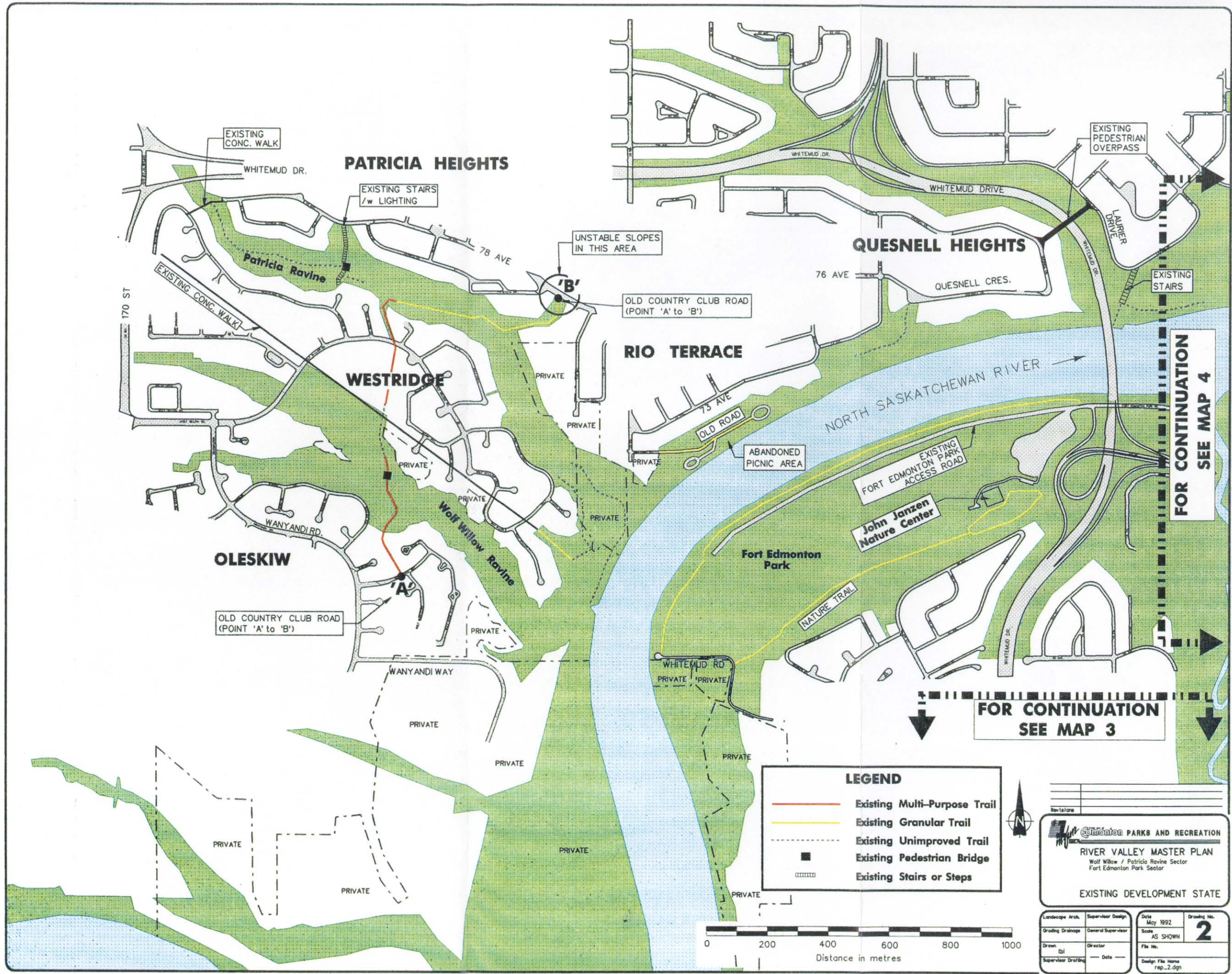
Existing development is shown on Map 5.

This section of the proposed River Valley Park extension stretches from the existing end of formal river valley park development at the Strathcona Science Park Bridge in Rundle Park through Hermitage Park, the "Back-40" of Hermitage Park and includes Kennedale and Kernohan Ravines. Portions of this area were partially developed with funding from the original CCRP development in the late 1970's, but development was never completed due to lack of funding.

The area contains a granular trail which extends from the present end of the paved trail system in Rundle Park along the river edge into Hermitage Park and to the north end of the Hermitage lake system. In the "Back-40" a packed earth trail circuits the lake; an unpaved service road also provides access to the extreme north end of Hermitage Park. In Kennedale Ravine an asphalt trail (developed in 1989) extends from the end of the ravine at 47 Street to 40 Street; in the area east of 40 Street there are intermittent unimproved trails. East of Victoria Road a hard packed trail leads to Hermitage Park. In Kernohan Ravine, a packed earth trail leads from the school and playground area through the ravine to the Hermitage Park "Back-40".

The major physical problem in trail and park planning in this park area is the substantial number of large utility lines which cross the site. These include the storm sewer line down Kennedale Ravine and the Trans-Alta power corridor which runs lengthwise through Hermitage Park. These lines meet in the area north of the Hermitage lakes creating an area of very intense utility disturbance. The area was also heavily impacted by the tornado which destroyed many trees in the north part of the park. Major projects affecting this area in future are the proposal by Trans Alta for a new 240 KV power line through Hermitage Park, and a future outer ring road river crossing east of 17 Street.

The communities adjacent to this sector are newer single\multiple family residential areas. Community facilities and schools are partially developed. The neighbourhood of Canon Ridge adjacent to the park access road has been only partially developed.



PATRICIA HEIGHTS

QUESNELL HEIGHTS

RIO TERRACE

WESTRIDGE

OLESKIW

NORTH SASKATCHEWAN RIVER

Fort Edmonton Park

John Janzen Nature Center

FORT EDMONTON PARK ACCESS ROAD

ABANDONED PICNIC AREA

73 AVE

76 AVE

78 AVE

OLD COUNTRY CLUB ROAD (POINT 'A' to 'B')

OLD COUNTRY CLUB ROAD (POINT 'A' to 'B')

EXISTING CONC. WALK

WHITEMUD DR.

EXISTING STAIRS /w LIGHTING

UNSTABLE SLOPES IN THIS AREA

EXISTING PEDESTRIAN OVERPASS

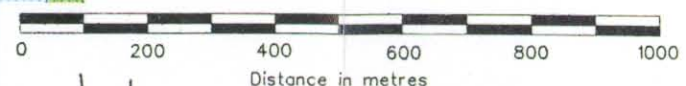
EXISTING STAIRS

FOR CONTINUATION SEE MAP 4

FOR CONTINUATION SEE MAP 3

LEGEND

- Existing Multi-Purpose Trail
- Existing Granular Trail
- - - Existing Unimproved Trail
- Existing Pedestrian Bridge
- ▬ Existing Stairs or Steps



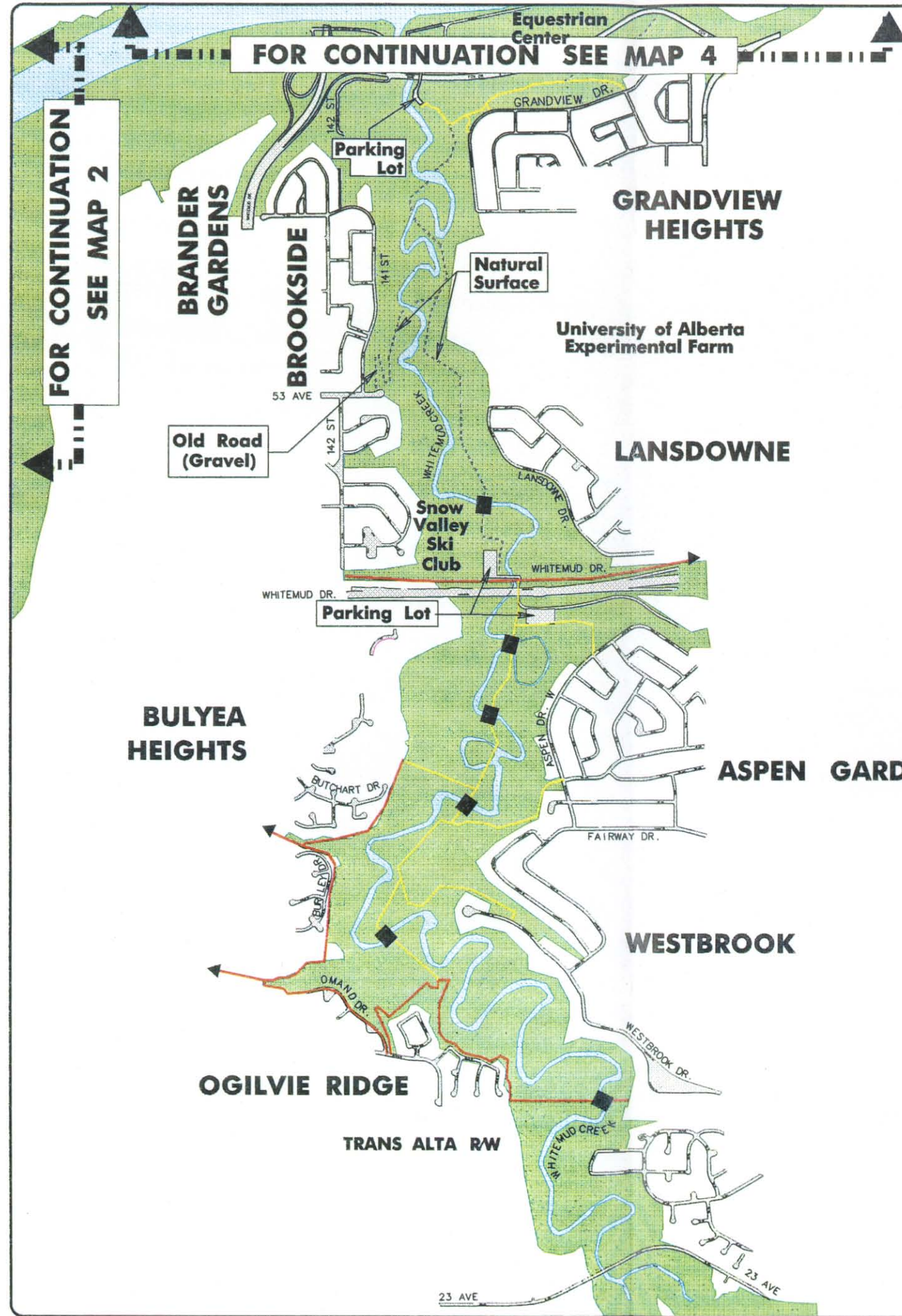
Revisions

Edmonton PARKS AND RECREATION

RIVER VALLEY MASTER PLAN
Wolf Willow / Patricia Ravine Sector
Fort Edmonton Park Sector

EXISTING DEVELOPMENT STATE

Landscape Arch.	Supervisor Design	Date	Drawing No.
Grading/Drainage	General Supervisor	May 1992	2
Drawn	Director	Scale	AS SHOWN
Supervisor Drafting	Date	File No.	
		Design File Name	rep_2.dgn



FOR CONTINUATION SEE MAP 4

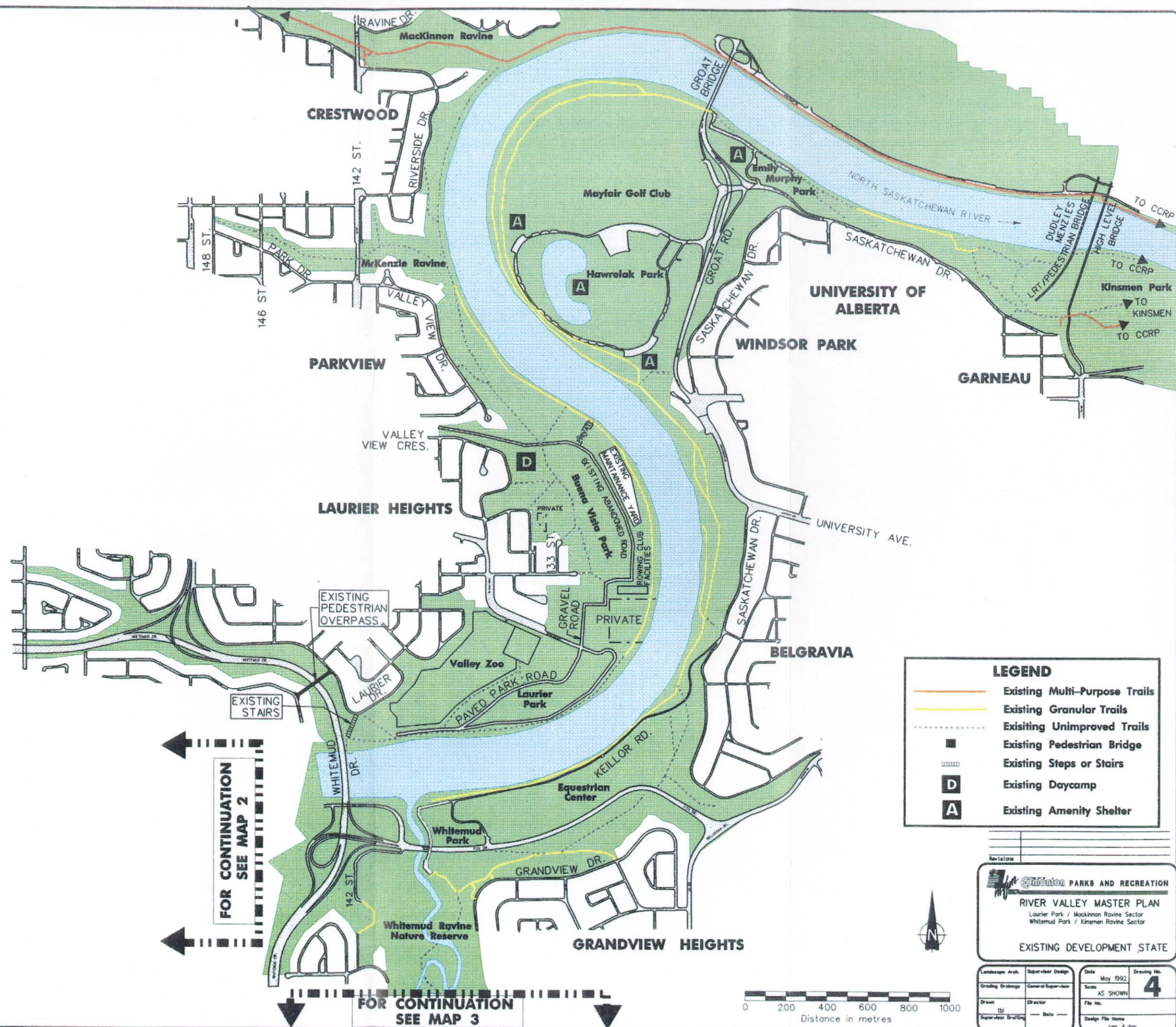
FOR CONTINUATION SEE MAP 2

LEGEND

-  Existing Multi-Purpose Trail
-  Existing Granular Trail
-  Existing Unimproved Trail
-  Existing Pedestrian Bridge



Revisions			
 RIVER VALLEY MASTER PLAN Whitemud / Blockmud Ravine			
EXISTING DEVELOPMENT STATE			
Landscape Arch.	Supervisor Design	Date	May 1992
Grading/Drainage	General Supervisor	Scale	AS SHOWN
Drawn	Director	File No.	
Supervisor Drafting	— Dets —	Design File Name	rep_3.dgn
		Drawing No.	3



LEGEND

- Existing Multi-Purpose Trails
- Existing Granular Trails
- Existing Unimproved Trails
- Existing Pedestrian Bridge
- Existing Steps or Stairs
- Existing Daycamp
- Existing Amenity Shelter

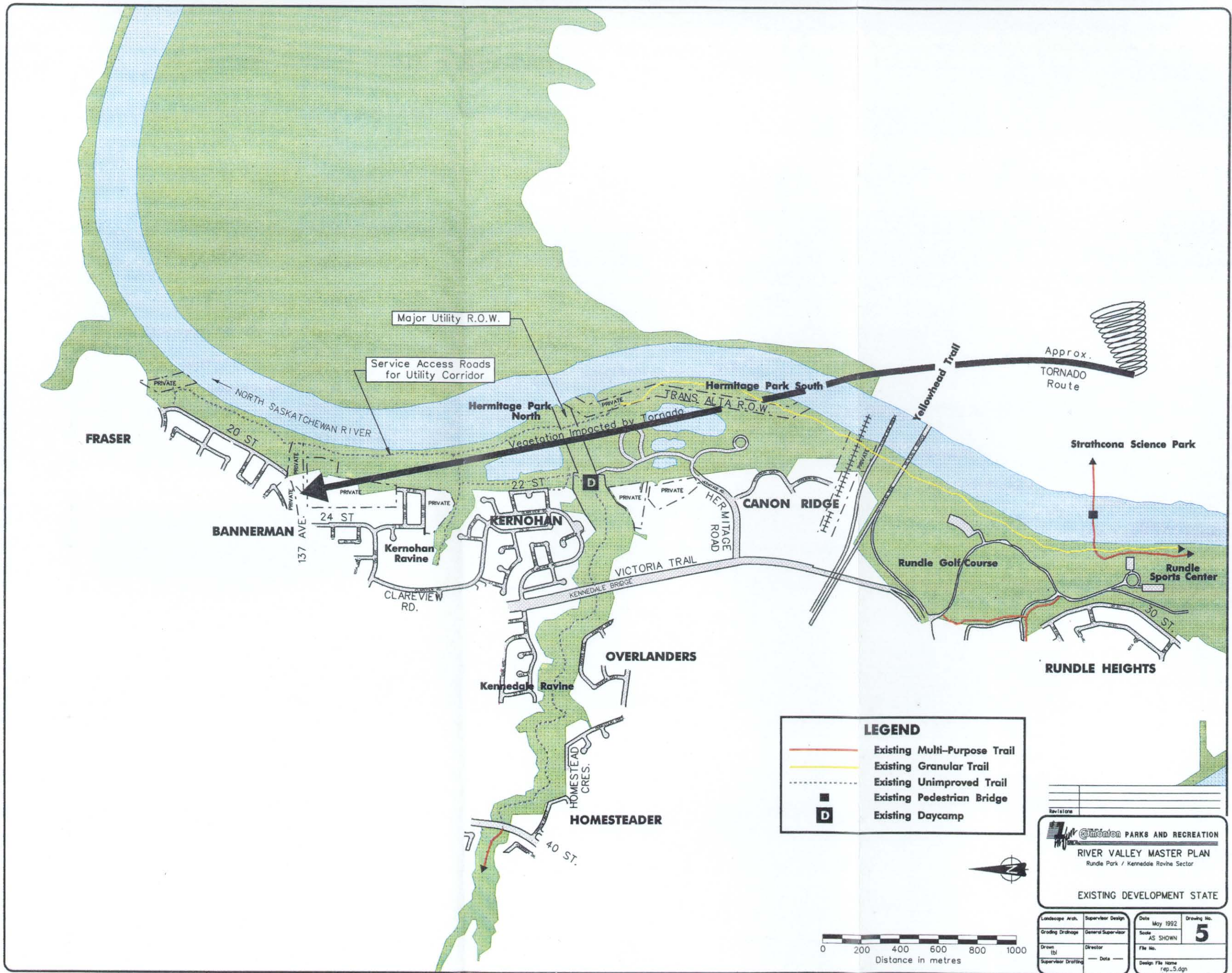
EMMETSON PARKS AND RECREATION
RIVER VALLEY MASTER PLAN
 Laurier Park / MacKinnon Ravine Sector
 Whitemud Park / Kinsmen Ravine Sector
EXISTING DEVELOPMENT STATE

Landscape Arch.	Supervisor Design	Date	Drawing No.
Grading/Drainage	General Supervisor	May 1992	4
Drawn	Director	Scale	AS SHOWN
Supervisor Drafting	Date	File No.	
		Design File Name	rep_4.dgn



FOR CONTINUATION SEE MAP 2

FOR CONTINUATION SEE MAP 3



Major Utility R.O.W.

Service Access Roads for Utility Corridor

Hermitage Park North

Hermitage Park South

TRANS. ALTA R.O.W.

Vegetation Impacted by Tornado

Yellowhead Trail

Approx. TORNADO Route

FRASER

BANNERMAN

Kernohan Ravine

KERNOHAN

CANON RIDGE

Strathcona Science Park

Rundle Golf Course

Rundle Sports Center

OVERLANDERS

RUNDLE HEIGHTS

Kennedale Ravine

HOMESTEADER

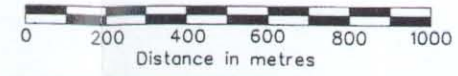
LEGEND

- Existing Multi-Purpose Trail
- Existing Granular Trail
- Existing Unimproved Trail
- Existing Pedestrian Bridge
- Existing Daycamp

Revisions

Edmonton PARKS AND RECREATION
RIVER VALLEY MASTER PLAN
 Rundle Park / Kennedale Ravine Sector
 EXISTING DEVELOPMENT STATE

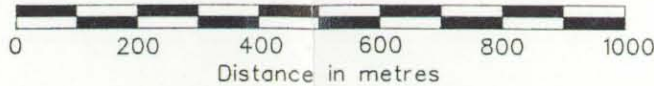
Landscape Arch.	Supervisor Design	Date	May 1992	Drawing No.
Grading/Drainage	General Supervisor	Scale	AS SHOWN	5
Drawn	Director	File No.		
Supervisor Drafting	Date	Design File Name	rep_5.dgn	





LEGEND

	Existing Granular Trail
	Existing Unimproved Trail
	Existing Pedestrian Bridge



<p>Edmonton PARKS AND RECREATION RIVER VALLEY MASTER PLAN Upper Mill Creek Ravine Sector</p>			
EXISTING DEVELOPMENT STATE			
Landscape Arch.	Supervisor Design	Date	Drawing No.
Grading Drainage	General Supervisor	May 1992	6
Drawn	Director	Scale	AS SHOWN
Supervisor Drafting	Date	File No.	
		Design File Name	rap_5.dgn

Recreation activities in this area are presently limited to low intensity activities. The trail-based activities include walking, jogging, cycling, and cross country skiing, nature observation and photography. The activities in the park areas are limited to picnicking, unstructured play, sledding and nature observation. More intensive and organized activity areas are available in nearby Rundle Park, (playgrounds, aquatics, picnic areas, interpretive sites). Some reorganization of the Hermitage Park picnic areas will be required to make them more attractive and functional.

A detailed description of trails in this area is included in Appendix 2.1.

2.2.4 SOUTHEAST EXTENSION AREA: Upper Mill Creek

Existing development is shown on Map 6.

This section of the proposed river valley park extension stretches from the Whitemud Freeway west of 50th Street southeast along Mill Creek Ravine to 34 Street north of 34 Avenue, and covers approximately 3.5 kilometres of ravine. This area contains a section of the creek which has been cut off by industrial and commercial development from the lower portion of Mill Creek Ravine, which was developed with trails and bridges in the mid 1980's. The area is adjacent to the Millwoods Golf Course and the Jackie Parker Recreation Area. The ravine presently contains a narrow hard packed earth trail and several primitive log creek crossings. Mill Creek is crossed by the Whitemud Freeway, 50th Street and 34 Street in this section, disrupting the continuity of the trail.

The communities adjacent to this section of Mill Creek are either new or developing predominantly single family neighbourhoods. Schools and community facilities are developed in the older communities on the southwest side of the creek, but are not fully completed in the new neighbourhoods on the northeast side of the creek. The main project affecting this area is the development of Jackie Parker Recreation Area, which is in the planning stage.

Present recreation activities in upper Mill Creek Ravine are limited to passive, trail-based activities such as walking, jogging, nature observation, photography, and cross country skiing. Sledding is occurring in two locations on the ravine: on the Trans-Mountain Pipeline right-of-way, and north of 38 Avenue.

More intensive activities and amenities are located in the Millwoods Golf Course area and in other Millwoods parks. Recreation activities proposed for Jackie Parker Recreation Area include skating, picnicking, day camps, playgrounds, water play area, environmental demonstrations and an amenity shelter. Washrooms, drinking water, phones and parking are also proposed for Jackie Parker Recreation Area, where they could serve both trail users and recreation area users.

A description of the trails in this area is included in Appendix 2.1.

2.3 RESOURCE ANALYSIS AND CLASSIFICATION SYSTEM.

The Concept Plan established the vision, basic planning principles and management framework for the future of Edmonton's river valley park system. While the Concept provided philosophical direction, a number of questions remained to be answered through the Master Plan, such as:

Which areas need to be protected?

Where would the environmental impact of development be lowest?

Where should trails and facilities be located or not be located?

Which areas of the valley are disturbed? What should be done in these areas?

What types of development are appropriate and require a valley setting?

In the Concept Plan, a preliminary resource assessment was completed to begin to identify such areas.

The major concerns to be addressed and identified through the Master Plan resource analysis were:

- Wildlife Habitats (Existing and Potential).
- Sensitive or Unique Vegetation.
- Physical Constraints to development.

The resource analysis has been detailed in the Master Plan. Using the 1980 Biophysical Study prepared by Edmonton Parks and Recreation, land areas within the river valley were mapped according to the resource classification system in Figure 3. Once the land areas were classified, they were analyzed by overlaying various factors. This resource analysis process (Figure 4) served to identify areas of significant biological sensitivity and physical constraints.

By evaluating resource sensitivity and constraints early in the planning process, significant wildlife habitat areas and unstable or flood prone areas can be excluded from development. It is then possible to plan for the development and future management of an area based on the environmental resource capability.

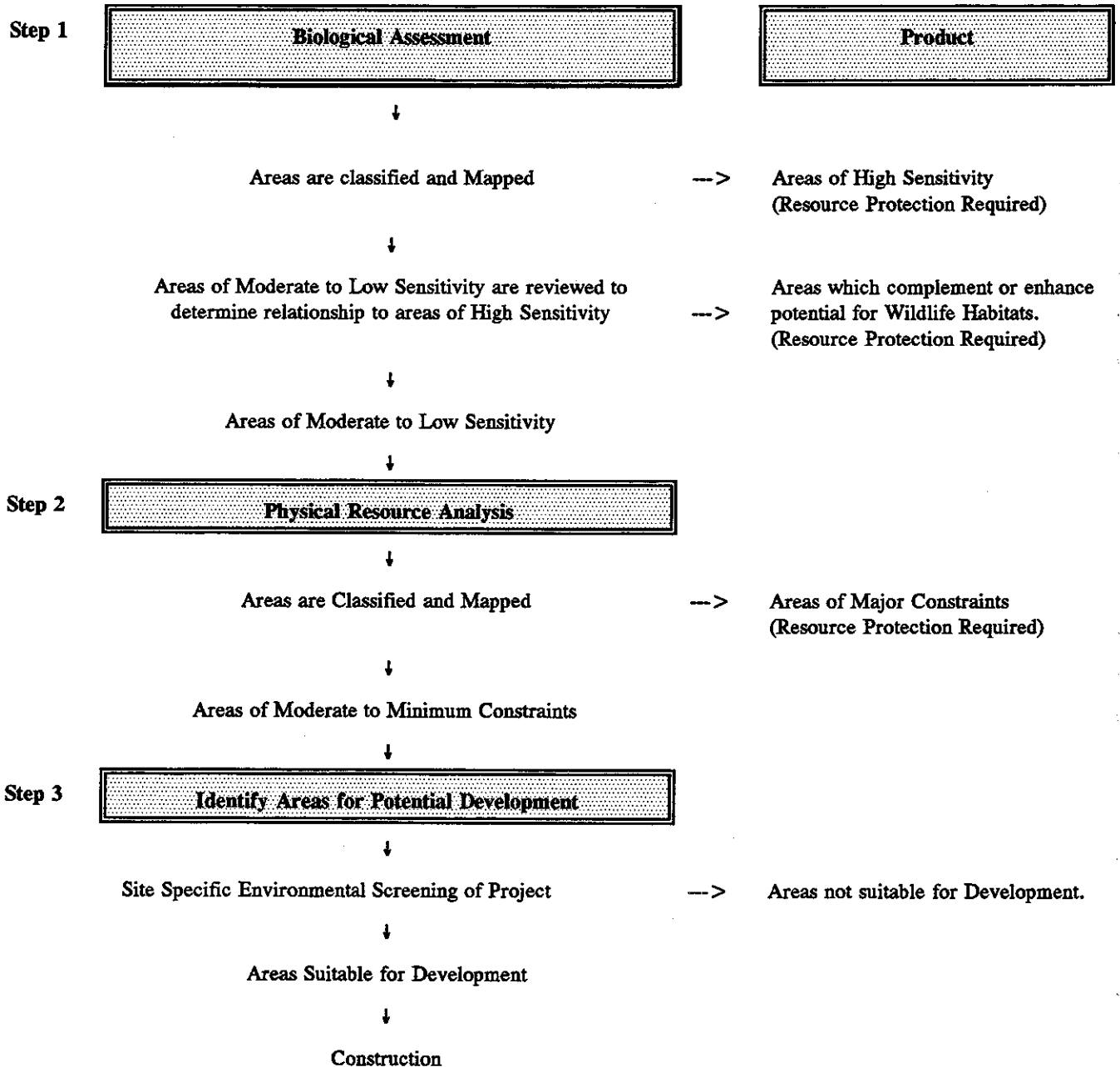
Figure 3

RESOURCE CLASSIFICATION SYSTEM

VEGETATION		DEFINITION:
Class 1	Low Sensitivity	vegetation can withstand some degree of mechanical damage and/or environmental change with minor reclamation; park maintenance occurs
Class 2	Marginal Sensitivity	can withstand some degree of damage/change with major reclamation, some minor park maintenance occurs
Class 3	High Sensitivity	areas of rare plants or plant communities, any damage/change would result in severe impacts which could not be mitigated, no park maintenance
WILDLIFE (HABITAT POTENTIAL)		
Class 1	Not Significant	human disturbance has eliminated/reduced natural habitat
Class 2	Moderate Habitat	some wildlife species exist however numbers are not significant
Class 3	Significant Habitat	area contains abundant wildlife/specialized species
SLOPE		
Class 1	Flat/Minor Slope	0 - 7.5 % grade, mostly within floodplain or upland area
Class 2	Moderate Incline	7.6 - 15 % grade, mostly banks or terraces
Class 3	Steep/Hazardous	> 15 % slope, steep banks
HYDROLOGY		
Class 1	No Effect	no drainage impacts/drainage controlled
Class 2	Moderate Effect	within seasonal minor watercourses or areas of seasonal ground water seepage
Class 3	In Floodplain & Areas of Drainage/Seepage	within the 1:50 year flood line watercourses or areas of continual ground water seepage
GEOLOGY/SOILS		
Class 1	Stable	no evidence of slope failure, soils exhibit low erosion potential
Class 2	Marginal Stability	evidence of inactive slope failure, soils have moderate erosion potential
Class 3	Unstable	areas of active slope failure, soils highly susceptible to erosion

Figure 4

RESOURCE ANALYSIS PROCESS



Step 1 - Biological Assessment

The first and most critical factor to be assessed was the biological sensitivity (vegetation and wildlife habitat potential), because of the conservation principles established in the Vision Statement. Diversity of natural habitat was the major criterion used, in that the diversity and abundance of the local plants govern the kinds and quantity of wildlife that an area can support. Wherever disturbances or modifications occur which simplify plant community structure, fewer species of wildlife are able to exist.

The 1980 Biophysical Inventory of the vegetation, wildlife and aquatic habitat is currently the best compiled inventory covering the entire river valley, although some elements of the inventory lack site specific detail. It will be necessary to "field check" to update and refine this information in the future.

After overlaying vegetation and wildlife habitat potential, the following groupings occur:

LOW SENSITIVITY- <----- MODERATE -----> -HIGH SENSITIVITY				
Class 1 Vegetation + Class 1 Wildlife	Class 1 Vegetation + Class 2 Wildlife	Class 2 Vegetation + Class 2 Wildlife	Class 2 Vegetation + Class 3 Wildlife OR Class 3 Vegetation + Class 2 Wildlife	Class 3 Vegetation + Class 3 Wildlife

DEFINITIONS	WILDLIFE HABITAT	VEGETATION HABITAT
Class 1	Grasses/Forbes; Mowed or cleared areas.	Low shrubs/grasses; Tall shrubs/saplings; Grasses/forbes; Mowed or cleared areas.
Class 2	Low Shrubs/Grasses; Tall Shrubs/Saplings; Aspen; Balsam Poplar; White Spruce/sparse understory	Aspen; Aspen/White Spruce/Other deciduous; Balsam Poplar/Other deciduous; White Spruce/denser understory; White Spruce/Deciduous
Class 3	Aspen/Balsam Poplar; Aspen/White Spruce & Other deciduous; Balsam Poplar/White Spruce; Balsam Poplar/ Other deciduous; Birch/White Spruce; Birch/Other Deciduous; White Spruce; denser understory; White Spruce/Deciduous	Aspen/Balsam Poplar; Balsam Poplar; Balsam Poplar/White Spruce; Birch/White Spruce; Birch/Other deciduous; White Spruce/sparse understory.

After mapping all factors, the most biologically sensitive lands are identified. (See Maps 7-10). Efforts will be made to protect these areas and exclude them from development. Areas of moderate to minimal sensitivity are to be reviewed in detail to define the potential for development. The final designation of an area will depend on the objectives of the park area, the nature of adjacent areas, and the feasibility of transforming and rehabilitating areas to a more natural state given the existing impacts (e.g. utility lines, recreation uses, etc).

Step 2 - Physical Resource Assessment

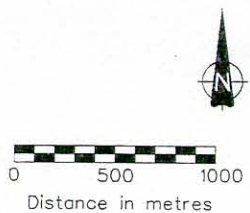
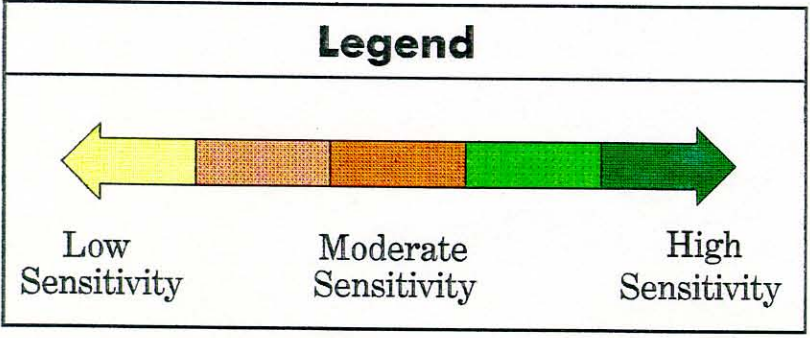
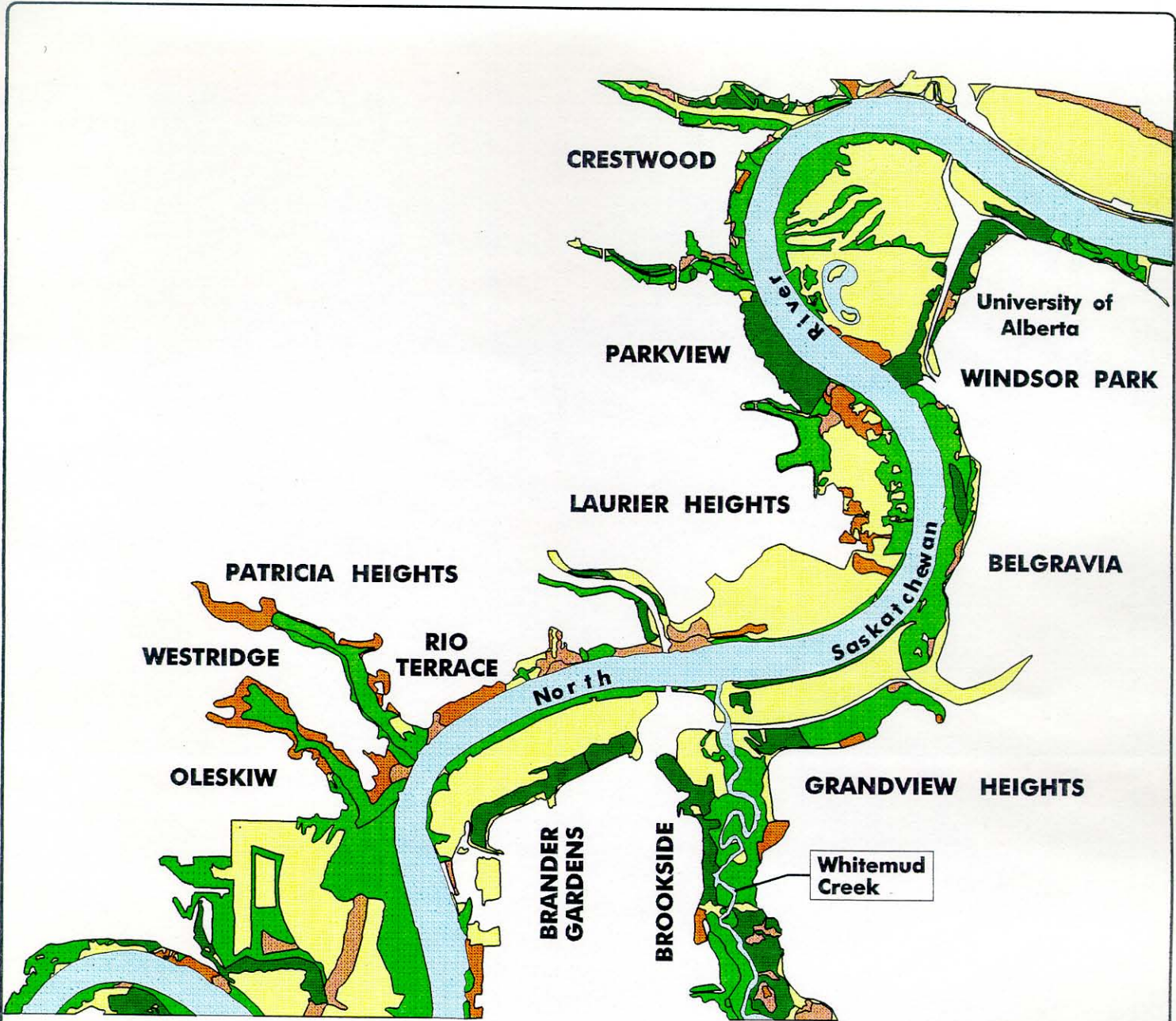
A review and assessment of the physical resource factors (engineering constraints to development such as slope, hydrology and geology/soils) has occurred based on the classification system (Figure 3). These factors can be overlaid on the biological assessment to determine areas of major to minimum physical constraints to development.

After overlaying the factors, the following groupings occur:

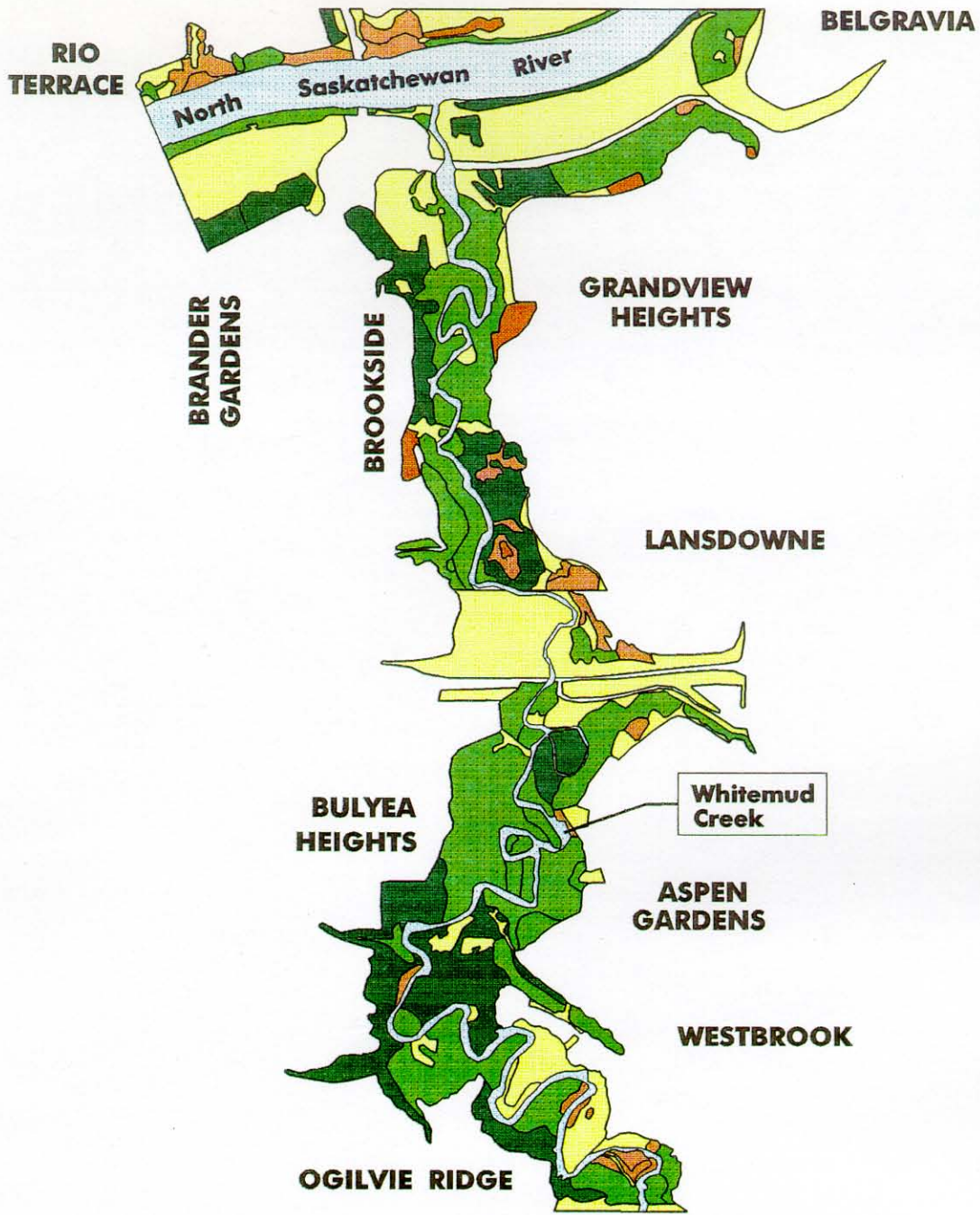
RESOURCE FACTORS	MAJOR CONSTRAINT	MODERATE CONSTRAINT	MINIMAL CONSTRAINT
Slope	Class 3	Class 2 & 3	Class 1 & 2
Hydrology	Class 3	Class 2	Class 1 & 2
Geology/Soils	Class 2 & 3	Class 2	Class 1
SCORE	8-9	6-7	3-5

The extent of the proposed development in combination with the location of proposed development will determine the potential environmental impact. As an example a pedestrian bridge in an area of major constraints will have a greater impact than upgrading the surface of an existing trail in an area of minimum constraints. The environmental assessment process is described in Chapter 4.

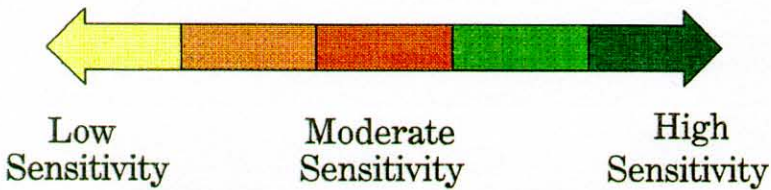
Maps 11 - 14 display the physical resource assessment and identifies areas of constraints.



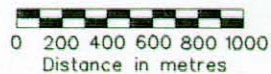
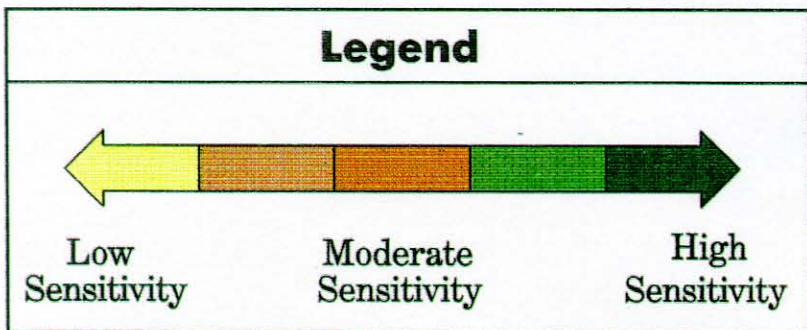
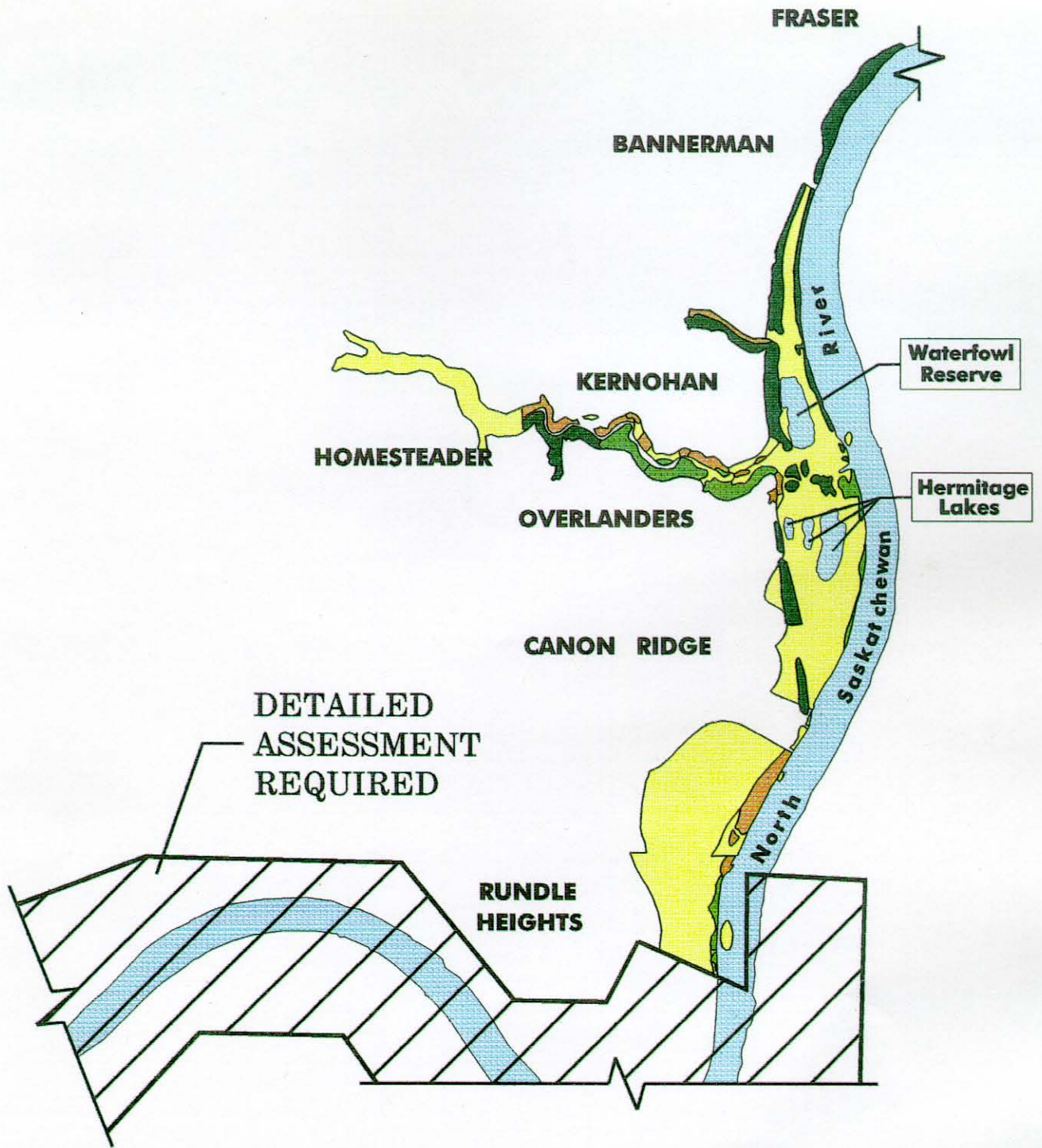
Calgary PARKS AND RECREATION			
RIVER VALLEY MASTER PLAN Central River Valley			
BIOLOGICAL RESOURCE ANALYSIS (Wildlife and Vegetation)			
Landscape Arch.	Supervisor Design	Date	Drawing No.
Grading Drainage	General Supervisor	Scale	7
Drawn	Director	File No.	
Supervisor Approval	Date	Design File Name	R00-7.dgn



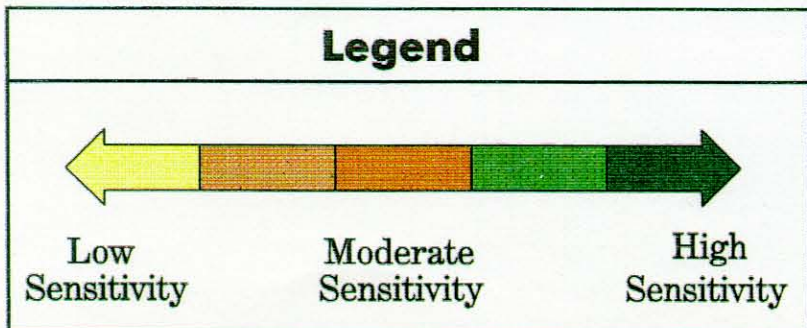
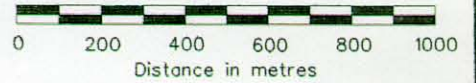
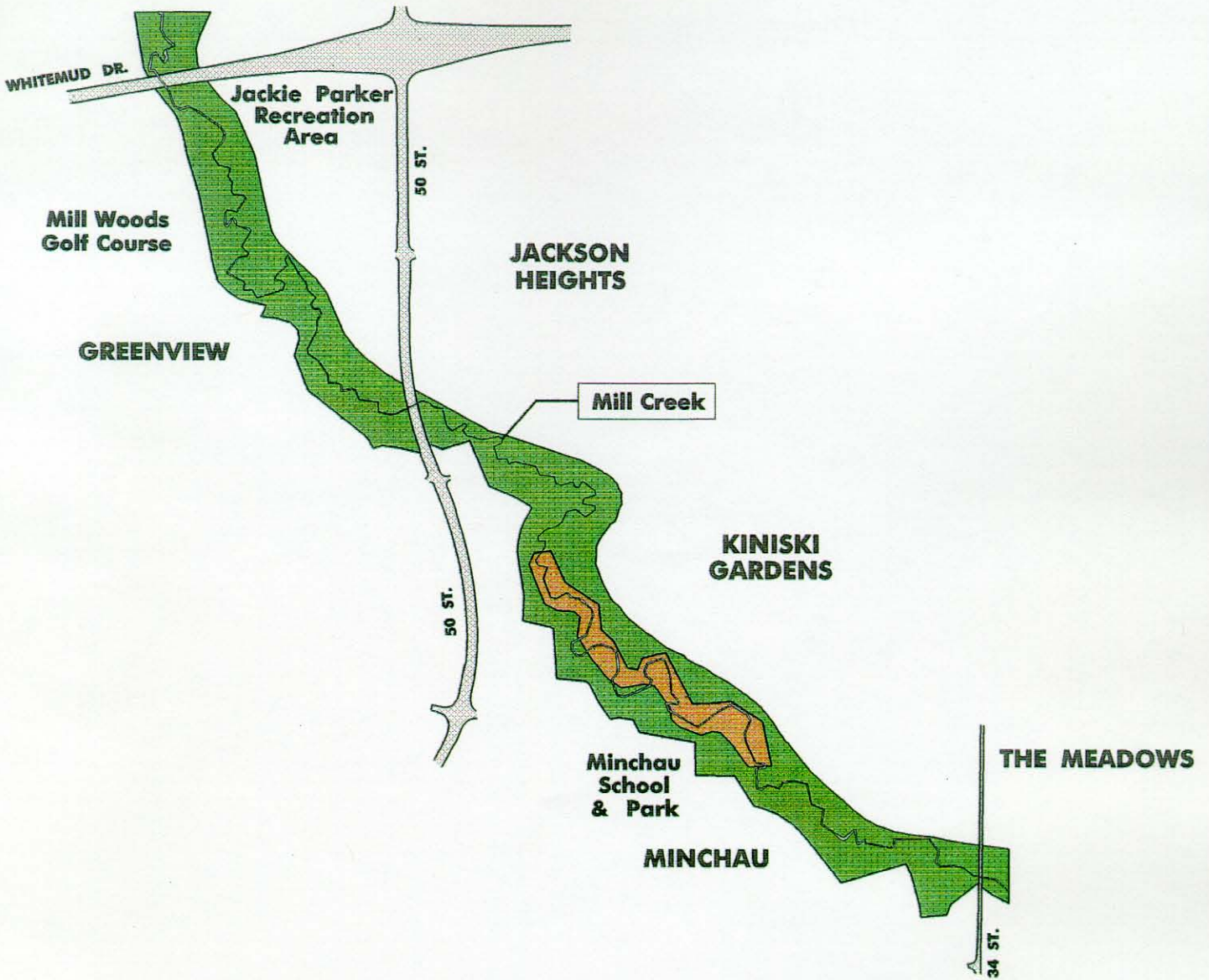
Legend



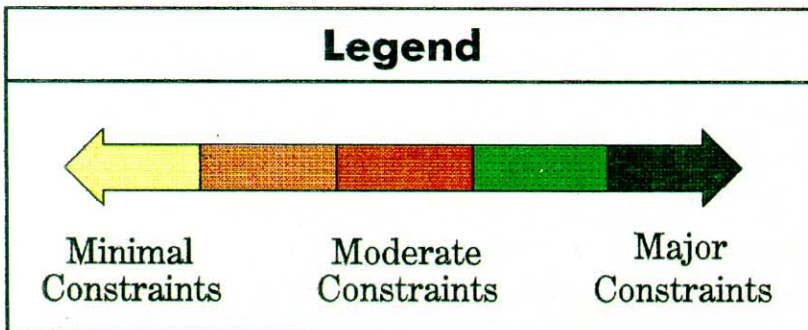
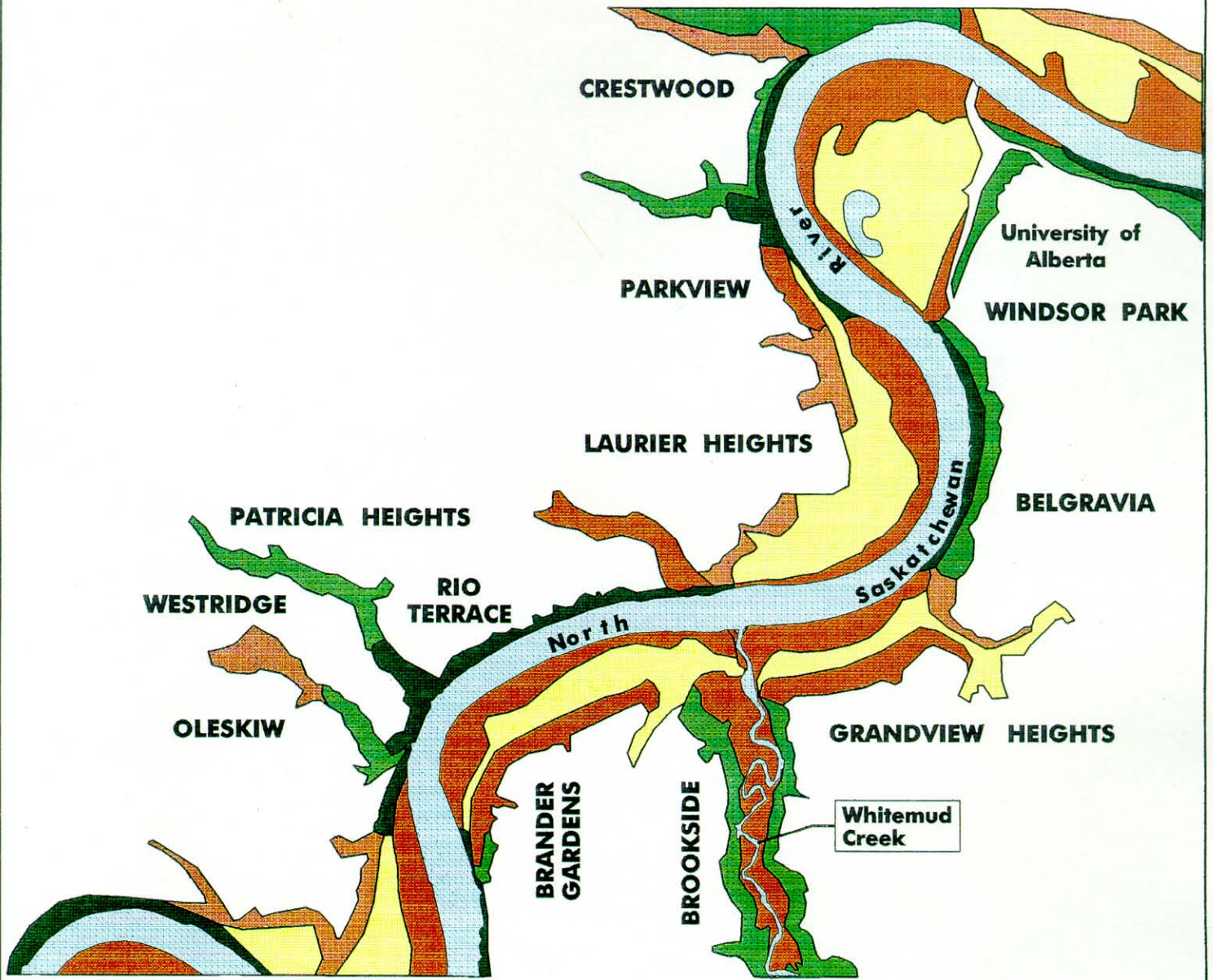
RIVER VALLEY MASTER PLAN Whitemud / Blackmud Ravine			
BIOLOGICAL RESOURCE ANALYSIS (Wildlife and Vegetation)			
Landscape Arch. Drafting/ Drafting Drawn Supervisor/ Drafting	Supervisor/ Design General Supervisor Director Date	Date Scale File No. Design File Issues esp. 3.0p	Drawing No. 8



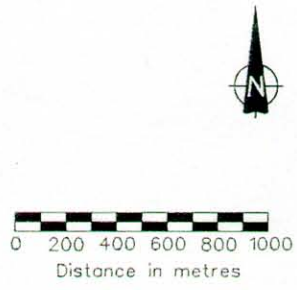
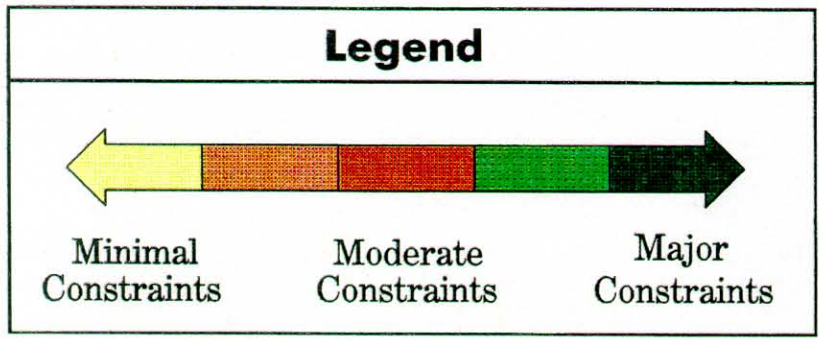
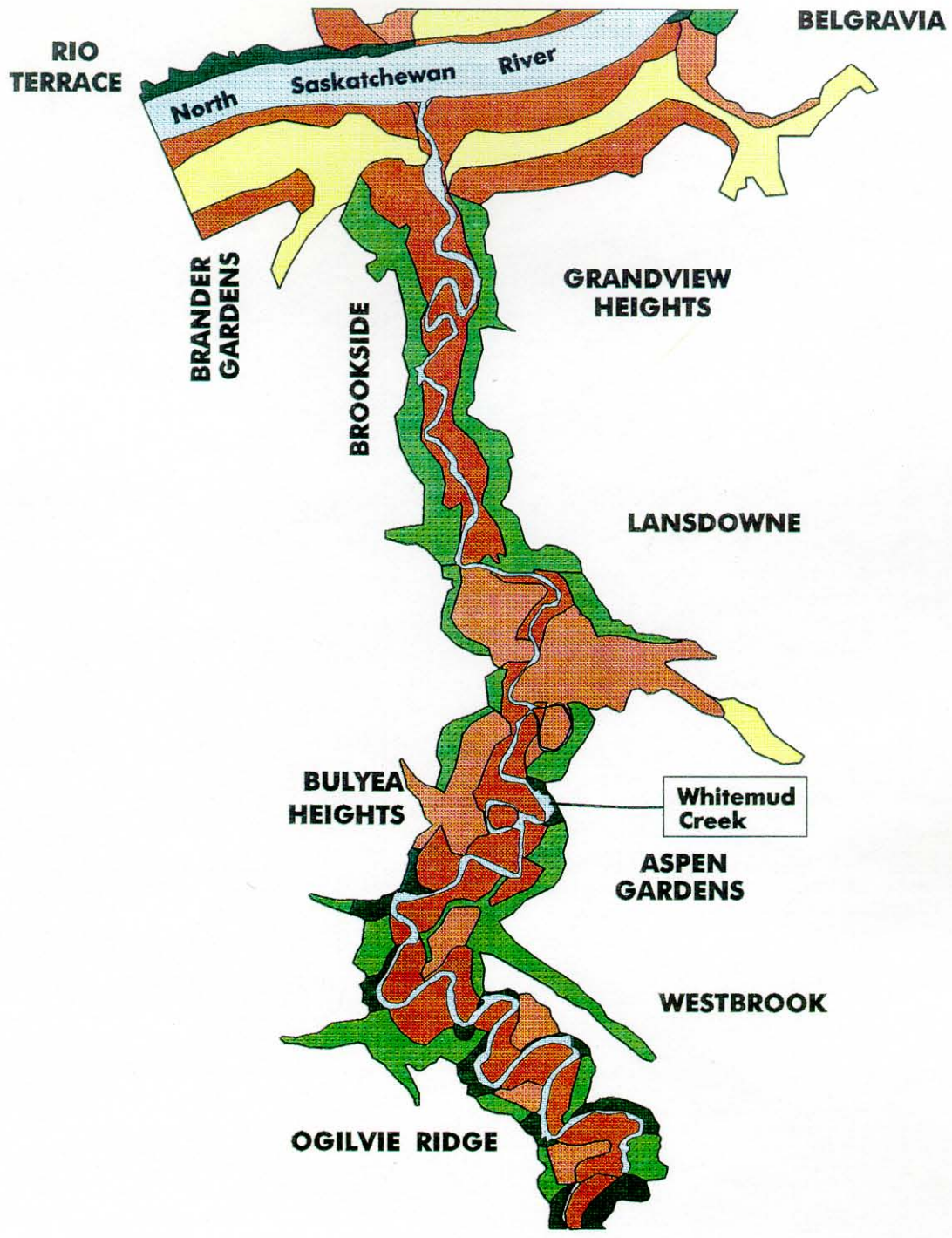
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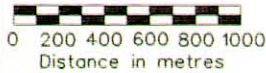
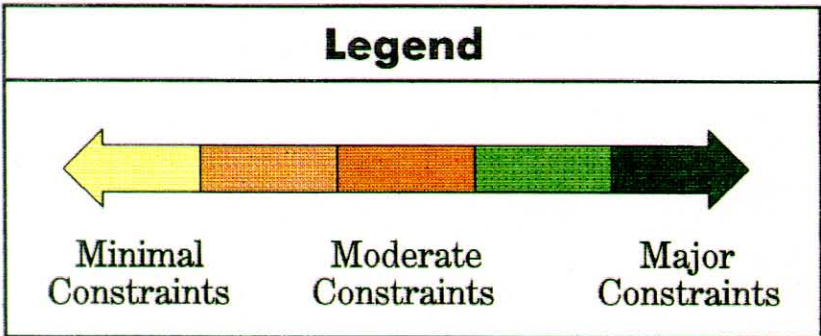
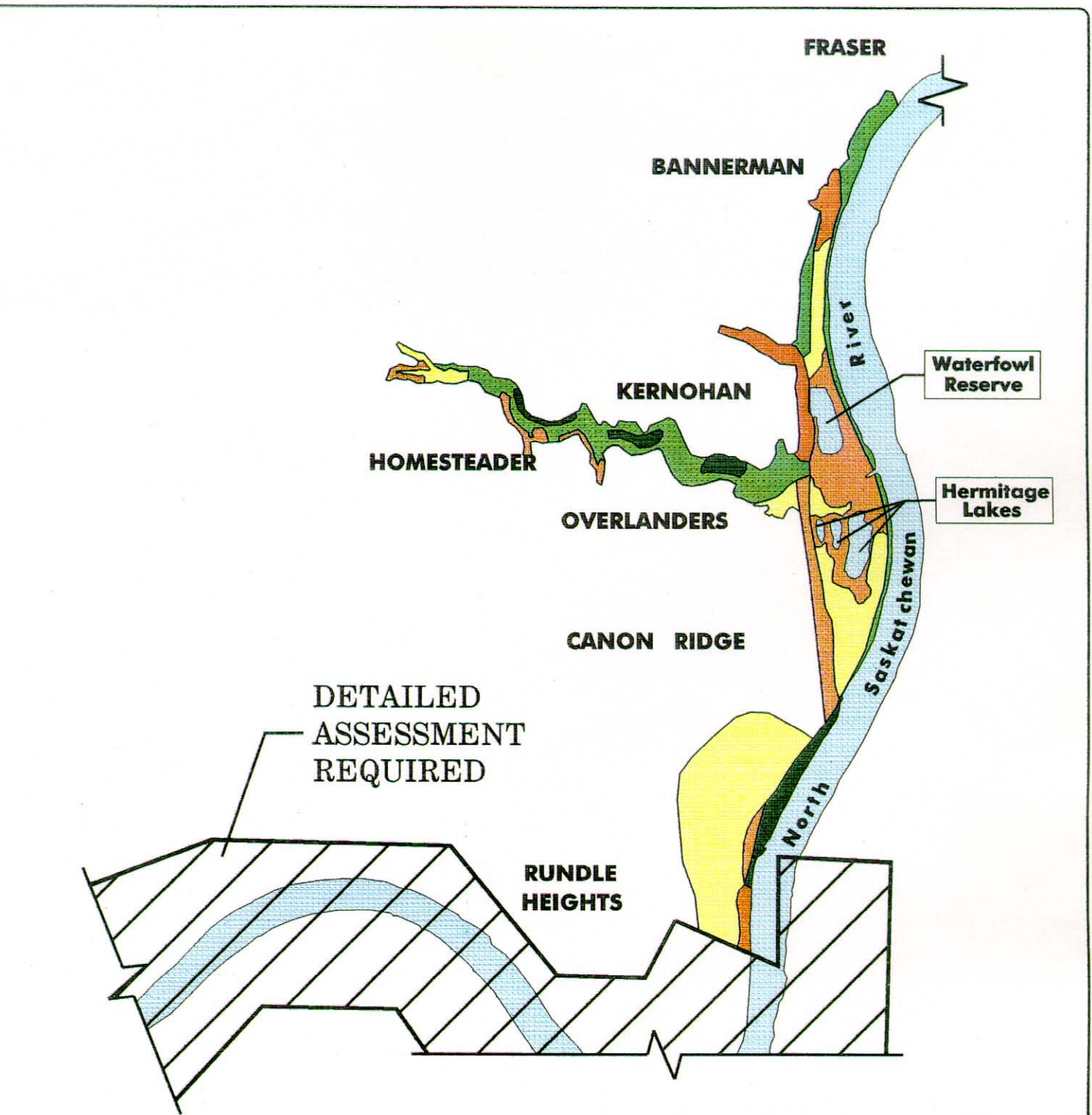
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RIVER VALLEY MASTER PLAN			
Upper Mill Creek Ravine			
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Drinking Water	General Supervisor	May 1992	10
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Supervisor Drafting	Date	Design File Name	
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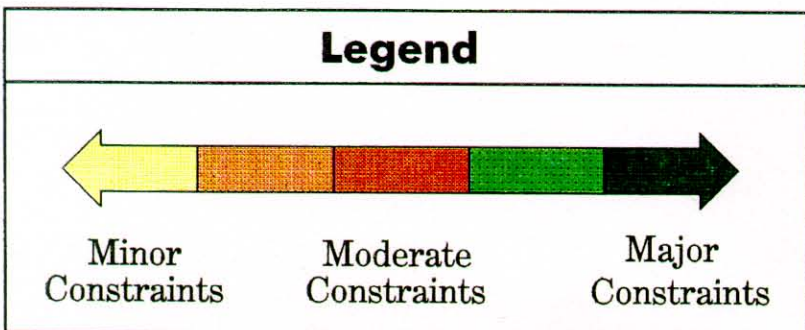
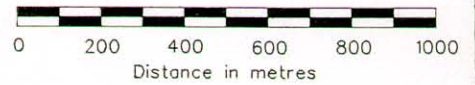
Edmonton PARKS AND RECREATION			
RIVER VALLEY MASTER PLAN Central River Valley			
PHYSICAL RESOURCE ANALYSIS (Slope, geology/Geomorphology, and Hydrology)			
Author: []	Team Lead: []	Date: May 1992	Drawing No. 11
Grading: []	General Supervisor: []	Scale: AS SHOWN	
Drawn: []	Director: []	File No.:	
Supervisor: []	Date: []	Design File Name: []	[]



AMERICAN PARKS AND RECREATION			
RIVER VALLEY MASTER PLAN			
Whitemud / Blockmud Ravine			
PHYSICAL RESOURCE ANALYSIS			
(Slope, Geology/Geomorphology, and Hydrology)			
Landscape Arch.	Supervisor/Design	Date	Drawing No.
Credley/Drabing	General Supervisor	May 1992	12
Drawn	Director	Scale	File No.
BY	Date	AS SHOWN	
Supervisor/Design	Date	Design File Name	cap_12.dwg



Alberta PARKS AND RECREATION			
RIVER VALLEY MASTER PLAN			
Rundle Park / Kennedie Ravine			
PHYSICAL RESOURCE ANALYSIS			
(Slope, Geology/Glomorphology, and Hydrology)			
<small>Contract No.:</small>	<small>Supervisor:</small>	<small>Date:</small> May 1992	<small>Drawing No.:</small>
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<small>Supervisor Staffing:</small>	<small>Date:</small>	<small>Design File Name:</small>	
<small>rep_13.dgn</small>			



		RIVER VALLEY MASTER PLAN Upper Mill Creek Ravine	
PHYSICAL RESOURCE ANALYSIS (Slope, Geology/Geomorphology, and Hydrology)			
Author: [blank] Date: May 1992	Supervisor: [blank]	Scale: AS SHOWN	Drawing No: 14
Designer: [blank]	Checker: [blank]	Date: [blank]	Design File Name: rpg_14.dgn

2.4 PUBLIC OPINION ON ACTIVITY & FACILITY SUITABILITY

At the Concept Plan and Master Plan public meetings, the public was asked their opinion on the appropriateness of a list of recreation activities and facilities within three proposed management areas: Preservation, Conservation and Extensive Use. A summary of public views is found in Appendix 2.1.

I. Preservation Areas

Preservation areas were viewed as the most restrictive areas for recreation activities and facilities development. Suitable activities included nature study and observation, photography, canoeing/kayaking, and walking and jogging. Facilities development was viewed as restricted to natural surface trails with limited support for development of interpretive signs/displays, viewpoints and decks, granular trails, pedestrian bridges and washrooms at the edge or perimeter of the preservation area.

II. Conservation Areas

Conservation areas represented areas of greater activity and facility development than preservation areas. A broader range of activities were viewed as appropriate and were mostly related to trail based activities. Water based activities such as canoeing/kayaking, fishing and rowing were also viewed as appropriate.

Facility development viewed as appropriate included granular trails, interpretive signs/displays, natural trails, viewpoints/decks, and pedestrian bridges. Other facilities which were marginally appropriate included washrooms, telephones, paved trails, drinking fountains, day camps and boat/canoe docks.

III. Extensive Use Area

Extensive use areas represent full service areas with a broad range of facilities. These areas should cater to a variety of activities and individuals, large groups and families with children. The most highly supported facilities included: children's playgrounds, washrooms, pedestrian bridges, drinking fountains, parking areas, telephones, fitness courses, amphitheatre, paved trails and equipment rentals.

In many areas of the river valley, recreation activities occur which were not viewed as appropriate within the three management areas. Some of these activities are not permitted at all, such as use of 4WD/ATV's, snowmobiling, recreation vehicle camping and cycling off designated trails. Casual picnicking and x-country skiing cause little damage to the environment, and would not be discouraged from any area on an informal basis. Recreation activities would not be formalized through development unless they were suitable within the management area.

During preparation of the master plan public concern was expressed over the extent of activities/facilities which are permitted in extensive use areas, recognizing that a very broad range of uses occur now and that the vision statement identifies major new facility development as inappropriate. Because of this concern, those activities/facilities which do not fit the vision have been identified (in Appendix 2.1) and would not be accommodated in the future.

Activity and facility proposals are further described in Section 4.2 Park Development Guidelines and Standards and in Chapter 5 Plan Objectives and Proposals.

In conclusion, classifying the river valley into management units which would have varying levels of recreation use and facilities development has general public support. The types of activities and facilities found within the units would be most varied within the extensive use areas, and more restrictive in the conservation and preservation areas.

2.5 PUBLIC INPUT

PUBLIC INPUT MODEL

A sequential public input process was developed to meet the needs of a development program spread over ten years and to closely coordinate the timing of public consultation with construction. Three levels of planning detail were identified. Each level builds on the previous, refining proposals from general intent to specific detail and narrowing the scope of target public from the very broad general citizenry to a more local community stakeholder-user. The sequential public input process was designed to minimize the possibility that public expectation of development could be raised prematurely.

BACKGROUND

Input techniques utilized in developing the Concept Plan included review of existing data, distribution of a questionnaire to every household and ratification through open house type public meetings. Over 1500 citizens participated in the Vision Survey questionnaire. Approximately 80% of the respondents supported the Vision Statement and Basic Principles. Over 200 citizens attended the open house meetings in October 1990.

PUBLIC REVIEW OF PRELIMINARY MASTER PLAN (NOVEMBER 1991)

A number of issues raised by the public during preparation of the Concept Plan were to be resolved at the Master Plan level. A chart summarizing these issues and proposed action/resolution is shown in Appendix 2.2.

A preliminary Master Plan was presented to the public in November 1991 for review and input. A series of four public meetings was conducted between November 20th and 28th, 1991. Each meeting reviewed the overall Master Plan proposal, the resource assessment process, the proposed land management planning units, and the proposed standards and guidelines for development. In addition each meeting focused on a different area of the valley and reviewed in detail the development proposed for that specific area.

An encouraging level of public interest was shown by 278 people registering attendance and 182 completing the distributed questionnaire. While the questionnaire sampling cannot be regarded as statistically sound it did provide an indication of public preference.

The respondents generally:

- supported the preliminary Master Plan, the management zoning proposal, and the trail classification/guidelines;
- preferred 10 foot asphalt surface main trails and top-of-bank trails, and 4 foot ravine and access trails.

A summary of the public response to the preliminary Master Plan presented at the November meeting is summarized in Appendix 2.3.

PUBLIC REVIEW OF REVISED MASTER PLAN (FEBRUARY 1992)

The input and comments received from the November public meetings, subsequent meetings with selected special interest groups and concerned individuals, meetings with Department staff and staff of other Departments, was considered and incorporated into a revised Master Plan. This was taken to the public for review and ratification at an Open House on February 5th and 6th, 1992.

Newspaper advertisements were placed to advertise the two day Open House and a special briefing was held to give media personnel equal access to information. In addition a letter of invitation was sent to 900 names on the existing mailing list indicating this was the last public forum opportunity to register verbal and written comments before the Master Plan was submitted to Council.

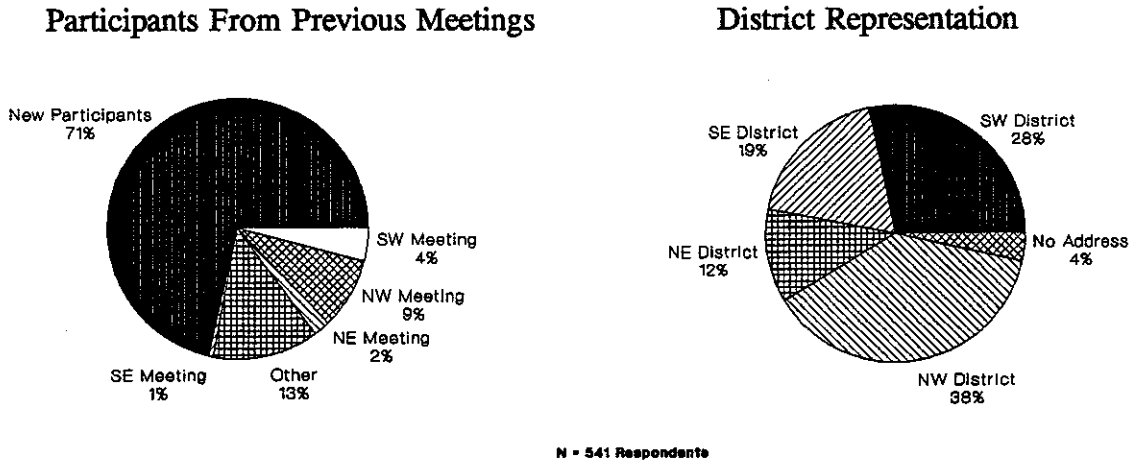
Information provided to the public included:

- feedback on information gathered at previous public meetings: questionnaire survey results and summary of planning issues for each quadrant of the river valley along with recommended resolutions.
- a revised program statement for each area.
- maps were posted indicating the previous plan and the revised plan.
- detailed site plan drawings.

Approximately 700 people attended the two day open house, of which 541 returned the distributed survey (77%). Most individuals had not attended the November public meetings. Attendees came from all parts of the city representing every district (Figure 5). This was attributed to the excellent media coverage.

Figure 5

FEBRUARY OPEN HOUSE PARTICIPATION



Attendees were heavy users of the river valley with a very high percentage indicating more than 50 visits per year. All major activities were well represented with a large proportion of respondents indicating they used the valley for several activities.

An analysis of the questionnaire distributed at the open house is found in Appendix 2.4.

SUPPORT FOR THE MASTER PLAN

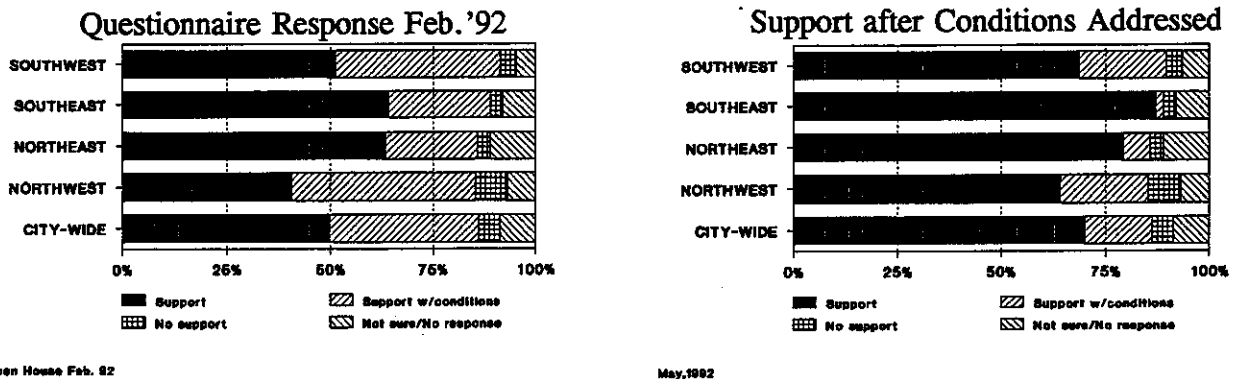
At the February Open House, respondents were asked to indicate Support, Support with Conditions or Non-Support for the revised River Valley Master Plan. The assumption made was that if the identified concern was met, that support was received. The initial tabulation indicated 50% Support and 36% Support with Conditions. Through a further analysis of each individual survey and by addressing the identified concerns, support for the revised Master Plan was increased to 70% as shown in Figure 6. A summary of the public comments, including a list of the "met" and "unmet" concerns is in Appendix 2.5.

A number of comments were site specific, but the most frequently mentioned conditions/comments were:

- concern for general trail safety,
- concern for affect on wildlife and environment,
- concern for affect on integrity of valley (don't overdevelop),
- desire bike access to dirt trails,
- opposition to development of housing in valley,
- desire for increased presence of police,
- desire for off-leash areas for dogs,
- comments regarding provision of bridge links.

Figure 6

PUBLIC VIEWS OF THE MASTER PLAN

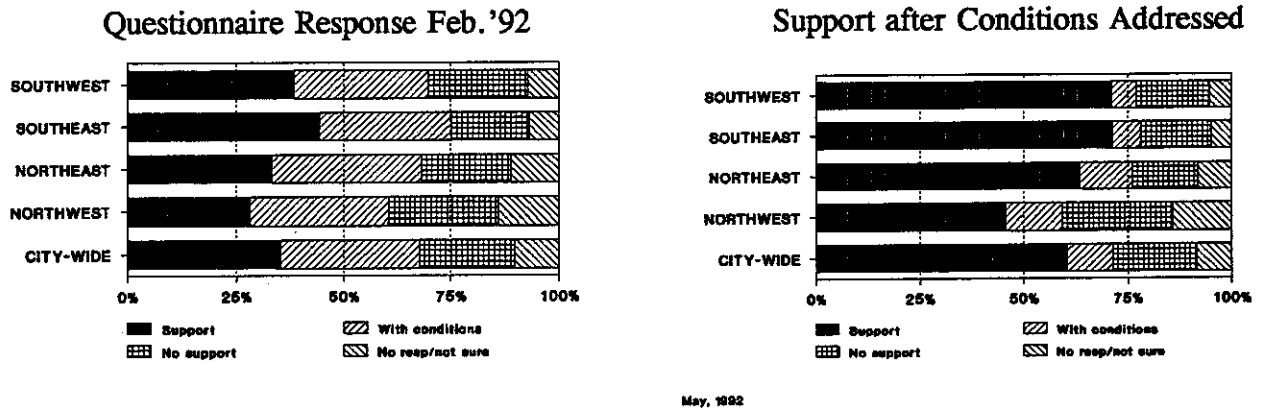


CHANGES TO THE TRAILS GUIDELINES

The greatest change from the November proposal was the concept of permitting cyclist access to selected granular trails. Response to the new trail classification proposal indicated 36% Support, 32% Conditional Support for this proposal. Much of the conditional support centered around concern for pedestrian safety, speed of non-pedestrians, desire for greater police presence, and need for an educational campaign to encourage a proper code of behaviour. By addressing many of the Conditional Support concerns, Support can be increased to 61%, as is shown in Figure 7.

Figure 7

REVISED TRAIL GUIDELINES



The Department feels confident the public is prepared to designate some granular trails as multi-purpose. Additional public input is required however before a trail is so designated. This input will be acquired at the Site Plan development level. A process is identified in Section 4.2.

As a result of the public input in February, the Master Plan was further refined before presentation to City Council.

CHAPTER 3 - PROPOSED URBAN PARK BOUNDARY

To access Provincial Urban Parks Program, Phase II funding the City must clearly define the boundary of the new urban park.

The present development in the river valley system includes Capital City Recreation Park (CCRP), which was developed with Provincial funding, and a number of areas developed by the City. Urban Parks Program Phase II funds can be spent in any part of boundary of the new urban park where the planning and program requirements of the Province have been satisfied (such as completion of the master plan).

Operating costs for CCRP are funded from a provincial operating grant and municipally developed river valley parks are supported by the tax levy. However, to provide consistency of service levels throughout the river valley and ease of administration the City would like to merge the existing CCRP operating grant and the UPP Phase II operating grant.





The Province has agreed that the City may use the total funds from the two grants anywhere within the North Saskatchewan River Valley and Ravine System Urban Park boundary. Any new administration and accounting procedures for the two grants will be determined when the City is ready to access the Phase II operating funds.

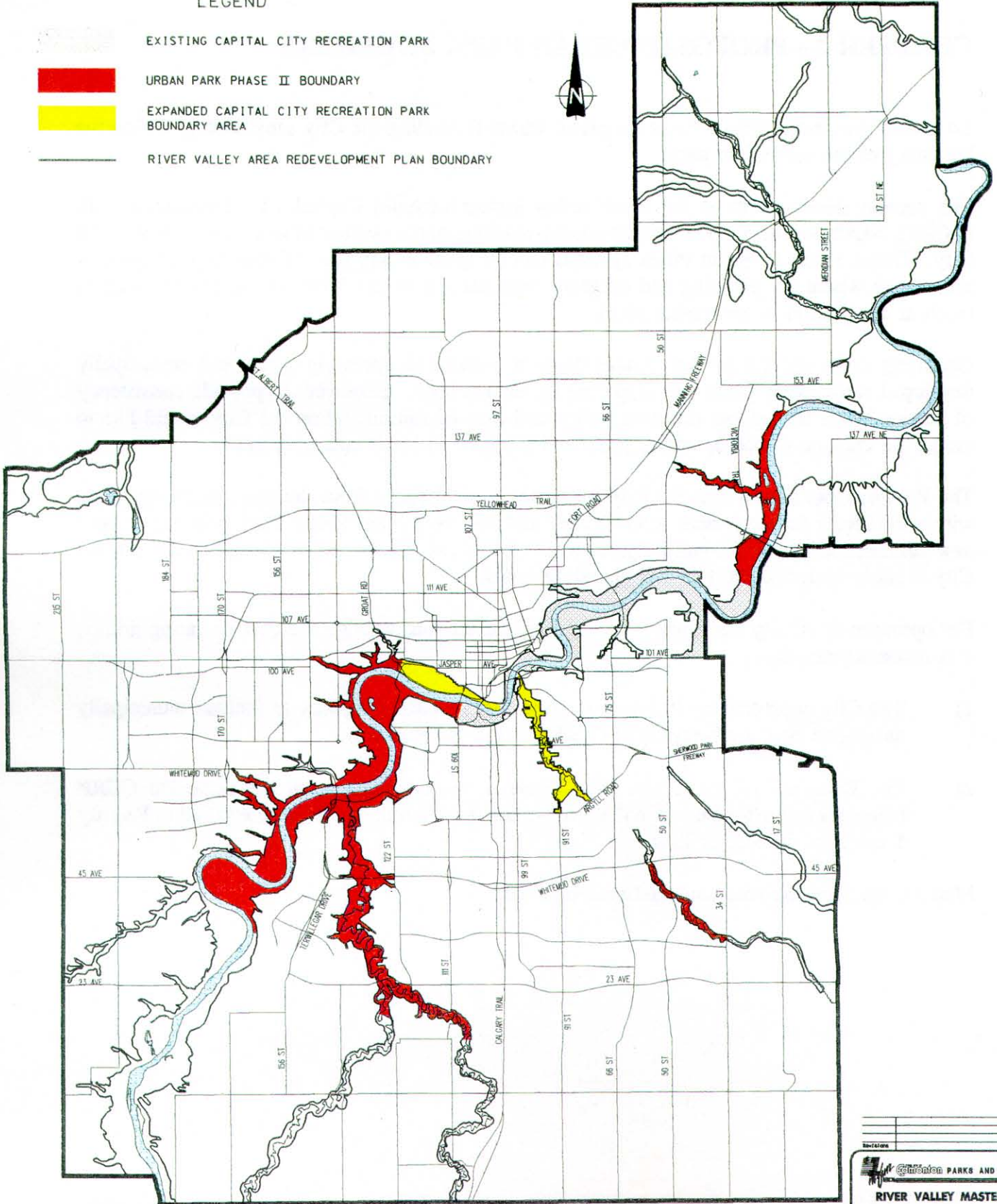
For optimum flexibility and clarity in accessing capital and utilizing the two operating grants, it is recommended that:


- 1) The City approach the Province to expand the CCRP boundary to include municipally developed park areas (eg. Mill Creek Ravine, River Road).
- 2) The Boundary of the Urban Park Phase II be contiguous with the expanded CCRP boundary and extend through the river valley incorporating all lands identified in Priority 1 and 2 of the Master Plan.

Map 15 identifies the recommended park boundary.

LEGEND

-  EXISTING CAPITAL CITY RECREATION PARK
-  URBAN PARK PHASE II BOUNDARY
-  EXPANDED CAPITAL CITY RECREATION PARK BOUNDARY AREA
-  RIVER VALLEY AREA REDEVELOPMENT PLAN BOUNDARY



			
RIVER VALLEY MASTER PLAN			
URBAN PARK PHASE II BOUNDARY			
Landscape Arch. Grading/Drainage Drawn Designer/Arch. Drafting	Supervisor Design Director of Supervisor Date	Date May 1992	Sheets No. 15
Design File Name: rvg-15.dgn			

CHAPTER 4 - PLANNING AND MANAGEMENT POLICIES

The river valley contains both natural and urban characteristics. The characteristics associated with the natural aspects are wildlife, vegetation, and physical features. Those associated with the urban aspects of the river valley relate to the historical, archaeological, cultural origins, and the trails and facilities which help people use the valley. The valley ranges from areas virtually undisturbed and natural, to areas that have been extensively altered or developed.

The data analysis in Chapter 2 described the natural and urban characteristics:

- The Development Inventory identified the policy and historical use constraints which exist.
- The Site Inventory identified existing conditions, recreation use, and established patterns of behaviour which must be considered.
- The Resource Analysis process identified areas requiring environmental protection and areas suitable for development.
- Recreation Activity and Facility Suitability was publicly identified and reviewed for each land management unit.

Through this analysis, the principles of the Preservation Conservation and Extensive Use land management units have been established. These principles direct the appropriate level of development, and the management and operation standards for the river valley park system. Wherever possible, development will be restricted to existing impacted areas.

4.1 LAND MANAGEMENT PLANNING UNITS

The Land Management units describe the future desired state of an area. These are defined as:

1. Extensive Use Areas

These are characterized by parks and facilities bordering major roads and pathways. Human intervention has significantly affected the natural evolutionary pattern of the environment.

- areas of existing major recreation facilities and amenities.
- automobile accessible.
- accessible via the trails system or river transportation.
- provide a broad range of recreation facilities and services.
- management practices will limit further impact on the river valley environment.

In the future development must be compatible with vision and master plan and will be less intensive than previous major park development in the river valley. Facilities would support the following suitable activities: informal ice skating, tobogganing/sledding, picnicking, bicycling, walking and jogging, hot air ballooning, snowshoeing, cross country skiing, model boating, photography, orienteering, rowing/canoeing and kayaking, hang gliding, riverbank and lake fishing, nature study/observation, horseback riding and archery in designated areas.

The following amenities would be viewed as appropriate in an extensive use area: children's playgrounds, washrooms, pedestrian bridges, drinking fountains, telephones, parking areas, fitness courses, amphitheatres, daycamps and paved trails. Further details are found in Section 4.2.

2. Conservation Areas

These are characterized by moderate ecological sensitivity, and high accessibility as a result of adjacent urban development. Some original regrowth forests and wildlife habitats remain intact. These areas contain a variety of trails, however most are currently granular or undeveloped.

- areas of low intensity trail-based recreation facilities ie. interpretive facilities, natural environment programs, informal picnic areas and day camps at the perimeter.
- accessible via trail system or river.
- natural environment areas requiring rehabilitation because of modification through historical/current development and maintenance practices.
- disturbed areas allowed to naturalize (with assistance if required).
- provides a buffer or transition between preservation areas and extensive use or non-recreational use areas

- long term goal to restore areas and create corridors for trail-based recreation activities.
- management practices enable high levels of use limited to trail-based activities with limited impacts on the environment.

In the future facilities would support the following suitable activities: photography, walking and jogging, cross country skiing, nature study/observation, orienteering, snowshoeing, bicycling, rowing/canoeing and kayaking, riverbank and lake fishing, horseback riding and picnicking.

The following amenities would be viewed as appropriate in a conservation area: granular trails, interpretive signs/displays, natural surface trails, viewpoints/decks, and pedestrian bridges, paved trails, washrooms, telephones, drinking fountains and daycamps (at perimeter).

3. Preservation Areas

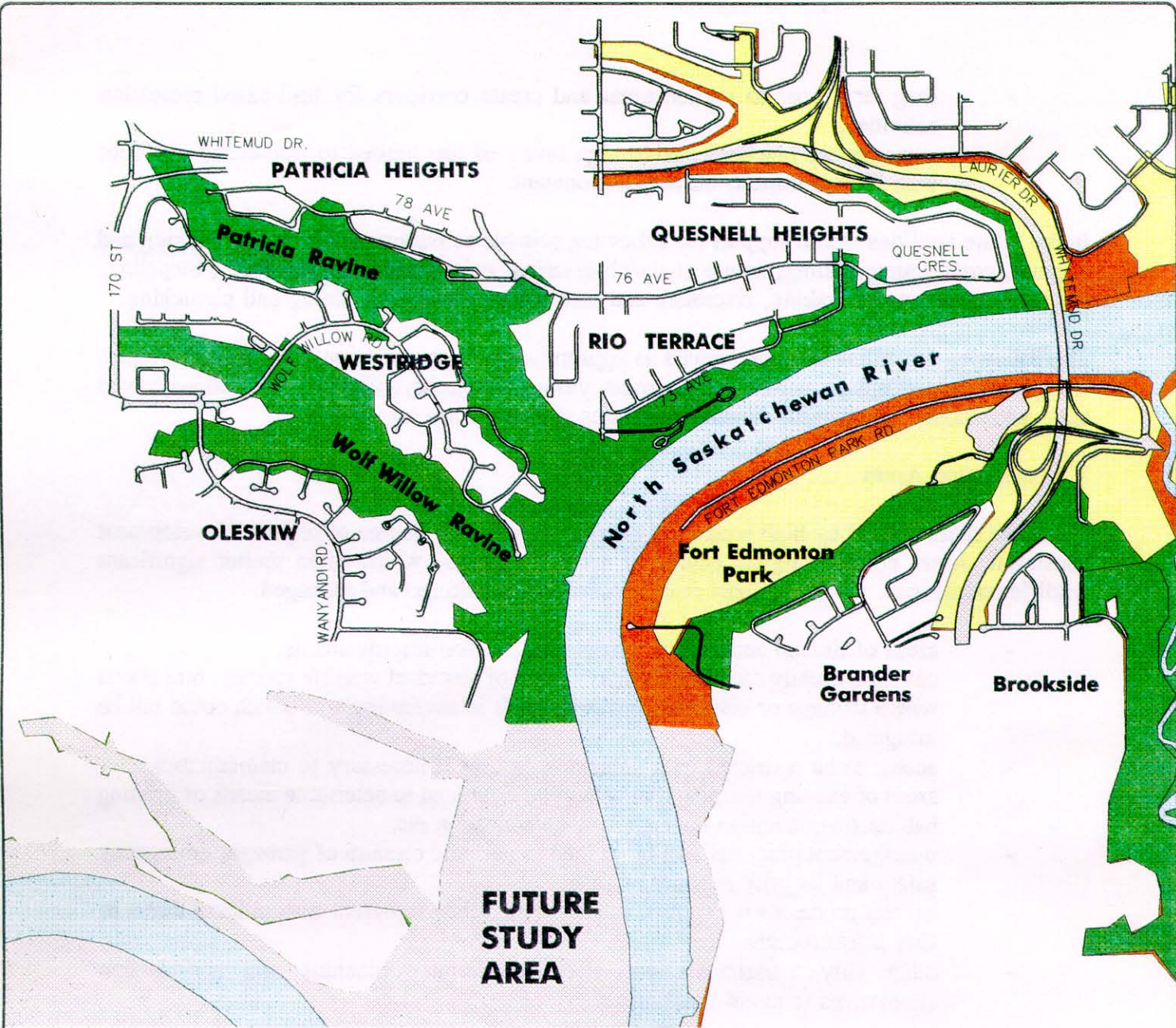
These are characterized by high ecological sensitivity and some degree of physical development constraint. Areas contain original stands of native vegetation which often shelter significant wildlife populations. Visitor impact must be carefully monitored and managed.

- areas of limited access and restricted recreation improvements.
- environmentally sensitive habitats - areas of abundant wildlife species, rare plants where damage or disturbance would result in severe impacts which could not be mitigated.
- access to be restricted with security measures if necessary to maintain area.
- areas of existing use/disturbance will be examined to determine means of limiting habitat fragmentation through signage/education etc.
- management practices will be limited to periodic cleanup of garbage, emergency safety and security services, signage.
- natural processes will not be altered unless they represent a significant threat to City infrastructure.
- other City departments will need to examine planning and construction alternatives to avoid these areas.

In the future facilities would support the following suitable activities: nature study/observation, photography, canoeing, kayaking, walking and jogging.

The following amenities would be viewed as appropriate in a preservation area: natural surface and granular trails, interpretive signs and displays, viewpoints/decks, pedestrian bridges, and washrooms (at perimeter).

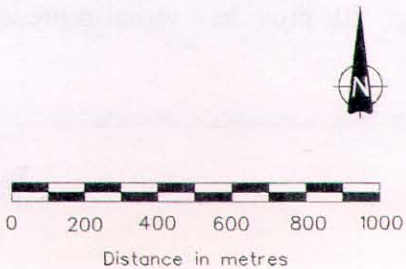
Maps 16 through 20 provide a visual representation of location of the land management units.



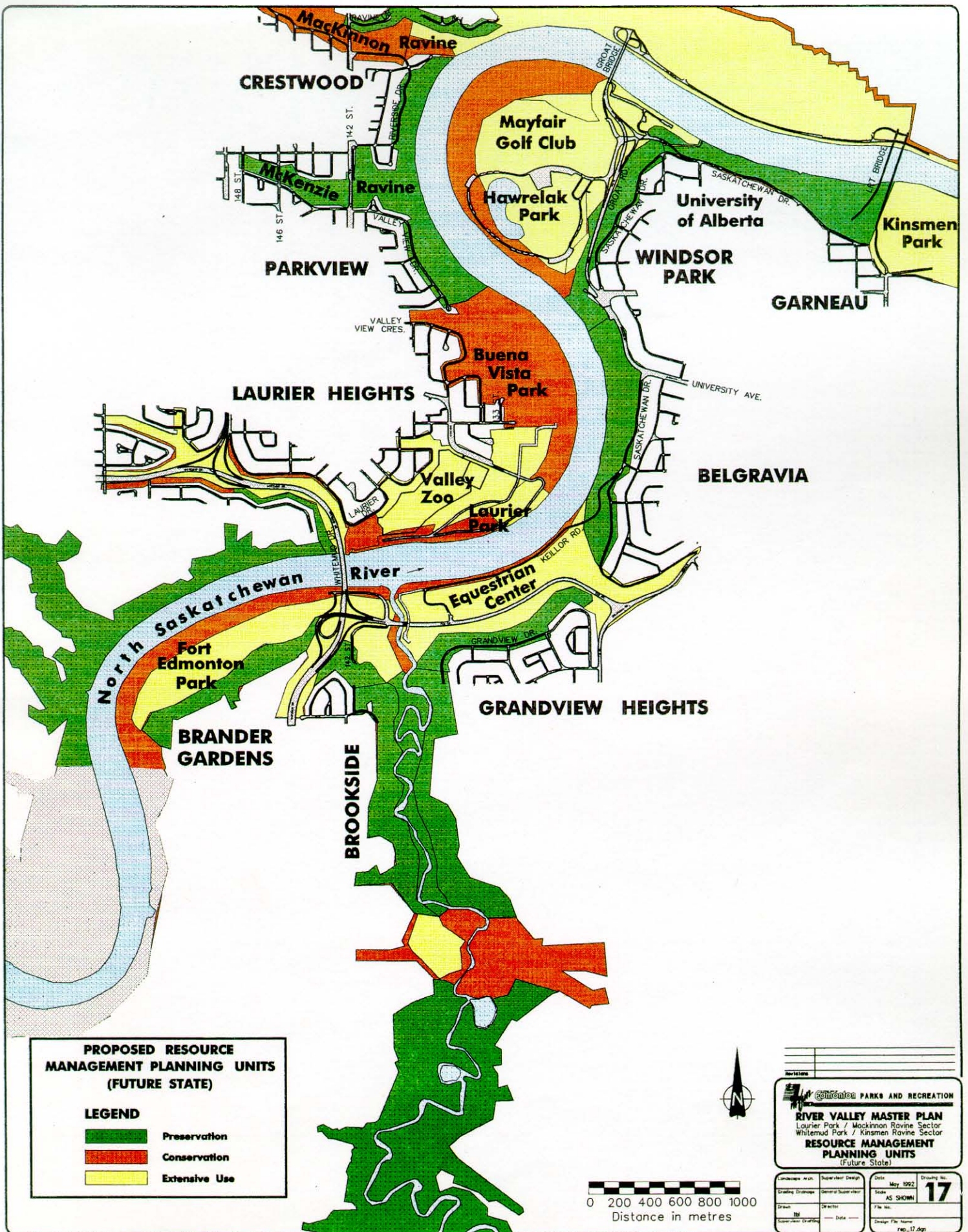
PROPOSED RESOURCE MANAGEMENT PLANNING UNITS (FUTURE STATE)

LEGEND

- Preservation
- Conservation
- Extensive Use



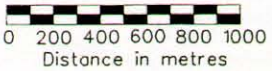
Edmonton PARKS AND RECREATION			
RIVER VALLEY MASTER PLAN			
Wolf Willow / Patricia Ravine Sector			
RESOURCE MANAGEMENT PLANNING UNITS			
(Future State)			
Landscape Arch.	Supervisor Design	Date	Drawing No.
Drawing Date	General Supervisor	Scale	16
Drawn	Checked	File No.	
Supervisor Drawing	Date	Design File Name	rep_16.dgn



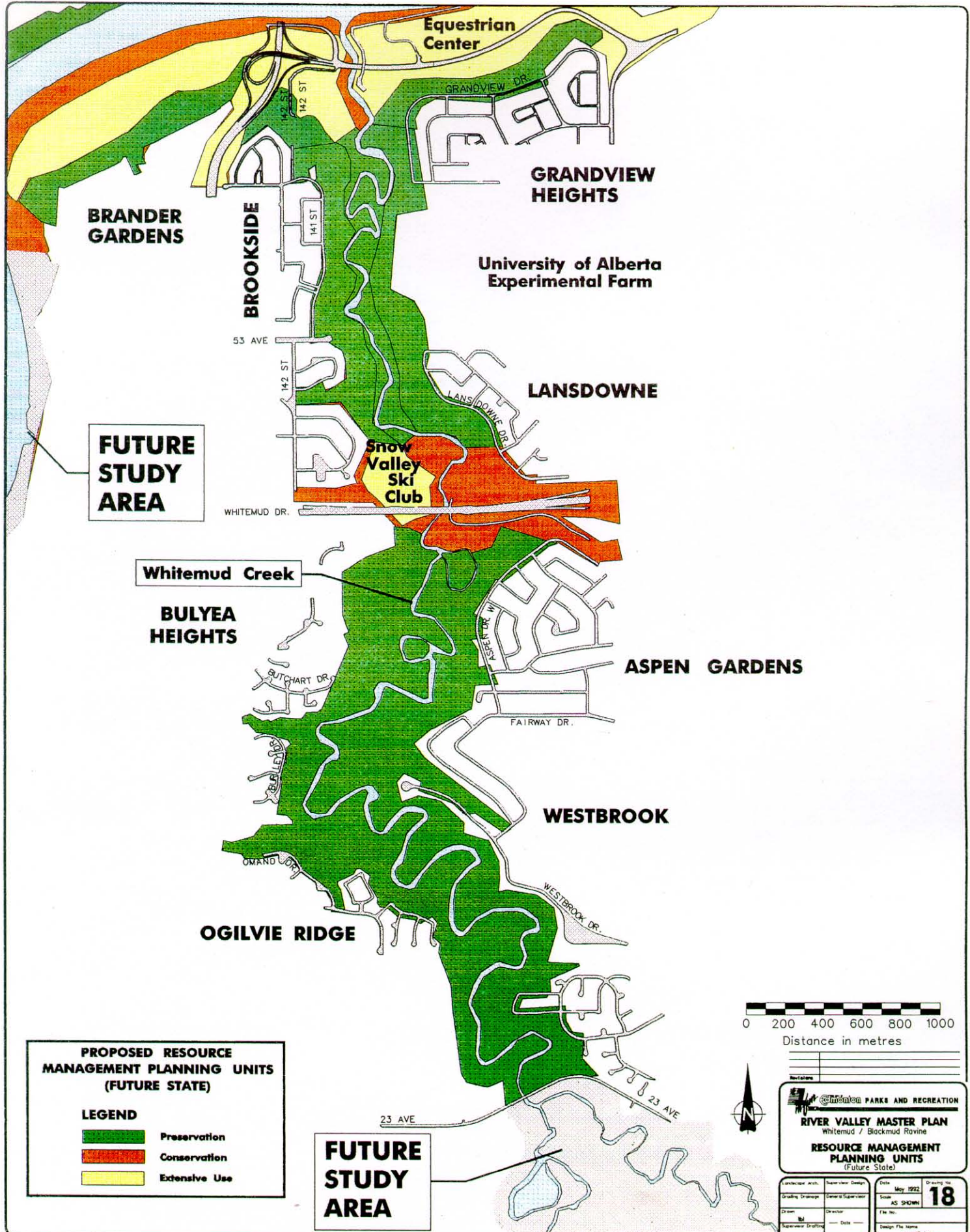
PROPOSED RESOURCE MANAGEMENT PLANNING UNITS (FUTURE STATE)

LEGEND

- Preservation
- Conservation
- Extensive Use



RIVER VALLEY MASTER PLAN Laurier Park / Mackinnon Ravine Sector Whitemud Park / Kinsmen Ravine Sector RESOURCE MANAGEMENT PLANNING UNITS (Future State)			
Landscape Arch. Drawing Date: 02/01/92 Designer: [Signature]	Supervisor Design General Supervisor Director Date:	Date: May 1992 Scale: AS SHOWN File No.:	Drawing No.: 17 Designer File Name: rap_17.dwg



BRANDER GARDENS

Equestrian Center

GRANDVIEW HEIGHTS

University of Alberta Experimental Farm

BROOKSIDE

LANSDOWNE

FUTURE STUDY AREA

Snow Valley Ski Club

Whitemud Creek

BULYEA HEIGHTS

ASPEN GARDENS

WESTBROOK

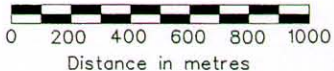
OGILVIE RIDGE

PROPOSED RESOURCE MANAGEMENT PLANNING UNITS (FUTURE STATE)

LEGEND

- Preservation
- Conservation
- Extensive Use

FUTURE STUDY AREA

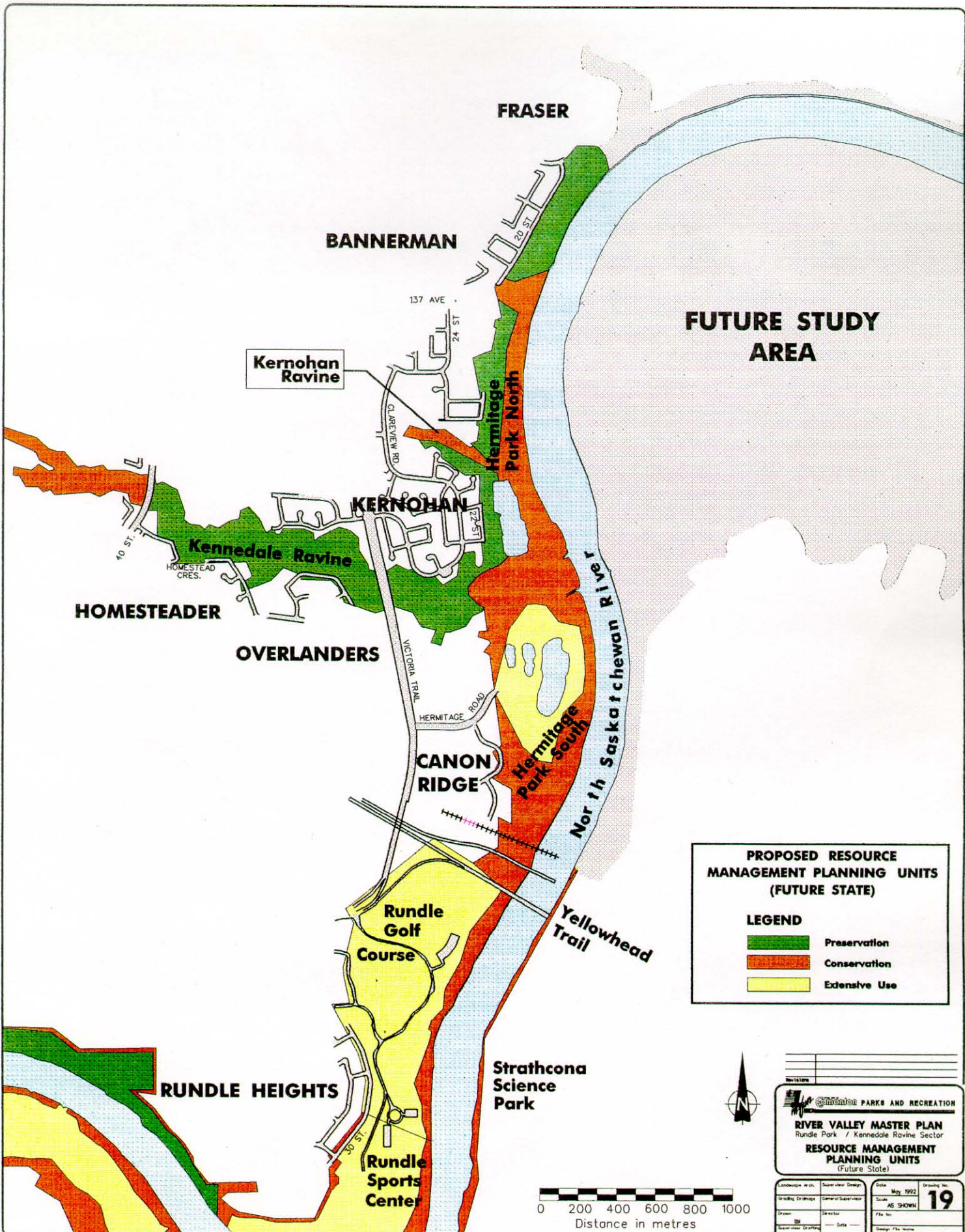


City of Edmonton PARKS AND RECREATION

RIVER VALLEY MASTER PLAN
Whitemud / Blockmud Ravine

RESOURCE MANAGEMENT PLANNING UNITS (Future State)

Author/Designer	Supervisor/Designer	Date	May 1992	Drawing No.	18
Grading/Drainage	General Supervisor	Scale	AS SHOWN		
Drawn	Director	File No.			
Supervisor/Grading	Date	Design File Name	rap_18.dgn		

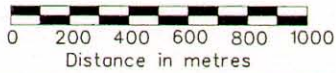


FUTURE STUDY AREA

PROPOSED RESOURCE MANAGEMENT PLANNING UNITS (FUTURE STATE)

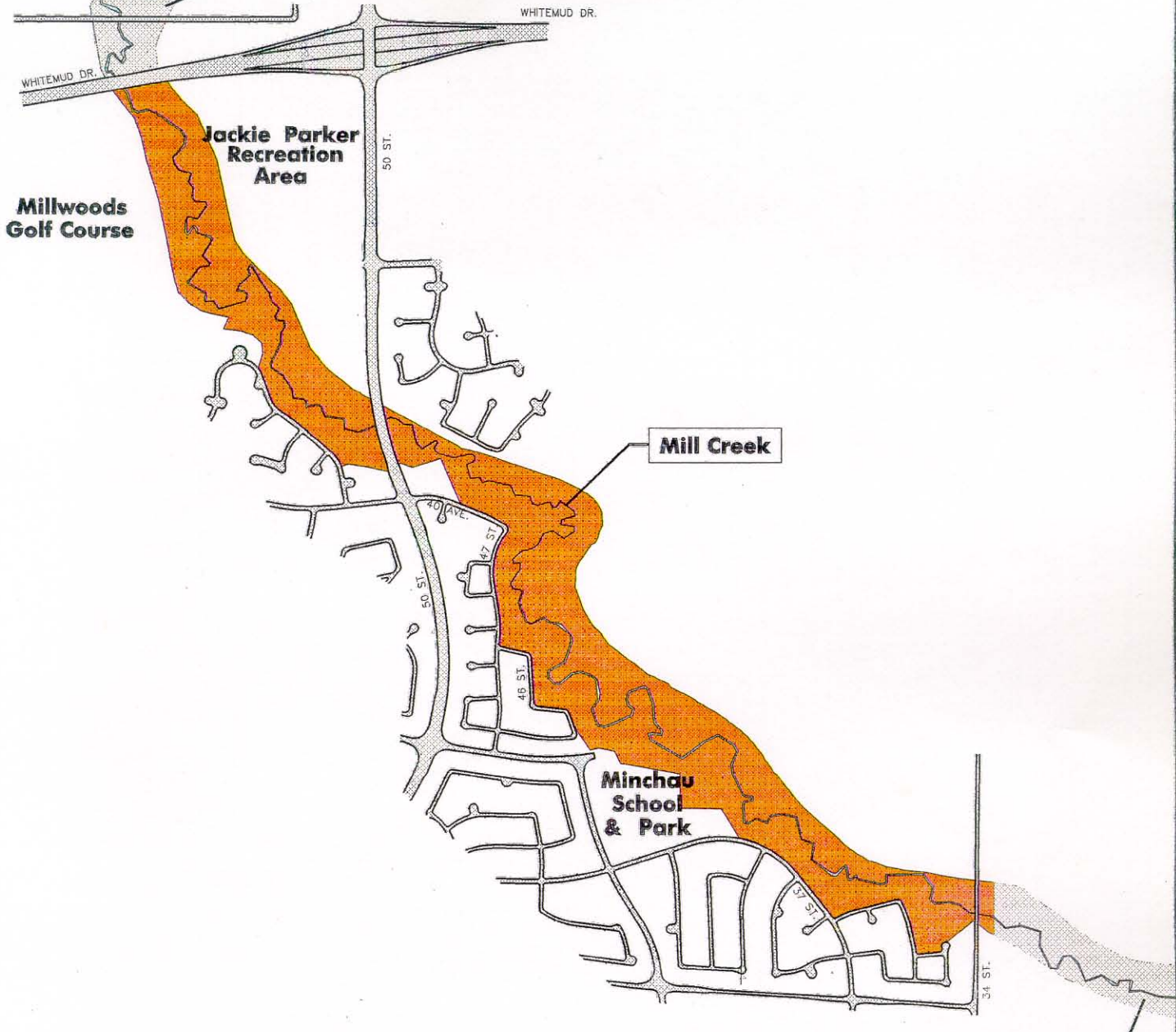
LEGEND

- Preservation
- Conservation
- Extensive Use



RIVER VALLEY MASTER PLAN Rundle Park / Kennedale Ravine Sector RESOURCE MANAGEMENT PLANNING UNITS (Future State)	
Date: May 1992 Scale: AS SHOWN File No: 19	Supervisor: [] Designer: [] Drafter: [] Date: []

FUTURE STUDY AREA

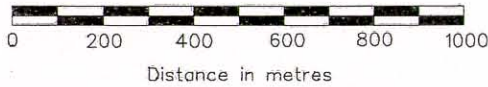


FUTURE STUDY AREA

PROPOSED RESOURCE MANAGEMENT PLANNING UNITS (FUTURE STATE)

LEGEND

- Preservation
- Conservation
- Extensive Use



<p>EMMETT PARKS AND RECREATION</p>			
<p>RIVER VALLEY MASTER PLAN Upper Mill Creek Ravine Sector</p>			
<p>RESOURCE MANAGEMENT PLANNING UNITS (Future State)</p>			
Landscape Area: Drawing Date: Drawn by: Supervisor Drawing:	Supervisor Design: General Supervisor: Director: Date:	Date: May 1992 Scale: AS SHOWN	Drawing No.: 20 Design File Name: rep_20.dgn

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.

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	Not appropriate	Not appropriate	appropriate
- Wooden	Not Appropriate	conditional	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 maintenance 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

4.3 CONSTRUCTION AND PROJECT MANAGEMENT GUIDELINES

Construction procedures require careful planning in the river valley so that impact is minimized. Access routes, size of equipment and material staging areas will be chosen to lessen hazards during construction, limit disruption to the existing environment, and limit the need for reclamation measures. A major criterion in the selection of a contractor(s) will be the appropriateness of the construction methods proposed.

As individual site plans are developed at the detailed design stage, the most feasible and economical construction procedures causing the fewest short term and long term impacts will be used. Options will be evaluated using the following criteria to weigh positive and negative attributes of each method:

1. **Community Impact** - a review of the impact of equipment, vehicles, materials and construction crews, including:

Construction traffic: Noise, dust and mud generated from truck traffic are anticipated to be concerns to adjacent residents. Careful planning at the detailed design and tender stage will reduce the impact to adjacent communities. These impacts will be relatively short term.

Noise/Odour impacts: The major bridges will be built in the winter and noise will travel through the valley. Most trail construction should occur in late summer or early fall to avoid nesting/mating season. Duration of the construction period will be as short as possible. Daylight hours are reduced during winter, therefore the length of construction day is limited. Notices will be advertised to adjacent communities.

Parking: Some construction related traffic can be expected at entrance points to construction sites. Parking will not be permitted, except for construction vehicles at designated valley parking areas. Residents will be notified of proposed access areas.

Mud: Construction vehicles may create some mud on residential and park roads. This will largely depend on construction timing. Proper and timely cleanup of the area will be coordinated with maintenance staff.

Hazard potential: Construction sites can be dangerous if not properly fenced and signed. The contractor will be required to properly sign and secure all construction sites. Notices will be sent to adjacent communities.

- 2. Environmental Impact** - physical impact on the immediate construction area such as rutting of existing trails from construction traffic, or impacts on the river edge from bridge construction. The number of trips into a site with equipment must be minimized.

Vegetation disturbance: Access routes for construction equipment, material stockpile areas, bridge construction and trail surface upgrading will impact the natural vegetation of the area. In the long term, the majority of recreational users will confine their travel to the upgraded trails, resulting in less overall damage or positive impacts. Bridge sites will be rehabilitated using existing compatible soils and native plant materials, such as wild seed mixes and native shrubs. Bridge embankments will be stabilized with rip rap and plant materials. Stockpile sites will be scarified to remove all materials, seeded with wild seed mixes and planted with trees and shrubs. Trail excavation will be done by "lift and place" where removed material will regenerate at the side of the trail.

Wildlife impacts: No major impacts are anticipated as a result of the projects in the Master Plan. Construction will be primarily on existing trails; bridge construction will occur in the winter, mostly within areas of minimal sensitivity. There is potential for damage to subnivian habitat critical for small mammals due to snow compaction during construction. Only a few bridge sites and trail areas will be active at one time, therefore animals will move to other areas of the river valley. Construction areas will be fenced, and contractors will be expected to limit activities to those areas. Materials will be removed from construction areas as soon as work is complete. Timing and location of work will be sequential to avoid trapping ungulates and other winter dwellers between construction sites. Construction will be scheduled and located to avoid conflicting with critical breeding and rearing times of identified species. For example, to avoid impacts to the majority of avian wildlife, trail construction should occur in late summer and fall. Identification of beaver winter food storage sites will be undertaken and these sites avoided during construction. Attempts will be made to minimize the damage to existing beaver dams. Construction access will be limited to existing roads, parking areas, trails or frozen creeks. Upon completion, designated trails and bridges will limit human intrusion into habitat areas off the main trail system.

- 3. Temporary Impacts on Recreational Use** - construction activities may restrict use of some areas of the river valley and quick turnaround time is desirable. Construction sites and storage areas will require additional security fencing.
- 4. Rehabilitation of Access Routes** - Existing trails, creek areas or any embankments which are used as construction access routes will require a rehabilitation plan. The greater the impact of access (particularly in undisturbed areas) the larger the scope of rehabilitation work.
- 5. Vertical Grades/Choices of Construction Equipment** - Grades in excess of 20-25% place restrictions on safe access and should be avoided.

- 6. Construction Efficiency** - Access options and timing/seasonality will directly affect choices of equipment, methods of material delivery and the ability to prefabricate components off-site. An example is the use of helicopters which provide increased efficiency in the delivery of concrete and bridge superstructures. Timely delivery and accurate placement will reduce environmental impact, however, additional costs would be incurred.

Construction methods and equipment will be outlined in the Scope of Work of each contract.

4.4 ENVIRONMENTAL REVIEW MODEL: REQUIREMENTS OF THE RIVER VALLEY BYLAW #7188

Prior to construction of the projects within this plan, an Environmental Review is required under Bylaw #7188, the North Saskatchewan River Valley Area Redevelopment Plan. A major principle of the River Valley ARP is to insure the preservation of the natural character and environment of the North Saskatchewan River Valley and its ravine systems. The objectives which have specific application are:

- i) To control the construction of major facilities within the North Saskatchewan River Valley and its ravine systems;
- ii) To minimize the potential adverse environmental effects of all existing and future public works on the natural environment of the North Saskatchewan River Valley and its ravine systems; and
- iii) To control the design and construction of future public works in a manner which will enhance the natural environment of the North Saskatchewan River Valley and ravine systems.

It is therefore important that the development projects proposed within the Master Plan be carefully planned and implemented according to the objectives and policies in Bylaw #7188. To achieve these objectives, an environmental review is required which will incorporate the following:

- 1) An assessment of the potential impacts of development on the natural and man-made environments;
- 2) A review of construction methods, proposed alternatives and recommended development options;
- 3) Recommended measures, where appropriate and economically feasible, that mitigate or eliminate the potential adverse impact(s) on the environment resulting from this project.

Master Plan Resource Analysis and Land Management Units

The Master Plan bases future development according to the environmental sensitivity and resource constraints of an area; land areas have been screened for their recreation development potential, and identified according to land management units. The existing state of an area and the proposed developments have been described in the plan, which defines the anticipated impact of project construction.

Five types of projects, the potential impacts, and the need for further environmental review prior to construction are described in Figure 15. The Master Plan fulfils the environmental review requirements for projects in categories 1 and 2. Projects in categories 3, 4 and 5 will require a further environmental review prior to construction.

ENVIRONMENTAL REVIEW MODEL

Figure 15

TYPE OF PROJECT	PURPOSE	TYPE OF FACILITY	LEVEL OF IMPACT/REVIEW
Type #1 Upgrade of existing surface or facility which is currently in use	Purpose: to replace or improve amenities & surface materials to accommodate existing use, assist in maintenance, and reduce use impacts.	<ul style="list-style-type: none"> - granular trails - landscaping - boardwalks - signage - minor amenity replacement 	<ul style="list-style-type: none"> -minor construction impact -no change of existing use -environmental review completed
Type #2 New surface improvements which may or may not require grading	Purpose: to establish new facilities to accommodate existing public use of the river valley as approved through the master plan	<ul style="list-style-type: none"> - granular trails - paving existing heavily used trails - landscaping - boardwalks - signage - gravel parking 	<ul style="list-style-type: none"> -minor construction impact -minor change of existing use -environment review completed
Type #3 Projects requiring minor utilities/ foundations and resulting in major surface improvements	Purpose: to provide new facilities for trail continuity as approved through the master plan	<ul style="list-style-type: none"> - new paved trails - stairs/retaining walls - minor creek crossings (prefab bridges) - gravel roads/parking - minor buildings - telephones 	<ul style="list-style-type: none"> -moderate construction impact -some change of use -further environmental review/full EIA required
Type #4 Projects requiring major utilities, building and structural improvement	Purpose: minor facilities which provide comfort and security for public use of the river valley	<ul style="list-style-type: none"> - washrooms - shelters - drinking water - water/sewer lines 	<ul style="list-style-type: none"> -moderate construction impact -major change of use -full EIA required
Type #5 Projects requiring excavation, foundations, pipes/piers	Purpose: facilities which provide river crossings and major amenities for comfort and convenient public use of the river valley.	<ul style="list-style-type: none"> - Paved roads - paved parking - river bridges - major pavilions 	<ul style="list-style-type: none"> -major construction impact -major change of use -full EIA required

This matrix has been designed to be as comprehensive as possible. However if a project does not fit into any category a further environmental review of these other projects may be required.

Most trails projects are improvements to existing trails, and would therefore not result in substantial construction or use impacts. The Construction and Project Management Guidelines in Section 4.3 of the Master Plan outline the need to carefully consider environmental and community impacts in planning for construction. Other projects which involve more structural improvements, particularly the pedestrian bridges, will require further detailed design, or Provincial/Federal Approval would require a detailed Environmental Impact Assessment. This has been considered in the proposed timing for the bridge projects.

The short term impacts are anticipated disturbances to communities adjacent to the river valley, and to park users. Construction activities will create some noise, traffic and will limit public use and access to various trail areas to insure public safety and ease of construction activity. There will also be short term and long term impacts to the existing environment and biophysical characteristics present in the area of construction. Construction of bridges and trails will result in some short term and long term impacts to the natural environment. There will, however, be many long term benefits resulting from development of the Master Plan. The short term impacts are acceptable, given the implementation of identified mitigation measures.

SUMMARY STATEMENT

The upgraded trails, amenities and bridge crossings will increase the recreational use of the river valley by making it more accessible to the general user. More trail users will bring with them the possibility of increased adverse impacts on the environment.

The development of trails can also reduce negative impacts in a number of ways. Designated trails, improved amenity facilities, and river and creek crossings direct users. This will reduce the ongoing impact of users who are uncertain of their route. Designated trails make the policing and maintenance of the river valley and ravine system far easier. The existence of trails and recreation facilities, especially well used ones, tends to codify the recreational uses of the area. This will confirm in the public's mind that the river valley is a place for environmental appreciation and recreational pursuits.

The resource analysis completed through the Master Plan has fulfilled the environmental review requirements of the North Saskatchewan River Valley Bylaw #7188 for the projects in Category 1 and 2. Projects in Category 3, 4 and 5 will require a further environmental review.

4.5 RESOURCE MANAGEMENT AND OPERATIONS GUIDELINES

Five management functions were identified as essential to effectively integrate resource protection, recreational use, and ongoing parks operations within the three land management units. They are as follows:

- A. Park Development Guidelines and Standards Ensure development is compatible with the preservation and conservation goals of the river valley and is accomplished in a way that minimizes environmental impact (refer to Section 4.2).
- B. Maintenance Policies and Practises Provide levels of service compatible with the goals of preservation, conservation, safety and cost. Forest management principles will be implemented where possible to improve the quality of river valley forests for its principal uses: wildlife habitat, forest recreation, and environmental education.
- C. Safety and Security The public, volunteer organizations, Parks and Recreation, Police and Fire Departments and Ambulance Authority must work together to ensure the safety and security of all river valley users.
- D. Recreation, Education, Interpretive and Visitor Services Develop awareness and responsibility for river valley historical, archaeological, cultural, wildlife and vegetative resources.
- E. Administration Operationalize the Master Plan and complete a Resource Management Plan to achieve a holistic approach to management of the River Valley System (refer to Section 6.4).

Listed below is a general description of how management and operations (Items B, C and D) differ within the three land management areas.

1. EXTENSIVE USE (major parks and facilities)

Maintenance

- regular maintenance at defined service levels
- tree removal (where hazardous), planting, restoration and protection from wildlife
- grass cutting
- garbage removal
- pest control
- parks service centre

Safety and Security

- safety/security services available
- police patrolled
- telephones (regular service and blufones)
- emergency vehicle access

Recreation, Education, Interpretive and Visitor Services

- administrative offices, program and facility bookings
- on site information service for distribution of resource information and promotional program publication
- staff present orientation programs, demonstrations, including guided and self guided approaches
- drop-in and pre-registered courses
- workshops and lectures in interpretive techniques
- full directional and safety signage

2. CONSERVATION

Maintenance

- limited maintenance (minor tree and grass cutting)
- some wildlife control, e.g. relocation of beaver
- trail edge maintenance, removal of hazardous debris
- some forest management, restoration and replacement of vegetation where necessary
- limited signage
- garbage removal

Safety and Security

- limited safety/security services
- blufones and limited vehicle access at perimeter

Recreation, Education, Interpretive and Visitor Opportunities

- pedestrian and bicycle access, trail based activities
- limited signage

3. PRESERVATION

Maintenance

- no routine maintenance, (no tree or grass cutting)
- no wildlife control
- no trail maintenance
- seasonal garbage cleanup
- forest management limited to restoration

Safety and Security

- limited safety/security services (only in emergencies)
- blufones should be located at perimeter or at interface with Conservation or Extensive Use zones.

Recreation, Education, Interpretive and Visitor Services

- limited human intrusion
- activities may include wildlife studies, orienteering, photography, sightseeing, walking/hiking.

CHAPTER 5 - PLAN OBJECTIVES AND PROPOSALS

The Concept Plan established preliminary objectives and program statements which have been expanded in the Master Plan.

5.1 GENERAL PLANNING OBJECTIVES

With the exception of identified park nodes, restrict development to maximum of an integrated trail system, which would make the river valley accessible to the public yet protect the natural landscape and wildlife habitat areas.

1. Establish a stewardship of protection by balancing conservation of open space and recreation development, with the first priority on conservation and the second priority on low intensity, passive outdoor, and trail-based recreation activity.
2. Establish a natural park environment through the retention or enhancement of vegetation and wildlife habitat.
3. Match the type of trail and location of amenities to the biological and physical sensitivity of the river valley.
4. Extend the linear park system through a series of paths, trails and open space and basic amenity services.
 - the major emphasis on continuous trail development.
 - trails not necessarily on both sides of river.
 - trails interconnected by pedestrian bridges.
 - emphasis on river valley use by the whole city.
 - provision of connections to bike route systems.
 - enhance the variety of experiences by providing some alternative trail routes.
 - establish continuous routes for pedestrians, cyclists and dog walking.
 - provide washrooms, drinking water and telephones.
5. Severely restrict the development of new recreation and tourism facilities in the river valley while ensuring that existing destinations or attractions are linked to the trail network.
6. Provide accessibility regardless of age or mobility, when this can be accomplished without major alterations to site or without altering the intent of the experience. Design standards will accommodate the widest cross-section of age and skill levels.
7. To insure user safety is promoted through a combination of trail and facility design standards, safety education and awareness programs and enforcement measures.

The following sections address proposals for the Priority 1 areas.

5.2 SOUTHWEST EXTENSION PLANNING OBJECTIVES AND PROPOSALS

To link existing City-wide facilities and parks through complimentary multi-use and pedestrian trail systems using existing trail alignments extending from Kinsmen Park to a river crossing bridge at west end of Fort Edmonton Park.

KINSMEN PARK, EMILY MURPHY PARK, HAWRELAK PARK

To rationalize the existing network of trails to provide opportunities for access while reducing potential for conflict and limiting impact on biologically and physically sensitive areas.

- Develop a multi-purpose trail linkage from Kinsmen Sports Centre and Dudley Menzies Bridge area to the University and Groat Bridge along the top-of-bank.
- Direct bicycle traffic away from the flood-prone river bank area between Kinsmen Park and Emily Murphy Park.
- Redesign the river edge area of Emily Murphy Park to eliminate conflicts between trail users and picnickers, and simplify route access.
- Upgrade trails on perimeter of Hawrelak Park to provide alternative routes around the Park.

HAWRELAK PARK TO WHITEMUD CREEK

- Provide continuous access to the paved multi-purpose trail by developing a pedestrian bridge connecting Hawrelak Park to Buena Vista Park.
- Direct users to a multi-purpose top-of-bank route to minimize impact on the sensitive river bank area between Hawrelak Park and Keillor Road.
- Convert Keillor Road to a paved multi purpose trail.
- Develop a bridge over Whitemud Creek to provide continuous trail access.
- Honour existing commitments to provide equine trails, while assessing long term needs.
- Identify a location for a potential future bridge between Hawrelak/Mayfair area and MacKinnon Ravine and evaluate need regularly in future.
- Review the appropriateness of Class 2 designation trails in the Hawrelak Park area.

MOUTH OF WHITEMUD CREEK TO FORT EDMONTON PARK

To integrate the Whitemud Creek trail with the main river valley trail and provide appropriate amenities.

- Redesign Whitemud Park to reflect the closure of Keillor Road, reduce fragmentation, improve function and aesthetics and connect to Whitemud Creek Nature Reserve trails.
- Provide basic amenities to serve river valley and Whitemud Ravine trail users.
- Retain existing John Janzen Nature Centre river bank trail.
- Provide continuous access to the paved multi-purpose trail (which may connect the Fort Edmonton Park area to Wolf Willow Ravine via a future pedestrian bridge).
- Align trails to connect to Quesnell Bridge in the short term.
- Identify a location for a potential future bridge from Laurier Park to mouth of Whitemud Creek and evaluate need regularly in future.

WHITEMUD CREEK (completion of Phase I, Priority 2)

To protect a sensitive wildlife habitat and movement corridor by controlling public access.

- develop a pedestrian-only granular trail and neighbourhood access trails following existing alignments wherever possible with small scale bridges as required for trail continuity.

Proposals for the Southwest Extension are shown on Maps 21, 22 and 23.

5.2.1 Recreation Activities and Amenity Proposals

A broad range of recreation opportunities and activities are provided in this section of the river valley. Most activities are focused around the one-of-a-kind facilities presently existing, and are both extensive and intensive. Therefore, it is recommended that no new activities be introduced and that development be confined to rationalizing existing problems (such as reorganization of picnic areas) and upgrading trail linkages. Trail-based activities will increase including biking, walking, jogging, cross-country skiing, nature observation and photography.

Because of existing development in the area, amenities are already available at reasonable intervals at Fort Edmonton Park, the John Janzen Nature Centre, Hawrelak Park, Emily Murphy Park and Kinsmen Park. An amenity area at Whitemud Park is proposed with washrooms, bluphones and drinking water which would serve users of the main trail system and users of the Whitemud Creek trail system.

5.2.2 Trail and Access Proposals

Parallel and complementary trail systems are proposed throughout most of the area. Most of the proposed trails will follow existing trail alignments, to minimize impact on vegetation.

Granular trails are proposed along the river edge and bank from the west end of Fort Edmonton Park, along the bank below Keillor Road, continuing north along the riverbank and around the perimeter of Hawrelak Park. These trails will follow existing alignments. Some of these trails are candidates for Class 2 multi-purpose use. The trail will be realigned through Emily Murphy Park, along the river edge through the University Forest Reserve and will link into Kinsmen Park along the river edge where it will connect to existing CCRP trails. A connection to the granular trail proposed for Whitemud Ravine will be made at the mouth of Whitemud Creek. The existing equine use of the trail from the Whitemud Equine Centre to Groat Bridge can be preserved, either for the short or long term.

A multi-purpose trail is proposed along the river edge from the west end of Fort Edmonton Park, using a portion of the park service road and crossing a new bridge at the mouth of Whitemud Creek. The trail will follow along the Keillor Road alignment to Saskatchewan Drive at 76 Avenue. The multi-purpose trail will continue as an on-street route along the edge of Saskatchewan Drive to University Avenue where it will connect to the existing Class 3 bicycle route to the University. Bicycle use will be excluded from the river bank area between Keillor Road and the south edge of Hawrelak Park. A paved multi-purpose trail will be developed around the perimeter of Hawrelak Park/ Mayfair Golf Club and along Emily Murphy Park Road with improved connections to the Groat Bridge sidewalk. The on-street route will follow an existing Class 3 bike route along Emily Murphy Park Road and Saskatchewan Drive at the northern edge of the University campus. A paved multi-purpose trail will be developed to

upgrade the connection from 111 Street down the river bank to the Kinsmen Sport Centre and to the Dudley Menzies LRT Bridge, and into the existing CCRP multi-purpose trails at the Walterdale Bridge. These trails will provide a combination of river valley and top-of-bank views, will avoid the most sensitive river bank areas in this section of the river valley and will provide opportunity for improved bicycle access to the University and Downtown from the west and southwest.

Five potential pedestrian bridge locations have been identified for this section of the river valley, only two are proposed for short term construction. The first proposed for construction would link the south end of Hawrelak Park (near the amphitheatre) and the north end of Buena Vista Park, and is necessary because of steep, unstable and environmentally sensitive slopes between Buena Vista Park and MacKinnon Ravine, and between Hawrelak and Whitemud Parks. The second proposed for construction is at the west end of Fort Edmonton Park, and is necessary because the route south toward Terwillegar Park is blocked by an area of residential development which extends to the river edge. This bridge will provide access for west end residents.

A future bridge may connect the Whitemud Park area with Laurier Park, because the route on the north bank of the river is blocked west of the Quesnell Bridge. This location has been identified as a potential pedestrian and streetcar bridge which would link the Fort Edmonton Park streetcar system to the Valley Zoo. Further study of the cost/benefit of this bridge is required. It is proposed to be delayed +10 years. In the short term trails will connect to the Quesnell Bridge. Another future pedestrian bridge is proposed between MacKinnon Ravine and the Mayfair Golf Club and is desirable to protect sensitive vegetation and habitat south of MacKinnon Ravine, but may prove to be unnecessary due to improvements to the Groat Bridge to accommodate pedestrians and bicycles and depending on the effectiveness of operational measures to limit access to this area.

A possible future location for a pedestrian bridge has been identified from the Equine Centre area to Buena Vista Park, depending on how and when the University Farm develops.

5.2.3 Automobile Access

Automobile access to the parks and facilities in this section of the river valley is good and no additions are proposed. Reorganization of the Whitemud Park and Equine Centre access is proposed to relocate all automobile access to the Fox Drive entrance.

5.3 NORTHWEST EXTENSION PLANNING OBJECTIVES

GOVERNMENT HILL PARK

To transform a disturbed area of low biological sensitivity at a major intersection of valley trails to an intensive use area providing amenities and facilities to support the main river valley trail system, including a staging area and picnicking.

- Redesign the park area to accommodate improved parking, amenity shelter, picnicking, viewpoint areas and re-landscaping.

MACKINNON RAVINE

To transform a heavily used and highly disturbed area to a major multi-purpose river valley access route with landscaping which creates a more natural appearance.

Redesign park to:

- Provide additional landscaping consistent with the pre-disturbance natural character.
- Address existing trail use conflicts by introducing a new pedestrian-only trail route.
- Improve neighbourhood access to trails.
- Protect fragile river edge south to McKenzie Ravine by limiting access to pedestrian-only traffic.
- Provide alternative river valley access locations to reduce dependence on MacKinnon trail.
- Identify a location for a potential future bridge between MacKinnon Ravine and to Hawrelak/Mayfair area, and evaluate need regularly in future.

MCKENZIE RAVINE

To rehabilitate a moderately sensitive area disturbed by utility construction and road crossing to a pedestrian oriented nature trail linked to the main river valley trail system.

- Develop a pedestrian-only granular trail following the existing path through the full length of the ravine.
- Restore/landscape low-lying area at mouth of ravine.

- Improve neighbourhood access to ravine trail.
- Direct bicycle traffic away from the ravine and from sensitive river edge lands between MacKinnon Ravine and McKenzie Ravine.

BUENA VISTA PARK

To conserve and rehabilitate a moderately sensitive undeveloped open space by establishing a pedestrian oriented nature park for informal recreational use and picnicking, accessible by the main trail system, with amenities for safety and comfort.

- Enhance a natural meadow for wildlife habitat by enlarging the area and reducing fragmentation.
- Consolidate low intensity recreational activities such as picnicking and children's day camp to the periphery of meadow area in areas with improved access.
- Provide multi-purpose and pedestrian-only trail connections to existing and proposed river valley trail system.
- Review potential for designating Class 2 trails to provide cycling alternative.
- Provide continuous access to main trail by developing a bridge connecting Buena Vista Park and Hawrelak Park.
- Provide washrooms, drinking water and security telephones.
- Allow several clearings in the wooded strip at river edge to naturally regenerate.
- Provide a site for rowing activities.
- Consolidate or relocate existing maintenance yards.
- Improve vehicle access while limiting road development.

LAURIER PARK

Selectively redesign a major activity area to improve the function and quality of existing facilities.

Re-design park to:

- Provide a more aesthetic and functional entrance to Laurier and Buena Vista Parks.

- Improve the quality and distribution of picnic sites and eliminate conflict between trail users and picnickers.
- Re-align access to public boat launch area.
- Identify a location for a potential future bridge between Laurier Park and Whitemud Creek and evaluate need regularly in future.
- Reduce zoo parking area and landscape appropriately.
- Identify a location which will provide an opportunity for a possible future connection between Laurier Park and the Equine Centre area.
- Align trails to connect to Quesnell Bridge in the short term.

PATRICIA RAVINE & WOLF WILLOW RAVINE

Retain an area of high biological sensitivity as a natural area, by limiting and controlling access opportunities, creating a neighbourhood trail loop system and selective restoration of disturbed areas.

- Develop a continuous neighbourhood loop trail system through a combination of unimproved trails, pedestrian-only granular trails, and multi-purpose trails through upper Patricia Ravine and the western edge of Wolf Willow Ravine, following existing paths wherever possible.
- Designate on-street routes to provide bicycle access from neighbourhoods to the main trail system.
- Provide continuous access to the main valley trail system for west end residents by developing a bridge connecting the Wolf Willow Ravine area to Fort Edmonton Park.
- Identify connections to the main trail system via bridge to Fort Edmonton Park and on-street routes to Laurier Park.

Proposals for the Northwest Extension are shown on Maps 21 and 23.

5.3.1 Recreation Activities and Amenity Proposals

The recreation activities proposed in this section are trail-based with two exceptions. 1) Buena Vista Park presents a good opportunity for selected low intensity, primarily unstructured outdoor recreation activities, based on the distinctly different experiences of the large meadow and the wooded river edge. The activities should complement the more intensive activities available at the Valley Zoo and Laurier Park area, but the area should remain separate and distinct. The recommended activities around the meadow would include walking, jogging, cycling, bird and wildlife observation, photography and group picnicking. 2) The characteristics of the river in Buena Vista and Laurier Parks provide good potential for river edge activity, such as boat launching, rowing, and river viewpoints, therefore the rowing club and boat launch location are proposed to remain.

To achieve the objective of retaining the natural character of Buena Vista Park it is proposed that the existing maintenance yard be relocated. Approximately 15-20 picnic sites are proposed in a clearing south of 81 Avenue. The exact number will be determined by the number of sites removed from Laurier Park. The Buena Vista area has traditionally accommodated a children's day camp, which would be retained but relocated to one of the clearings north of the present maintenance yards. The remaining clearings would be allowed to naturalize. An amenity building containing washrooms, drinking water, and security telephones is proposed south of 81 Avenue, and if feasible should be built in combination with the Rowing Club site. The existing washrooms at Laurier Park will serve the west end of this section of the valley. An alternative amenity building and Rowing Club location is at the "Yorath property", if it can be acquired by the City.

5.3.2 Trail and Access Proposals

Patricia/Wolf Willow Ravine Trails

The intent for the neighbourhoods surrounding Patricia and Wolf Willow Ravines is to develop a system of granular and paved trails which will provide a variety of neighbourhood recreational loops and access to the main trail system at Laurier Park and Fort Edmonton Park. In both ravines a granular trail would follow a route just inside the tree line or along a shelf just below the top of the ravine bank.

From the end of Patricia Ravine to the existing stairs the trail is proposed as a granular trail. A granular trail would link from the existing stairs along a shelf below the bank to Country Club Road and continue along the west side of the ravine to Wolf Willow Crescent where it would follow an old top-of-bank trail and lead to the height of land between the ravines. This promontory provides a spectacular viewpoint of the surrounding valley and ravines. Although it is possible to follow Patricia Ravine further toward its mouth, a portion of the ravine is privately owned making the west bank routing preferable. Alternatively, a branch of the trail

could be developed to the river through the Jewish Community Centre site. In Wolf Willow Ravine a similar granular trail would lead along the tree line on the west bank from Wakina Road to Country Club road. No trails are proposed in the lower part of Wolf Willow Ravine since this area is virtually undisturbed. East of Patricia Ravine the trails in the old picnic grounds would be retained as a granular loop. Proposed on street bicycle routes along 76 Avenue would connect to the pedestrian bridge crossing Whitemud Drive, to connect into Laurier Park.

To complement the granular pedestrian-only trails it is proposed to use the existing walks along the Trans-Mountain pipeline as a multi-purpose trail spine through Westridge neighbourhood. Country Club Road would be developed as a multi-purpose trail, in the short term as a combination of paved and granular surface. In the long term the entire link should be paved, providing excellent connections between Patricia Heights, Rio Terrace, Westridge and Oleskiw neighbourhoods. This multi-purpose trails would connect to proposed on street bicycle routes to provide access to the main river valley trail system along 62 Avenue and at the Whitemud Drive overpass. Many combinations of these trails are possible to provide neighbourhood loops of a variety of lengths.

Laurier Park/Buena Vista Park Trails

A paved multi-purpose trail is proposed from the Quesnell Bridge and the Whitemud Drive pedestrian overpass along the perimeter of Laurier Park. It would follow the access road in Buena Vista Park and skirt the tree line east of the Great Meadow. Granular neighbourhood access points are proposed from Valleyview Crescent, 134 Street, 133 Street, and 81 Avenue. The paved trail would connect to the pedestrian bridge linking to Hawrelak Park, where the trail would continue on the south river bank.

Granular trails, which are candidates for Class 2 designation, will follow the existing granular trail alignment through Buena Vista Park at the river edge with a branch at the base of the slope providing a circuit of the Great Meadow. Unimproved neighbourhood access trails are proposed branching from Melton Road and Valleyview Drive. Granular trails are also proposed in the area between the Hawrelak pedestrian bridge and MacKinnon Ravine because the area is steep, unstable and provides high quality wildlife habitat. A granular trail is proposed through the length of McKenzie Ravine following the existing path with improved neighbourhood access created by stairs at 142 Street. A boardwalk section is proposed at the mouth of the ravine. Some restoration will be required in the low-lying area at the mouth of McKenzie Ravine.

McKenzie/MacKinnon Ravine Section

Unimproved trails only are proposed in the steep and unstable area between McKenzie and MacKinnon Ravines. This area should be a pedestrian access only area in perpetuity. Site specific restoration may be required. A variety of measures maybe introduced to minimize access including signing and fencing at both ends.

MacKinnon Ravine and Government House Park

The MacKinnon Ravine trail has proved so popular that measures must be taken to improve the comfort level for users. Very little could be done to change the grades which encourage high speeds so trails are proposed which will provide alternatives for pedestrians. Initially a trail will be marked by mowing from 142 Street to the mouth. If the trail proves effective and popular it may be gravelled and extended in future. Other operational changes, such as contra flow should be examined. Areas will be identified for naturalization and native plantings to recreate the natural character of the ravine. Pedestrian bridges affecting this section were described in 5.2.2.

5.3.3 Landscape Restoration

Landscape restoration will be required in several areas. The Great Meadow in Buena Vista will be defined by maintenance practices to ensure that the meadow is allowed to extend to 81 Avenue on the south. Cleared areas in the river edge forest will be allowed to naturalize, abandoned roads and paths will be scarified so that native plants can colonize and reduce the fragmentation.

The mouth of the McKenzie Ravine will be restored to create the most suitable vegetation for the low and consistently wet conditions. Bog or marsh species may be appropriate, but decisions will be based on further study.

The area between McKenzie and MacKinnon will have traffic significantly reduced. In localized areas the present trail width will be reduced and existing damage corrected.

MacKinnon Ravine will be subject to substantial reduction in mowed areas to allow shrub and trees to colonize. Selected areas will be planted with native species to encourage reforestation and recreate a more natural setting in this heavily disturbed area.

5.3.4 Automobile Access

Access to all of the park areas in this section is proposed to be primarily by foot and bicycle. The existing vehicular access to the Valley Zoo via Buena Vista Road will be retained, and the Valley Zoo parking area will be downsized and landscaped for improved function and appearance. The existing road servicing the Laurier Park picnic grounds will be revised to reduce the number of picnic sites, provide a higher quality picnic area and provide a route for the main trail. Provision for service and emergency vehicle access will be provided using the proposed trail, and the existing service road which would be realigned. A branch of the main access road will provide access to the existing boat launch from Buena Vista Road.

5.4. NORTHEAST EXTENSION PLANNING OBJECTIVES AND PROPOSALS

To transform an area disturbed by resource extraction and utility development into a nature oriented outdoor recreation area which recreates a natural environment with emphasis on opportunity for waterfowl and wildlife observation, trail-based recreation activities and picnicking.

HERMITAGE PARK

Redesign and landscape to:

- Improve the multi-purpose trail connection to Rundle Park.
- Extend multi-purpose trail northward along river edge connecting Kennedale and Kernohan ravines to future river crossing bridge to the proposed Clover Bar Recreation Area.
- Improve quality and distribution of picnic sites.
- Provide additional amenity services in a central location.
- Undertake an extensive program of naturalization and planting of native species to enhance quality of vegetation and wildlife habitat, to reduce visual intrusion of power line structures, and to rehabilitate disturbed utility corridor areas.
- Review potential for designation of Class 2 trails.

KENNEDALE RAVINE

- Develop a pedestrian only granular trail through the ravine, following existing trail and utility alignments, including minor pedestrian bridges or boardwalks where required.
- Develop a top of bank connection to the main river valley trail system in Hermitage Park through a combination of multi-purpose trails and on street routes.
- Restore areas of disturbed landscape in the ravine.

LAKES

- Enhance waterfowl habitat by naturalizing edge planting and careful design of trails adjacent to north lake.
- Naturalize edge treatment of south lakes.
- Relocate/consolidate north maintenance yard.
- Restore landscape at creek mouth.

KERNOHAN RAVINE

- Develop a trail through the ravine linking to the main river valley trail.

Proposals for the Northeast Extension are shown on Map 24.

5.4.1 Recreation Activities and Amenity Proposals

Recreation activities in this area are proposed to be limited to low intensity activities. The trail-based activities will include walking, jogging, cycling, cross country skiing, nature observation and photography. The activities in the park areas are proposed to be limited to picnicking, unstructured play and nature observation. More intensive and organized activities should be directed to nearby Rundle Park.

Some reorganization of the existing Hermitage Park picnic sites will be undertaken to make them more attractive and functional, but no increase in number of sites is proposed.

The washrooms presently available at the maintenance area near the entrance to the park will be retained. An additional amenity area is proposed north of the south Hermitage lakes where the facility could serve users in north Hermitage Park, the picnic areas adjacent to the lakes and users entering from Kennedale Ravine. The specific siting will depend on the restrictions imposed by the utility alignments. In future a small amenity area may be required near the future pedestrian bridge location. It is proposed that the existing maintenance yard in north Hermitage Park be relocated.

5.4.2 Trails and Access Proposals

Two parallel trail systems are proposed in this area. A pedestrian-only granular trail is proposed along the existing granular trail alignment from the Strathcona Science Park bridge and into Hermitage Park. The area under the bridge abutments requires a short length of paved multi-purpose trail because it is too narrow for two separate alignments. The granular trail will follow the existing trail alignment through south Hermitage Park to the area of the Tornado Memorial at the north end of the largest lake. A small bridge is required to cross the lake outlet. The granular trail will continue north through the area of the creek mouth where it will meet the trail from Kennedale Ravine and join the multi-purpose trail. A trail loop is proposed around the south lakes, providing a variety of walks. These trails are candidates for Class 2 designation.

In Kennedale Ravine a continuous granular trail is proposed from 40 Street to Hermitage Park. To the extent possible the trail will follow existing trail and utility alignments to avoid additional disturbance of the Ravine. Approximately seven pedestrian bridges will be needed to link the Kennedale trail. Stairs or steps would be installed along 34 Street, Victoria Trail and Clareview Road to provide neighbourhood access due to the steepness of the banks of the ravine.

In Kernohan Ravine short and long term alternatives are possible. In the short term a granular trail is proposed along the existing trail alignment. In the longer term, this trail could be paved providing multi-purpose access to the future bridge crossing to the Clover Bar area.

A network of paved multi-purpose routes is proposed. Starting from the end of the existing system in Rundle Park the trail would follow along the existing park access road to the golf course parking lot and along the top of bank at the east side of the golf course. Trail routes have been identified around the perimeter of the golf course to provide a multi-purpose trail loop through Rundle Park and provide additional access into the adjacent neighbourhoods. The multi-purpose trail would continue under the bridge spans where the bank is too narrow to make separate paved and granular trails feasible.

The multi-purpose trail would continue through Hermitage Park around the west side of the meadow to the parking lot. A loop will be created around the south lakes, following the existing service vehicle track and the park road. The trail would continue into north Hermitage Park along the service road to Kernohan Ravine. A multi-purpose trail will continue north of Kernohan Ravine to 137 Avenue.

A paved multi-purpose trail is proposed along the top of bank on the south side of Kennedale ravine to provide multi-purpose access into Hermitage Park for a substantial area of Hermitage and Homesteader area. This trail will be developed as a combination of separate and on-street routes.

5.4.3 Automobile Access

Automobile access into Hermitage Park is provided along Hermitage Road. The capacity of the existing parking areas should be reviewed in the longer term.

5.4.4 Landscape Restoration

Because the area has been extensively disturbed through a combination of resource extraction, utility development and natural disasters, landscape restoration will be an integral part of the site development. Areas of Kennedale ravine will require rehabilitation particularly where roads, utility crossings, and storm sewer outfalls occur. The area at the mouth of Kennedale Ravine between the two lake systems also requires landscape rehabilitation. It is proposed that the rehabilitation will use native plant species so that the effect is of speeding up the natural restorative process. In the south end of Hermitage Park it is proposed that maintenance activities be reviewed to allow regeneration of the forest cover. south of the toboggan hill. Maintenance practices along the perimeter of the lakes should reflect an objective of creating a lake edge of reeds, cattails and other native aquatic plants, to enhance the wildlife habitat and create a more natural lake edge.

5.4.5 Long Term Proposals

One future pedestrian bridge location has been identified in the Northeast area. This bridge would connect Hermitage Park to the recreation area which is to be created from the Clover Bar landfill site. This bridge will not be needed until the Clover Bar site has been closed and rehabilitated for recreation use. An alternative which may eliminate the need for this bridge would be to provide pedestrian and bicycle access through the future outer ring road river crossing. Both of these proposals are long term options (+10 years), and should be reviewed when plans for the outer ring road and the Clover Bar Landfill site are completed.

A hiking trail to Fort Saskatchewan is proposed as a long term extension of the proposed trail system. A north bank route is preferred and rights-of-way should be secured through subdivision or easements on an opportunity basis.

5.5 SOUTHEAST EXTENSION PLANNING OBJECTIVES AND PROPOSALS

To retain the natural features of Mill Creek by channelling public use through development of a nature oriented trail system linked to the Jackie Parker Recreation Area and the Millwoods Golf Course, and ultimately to Mill Creek Park.

- Develop a continuous pedestrian only granular trail and minor bridges through the ravine following existing trail alignments wherever possible.
- Provide a continuous bike route along the top of the bank through a combination of hard-surfaced multi-purpose trails and designated on-street bike routes.
- Connect ravine trails to Jackie Parker Recreation Area and Millwoods Golf Course.
- Link adjacent neighbourhoods to the ravine and top of bank trails by providing appropriate creek crossings and access trails or stairs.
- Provide a multi purpose trail to connect to the existing Mill Creek Park by developing a route along Whitemud Drive and 91 Street to Argyll Road.
- Acquire property or access agreements on an opportunity basis along the true alignment of Mill Creek to create a direct connection between the upper and lower sections of Mill Creek.

Proposals for the Southeast Extension are shown on Map 25.

5.5.1 Recreation Activities and Amenity Proposals

Recreation activities in upper Mill Creek Ravine are proposed to be limited to passive, trail-based activities such as walking, jogging, nature observation, photography, and cross country skiing. More intensive activities and amenities would be located more appropriately in Jackie Parker Recreation Area (JPRA) or in other Millwoods parks. The proposal for Jackie Parker Recreation area includes washrooms, drinking water, bluphones and parking which could serve both trail and park users.

5.5.2 Trails and Access Proposals

Trails in Mill Creek are not likely to experience the very high levels of use presently found in other parts of the river valley in the near future. The ravine is narrow and not suitable for a paved trail below the top-of-bank, even if demand becomes high.

A continuous pedestrian only granular trail is proposed through the ravine, following the existing path with one new section required to provide a clear route through the ravine adjacent to Minchau School site. Approximately 14 minor pedestrian bridges will be developed as required by the final alignment. Granular access trails will connect into the adjacent neighbourhoods at the top-of-bank on both sides of the creek using selected existing routes. A top-of-bank road will be developed to serve neighbourhoods on the east side of the creek, with the alignment and neighbourhood access points to be determined at subdivision.

A paved multi-purpose trail is proposed from Whitemud Freeway to 40 Avenue, on the northeast side of the creek near the tree line of the ravine in JPRA. The trail will cross 50 Street at 40 Avenue and link into the Trans Mountain Pipeline r-o-w. A branch of this multi-purpose trail will connect along the golf course access road and parking lot to Greenview neighbourhood. Continuous top-of-bank bicycle routes will be provided through a combination of paved trails and on-street routes using top-of-bank roads. East of 50 Street and 40 Avenue an on-street route would follow 47 and 46 Streets from the pipeline right of way to Minchau School site, where a paved multi-purpose trail will be constructed to 35 Avenue. An on-street route would connect to 34 Street. In the long term a separate continuous trail could be constructed along the top-of-bank setback, if demand is high. Two paved multi-purpose crossings of the ravine are proposed; the first crossing the Trans-Mountain Pipeline right-of-way, the second crossing the ravine along the extension of the alignment of 38 Avenue. The multi-purpose trails would connect to a Class 1 bike route on 50 Street and to a Class 1 bike route on 34 Street.

5.5.3 Automobile Access

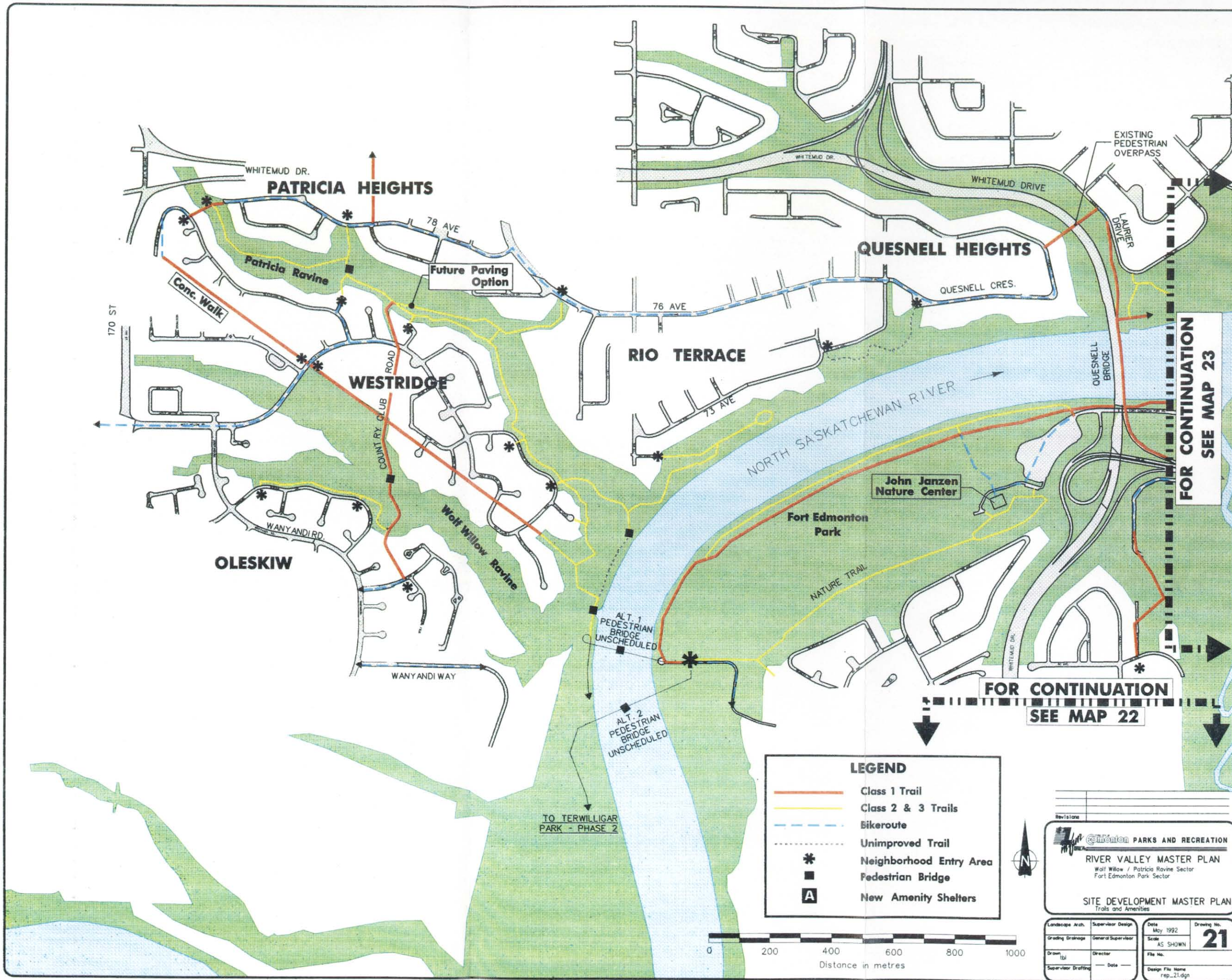
Automobile access and parking will be provided only at Jackie Parker Recreation Area. Some parking is also available at Minchau School which may serve as a small scale staging area for the southern portion of the trail system. A traffic control device is required at 50 Street and 40 Avenue to permit safe crossing.

5.5.4 Ravine Linkage Proposals

It is desirable to provide a direct link between the two ends of Mill Creek Ravine by recreating the disturbed ravine alignment. In the long term a route along the true creek alignment is preferred. This would create a direct connection, but could take a long time to complete because of the need to acquire land through easements, purchase, or subdivision. In the short term the proposal is to improve the linkage by creating a paved multi-purpose trail in the road r-o-w along the south side of Whitemud Drive and then following 91 Street to connect into the existing Mill Creek Park development. This route would improve access to the trail system for a greater number of Millwoods neighbourhoods. In either case connection would improve access for Millwoods residents into the main river valley system and would also provide an opportunity for users of the main river valley to travel south to Millwoods.

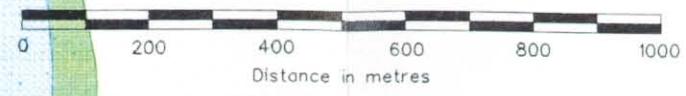
5.5.5 Long Term Proposals

In future granular trails should be extended East of 34 Street through the ravine or alternatively as a top-of-bank route in areas where the ravine is narrow and fragmented. This extension should occur simultaneously with development of The Meadows neighbourhoods. Ultimately the trail should end at Highway 14 where it will link into the proposed Strathcona County Trail System.



LEGEND

- Class 1 Trail
- Class 2 & 3 Trails
- - - Bikeroute
- - - Unimproved Trail
- * Neighborhood Entry Area
- Pedestrian Bridge
- A New Amenity Shelters



Revisions

Edmonton PARKS AND RECREATION

RIVER VALLEY MASTER PLAN
Wolf Willow / Patricia Ravine Sector
Fort Edmonton Park Sector

SITE DEVELOPMENT MASTER PLAN
Trails and Amenities

Landscape Arch.	Super-visor Design	Date	Drawing No.
Grading/Drainage	General Super-visor	May 1992	21
Drawn	Director	Scale	
Super-visor Drafting	Date	AS SHOWN	File No.
Design File Name		rep_21.dgn	

FOR CONTINUATION SEE MAP 23

FOR CONTINUATION
SEE MAP 21

BRANDER
GARDENS

GRANDVIEW
HEIGHTS

University of Alberta
Experimental Farm

Future Trail Extension
Fox Drive to Whitemud Drive
Scheduled for 1992 / 1993 Construction

LANSDOWNE

Pedestrian Bridge
(Unscheduled)







Snow
Valley
Ski
Club

Top of Bank Trails
(Unscheduled)
by Developer

BULYEA
HEIGHTS

ASPEN GARDENS

LEGEND

-  Future Extension Boundary
-  Class 1 Trail (Paved)
-  Class 3 Trail (Granular)
-  Bikeroute
-  Neighborhood Entry Area
-  Pedestrian Bridge

WESTBROOK

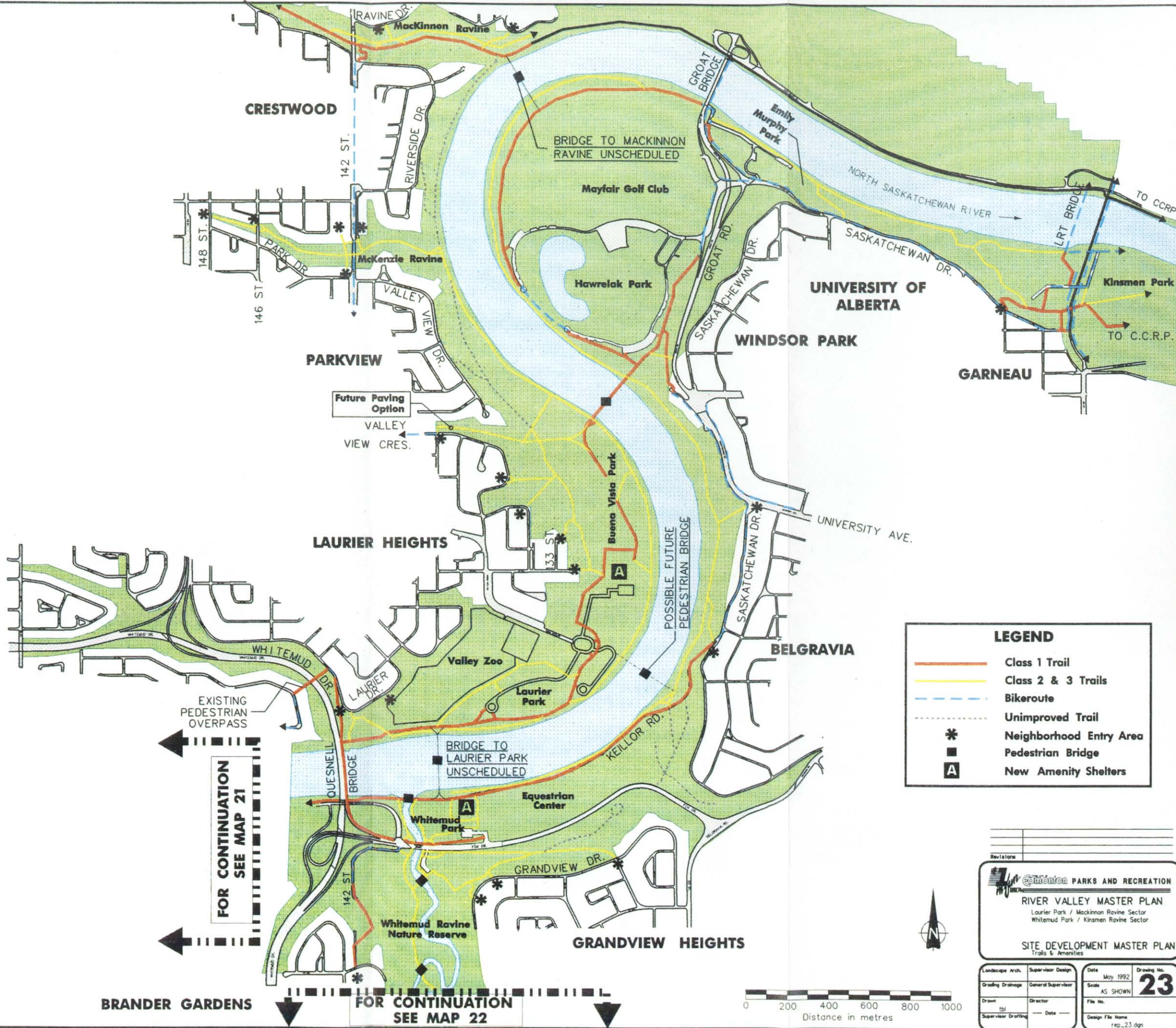
FUTURE EXTENSION - PHASE 2
(from 28 Ave to 111 Street)

OGILVIE RIDGE

TRANS ALTA RW



<p>Revisions</p>			
<p> Edmonton PARKS AND RECREATION</p>			
<p>RIVER VALLEY MASTER PLAN Whitemud / Blackmud Ravine</p>			
<p>SITE DEVELOPMENT MASTER PLAN Trails and Amenities</p>			
Landscape Arch.	Supervisor Design	Date	Drawing No.
Grading Drainage	General Supervisor	Scale	May 1992
Drawn	Director	File No.	22
Superior Drafting	Date	Design File Name	rep_22.dgn



LEGEND

- Class 1 Trail
- Class 2 & 3 Trails
- - - Bikeroute
- - - Unimproved Trail
- * Neighborhood Entry Area
- Pedestrian Bridge
- A New Amenity Shelters

Revisions

Edmonton PARKS AND RECREATION

RIVER VALLEY MASTER PLAN
 Laurier Park / Mackinnon Ravine Sector
 Whitemud Park / Kinsmen Ravine Sector

SITE DEVELOPMENT MASTER PLAN
 Trails & Amenities

Landscape Arch.	Supervisor Design	Date	May 1992	Drawing No.	23
Grading/Drainage	General Supervisor	Scale	AS SHOWN		
Drawn	Director	File No.			
Supervisor Drafting	Date	Design File Name	rep_23.dgn		



BRANDER GARDENS

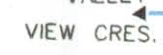
FOR CONTINUATION SEE MAP 22

FOR CONTINUATION SEE MAP 21

EXISTING PEDESTRIAN OVERPASS



Future Paving Option
 VALLEY VIEW CRES.

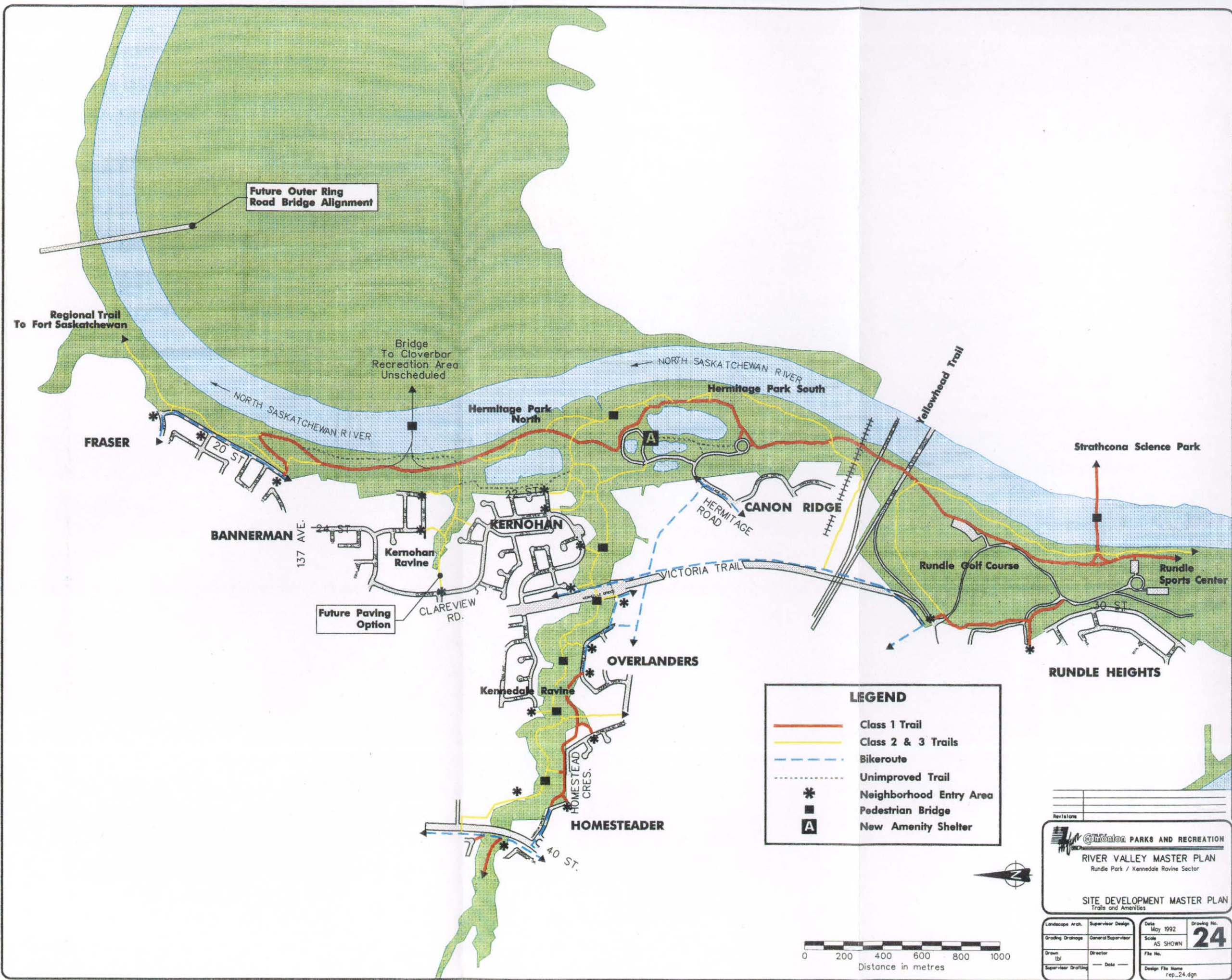


POSSIBLE FUTURE PEDESTRIAN BRIDGE



TO CCRP

TO C.C.R.P.

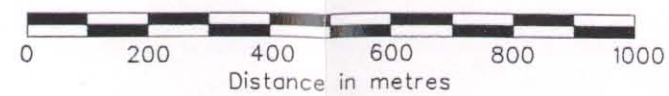


Edmonton PARKS AND RECREATION RIVER VALLEY MASTER PLAN Rundle Park / Kennedale Ravine Sector SITE DEVELOPMENT MASTER PLAN Trails and Amenities			
Landscape Arch. Grading/Drainage Drawn (tbl) Supervisor Drafting	Supervisor Design General Supervisor Director Date	Date May 1992 Scale AS SHOWN File No. Design File Name rep_24.dgn	Drawing No. 24



LEGEND

	Class 1 Trail
	Class 2 & 3 Trails
	Bikeroute
	Unimproved Trail
	Neighborhood Entry Area
	Pedestrian Bridge
	New Amenity Shelters



<p>Revisions</p>			
<p>Cemontion PARKS AND RECREATION</p> <p>RIVER VALLEY MASTER PLAN</p> <p>Upper Mill Creek Ravine Sector</p>			
<p>SITE DEVELOPMENT MASTER PLAN</p> <p>Trails and Amenities</p>			
Landscape Arch.	Supervisor Design	Date	May 1992
Grading Drainage	General Supervisor	Scale	AS SHOWN
Drawn	Director	File No.	25
Supervisor Drafting	Date	Design File Name	rep_25.dgn

CHAPTER 6 - IMPLEMENTATION STRATEGY

Projects included in the Master Plan are recommended for financing over an seven year time frame (1992 through 1998).

Public opinion on priority for development indicates greatest support for developing outward from existing park and trail development so that the system is always continuous, with slightly less support for developing in areas of heaviest use first.

6.1 FINANCING AND COST ESTIMATES

Construction cost estimates for Priority 1 projects are based on site development plan drawings. Priority 1 costs are based on 1992 construction costs and are expressed in 1992 dollars. River bridge costs are based on the 1990 Bridge Cost Study.

Estimates for Priority 2 projects are taken from the Concept Plan and are expressed in 1990 dollars.

The anticipated construction cost (in millions of dollars) for areas within the recommended park boundary is:

Priority 1	\$13.25 M
Priority 2	<u>\$15.87 M</u>
Total Master Plan	\$29.12 M

Priority 3 areas (outside the recommended park boundary) were estimated in the Concept Plan to cost \$23.76 M.

PRIORITY 1 PROJECTS

Financing for Priority 1 projects will be from the remaining UPP Grant (\$14 million 1992-1998 Capital Priorities Plan). This funding could be augmented by other funding as opportunities arise and from community and private sector sponsorships.

Should financing not meet projected annual requirements, projects will be recommended in their rank order of priority to the level of available funding.

6.2 PHASING OF CONSTRUCTION

Phasing of construction to achieve maximum public benefit has considered several factors:

- reasonable financing expectations and consistency of cash flow from year to year.
- sequencing to extend the system for public use prior to all projects being completed.
- work should proceed simultaneously in all sectors of the river valley.

Criteria were established to rank each project in the plan, as shown in Figure 16.

CRITERIA FOR PROJECT PRIORITY SETTING

Figure 16

CRITERIA	Score 1	Score 2	Score 3
Provides improved service level	Provides only local access and use	Provides access to main trail system	Extends main trail
Enhances/aids in rehabilitation of the natural environment	Minor aesthetic enhancement	Major aesthetic enhancement	Essential to meet long term ecological objectives
Addresses management concern	Indirectly educates users or resolves maintenance concerns	Resolves a safety/behavior issue or concern	Resolves multiple management concerns
Implementation requires further detail or input	Major design/EIA/public input or land issues	Minor design/Env. screening/public review required	All approvals in place

PRIORITY 1 PROJECTS

Based on the "Criteria for Project Priority Setting" the project schedule in Figure 17 was developed. Projects are identified in rank order, and have been estimated in thousands of dollars (1992 costs). The locations of projects are identified on Map 26 (Page 86).

In this schedule Priority 1 projects would be completed up to the limit of the Urban Parks Program grant, and potentially within the 1992 - 1998 budget time frame.

MASTER PLAN - PRIORITY 1 PROJECT SCHEDULE
PRELIMINARY COST ESTIMATES in \$K

PROJECT RANK NUMBER AND NAME/LOCATION	1992	1993	1994	1995	1996	1997	1998	TOTAL
#1 Government Hill Park	250							250
#2 Whitemud Ravine Trails	600	440						1,040
#3 McKenzie Rav to MacKinnon	21							21
#4 Rundle Park North	225							225
#5 Buena Vista Park			400	400	455			1,255
#6 Kinsmen Park & U of A	329							329
#7 Buena Vista to Hawrelak Bridge		1800	1425					3,225
#8 Laurier Park			300	440				740
#9 Hawrelak/Mayfair Trails			280					280
#10 North Hermitage & Kernohan Trails/Landscape restoration	298			332				630
#11 MacKinnon Ravine	57	169						226
#12 South Hermitage to Kennedale Trails/Amenities	293			56	400	207		956
#13 Emily Murphy Park	35		39					74
#14 McKenzie Ravine Trails				78				78
#15 Kennedale Ravine					200	212		412
#16 Keillor Road/Equine area			296					296
#17 Belgravia Trail to Hawrelak					91			91
#18 Ft. Edmonton Trails					448			448
#19 Upper Mill Creek	218				155			373
#20 Whitemud Park					300	625	700	1,625
#21 Jackie Parker Trails					200			200
#22 Quesnell access to Laurier	100							100
#23 W Willow Viewpoint & Trails						38		38
#24 W Willow Trail on Wakina Dr						75		75
#25 Country Club Road						189		44
#26 Patricia Ravine Trail						44		189
#27 Rio Terrace Park Area						31		31
TOTAL PRIORITY I AREAS	2,426	2,409	2,740	1,306	2,249	1,421	700	13,251

PRIORITY 2 PROJECTS

Priority 2 projects are delayed until additional funding is made available.

PROJECT RANK NUMBER AND NAME	TOTAL
#28 Ft Edmonton - Wolf Willow Bridge	3,225
#29 Whitemud Ravine Trails Phase II - 28 Ave to Bearspaw	600
#30 Wolf Willow to 23 Avenue Trails	455
#31 Terwillegar to EGCC Bridge	3,300
#32 Terwillegar Servicing and Major Amenities	3,600
#33 Terwillegar minor amenities	195
#34 Terwillegar Restoration	2,500
#35 Terwillegar to Wedgewood Bridge	2,000
TOTAL PRIORITY 2	15,875

6.3 LAND ACQUISITION AND EASEMENTS

The land ownership and recommended acquisition strategy for projects in the Priority I development area are outlined in Section 2.1.2. Lands in private ownership are shown on Maps 2 through 6:

SOUTHEAST AREA: Between Whitemud Freeway and 34 Street all required lands are in municipal ownership, except a small section of trail below top-of-bank in south Kiniski Gardens (Creek's Crossing). Subdivision is proceeding in this area, and land for the trail is expected to be in City ownership prior to construction. Lands along Mill creek between Whitemud Drive and Argyll Road are owned privately.

Action: Opportunity acquisition of lands along Mill Creek north of Whitemud Drive and acquisition through subdivision of lands east of 34 Street.

NORTHEAST AREA: One parcel is owned by the Provincial government, a second is owned by Trans-Alta Power.

Action: Acquire the Provincially owned property. The Trans-Alta property provides a right of way for power lines and does not affect any development proposals, although crossing permits will be required.

SOUTHWEST AREA: Two areas are affected, the University Forestry Reserve area between Kinsmen Park and Emily Murphy Park, and the University of Alberta lands in Whitemud Creek.

Action: Negotiate an easement agreement with the University of Alberta for trail development along the river edge portion of the forestry reserve, and in Whitemud Creek.

NORTHWEST AREA: Two areas are affected, Buena Vista Park and Patricia Ravine.

Two private properties are located in Buena Vista Park; The "Yorath property" is developed with a single family dwelling, the "Prodor lot" is undeveloped.

Action: An easement exists, for the existing trail through the "Yorath property". Acquisition is not essential for development but the property should be acquired to consolidate lands. The "Prodor lot" is being acquired for consolidation with Buena Vista Park through the usual opportunity purchase program for consolidation of river valley property.

Private property extending below the top of bank is common along the east side of Patricia Ravine, including residential properties and the Jewish Community Centre. Trail alignments are not affected by residential development, but any trail alignment through the mouth of the creek would be affected by the Centre.

Action: Negotiate an easement or other arrangement for access through the Jewish Community Centre lands. Trail alignments in Wolf Willow are not affected by private ownership.

6.4 MANAGEMENT AND OPERATIONS

The programming and maintenance of the Urban Park and the existing river valley and ravine system will be managed by the recently created River Valley Parks unit of the Operations Branch of Edmonton Parks and Recreation. Delivery of services in the river valley has been consolidated to ensure the river valley is managed holistically and consistently throughout the city.

Operating funding for the Urban Park extension of the river valley park system is available from a companion Operating and Maintenance Grant, funded by the Alberta Heritage Savings Trust fund. Eligible operating costs include those incurred on a regular basis, such as major maintenance and programming expenditures.

Funding eligibility is based on 3% of planning and design, and construction grant funds expended, and has been projected in Figure 18 (thousands of dollars). Funding will be determined by the Province for five year periods, commencing when the City applies. A detailed estimate and strategy will be prepared in early 1993 to determine how best to access the Operating and Maintenance funding.

Figure 18

ESTIMATED OPERATING GRANT ELIGIBILITY IN \$K

	1993	1994	1995	1996	1997	1998	1999
PLANNING & DESIGN	31.9	31.9	31.9	31.9	31.9	31.9	31.9
CONSTRUCTION	72.7	145	227.2	266.4	333.9	376.5	397.5
TOTAL ELIGIBILITY	104.60	176.90	259.10	298.30	365.80	408.40	+450.00

URBAN PARKS GRANT PROGRAM PROCESS

CONCEPT PLAN -- *sets general direction*

- .. established publicly supported vision for valley
- .. established an area of study
- .. established framework for Master Plan
- .. has public input and support.

COUNCIL APPROVAL

PROVINCIAL APPROVAL

MASTER PLAN -- *builds on the concept plan*

- .. sets out long-term policy guidelines (development, use and care)
- .. provides data base on which decisions are made
- .. becomes a tool for ensuring consistent approach
- .. identifies the park boundary
- .. includes estimate of capital and operating costs
- .. has public input and support.

COUNCIL APPROVAL

PROVINCIAL APPROVAL

SITE PLANS -- *detailed plan*

- .. outlines how specific area will be developed
- .. includes tender specifications
- .. has public input and support.

COUNCIL APPROVAL

PROVINCIAL APPROVAL

CONSTRUCTION

OPERATING GRANT -- *assistance with operation of the Urban Park*

- .. application submitted annually

CRITERIA FOR PRIORIZATION FOR STUDY AREAS

The following criteria derived from Department and Corporate prioritization systems was recommended. They are presented in order of importance. However, it was intended that they be viewed holistically so that projects which best address the group of criteria would be selected over those which address only one.

1. Priority should be given to extending the system logically, tying into existing trail systems, city-wide facilities and adjacent neighbourhoods along the route.
2. Priority should be given to areas of population not presently served by formal river valley and ravine trails and facilities.
3. Priority should be given to portions of the overall plan which show cost-sharing benefits through other City projects or through alternative sources of financing (community, private sector, grants, etc.).
4. Priority should be given to projects in areas where land is in City ownership.

WEIGHTING FACTORS UTILIZED IN APPLICATION OF CRITERIA

<u>Criteria</u>	<u>Factor</u>	<u>Weighting</u>
1. logical extension of existing park/trail system	- direct connection	3
	- 1 missing link	2
	- 2 missing links	1
2. population served; # years waiting for development	- 10+ years	3
	- 3 - 10 years	2
	- less than 3 years	1
4. Land	- high	3
	- medium	2
	- low	1
5. Other	- timing and relationship to other city projects.	++

DETAILED DESCRIPTION OF EXISTING TRAILS

Southwest Area - Existing Trails and Access

Existing trails in this section are shown on Maps 2,3 and 4. Moving from west to east, an existing granular trail loop circuits the Fort Edmonton Park site from Whitemud Road along the river bank and the north facing slope. This trail features interpretive stations and is used in conjunction with John Janzen Nature Centre programs. Several drainage channels have been cut along the river edge section to allow standing water to drain away to the river. No trail connection exists east to the banks of Whitemud Creek although an unimproved route is available along the north side of the Fort Edmonton Park access road. Access east is only via the Campbell Bridge to Whitemud Park since the bridge at the mouth of Whitemud Creek was removed.

In Whitemud Creek, a granular trail with log bridges which was developed in the 1960's and connects to Whitemud Park along the picnic area access road. The trail begins behind the maintenance building and follows the east bank of the creek, through an area with many springs. In some sections several routes are evident, in response to local wet conditions. The trail continues across Whitemud Creek to Snow Valley Ski Club although the bridges no longer exist. A 1.8 meter granular trail and pedestrian bridges (developed in 1991) leads from Snow Valley south to approximately 28 Avenue.

From the mouth of Whitemud Creek a granular river edge trail parallels Keillor Road. It is joined by a separate equestrian granular trail leading from the Equine Centre. These two trails merge; several sections of are braided with cross connections. An abandoned river edge trail is visible but has been blocked by fencing where a portion has fallen into the river. Several unimproved paths lead from Saskatchewan Drive down the bank to the granular trails.

The two trails follow the perimeter of Hawrelak Park and the Mayfair Golf and Country Club to the Groat Bridge. These trails also are braided with cross connections. These trails end at the Emily Murphy Park parking lot. A connection to the Groat Bridge sidewalk is possible from this area but is not well developed. An unimproved trail traverses the picnic area and along the Emily Murphy Park access road; the route is moderately difficult to follow. At the east end of Emily Murphy Park an unimproved trail follows the river edge east through the University Forestry Reserve. The trail is only slightly above the river level, is frequently wet and is often impassable in high water periods. Evidence is common of attempts by users to find bypasses to the wet sections. The adjacent vegetation has been damaged in some areas by this casual trail development.

East of the University Power Plant (West Kinsmen Park) there are numerous unimproved trails leading down the bank to river edge. These trails are narrow and many are severely eroded. In the vicinity of the High Level Bridge the trail follows the Kinsmen Park/Menzies Bridge access road. The Menzies Bridge provides pedestrian and bicycle connections to downtown and the Legislative grounds and to the existing paved trails along River Road.

The south bank trails connect to the existing paved CCRP trails at the John Walter Historic Site, west of the Walterdale Bridge.

Southeast Area - Existing Trails and Access

Existing trails are shown on Map 6. Unimproved trails presently run through the length of Mill Creek from Whitemud Drive to the southeast. In the section from 50 to 34 Street the trails are clear and easily followed. There are a few sections where route finding is difficult because of side trails or very meandering, braided routes. The trail width is inconsistent varying from about 1.8m (6 ft.) to .3m (1 ft.). Utility rights of way (ie. Trans-Mountain Pipeline and power line construction) provide informal intermediate points of access across the ravine and to the trail. Neighbourhood access

trails have developed casually; several are steeper than recommended guidelines. The Minchau school site access is the largest of these access points, some parking is also available at this point. Numerous crossings of the creek are made via primitive log bridges.

No direct connection to lower Mill Creek Ravine is available. Cyclists from Millwoods can follow 91 Street to the park entrance at Argyll Road. This is currently not a feasible pedestrian route.

Northwest Area - Existing Trails and Access

Existing trails are shown on Maps 2 and 4. Beginning at the Quesnell Bridge a casual unimproved path connects to the western most loop of the picnic ground access road. A paved route is available along the park road, another informal route meanders along the river edge traversing picnic sites. A further unimproved path parallels the zoo perimeter fence. Route finding on the casual trails can be difficult and some of the routes are poorly chosen causing conflict with other uses. The picnic ground design is outdated, and confusing to users looking for a site. At the boat launch the main trail becomes more formal. The surface is pea-gravelled, the path 1 to 1.8m wide and the route easy to follow. The trail follows the river edge closely past the rowing and canoe club sites. This trail veers up slope away from the river edge in the moderately steep area at the north end of Buena Vista Park where it continues to the mouth of McKenzie Ravine.

In the centre of Buena Vista Park a meadow area is crossed by a number of trails and service roads which provide access to the river edge trail but also fragment the area. A service road skirts the east edge of the meadow from the maintenance yard gate and provides access to the numerous material stockpile sites. A further dirt track cuts north-south along the central axis of the meadow to the day camp site. Several neighbourhood access trails cut across the meadow east-west. Continuations of these trails leads north through the sloped area at the north end of Buena Vista, paralleling and eventually joining the main river edge trail. Cross connections occur at several points between these trails.

A wide but unimproved trail follows the bottom of McKenzie Ravine from 148 Street to the mouth. Access is limited to the 145 Street ravine crossing. Access is difficult but possible in the heavily eroded area adjacent to the 142 Street bridge. A steep and little used route starts from a utility lot at 95 Avenue along a utility r-o-w. Within the ravine the trail is clear and easily followed throughout its length. Within a few hundred metres of the mouth the trail is very wet and often impassable due to springs and seeps which have no outlet to the river. This area is very disturbed by attempts to find a dry route. Tree branches and logs have been thrown on the route to improve passage but have helped little and make for very uncertain footing. More recently an attempt to fill the area and raise the trail has produced a drier but aesthetically poor situation.

A short distance north of McKenzie Ravine the bank becomes very steep and narrow. One unimproved access trail exists from Riverside Drive. The trail north to MacKinnon Ravine is narrow, steep and rolling. Rutting is evident in the steeper sections, attributable to erosion and mountain bike activity. Weeping tile and plastic pipe has been laid along and under the trail in some sections to channel drainage. A staircase is located in the steepest section; the bank adjacent is heavily eroded from use. The trail drops very near the river edge along the narrowest portion of the bank. The trail in this section is narrow, wet and very close to the river. This trail joins the MacKinnon Ravine trail, and presently provides the only valley route to Buena Vista.

A 3 meter wide asphalt trail was developed through MacKinnon Ravine in 1987 when roadway plans were abandoned. Access trails exist at 149 Street, 142 Street and Ramsay Ravine. The trail is in the wide heavily disturbed bottom of the ravine. Visibility is good throughout due to the absence of trees and shrubs, but the popularity of the trail coupled with the consistent grade has created speeding situation making many users uncomfortable. One branch of the trail connects under the Groat Bridge abutment to the River Road trail, another leads to Government House Park.

Northeast Area - Existing Trails and Access

Existing trails are shown on Map 5. Starting at the Strathcona Science Park Bridge a paved service road leads north along the river. The road ends at a leachate collection tank. A granular trail continues along the river bank traversing several steep sections. The trail dips sharply under the highway and railroad bridges making a very difficult climb for southbound users. The topography flattens immediately north of the bridges and the pea-gravel trail continues along the edge of trees at the riverbank around the north end of the lakes past the Tornado Memorial and exits to the gravel park access road. Several picnic tables are scattered along the trails. A gate and bollards separate the vehicular accessible picnic area from the "Back 40" where trail development is less formal. A dirt service road continues north past the maintenance area and north lake. The road continues to the extension of 17 Street but becomes increasingly rough. This road is the primary pedestrian access into north Hermitage. Several access tracks intersect it, particularly down the bank from 137 and 144 Avenue areas.

In Kennedale Ravine a paved trail is developed to 40th Street in a heavily disturbed area. East of 40 Street to Victoria Trail are intermittent sections of trail which cross the creek in several locations. Access is possible under the Victoria Trail bridge and down a steep utility r-o-w at 34 Street. East of Victoria Trail a steep hard packed earth path leads down the south bank past the day camp site and into Hermitage Park in the heavily disturbed area between the north and south lakes. This area was heavily damaged by the 1987 tornado, by an extensive network of power lines crossing to the Clover Bar generating station and major storm sewer outfalls.

A hard packed earth trail leads from the Kernohan School site down the ravine where it exits north of the north lake. An unimproved path leads along the west side of the lake and intersects the Kennedale Ravine trail at the south end of the lake.

**PUBLIC OPINION ON SUITABLE RECREATION ACTIVITIES
(LISTED IN RANK ORDER)**

PRESERVATION	CONSERVATION	EXTENSIVE USE
Nature Study/Observation	Photography	Ice Skating
Photography	Walking/jogging	Tobogganing/sledding
Canoeing/Kayaking	X-Country Skiing	Picnicking
Walking/jogging	Nature Study/Observation	Paddle Boating
	Orienteering	Cultural Events & Festivals *
	Snowshoeing	Bicycling
	Bicycling	Walking/jogging
	Canoeing/Kayaking	Hot Air Ballooning
	Riverbank & Lake Fishing	Snowshoeing
	Rowing	X-Country Skiing
	Horseback Riding	Model Boating
	Picnicking	Photography
		Rowing
		Orienteering
		Canoeing & Kayaking
		Hang Gliding
		Riverbank & Lake Fishing
		Swimming *
		Golf *
		Downhill Skiing *
		Nature Study & Observation
		Horseback Riding
		Archery
		Bobsled & Luge *

**PUBLIC OPINION ON SUITABLE FACILITIES
(TOP TEN IN RANK ORDER)**

PRESERVATION	CONSERVATION	EXTENSIVE USE
Natural trails	Granular trails	Children's Playgrounds
Interpretive signs/displays	Interpretive signs/displays	Washrooms
Viewpoints/decks	Natural Trails	Pedestrian Bridges
Granular trails	Viewpoints/decks	Drinking Fountains
Pedestrian Bridges	Pedestrian Bridges	Telephones
Washrooms	Washrooms	Parking Areas
	Telephones	Fitness courses
	Paved Trails	Amphitheatre
	Drinking Fountains	Paved Trails
	Day camps	Equipment Rentals *

This list of activities and facilities were rated as appropriate within the management area by more than 40% of respondents.

* These activities/facilities do not conform to the publicly supported vision statement.

OUTSTANDING ISSUES FROM CONCEPT PLAN/PUBLIC INPUT

ISSUE	ACTION/RESOLUTION IN MASTER PLAN
1. Identify vegetation/wildlife habitat areas in order to preserve and limit intrusion in sensitive areas.	Sensitive habitat areas have been identified and additional field studies have been initiated. Strategies to manage sensitive habitats are required; to be addressed in Management Plan.
2. Limit permitted activities and monitor/control users to preserve wildlife habitats.	Activity/facility suitability assessment done. Development will be limited to appropriate recreation facilities. Strategies to monitor/control use required; to be addressed in Management Plan.
3. Achieve an acceptable balance between conservation and recreation use/development.	Public approval of Master plan.
4. Propose developments which will blend in with the natural environment.	Public approval of Master plan.
5. Development should be compatible with defined resource management units.	Public approval of Master plan (specifically management units, development standards and guidelines).
6. Spread out development to avoid congestion.	Public approval of Master plan (specifically extension of trails system, development of pedestrian bridges).
7. Avoid additional development, overuse and overdevelopment of existing parks.	No additional uses introduced to existing parks, development limited to upgrading trails, and extension of trail system and basic public services (wash rooms, drinking water and security telephones).
8. Insure safety of river valley users through installation of telephones, information signs and a safe trails system.	Incorporated in trail standards and construction guidelines; amenities include emergency phone.
9. Identify better means of enforcement, education, security of park assets.	Improving access will deter some activities in that more users will be in the park; additional strategies to be outlined in the Management Plan.
10. Examine trails needs to provide a safe system.	Public approval of Master plan, trails classification and trails standards.
11. Provide a variety of recreation opportunities.	Public approval of Master plan.

ANALYSIS OF PUBLIC RESPONSE TO PRELIMINARY MASTER PLAN (November 1991)

1. Respondents generally supported the draft master plan.
(47% support plus 22% support with conditions.)
2. Majority of respondents supported the Management Zoning proposal.
3. Majority of respondents supported the Trail Classification/Guidelines.
4. Respondents had difficulty identifying priority for what should be developed where. Approximately 33% did not complete these questions. However, those that responded indicated a preference for (a) development occurring in continuous manner, (ie. outward from existing trail and park development) and (b) development of basic needs (ie trails, bridges, washrooms).

5. Preference for trail surface:

	<u>#1 Ranking</u>	<u>#2 Ranking</u>
Main Valley Trail	asphalt	granular
Ravine Trails	granular	soil/grass
Access Trails	granular	soil/grass
Top-of-Bank Trails	asphalt	soil/grass

6. Preference for trail width:

	<u>#1 Ranking</u>	<u>#2 Ranking</u>
Main Valley Trail	10 feet	8 feet
Ravine Trails	4 feet	6 feet
Access Trails	4 feet	6 feet
Top-of-Bank Trails	10 feet	6 feet

7. Opinions obtained:

	<u>Agree</u>	<u>Disagree</u>	<u>No Opinion or Response</u>
- The current situation with multi-use trails is fine, I see no conflict.	39.6%	37.9%	22.5 %
- Cyclists should be permitted on granular trails.	36.8%	53.8%	9.3%
- Cyclists should be permitted on soil/grass trails.	20.9%	68.1%	10.9%
- Separate trails should be provided pedestrians.	53.3%	30.8%	15.9%
- Separate trails should be provided cyclists.	48.9%	33.0%	18.1%
- Separate trails should be provided horseback riding.	47.8%	30.8%	21.4%
- Skateboards and rollerblades should be permitted on paved trails.	39.6%	43.4%	17.0%
- More safety education programs are needed for trail users.	60.4%	16.5%	23.1%
- Need more street routes for bicycles.	76.9%	8.8%	14.3%
- Need more bike routes separate from roads.	75.8%	11.1%	13.2%

8. Summary of general comments/issues and proposed resolution

GENERAL ISSUES	ACTION/RESOLUTION
<p>1. Resource assessment methods</p> <ul style="list-style-type: none"> - system lumps together biophysical and physical factors which effectively eliminates flat stable areas from preservation areas. 	<p>A new analysis has been completed in which areas are initially categorized through wildlife and vegetation sensitivity. Physical constraints are subsequently overlaid on remaining areas to determine if additional constraints exist (See detailed resource assessment).</p>
<p>2. Suitable activities/facilities</p> <ul style="list-style-type: none"> - some activities viewed as appropriate are not on lists. - some facilities on the list not considered appropriate. 	<p>Casual or informal use would not be limited unless it is impacting on the area. Facilities will not be provided to encourage inappropriate activities. Activity/facility list has been reviewed to identify items which are not consistent with the Vision Statement.</p>
<p>3. Resource management units should reflect the desired future state of an area.</p>	<p>Definitions have been changed to reflect more closely the future intent of the management unit.</p>
<p>4. Dog walking</p> <ul style="list-style-type: none"> - clarify where dogs are and are not allowed. - provide a way for dog walkers to use trail system without getting entrapped in "no dog" areas. - provide off-leash area. - not identified in list of suitable activities. 	<ul style="list-style-type: none"> - See System Wide Planning Objective #4 - Concept of an "Off-Leash Area" will need to be examined on City-wide policy basis in conjunction with other departments. Subject to Council approval. - no distinction made between walking and dog walking. Viewed as appropriate except in specified areas.
<p>5. Cycling on granular trails</p> <ul style="list-style-type: none"> - increased popularity of mountain bike and strong desire to utilize granular trails. - need to reduce/control speeds. 	<ul style="list-style-type: none"> - Change to Trails Classification system. Class 2 (granular multi-purpose) trails will be designated WHERE APPROPRIATE at the site plan level. - Education safety programs.
<p>6. Location and need for proposed pedestrian bridges</p> <ul style="list-style-type: none"> - MacKinnon Ravine/Hawrelak Park - Buena Vista/Hawrelak - Laurier/Whitemud Park - Ft. Edmonton/Wolf Willow 	<p>Propose delaying development of any bridge where current needs can be served by existing structure.</p>
<p>7. Safety on the trails</p> <ul style="list-style-type: none"> - need to provide safe trails for all users. 	<ul style="list-style-type: none"> - Trail Standards implemented. Additional trail development will disperse users. - Safety education program developed.
<p>8. Wildlife Management</p> <ul style="list-style-type: none"> - control of beaver populations 	<p>To be addressed in Management Plan.</p>
<p>9. Forest Management (see Southeast sheet)</p>	<p>To be addressed in Management Plan.</p>
<p>10. River Access</p> <ul style="list-style-type: none"> - need additional boat launch access. - provide an opportunity to get close to river edge. 	<ul style="list-style-type: none"> - sites shown on plans - sites specific details.

<p>11. Development should not proceed. Spend money elsewhere.</p> <ul style="list-style-type: none"> - limit expansion to land acquisition. 	<ul style="list-style-type: none"> - current uses will continue to grow. - unless users are properly directed and managed more damage will occur. - no major land acquisition required as most areas will come to City through subdivision. - easements may also be used.
<p>12. Overall maintenance/operation of the park.</p> <ul style="list-style-type: none"> - will funds be identified for this. 	<ul style="list-style-type: none"> - Provincial grant program allocates some funds to offset operation costs. - Need to look at development plan to see where Operating costs can be reduced.
<p>13. Trail Standards</p> <ul style="list-style-type: none"> - Provide a variety of trails. - insure paths are not wider than designated or needed. 	<ul style="list-style-type: none"> - see proposed trails system - widths must address user needs, safety access and sensitivity of site.
<p>14. Linkage between river valley trails and on street bike routes.</p> <ul style="list-style-type: none"> - need to link systems up in a comprehensive manner. 	<ul style="list-style-type: none"> - Potential linkages have been shown on drawings in consultation with Transportation. - Work with Transportation and other organizations to implement (Process currently under way).
<p>15. Timing & Priorities of Project Construction.</p> <ul style="list-style-type: none"> - concern that projects should be completed before others are started. - signage must be in place before use becomes heavy. 	<ul style="list-style-type: none"> - need some flexibility in budgeting/costing. - signage incorporated as part of basic construction program.
<p>16. Public information on River Valley</p> <ul style="list-style-type: none"> - need to follow up with public information, brochures, pamphlets. 	<ul style="list-style-type: none"> - needs to be addressed as plans are implemented. - part of operations component of Management Plan.
<p>17. Forest Management, Naturalization & Landscape Rehabilitation.</p> <ul style="list-style-type: none"> - need to rehab at 50 St. with natural planting. 	<ul style="list-style-type: none"> - Part of Management Plan - need to develop principles. Dept is currently developing Naturalization Plan. - general areas to be identified in Master Plan drawings and site plan drawings.

SOUTHEAST ISSUES	RESOLUTIONS
<p>1. Timing of Development</p> <ul style="list-style-type: none"> - want upper Mill Creek high priority. - want linkage to lower Mill Creek reviewed <u>now</u> not in long term. 	<ul style="list-style-type: none"> - Upper Mill Creek development in 92-94 (See Project Schedule). - linkage to lower Mill Creek (feasibility study could begin immediately - funding for development currently unscheduled).
<p>2. On-street bike routes may conflict with bus route on 36th Ave.</p>	<p>Multipurpose trail to be off street along bus route area.</p>
<p>3. 38th Ave. roadway crossing of Mill Creek Ravine.</p> <ul style="list-style-type: none"> - is this going to be built? 	<ul style="list-style-type: none"> - has been deleted from Transportation and Burnewood Neighbourhood Structure Plan.
<p>4. Access from other parts of Millwoods.</p>	<ul style="list-style-type: none"> - links provided into utility r-o-w. General access by vehicle to Jackie Parker Recreation area.
<p>5. Top-of-Bank area - N.E. side of 50 Street.</p> <ul style="list-style-type: none"> - pedestrians are travelling to 50 Street and often cut across. 	<ul style="list-style-type: none"> - intersection of 40 Avenue and 50 Street to be signalized. - casual routes will be barricaded.
<p>6. Clean up of the creek bed.</p> <ul style="list-style-type: none"> - deadfall/trash within creek bed has created ponding and is blocking culverts. - potential for bank instability. 	<ul style="list-style-type: none"> - Parks Maintenance programs and cleanup programs.
<p>7. Cycling within ravine.</p>	<ul style="list-style-type: none"> - Not permitted (Enforcement maybe required). - signage/education to identify.

SOUTHWEST ISSUES	RESOLUTION
<p>1. Timing on closure of Keillor Road and downgrading to park trail.</p>	<ul style="list-style-type: none"> - Scheduled to occur on completion of proposed improvements to 114 Street as approved by Council.
<p>2. Equine use of trails.</p>	<ul style="list-style-type: none"> - Present use to continue. Future use will depend on decision on outcome of Equine Centre proposal.
<p>3. Designation of Whitemud Ravine Nature Reserve as Preservation Management Area.</p>	<ul style="list-style-type: none"> - Detailed assessment not completed. Proposed to be preservation area.
<p>4. Access from Grandview Heights.</p> <ul style="list-style-type: none"> - concern for detailed site of access. - avoid seepage areas. 	<ul style="list-style-type: none"> - proposed as granular access trail.

NORTHEAST ISSUES	ACTION/RESOLUTION
1. River Access - need for facilities downstream of 50 St. to provide access to Rundle/Hermitage.	- included in plan. - will review Hermitage at detailed site plan level to identify potential access.
2. Relocation of Multipurpose trail to Top-of-Bank. - avoid wildlife area north of lake.	- Need multipurpose connection to future ped bridge and to provide access to North Clareview to be reviewed in long term.
3. Access along S. bank of Kernohan.	- potential access stair identified. - need to examine on-site specific basis.
4. Scale down development around North pond to protect wildlife.	- Some reduction in number and standard of trails has been shown on plan.
5. Level of maintenance should be reviewed. - undeveloped side of Hermitage - around Tornado Memorial	- Address in Mgt. Plan. - Potential areas of landscape naturalization have been identified which will mean different levels of maintenance.
6. Encroachments along top of bank - Kennedale Ravine.	- Address on-site specific basis through encroachment policy.
7. 40 St/ Kennedale Ravine intersection. - is there a need for traffic control. - what is the best solution to avoid traffic conflicts?	- trail details to be reviewed with Transportation Department.
8. Access routes (144 Ave Area) for utilities maintenance vehicles (D9 & D10). - what type of trail would meet access needs. - what is frequency of use.	- proposal is for access using multi-purpose paved trail. To be reviewed by Utility Co's departments - Site Plan detail.

NORTHWEST ISSUES	RESOLUTION
1. Trail between MacKinnon and McKenzie Ravine should not be there. Area is too sensitive.	- Existing trail to remain unimproved. - access to this area will be restricted. - site specific restoration included in plans.
2. No development in Buena Vista Park.	- Buena Vista is an integral part of the Park System and a staging area for people walking dogs, hiking, skiing and biking in the area. Facilities need to be developed to limit further impacts and to manage the area. - Most trails development is on existing disturbed roads or footpaths. Proposed major landscape rehab or naturalization program. See Northwest Extension Planning Objectives (Buena Vista Park Section 5.5).
3. Dog walking - Concern that dog walkers will be displaced by development. - People need to clean up after their dogs.	- See General Planning Objectives #4.(Section 5.1) - Public information required. - Provide garbage containers.

<p>4. Resource Management designation of Buena Vista park area.</p> <ul style="list-style-type: none"> - No intensive maintenance. 	<ul style="list-style-type: none"> - Maintenance to be appropriate to the future resource management designation of area (predominately conservation).
<p>5. Management of MacKinnon Ravine.</p> <ul style="list-style-type: none"> - Mowed area adjacent to paved trail should be wider for pedestrians. - Safety concern 	<ul style="list-style-type: none"> - Accommodate pedestrians on separate trail site. specific plan to address this concern. - Extension of trail system may disperse users.
<p>6. Loud "bush" parties in Buena Vista and Laurier Park.</p>	<ul style="list-style-type: none"> - Development which is proposed should reduce access to north part of Buena Vista and some of Laurier, while at the same time making the overall area easier to monitor and enforce.
<p>7. Access at 95 Avenue and 141 Street. Redundant access - not required.</p>	<ul style="list-style-type: none"> - Deleted from plan drawings. - Existing area should naturalize if access is restricted.
<p>8. MacKinnon/Buena Vista bridge should be a priority. See General Issues #6</p>	<ul style="list-style-type: none"> - Currently a long range (after 98) priority. - Maybe dropped from plan - Dept. will look at connections to Groat Bridge and improve access. - restriction on access to McKenzie Ravine. - Will review again at site specific plan stage.
<p>9. Look at the potential of a river crossing at south end of Buena Vista over to Keillor Road area.</p>	<ul style="list-style-type: none"> - Potential bridge site has been identified in the Master Plan. - Long range priority (after 98), subject to review.
<p>10. Need to distinguish more clearly between Conservation and Preservation Management approach.</p>	<ul style="list-style-type: none"> - Definitions have been revised to reflect future desired state. - Management guidelines to be detailed as part of Resource Management Plan.
<p>11. Designation of picnic areas in Buena Vista Park.</p> <ul style="list-style-type: none"> - Concern for loud parties. - Concern that dogs will not be allowed. 	<ul style="list-style-type: none"> - Picnic areas will be limited to staging areas around proposed parking areas. Some existing picnic areas will be relocated. Design of picnic areas will be more suited to groups and would be available as booked sites. - string of trails will ensure dog walking routes provided.
<p>12. Hard surfacing Country Club Road will increase use by cyclists - encourage speed.</p> <ul style="list-style-type: none"> - Should be designated Preservation Zone. 	<ul style="list-style-type: none"> - Country Club road is only paved trail proposal linking Westridge, Wolf Willow, Oleskiw and Patricia Heights neighbourhoods
<p>13. Location of day camp site in Buena Vista.</p> <ul style="list-style-type: none"> - Currently located in area identified for multipurpose trail connection to Hawrelak bridge. 	<ul style="list-style-type: none"> - To be relocated in area currently occupied by maintenance (Watson Yard).
<p>14. Relocation of Maintenance Yards.</p> <ul style="list-style-type: none"> - Current maintenance operation is scattered throughout Buena Vista. 	<ul style="list-style-type: none"> - To be relocated or consolidated. - Department currently studying future location.

ANALYSIS OF QUESTIONNAIRE DISTRIBUTED AT OPEN HOUSE - FEBRUARY, 1992

- estimate 700 people attended open house.
- 541 people completed the questionnaire = 77% response rate.
- good representation from all districts.

Questions:

1. High level of attendance from people who had not attended a previous meeting, ie 378 people = 70%.
2. Attendees heavy users of the valley with 289 people (53%) indicating more than 50 visits per year.
3. All major user activities well represented.

Large portion use valley for several activities:

- 90% (488) walking/dog walking/jogging/hiking.
- 68% (366) cycling/mountain biking.
- 63% (339) winter sports (skating/skiing/tobogganing).
- 39% (213) nature study/photography/orienteering.

4. Response to new proposal for some access to granular trails for cycling:

- 36% (192) Support.
- 32% (174) Support with conditions.
- 22% (199) Non-support.
- 5% (28) Not sure.
- 5% (28) No response.

5. Have your concerns been addressed by revised plan?

- 45% (243) Yes
- 28% (153) No
- 3% (18) Not sure
- 24% (127) No response

- Total of "Yes" and "No responses" (assumed no concerns) = 69%
- Comment about unresolved concerns consistent with list in Question 6.

6. Do you generally support the River Valley Master Plan?

- 50% (377) Support**
- 36% (195) Support with conditions**
- 5% (27) Non-support**
- 4% (20) Not sure**
- 5% (27) No response**

- Total of Support and Conditional Support = 86%**
- Percentage of Non-support is 5%.**

7. Survey respondents represent a good age distribution ranging from 4 to 85 years of age. This distribution consistent with age of visible valley users and is consistent with civic census data.

**SUMMARY OF PUBLIC COMMENTS
RE: REVISED MASTER PLAN (FEBRUARY, 1992)**

1.0 CONDITIONS MET: Response moved to "Support"

- 1.1 - develop a reasonable solution to bike pedestrian conflict.
- .2 - keep bikes out of preservation areas.
- .3 - consider needs of older/handicapped people.
- .4 - no new major development in valley.
- .5 - must upgrade other park areas/facilities.
- .6 - provide more resting/viewing areas.
- .7 - education is key to multi-use trails (courtesy & safety).
- .8 - more signage to address use conflict and dog care.
- .9 - limit extensive use areas.
- .10 - retain separate horse trail.
- .11 - trails should be multi-use unless possible to separate, horse trail at Hawrelak.
- .12 - keep bridges to a minimum/reduce number.
- .13 - encourage responsible dog ownership.
- .14 - don't limit facilities to wealthier areas of the city.
- .15 - people are abusive of nature - have some type of environmental watchdog in place.
- .16 - protect environmentally sensitive areas/leave some areas natural.
- .17 - provide dividing line between cycling/walking lanes.
- .18 - must preserve walking experience without dodging bikes.
- .19 - paved trail around Mayfair Golf Course superfluous/unnecessary.
- .20 - attend to biggest bang for buck now, schedule expensive features for future.
- .21 - consider 3m wide Class 2 trail in some areas.
- .22 - concern for bikes on steep grades.
- .23 - restrict landscaping and unnatural interference.
- .24 - do not permit cyclists in areas where environmental damage occurs.
- .25 - address need for legal off-leash areas for dogs.
- .26 - need method of controlling bike speed.
- .27 - limit the number of signs, paved trails, picnic benches.
- .28 - balance people convenience and wildlife needs: no access points through sensitive/wildlife areas.
- .29 - please, not a system of manicured parks.
- .30 - protect/save path between MacKinnon and McKenzie Ravines.
- .31 - leave dirt trails for walking pleasure.
- .32 - permit dog walkers on horse trail.
- .33 - provide room in some secluded areas for slow walkers.
- .34 - recognition of the wildlife in Great Meadow area.

- .35 - keep costs to build and operate down.
- .36 - provide blufones at regular intervals.
- .37 - post signs to keep people out of fragile areas.
- .38 - have more public consultation.
- .39 - integrate bike trails and bike on-street routes.
- .40 - improve bike connections from downtown to river valley.
- .41 - investigate contra-flow system - many older people cannot hear bikes coming.
- .42 - keep cyclists off winding granular trails.
- .43 - survey park users for opinion - not all come to meetings.
- .44 - do detailed biological survey of area before proceeding.
- .45 - cyclists are single largest user of valley-do not relegate us to pavement.
- .46 - spread out the activity, but try to protect natural habitat.
-plus numerous site specific comments.

2.0 CONDITIONS NOT MET/PARTIALLY MET

- 2.1 - provide separate trails for cyclists and pedestrians.
- .2 - provide cyclists full access to all trails.
- .3 - provide cyclists with access to 80% of granular trails.
- .4 - provide cyclists with access to dirt trails.
- .5 - improve water quality for use by water base activities.
- .6 - increase police presence.
- .7 - leave log bridges in Mill Creek - development will lead to conflict with cyclists.
- .8 - designate less heavily used roads as combined auto/biker routes.
- .9 - increase equine access.
- .10 - open up Wolf Willow ravines.
- .11 - connect Upper and Lower Mill Creek - as soon as possible.
- .12 - limit paved trails to commuter/access areas.
- .13 - leave area as it is - no development.
- .14 - too expensive, reduce costs. Many of the places you are going to develop are currently being enjoyed at no cost to taxpayer.
- .15 - no paving and minimum upgrading. Maintenance of paved trails too expensive.
- .16 - prefer granular multi-purpose main trail as paved trail encourages speed.
- .17 - stop all future house/apartment building in valley.
- .18 - Buena Vista Flats: designate it a wilderness park; leave it as is (without picnic tables); designate it for use as an unleashed area for dog walkers; eliminate bridge.
- .19 - provide some challenging trails for mountain bikes.
- .20 - cannot see need for more picnic tables/ don't encourage more picnic areas unless dollars available for complementary police patrol of area.
- .21 - mistake to allow cyclists on granular trails. Pedestrians lose freedom.
- .22 - have one-way trails on parallel separate bike/hike trails.
- .23 - put obstacles on trails to slow down cyclists.
- .24 - provide more cross-country track setting.

- .25 - no park maintenance trucks in valley.
- .26 - no wide trails - removes nature from the users.
- .27 - development money should be used on erosion bars and culverts and not on upgrading trails.
- .28 - restrict bikes from pavement, not from non-pavement.

3.0 NOT SUPPORT/NO RESPONSE

- 3.1 - money would be better spent in neighbourhoods where people live and have nothing.
- .2 - cyclists should be allowed on all trails/more trails.
- .3 - insufficient concern for wildlife.
- .4 - insufficient provision for horses.
- .5 - unsure - need to study the information more.
- .6 - too much pavement - prefer granular/leave natural.
- .7 - too expensive/unnecessary to pave trails.
- .8 - cyclists want exciting wood-chip/granular trails near home.
- .9 - if preservation of valley is important - don't develop it.
- .10 - leave area natural - spend money improving roads.
- .11 - need more emphasis on cycling.
- .12 - clear trails of snow/ice for safe winter cycling.
- .13 - cyclists should have access to more trails.
- .14 - area attracts people because it is undeveloped.
- .15 - plan does not include an off-leash dog area.
- .16 - plan favours pedestrians over cyclists.
- .17 - need trail for only cyclists.
- .18 - too much attention to bikers needs and not enough to needs of wildlife.

4.0 GENERAL COMMENTS

- 4.1 - big asset to city. Establishes our distinctiveness.
- .2 - river valley makes us the envy of other cities.
- .3 - great legacy.
- .4 - good job. Looks promising.
- .5 - well thought out. Thoughtful planning. Good design model taking public opinion into account in planning process.
- .6 - better to error on the under development side.
- .7 - believe plan to pave is misguided. am convinced that usage will decline as trails are paved.
- .8 - support city not becoming a cement wasteland.
- .9 - conservation/preservation seems to be clearly addressed.
- .10 - valley should be kept quiet and passive ... a relief from city hustle and noise.
- .11 - I'm excited about the direction being taken.
- .12 - let's get on with it.
- .13 - the benefits of the development outweigh the costs.
- .14 - I fully support use of my tax dollars for this project.

- .15 - essential to prevent further housing development from encroaching on river valley. Apartment development is shameful.
- .16 - concentrate on narrow trails for walking and cross-country skiing.
- .17 - spreading out the trails should spread out the people, reduce congestion and impact on nature.
- .18 - look forward to accessing other parks by bike/hike trails.
- .19 - appreciate the difficulty in trying to meet needs of cyclists and walkers.
- .20 - Master Plan should be developed prudently and practically when economic conditions permit.
- .21 - expand during recession times to create jobs.
- .22 - one of the few times I can say my tax dollars are being well spent.
- .23 - this will equal or better Central Park.
- .24 - better than previously presented plan. Thank you for listening.
- .25 - place priority on expanding trail system. Test public opinion. As use develops do high cost items.
- .26 - the plan is recreation oriented, but begins to address commuters concerns.
- .27 - would like to see plan progress faster.
- .28 - support east/west expansion but feel downtown core needs more park/river valley opportunities.
- .29 - should be off-leash areas in all parts of city.
- .30 - using tax dollars to improve the recreational quality of our city is a prudent investment.
- .31 - do not delay unnecessarily development of trails because of time required for bridge construction.
- .32 - river crossing footbridges and "backbone" trails are top priorities.
- .33 - the soon the better.
- .34 - 10 years from now we'll be really glad we did this.
- .35 - congratulations on your far-sightedness.
- .36 - hope money will not be a factor in completing this plan.
- .37 - avoid removal of wild berry tree stands during construction.
- .38 - excellent job in public consultation and accommodating a diverse public interest.
- .39 - preserve areas that still support natural flora/fauna.



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