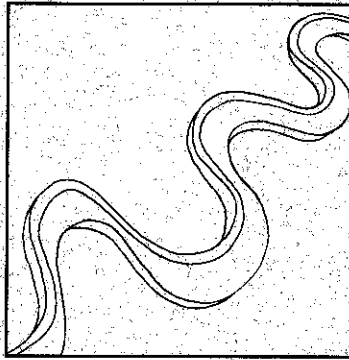


RIBBON OF GREEN

**NORTH SASKATCHEWAN
RIVER VALLEY AND
RAVINE SYSTEM
CONCEPT PLAN**

A.02.05



RIBBON OF GREEN

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RAVINE SYSTEM
CONCEPT PLAN**

ACKNOWLEDGEMENTS

Preparing a long-range vision of this magnitude required the dedication, knowledge and efforts of many people. Edmonton Parks and Recreation wishes to thank all those Edmontonians who participated in formulating the Vision for the North Saskatchewan River Valley and Ravine System.

The support and assistance received from Corporate and Department staff is appreciated. The substantial time and effort contributed by the Policy and Capital Budget Unit, the Land Management Unit, the Design and Survey Unit and the River Valley and Ravines Operations Committee of the Parks and Recreation Department is acknowledged.

A special "Thank You" is extended to the Project Team members who made the work so enjoyable:

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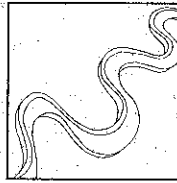


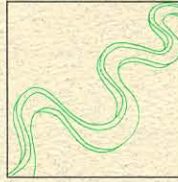
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Vision Statement

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

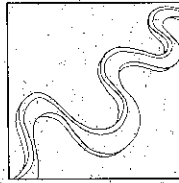
with conservation and will be located in areas which are already disturbed or where environmental impact will be low.

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.



Executive Summary

The North Saskatchewan River Valley and Ravine system winds through the City of Edmonton like a ribbon of green. It is the most dominant physical feature of the City and surrounding areas. Its high level of physical, biological and scenic variation can rarely be found in any other major city in North America. It is one of the largest and most continuous areas of urban parkland in North America, encompassing over 7400 ha of land.

In recognition of the scenic pleasure provided by the valley to Edmontonians and visitors, municipal and provincial authorities have for eighty years sought to protect the natural open space from urban development while providing a park system suitable for a metropolitan area.

The development in 1975 of the Capital City Recreation Park by the Province of Alberta through the Alberta Heritage Savings Fund and the North Saskatchewan River Valley Area Redevelopment Plan Bylaw passed by City Council in 1985 have established a framework for effective management and utilization of the area. Simultaneously with these plans, in recognition of the need to develop a long term plan for the use, care and management of the area, Edmonton Parks and Recreation began to study the valley. However, due to funding priorities this management plan remained an unrealized goal.

The 1989 announcement by the Province of Alberta of a continuation of the previous urban park development program and the eligibility of the City of Edmonton to receive up to \$15 million over a ten-year period provided the impetus to fulfil the on-

going desire to have a resource management plan for the entire North Saskatchewan River Valley and Ravine System in place.

At a meeting on June 26, 1990, City Council approved proceeding with the preparation of a Conceptual Plan for the North Saskatchewan River Valley and Ravine System to meet the requirements of the Provincial Urban Parks Program, Phase II. It was decided to prepare necessary plans in-house to meet the provincial grant requirements.

A Project Team was struck to prepare the plans and documentation and to develop a process which would involve the public in preparing the long term plan. The goal was to develop a publicly supported position statement which defines the over-riding philosophy for development, programming and maintenance activities within the North Saskatchewan River Valley and Ravine System.

On August 8, 1990, Executive Committee of City Council supported the recommended planning process and the public input process.

1. *Development of a Concept Plan and a Conceptual Resource Management Plan by December, 1990.*
 - To be achieved by conducting three concurrent 'streams' of work: Vision Stream, Environmental Stream, and Resource Management Stream.
 - Public input to be of a broad scope and of a general nature; the participation target being every citizen to the level of confirming a collective public vision.
 - Study area is the total river valley system.

2. *Development of a Master Plan and Resource Management Plan by December 1991.*

- Refinement of the program statement; planning will concentrate on specific areas; preferred development alternatives selected; development priorities will be set.
- Geographic range of stakeholders will narrow but the level of participation and depth of involvement in planning detail will increase.
- Urban Park Boundary will be established.
- On completion of the Master Plan specific development priorities will be selected and preliminary budgets prepared. No development proposal will proceed to the site plan level until funding is secured.

3. *Development of Detailed Site Plans - 1992*

- Detailed site planning and design for the highest priorities could begin in 1992 for construction in 1993.
- The range of stakeholders will narrow to those specifically affected by the proposals while the level of planning detail and the depth of public participation is high.

With the goal and process confirmed the first task was to identify what aspirations the citizens of Edmonton had for the valley. This was accomplished by reviewing public input on other trail and park developments in the City, leisure studies and surveys and existing policies; synthesizing this information into a Vision Statement and Basic Principles; and taking this to the public for review, rating, and comment.

One thousand five hundred and twenty-seven (1527) citizens participated in the Vision Survey questionnaire. Between 70.4% and 82.9% of the respondents supported the Vision Statement and Basic Principles with 78.7% supporting the Vision Statement as presented.

Based on input received from the Vision Survey and existing documentation, a draft Program Statement and draft Concept Plan were developed. The Concept Plan along with a Resource Management Plan were presented to the general public at two open houses for review, input and ratification. Over two hundred citizens attended with seventy-seven completing and submitting the subsequent questionnaire. Ninety-three percent of the respondents supported in principle the Concept Plan as presented.

The Concept Plan and the Resource Management

Plan were revised as a result of the input received at the two open houses. The combined plans were presented to Edmonton City Council on November 27, 1990.

The Plan proposes tripling the present urban park to include the entire length of the North Saskatchewan River Valley and Ravine System. The plan will take approximately \$67 million to complete. It would extend the existing Capital City Recreation Park eastward to the northeasterly city boundary and westward to the southwesterly city boundary to provide a 7400 hectare park through the heart of Edmonton. The Plan identifies a land acquisition strategy and recommends a financing strategy.

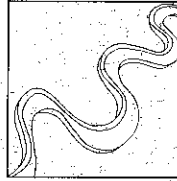
The Plan emphasizes careful utilization and good management to ensure the valley's integrity is retained for the enjoyment and use of future generations. The Plan represents a balance between making the valley accessible for public use and protecting the natural landscape and wildlife habitat areas. It includes a Resource Management Plan and a general description of the kind of development proposed. It divides the park area into three land management zones: Preservation, Conservation and Extensive Use.

Five major parks are proposed for development: Big Island, Terwillegar, Twin Brooks, Buena Vista and Hermitage Parks. It is proposed to provide a continuous trail system through the valley and eventually link the trail system with adjacent municipalities. The proposed trail system will be designed to minimize environmental impact and will be linked through construction of eight river bridges. The river valley joins existing major tourist facilities which should be a key area for tourism funding assistance.

It is expected that tourism development within the valley would be consistent with the Vision and Basic Principles. Major facilities will develop within their approved boundaries. Future completion of these facilities would not rely on Urban Park Program funding.

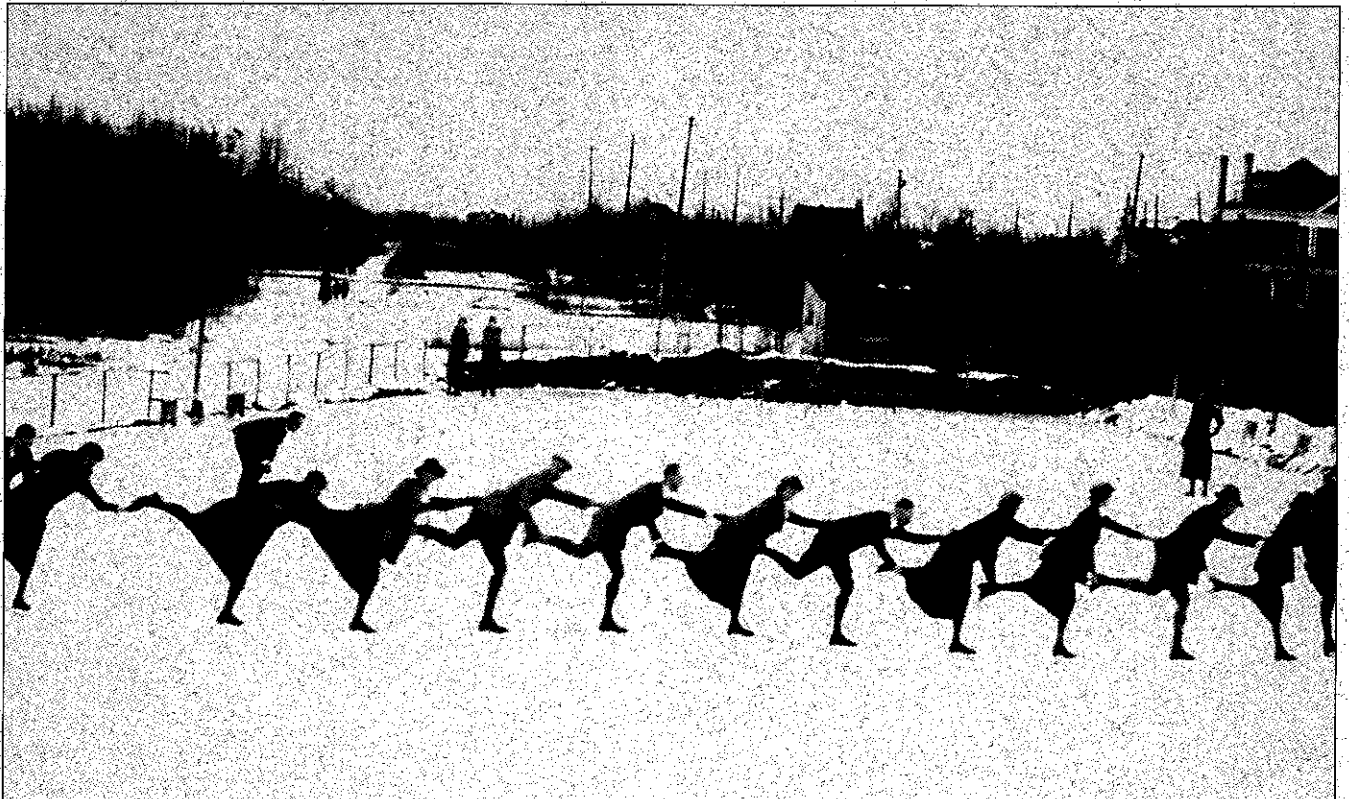
The Urban Parks Program Phase II has provided the City of Edmonton with an opportunity to consider the river valley and ravine system as a whole and to establish publicly supported goals for the development and management of the area befitting the capital city of the Province of Alberta.

CHAPTER I



Introduction

THE 1989 announcement by the Provincial Government of Phase II of the Urban Parks Program and the eligibility of the City of Edmonton for up to \$15 million over a ten year period has provided Edmonton with the opportunity to consider the river valley system as a whole and to establish publicly accepted goals for its development and management.



A. BACKGROUND

1. LOCATION

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 from the agricultural southwest quadrant 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, through areas bounded by residential and 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. It is the most dominant physical feature of the City of Edmonton and surrounding area.

2. HISTORICAL SIGNIFICANCE OF THE RIVER VALLEY

The River Valley: the first center of activity in historic Edmonton

The North Saskatchewan River was once an important transportation and trade route. The City of Edmonton developed along the banks and particularly in the river flats. Indian encampments were common along the river and became more numerous and regular once Fort Edmonton was established. Ferry crossings attracted businesses and residences to the valley and settlements occurred on both sides of the river.

Edmonton is one of the few prairie cities which can trace its beginning back to a fur trade post. The first post was established in 1795 and its subsequent moves to various sites led to the development of the river valley.

The discovery of the North Saskatchewan River is credited to Brothers Chevalier Pierre and Francois Gaultier de Vorenes, who entered the river from Lake Winnipeg in 1741. In 1795 the Northwest Company (Fort Augustus) and the Hudson's Bay Company (Edmonton House) established fur trading posts near the junction of the Sturgeon and the North Saskatchewan Rivers, near the present Fort

Saskatchewan. The two forts were moved upstream some time around 1802-06 to a site considered more secure and also more convenient to the fur trade, somewhere in the vicinity of the power plant in Rosedale.

In 1821, after the amalgamation of the two companies, the fort was renamed Fort Edmonton. The floods of 1825 and 1830 convinced the Hudson's Bay Company to move away from the river flats to higher grounds. The new site selected was south of the present Legislative Building. The fort, stockade, barracks, and residences in this complex stood on this location from 1831 to 1915 until the fort was dismantled.

During this time Woodland Cree Indians camped on the north side of the river while Blackfoot Indians camped on the south shore. Trade was active among the Indians, settlers, and the Hudson's Bay Company. Edmonton was the key to the North Saskatchewan - Athabasca system. The growing settlement outside the Fort occupied an area close to the river and became the settlement's commercial center (Rosedale).

The establishment of the 'Belle of Edmonton' ferry in 1882 joined Edmonton on the north side of the river to the Strathcona area on the south.

A graveyard used by the early white and native Edmontonians from approximately 1820 to the 1880's was situated just to the east of the Fort, near the North end of the Walterdale Bridge.

The Edmonton, Yukon and Pacific Railway line crossed the hillside below the Fort and Fort Edmonton was the terminus of a wagon road which stretched to Stony Plain and on to Rocky Mountain House.

The area now known as Walterdale was a bustling and growing industrial and residential area at the turn of the century until it was destroyed by the disastrous 1915 flood. It was along this portion of the river that ferries and steamboats landed. Indians and settlers forded the river on a ridge where the High Level Bridge spans the river and prospectors panned for gold. Riverside Park (now Queen Elizabeth Park) was a popular recreation area and the adjacent Strathcona Power Plant generated electricity for that young settlement.

Rosedale, the level land on the riverbank east of Fort Edmonton, was as much a neighbourhood as an industrial and service area. It contained the station for the Edmonton, Yukon, and Pacific Railway, the Donald Ross (Edmonton) Hotel, Edmonton's first race track and exhibition grounds, schools, apart-

ments and several industries including an oil well, a power station and two ice plants.

Coal companies mined the easily workable river bank and valley sides and sunk numerous shafts into 'underground Edmonton'. Dredges were used in the search for gold. Gold was found near the Beverly Bridge in 1865 and attracted many settlers and augmented the pattern of residential, commercial and industrial land use in the growing settlement.

After 1891, when the railway reached Strathcona from Calgary, the river lost a great deal of its transportation function and became primarily a recreational area. Ice skating and horse racing were popular during the winter and excursions on the paddle steamer 'City of Edmonton' were popular during the summer. The steamer cruises between Big Island and Fort Saskatchewan ended in 1914 but canoeing remained a popular means of river travel.

In 1902 an Edmonton, Yukon and Pacific train crossed over the Low Level Bridge (built in 1900) from Strathcona and entered the town of Edmonton for the first time. In 1904 Edmonton achieved city status and a year later it became the capital of the newly established Province.

In 1912 Edmonton and Strathcona amalgamated; the Legislative Building officially opened and the High Level Bridge and the Dawson Bridge were completed. In 1915 the Walterdale Bridge (105 Street) was constructed. With the opening of the new bridges and the completion of the Canadian Pacific Railway it was no longer necessary to use ferries or to scale the steep slopes and hills of the river valley. Traffic was now able to bypass the valley and go directly to the core of Edmonton, which initiated a land use pattern change in Edmonton from a valley to an upland orientation. Commerce moved to Jasper Avenue and the valley industries were phased out. Residential communities developed on the uplands and the focus was drawn away from the river valley, the first centre of activity in historic Edmonton.

3. PROTECTIVE POLICIES

The river valley is on loan from future generations.

The river valley to a large degree is an open green and 'natural' space amidst a growing urban centre. It has and will continue to experience pressures from many sectors to relinquish its finite resources of space, aesthetic quality, flora and fauna habitat. To maintain the valley system in perpetuity will require wise

and capable management.

For seventy-five years, municipal, regional and provincial authorities have sought to protect the valley's natural open space from urban development and provide a park system suitable for a metropolitan area. Some key events in protection of the valley were:

- Protection of the river valley was first proposed by Frederick C. Todd, a Montreal landscape architect, in 1907.
- In 1915 the Province of Alberta adopted a report prepared by Mr. Todd which established policy for the protection of the valley and ravines for recreation purposes.
- In 1933 a Zoning Bylaw was prepared by the City which regulated land use by preserving river valley lands as parkland.
- In 1970 Council adopted a 'top of the bank' policy which defined the limit of the river valley and ravine system, introduced principles governing development in proximity to the valley and prescribed regulation for development permits/zoning certificates in areas adjacent to the limit of the valley and ravine system.
- Also in 1970 the Edmonton Parks Master Plan (1970-1980) set forth policies for long term purchase of river valley lands for parks and environmental protection.
- In 1971 the General Municipal Plan provided river valley policy objectives with respect to environmental protection and designated lands for long-range acquisition for future park use.
- The 1972 Edmonton Regional Plan designated large portions of the river valley as 'Metropolitan Recreation' land.
- In 1975 City Council directed the City Planning Department to prepare a 'Development Scheme Bylaw' and adopted the main objectives identified in the River Valley Study (1974).
- In 1976 the Province began passing Orders-in-Council applying Restricted Development Area legislation to most of the river valley from Devon to Fort Saskatchewan.
- The 1980 General Municipal Plan reaffirmed principles, guidelines and policies for the preservation of the river valley.
- In 1983 Edmonton City Council directed the Administration to prepare a revised North Saskatchewan River Valley Area Redevelopment Plan.

- In 1985 Edmonton City Council approved the North Saskatchewan River Valley Area Redevelopment Plan Bylaw which established the major portion of the system as an environmental protection area and for use as an urban and natural park. This plan initiated a process for more effective future management of the river valley and ravine system.

4. REGIONAL SIGNIFICANCE

Without the North Saskatchewan River Valley, Edmonton is just another prairie city.

The North Saskatchewan River originates at the Saskatchewan Glacier on the southwest slope of Mt. Saskatchewan (3,333 meters) in the Rocky Mountains. The Baptiste, Nordegg and Brazeau Rivers are major tributaries in the foothills. It enters the Province of Saskatchewan north of Lloydminster and is met by the Battle and South Saskatchewan Rivers before flowing into Lake Winnipeg just southeast of The Pas, Manitoba. The catchment area providing river flow at the Edmonton area is approximately 29,775 square kilometres.

The North Saskatchewan River bisects the City of Edmonton on the southwest - northeast diagonal. The valley is incised 45 to 60 meters below the level of the former glacial Lake Edmonton and within this valley the various levels of river terraces and major meanders have high natural scenic and recreational value.

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 increases the recreation potential to a level rarely found in major metropolitan areas.

Also unique in Edmonton is the natural condition of the North Saskatchewan River Valley and Ravine System. Few other people can boast as can Edmontonians of their river valley. The backdrop it provides emphasizes the downtown core and the natural state is as close to wilderness as any city can speak of within its boundaries. Other river systems in other cities have been subjected to heavy industrial use over the years. The North Saskatchewan River, partially due to the steepness of the slopes and largely due to the farsightedness of Edmonton's City Fathers, has been successful in retaining its 'park like' image. There are few

other cities that can match this record as tested against the critical factor of time.

5. CAPITAL CITY RECREATION PARK - AN ALBERTA HERITAGE

River valleys and ravines are a valuable heritage. It is appropriate that Alberta Heritage Trust Fund dollars be used to protect them and make them accessible to the public.

On April 26, 1974 the Province of Alberta and the City of Edmonton jointly announced the development of a 16 kilometre long urban park (Capital City Recreation Park), financed through the Alberta Heritage Savings Fund. The park begins at the High Level Bridge and extends to Hermitage Park, two kilometres downstream of the Beverly Bridge. This project saw a 1215 hectare portion of the river valley in central and east Edmonton developed and rehabilitated for parkland and recreation use.

The urban park provides for 29 kilometres of paved and 26 kilometres of gravelled trails linked to three major activity centers via four pedestrian bridges across the river, three public use amenity facilities, boat launching and raft recovery, shoreline stabilization and parking. Viewpoints and rest areas were installed at locations where the sweep of the river valley and the city skyline provides a most pleasing panorama. Where grades allowed, sections of the trail system were constructed for use by the disabled.

Development at the three major activity centres included: Rundle Park with an 18-hole par 3 golf course, a dressing room building for the sports field area, fresh water lagoons, a family recreation building and a geological interpretive centre as well as sports fields and picnic areas; Goldbar Park, which includes a maintenance building, a major playground area and picnic facilities, a dressing room building and sports fields; Hermitage Park, which includes a maintenance and public washrooms building, a pond system and picnic facilities.

The City of Edmonton considers itself very fortunate to have had the opportunity to develop 16 kilometres of the 48 kilometres of river valley through the original urban parks program. That legacy of trail and park development is greatly enjoyed and used by Edmontonians. Recent surveys indicated an estimated 1,600,000 people visited the park in 1989.

The development of CCRP has deepened citizen's love and appreciation for the area and it has raised their awareness of what happens in the valley. The result of this increased awareness is the public now recognizes the valley can be easily damaged as well as conserved. Citizens of Edmonton have clearly indicated they want assurance the valley will be protected and subsequently expect development and management to be conducted in an appropriate manner.

B. PLAN PROCESS

1. RESPONSIBILITIES AND DECISION MAKING

Three types of plans will be required to complete river valley and ravine planning. This section concentrates on the first of these plans, the Concept Plan. The North Saskatchewan River Valley and Ravine System Concept Plan has been prepared using the staff and resources of the City of Edmonton, Parks and Recreation Department. This approach was selected as the most acceptable because of the wide variety of experience and expertise existing in the Department. The team assembled for the project was responsible for all aspects of preparation of the Concept Plan including meeting requirements of the Urban Parks Program, Phase II.

In the Concept Plan preparation the responsibility of the planning team was to:

- gather data from relevant sources
- identify issues and concerns
- confirm the views and preferences of Edmontonians
- synthesize information from all sources
- develop publicly supported plans based on this data
- recommend a plan to City Council for consideration

The public role in the development of the Concept Plan was to:

- share concerns and issues with the planning team
- assist in formulating the Vision and Principles
- identify where plans did or did not meet their expectations

The role of City Council was to review, endorse planning processes, provide overall direction and make all decisions related to the philosophy, content and implementation of the plan.

2. PLAN PREPARATION STRUCTURE

On June 26, 1990, City Council granted approval 'to proceed with preparation of a conceptual plan for the North Saskatchewan River Valley and Ravine System to meet the requirements of the Provincial Urban Parks Program, Phase II'.

On August 22, 1990 a process was presented to the Executive Committee for their consideration. That process is illustrated in Figure 1. 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.
- 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 a draft Concept and Management Plan for public review.

3. PLAN PRODUCTS AND OUTPUTS

Products and outputs of each of the three required Plans are shown in Figure 2.

The products of the Concept Plan are:

- 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.
- Criteria for priority setting.
- Identification of future planning processes.

4. PUBLIC INPUT MODEL

Each of the three required plans must contain an appropriate public input process, which is specific to the decisions needed in each plan.

A conceptual model of the public input process is shown in Figure 2. This figure illustrates the relationship of public input to the planning detail required at the Concept, Master and Site Plan levels. Each successive plan builds from the previous plan in an iterative process, refining proposals from general intent to specific detail. Because the planning time-frame is over a three-year period the overall public input process and its products have been designed specifically to minimize the possibility that public expectations of immediate development could be raised prematurely.

In the Concept Plan development the public input was of a broad scope and general nature. The input

was targeted to all Edmontonians for the purpose of confirming a philosophy and collective public vision for the river valley. The draft vision was based on existing policy, recent surveys and studies. The level of planning detail needed was low.

At the Master Plan level scheduled for 1991, planning will concentrate on specific areas and the range of stakeholders will narrow, but the depth of participation will increase. On completion of the Master Plan specific development priorities will be selected and preliminary budgets prepared. It is at this level that specific public expectations will begin to develop. When funding has been secured the priority areas will proceed to the site plan level to ensure that development is closely tied to the final planning stage leading to construction.

At the Site Plan level, it is anticipated the range of stakeholders will narrow to those specifically affected by the proposals while the level of planning detail and depth of public participation will increase.

5. PUBLIC INPUT METHODS

Public input to the Concept Plan was of three types:

The first type, participation information, was derived from the 1988 Provincial survey (Edmonton sample) which created a picture of the types of activities, frequency of participation and barriers to recreation participation perceived by Edmontonians.

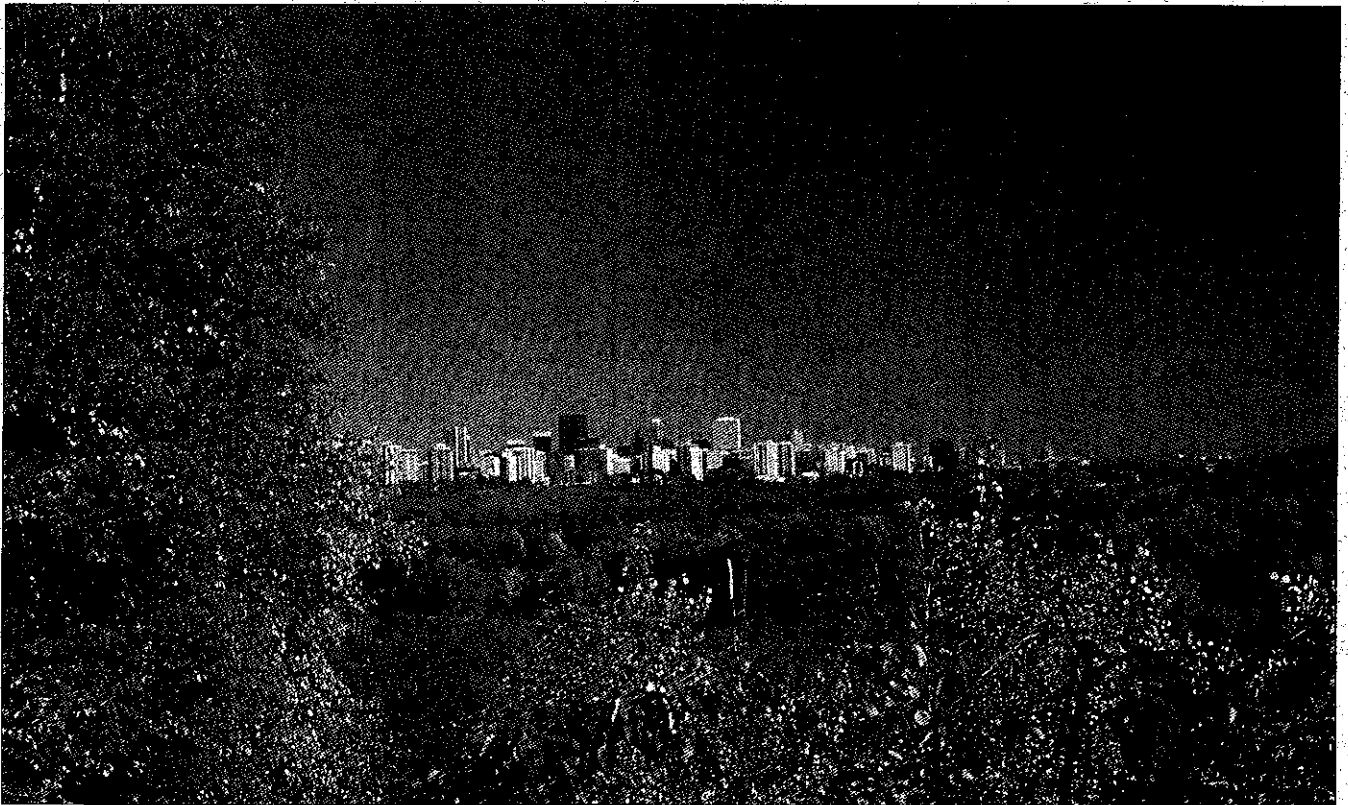
The second type was from the 1989 Leisure Survey which identified relative values Edmontonians placed on selected recreation facilities and opportunities and provided information on public attitudes about the importance of the river valley. These studies are further discussed in Chapter II Section A.

The third type of public input was the River Valley Vision Survey. Information from the two city-wide surveys was combined with policy statements already adopted by City Council to develop a draft vision statement and principles for the North Saskatchewan River Valley and Ravine System. This survey, reproduced in Figure 3, was distributed to all households in Edmonton through the Parks and Recreation Department's Fall Community Program Guide on August 26, 1990. Announcements were placed in the Edmonton Sun, Edmonton Journal and Edmonton Examiner to draw attention to the survey instrument. The survey was again reproduced in the Edmonton Examiner on September 9, 1990 to ensure the best coverage possible of the City-wide target audience.

The project time lines required public input to begin during the summer, normally a time avoided for public participation. To overcome the demands on residents' time the response mechanisms were intentionally designed to be 'user friendly' by providing accessible and convenient options for response. Two telephone response techniques were developed in cooperation with EdTel to provide equal opportunity for touch tone and rotary dial telephone customers. Phone lines were open 24 hours a day, seven days a week for a three week period between August 26 and September 16, 1990. A mail in/drop off response technique was provided for those who preferred. A summary of the response is shown in Figure 4, and further detailed in Chapter II, Section C.

Responses from the survey were used to confirm whether the draft Vision & Principles accurately represented the views of Edmontonians. Comments from the survey were used to identify in greater detail the issues or concerns residents felt about each of the statements. The responses were used to determine whether the statements should be revised and were used to develop draft Program Objectives.

The revised Vision and Principles and Program Objectives were presented to the public at Open Houses on October 15 and 16, 1990. The Open Houses were advertised in the Edmonton Journal, Edmonton Sun and Edmonton Examiner and by mail-out announcement to more than 600 citizens who had requested to be kept informed.



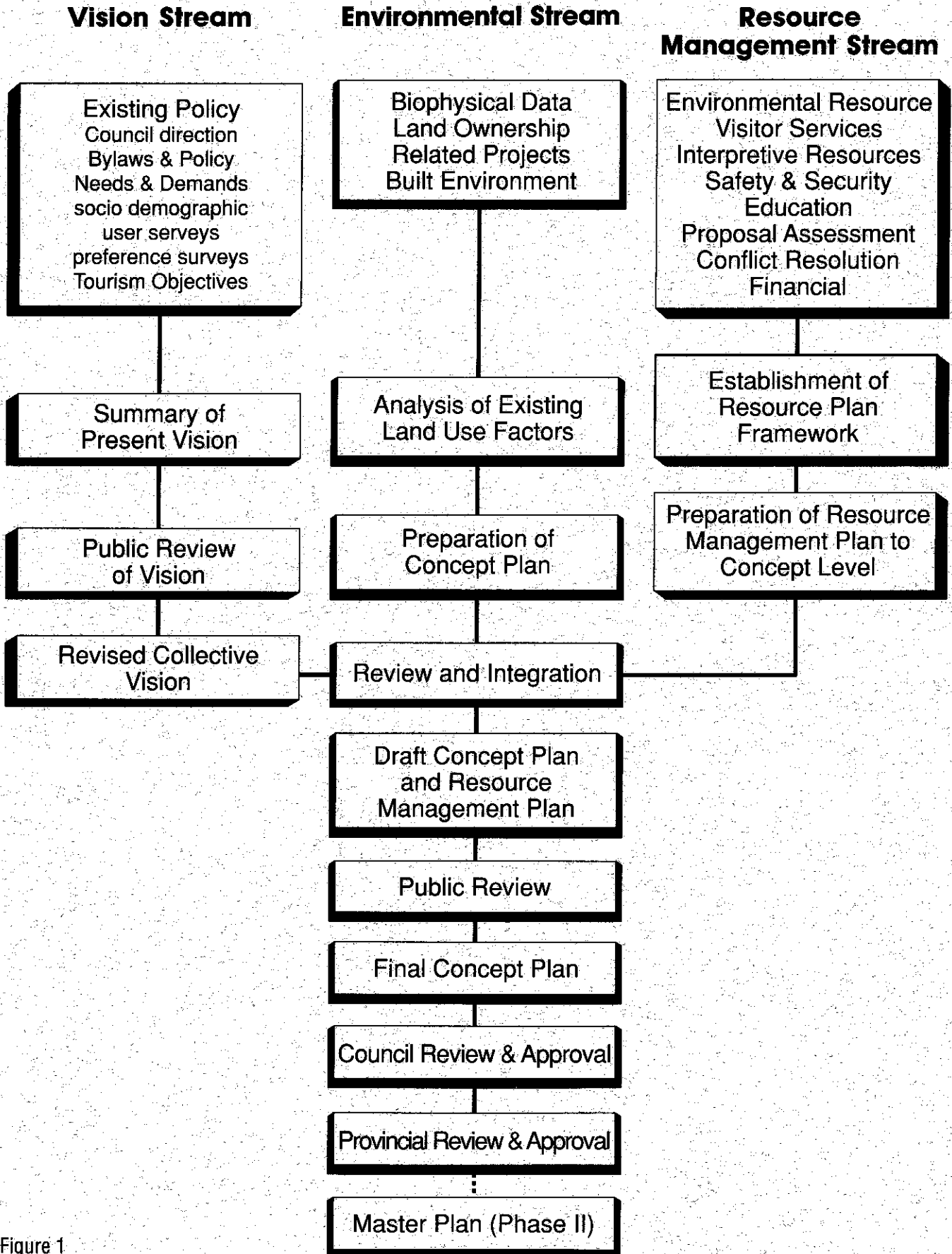
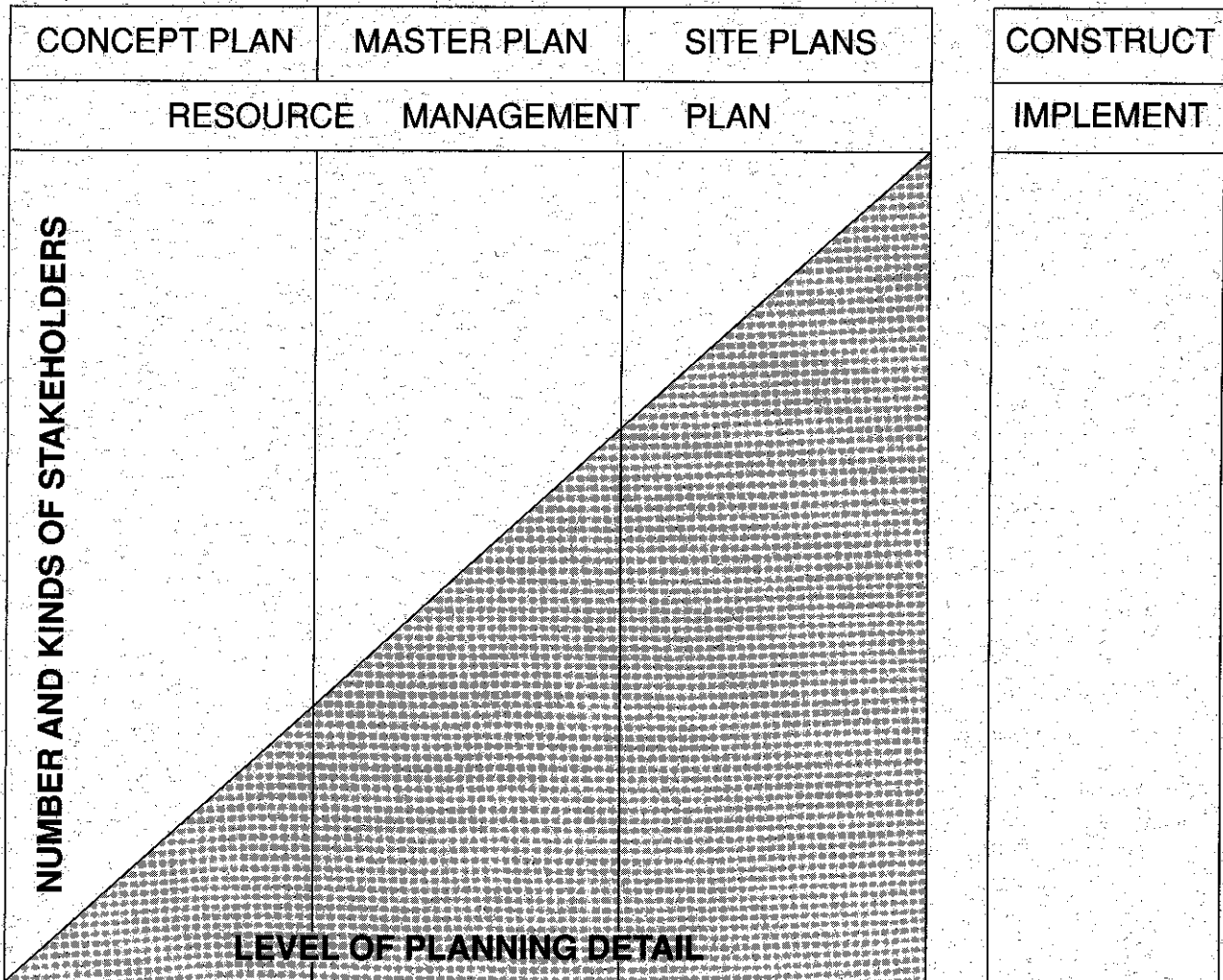


Figure 1

RELATIONSHIP OF PUBLIC INPUT TO PLANNING DETAIL



1990	1991	1992 - 93
PRODUCTS : Program Statement for Whole Valley	Refinement of Program for Specific Areas	Detailed Program for Approved Priorities
Overview of Proposed / Potential Development Opportunities	Selection of Development Alternatives	Detailed Design
Criteria for Priority Setting	Refine Priorities	
Future Planning Processes		

1993 - 99

Figure 2

RIVER VALLEY — VISION SURVEY

Edmonton's most dominant physical feature is the North Saskatchewan River Valley and Ravine System. As the City continues to grow the valley and ravines come under pressure from competing uses (i.e. preservation versus development). It is clear the valley cannot be all things to all people.

During the next year Edmonton Parks and Recreation will be working with the public to develop a plan for the River Valley. This plan will provide

long term direction for the valley's use and care. This is the first of a number of opportunities for the public to become involved in the planning process.

We have developed a "vision" for the future of the valley based on existing policy and recent surveys. We need to know if these statements reflect your vision for the future of the valley and how you feel it should be managed.

To complete this survey follow the instructions below.

VISION STATEMENT:

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

COMMENTS:

RATINGS				
STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
1	2	3	4	5

The following basic principles will be used as a guide to achievement of the vision for the future of the valley:

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 wild life communities and to limit the intrusion of man.

COMMENTS:

1	2	3	4	5
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2. RECREATION:

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

COMMENTS:

1	2	3	4	5
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3. DEVELOPMENT:

(a) New or expanded facilities will be those which enhance recreation opportunities and are compatible with conservation.

COMMENTS:

1	2	3	4	5
---	---	---	---	---

(b) New or expanded facilities will be located in areas which are already disturbed or where environmental impact is low.

COMMENTS:

1	2	3	4	5
---	---	---	---	---

4. TRAILS:

(a) Trails will provide continuous access through the valley.

COMMENTS:

1	2	3	4	5
---	---	---	---	---

(b) Trail width, surface and location will be selected to minimize impact on the environment.

COMMENTS:

1	2	3	4	5
---	---	---	---	---

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.

COMMENTS:

1	2	3	4	5
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ADDITIONAL COMMENTS:

If you wish to be notified of future participation opportunities, please provide your name, address and postal code.

INSTRUCTIONS:

- There are three ways you can respond to this survey. PLEASE CHOOSE ONLY ONE. Telephone lines are available 24 hours a day between Aug. 26 and Sept. 16.
- If you are a "touch-tone" telephone customer, please dial the 493-9000 "Talking Yellow Pages" when requested enter code 5700.
 - If you are a rotary dial telephone customer, please call 491-6000 or 491-6020. Please refer to the questions on this page. State question number and then your answer. For example "Question number one — I strongly agree." You will have 2 minutes to leave your complete message.
 - You may complete the survey and mail/deliver it to any office or facility of Edmonton Parks and Recreation or to Box 2359, Edmonton, Alberta, T5J-2R7.

RIVER VALLEY - VISION SURVEY

Total Respondents - 1527

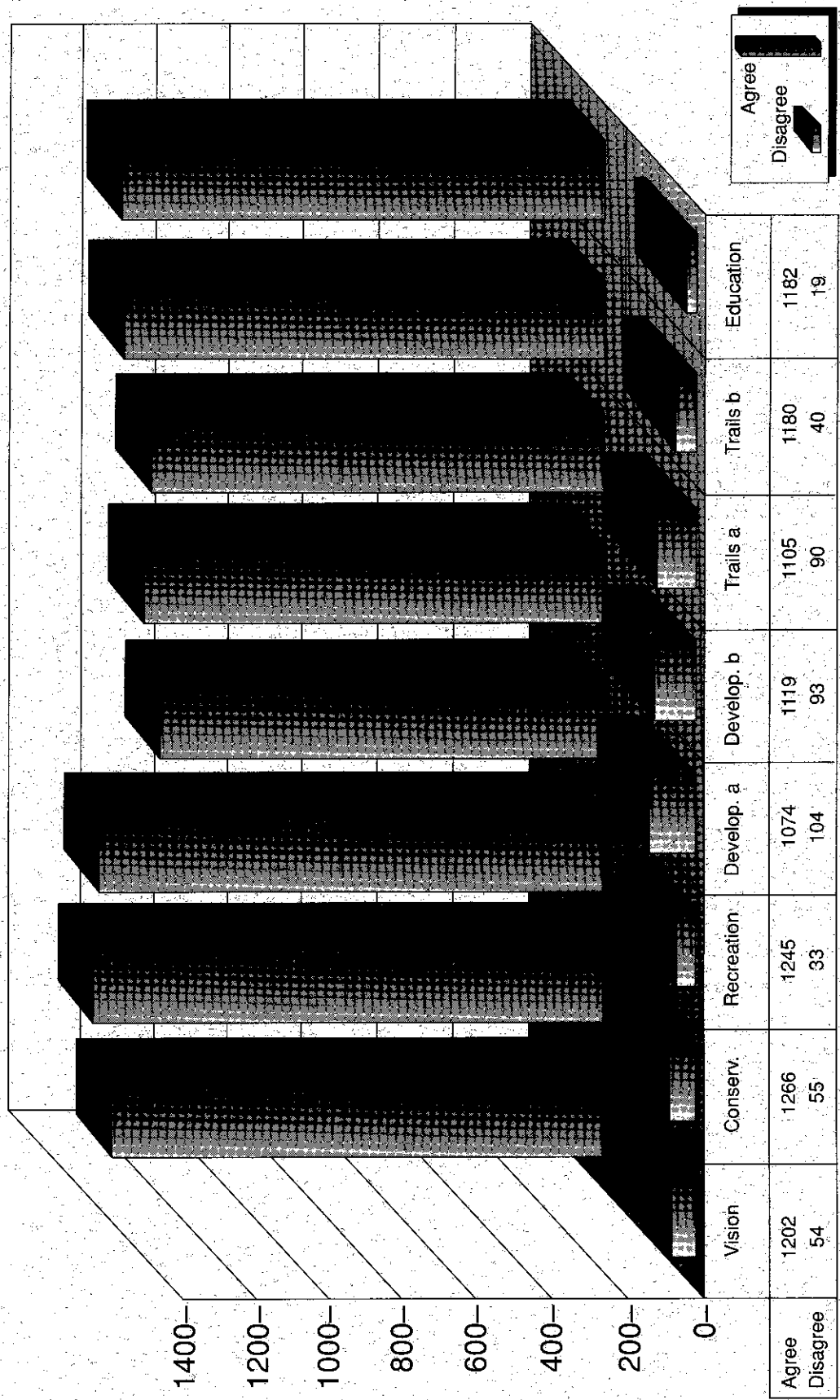
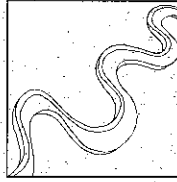


Figure 4

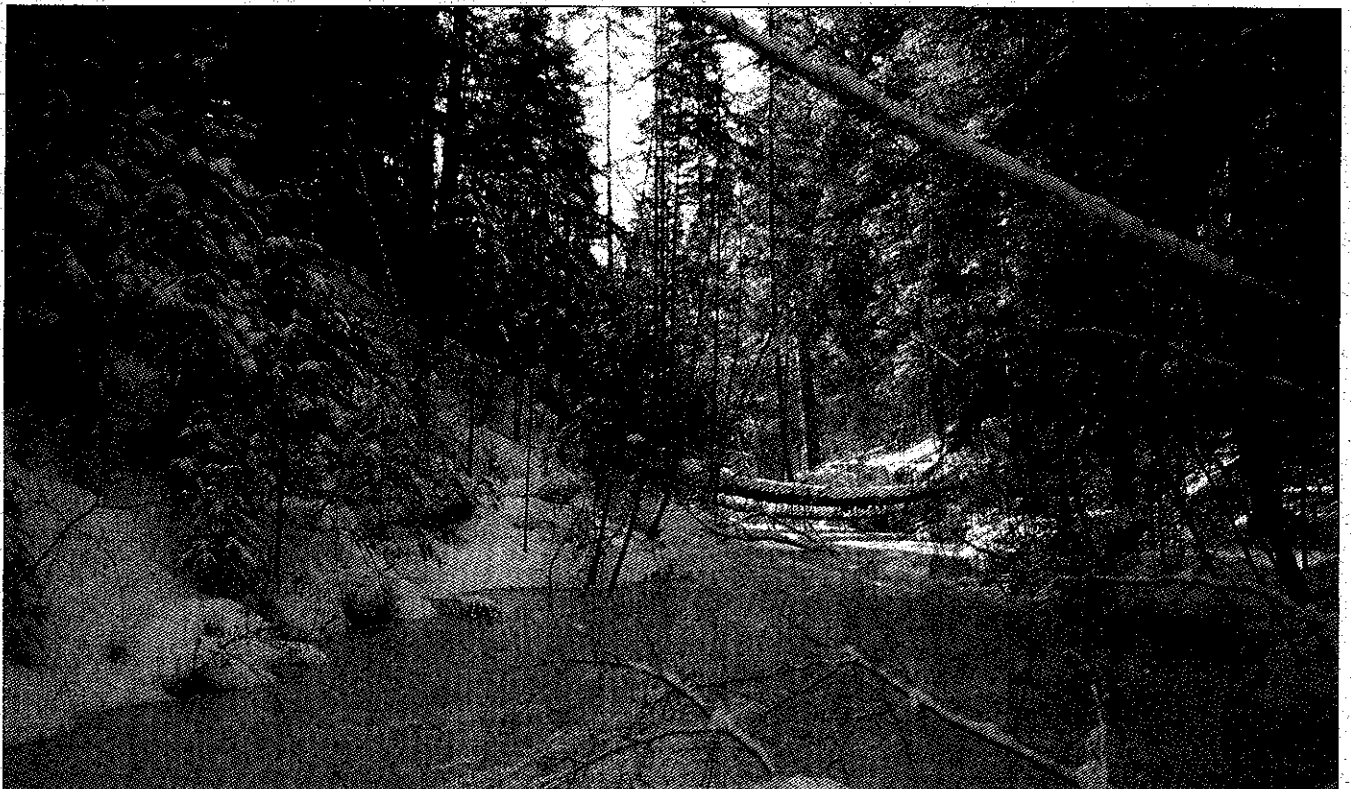
CHAPTER II



Data Analysis

T*THIS chapter summarizes information available which is relevant to the planning of the North Saskatchewan River Valley and Ravine System.*

These data include land based information, social, demographic and economic data, recreation participation and preferences (particularly regarding the river valley), recreation trends and municipal and provincial policy affecting the river valley.



A. EXISTING STUDIES

1. NORTH SASKATCHEWAN RIVER VALLEY BIOPHYSICAL STUDY

In July, 1980 Edmonton Parks and Recreation commissioned the North Saskatchewan River Valley and Ravine System Biophysical Study. This was an initial step in a process for long range planning and management of the river valley and ravines. The purpose of this study was to provide detailed information on the environmental capabilities of the river valley as basis for making planning decisions. The study area comprised 40 kilometres of the river valley and all associated ravines within the 1980 City limits.

Biophysical Study

One of the major products of the study was the development of more than 200 natural resource inventory maps at a scale suitable for planning purposes (1:5000) and a Technical Report of research methods and findings. This included the following:

- Physical Resources: slopes, soils, geology, geomorphology, hydrology.
- Biological Resources: vegetation, wildlife, aquatic fauna.
- Cultural Resources: land use, archaeological/historic.
- Scenic Resources: views, perspectives, observer position.

The data base has provided valued information to a number of City Departments since it was completed in 1981. In the future, to fully utilize and analyze this information, it will be computerized onto the Geographic Base Information System (GBIS). This will permit continued input, manipulation, analysis and speed retrieval. Through the computer use of the inventory maps, information can be overlaid to assess the inherent land use capability of any particular natural resource. For example, site specific maps of vegetation, soils, and wildlife can be combined, analyzed and rated for their tolerance to withstand recreation development/disturbance.

In addition, some elements of the natural resource inventory presently lack site specific detail i.e., vegetation and wildlife inventories. It will be necessary to 'field check' to further update and refine this infor-

mation. Some discussions have taken place with the University of Alberta to use graduate students for this research. As well, a number of other knowledgeable volunteer groups, such as the Edmonton Natural History Club, could help to expand the data over time.

Resource Analysis

In 1981, a technical report was prepared on the capability and suitability of the valley lands for recreation purposes.

This study examined the following:

- existing leisure time values, attitudes and river valley and ravines visitor use data.
- biophysical, historical and other factors affecting capability and suitability of the resource base for parks and recreation related activities.
- land use and environmental factors affecting growth and use of the valley.
- identification and use of resource management units as a means of identifying planning constraints, resource opportunities, developing planning criteria and policies.

The major products of the resource analysis included:

- 128 Recreation Capability and Suitability rating maps at 1:5000 for the following recreation facility and program categories: nature dependent, nature enhanced linear, nature enhanced non-linear, downhill skiing and tobogganing, golf, hang gliding, off road vehicles, and sports fields.
- 16 Resource Planning and Management Units maps.
- 16 Land Use and Environmental Constraints maps.
- 16 Structural Elements maps.
- Technical Report.

A manual resource analysis technique was employed for determining resource capability and suitability, therefore limits were placed on the comprehensiveness of the analysis. With future computerization of information it will be possible to complete a more comprehensive capability/suitability and impact analysis.

In reviewing the criteria employed in capability/suitability analysis certain factors were not examined which are particularly relevant at this time. Current recreation activity preferences and the Vision Survey/Public Open House recently completed by Parks and Recreation indicate little public support for

further development of the river valley and ravines for downhill skiing, golf, off road vehicles and sport fields. The recent river valley survey has helped the Department understand the public's perception of which recreation activities and facilities are suitable or unsuitable within the river valley and ravine system. This will result in updated criteria to assess recreation activity and facility suitability.

2. LAND USE AND THE BUILT ENVIRONMENT

Lands adjacent to the river valley and ravines have always been viewed as prime development areas. Single family developments border large portions of the valley. Closer to the city centre high density housing has been developed. In the northeast, the south edge of the valley contains refineries, industrial uses, gravel extraction and agricultural lands. At the far west and south edges of Edmonton the non-residential uses bordering the valley are agricultural, institutional and recreational i.e., golf courses.

In most areas residential development fronts on to the river valley, separated by a top-of-bank roadway, or walkway. Where private lots directly back on to the valley, some exclusive use of the river bank edge has led to encroachments and public use conflicts. The City now requires developers to provide public access to the top-of-bank with either a roadway or public walkway. These are incorporated into neighbourhood plans at the subdivision stage of development.

There are currently approved plans for urban growth in a number of areas bordering the river valley and ravines. Most of the development is proposed in the southwest and west end of the City and will result in residential infill to the Outer Ring Road.

In the southwest; Riverbend, Terwilligar, Twin Brooks and Blackburne will be developed over the next ten years. These developments will enclose Whitemud and Blackmud ravines and the southwest edge of the river valley to the Outer Ring Road river crossing.

In the west, the West Jasper Place Area Structure Plan is being completed for the neighbourhoods of Wedgewood and Donsdale. This development will fill in the areas between Wolf Willow/Patricia Ravines, Wedgewood Ravine and the Outer Ring Road crossing over Wedgewood Ravine.

Very little development is occurring in the northeast. The north boundary of the Clareview Area

Structure Plan is at 153 Avenue and is presently developed. This boundary coincides with the Outer Ring Road crossing over the river.

3. LAND OWNERSHIP

The City currently owns the majority of lands within the North Saskatchewan River Valley and Ravines system within the developed residential portions of the City. Some exceptions exist where development preceded Environmental Reserve provisions or where specific policies were adopted i.e., the central river valley communities of Rosedale, Cloverdale, Riverdale, Lavigne and Centre Town.

In the remainder of the system, wherever possible, the subdivision land acquisition process will continue. Where major 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 landowners unless there is a requirement for development approval.

In the long term, lands in the river valley and ravine system will come into municipal ownership on subdivision as Environmental Reserve or possibly Municipal Reserve. The timing of acquisition through subdivision is dependent on the plans of private owners. Their plans are dependent on market demand for residential development and economics of land servicing. City projections are that greatest residential development will occur in the West Jasper Place and Riverbend areas followed by Northeast Millwoods 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 alignment and along Whitemud Creek in the same area. Lands in the northeast are anticipated as long term acquisitions through subdivision. Lands along Mill Creek between 34 Street and Highway 14 are expected to subdivide over the next ten years.

4. RELATED PROJECTS

A number of related projects are currently being studied which have a potential impact on the North Saskatchewan River Valley and Ravines System. These include the following:

**Alberta Environment:
North Saskatchewan River Basin Study**

- This study is examining land uses along the river and extends from the headwaters (Rocky Mountains) to the Saskatchewan Border. The study will review public perceptions and propose future policy. Anticipated study completion is 1991.

**City of Edmonton Environmental Services:
Rossdale Intake Relocation**

- This study is reviewing alternatives for relocating the existing water intake for the Rossdale Water Treatment Plant. One alternative is to construct the intake pipe under the proposed river valley trail alignment. Anticipated study completion is 1991.

**City of Edmonton Environmental Services:
South Ring Water Main**

- This study is examining alternatives and impacts of a major water main from the E.L. Smith Water Treatment Plant to south Edmonton. The water line crosses the river and Whitemud/Blackmud Ravines. Anticipated study completion is 1990/91.

**City of Edmonton Transportation Department:
Drainage Master Plan**

- This study will examine Edmonton's future drainage needs and will impact on the overall river drainage basin. Anticipated study completion is 1991.

**City of Edmonton Transportation Department:
LRT Extension to West Edmonton**

- This study will examine alternatives to extend LRT service to west Edmonton. The route is proposed to cross the river valley from some point in southwest Edmonton. Anticipated study completion for the Functional Plan is 1991, for Construction is 2000 - 2005.

**Alberta Transportation/City of Edmonton:
Outer Ring Road Expansion**

- Expansion of the Ring Road will mean major impacts to the river valley. Crossings are proposed over Wedgewood Ravine, the North Saskatchewan River, south of Terwillegar Park, Whitemud Ravine, Blackmud Ravine and again over the North Saskatchewan River at Clover Bar.

**City of Edmonton, Environmental Services:
Clover Bar Landfill Reclamation**

- Upon closure of the Clover Bar landfill site, Environmental Services will reclaim the area to provide for recreation uses. Anticipated completion is 1994.

**City of Edmonton, Transportation Department:
Comprehensive Bicycling Plan**

- This study is examining present problems and barriers to bicycle use in the City. It will develop policy to guide future bicycle route planning and standards and could affect trail development standards in the river valley and ravine system. Anticipated study completion is 1991.

**City of Edmonton, Public Works Department:
Bank Stabilization Study**

- This study is identifying river valley and ravine bank stabilization problems and prioritizing areas for remedial work.

**5. SOCIAL, DEMOGRAPHIC AND
ECONOMIC OVERVIEW**

The following was extracted from data prepared by the City Forecast Committee.

Population and Societal Characteristics

- Edmonton's population is expected to grow to 641,000 by 1995.
- High growth areas will continue in the west and southwest of the City. The areas of Riverbend, West Jasper Place, the northeast area of Millwoods and the Castledown Extension are expected to be the fastest growing areas.
- Aging population is an important trend nationally, but will be less noticeable in Edmonton. The proportion of seniors is expected to increase from 12% to 12.4% by 2000.
- Baby-boomers will continue to exert a strong influence over social and economic life. One-third of the population is presently between the ages of 25 and 44. This age group is creating a baby-boomlet.
- Family size continues to decrease and is expected to average between 2.7 and 3.0 persons by 2001.

- Diversity of family form is a continuing feature of society. Two-parent families have declined; one-parent and non-family households are increasing.
- All age groups will increase in numbers over the next five years except the young adult group (15-24).
- Alberta shows the highest labour force participation in Canada and the highest female labour force participation in the country.
- There is evidence of increasing stress in Canadian society as illustrated by rising crime, drug and alcohol abuse and suicide. People indicate they feel less safe and secure than in the past.

Economic Overview

- Edmonton will follow the Provincial trend of moderately strong growth, between 3% and 4% annually for the period 1990-95.
- Unemployment and inflation rates in Edmonton are expected to be slightly higher than the Provincial average for the period 1990-95.
- It appears more Edmontonians are living below the poverty line.

6. PARTICIPATION AND PREFERENCES

Several studies are available to construct a picture of leisure activity preferences, attitudes and participation. This information helped to clarify what types of activities would be most desirable and publicly acceptable related to river valley recreation. These studies are discussed briefly in this section and some themes or trends are drawn from them.

1988 General Recreation Survey - Edmonton

This survey was conducted by Alberta Recreation and Parks throughout the Province. The Edmonton sample is a valid sample for the City. Both participation of respondents and favourite activities are relevant to the North Saskatchewan River Valley and Ravine System planning.

These data show the highest participation in:

- | | |
|---|-------|
| • Walking for pleasure | 89.4% |
| • Driving for pleasure | 72.5% |
| • Visiting a museum, live theatre, art gallery, etc. (not movies) | 68.8% |
| • Craft or hobby | 66.1% |

- | | |
|----------------------------|-------|
| • Gardening | 65.0% |
| • Bicycling | 61.9% |
| • Swimming | 61.4% |
| • Sports spectators | 61.0% |
| • Attend education courses | 48.2% |
| • Ice skating (not hockey) | 46.8% |

Adult respondents listed their three favourite recreation activities. The weighted ranking included seventy-two activities of which the top ten are:

1. Walking for pleasure
2. Bicycling
3. Camping
4. Swimming
5. Golf
6. Fishing
7. Crafts/hobbies
8. Reading books/magazines
9. Gardening
10. Creative activities

Other activities in the top thirty which commonly occur in the river valley and ravine system included skiing, jogging and running, picnics, ice skating, boating and horseback riding.

Pleasure, relaxation, physical health and exercise, enjoyment of nature and doing something different from work were the five most important motivations for participation identified.

1989 Leisure Survey

This study was conducted by Edmonton Parks and Recreation to determine citizen attitudes and preferences concerning Departmental services and in particular to measure perceptions of the relative importance of services and facilities.

The most frequent activities participated in included:

- | | |
|------------------------------|-------|
| • Aquatics | 36.4% |
| • Outdoor winter sports | 35.6% |
| • Biking and walking | 29.1% |
| • Outdoor summer sports | 26.4% |
| • Picnicking and park visits | 21.5% |

- 63% of respondents rated the river valley parks and trails as the most important city-wide facility; 29% listed tourist facilities (Space and Sciences, the Valley Zoo, Fort Edmonton and Muttart) as the most important city-wide facilities.

- 70% rated local parks as the most important community facility; swimming rated 20%, ice facilities 10%.
- On average Edmontonians would choose to spend forty-six cents (.46) of every dollar on river valley and ravine development and fifty-four cents (.54) on community park development.
- Opinion was nearly unanimous that natural trails, multi-purpose paved trails, picnic and rest areas were important components of river valley and ravine development.
- 38% of respondents felt there were insufficient biking, walking and cycling trails; 46% indicated there were sufficient trails. Trail users tended to feel there were insufficient trails, non-users tended to feel there were enough trails.
- 53% indicated a preference for multi-use paved trails; 37% preferred natural trails. Families with children tended to prefer paved trails.

River Valley Trail User Study

The purpose of this study, conducted in 1988, 1989 and 1990, was to determine the number and type of trail users and whether trails were appropriately designed and maintained. Data presented is from the 1989 survey. Both observation techniques and questionnaires were used.

- Total 1989 trail visits were estimated at 400,000. Cyclists represented 40%; walkers represented 27%. The remaining 33% was a combination of family visits, jogging, nature observation, picnicking, dog walking and horseback riding.
- Afternoons and evenings were peak trail use times.
- Walking, jogging and nature observation activities were relatively constant through the week. Cycling increased dramatically on weekends. Overall, Sunday was the highest trail use day.
- In proportion to their numbers in the city population, adults and school age children were slightly over represented as trail users.
- Teens, pre-schoolers and seniors were slightly under-represented as trail users.
- Although males and females are almost equally represented in the city population; two thirds of trail users were male, one third female.
- Cycling use showed the greatest increase, up 43% over 1988 data; walking (19%) and family use (30%) increased in 1989.

A satisfaction survey of trail users in 1989 indicated:

- Users were reasonably well satisfied with trail location, access, maintenance, trail safety, surface, signage and length. Weakest ratings of satisfaction were with shower facilities, washroom, and personal safety aspects of trails.
- Male users rated personal safety satisfaction very high; female users rated it very low.
- 58% of respondents supported mountain bike use on unpaved trails.

7. TRENDS AFFECTING RECREATION AND IMPLICATIONS

Analysis of survey data, social, economic and demographic data and major themes in Canadian society indicates these implications for river valley and ravine system planning.

Environmental concerns:

A growing consensus for action on environmental issues at personal, business and governmental levels.

Important concerns are ozone depletion, air quality, water quality, solid waste reduction and disposal, forest destruction and global warming.

Implications of this trend are:

- increased demand for environmental impact assessment.
- demand for less consumptive recreational activities.
- demand for natural spaces; restoration and preservation of natural areas.
- demand to clean up waste and pollution of water, air and land.
- increased demand for information on and alternatives to chemical pesticides, herbicides and fertilizers.
- demand for nature oriented experiences.

Health and well being concerns:

Concern for environmental effects on health, health care cost, and for personal quality of life.

Implications of this trend are:

- personal responsibility for health will be emphasized.
- focus on illness prevention will affect motivation and choice of recreation activities.

Social and economic concerns:

Social stresses of various types (safety, economic security, family and work related pressures) are concerns of society.

Implications of this concern are:

- continued uneasiness over personal safety in park and trail areas.
- recreation and spare time activities will serve as a source of fulfilment in many people's lives, providing challenge and opportunities for learning and mastery of skills.
- demand for recreation that is home-based or easily accessible and flexible to people's schedules and amount of free time.
- recreational spending could suffer during poor economic conditions, emphasizing low cost or tax-supported recreation.
- continued demand for high quality experiences.
- increasing importance of tourism to the economy.

B. EXISTING POLICY FRAMEWORK

1. PROVINCIAL GOALS

The City of Edmonton is working closely with the Province of Alberta to achieve the aims of the Provincial Urban Parks Program.

Urban Parks Program Goal

The purpose of developing urban parks is the establishment of significant areas of open space to ensure urban populations have easy access to natural environments and the development of these areas to enable their sustained and unimpaired use for outdoor recreation.

Objectives

- to provide a variety of recreation opportunities;
- to allow people of all income groups to participate in these opportunities;
- to have easy accessibility to surrounding urban areas;
- to preserve natural landscape features and provide recreational facilities in harmony with these features.

2. MUNICIPAL POLICY

The purpose of this section is to briefly describe the municipal policy impacting the North Saskatchewan River Valley. These documents should be reviewed for additional details:

Edmonton General Municipal Plan (Bylaw 6000)

The G.M.P. is the most comprehensive and far reaching document approved by Council. It provides direction from which all other plans are derived.

Volume I of the G.M.P. has the most direct impact upon development in the North Saskatchewan River Valley: Components 10 (Parks and Recreation), 11 (River Valley) and 12 (Natural Environment).

Volume II also contains important information pertinent to this study: Policy Reports #10 (Parks and the River Valley) and 11 (Natural Environment).

North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188).

The purpose of the NSRV ARP is to protect the North Saskatchewan River Valley and Ravine System as part of Edmonton's valuable open space heritage. It establishes the principles for future implementation plans and programmes for park development and the retention of the designated residential areas of Rossdale and Cloverdale.

The ARP adopted by Council in 1985 is pertinent to this study in that it reflects current city policy.

The major goals of the North Saskatchewan River Valley Area Redevelopment Plan are:

- to ensure preservation of the natural character and environment of the North Saskatchewan River Valley and its Ravine System.
- to establish a public metropolitan recreation area.
- to provide the opportunity for recreational, aesthetic and cultural activities in the Plan area for the benefit of Edmontonians and visitors of Edmonton.
- to ensure the retention of enhancement of the Rossdale and Cloverdale communities in the River Valley.

The remainder of the NSRV ARP establishes a number of objectives and policies including:

Parkland Development

- encourage water oriented modes of transportation (2.3.5).
- conserve archaeological, palaeontological, architectural and historic resources (2.3.6).
- policy 3.2.1 establishes Natural Conservation Areas to manage significant vegetation, wildlife, waterfowl and other unique natural features.
- policy 3.2.5. establishes 'viewpoint parks'.
- policy 3.2.6. promotes compatible commercial development (eg. cafes, restaurants, bicycle rentals).
- policy 3.2.7 allows the city to establish Environmental Reserves.
- policy 3.2.10 promotes a trail system as the major means for movement in the valley (bicycle, cross-country, and equestrian trails mentioned).

Environmental Protection

- the entire River Valley and Ravine System is established as an environmental protection area (objective 2.4.1.).

Transportation

- only direct crossings permitted (policy 3.4.1).
- environmental impact assessment screening required (policy 3.4.2).

Major Facility and Natural Resource Development

- prohibit utility corridors and rights of way except for direct river crossings.
- all proposed developments require an EIA (policy 3.5.3).

Agricultural Land Use.

- allowed to continue.

Residential Land Use.

- existing residential development is permitted. New lots permitted only in the central area.

Central Area Land Use

- communities of Rossdale and Cloverdale are recognized.

Environmental Impact Assessment Process (Bylaw 7188)

The North Saskatchewan River Valley ARP (Bylaw 7188), Policy 3.3.3. requires that an environmental impact screening and assessment report be prepared for all public development and development on public land. The process is outlined as Schedule D to Bylaw 7188.

This process is intended to ensure that the objectives and policies relating to environmental protection and land use planning goals in the North Saskatchewan River Valley Area Redevelopment Plan are achieved.

The following factors are examined when assessing the potential impacts:

- hydrology
- geology/geomorphology
- vegetation/wildlife
- soils

- noise/odour/visual
- historical/archaeological
- surrounding land use
- social impacts

The screening and review of Environmental Impact Assessments is co-ordinated by the Planning and Development Department. Final approval is from City Council.

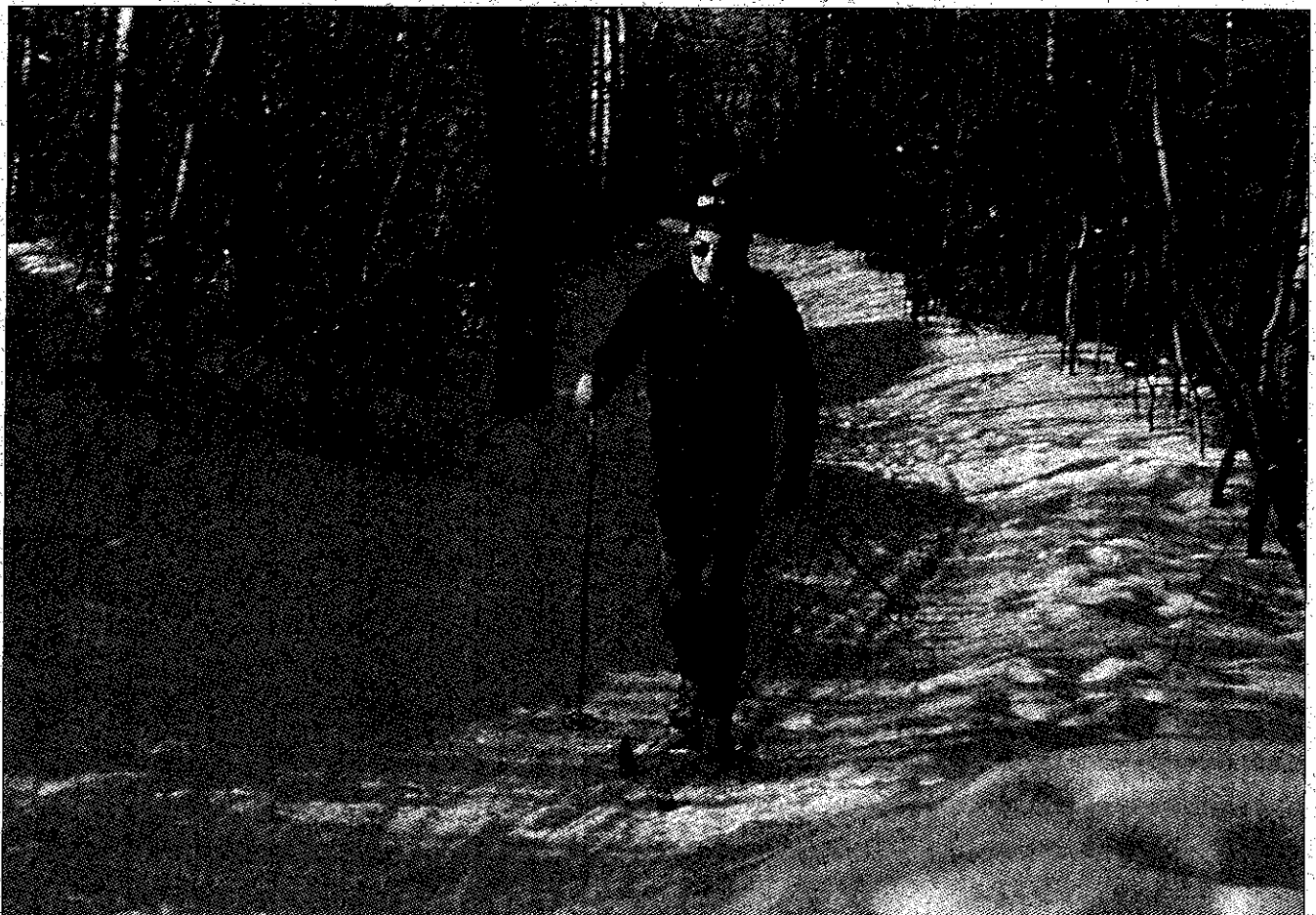
Top of Bank Roadway Policy

This policy was originally adopted by Council in 1970 and was again approved through resolution as part of the NSRV ARP in 1985. The purpose of this policy is:

- To ensure the provision of an open space between the North Saskatchewan River Valley and Ravine System and urban development.
- To provide public access to the North Saskatchewan River Valley and Ravine System.

These guidelines govern the actions of the subdivision approving authority (Municipal Planning Commission) in dealing with the subdivision of land abutting the North Saskatchewan River Valley Area Redevelopment Plan boundary.

The policy requires developers to provide a top-of-bank roadway or public walkway between the geographic top-of-bank and development. A number of criteria exist in the policy which are reviewed to determine whether a top-of-bank roadway is required. A minimum setback of 7.5 meters (25 feet) is always provided as open space adjacent to the top-of-bank; a greater setback may be required where slope instability is identified.



C. ANALYSIS OF PUBLIC INPUT

1. VISION SURVEY COMMENTS AND RECOMMENDATIONS

Of the 1527 vision survey respondents approximately 25% made additional comments. These have been summarized and grouped into the following categories:

- preservation and conservation of river valley vegetation and wildlife.

- development of additional open space areas.
- safety and security of users.
- trails system issues, cleanup of valley.
- education of users.
- the provision of recreation opportunities.

The categories have been evaluated and ranked and the following recommendations are incorporated in the plan.

ISSUE/DISCUSSION	ACTION/RECOMMENDATION
Preservation & conservation of river valley vegetation & wildlife	
<ul style="list-style-type: none"> • maintain natural areas • keep areas undisturbed • repair disturbed areas • maintain as much vegetation as possible 	<ul style="list-style-type: none"> - limit development to disturbed areas. - development to be compatible with conservation. - reclamation plans required. - City tree policy requires compensation for all damaged or destroyed trees.
<ul style="list-style-type: none"> • preserve and limit intrusion into wildlife habitats 	<ul style="list-style-type: none"> - identify habitat areas. - introduce zones if applicable. - limit permitted activities. - monitor and control users.
<ul style="list-style-type: none"> • distinguish different zones in the river valley as high or low activity zones 	<ul style="list-style-type: none"> - zones in Resource Management Plan. - activities should relate to zones.
<ul style="list-style-type: none"> • conservation highest priority vs. recreation highest priority 	<ul style="list-style-type: none"> - detailed planning stage to reach acceptable balance.
Development of additional areas/facilities	
<ul style="list-style-type: none"> • small developments which blend in with natural setting 	<ul style="list-style-type: none"> - planning principle of development only if compatible with conservation. - details will be worked out at Master Plan level.
<ul style="list-style-type: none"> • limit development of large facilities 	<ul style="list-style-type: none"> - Bylaw 7188 limits development. - development must conform to Vision statement or Council approved Master Plan.
<ul style="list-style-type: none"> • no new commercial/residential 	<ul style="list-style-type: none"> - Bylaw 7188 limits development areas. - management zones identify types of future development.
<ul style="list-style-type: none"> • no development at all 	<ul style="list-style-type: none"> - use will continue, must recognize this and effectively plan/manage where development is suitable or not.

ISSUE/DISCUSSION	ACTION/RECOMMENDATION
• minimum development	- development according to appropriate management zones (Master Plan level).
• only in disturbed areas	- Planning Principle # 2.
• accessible to all users	- Program Objective # 1.
• improve access to river valley	- Program Objective #2.
• spread out development to avoid congestion	- extend facilities in river valley as proposed in concept plan. - examine ways to deal with overused areas. - avoid additional development in existing extensive use areas. - avoid overdevelopment of existing parks.
• preserve existing river valley communities	- River Valley Bylaw (7188) identifies residential communities. - Area Redevelopment Plans have been approved by Council.
• valley owned by public	- continue to acquire ER lands, obtain easement, etc.
Safety & security of river valley users.	
• information signs, telephone	- functions of Resource Management Plan. - deal with locations at Master Plan stage.
• personal safety • design issues (grades and narrow corners, on trails)	- deal with at Master Plan level.
• control speed of bikes	- monitoring/enforcement of bylaws. - education programs.
• trail patrols • horse patrols	- functions of Resource Management Plan. Need to legitimize responsible agencies, i.e., Venturers, more Police Dept. funds/Bylaw Enforcement.
• monitor users	- system of evaluation required.
• security of assets • control vandalism	- review enforcement and education programs.

ISSUE/DISCUSSION	ACTION/RECOMMENDATION
Trails system issues	
• separate bike/walking trails	- Master Plan level.
• natural trails	- management zones specify what is appropriate. - details at Master Plan level.
• expand the trail system	- proposed in Concept Plan.
• trails for multi-use	- Program Objectives # 1.
• keep trails localized within ravines	- detail in Master Plan. - river valley should be available to City wide users.
• paved trails	- details in Master Plan.
• develop on river edge to preserve natural areas	- as identified in Concept Plan. - details in Master Plan.
• no trail development	- development has been strongly supported in Vision Survey.
• bicycle freeway throughout City	- will work with Transportation Department.
• barrier free design	- Program Objective # 1.
• develop trails to west end	- proposed in Concept Plan.
Cleanup the river valley	
• garbage	- maintenance function of Resource Management Plan.
• river pollution	- City will work with Alberta Environment to address this issue.
Need to educate users	
• to reduce vandalism, misuse and garbage • increase programs & information services • childrens programs through school system • interpretation of nature and history of river valley	- develop strategy for education programs in river valley. - Resource Management plan ties into safety/security function. - continue to investigate program improvements.

ISSUE/DISCUSSION	ACTION/RECOMMENDATION
Provision of recreation opportunities	
<ul style="list-style-type: none"> • compatible with the natural environment 	<ul style="list-style-type: none"> - management zones have identified appropriate level of activities.
<ul style="list-style-type: none"> • provide additional opportunities 	<ul style="list-style-type: none"> - Concept Plan proposes additional areas for recreation.
<ul style="list-style-type: none"> • balance between protection and recreation opportunities 	<ul style="list-style-type: none"> - specifics to be resolved at Master Plan level. - Program Objective # 2.
<ul style="list-style-type: none"> • variety of opportunities • preference for: walking/hiking; cycling; interpretive and nature programs; horseback riding; x-country skiing; canoeing 	<ul style="list-style-type: none"> - specifics to be identified in Master Plan. - management zones identify appropriate activities.

2. OPEN HOUSE COMMENTS

The majority of the comments received at the Open House on October 15 and 16, 1990 were site specific and will not be addressed at this level. These issues will be dealt with at the Master Plan/Site Plan level. Of the comments received, the following trends emerged:

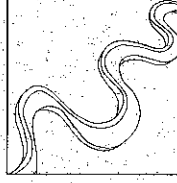
- strong support for preservation of the river valley for future generations; green spaces; protect natural areas; more preservation zones; protection legislation required.
- keep extensive use zones to a minimum.
- river valley and ravines should have connected bike trails; need to keep safety in mind on multi-use trails; reduce conflicts between users; reduce speed of bike traffic; minimize paved trails.
- motorized recreation vehicles (ATV's/snowmobiles) are not desirable in the river valley.
- Resource Management Plan should review maintenance practices.

As a result of the comments received, the following is proposed:

- a further refinement of the Management Zones map; to provide some greater level of detail at the Master Plan level.
- Vision and Principles to remain as stated.
- continue to analyze municipal/provincial legislative controls to identify improvements (possibly through an Environmental Task Force). Ensure City departments and City Council are informed of citizen views on preservation legislation.
- review connections, surface and width in the river valley trail plan and Comprehensive Bicycle Plan. Educational and awareness programs will be considered.
- recreational motorized vehicles will not be allowed.
- the public will be further surveyed to obtain more input on perception of what activities are appropriate to each management zone.



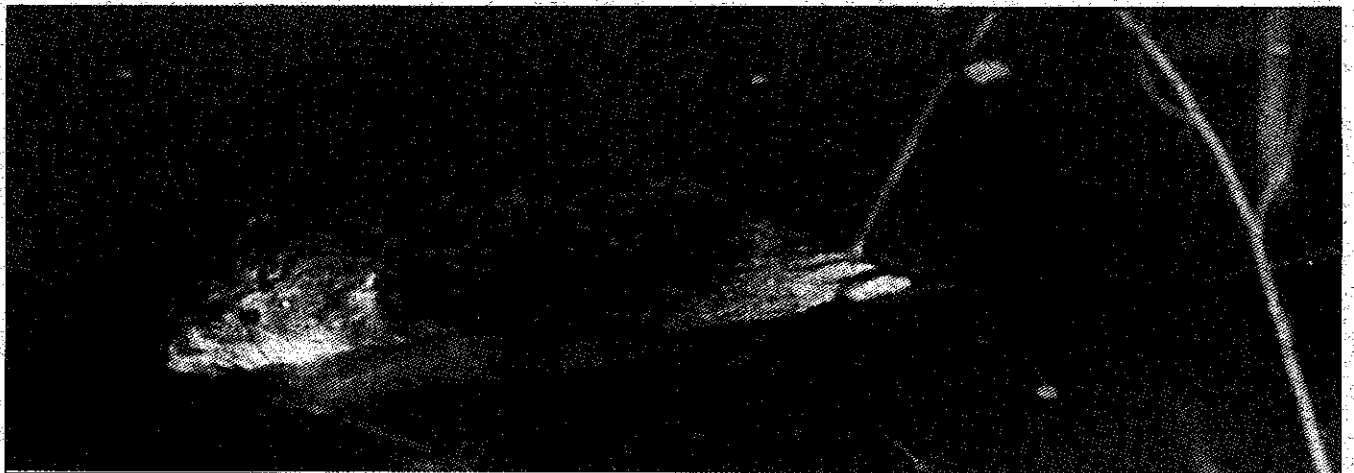
CHAPTER III



Planning and Management Policies

IN 1907 Frederick Todd envisioned a river valley that would provide the citizens of Edmonton with opportunities to enjoy and appreciate the natural aesthetic qualities of the area for generations to come. Since that time the human pressure exerted on the river valley has challenged the custodians of the area with the problem of balancing the need to preserve the environmental integrity inherent in the river valley with the need to provide citizens with an opportunity for meaningful recreation. It is clear the valley cannot be all things to all people.

In 1990 the citizens of Edmonton continued to build on Todd's vision with an expression of their own vision. That vision and its basic principles are recommended to provide the long term direction for the valley's use and care.



A. PUBLICLY SUPPORTED 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 tranquility 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.

B. PROGRAM STATEMENT

Following the hierarchical direction set down by the Vision Statement, the public on October 15 and 16, 1990, reviewed and amended the Conceptual Program Statement for the river valley system:

1.0 DISABLED

To take an 'integrated' approach to planning to promote accessibility for everyone regardless of age or mobility without major alterations to site or without altering the intent of the experience.

- *design to include widest cross-section of the public.*
 - consider ramps instead of steps.
 - strategic location of amenities.
 - emphasize barrier free design rather than developing separate trails.
- *provide less mobile persons with full range of options.*
 - opportunity for equal choice.
 - disabled, seniors and children.
- *design modifications*
 - the extent of physical accessibility will be based on the degree to which modifications at the particular site or facility are required.

2.0 MAJOR EMPHASIS

With the exception of identified park nodes, to 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.

- *a linear park system linked through a series of paths, trails and open space.*
 - major emphasis on continuous trail development.
 - trails not necessarily on both sides of the river.
 - trails interconnected by pedestrian bridges.
 - frequent access to main trails and parks from adjacent neighbourhoods.
 - provide parking lots at major access points.
 - encourage accessibility by good bus service.
 - emphasis on river valley being used by whole city.

- *a natural park environment*
 - reforestation of denuded areas.
 - identify and preserve 'special areas'.
 - restrict some areas.
 - block off and restore unnecessary footpaths.
- *a stewardship of protection . . . balancing open space conservation and recreation development.*
 - priority # 1 - conservation.
 - priority # 2 - recreation.
 - recreation limited to 'tranquil' activities.
- *network other areas and facilities to the valley, but don't develop more facilities in valley.*
 - linkages to trail system/urban park systems of adjacent municipalities (regional trail system).
 - linkages to other parks/recreational facilities.

3.0 PARK DEVELOPMENT

3.1 To complete program statements for the future development of five major parks:

- *Hermitage Park*
 - a nature oriented outdoor recreation park which creates a natural preserve area and an opportunity for pond life appreciation, bird watching, wildlife observation, hiking, fishing, introduction to flatwater canoeing, snowshoeing, social skating and picnicking.
- *Buena Vista Park*
 - a pedestrian oriented nature park designed for informal recreational use and picnicking.
- *Terwillegar Park*
 - a water-based, nature oriented park which creates a natural preserve area and re-establishes a viable ecology by utilizing existing and restored resources. Designed for pond life appreciation, bird watching, wildlife observation, hiking, fishing, boat launching, introduction to flatwater canoeing, snowshoeing, social skating and picnicking. Potential for relocation of the John Janzen Nature Centre.
- *Big Island*
 - a water-based, nature oriented park situated on land subject to frequent flooding. Access will

be limited to bicycles, pedestrians and boats. Designed for pond life appreciation, bird watching, wildlife observation, hiking, fishing, boat launching, picnicking, snowshoeing and cross-country skiing.

- *Twin Brooks Park*

- a normal district level park designed to meet the needs of communities adjacent to Blackmud/Whitemud Ravine. Design program will be developed between Department and adjacent communities. Significant opportunity exists to link Twin Brooks Park to the Whitemud Ravine Nature Reserve.

3.2 To implement existing plans for Whitemud Creek and Jackie Parker Recreation Area/Upper Mill Creek.

3.3 To investigate the potential for development of conceptual program statements for Horsehills, Clover Bar, and remaining ravine lands.

4.0 TOURISM

To work with the Edmonton Tourism Committee to identify projects which would enhance Edmonton's tourism marketing position.

- projects must be consistent with 'Vision'.
- shared responsibility for planning, developing, financing and operating.
- completion of project at Ft. Edmonton, Zoo, Muttart Conservatory.
- riverboat operation.
- radial railway (streetcar) between Ft. Edmonton and Buena Vista.

5.0 EXISTING FACILITIES

To limit the geographic size of existing major facilities located in the valley to current boundaries as defined by existing master plans.

- Fort Edmonton, Valley Zoo, Kinsmen Sport Centre, Muttart Conservatory, Whitemud Equine Centre, ski hills, campgrounds, golf courses and other leased facilities.

6.0 LAND ACQUISITION

To limit cost of parkland acquisition.

- identify lands essential to trail development.
- negotiate long term easement agreements in preference to acquisition.

7.0 RESOURCE MANAGEMENT PLAN

7.1 To develop a Resource Management Plan to ensure the long term objectives of the Vision and Principles are realized.

- co-ordinate and integrate management functions.

7.2 To work with the Province and other City departments to complete river water quality studies and identify initiatives leading to improved water quality.

7.3 To work with other government and City departments to identify areas of special environmental significance or sensitivity within the river valley and ravine system.

8.0 OTHER ACCESS ISSUES

To study access potential of:

- *Transportation/Utility corridor lands, with special attention to river and ravine crossings.*
- *residential areas of north Edmonton.*

C. RESOURCE MANAGEMENT PLAN

1. A PLAN FOR THE FUTURE

The publicly supported Vision Statement is the underlying motivation for governing the future management of the river valley. Recognizing the demands placed on the river valley's natural resources, it is important to be aware of the difficulties facing the City in attempting to fulfill this vision. The river valley is identified by both natural and urban characteristics. Those associated with the natural aspects have wildlife, vegetation, biophysical, historical, archaeological and cultural origins while those associated with the urban aspects of the river valley relate to access and linkage of trails and the relationship of these to pedestrians, bicyclists, horseback riders, skiers, vehicles, parking and transit. The Resource Management Plan will describe the characteristics of these two factors through the use of management zones and will provide a framework from which decisions concerning urban and natural system interaction can be made. The Resource Management Plan will contain the guiding principles and the foundation for resolving conflict related to both use and conservation of the river valley.

2. MANAGEMENT ZONES

The river valley and its associated ravines is a complex collection of ecosystems that range from areas virtually undisturbed and natural to areas that have been extensively altered or developed. These areas represent varying degrees of sensitivity towards accommodating and sustaining recreation. In order to highlight the opportunities and constraints of each of these areas the river valley will be described in terms of Management Zones. The zones have been initially defined as **Preservation Zone, Conservation Zone and Extensive Use Zone** based on a preliminary visual analysis of the river valley. It may be necessary to further define the zones or add new zones as more detailed information becomes available. A brief description of the zones follows:

- **Preservation** is defined as a process used to restrict an area for the protection of natural resources. The **Preservation Zone** is characterized by mini-

imum disturbance, leaving native vegetation and wildlife habitat intact. Management practises will include no development, no routine maintenance, periodic garbage cleanup, restricted wildlife control (only when ecological balance is threatened), only emergency safety and security services. Human intrusion will not be encouraged. This zone could include areas which are very steep and/or unstable and areas of unique characteristics such as sensitive or unusual habitats, geological features or cultural remains. Examples of activities which may be included are: canoeing/kayaking, walking, jogging, nature study observation, photography.

- **Conservation** is defined as a process used to manage the interaction of natural resources and people so as to prevent exploitation, destruction or neglect. The **Conservation Zone** is characterized by some human disturbance; considerable native vegetation and wildlife habitat remain intact. Management practises will include development limited to trails, routine garbage pick up and trail edge maintenance, limited wildlife control, some habitat restoration and some safety and security services. Recreation will be limited to trail based activities. Examples of activities which may be included are: snowshoeing, X-country skiing, canoeing/kayaking; orienteering, photography, rowing, fishing, bicycling, walking, jogging, nature study observation, horseback riding.
- **Extensive Use Zones** are characterized by substantial facility development and high accessibility to people, i.e., major parks and facilities. Management practises will include high levels of daily maintenance and full safety and security services. This area has a wide range of recreational activities. Preservation and Conservation principles will apply where it is deemed necessary or possible. Recreation could include high activity areas such as facility operation, programs, interpretive displays and information centers.

3. MANAGEMENT FRAMEWORK

The five management functions identified as essential to effectively integrate utilization with preservation:

- Recreational, Educational, Interpretive and Visitor Services.
- Development Policies and Practices.
- Maintenance Policies and Practices.

- Safety and Security Services.
- Administration.

For the Resource Management Plan to operate effectively these major functions must be integrated where decisions concerning the river valley are made. This will require a collective effort on the part of all interested publics, non-profit organizations, private organizations, City of Edmonton departments and other agencies or levels of government.

Recreational, Educational, Interpretive and Visitor Services

Recreational, educational, interpretive and visitor services will be provided to develop awareness of and responsibility for river valley historical, archaeological, cultural, wildlife and vegetative resources.

Development Policies and Practices

Proposed recreation land uses will be reviewed to ensure that if development is deemed necessary or desirable it will be compatible with the preservation and conservation goals of the river valley and will be accomplished in a way that minimizes the environmental impact.

Maintenance Policies and Practices

Maintenance will be provided to defined 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 i.e., forest recreation, environmental education and wildlife habitat.

Safety and Security Services

The public, volunteer organizations, Parks and Recreation, the Police and Fire Departments will work together to ensure the safety and security of all river valley users.

Administration

This document is a long range plan which will provide consistent overall guidelines for the variety of activities and functions carried on in the river valley. It will act as a guide and framework for decision making. In order to effectively carry out this mandate it will be necessary to develop a mechanism which can serve as a vehicle for bringing interested groups and individuals together to discuss issues relevant to the river valley.

4. MATRIX

The following diagram represents the components of the Resource Management Plan and signifies the interaction of these components (zones and the management functions). The intersecting points reflect the level of importance attached to each interaction. Level of importance is defined as high, medium

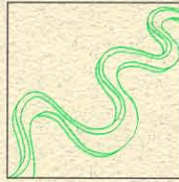
and low and is further defined in the following manner.

- High - suggests a high level of service.
- ◐ Medium - suggests a moderate level of service.
- Low - suggests minimum or non existent service.

Management Framework Management Zone	RECREATION INTERPRETIVE VISITOR	DEVELOPMENT	SAFETY SECURITY	MAINTENANCE			
				AGRICULTURE	TURF MAINTENANCE	PARK SERVICING	CLEAN UP
PRESERVATION							
CONSERVATION	●		◐				◐
EXTENSIVE USE	●	◐	●	●	●	●	●

Figure 5

CHAPTER IV



Plan Proposal

THIS chapter contains a description of the conceptual proposals for various areas of the North Saskatchewan River Valley and Ravine System. All areas of the valley and ravine system outside of the existing developed portion (CCRP, Mill Creek and Victoria/MacKinnon areas) are included in the descriptions.

The North Saskatchewan River Valley and Ravine System has been divided into seven map areas; the following information is included for each map area:

- a description of the General Site Program and Activity Potential of the area, derived from the Vision, Principles and Program Statement.
- a Preliminary Development Program itemizing potential work and costs in 1990 dollars.
- notes on land acquisition issues.

The General Site Program and the Preliminary Development Program will be the basis for development of complete program statements in the Master Plan.

A. BIG ISLAND AND AREA

GENERAL SITE PROGRAM AND ACTIVITY POTENTIAL

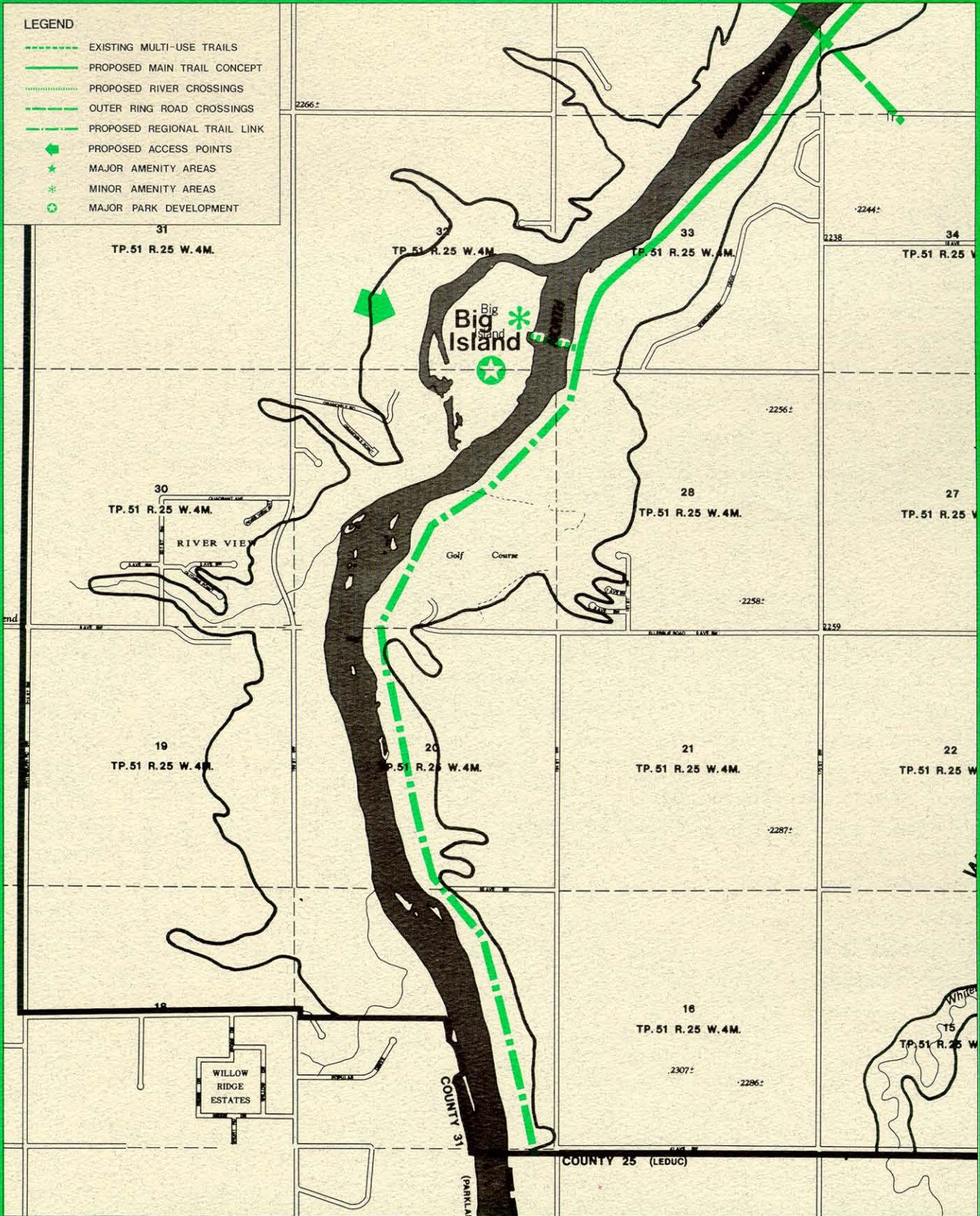
- a water-based, nature oriented park situated on land subject to frequent flooding. Access will be limited to bicycles, pedestrians and boats. Designed for pond life appreciation, bird watching, wildlife observation, hiking, fishing, boat launching, picnicking, snowshoeing and cross-country skiing.
- a pedestrian bridge will link the area to integrated trail to Terwillegar Park (north) and to regional walking trails to Devon (south).
- trail to adjacent communities (west) will be considered when population warrants further development.
- walking trail linkage to Devon.

LAND ACQUISITION

- Renewal of lease for Big Island required.
- Access easements required for trail development on private land.

PRELIMINARY DEVELOPMENT PROGRAM AND COSTS

• 15 km walking trail to Devon	\$	300,000
• Pedestrian Bridge	\$	3,700,000
• Minor amenity area	\$	125,000
• Pier development	\$	50,000
• Big Island walking trails	\$	72,000
• 3 km main trail (to 23 Ave)	\$	170,000
• Site restoration	\$	100,000
Capital Development Total Cost	\$	4,517,000



MAP A: BIG ISLAND AND AREA

B. TERWILLEGAR PARK AND AREA

GENERAL SITE PROGRAM AND ACTIVITY POTENTIAL

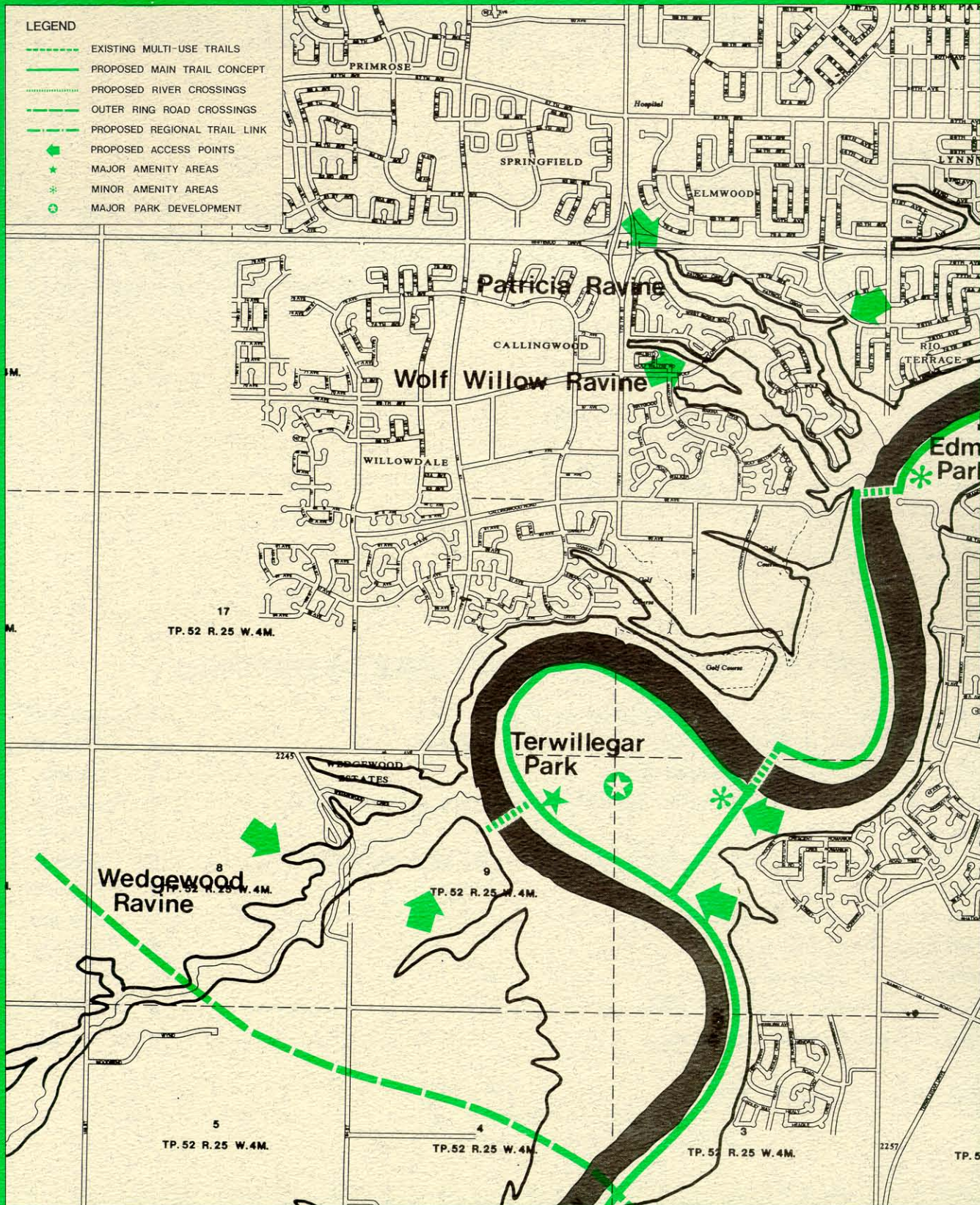
- a water-based, nature oriented park which creates a natural preserve area and re-establishes a viable ecology by utilizing existing and restored resources. Designed for pond life appreciation, bird watching, wildlife observation, hiking, fishing, boat launching, introduction to flatwater canoeing, snowshoeing, social skating and picnicking. Potential for relocation of the John Janzen Nature Centre.
- an integrated trail will provide opportunity for bicycling, cross-country skiing, jogging and walking.
- linkage to adjacent neighbourhoods.
- linkage to Wedgewood, Gariepy, Wolf Willow and Patricia Ravines, Ft. Edmonton Park and Big Island via pedestrian bridges.

LAND ACQUISITION

- Access easements required in Wedgewood Ravine and private lands below Edmonton Golf and Country Club for trail development.

PRELIMINARY DEVELOPMENT PROGRAM AND COSTS

• Wedgewood to Terwillegar Pedestrian Bridge	\$ 3,300,000
• Terwillegar to Edmonton Golf & Country Club Bridge	\$ 2,750,000
• Edmonton Golf and Country Club to Ft. Edmonton Bridge	\$ 3,240,000
• 8 km main trail (23 Ave to 58 Ave)	\$ 455,000
• Wedgewood ravine trails	\$ 75,000
• Patricia/Wolf Willow Ravines trail	\$ 80,000
• Terwillegar major amenity area (building, parking)	\$ 1,600,000
• Site services	\$ 2,000,000
• Boating facilities	\$ 75,000
• Landscape restoration	\$ 2,500,000
• Minor amenity area	\$ 120,000
Capital Development Total Cost	\$ 16,195,000



MAP B: TERWILLEGAR PARK AND AREA

C. WHITEMUD, BUENA VISTA AND WEST CENTRAL RIVER VALLEY AREA

GENERAL SITE PROGRAM AND ACTIVITY POTENTIAL

- pedestrian oriented nature park designed for informal recreational use and picnicking.
- an integrated trail will provide for bicycling, cross-country skiing, jogging and walking.
- linkage to adjacent neighbourhoods, Valley Zoo and McKenzie Ravine.
- linkage to Wm. Hawrelak Park by pedestrian bridge.
- linkage to Ft. Edmonton and Whitemud Ravine by streetcar and pedestrian bridge.
- need for a pedestrian bridge connecting MacKinnon and Mayfair areas should be assessed in view of existing and future pedestrian and trail improvements to Groat Bridge.
- completion of Ft. Edmonton, Valley Zoo and Muttart according to their Master Plans.

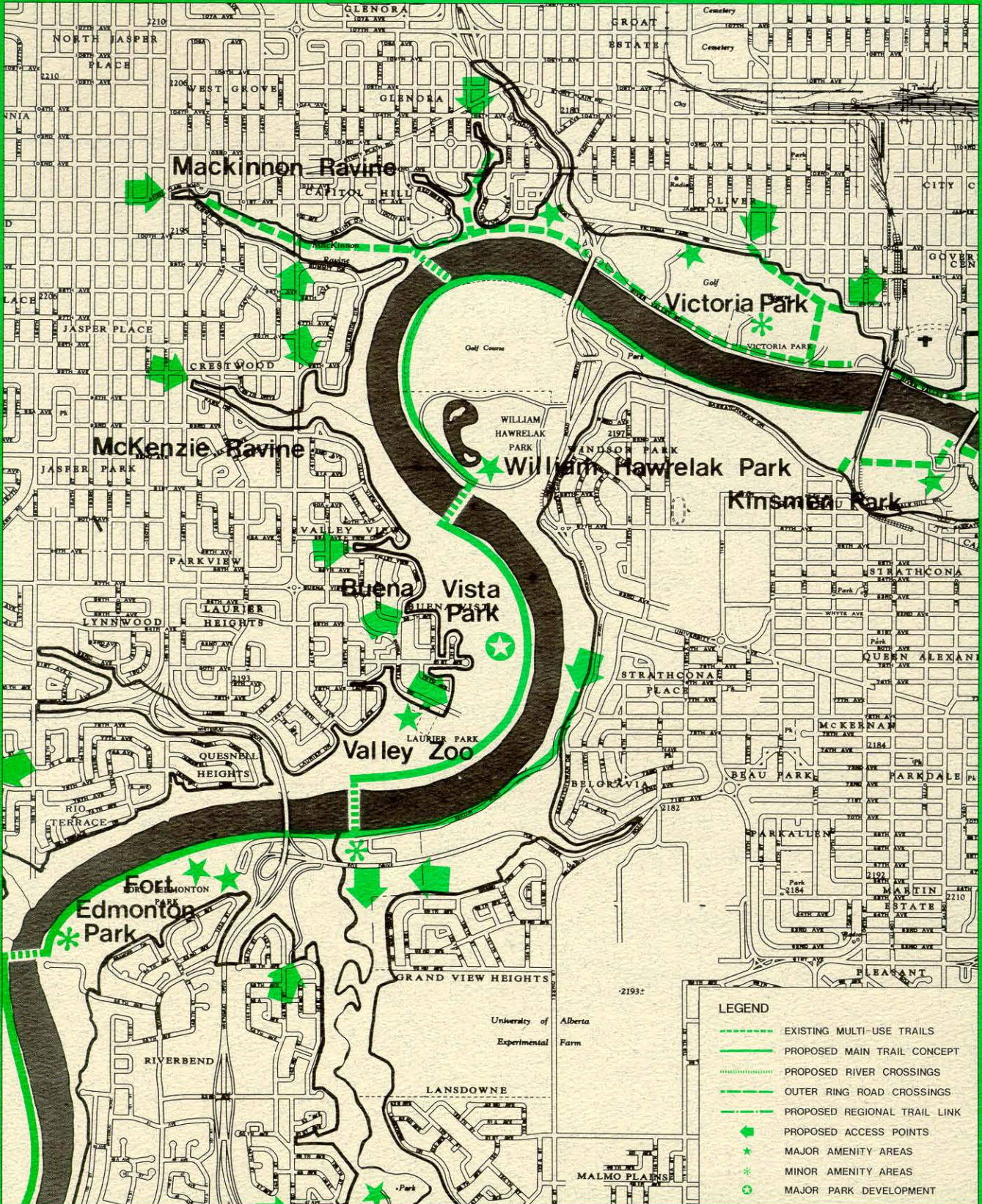
LAND ACQUISITION

- Two isolated private properties in Buena Vista Park require access easements or purchase. Trail easement is in place for one additional private property.
- An access agreement is required through the river edge portion of the University Forestry Reserve.

PRELIMINARY DEVELOPMENT PROGRAM AND COSTS

• Whitemud Park to Laurier Park Pedestrian/Streetcar Bridge	\$ 6,500,000
• Buena Vista Park to Wm. Hawrelak Park Pedestrian Bridge	\$ 3,225,000
• Mayfair to MacKinnon Pedestrian Bridge	\$ 3,000,000
• 11.5 km main trail (West end of Ft. Edmonton Park to High Level Bridge)	\$ 650,000
• 2 minor amenity nodes	\$ 250,000
• Buena Vista Park improvements (road, parking and park improvements)	\$ 700,000
• access trail development	\$ 150,000
• Fort Edmonton access road relocation*	\$ 320,000
• Fort Edmonton facilities (hotel)	\$ 3,250,000
• Valley Zoo infrastructure	\$ 7,500,000
• Muttart Conservatory/Grierson Hill	\$ 4,750,000
Capital Development Total Cost	\$ 30,295,000

*funding ear marked for 1991



MAP C: WHITEMUD, BUENA VISTA AND WEST CENTRAL RIVER VALLEY AREA

D. WHITEMUD/BLACKMUD CREEKS

GENERAL SITE PROGRAM AND ACTIVITY POTENTIAL

- The Whitemud/Blackmud Creeks are identified as a Nature Reserve in a plan approved by City Council in January, 1990.
- Phase I (Creek mouth to 23 Ave) will contain a granular trail and 10 stream crossings with access points from adjacent residential areas. Amenity areas are identified at Whitemud Park and Snow Valley.
- Phase II (Blackmud Creek from 23 Ave to 111 Street) is identified as a wildlife sanctuary with trail development restricted to the top of bank area.
- The Twin Brooks Park is proposed to be a district level park designed to meet the needs of communities adjacent to Blackmud Ravine. Design program will be developed between Department and adjacent communities. Significant opportunity exists to link Twin Brooks Park to the Whitemud Ravine Nature Reserve.

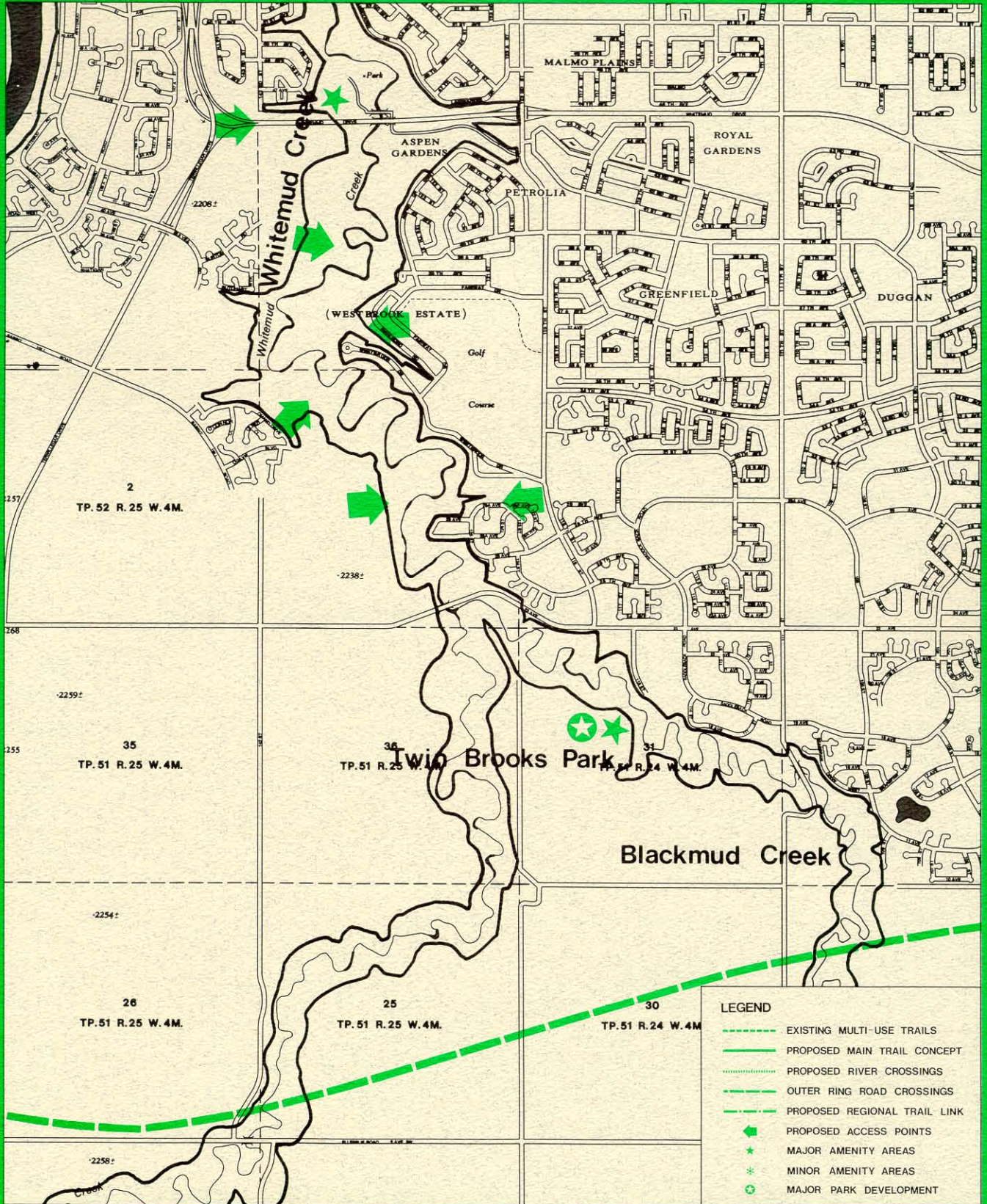
LAND ACQUISITION

- Trail easements have been secured through Phase I Area
- Trail easements must be negotiated for Phase II areas.
- Twin Brooks Park site is City-owned

PRELIMINARY DEVELOPMENT PROGRAM AND COSTS

• Whitemud Creek Phase I*	.....	\$	500,000
Phase II*	.....	\$	600,000
• Twin Brooks District Park			
- Amenity structures	.....	\$	600,000
- Roads and parking	.....	\$	600,000
- Site grading and seeding	.....	\$	300,000
- Site landscaping	.....	\$	300,000
Capital Development Total Cost	.....	\$	2,900,000

*budgeted amounts for 1990 and 1992



LEGEND

- EXISTING MULTI-USE TRAILS
- PROPOSED MAIN TRAIL CONCEPT
- PROPOSED RIVER CROSSINGS
- OUTER RING ROAD CROSSINGS
- PROPOSED REGIONAL TRAIL LINK
- PROPOSED ACCESS POINTS
- MAJOR AMENITY AREAS
- MINOR AMENITY AREAS
- MAJOR PARK DEVELOPMENT

MAP D: WHITEMUD/BLACKMUD CREEKS

E. HERMITAGE/CLOVER BAR AREAS

GENERAL SITE PROGRAM AND ACTIVITY POTENTIAL

- a nature oriented outdoor recreation park which creates a natural preserve area and an opportunity for pond life appreciation, bird watching, wildlife observation, hiking, fishing, introduction to flat-water canoeing, snowshoeing, social skating and picnicking.
- an integrated trail will provide opportunity for bicycling, cross-country skiing, jogging and walking.
- linkage to Kennedale and Kernohan Ravines, adjacent neighbourhoods, Rundle Park, and regional trail system to Ft. Saskatchewan.
- linkage to future Clover Bar Recreation Area and County of Strathcona via pedestrian bridge. A recreation feasibility study will be required to analyze potential of Clover Bar area.

LAND ACQUISITION

- Hermitage Park lands and Clover Bar Recreation Area lands are City-owned.
- Trail easements or acquisition of provincially and privately held lands will be required to link Clover Bar Recreation Area to Hermitage Park.

PRELIMINARY DEVELOPMENT PROGRAM AND COSTS

• Pedestrian Bridge (North Hermitage to Clover Bar)	\$ 3,250,000
• Major amenity area upgrading	\$ 1,000,000
• Minor amenity area (2)	\$ 250,000
• 6.6 km main trail development	\$ 376,000
• access trail development	\$ 200,000
• Clover Bar redevelopment	\$ 6,000,000
Capital Development Total Cost	\$ 11,076,000

F. OLDMAN CREEK/HORSEHILLS CREEK AND AREA

GENERAL SITE PROGRAM AND ACTIVITY POTENTIAL

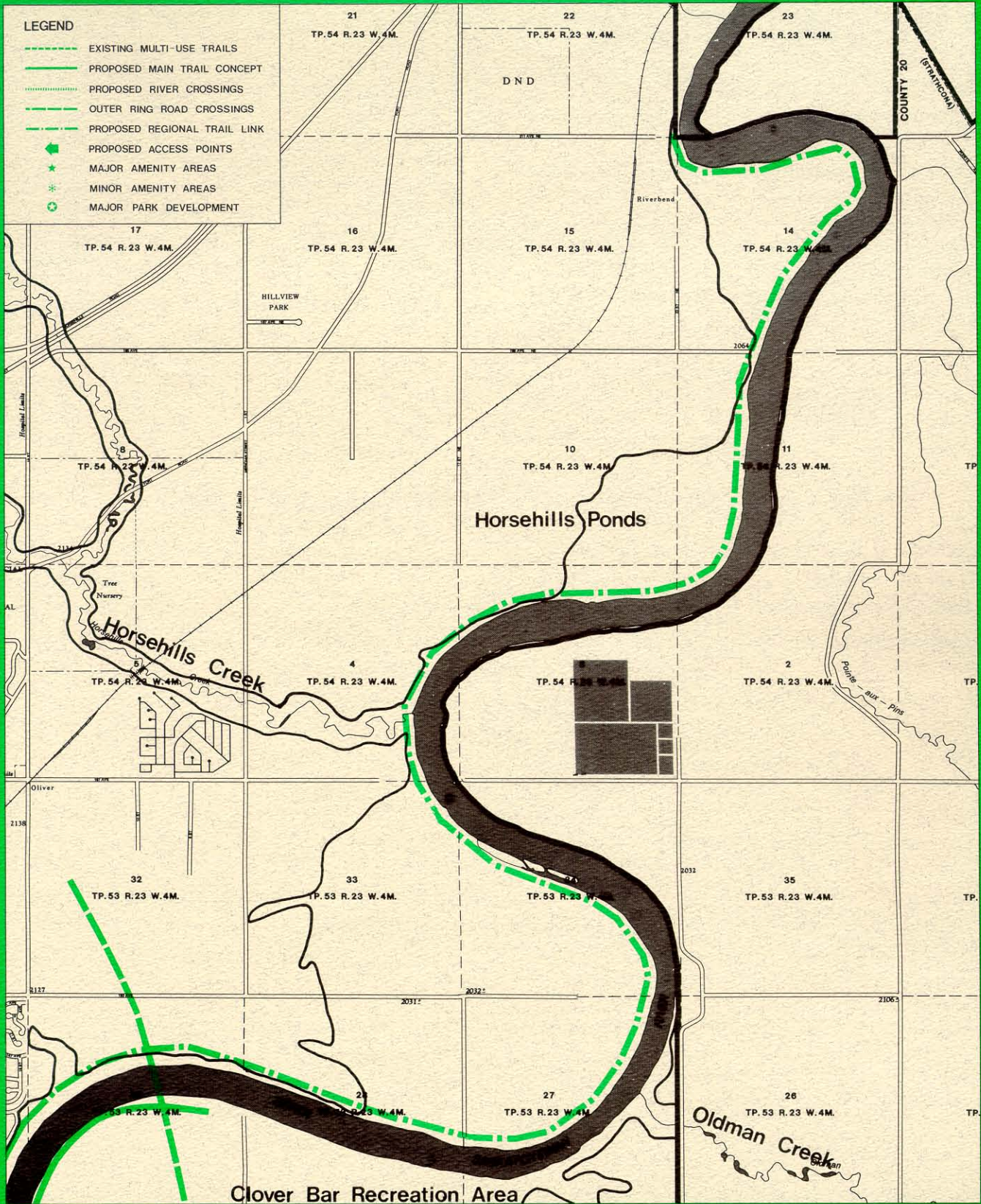
- A regional walking trail linking Hermitage Park to Ft. Saskatchewan and County of Strathcona.
- Future opportunities exist to provide protection of and access to the Oldman Creek and Horsehills Creek areas. These areas should be studied to determine their potential.
- Potential exists for redevelopment of the Horsehills pond areas as water - based nature oriented area through restoration of the site.
- Potential exists to tie the Oldman Creek area to the Clover Bar Recreation Area.

LAND ACQUISITION

- Trail access easements will be required through private lands to develop walking trails.
- Possible future acquisition of Horsehills ponds property.

PRELIMINARY DEVELOPMENT PROGRAM AND COSTS

• 21 km walking trail to Ft. Saskatchewan	\$	420,000
• Redevelopment of Horsehills ponds		<u>not determined</u>
Capital Development Total Cost	\$	420,000



MAP F: OLDMAN CREEK/HORSEHILLS CREEK AND AREA

G. UPPER MILL CREEK AREA

GENERAL SITE PROGRAM AND ACTIVITY POTENTIAL

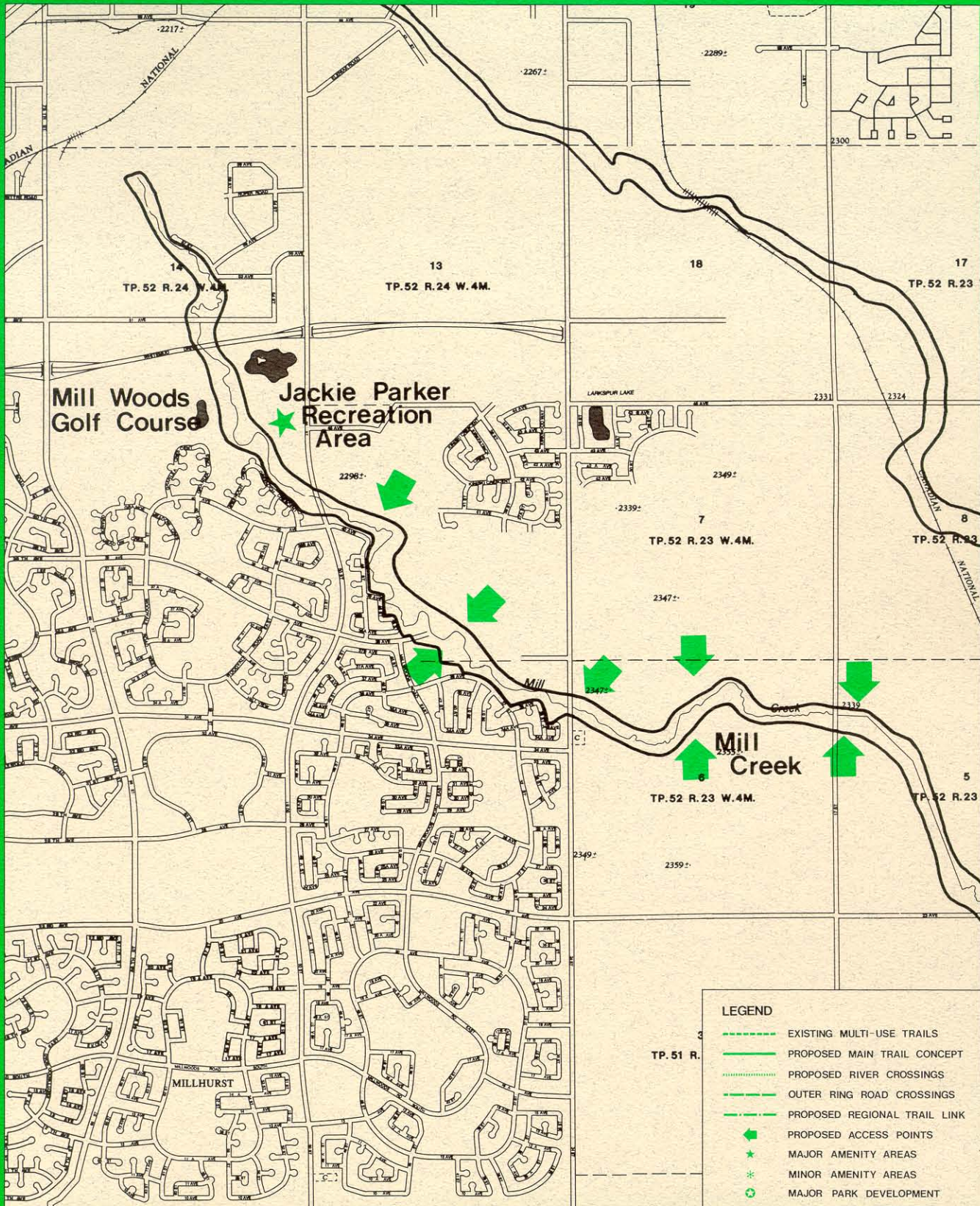
- A nature oriented trail system linked to Jackie Parker Recreation Area and the Millwoods Golf Course.
- Potential for future reconstruction of the original ravine alignment (or a close approximation) through the industrial area should be examined to determine if a direct link between the upper reaches of the creek and Mill Creek Ravine Park is feasible.
- Potential for tie-in to Strathcona County system at the point where Mill Creek intersects Highway 14 should be examined.

LAND ACQUISITION

- Lands along Mill Creek are owned by the City or will be acquired through subdivision.
- Trail easements or acquisition may be required in the industrial area to re-establish a direct link.

PRELIMINARY DEVELOPMENT PROGRAM AND COSTS

• Jackie Parker Recreation Area	\$ 500,000
• Trail connections	not determined
• Link between upper and lower creek areas	<u>not determined</u>
Capital Development Total Cost	\$ 500,000

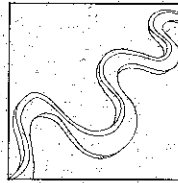


MAP G: UPPER MILL CREEK AREA

H. CAPITAL COST SUMMARY

• Big Island and Area	\$ 4,517,000
• Terwillegar Park and Area	\$ 16,195,000
• Buena Vista and Area	\$ 30,295,000
• Whitemud/Blackmud Creek Area	\$ 2,900,000
• Hermitage/Clover Bar Area	\$ 11,076,000
• Old Man Creek/Horsehills Creek Area	\$ 420,000
• Upper Mill Creek Area	\$ 500,000
	<u>\$ 65,903,000</u>
• Land Acquisition/Easement Acquisition	\$ 1,000,000
Total of Concept Plan Estimated Capital Costs	\$ 66,903,000
(in 1990 dollars)	

CHAPTER V



Financing and Phasing

THIS chapter contains a review of potential funding sources for the North Saskatchewan River Valley and Ravine System Concept Plan. These potential sources must be examined further at the Master Plan stage to prove their feasibility. This chapter outlines a proposed land acquisition strategy and recommends four criteria for prioritizing projects for construction.



A. FUNDING SOURCES

A brief description of each potential funding source follows.

1. URBAN PARK PROGRAM PHASE II GRANT

Edmonton is eligible for \$15 million in funding through this program extending to March 31, 1999. These funds may be used for planning, design, construction and land acquisition purposes connected with the Plan.

2. TOURISM GRANTS

Tourism grants and tourism industry funding should be vigorously sought for appropriate projects within the river valley and ravine system. Edmonton Parks and Recreation and the Edmonton Tourism and Convention authority should work hand in hand to identify projects which mutually address tourism objectives and river valley planning goals. In particular, development of facilities at the Valley Zoo, Fort Edmonton Park and Muttart Conservatory, which already are strong tourism attractors, should be a focus of this funding. The natural environment of Edmonton's river valley is also recognized for its tourism potential and projects for trail or park development could also be considered for tourism funding.

3. PARKLAND PURCHASE RESERVE ACCOUNT (P.P.R.A.)

The P.P.R.A. receives funding from sales of surplus parks properties. These include some residential and all industrial lands. Revenues from lease or rental of properties also accrue to this fund. This fund presently finances some \$2 million in capital projects and land acquisition for Parks and Recreation annually. It is proposed that a sum of \$2 million per year be targeted to river valley and ravine development beginning in 1992.

4. GENERAL FINANCING

It is proposed that the City fund river valley and ravine projects directly from its pay-as-you-go sources in the amount of \$2 million annually beginning in 1994.

5. OTHER PROJECTS OF THE CITY

A number of City projects relate to or will affect the river valley and ravine system. These are described in Chapter II, Section A. These projects may provide opportunities to build on work identified and funded by other City Departments. Noteworthy examples include the Rossdale Water Intake Relocation, West LRT extension and Clover Bar Landfill Restoration projects. It is proposed that these projects be examined with respect to river valley planning goals and that relevant aspects of the projects be dovetailed. If the river valley route for the Rossdale Water Intake is selected potential exists to develop trails over the water line from Terwillegar Park to Groat Bridge. Cost-sharing of river crossings should also be examined at the Preliminary Design Phase. Some land easement requirements would also serve both projects. One alternative route for a West LRT line would require a river crossing in the vicinity of the Whitemud pedestrian/streetcar bridge and may provide mutual benefits. The City is required to reclaim the Clover Bar Landfill Site upon closure. This work is financed through Environmental Services and is tentatively scheduled for 1993/1994, although this may be delayed.

6. COMMUNITY AND PRIVATE SECTOR FUNDING

Community groups and organizations such as the community leagues, area councils and recreation organizations have repeatedly demonstrated their ability and interest in funding projects of benefit to the quality of life in Edmonton. Recreation groups should be encouraged to support projects financially. Recreation facility or amenity development, portions of park development and community access trails are some aspects of development which may be targeted for community funding. Developer financing of top-of-bank walks is required by the city and many developers have supported park development projects which benefit their lands. This thinking may be extended to projects within the scope of the river valley and ravine plan. Untapped potential exists to incorporate private sector funding. These could include concession development or facility development funding and corporate sponsorships of projects such as bridges and amenity buildings.

Potential Funding Sources and Phasing (in \$'000's)
(Figures are not inflated)

* represents Clover Bar Landfill reclamation only

	1	2	3	4	5	6	7	8	9	10	
Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Total
1. Urban Parks Grant	0	600	400	2000	2500	3200	3150	2000	750	400	15000
2. Parkland Purchase Reserve	0	0	0	2000	2000	2000	2000	2000	2000	2000	14000
3. Tourism	0	0	0	1500	2000	2000	2000	1500	1500	1500	12000
4. General Financing	0	0	0	0	0	2000	2000	2000	2000	2000	10000
5. Other Projects	0	0	0	0	3000	3000	0	0	0	0	6000*
6. Community & Private Funding	0	0	0	850	850	850	850	850	850	850	5450
7. Grants	0	0	0	250	250	250	250	250	250	250	1750
Totals	0	600	400	6100	10600	13300	10250	8600	7350	7000	64200

Figure 6

7. GRANTS

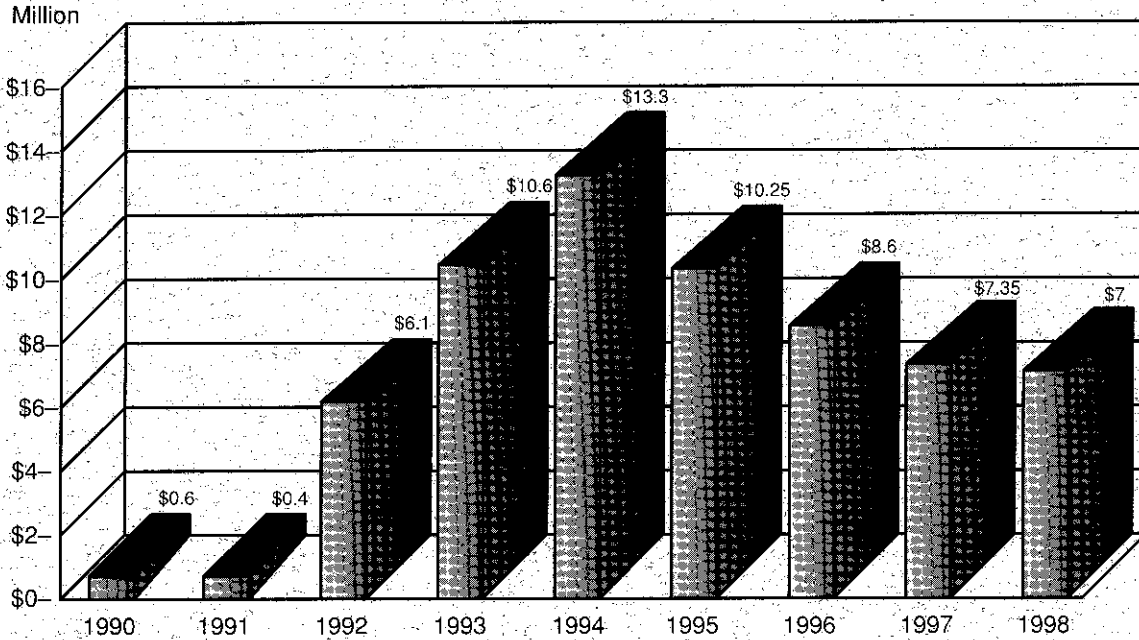
Provincial and Federal grants may be fruitful sources of financing for river valley and ravine projects. These funding sources should be vigorously sought for appropriate projects. Grants related to environmental restoration and conservation and employment grants should be particularly targeted.

Figures 6 and 7 show a potential financing scheme for the Concept Plan through 1999. These funding sources should be further assessed to determine their feasibility and confirm funding targets in the Master Plan phase at the same time program statement and costs are being refined.

POTENTIAL FUNDING - figures not inflated

FUNDING PHASING

1990 - 1998



FUNDING SOURCES

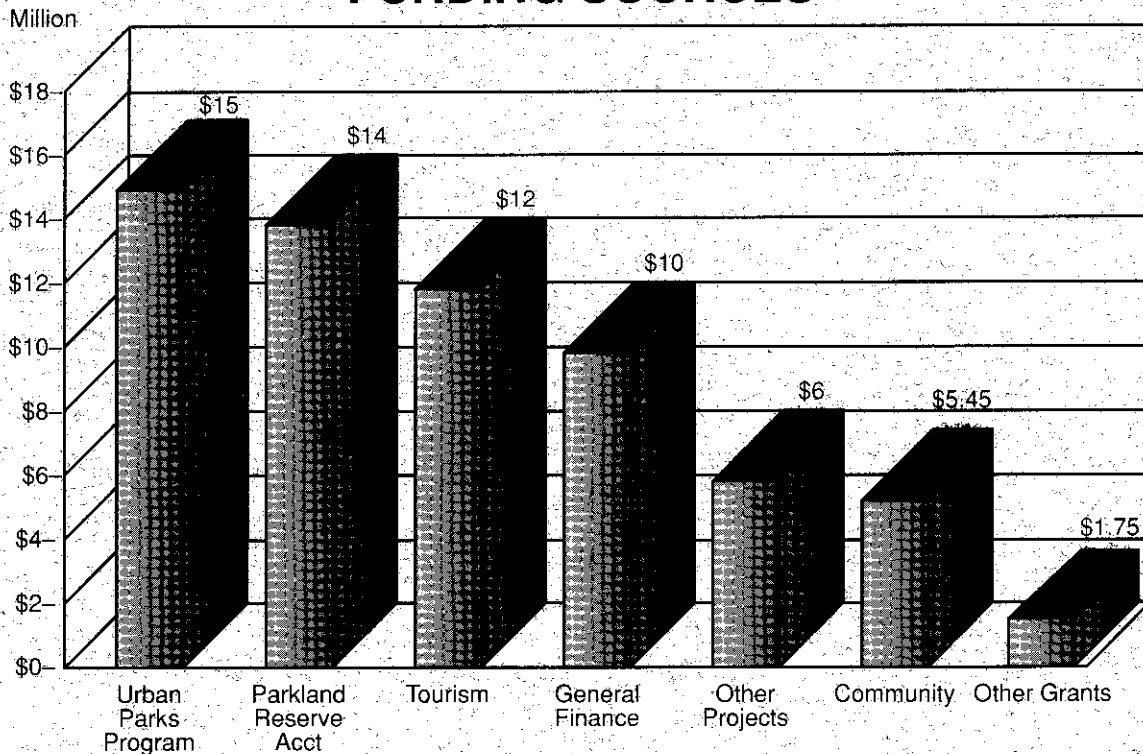


Figure 7

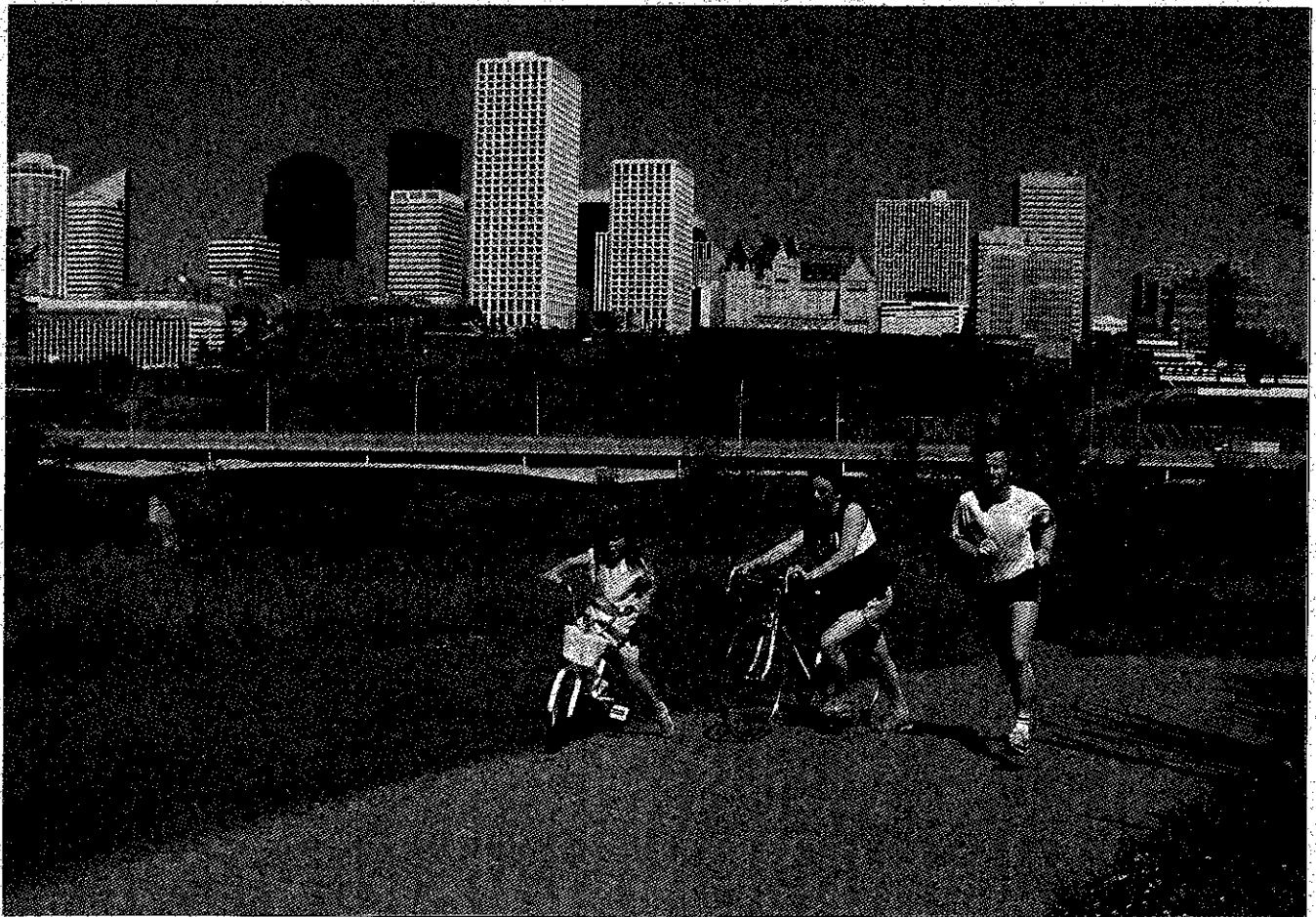
B. LAND ACQUISITION STRATEGY

Land acquisition strategy should recognize the eventual acquisition of areas of the river valley and ravine system adjacent to undeveloped land through Reserves. Land which is required before adjacent development occurs should be approached in these ways:

1. Secure long-term easements required at nominal values recognizing eventual requirement for provision of Environmental and Municipal Reserves upon subdivision.

2. Purchase of permanent easements for required lands which are unlikely to subdivide because of their size or location.
3. Negotiate with the Provincial Government for transfer of lands within their ownership in the river valley and ravine system at nominal values.
4. Outright purchase of properties as a final resort.

Appendix 2 illustrates land ownership within the study area.



C. CRITERIA FOR PRIORITIES

The underlying assumption of the phasing and financing proposals is that the entire system proposed will be built. The goal for financing is to identify means sufficient to provide funds for the entire system. The goal in establishing criteria for priorities is to develop an appropriate sequence for carrying out the work.

The City of Edmonton and the Parks and Recreation Department each employ a capital project priorities system which is applied to all projects.

Several priorities are relevant to the North Saskatchewan River Valley and Ravine System Concept Plan.

Categories 3, 5 and 6 are most likely to be applicable to park and trail development projects in the North Saskatchewan River Valley and Ravine System Concept Plan.

Parks & Recreation Department Criteria	Effect on Concept Plan
1. Council commitment.	1. Not applicable.
2. Conservation of existing assets.	2. May be applicable to facilities existing in river valley.
3. Collaborative projects.	3. Applicable to specific projects which may have community or group support, grants, private contributions or cost share with other City projects.
4. Optimizing operations of existing assets.	4. May be applicable to existing facilities within the plan area.
5. Extending fundamental services to unserved areas.	5. Applicable to basic works in areas of the river valley and ravines not formally developed.
6. Projects benefitting local economy.	6. May apply to projects supporting economic development or tourism strategies or those generally adding to quality of life.

Corporate priority criteria are imposed upon the ranked priorities of City departments to ensure most important works are financed throughout the Corporation.

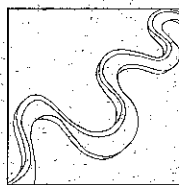
Corporate priority categories relevant to North Saskatchewan River Valley and Ravine projects are (in rank order).

- #240 economic development and promotion.
- #270 support of human and social environment - City wide.
- #390 support of human and social environment - enhanced level of service/new service.

The following criteria derived from the Departmental and Corporate prioritization systems are recommended. They are presented in order of importance. However, it is intended that they be viewed

holistically so that projects which best address the group of criteria overall 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.



APPENDICES

APPENDIX 1

Concept Map

Located inside envelope on back cover.

APPENDIX 2

Land Ownership Map

Located inside envelope on back cover.

APPENDIX 3

Additional Studies Required At The Master Plan Stage

The following studies will be required to support development of the Master Plan.

1. ENVIRONMENTAL IMPACT ASSESSMENT

The North Saskatchewan River Valley Bylaw #7188 will require preparation of an Environmental Impact Assessment at the Master Plan stage. The E.I.A. will have to address the effects of trail, bridge and facility development and the mitigations necessary to minimize environmental impact of development and operations.

2. HISTORICAL RESOURCES IMPACT ASSESSMENT

An H.R.I.A. may be required by Alberta Culture to identify the presence or absence of archaeological or paleontological resources affected by the plan proposals. Depending on the nature of any resources identified mitigation measures will be required. A determination will be made by Alberta Culture based on the Concept Plan proposals.

3. DIGITIZING BIOPHYSICAL INFORMATION

Analysis of the 1980 Biophysical Inventory will require the manipulation of large quantities of data which are presently accessible only in hard copy for manual analysis. Conversion of this existing information to digital format on the City's Geo Base Information System will speed this process and increase accuracy of analysis.

4. DIGITAL TOPOGRAPHIC MAPPING

All City of Edmonton Mapping is compatible with the G.B.I.S. system. In particular, digital aerial mapping for production of topographic plans is justified because of the unequalled accuracy, speed and non-destructive nature of the remote mapping technique. It is the only practical method for preparing extensive topographic information required for river valley trail and park planning. Mapping will be completed in 1990 and 1991.

5. BRIDGE LOCATION - ENGINEERING ANALYSIS

This study completed in 1990, examined the preferred locations of pedestrian bridge structures, recommended precise alignments, established the structural and hydrological requirements for the bridges, identified construction access areas and prepared cost estimates.





Source Materials

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- Bridge Cost Study - Capital City Parks Extension. Bolter Parish Trimble Ltd. for City of Edmonton Parks and Recreation. 1990