WHITEMUD INTEGRATED AREA
CONCEPT PLAN

Prepared by the

WHITEMUD INTEGRATED PLAN ADVISORY COMMITTEE

with Assistance from

EDA *Collaborative Inc.*

February 2003

EXECUTIVE SUMMARY

The Whitemud Integrated Plan area encompasses a very important area of Edmonton's southwest river valley. The area is home to several popular recreation destinations including Fort Edmonton Park, John Janzen Nature Centre, Whitemud Equine Centre and Whitemud Park. It is also a popular destination for joggers, nature lovers, fishermen, canoeists, kayakers, tobogganers, and cyclists. To date individual facilities have developed independently and there has not been a comprehensive review of the area as a whole. Pressure for use of this valuable area has been increasing as existing facilities consider upgrading and expansion, and as new development proposals come forward.

An Advisory Committee was formed from area stakeholders and residents to review current plans and proposals and determine the best course of action for the area as a whole. During the site analysis phase, environmental and historic resources, existing infrastructure, and transportation issues were reviewed. Current operations, programming and site use, and current plans and proposals were also evaluated to identify areas of conflict and overlap. Through a year of committee meetings and a public open house, a Concept Plan was developed to reflect the Advisory Committee's vision for the area. A detailed review of the trails around Ft. Edmonton Park was completed and reviewed by the public in June 2002. This is included as Appendix 1.

VISION

The Whitemud Integrated Plan Area is a special part of Edmonton's river valley. It is a place where the natural environment is protected and carefully managed while permitting a diversity of low impact recreational and interpretive opportunities for the public. These opportunities will build upon and complement the natural landscapes and existing cultural features.

PLAN OBJECTIVES

The Advisory Committee endorsed the vision, basic principles and planning objectives outlined in the Ribbon of Green Master Plan, and added the following specific plan objectives:

1. *There will be no net loss of natural vegetation through future development. Clearing, if required, will be kept to a minimum, and an equivalent area will be revegetated elsewhere within the study area.*

2. *Where possible, buffer zones will be provided between areas of significant environmental value and intensive use areas*

3. *Existing facilities and attractions will continue to operate within their current boundaries, with upgrading or expansion following plans currently approved.*

4. *The area will continue to be accessible to all City residents and visitors. Alternative modes of transportation to reach the site will be actively encouraged, including extension of the streetcar operations outside of Fort Edmonton with connections to public transit, and various means of trail access. Increased parking demands will be addressed primarily through joint program co-ordination, sharing of existing facilities, and the use of the streetcar between current parking facilities and destination areas. New parking facilities would be a last resort.*

5. *Existing informal public use of the area including fishing, picnicking, tobogganing, canoeing and kayaking, and all modes of trail use will continue to be accommodated.*

CONCEPT PLAN

The Concept Plan includes low impact development in several areas as described below. Detailed design, environmental review and public input will be required for each component of the plan, prior to implementation. All work must meet the requirements of the River Valley Bylaw.

Whitemud Ravine Trailhead (South of Fox Drive)
Whitemud Park South would continue to serve the existing uses (tobogganing, programmed day camps, Whitemud Ravine trailhead) in upgraded facilities.

- *removal of existing trailer and garage*
- *new multi-purpose trailhead (public warmup area, classroom, public washrooms)*

Whitemud Park Upgrading (North of Fox Drive)
Whitemud Park North would continue to serve the existing park users with some general upgrading. Proposed upgrades would include:

- *new permanent public washroom building near the north end of the site*
- *existing vehicular access and parking area would be retained with some upgrading to ensure efficient use of the available area*
- *multi-purpose open space to be shared with the Equine Centre*

Trail System Improvements

- *class one (paved) trail connection to link future river bridge at south end of Fort Edmonton with new the river bridge at Whitemud Park (to replace the Quesnell bridge trail), and Keillor Road*
- *bridge over Whitemud Creek at mouth to accommodate all trail users and streetcar*
- *class one trail connection from future South University Campus (University Farm) to Keillor Road*

Renaturalization of Farm Site

- *remove majority of current horse grazing operations*
- *remove existing buildings and septic field*
- *revegetate or renaturalize area*

Streetcar Extension

- *extend streetcar line from Fort Edmonton to Fox Drive and Equine Centre including installation of a bridge over Whitemud Creek*

Fort Edmonton, Whitemud Equine Centre, John Janzen Nature Centre

- *existing facilities would continue to follow their existing approved Master Plans, ensuring that all development is in accordance with recommendations outlined in this study*

Transportation and Streets
The City of Edmonton Transportation and Street Department is proposing to widen Whitemud Drive from Terwillegar Drive to 149 Street. Two components of their proposal impact the Whitemud Integrated Plan area:

- *Widening of Whitemud Drive is to include the addition of two lanes of traffic on the Quesnell Bridge. It has been determined that the existing bridge structure will not accommodate the extra traffic lanes and a multi-use walkway, therefore a new pedestrian river crossing bridge would be constructed downstream from the current bridge location.*

IMPLEMENTATION

- *Improvements to the access into Fort Edmonton from the south were recommended in the Whitemud Drive study. A new exit ramp will be constructed from the current Fox Drive exit ramp, providing access to Fort Edmonton through the existing controlled intersection.*

Refer to Drawing 1 - Concept Plan

It is anticipated that implementation of the Whitemud Plan will occur over a number of years. Most existing facilities within the study boundary have been developed through partnerships between the City of Edmonton and area stakeholders, and it is anticipated that implementation of the Concept Plan will be undetaken in a similar fashion.

Preliminary cost estimates for the Concept Plan Components are shown in the following chart.

	TOTAL BUDGET	PHASE 1 2 year	PHASE 2 5 year
1 FOX FARM RENATURALIZATION / HORSE PASTURE	**$250,000**	**$250,000**	
Building Demolition			
Revegetation / Reforestation			
Renaturalization (Weed Control / Seeding)			
Fencing			
2 WHITEMUD RAVINE TRAIL HEAD	**$350,000**	**$350,000**	
Whitemud Ravine Trail Head Shelter			
Existing Building Removal / Rehab			
Parking Improvements			
Interpretive Signage			
3 WHITEMUD PARK	**$250,000**	**$250,000**	
Phase One Master Plan			
Phase Two General Upgrading			
Whitemud Park Washrooms			
Parking Improvements			
Mulit-purpose Display area			
Riverbank / Fishing			
4 TRAIL SYSTEM IMPROVEMENTS		**$1,000,000**	**$5,000,000**
Phase One - Planning and Design			
EIA and Engineering for Whitemud and River Bridge			
Planning and Design for all Trails (15%)			
Phase Two - Construction			
Class One Trail - Fort Edmonton			
Class One Trail - Farm Site			
U of A South Campus Connection Trail			
(to Belgravia Overpass)			
Grandview Connection with Fox Drive Overpass			
Whitemud Bridge			
Fort Edmonton / Wolf Willow River Bridge			
TOTAL ALL COMPONENTS	**$6,850,000**	**$1,850,000**	**$5,000,000**
RECOMMENDED BUDGET			

Transportation and Individual Facility budgets are not included.

FORT EDMONTON PARK/ JOHN JANZEN NATURE CENTRE

Infill development and upgrading to continue as per current Master Plan within existing boundary

STREETCAR EXTENSION

G Extend Streetcar line from Fort Edmonton to bus stop on Fox Drive

WHITEMUD PARK

Master Plan required for Park

N Riverbank maintained for fishing

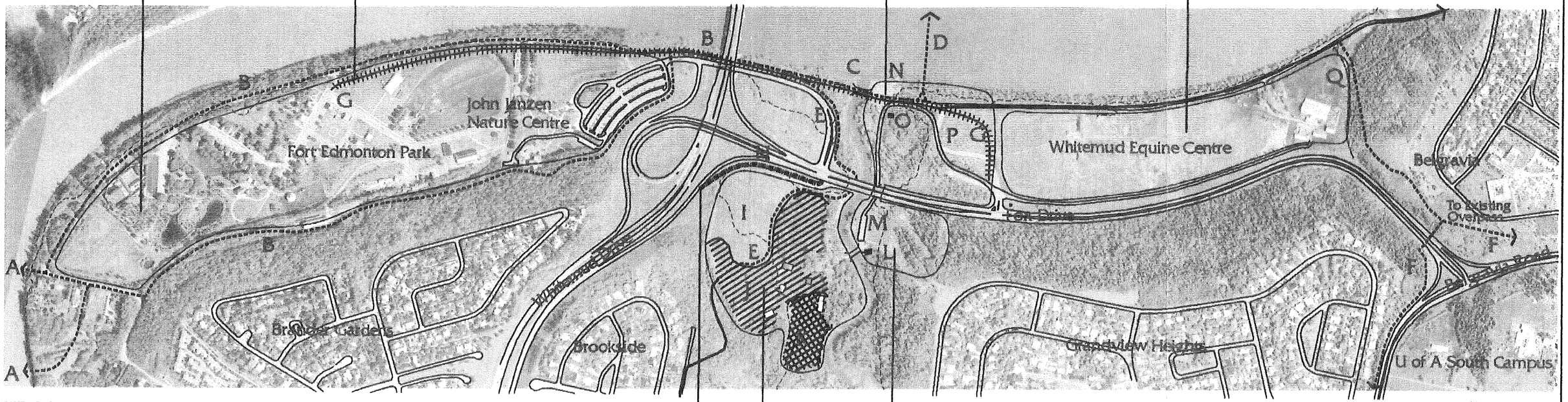
O Public washroom

P Multi-purpose Open Space

WHITEMUD EQUINE CENTRE

Redevelopment to continue as per current Master

Q Improvements to drainage



TRAIL SYSTEM IMPROVEMENTS

——— Existing Multi-use Trail

--------- Proposed Multi-use Trail Options

A River Bridge- 2 Options

B River Bridge Trail Connections- 2 options

C Whitemud Creek Bridge for Trail and Streetcar

D River Bridge to replace Quesnell Bridge Trail

E Redevelop link to Brookside

F Trail Connection from Keillor Road to U of A Campus and 122nd St.- 2 Options

ROADWAY IMPROVEMENTS

H Exit Ramp for Fort Edmonton Access

WHITEMUD RAVINE TRAILHEAD

L New Trailhead Shelter and Washrooms

M Existing road access and gravel parking lot improvements

FARM SITE RENATURALIZATION

I Portion of existing horse pasture to remain

J Renaturalization area

- Remove horse pasture, fences, and existing buildings
- Allow natural revegetation with weed control

K Revegetation/ reforestation program

North

0 50 100 250 500 750m

EDA Collaborative Inc.

July 2001

WHITEMUD INTEGRATED PLAN

Concept Plan

Acknowledgements

Advisory Committee Members

Harvey Bradley	Edmonton Radial Railway Society
Karen Fox	Citizen at Large
Sue Lambert	Grandview Community League
Ralph Playdon	Edmonton Equine Society
Jim Martin*	FEESA, an Environmental Education Society
Dave McInnes	Edmonton Nature Centres Foundation
Mildred Richardson	Riverbend Community League
Don Smith	Fort Edmonton Historical Foundation
Harry Stelfox	Edmonton Natural History Club

**until March Advisory Committee meeting*

Alternative Representatives:

Craig Dockrill	Edmonton Natural History Club
Alex Drummond*	FEESA, an Environmental Education Society
John Hrynkow	Edmonton Equine Society
Jim Ryan	Edmonton Nature Centres Foundation

City Representatives

Gabriele Barry	Edmonton Community Services
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Consultant Team

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

The Whitemud Integrated Plan area encompasses a very important area of Edmonton's southwest river valley. The area is home to several popular recreation destinations including Fort Edmonton Park, John Janzen Nature Centre, Whitemud Equine Centre and Whitemud Park. It is also a popular destination for joggers, nature lovers, fishermen, canoeists, kayakers, tobogganers, and cyclists. To date individual facilities have developed independently and there has not been a comprehensive review of the area as a whole. Pressure for use of this valuable area has been increasing as existing facilities consider upgrading and expansion, and as new development proposals come forward.

The need for a comprehensive plan became apparent in 1999, as the City of Edmonton reviewed several requests for new developments. Community Services initiated the Whitemud Integrated Plan Study with the purpose to review all existing proposals, evaluate the site capabilities from the perspective of infrastructure and functionality, environmental sensitivity, and aesthetics, and determine the future plan for the area as a whole. The boundaries of the study area are the Whitemud Equine Centre (eastern edge), Fort Edmonton Park (western edge) the North Saskatchewan River (north edge) and the Whitemud Ravine Nature Reserve at 63 Avenue (south edge). Although some facilities within the study area have current approved Master Plans, this is the first comprehensive review of the entire area.

Study Area

1.2 STUDY PROCESS

The process for completing the study included: a physical inventory and analysis phase; a review of existing operations and plans for future upgrading; development of a vision statement and set of planning principles for the area; development and review of several potential alternatives; and development of a concept plan.

The initial inventory phase of the study included a thorough review of biophysical site conditions, historical and prehistoric potential, and existing infrastructure. From this physical review, development constraints were identified.

Existing plans and reports relating to the area were reviewed, together with current proposals for development within the study area. Area stakeholders presented their plans for future upgrading or expansion. An evaluation of these plans and proposals identified potential areas of conflict and overlap, and potential areas for co-operation. Information gathered in this phase was summarized and reviewed with the Advisory Committee.

The Committee spent some time reviewing their vision for the area, preparing a Vision Statement and set of guiding principles which were refined through the course of the study process.

A number of possible development scenarios were then prepared for review and evaluation by the Advisory Committee. An evaluation matrix was prepared for each of the potential development alternatives rating them according to a list of criteria developed by the Committee.

Committee members were requested to prioritize plan components, then participate in a group workshop to determine which elements would be included in the plan to be presented to the public. From this workshop, a draft Concept Plan was prepared by EDA for refinement and ratification by the committee. The plan was presented to the public at two Open House meetings and the final report prepared for presentation to City Council.

1.3 STAKEHOLDER and PUBLIC INPUT

Stakeholder involvement was integral to the completion of the Whitemud Integrated Plan. At a meeting held on June 14, 1999 key stakeholder organizations and City administration met to review stakeholder projects and outline the proposed Whitemud Integrated Plan study. **EDA** *Collaborative Inc.* was retained as an independent consultant in October, 1999. An Advisory Committee was formed to help guide the process and work with the consultant in formation of the plan. It included representatives from each of the key stakeholder groups:

- *The Edmonton Equine Society*
- *Fort Edmonton Historical Foundation*
- *Edmonton Radial Railway Society*
- *Edmonton Nature Centres Foundation*
- *FEESA, an Environmental Education Society*
- *Edmonton Community Services*
- *Edmonton Natural History Club*
- *Grandview Community League*
- *Riverbend Community League*
- *Citizen at Large*

This committee met on a monthly basis from December, 1999 until completion of the final draft plan and report in July, 2000. Input from the general public was requested at a Public Open House held on June 6, 2000, and comments were incorporated into the plan.

Finalization of the plan was delayed until July 2001 to allow incorporation of the Whitemud Drive / Quesnell Bridge Upgrading Study.

A detailed review of the trails around Ft. Edmonton Park was completed and reviewed by the public in June 2002. This is included as Appendix 1.

2.0 EXISTING SITE USE

2.1 FORT EDMONTON PARK

Programs and Existing Levels of Use

The Fort Edmonton mission statement is *"Providing diverse opportunities for people to learn, grow and enjoy themselves through the conservation, animation and experience of Edmonton's history."*

Fort Edmonton is one of the most popular tourist attractions in Edmonton. The Park is a City operated facility under the jurisdiction of Community Services. The Fort Edmonton Historical Foundation undertakes fund raising for new projects.

General public visitation is 125,000 annually. Visitors include all ages with families comprising 42% of total visitors. The park is currently open to the public from May to September, but runs some programs during the winter, and also rents venues for meetings and parties year round. Facility rentals accommodate an additional 62,000 per year, and structured programs attract another 21,000. This brings total annual visitation to 208,000.

Three major events are hosted at the park annually. The largest of these events is the Harvest Fair (end of August) which drew 8,000 visitors in 1999. Canada Day draws 6,000 visitors and Spring Carnival (May 24th weekend) generally draws 4,000 to 5,000.

Winter Sleigh Ride at Fort Edmonton

Physical Site Description and Existing Facilities

Fort Edmonton Park occupies the river terrace west of Whitemud Drive. The site contains a number of buildings and other structures representing Edmonton's history from the establishment of Fort Edmonton to the 1920s. There are approximately 74 public buildings currently on site in additional to a number of

administrative buildings. A large new building, the Blatchford Hangar has been recently opened.

A steam train and historic streetcars (refer to Radial Railway Society below) transport passengers throughout the site. A formal 400 stall parking lot is located at the main entrance at the east end of the site, with smaller informal lots located throughout the Park with access from the service road along the north edge of the site. On site parking has been sufficient to accommodate visitors to date, with the main parking lot accommodating normal visitation levels, and several grass overflow areas accommodating peak visitation for special events. Park and ride services have been attempted with minimal success.

The site contains many mature trees which have been planted over the years and a small pond was created at the southwest end to handle storm drainage. Native vegetation has been retained along the riverbank and the slopes to the south of the park are heavily treed.

Aerial View of Fort Edmonton - East End

2.2 EDMONTON RADIAL RAILWAY SOCIETY

Programs and Existing Levels of Use

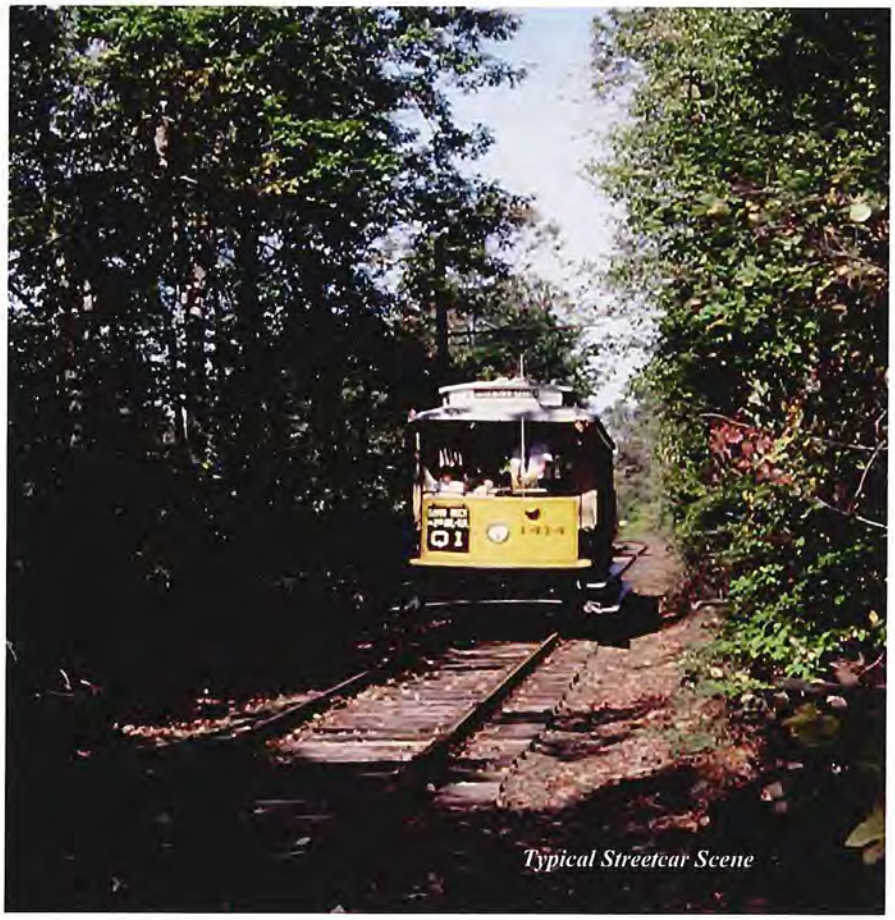
The Edmonton Radial Railway Society (ERRS) currently operates a streetcar line within Fort Edmonton Park. Historic Edmonton streetcars take passengers from the entrance along a rail line down the centre of 1920 and 1905 Streets, around a turn around loop and back to the entrance. In 1999, 136,919 passengers were carried on streetcars in Fort Edmonton Park, which represents a large portion of the visitors to the park.

The streetcars are operated and maintained strictly by volunteers. In 1999 volunteer hours spent on the Fort Edmonton line and the High Level bridge line (another line operated by the ERRS), totaled 15,723.

2.2 EDMONTON RADIAL RAILWAY SOCIETY *continued*

Physical Site Description and Existing Facilities

The society owns a number of streetcars which they are currently not operating. These cars are from various countries around the world and cannot operate at Fort Edmonton under their agreement with the Park which allows only historic Edmonton streetcars. Lack of a looped system on the high level line also limits which cars can be operated. The ERRS .houses and maintains their Fort Edmonton cars in a streetcar "Barn" within Fort Edmonton Park, close to the entrance.



Typical Streetcar Scene

2.3 JOHN JANZEN NATURE CENTRE

Programs and Current Levels of Use

John Janzen Nature Centre provides environmental education with a vision of developing an appreciation of Edmonton's distinct natural environment. The Centre's Mission is "*...to provide Edmonton residents and visitors the opportunity to enjoy and interact with the City's natural environment through the provision of:*

1. *Direct, professional, user oriented program services*
2. *Information, trails, exhibits and activities in a safe enjoyable and relaxing atmosphere for an array of visitors (families, children and adults) and:*
3. *Interactive public communication focussed on the understanding of topical issues relating to nature.*

The Nature Centre has been operated from this location since 1976. Community services staff provide day to day operations and the Nature Centre Foundation provides development planning and fund raising for capital projects.

Annual visitation is 25,000 with 49% families, 44% adults and 7% "other". Programs draw an additional 29,000. for a total annula visitation rate of 54,000. One or two special events are hosted annually, drawing approximately 300.

Nature Programming at John Janzen Nature Centre

2.3 JOHN JANZEN NATURE CENTRE *continued*

Physical Site Description and Existing Facilities

John Janzen Nature Centre is located within Fort Edmonton Park. Outdoor facilities include a small pond / wetland area, an outdoor display area, and an informal gathering area. Nature Centre trails along the river and through the valley slopes south of Fort Edmonton form an important component of the Centre's programmed area. Parking requirements are met at the Fort Edmonton parking lot.

John Janzen Nature Centre

2.4 WHITEMUD EQUINE CENTRE

Programs and Existing Levels of Use

The core activities of the Whitemud Equine Centre are instructional riding, recreational equestrian activities, therapeutic riding, and competition.

Equestrian Facilities have been located on this site since the mid 1950's, with the Whitemud Equine Centre operating as a City Facility since 1973 when the City acquired the land. Since that time it has been operated under various lease agreements between independent operators and the City. Currently, the Friends of Whitemud Equine Centre have a 20 year lease for the land (signed in 1995), and the Whitemud Equine Centre Society (an organization with representatives from the various groups using the Centre) has a 1 year agreement (September 1999 - 2000) to manage the facility. The four groups represented on the "Society" include the Friends, the Hunter Jumpers, the Little Bits Riding Program, and the Boarders.

The largest special event held at the site is the Northlands Horse Show, a week long event at the end of May. Three to four thousand people attend this event, bringing approximately three hundred horses. Other special events include the Fox and Hound Event - (3 days at the end of June) which includes a fun run, and the Pony Club Rally during late summer. Other smaller events occur throughout the summer.

Daily activities include horse boarding, riding lessons, and the disabled riding program. Currently 40 horses are boarded at the Centre, however, numbers are down from a peak of 85 due to the recent change in operators. Assuming a normal average of 60 horses, with owners visiting an average of three times per week all year, or 9,000 visits annually. Statistics from the Equine Centre Master Plan indicate group riding lessons can involve up to 700 people per season with another 130 people in individual riding lessons. With most lessons as 12 week sessions, this equates to approximately 10,000 visitations.

Other groups events are hosted at the Centre including hay rides, tours, school groups riding and horse care, and summer day camps. These bookings account for approximately 10,000 visits per year.

From available statistics, an annual visitation rate of approximately 30,000 has been estimated.

Whitemud Equine Centre

2.4 WHITEMUD EQUINE CENTRE *continued*

Physical Site Description and Existing Facilities

The Whitemud Equine Centre occupies the portion of the river terrace north of Fox Drive and east of Whitemud Drive. The majority of the area is open space utilized for grazing, outdoor shows or lessons. Structures on site include an indoor arena, a large barn containing horse stalls, classroom, lobby, and office. Two smaller barns provide additional stalls. Other buildings include: two residences, a garage, site washrooms, and a field house associated with the outdoor show arenas. Parking is relatively undefined with gravel lots located near the main building and show arenas. Wooden post and rail fencing surrounds the various pastures and arenas.

Berms have been constructed and landscaped around various show areas at the west end of the site. Native vegetation grows along the river banks and a few other stands are located throughout the site.

2.5 WHITEMUD PARK

Programs and Current Levels of Use

Whitemud Park is a City park catering primarily to picnickers and fishermen in the summer, and tobogganing in the winter. Many trail users travel through the park. Fishing is very popular near the confluence of Whitemud Creek and the River. Users park their vehicles close to their fishing spot and often carry chairs and other equipment to the shore. Picnickers usually park at the entrance near Keillor Road or along the service road in the park.

Community Services operates a number of summer day camps at Whitemud Park South (portion south of Fox Drive). They run 2 to 3 camps per week with 50 -60 children per camp. From visitation counts during the summer of 1999, approximately 15,000 recreational visitors are estimated annually, the majority during summer months.

Picnic Area in Whitemud Park

2.5 WHITEMUD PARK

Physical Site Description and Existing Facilities

Whitemud Park includes the land between Fox Drive and the River east of Whitemud Creek and the land south of Fox Drive east of the creek. The park contains washroom buildings, a program / warm up trailer, a garage, several picnic sites, and three informal gravel parking areas.

The site contains native polar trees, but use and maintenance at the park has eliminated most of the undergrowth. Many of the poplars remaining are nearing the end of their life span.

2.6 FARM SITE

Programs and Current Levels of Use

The farm site included within the study area was turned over to the City in 1996. At that time, various groups began using the site under an informal arrangement with Community Services who were responsible for the site. Edmonton Catholic School Board currently operates a bike repair shop in the garage; Community Services stores equipment; Fort Edmonton currently pastures horses throughout the site and stores wagons in the Arena.

Horse Pasturing at Farm Site

Physical Site Description and Existing Facilities

The farm site contains a main residence, a smaller "bunkhouse" a large garage - workshop, a horse barn, and an indoor riding arena. Buildings are not suitable for public use. Several pasture areas are fenced with page wire fencing. A gravel road provides access from the signalized intersection on Fox Drive.

Some trees were planted near the residence, otherwise plant material in the site is native.

2.7 TRAILS

Programs and Current Levels of Use

Trails within the study area are well used. Trail user surveys conducted during July, August and September, 1999 indicated extensive and consistent trail use. A total of 180 hours of survey time was spent covering all days of the week and all time periods between 9:00 a.m. and 9:00 p.m. at three separate locations (Keillor Road, Whitemud Park south, and River Trail - Fort Edmonton) A total of 4,778 trail users were counted over the survey duration with a breakdown of user types as follows:

- 33% - walkers and hikers
- 31% - bicycles
- 20% - Jogging
- 13% - Dog Walking
- 3% - Nature Appreciation

The breakdown of user types was very similar between the three survey locations.

The breakdown of users by age group was:

- 71% - Adults
- 12% - Seniors
- 9% - Teens
- 8% - Children

Assuming that these statistics provide a reasonable estimate of typical summer use, and assuming a drop in use during the winter months, a total annual visitation rate of 70,000 could be considered a reasonable estimate.

User conflicts have caused some concern within the Ravine area, as the trails are very attractive to many different users. Complaints have also been received about mountain biking and off leash dog walking on hiking trails in Whitemud Ravine.

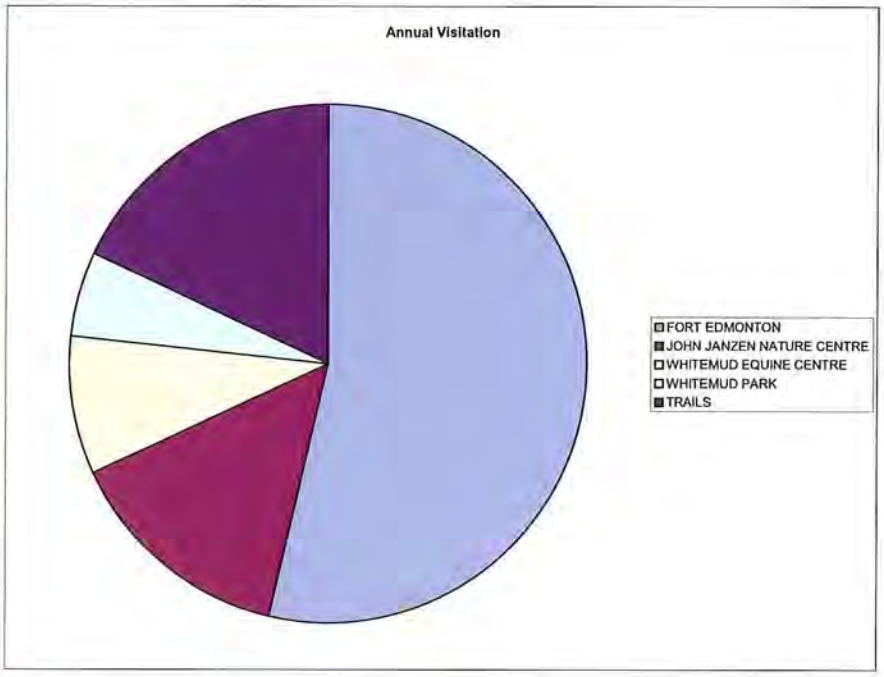
Physical Site Description and Existing Facilities

Paved trails (class one trails) in the study area include Keillor Road, a trail linking Keillor with the Quesnell bridge, a trail connecting the Farm site access road with Brander Gardens to the south and a short section of trail linking the Fort Edmonton access road, under the Campbell bridge to the farm site access road.

Class 2 trails (wide granular for pedestrians and bicycles) connect Grandview with Whitemud Park. All other trails along the river and into Whitemud Ravine are class 3 (narrow granular for pedestrians). There is a separate equestrian trail connecting the Equine Centre with Hawrelak Park, and horses are allowed on the Whitemud Ravine trails to Snow Valley.

2.8 *VISITATION SUMMARY*

Annual visitation to the study area, based on a combination of actual visitor counts and extrapolation from surveys, is estimated to be 400,000. Of these numbers, approximately 54% can be attributed to Fort Edmonton Park, 18% to informal trail use, 14% to John Janzen Nature Centre, 9% to the Equine Centre, and 5% to Whitemud Park as illustrated in the following chart.



Use levels in the area are somewhat higher during summer months, particularly in Whitemud Park, Fort Edmonton, and on the trails. Use at the Equine Centre is relatively consistent throughout the year.

Possible Streetcar Alignment
Through Wooded Area

John Janzen Nature Centre

Whitemud Park North

Fort Edmonton Park

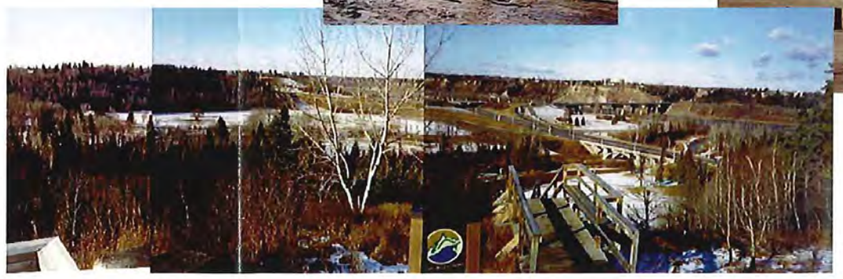
River Loop Trail

Airphoto not to scale

Whitemud Equine Centre

Fox Farm

Proposed Streetcar Route



Whitemud Park South

Existing Condition Images
Whitemud Integrated Plan

EDA Collaborative Inc.

June 2000

3.0 SITE ANALYSIS

3.1 ENVIRONMENTAL RESOURCES

This area of the river valley has been actively used for recreational activities for many years, however, it still contains important natural resources and wildlife habitat. A review of available reports (listed following) and discussions with area stakeholders provided an overview of the important environmental resources within the study area as outlined in this section.

- *Ribbon of Green Master Plan - City of Edmonton 1992*
- *North Saskatchewan River Valley Biophysical Study - EPEC 1981*
- *Rossdale Water Intake Relocation Environmental Impact Assessment - Kipen Gibbs 1993*
- *North Saskatchewan Flood Risk Mapping Study - IDE 1995*
- *Whitemud & Blackmud Ravines Trails Development Plan - Edmonton Parks and Recreation 1990*
- *Site bird surveys - Parks and Recreation Bird Survey 1990, Christmas Bird Count - 1989, Biophysical Survey Parks and Recreation - 1980, Natural History Club / Gretzinger - 1988.*
- *Alberta's Watchable Wildlife Checklists - Fish, Amphibians, Reptiles, Mammals (1996); Birds (1992); Plants (1995)*

Key information for each environmental component is highlighted in this section. Environmental Factors which pose a constraint to development are illustrated on Drawing 2 - Constraints to Development.

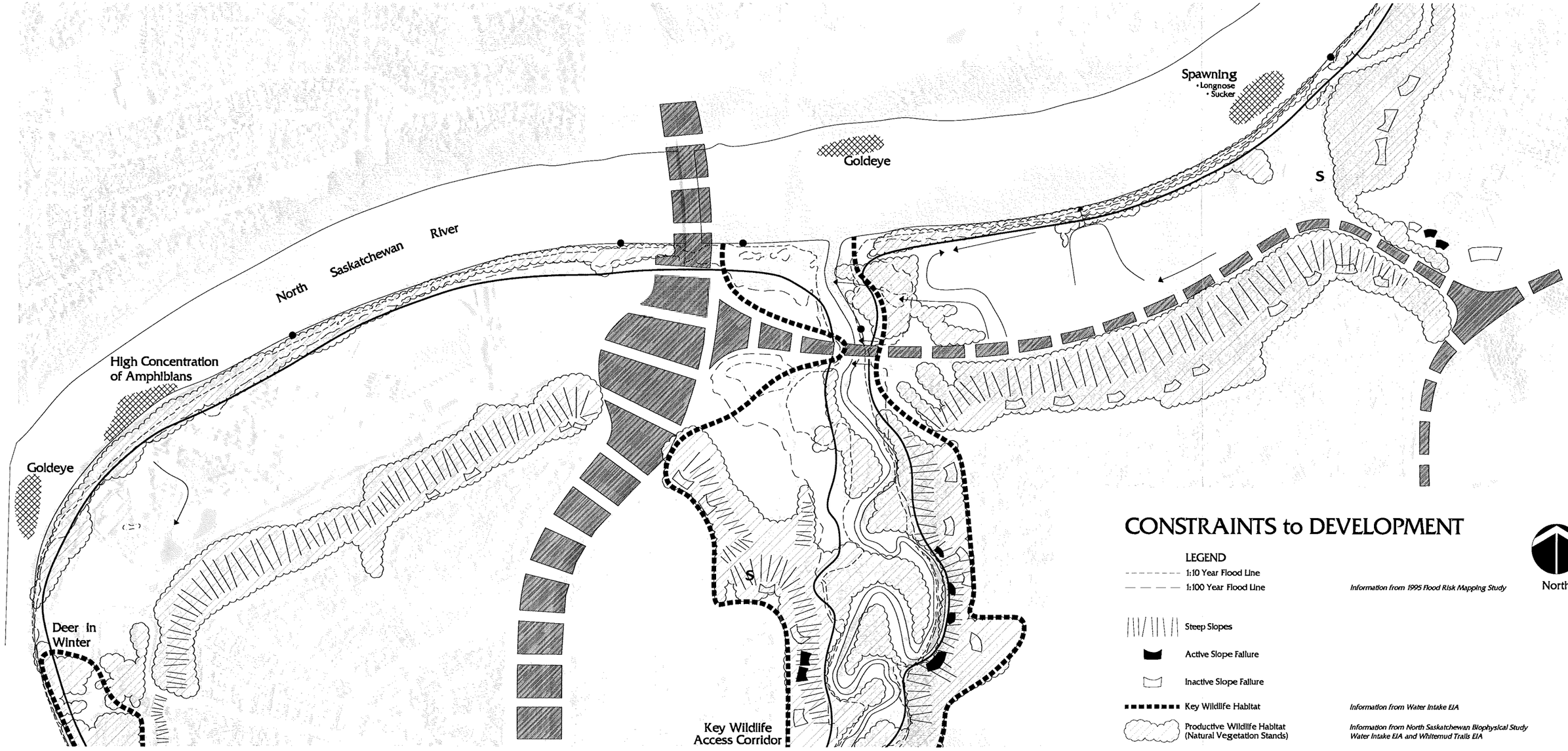
Biophysical Elements

Hydrology *(Flood Risk Mapping Study)*

- Flooding would have minimal impact on the Equine Centre or Fort Edmonton terraces but substantial impact on the Whitemud Creek Ravine (Farm site)
- Farm site - the north central field is completely within the 1:10 year flood zone; all outbuildings and northwest field are within the 1:50 year flood line; only the residence and west field are above the 1:100 year flood line.
- There are five existing storm sewer outfalls into the River within the study area. They discharge storm runoff water from adjacent neighbourhoods and from runoff within the study area. River water quality test results from the outfall at the east end of the Equine centre shows "spikes" of high coliform counts which would undoubtedly correspond to major storm events. These counts are likely due to surface run-off through horse pens at the east end of the Equine Centre. It should be noted that the E.coli bacteria is associated with cattle and not horses.
- Some surface drainage from the study area terraces is channeled directly into the River.

Geology / Geomorphology *(River Valley Biophysical Study)*

- Alluvial deposits underlay the floodplain and terraces
- Groundwater may be present near the base of terrace deposits
- A high water table is expected in one "gully" location in Whitemud Ravine, and at the bottom of an old stream channel at the east end of the Equine Centre
- There is a spring located near the base of the toboggan slope in Whitemud Park South
- There are a number of unstable slopes adjacent to the study area, but most failures are now inactive; however, there are some active slope failure areas along Whitemud Creek



CONSTRAINTS to DEVELOPMENT

North

LEGEND

- 1:10 Year Flood Line
- 1:100 Year Flood Line — *Information from 1995 Flood Risk Mapping Study*
- Steep Slopes
- Active Slope Failure
- Inactive Slope Failure
- Key Wildlife Habitat — *Information from Water Intake EIA*
- Productive Wildlife Habitat (Natural Vegetation Stands) — *Information from North Saskatchewan Biophysical Study, Water Intake EIA and Whitemud Trails EIA*
- High Potential for Prehistoric Resources (50m from River or Creek) — *Information from North Saskatchewan Biophysical Study*
- Transportation Corridor
- S — Possible Spring Location / High Water Table
- Storm Sewer Outlet
- Drainage

Dwg. 2

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March 2001

0 50 100 250 500 750m

WHITEMUD INTEGRATED PLAN

Constraints to Development

Slopes *(from site topography maps)*
- The river banks and the river valley and creek valley slopes are generally too steep for development
- The Fort Edmonton and Equine Centre terraces are relatively flat.

Soils (*River Valley Biophysical Study &Water Intake EIA*)
- Fort Edmonton - most of site is highly disturbed
- Whitemud Equine Centre - highly disturbed
- Much of area has been filled for road construction
- Natural soils include silt / clay deposits

Vegetation / Habitat (*River Valley Biophysical Study, Watchable Wildlife Checklist Series)*
- Whitemud Creek Ravine is home to at least 279 flowering plant and 10 fern / fern ally species as listed in the Watchable Wildlife Checklist.
- Predominant vegetation in the study area is aspen or mixed balsam poplar with some white spruce
- One recorded plant species in the ravine, the Prairie Rose, is listed as "vulnerable, threatened or endangered in Canada". Four species in the Forbs or Grasses plant form categories are listed as rare in Alberta.
- Fort Edmonton / Whitemud Equine Centre / Farm site - have all been long cleared of native vegetation except along the edge of the riverbank
- Balsam Poplar / White Spruce is predominant north of the Equine centre
- Balsam Poplar / Other deciduous vegetation is predominant north of Fort Edmonton
- White Spruce / Deciduous vegetation predominates south of Farm site
- Deciduous and mixed wood forests support the greatest diversity of birds

Wildlife

With its proximity to the Whitemud Nature Preserve and the University Farm, and its large expanses of native vegetation along the valley slopes, the Whitemud Integrated Plan area is an important wildlife corridor.

Deer (*Rossdale Water Intake Relocation EIA, Edmonton Natural History Club observations*)
- The only area within study boundary tested during the Rossdale water intake relocation EIA was at Fort Edmonton where there were consistent sightings
- There is an important wintering area immediately south of Fort Edmonton
- Both White-tail Deer and Mule Deer frequent the study area on a year round basis. The heavier spruce and mixed-wood forest cover in the ravine is particularly important during cold and deep snow winter conditions.
- Deer (and other mammals) often travel north through the Whitemud Ravine, enter the treed slopes south of Fox Drive, cross Fox Drive west of the Belgravia traffic signals and enter the University Farm. It is likely that they also access the Keillor Road area, although this route does not appear as well used judging by track observations.
- Animal populations also inhabit the slopes south of Fort Edmonton, but the connection into Whitemud Ravine is blocked by Terwillegar Drive. Deer have been observed crossing at this location, however, at great risk and have also been observed crossing Fox Drive to reach the trees in Whitemud Park. There have been many deer fatalities over the years along Fox Drive.

Other Mammals (*Whitemud Ravine Trails EIA, Alberta's Watchable Wildlife Checklists*)

- Twenty-five different mammal species have been confirmed in Whitemud Creek Ravine (*Watchable Wildlife Checklist*) including various species of shrews, bats, rabbits and hares, rodents, carnivores and ungulates. Of the ungulates, mule deer and white-tailed deer are commonly seen, moose may be seen occasionally. The striped skunk is the only carnivore listed as "common"; other occasional or uncommon species include coyotes, red fox, raccoon, ermine, mink, and lynx. Common rodents include beaver, chipmunk, Richardson's ground squirrel, red squirrel, deer mouse, meadow and red-backed voles. Muskrats and Porcupines have been recorded but are uncommon. The snowshoe hare is the only common recorded species of the rabbits and hares group. The little brown bat has been recorded and listed as common, the silver-haired bat has been recorded, but is uncommon. The masked shrew is commonly seen, other shrew species have been recorded but are uncommon.
- An additional 24 species of mammals are expected to be found in the area based on regional distribution and habitat needs, but have not yet been recorded in Edmonton.

Fish and Amphibians (*Water Intake EIA*)

- Several sport fish species are found in the North Saskatchewan River, with Goldeye as the most important
- High concentration of Goldeye have been noted at mouth of Whitemud Creek and at another location near the south end of Fort Edmonton
- High concentration of spawning Longnose, White Sucker and Red Horse were noted at east end of Equine Centre
- A high concentration of breeding amphibians were noted at a location along the riverbank near south end of Fort Edmonton Park

Birds

River Valley

Waterfowl (*Water Intake EIA*)

- The River was surveyed by boat 3 times during April and May 1992
- The Whitemud study area was not identified as an important habitat for waterfowl (there are better sites at Hawrelak and Terwillegar Parks)

Raptors (*Water Intake EIA*)

- River surveyed by boat 3 times April and May 1992
- Few Raptors were sighted in study area river flats, they tend to stay in less developed areas farther south (Country Club Flats / Terwillegar)

Songbirds (*Water Intake EIA and Christmas Bird Counts*)

- Keillor Road is one of the four sites used in the Christmas Bird Counts (Keillor, Terwillegar, Laurier, and Hawrelak). The total number of species counted on Keillor Road was "average" for the four sites, however, the total number of birds was lowest of the 4 sites. The site had more "urban" species (those birds which are commonly seen in urban settings) and fewer "wild" species than the other sites.

Birds - Whitemud Ravine *(various site surveys)*

- Whitemud Ravine supports a rich diversity of bird species (better than other ravines such as McKinnon, Groat, Mill Creek) Bird Counts in the Ravine have been done on a number of occasions by various groups with 131 species being recorded.

- Two species listed as "vulnerable, threatened, or endangered in Canada" (Watchable Wildlife Checklist Series), have been occasionally seen in the ravine - Cooper's Hawk and Great Grey Owl.

3.2 HERITAGE RESOURCES

Prehistoric Resources

- The potential for prehistoric sites is high in Edmonton relative to other parts of province due to the importance of the North Saskatchewan river valley. The valley was an important habitat for many game species and provided an important wintering ground for bison and also for area natives
- The river was an important travel corridor
- HRIAs (Historic Resource Impact Assessments) have not been completed within the river valley flats portion of the study area, but the potential for finds is moderate to high depending on location:
  Potential for finds:
  - River margin (within 50m) = high
  - River Flats (more than 50m) = moderate
  - Valley Slopes = low
  - Top of bank at edge = high
  - Table lands - back of top of bank = moderate
- The Whitemud Trails EIA included an HRIA - 126 shovel tests along the proposed centreline of the trail. They found no subsurface artifacts, but did find evidence of a previously unknown coal mine (which was filled in during trail construction, due to safety concerns).

Deer and other mammals often travel north through the Whitemud Ravine, enter the treed slopes south of Fox Drive, cross Fox Drive west of the Belgravia traffic signals and enter the University Farm. It is likely that they also access the Keillor Road area, although this route does not appear as well used judging by track observations. Animal populations also inhabit the slopes south of Fort Edmonton, but the connection into Whitemud Ravine is blocked by Terwillegar Drive. Deer have been observed crossing at this location, however, at great risk and have also been observed crossing Fox Drive to reach the trees in Whitemud Park.

Historic Resources

- The river was an important travel route, providing a reason for settlement for early settlers
- It was the demarcation line for Blackfoot and Cree and provided the meeting point for important events
- Recorded historic sites within or near the study area include a former residence at the south approach to the Quesnell bridge (under the road) and 2 coal mines in Whitemud Ravine - just south of our boundary
- All Historic Resources Sites recorded within the study area are disturbed and not highly rated for interpretive value

Palaeontological Resources

- No information was found on the area's potential for palaeontological finds, although there have been other finds in the river valley within Edmonton

3.3 SERVICING and INFRASTRUCTURE

A brief review of existing services and infrastructure is included in this section. A more detailed description can be found in the Appendices and in individual facility Master Plans.

Water and Fire Protection

Water is fed to Fort Edmonton Park and the Whitemud Equine Centre from Whitemud Road in Riverbend Subdivision. A 200mm asbestos-cement pipeline feeds water down the hill from Whitemud Road to a location near the historic fort, then continues eastward, servicing the all areas of the Park. A 150mm service connection from the Fort Edmonton main provides water to the John Janzen Nature Centre. There are a number of fire hydrants located throughout this area.

Beyond the Nature Centre, the 200mm main connects to the farm site south of Fox Drive, where there is a 200 mm main which runs up the hill to Grandview Drive. This main provides a connection back to the City system, which means the Fort Edmonton half of the park is a looped system.

From the farm site, the main crosses Whitemud Creek and Fox Drive where there is a reducer which changes the size of the main to 150 mm. There are no fire hydrants in this section of the main.

The 150mm main line provides service to the barns at the east end of the Equine Centre and the central show area. There are two fire hydrants at the Equine Centre.

Sanitary

Generally, Fort Edmonton Park is served by the City sanitary sewer system; the Whitemud Equine Centre and Whitemud Park are served by pump-out tanks; and the farm site is served by a septic field, designed to handle a single residence.

The sewers in Fort Edmonton park drain by gravity to a sewage lift station which is located near the Ramsey Greenhouse. This lift station pumps the sewage via a 150mm forcemain to the City sanitary system in Riverbend Subdivision on 148 Street near 64 Avenue. The gravity sewer is generally a 250mm pipe, except in the area of the historic Fort where it is 150mm diameter. The extent of this system is from the Fort in the west to the Station / Nature Centre parking lot in the east.

Equine Centre washrooms are housed in a separate building which is served by a pump-out septic tank. There is also a public washroom facility at the show area fieldhouse, which is also served by a pump-out tank.

Toilet buildings in Whitemud Park north and south of Fox Drive are pumped out.

Stormwater Management

While the majority of the area occupied by Fort Edmonton Park is served by a surface drainage system consisting of swales, ditches and natural sloughs or ponds, the developed portions of the site are served by underground storm sewers. One system serves the area from the west end of 1885 Street to the John Janzen Nature Centre. This system has pipes ranging in size from 200mm to 1050mm at the outlet to the North Saskatchewan River north of the Fire Hall.

A second system serves the Park / Nature Centre parking lot, with pipe sizes ranging from 200mm to 525mm at the outlet just west of the Quesnell Bridge.

3.3 SERVICING and INFRASTRUCTURE *continued*

There is a third outlet to the river just east of the Quesnell Bridge providing an outlet for a major system which primarily serves the Whitemud Drive south of the bridge including the Fox Drive interchange. A fourth 1200mm outlet on the east bank of Whitemud Creek, just north of the Campbell Bridge provides an outlet for the system serving Fox Drive and the service road leading to the Equine Centre.

There is a fifth 1500mm outlet at the north end of the Equine Centre providing an outlet to a tunnel storm drain which services Fox Drive and Belgravia Road.

Gas, Power and Telecommunications

ATCO Gas provides and maintains gas mains to service the buildings in the study area. Power and telephone systems serve all facilities

3.4 TRANSPORTATION

The Whitemud Integrated Plan area is segmented by Whitemud Drive and Fox Drive. The Quesnell Bridge, which carries Whitemud Drive across the North Saskatchewan River, is currently the most heavily used river crossing in Edmonton. The City's Transportation & Streets Department is in the process of developing plans for the widening of Whitemud Drive from Terwillegar Drive to 149 Street. This will include the widening of Quesnell Bridge from its current six-lane width to eight lanes. In reviewing the feasibility of widening the existing bridge, it has been concluded that the widened roadway and a multi-use walkway cannot be accommodated on the existing structure. Consequently, the proposal is that the Quesnell Bridge will be widened to accommodate the eight-lane roadway, while the multi-use walkway will be accommodated on a separate, new river crossing at an as yet unspecified, downstream location.

Access to the various land uses in the plan area is currently provided via two intersections on Fox Drive. Access to the Fox Farm and to Fort Edmonton Park is by way of a signal-controlled intersection located between Whitemud Creek and the Whitemud Drive/Fox Drive interchange. Access to Whitemud Park and the Equine Centre is available at the intersection of Fox Drive and Keillor Road access road, east of Whitemud Creek; this intersection is not signalized.

The proximity of the Fort Edmonton Park access to the Whitemud Drive/Fox Drive northbound to eastbound exit ramp junction results in difficult to negotiate weaving movements across the eastbound travel lanes on Fox Drive.

In order to improve the operation of Fox Drive between Whitemud Drive and the Keillor Road access, the Transportation and Streets Department examined several options aimed at improving the interaction between arterial through traffic and local access traffic originating from, or destined to the local amenities. The recommended option that has emerged from this review is a proposal to construct a separate access ramp from the northbound to eastbound Whitemud/Fox Drive exit ramp that would meet Fox Drive at the south approach to the exiting Fort Edmonton/Fox Farm access. This configuration would eliminate the previously noted weaving movements and improve Fort Edmonton access from the south.

Decisions which have been made by Transportation and Streets through the Whitemud Drive Study will be incorporated into the Whitemud Integrated Plan. It is recommended that detailed design for the new pedestrian bridge include Whitemud Park North and the Whitemud Creek bridge.

3.5 SUMMARY and EVALUATION

Environmental Resources Evaluation

Although the study are has been impacted by human development for many years, it remains an important "green" area near the centre of the City, providing an important buffer zone at the north end of the Whitemud Nature Preserve. To ensure that any future development within the area is compatible with the natural environment, it is important to understand which areas are most sensitive to disturbance.

A general review of level of sensitivity is included in the Ribbon of Green Master Plan for the entire river valley. In the Whitemud Plan Study area, high sensitivity areas are identified within the Whitemud Creek ravine, the river valley slopes south of Fort Edmonton and south of the Equine Centre, and along the river banks. The Fort Edmonton and Equine Centre river terraces, and the former farm site are identified as having low sensitivity.

More specifically, some key environmental factors from this review which could be impacted by development, or which could be a constraint to development, are described following and shown on Drawing 2 "Constraints to Development".

- **Flooding** is a concern in the Whitemud Creek Ravine, with approximately 2/3 of the Farm site within the 1:50 year flood event and at least half of that within the 1 in ten year event. This is a constraint to development , but also is a concern relating to water quality (see below). The river terraces are above the 1:100 year flood line.

- **Water Quality** - storm run-off generally flows directly into the river or creek. With horses currently pastured at the Equine Centre, at the Farm site and at Fort Edmonton, there is the potential for water contamination. (for more information on this topic, see the Stormwater management review). There are five storm outfalls discharging into the river or creek within the study area.

- **Slope Stability** could be a concern along the river valley and creek ravine banks. There have been instances of slope failure in the past, but all steep banks are currently well vegetated. This vegetation should be retained to protect the slopes.

- **Wildlife Habitat and Travel Corridors** - Deer, coyote and red fox, other small mammals and birds are resident in the area and the vegetated slopes provide an important movement corridor. Removal of any of this vegetation would impact the area wildlife.

Refer to Site Analysis Drawing

Heritage Resources Evaluation

Although significant prehistoric finds worthy of interpretation have not been identified within the study area, detailed Heritage Resource Impact Assessments have not been completed in the area. The river terrace area is rated as having moderate to high potential for finds, and HRIAs should be undertaken for new developments.

Historic activity in the area is well documented, and there are no remaining sites of any significance worthy of interpretation.

Servicing and Infrastructure Evaluation

The following sections set out the inadequacies of the current utility systems and the constraints to growth and development of the Whitemud Integrated Plan Area.

Water and Fire Protection

The current water system in the Equine Centre half of the park is not a looped system – ie. It lacks a connection back into the City system at the east end. A 200mm main extending down to the Equine Centre from either Grandview Drive, the Fox Drive/Belgravia Drive intersection, or Saskatchewan Drive in Belgravia Subdivision should be provided to complete the loop and provide a higher level of fire protection for the buildings in the Park.

With the current system, if there is a break or leak in the main feeding from the Farm site area, then service to all buildings lying to the east of the valve immediately west of the break location would be cut off until the break could be repaired.

The Fort Edmonton Park Master Plan notes deficiencies in the fire protection system relating to hydrant accessibility, hydrant spacing and sprinkler systems in buildings.

The Master Plan for the Renewal of the Whitemud Equine Centre lists the following water system deficiencies:

- Lack of indoor equine washing facilities
- Lack of automatic weather-proof drinking fountains for horses

Sanitary

The Fort Edmonton Park Master Plan sets out deficiencies in the sanitary system. These deficiencies relate to a 1986 incidence of the pumps being flooded and hence out of service for some time. Since the system depends upon the pumps being able to cycle on and off in accordance with the volume of sewage entering the system, facilities would have to be shut down during any prolonged period of pump failure.

For the Equine Centre, the current system of washrooms connected to pump-out tanks is a severe limitation to future growth and development. Any significant development will require the installation of gravity sewers, a lift station and a forcemain connected to the existing City system in either Grandview or Belgravia.

Stormwater Management

The most serious drainage issue appears to be the potential for contamination of the North Saskatchewan River from the runoff waters from the horse corrals at the Equine Centre. The runoff from this area is drained into a catchbasin adjacent to Keillor Road, and this catchbasin is connected to a storm drain which outlets to the river at Outfall #22. The City of Edmonton Drainage Services Branch regularly monitors the quality of the effluent from all outfalls, and the results of the sampling from Outfall #22 for 1998 and 1999 were reviewed. Total Coliform counts varied from a low of 300 to a high of 1.7 million, and the corresponding Fecal Coliform counts varied from 20 to 170,000 per 100 mL.

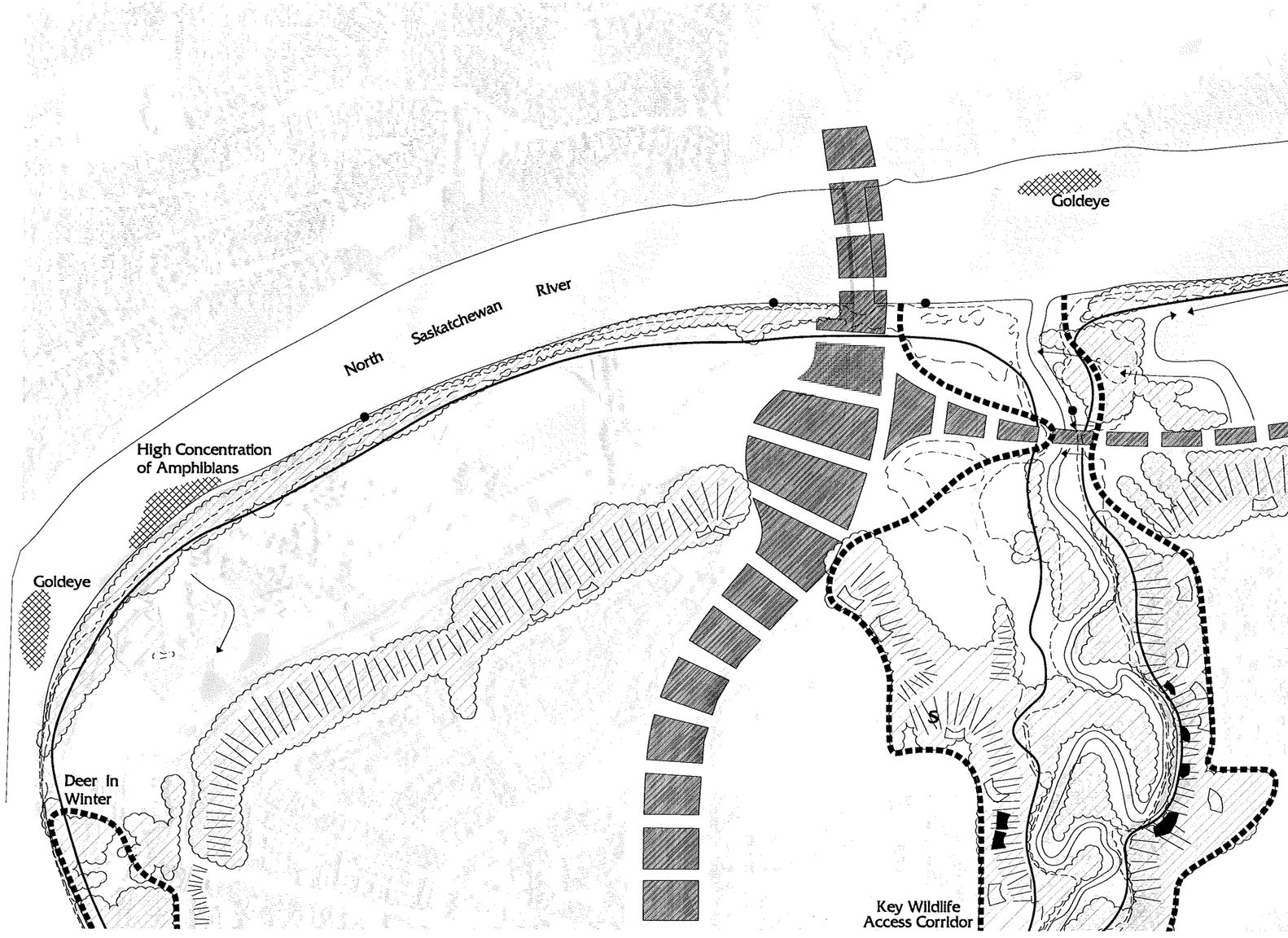
To put these numbers in perspective, the North Saskatchewan River, adjacent to Rossdale Water Treatment Plant in downtown Edmonton has a background level of 30 to 35 Fecal Coliforms/100 mL, except during runoff events when spikes in the counts reach the 2000 to 3000 FC/100 mL range.

Given the existence of the Equine Centre, the FC counts at Outfall #22 are to be expected. But given the existence of the Rossdale Water Treatment Plant intake downstream from this outfall, it is essential to implement measures which would reduce the magnitude of the FC counts attributable to the Equine Centre runoff.

A more detailed discussion of water quality issues is included in the appendices.

Gas, Power, and Telecommunications
Provision of gas, power, or telecommunications to new developments within the study area is not a constraint.

View of East Portion of Study Area - Equine Centre, Whitemud Park and Farm



CONSTRAINTS to DEVELOPMENT

North

LEGEND

- 1:10 Year Flood Line
- 1:100 Year Flood Line — *Information from 1995 Flood Risk Mapping Study*
- Steep Slopes
- Active Slope Failure
- Inactive Slope Failure
- Key Wildlife Habitat — *Information from Water Intake EIA*
- Productive Wildlife Habitat (Natural Vegetation Stands) — *Information from North Saskatchewan Biophysical Study, Water Intake EIA and Whitemud Trails EIA*
- High Potential for Prehistoric Resources (50m from River or Creek) — *Information from North Saskatchewan Biophysical Study*
- Transportation Corridor
- S — Possible Spring Location / High Water Table
- Storm Sewer Outlet
- Drainage

0 50 100 250 500 750m

EDA Collaborative Inc.

May 2001

WHITEMUD INTEGRATED PLAN

Site Analysis

4.0 CURRENT PLANS and PROPOSALS

4.1 MUNICIPAL PLANS

There are a number of policies and plan documents which could affect development within the Whitemud Integrated Plan area. This section describes approved documents and recent proposals received by the City.

North Saskatchewan River Valley Area Redevelopment Plan - Bylaw 7188

The purpose of this document is to protect the north Saskatchewan River Valley and Ravine System as part of Edmonton's valuable open space heritage and to establish the principles for future implementation plans and programmes for parks development .

The River Valley Bylaw governs all development within the river valley below the top of bank. It includes a broad outline of goals and objectives for river valley development, and describes procedure for approval of proposed developments, and requirements for Environmental Impact Assesments.

Major goals of the plan are:

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

Ribbon of Green Master Plan - 1992

This plan was prepared by Edmonton Parks and Recreation with extensive public input and was approved by Edmonton City Council (as amended) July 28, 1992. The Master Plan "*....emphasizes the continuation of an integrated trail system and the development of natural parks utilizing existing or restored resources to their best advantage. The plan is to recreate a natural preserve and re-establish a viable ecology while minimizing any additional development which may be contrary to the parks' primary use.*" (From covering letter signed by Don Ausman)

The Plan identified priority one development components totaling $13.25million, the amount allocated by the Province through the Urban Parks Program. This amount included $3,409,000 for 4 projects identified within the Whitemud Integrated Plan area boundary: Whitemud Ravine Trails ($1,040,000), Keillor Road / Equine Area ($296,000), Fort Edmonton Trails ($448,000), and Whitemud Park ($1,625,000). The estimated time frame for development was seven years (1992 through 1998); however, due to the to cancellation of the Urban Parks Program, the full program was not completed.

Whitemud and Blackmud Ravines Trails Development Plan - 1990

This plan recommended trail alignments and bridge crossing locations for trail development within Whitemud and Blackmud Ravines and included an Environmental Impact Assessment. It was prepared by Edmonton Parks and Recreation with assistance from a Development Committee including members of representative stakeholder groups and area residents. Two public meetings were held during preparation of the plan.

The report was approved by Edmonton City Council January 30, 1990. Most of the work recommended in the Plan has been completed.

4.2 APPROVED FACILITY MASTER PLANS

Fort Edmonton Master Plan - 1968, Updated in 1987

The original Master Plan for Fort Edmonton Park was prepared in 1968. The current Master Plan is an update of the original and was prepared by Larrie Taylor Architect with a team of multi-disciplinary subconsultants for the Fort Edmonton Historical Foundation and Edmonton Parks and Recreation. The updated Master Plan outlines a number of individual projects to be developed within the existing overall park framework. These projects are developed as funding is obtained.

Fort Edmonton is currently reviewing potential land use zoning changes to accommodate their ongoing development.

John Janzen Nature Centre Completion / Concept Plan - 1996

This plan was prepared by Edmonton Nature Centres Foundation in partnership with Edmonton Parks and Recreation in August 1996. It includes a three phase guide for development, expansion and revitalization of facilities and exhibits at John Janzen Nature Centre.

1. Interior Exhibit Upgrading and Backyard for Wildlife Exhibit
2. Facility Information Centres, Children's Natural Play Area
3. Building Expansion to increase program area, outdoor program area with fire pit and seating area, amphitheatre, picnic / rest area

All development proposals would be within the existing footprint; current parking is to be maintained and current trail use to be continued.

John Janzen has indicated an interest in expanding their programming to include interpretation in Whitemud Ravine. This use has not occurred in the past due to lack of washroom facilities.

Master Plan for the Renewal of the Whitemud Equine Centre - 1995

Prepared by the Friends of Whitemud Equine Centre, this Master Plan was approved by Edmonton City Council June 16, 1995. It identified the following new or upgraded facilities for a total estimated cost of $5,470,000.

- New Indoor Arena - large enough to allow more than one activity at a time
- Improved Outdoor Arenas
- New and Improved Stabling - (to accommodate 120 boarding and lesson horses)
- Improved Pens and Pastures
- Office and Support Facilities

The proposed timeline for the improvements was 1996 through 2005 , although this schedule has been delayed by approximately five years

The Friends of Whitemud Equine Centre had indicated an interest in using the farm site facilities for Western Riding show events and the potential short term use of arena for lessons and Little Bits Riding Program

Forestry Capital Legacy Project

This report was prepared by the Edmonton 1994 Forestry Capital Society in December 1993. The proposed "Legacy Project" included five components:

1. The Whitemud Ravine Legacy Centre - a 3,527 square foot (327.8m2) log building c/w decking on two sides, exhibition room for 100 people, large indoor / outdoor fireplace.
2. The John Walter Museum Site Legacy Centre - a 5,022 square foot (466.7m2) building c/w exhibition room for 100 people, interactive program area, enclosed activity area.
3. National Forest Capital of Canada Park - designation of the forested area on the south side of the river valley between Kinsmen Park and Emily Murphy Park.
4. National Forest Capital of Canada Trail - designation of the existing granular trail linking the two Legacy Centres
5. Educational Enrichment Program - CD-ROM available for use in school system to support field trips to the Legacy Centres.

This proposal was brought before City Council, but neither of the Legacy Centres were developed due to insufficient funds. The Forestry Trail, however, was designated with interpretive signage between Kinsmen Park and Whitemud Park.

Since that time, funds raised by the Forestry Capital Society were turned over to FEESA, an Environmental Education Society.

4.3 CURRENT PROPOSALS

The Fox Environmental Education Centre Proposal

A proposal for an Environmental Education Centre at the Farm site was discussed with Community Services by FEESA, an Environmental Education Society.

The main components of the proposal included:

- an 800 square metre Interpretive Centre associated with a 2 hectare outdoor display area
- an 800 to 1000 square metre education centre (combination of indoor classroom space and outdoor amphitheatre)
- Interpretive reforestation area
- Greenhouse operation for interpretation and supply of seedlings for reforestation program
- New interpretive trails in the Farm site and access to existing trails in Whitemud Ravine

The proposal indicated site access from the existing Farm site road, with parking provided near the education centre for cars and buses. Anticipated visitation was 50,000 annually, primarily through programmed use.

** FEESA representatives withdrew from the Whitemud Advisory Committee in March and indicated that they were pursuing other alternative locations for their Centre.*

Edmonton Radial Railway Society Expansion Proposal

The Edmonton Radial Railway Society (ERRS) currently operates within Fort Edmonton Park, providing internal transportation for park visitors. They have agreed to utilize only "Edmonton" streetcars in the park, but the Society has a number of non-Edmonton streetcars available for use but requiring another location. In order to use these cars, they are proposing to expand their rail line beyond the Fort Edmonton Park boundary. Their proposal includes two phases:

1. Phase one would extend the rail line from the 1905 / 1920 Street intersection, travel along the service road, under the Quesnell bridge, across Whitemud Creek and connect to the existing bus stop on Fox Drive (near the Keillor Road intersection). They have salvaged the former CPR - Jasper Avenue bridge and propose to utilize this bridge for the creek crossing. In 1994, they retained Thurber Engineering to undertake a geotechnical review and make recommendations for installation of this bridge. Navigable Waters has been consulted regarding the bridge proposal.

2. A long term goal of the ERRS is to provide a connection from their phase one terminus to the future LRT station at the Neil Crawford Centre (approximately 113 Street and 63 Avenue). They have initiated discussions with Edmonton Transportation, Edmonton Transit, and the University to review opportunities and will continue to evaluate potential route alignments for their connection. The ERRS also requires additional storage and maintenance facilities and wish to locate a facility somewhere along this expanded rail line.

The ERRS expansion proposal has not been submitted to the City for approval, however, the Whitemud Creek bridge crossing to accommodate streetcars is included in the Ribbon of Green Master Plan. (An additional river crossing bridge to accommodate streetcars was also included in the Ribbon of Green which would connect Fort Edmonton and the Zoo, however, this proposal is not currently being considered)

Whitemud Drive/Terwillegar Drive Functional Planning Study

The City's Transportation & Street Department is in the process of finalizing plans for the widening of Whitemud Drive from Terwillegar Drive to 149 Street. This will include the widening of Quesnell Bridge from its current six-lane width to eight lanes. In reviewing the feasibility of widening the existing bridge, it has been concluded that the widened roadway and a multi-use walkway cannot be accommodated on the existing structure. Consequently, if the Quesnell Bridge is widened to accommodate the eight-lane roadway, the multi-use walkway will be accommodated on a separate, new river crossing at an as yet unspecified, downstream location.

As part of the review of improvements to Whitemud Drive, Transportation and Streets Department has investigated opportunities to provide for transit priority measures on Whitemud Drive and/or its approaches. Preliminary indications are that transit priority measures will be most appropriate and effective on the approaches to Whitemud Drive than on Whitemud Drive itself. The intersection of Fox Drive/Fort Edmonton access appears as an ideally suited location to provide transit priority for buses heading westbound onto Whitemud Drive. Heading eastbound, it appears that bus priority is appropriate at the junction of 149 Street and the Whitemud Drive eastbound on-ramp.

Multi-use Trail Corridor Study

This study was initiated in the fall of 2000 by Transportation and Streets and is directed by a joint client team including representation from the Transportation and Streets, Community Services, and Planning and Development Departments. The study will recommend a network of multi-use trail corridors with connecting routes throughout the City of Edmonton. Specifically relating to the Whitemud

Integrated Plan area is a recommendation for a connection from the University south campus area (currently the University Farm) to Keillor Road.

Current Proposal for Implementation of Ribbon of Green Trails

Community Services has requested funding in 2002 - 2005 for implementation of extensions to the river valley trail system. Proposals include funding for the Whitemud Creek bridge, the river crossing bridge connecting the south end of Fort Edmonton Park with Wolf Willow area, and a class one trail connection between the two bridges. All are included in the Ribbon of Green Master Plan.

An environmental assessment and detailed planning will determine whether the existing "Jasper Avenue Bridge" is suitable for the Whitemud Creek location and proposed use.

Planning and Design work for these two bridges should be considered together with the new "Transportation" bridge. Detailed design of the Whitemud Bridge should include a Master Plan for Whitemud Park north to address streetcar track alignment, access to the riverbank for fishing, the trail and road alignment.

5.0 CONCEPT PLAN

5.1 VISION

Vision Statement

The Whitemud Integrated Plan Area is a special part of Edmonton's river valley. It is a place where the natural environment is protected and carefully managed while permitting a diversity of low impact recreational and interpretive opportunities for the public. These opportunities will build upon and complement the natural landscapes and existing cultural features.

In addition to the basic principles and planning objectives outlined in the Ribbon of Green Master Plan, the Advisory Committee recommends the following:

1. There will be no net loss of natural vegetation through future development. Clearing, if required, will be kept to a minimum, and an equivalent area will be revegetated elsewhere within the study area.

2. Where possible, buffer zones will be provided between areas of significant environmental value and intensive use areas

3. Existing facilities and attractions will continue to operate within their current boundaries, with upgrading or expansion following plans currently approved.

4. The area will continue to be accessible to all City residents and visitors. Alternative modes of transportation to reach the site will be actively encouraged, including extension of the streetcar operations outside of Fort Edmonton with connections to public transit, and various means of trail access. Increased parking demands will be addressed primarily through joint program co-ordination, sharing of existing facilities, and the use of the streetcar between current parking facilities and destination areas. New parking facilities would be a last resort.

5. Existing informal public use of the area including fishing, picnicking, tobogganing, canoeing and kayaking, and all modes of trail use will continue to be accommodated.

The Advisory Committee also supported the Vision and Planning Principles outlined in the Ribbon of Green Master Plan.

RIBBON of GREEN 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:

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.

RECREATION

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

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.

TRAILS

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

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

RIBBON of GREEN
GENERAL PLANNING OBJECTIVES

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

Establish a stewardship of protection by balancing conservation of open space and recreation development, with the first priority on conservation and the second priority on low intensity, passive outdoor, and trail-based recreation activity.

Establish a natural park environment through the retention or enhancement of vegetation and wildlife habitat.

Match the type of trail and location of amenities to the biological and physical sensitivity of the river valley.

Extend the linear park system through a series of paths, trails and open space and basic amenity services.

- the major emphasis on continuous trail development.
- trails not necessarily on both sides of river.
- trails interconnected by pedestrian bridges.
- emphasis on river valley use by the whole city.
- provision of connections to bike route systems.
- enhance the variety of experiences by providing some alternative trail routes.
- establish continuous routes for pedestrians, cyclists and dog walking.
- provide washrooms, drinking water and telephones.

Severely restrict the development of new recreation and tourism facilities in the river valley while ensuring that existing destinations or attractions are linked to the trail network.

Provide accessibility regardless of age or mobility, when this can be accomplished without major alterations to site or without altering the intent of the experience.

Design standards will accommodate the widest cross-section of age and skill levels.

To insure user safety is promoted through a combination of trail and facility design standard, safety education and awareness programs and enforcement measures.

RIBBON of GREEN PROPOSAL for

MOUTH OF WHITEMUD CREEK TO FORT EDMONTON PARK

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

WHITEMUD CREEK (completion of Phase I, Priority 2)

- To protect a sensitive wildlife habitat and movement corridor by controlling public access.
- Develop a pedestrian-only granular trail and neighbourhood access trails following existing alignment wherever possible with small-scale bridges as required for trail continuity.

5.2 ALTERNATIVES

During the study process, four potential land use options were prepared by the consultant and presented to the Advisory Committee to initiate discussion. These options represented a full range of development possibilities including a full development option (where all current proposals were accommodated), a minimal impact option (where current proposals were reduced in scope or eliminated completely to focus on improvements to the environment), an option which focussed on long term transportation and site access issues, and an option which accommodated all users, but with a lower intensity of use.

A more detailed description and conceptual plan for each the four Alternatives is included in the Appendices.
All Advisory Committee members reviewed the alternatives and provided input based on a predetermined list of criteria as follows:

- Access and parking - did the plan provide adequate public access or service access? Could people easily access the site using alternative modes of transportation?
- Environmental Impact - was the plan environmentally friendly?
- Stakeholders goals and objectives - did the plan meet the needs of the current facility operators, did it accommodate future plans?
- Cost - was the plan achievable?
- Vision - did the plan meet the Advisory Committee's vision for the area?

No option met the needs of all stakeholder groups, however, there was general agreement on many of the components.

At this point in the process, the Advisory Committee and consultant worked together to refine the various components for which there was general agreement and prepare a draft Concept Plan.

5.3 CONCEPT PLAN

The draft concept plan was refined into a final concept plan that was presented to the general public at a Public Open House on June 6, 2000 and June 2002. The plan generally received a high level of support with relatively few concerns. A summary of the questionnaires received at the Public Meetings is included in the Appendices.

The main components of the plan are described in this section and shown on the Concept Plan. The detailed design phase for each component will incorporate an appropriate level of public input and a more detailed environmental review. All buildings, bridges, and underground servicing will require full environmental impact assessments (EIAs). Trail construction, gravel roads and parking will require further environmental review, and may require a full EIA.

Whitemud Ravine Trailhead

The proposed trailhead development would replace existing facilities in Whitemud Park south. The main focus would be a new trailhead shelter building, which would contain all season heated public access washrooms, a public access meeting area, programmed classroom space, and a storage area. The approximate size of the building would be 10,000 ft2 (1 000m2) and would be custom designed to be sympathetic with the natural environment.

It is anticipated that the prime users of the classroom area would be the John Janzen Nature Centre for programmed nature study in Whitemud Ravine, and Community Services for their Day Camps. Other groups who might use the building could include the Catholic School Board for nature programs, FEESA for forestry interpretation in Whitemud Ravine, and the Edmonton Natural History Club. Other groups could potentially book the facility for special programs or events.

The existing road from Whitemud Park north would be retained for public access to the site with a small parking area to accommodate 10 to 20 cars and allow a small bus to turn around.

Tobogganing at the site would continue.

Whitemud Park North Upgrading

Whitemud Park North would be continue to serve the existing park users with some general upgrading. Proposed upgrades would include:

- New permanent public washroom building near the north end of the site. Depending on a more detailed review of seasonal use demand and on servicing feasibility, the building would be serviced with sanitary sewer, power, and gas for winter heating. It would be located close to the north end of the site to be easily accessible to fishermen, picnic site users, and trail users. The building would designed in a similar style as the Trailhead shelter.
- Existing vehicular access and parking area would be retained with some upgrading to ensure efficient use of the available area.
- Some regrading and reseeding would be undertaken in the area at the east end of the Equine Centre (in the bend of Keillor Road) to create a multi-use open space, suitable for special event tents or outdoor displays. This area could serve the Equine Centre, Community Services, or other groups for events.

Trail System Improvements

The Whitemud Integrated Plan area is an important crossroads for a number of existing trails. Keillor Road has become a very popular trail for all types of trail users; the Quesnell bridge currently provides an important connection for trails on the north and south sides of the river; Whitemud Ravine trails can be accessed from the study area, hiking and multi-use trails surround Fort Edmonton Park, and the three neighbourhoods along the south boundary of the area all have trail connections into the site. Keillor Road and the Fort Edmonton river trail have been designated as a portion of the Trans Canada Trail.

Transportation has determined that a trail cannot be accommodated on the Quesnell Bridge with the proposed new traffic lanes. A new pedestrian bridge would be constructed downstream of the Quesnell Bridge, with the exact location to be determined through a separate study.

Currently there is no direct connection between Keillor Road and Fort Edmonton trails. Trail users are required to cross Whitemud Creek on the Campbell bridge. A bridge across the mouth of Whitemud Creek is proposed by the Edmonton Radial Railway Society to serve both streetcars and trail users.. This bridge is included in the Ribbon of Green Master Plan and would provide a direct connection between Keillor Road and Fort Edmonton. (Refer also to "Streetcar Extension" section following for more information on the proposed bridge)

A future pedestrian river crossing bridge is identified in the Ribbon of Green Master Plan that would connect the south end of Fort Edmonton Park with Wolf Willow communities across the river. The addition of this bridge to Edmonton's trail system will provide an important commuter connection and recreation link for thousands of residents to the river valley trail system. It is expected to dramatically increase the number of trail users past Fort Edmonton. The current granular trails will not be sufficient to accommodate this increase in use and a paved (class one) trail connection will be required to connect the new bridge with the new pedestrian river bridge and Keillor Road.

1. The final location and alignment of this class one trail has been reviewed and the recommended Option is identified in Appendix 1. The proposal is to upgrade existing nature trails south of Fort Edmonton - this option would utilize existing cleared areas to limit the amount of clearing, however, these trails were designed for higher speed use and many sections would require straightening and flattening.

Another important trail connection which has been identified by Transportation and Streets and through the Multi-use Trail Corridor Study is a link between the University Farm (future south side campus) and Keillor Road.

Renaturalization of Farm Site

The farm site forms the north boundary of the Whitemud Nature Preserve and provides a transition area between the wildlife habitat of the Ravine and the more intensely developed area around the Whitemud Drive / Fox Drive interchange. Because of this, it was felt that the site should not be used for high intensity development, but rather should act primarily as a buffer zone for the Nature Preserve. Passive public use of the site would continue for trail use and nature interpretation, but new activities would not be encouraged. Current horse pasturing practices will be removed from the south pasture area, the riding arena area, and the low area adjacent to the creek at the north end of the site. The pasture area at the northwest end of the site will be retained.

Some areas of the site would be actively revegetated including the banks of Whitemud Creek, the south pasture, and the riding arena area. The revegetation will be carried out through a carefully monitored planting program to include small and medium sized native plants. Plant species would be chosen to match existing plant species currently found in Whitemud Ravine. It is recommended that this revegetation program will help protect the creek banks from erosion and will encourage wildlife travel zones along the creek. The removal of fencing associated with current horse pasturing will also help encourage wildlife travel along the creek.

The rest of the farm site would be gradually renaturalized. By ceasing any lawn mowing activity and by removing the horse grazing, native vegetation will gradually re-establish. However, the site has been disturbed for a long period of time and a stringent weed control program will be required initially.

Existing buildings and the septic field are not required for the proposed passive use and would be removed. A risk control inspection was carried out on the Farm site buildings in 1999 by Edmonton Corporate Services at the request of Community Services to address potential liability. In response to this report, a number of improvements were made to address risk issues, but the buildings are not considered suitable for public use in their current condition. An evaluation could be made to determine whether any of the buildings are suitable for relocation.

Vehicular access would be limited to service access only from the existing controlled intersection. The gravel access road to the residence would be removed except where it provides trail access to Riverbend, this portion would be redeveloped to a normal class one trail standard.

Streetcar Extension

Phase one of the ERRS proposed streetcar extension has been shown on the Concept Plan. As with all development within the study area, further review is required during the detailed design phase of their proposal.

- Phase one to Fox Drive and Equine Centre including installation of a bridge over Whitemud Creek has been shown according to the ERRS proposal.

- The ERRS indicated to the Advisory Committee that they would not pursue their earlier proposal for storage facilities in the river valley if phase two of the extension was successful, as they could then locate the required storage facilities at another location along the line, outside of the river valley.

Transportation and Streets

The City of Edmonton Transportation and Streets Department is currently finalizing plans for widening Whitemud Drive from Terwillegar Drive to 149 St. Two components of their plans impact the Whitemud Integrated Plan area:

- *Widening of Whitemud Drive will include the addition of two lanes of traffic on the Quesnell Bridge. It has been determined that the existing bridge structure will not accommodate the extra traffic lanes and a multi-use walkway, therefore a new pedestrian river crossing bridge will be constructed downstream from the current bridge location.*
- *Improvements to the access into Fort Edmonton from the south were recommended in the Whitemud Drive study. A new exit ramp will be constructed from the current Fox Drive exit ramp, providing access to Fort Edmonton through the existing controlled intersection.*

Other Improvements

The environmental overview indicated concerns regarding storm run-off quality at the east end of the Equine Centre. In response to these concerns, it is recommended that horse pens in this area be relocated, reconfigured, or reduced in size to allow development of a drainage swale which would bypass the pens. The Whitemud Equine Centre is currently reviewing this issue for immediate improvements and will include a thorough review of the situation and long term recommendations during detailed planning and design for their proposed site improvements.

Refer to Drawing 3 - Concept Plan

5.4 *ENVIRONMENTAL EVALUATION of the CONCEPT PLAN*

The proposed Concept Plan includes only low impact development, and generally will result in positive improvements to the environment.

Hydrology and Water Quality

Removal of horse pasturing functions from two areas adjacent to Whitemud Creek will improve the water quality of the run-off in these areas (the cleared area south of the former Fox residence, and the low terrace immediately adjacent to the creek, which is within the 1:10 year flood line). The proposed revegetation of the south area and renaturalization of the low terrace will also help improve water run-off quality.

Drainage improvements to the east end of the Equine Centre will direct valley slope run-off away from the horse pens to avoid contamination of the water. A more detailed discussion of potential measures to improve the water quality in this area is included in the appendices.

Vegetation and Wildlife Habitat

No major clearing would result from implementation of this concept plan. A small amount of clearing would be required for the streetcar extension and some clearing would be required for construction of the class one trail past Fort Edmonton - the amount would depend on the chosen route alignment).

The proposed revegetation of the south portion of the Farm site will provide additional woodland and shrubland wildlife habitat. Removal of existing fencing and renaturalization of the north portion will provide an open grassed area, accessible to wildlife and with good visibility. This will allow increased freedom of movement through the Farm site area and hopefully will provide safer movement corridors to avoid the freeway.

Soils, Erosion, and Slope Stability

The proposed revegetation of the south area will provide slope protection along the banks of Whitemud Creek. Riverbanks would not be affected by any proposed development in the Concept Plan.

If the trail alignment option south of Fort Edmonton is considered, slope stability issues must be addressed in the design.

Reclaiming of the Farm site will improve the environmental quality of a large area within the study boundary. It will provide a buffer zone between the Whitemud Ravine and more intensive development near the river.

FORT EDMONTON PARK/ JOHN JANZEN NATURE CENTRE

Infill development and upgrading to continue as per current Master Plan within existing boundary

STREETCAR EXTENSION

G Extend Streetcar line from Fort Edmonton to bus stop on Fox Drive

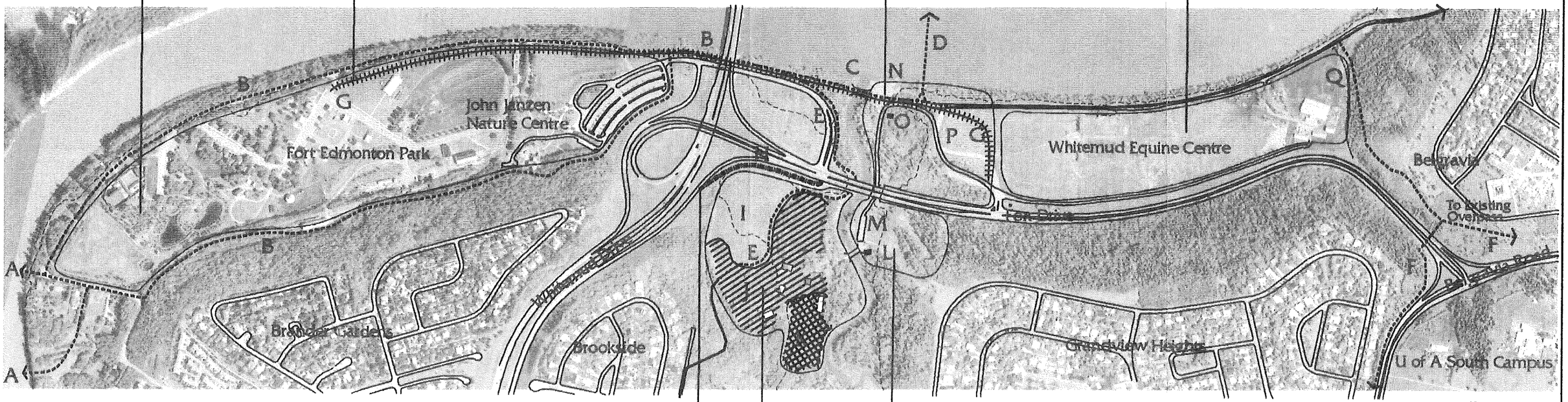
WHITEMUD PARK

Master Plan required for Park

N Riverbank maintained for fishing
O Public washroom
P Multi-purpose Open Space

WHITEMUD EQUINE CENTRE

Redevelopment to continue as per current Master
Q Improvements to drainage



TRAIL SYSTEM IMPROVEMENTS

——— Existing Multi-use Trail
--------- Proposed Multi-use Trail Options

A River Bridge- 2 Options
B River Bridge Trail Connections- 2 options
C Whitemud Creek Bridge for Trail and Streetcar
D River Bridge to replace Quesnell Bridge Trail
E Redevelop link to Brookside
F Trail Connection from Keillor Road to U of A Campus and 122nd St.- 2 Options

ROADWAY IMPROVEMENTS

H Exit Ramp for Fort Edmonton Access

WHITEMUD RAVINE TRAILHEAD

L New Trailhead Shelter and Washrooms
M Existing road access and gravel parking lot improvements

FARM SITE RENATURALIZATION

I Portion of existing horse pasture to remain
J Renaturalization area
· Remove horse pasture, fences, and existing buildings
· Allow natural revegetation with weed control
K Revegetation/ reforestation program

North

EDA Collaborative Inc.

July 2001

0 50 100 250 500 750m

WHITEMUD INTEGRATED PLAN

Concept Plan

5.5 IMPLEMENTATION

It is anticipated that implementation of the Whitemud Plan will occur over a number of years. Detailed design, environmental review and public input will be required for each component of the plan, prior to implementation. All work must meet the requirements of the River Valley Bylaw.

Most existing facilities within the study boundary have been developed through partnerships between the City of Edmonton and area stakeholders, and it is anticipated that implementation of the Concept Plan will be undetaken in a similar fashion.

Following are some order of magnitude budgets for the various components of the Plan.

	TOTAL BUDGET	PHASE 1 2 year	PHASE 2 5 year
1 FOX FARM RENATURALIZATION / HORSE PASTURE	**$250,000**	**$250,000**	
Building Demolition			
Revegetation / Reforestation			
Renaturalization (Weed Control / Seeding)			
Fencing			
2 WHITEMUD RAVINE TRAIL HEAD	**$350,000**	**$350,000**	
Whitemud Ravine Trail Head Shelter			
Existing Building Removal / Rehab			
Parking Improvements			
Interpretive Signage			
3 WHITEMUD PARK	**$250,000**	**$250,000**	
General Upgrading			
Whitemud Park Washrooms			
Parking Improvements			
Mulit-purpose Display area			
Riverbank / Fishing			
4 TRAIL SYSTEM IMPROVEMENTS		**$1,000,000**	**$5,000,000**
Phase One - Planning and Design			
EIA and Engineering for Whitemud and River Bridge			
Planning and Design for all Trails (15%)			
Phase Two - Construction			
Class One Trail - Fort Edmonton			
Class One Trail - Farm Site			
U of A South Campus Connection Trail (to Belgravia Overpass)			
Grandview Connection with Fox Drive Overpass			
Whitemud Bridge			
Fort Edmonton / Wolf Willow River Bridge			
TOTAL ALL COMPONENTS	**$6,850,000**	**$1,850,000**	**$5,000,000**
RECOMMENDED BUDGET			

PHASE ONE IMPLEMENTATION (2 year time frame)

1 FARM SITE RENATURALIZATION / HORSE PASTURE *Building Demolition* *Revegetation / Reforestation* *Renaturalization (Weed Control / Seeding)* *Fencing*	**$200,000**
2 WHITEMUD RAVINE TRAIL HEAD *Whitemud Ravine Trail Head Shelter* *Existing Building Removal / Rehab* *Parking Improvements* *Interpretive Signage*	**$300,000**
3 EIA / ENGINEERING for WHITEMUD CREEK BRIDGE *Environmental Impact Assessment* *Detailed Design for Bridge*	**$100,000**
SUB-TOTAL	**$600,000**

PHASE TWO IMPLEMENTATION (5year time frame)

1 WHITEMUD PARK NORTH *Whitemud Park Washrooms* *Parking Improvements* *Muti-purpose Display area* *Riverbank / Fishing Improvements*	**$200,000**
2 TRAIL SYSTEM IMPROVEMENTS *Whitemud Bridge to accommodate trail and streetcar* *Class One Trail Connection Whitemud bridge to Wolf Willow bridge*	**$1,000,000**
SUB-TOTAL	**$1,200,000**
TOTAL	**$1,800,000**

LONG TERM IMPLEMENTATION (10 year time frame)

1 TRANSPORTATION INFRASTRUCTURE

2 WHITEMUD PARK REDEVELOPMENT
Park redeveloped to accommodate new road access

Many other improvements will be funded independently by the group or facility involved in the upgrade.

1 STREETCAR EXTENSION

2 EQUINE CENTRE REDEVELOPMENT

3 JOHN JANZEN NATURE CENTRE UPGRADING

4 FORT EDMONTON PARK PROJECTS

APPENDIX 1

Fort Edmonton Multi-Use Trail and Trolley Line Extension Concept

List of Contents Page

1. DESCRIPTION OF PROJECT – SCOPE, METHODOLOGY

The project primarily entailed investigation of multi-use trail options around Fort Edmonton Park, between Whitemud Creek and Whitemud Drive, and the consideration of an alignment for an extension of a trolley car line from the Fort to the east. The trolley car system is currently managed by the Edmonton Radial Railway Society (ERRS).

The project process included the following steps.

- Establish criteria in terms of physical requirements for the proposed facilities, such as; slope, width, accessibility aesthetics, materials, operations, etc;
- Evaluate existing conditions throughout the study area in relation to the requirements for the proposed facilities;
- Undertake a site and user analysis to determine opportunities and constraints including potential corridors for a multi-use trail and trolley car route;
- Determine feasible trail and trolley car line alignment alternatives within the study area;
- Assess alternative corridors in detail in terms of environmental, aesthetic and economic impact and benefit. Obtain input from stakeholders;
- Propose preferred trail and trolley car routes based on detailed assessment;
- Present assessed alternatives and preferred route to stakeholders and general public. Incorporate comment from this presentation into design where necessary;
- Recommend trail and trolley car routes, for adoption by the City of Edmonton, based on assessment and stakeholder input.

2. CRITERIA AND PHYSICAL REQUIREMENTS OF PROPOSED FACILITIES

The following criteria provide a guide to the physical requirements of the proposed facilities. These criteria will assist in determining whether the proposed facilities are feasible along a potential route.

2.1 Criteria and requirements for a multi-use (Class 1) trail corridor

The intention for multi-use (Class 1) trails is to provide an all seasons, 'shared' access for a wide range of users. The range of potential users for this category of trail is listed in more detail in the user analysis. The general City of Edmonton standards for a Class 1 trail (sourced from Ribbon of Green Master Plan, 1992) are as follows:

- Intended to be major route and access trail
- (generally) paved – asphalt
- 2.5 –3.4m wide
- corridor cleared to provide clear-zone of 0.75m on each side and 1m on curves
- margins seeded or rehabilitated to match adjacent vegetation
- branch height of adjacent trees – 3.5m
- maximum sustained gradient of 8% (1:12 5)
- maximum limited (short-distance) gradient of 10% (1:10)
- crowned or 2% cross-fall for drainage
- barrier free access for disabled

- easy to intermediate degree of difficulty
- needs to accommodate frequent vehicular service access
- provides frequent rest areas and viewpoints
- provides full-scale drainage course and stream crossings

2.2 Criteria / requirements for trolley car corridor

- envelope of 6.0m vertical space and 3.66 horizontal space
- desirable max grade 3-5% (maximum grade 8%)
- can utilize shared corridor with vehicles, cyclists and pedestrians
- requires (post) supported power cables for trolley car
- requires access to frequent and practical pick-up points
- maintenance access is contained within track corridor
- desirable to have disabled access at main pick-up points
- crossings of drainage courses and streams need to be engineered for weight of trolley car

3. SITE AND USER ANALYSIS

3.1 Existing physical conditions

The overall study area between Whitemud Creek and Whitemud Drive is contained between the North Saskatchewan River to the north and the river valley side-slope to the south. The study area contains a variety of developed and natural areas which can be broadly described in the following precincts. The major developed features of the study area include Quesnell Bridge, Fort Edmonton and John Jantzen Nature Centre.

Quesnell Bridge precinct

The Quesnell Bridge is a major vehicular bridge across the North Saskatchewan River. Its southern approaches and interchange (Whitemud Drive) dominate the eastern portion of the study area and limit the opportunities for trail or trolley car routes. A 40m wide at-grade corridor is defined between the bridge's south abutment and the river. This corridor also includes the roadway access to Fort Edmonton and steep slopes down to the river's edge.

The majority of this precinct has been heavily disturbed due to bridge and roadway construction. The areas below the bridge abutment are flood prone.

Fort Edmonton and John Jantzen Nature Centre car parks and entries

Immediately west of Quesnell bridge is a large area accommodating permanent and overflow parking for both Fort Edmonton Park and the John Jantzen Nature Centre. Pathways providing pedestrian access from the car parks to the Fort and Nature Centre entries also exist. These are generally 2.75- 3.0m wide concrete. The pathways, both along the entry road and into the facilities, are generally well lit with post mounted fixtures.

This area also has a transit (bus) stop and access facilities for disabled. Public amenities are available within both the Fort (station) and Nature Centers.
The landscape in this area consists generally of mature planted vegetation in mown grass with isolated groves of naturalized vegetation.

Fort Edmonton Park

Fort Edmonton Park is a significant City of Edmonton attraction. Its historic buildings, streets, rail-line and trolley car line utilize most of the relatively flat river valley between Quesnell Bridge and Whitemud Road. All of the Fort's facilities are contained within a fenced perimeter to restrict both pedestrian and vehicular access. Secure access is necessary to ensure the protection and economic feasibility of the Fort.

A service road, which provides access for maintenance vehicles and visitors to functions, is located on the river side of Fort Edmonton Park. It generally marks the edge of the 1:100 year flood level. The fenced boundary is currently immediately east (on the river side) of the service road.

The west-side of the Fort is defined by a rail line which services the historic steam train. The line does not currently extend beyond the Fort boundaries. The Fort security fence is currently immediately west of the rail line.

John Jantzen Nature Centre

The nature centre is a relatively small yet significant facility tucked away to the south-east of Fort Edmonton Park. It shares the Fort parking area and pedestrian entry area and utilizes a network of existing granular nature trails on the vegetated river side-slope for nature interpretation.

North Saskatchewan River bank

A relatively undeveloped and naturally vegetated corridor remains north of Fort Edmonton Park, along the North Saskatchewan River. The river bank corridor varies between approximately 25m and 55m in width. Infrastructure which currently exists within the corridor includes, storage and launching area for the Fort Edmonton 'York boat', a granular walking/cycling trail which is between 1.2m and 1.8m wide and storm-water outfalls.

The existing granular trail commences just west of Quesnell Bridge and runs along a relatively flat bench approximately 10m from the river edge and exits at Whitemud Drive. The formed trail does not currently extend further to the west.

The majority of this precinct lies within the 1:100 year flood zone.

The remnant native vegetation has likely been disturbed at various times in the past yet has relatively dense canopy coverage and a dense under storey of tall shrubs.

River Valley slope

To the south of Fort Edmonton Park lies the steeply sloped and heavily vegetated River Valley side-slope. This land unit is continuous from Whitemud Drive/Quesnell Bridge to Whitemud Road. It is defined to the south by 66 Avenue and the residential neighbourhoods of Riverbend.
This precinct is in a relatively natural state and contains only a network of granular nature trails (1.2 – 1.5m wide) and some fencing.

3.2 Potential users of trail facilities

The needs of the following potential users of the proposed multi-use trail need to be considered.

- Commuter cyclists
- Recreational cyclists (adults and kids)
- Cross country skiers
- Walkers / hikers
- Walkers with dogs (on leash)
- Walkers with strollers
- Joggers / runners
- In-line skaters, scooters, skateboards
- Persons with a physical disability

3.3 Assessment Criteria

The following factors were considered during assessment of the potential route options in relation to the physical and operational constraints and opportunities within the study area.

- Potential impact on fauna
- Potential visual impact and aesthetics
  - *Views from adjoining areas and lookouts;*
  - *Views along corridor;*
  - *Aesthetic experience of users.*
- safety issues –
  - *opportunity for casual surveillance*;
  - *access to emergency phone stations*
- Heritage impact or compatibility
- Geotechnical constraints
- Drainage constraints, especially flooding
- Capital cost
- Ease of Construction
- Ease and cost of Maintenance
- Accessibility
  - *Slope,*
  - *connections to adjacent neighbourhoods and facilities.*

4. DISCUSSION AND COMPARATIVE ANALYSIS OF CORRIDOR OPTIONS

4.1 Potential routes for a multi-use trail

There are essentially two main sections of the study area to consider when assessing a potential multi-use trail within the study area.

The first section is between Whitemud Creek and the west side of Quesnell Bridge where existing constraints leave essentially one potential route (with possible minor variations) for a multi-use trail.

The second section from the west side of Quesnell Bridge to Whitemud Road offers three main alternative routes for a multi-use trail

4.1.1 Whitemud Creek to west side of Quesnell Bridge

Between Whitemud Creek and the west side of Quesnell Bridge there is essentially only one potential route for a multi-use trail. This lies between the existing Fort Edmonton access road and the River.

It is assumed that the existing access road to the Fort needs to be maintained generally in its current configuration including the parking lay-by under the bridge on the river side of the road. This lay-by is regularly used for unloading of kayaks and access to the river edge.

East of Quesnell Bridge, the multi-use trail can generally run through an existing open grassed area between Fort Edmonton Park Road and the river bank. No removal of vegetation should be required for the trail; however some disturbance may be necessary when a bridge is provided across Whitemud Creek. Location of the bridge to the south of the creek mouth would reduce potential aesthetic impacts on the river edge.

Beneath Quesnell Bridge, the multi-use trail route is constrained between the existing parking lay-by and the concrete pylon of the bridge. On the river side of the pylon, the slope drops steeply to the river.

4.1.2 West side of Quesnell Bridge to Whitemud Road

Three main alternative routes were considered for a multi-use trail corridor from the west side of Quesnell Bridge to Whitemud Road. Since it is not feasible to direct the trail through Fort Edmonton, the route options are either to the north or south of the fort. North of the main Fort complex there are 2 potential routes and to the south of the Fort there is 1 potential route. Even though the routes are substantially different, they are roughly the same in length.

The following broadly outlines each of the three options considered:

Option 1 - River edge trail

This route primarily follows the alignment of the existing granular trail which runs 7-15m back from the river edge. Some short sections of new alignment and grading of the existing bank would be required. Existing vegetation is primarily woodland with some larger and older trees (black poplar) and shrub under storey.

The proposed trail through the vegetated area would be approximately 1860m long and would need to be widened from the current 1.5m to around 4.5m (assuming a 3m trail and 0.75m clearance either side).

An average corridor of vegetation disturbance of 2.5m could be assumed.

Although the aesthetics of this existing popular route are considerable, the character would be altered by the clearing and grading required providing the necessary multi-use corridor width. This alignment would also concentrate increased use along one route with no other feasible alternative for cyclists. Pedestrians could alternatively use the granular nature trails south of Fort Edmonton.

This situation would be made worse by the fact that this area is flood prone. During periods of flooding, the trail would be closed and there would be no access for cyclists between Quesnell Bridge and Whitemud Road. Cyclists are currently prohibited from the granular trails south of Fort Edmonton due to potential conflict with Nature Centre groups. Flooding of the multi-use trail would likely mean that silt deposits would need to be removed prior to the trail being re-opened. Regular flooding of an asphalt trail may also reduce the potential life-span of the asset and result in increased operational costs.

Option 2 – Fort Service Road trail

This route could follow a new alignment through woodland from west of Quesnell Bridge to the edge of the existing service road. It could then follow either the edge of the existing service road, outside of the security fence or share the service road. The latter alternative would require that the security fence be moved to the south side of the service road. This would also mean that the numerous accesses into the Fort complex from the service road would need to be gated and monitored.

The potential route on the river side of the fence has a moderate to steep side-slope and is heavily vegetated with Aspen. Development of a multi-use trail on this alignment would result in a cleared corridor of approximately 5m due to the filling required on the river side.

The potential route which sees the service road shared has major operational implications for Fort Edmonton Park. Assuming the service road was not completely widened, the existing 6m wide pavement would need to be split between the multi-use trail and vehicular use. It would not be reasonable from a safety point of view to allow un-separated sharing of the service road, especially for pedestrians and disabled.

The resulting single lane for vehicles would need to remain 2-way. This could be supplemented by occasional widening (passing bays) along the service road. The widening would occur on the river side of the service road and result in removal of sections of vegetation and some earthworks.

The existing service road is generally at or above the 1:100 year flood level.

Option 3 - Nature Centre trail

This route would primarily utilize existing or widened concrete pathways from the west of Quesnell Bridge past the front of Fort Edmonton Park to the John Jantzen Nature Centre. Minimal impact on existing trees would be required for this 600m section of trail. Existing lighting, bike racks and furniture could also be utilized along this section. This route also provides direct access and exposure to the main entries for both Fort Edmonton and the Nature Centre. Potential congestion with cyclists and pedestrians in this area would need to be addressed with signage, pavement treatments and possibly widened pathways.

To the west of the Nature Centre, the multi-use trail could follow an alignment which roughly parallels the southern Fort security fence. Depending on slope and vegetation constraints it may be necessary to follow the existing nature trail alignment for some short sections of the route. To avoid conflict for users of the existing trail, it may be necessary to build a new 1.2m trail further up slope for these sections; maintaining a separated system.

Most of the potential route west of the Nature centre is treed, however a substantial amount of the potential corridor adjacent to the fence has been disturbed in the past and the vegetation is not mature. From the west edge of the Nature Centre through the vegetated area to Whitemud Road is approximately 950m.

Views into the Fort are obtained from a number of locations along this route and views and the sound of the steam train is a feature of the aesthetic experience. An alignment, which at various points moves away from the Fort security fence, would add interest and reduce the negative aesthetics of the fence. Existing interpretive nodes along the current granular trail could possibly be linked to the proposed multi-use route.

This potential route meets Whitemud Road at the toe of the river valley slope. A trail connection adjacent to the road would need to be built (on the eastern side) to provide access to a possible future bridge across the river at the end of Whitemud Road. Some minor regrading and modification of existing planted vegetation may be necessary to provide an off-road trail in this location.

The alternative bridge location to the west could be accessed via City owned property from Whitemud Road.

4.2 Potential routes for extension of trolley car line

The existing trolley car service in the study area is currently contained within Fort Edmonton Park. A separate service is provided across the High Level Bridge into Old Strathcona. Plans to expand the service from Fort Edmonton include a possible connection to 114 Street and the neighborhood of Belgravia via the Whitemud Equestrian Park. The existing trolley car line terminates at the eastern end of 1920 Street with a loop to the trolley car storage building.

Current plans assume provision of a bridge crossing near the mouth of Whitemud Creek which would accommodate the trolley car line and a multi-use trail. As previously discussed, an existing open area between Fort Edmonton Park Road and the North Saskatchewan River would be the most realistic route for the trolley car east of Quesnell Bridge. The trolley car line could utilize Fort Edmonton Park road, however the cost of providing track in the road and possible safety risks, could make this option not practical.

The most practical alignment for the trolley car line is in a shared or parallel corridor with the proposed multi-use trail between Fort Edmonton Park Road and the river. Under the Quesnell Bridge the two facilities would need to be accommodated between the roadway and the bridge pylon.

From the west side of Quesnell Bridge there are a number of alternative routes for a potential extension of the trolley car line outside of Fort Edmonton Park. These are generally described as follows.

4.2.1 Alignment parallel to Fort service road

This option is currently being considered in conjunction with development of the proposed Selkirk Hotel at the north end of 1905 Street. The trolley car line could continue down 1905 Street from the intersection with 1920 Street and run behind the proposed Hotel. The line could then run between the existing train line and the Fort service road. Some remnant native vegetation may need to be removed to accommodate this unless the line ran down the service road.

This alignment requires a significant length of 'dead running' before it reaches the 'public' frontage at Fort Edmonton Park road.

4.2.2 Alignment through entry to Fort Edmonton

This option was originally proposed as part of the Fort Edmonton Park master plan in 197? and includes a route which extends from the western end of 1920 Street opposite the existing trolley car barns. The extended line would have to cross the existing rail line and cross the park boundary south of the existing railway station. The line could then extend through the front of Fort Edmonton, possibly with designated trolley-stops in front of the Fort and John Jantzen Nature Centre.

Because of the proximity of the two attractions and their car parks, one central arrival and departure location for the trolley car may be adequate. The line could then extend adjacent to or on the existing sidewalk running parallel to Fort Edmonton Park Road towards the west side of Quesnell Bridge.

A variation on this option would be to run the trolley line down Fort Edmonton Park Road to the east of Quesnell Bridge. The cost implications of laying track on the roadway may be prohibitive and there could also be some safety concerns regarding potential conflict with vehicles.

However, this variation might provide a more 'historically relevant' depiction of how trolley cars previously ran down the middle of Jasper Avenue. Considering the context of Fort Edmonton Park it may be worth considering this variation in more detail.

5. *RECOMMENDED CORRIDOR OPTIONS FOR MULTI-USE TRAIL AND TROLLEY LINE EXTENSION*

The following recommended corridors have been presented to the Whitemud Integrated Plan Advisory Committee, the Edmonton Radial Railway Society and the general public at an Open House meeting of June 25, 2002, at the John Jantzen Nature Centre.

5.1 Recommended multi-use trail corridor

Of the three broad options discussed, the Nature Centre or Fort View trail is recommended as the most suitable multi-use trail corridor. The primary advantages of this route are;

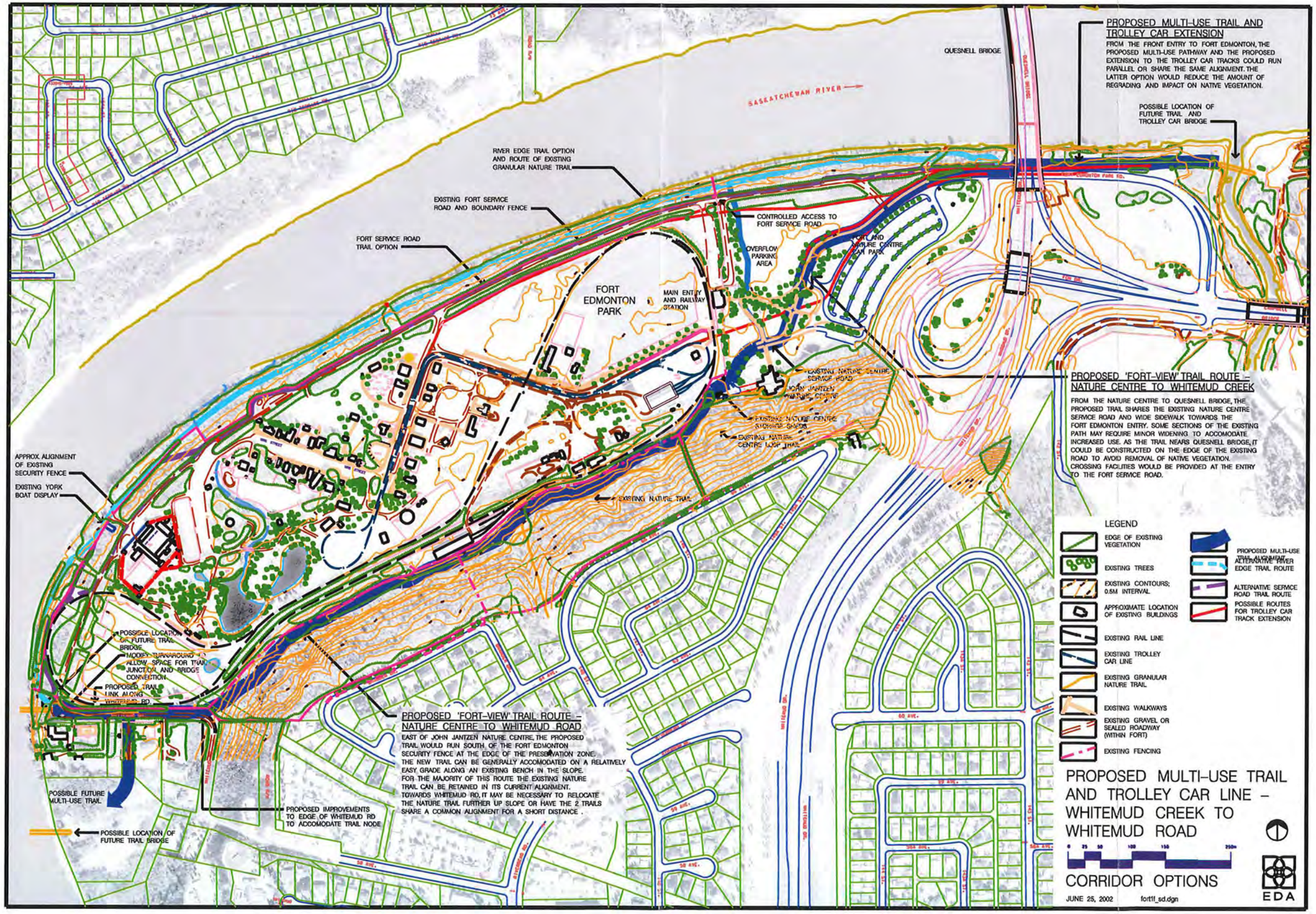
- Provides additional route while maintaining existing popular trails
- Provides link/exposure to Fort and Nature Centre
- Offers views (and sounds) of Fort and train
- Provides options for trail / stair links to adjoining communities
- Utilizes some existing pathways and existing infrastructure such as lighting, public telephones, seating, etc
- Proposed route is above flood zone
- Could provide casual surveillance for currently hidden southern boundary of Fort
- Cost of construction is comparable to other investigated options
- Could provide (emergency) service access to south side of Fort and provide possible fire buffer

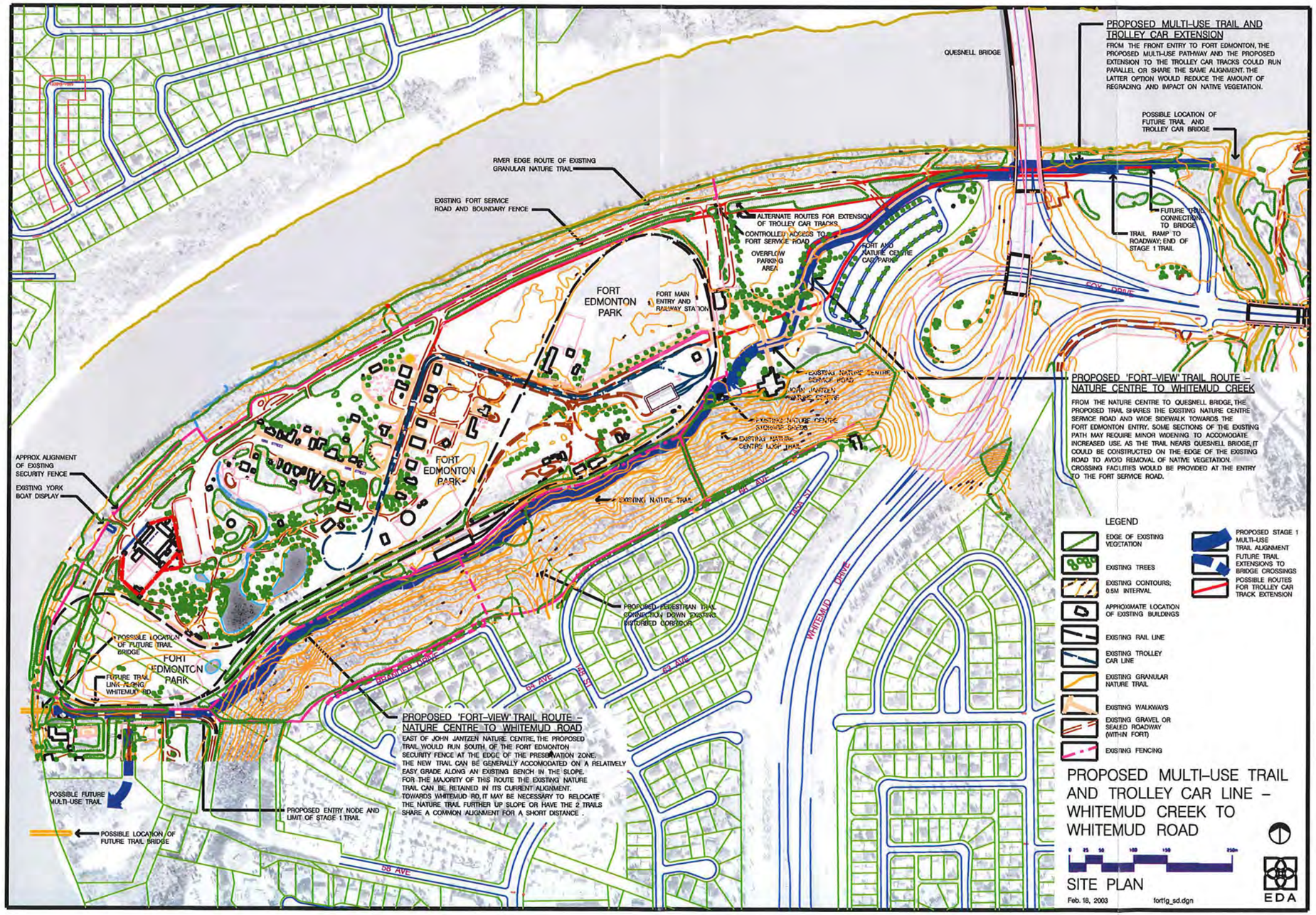
The preliminary budget for this trail option is $467,000. Details of the items included in this estimate are described in Appendix 1.

5.2 Recommended trolley line extension corridor

The recommended alignment for the extension of a trolley car line out of Fort Edmonton is through the front of Fort Edmonton.

Although a cost estimate for this facility has not been prepared as part of this study, it is expected that this option would prove the less costly due its shorter run. This alignment provides greater public visibility for the trolley service as it passes the Fort entry and car park and provides a functional link to the entries of both Fort Edmonton Park and John Jantzen Nature Centre. The existing infrastructure, such as light poles and transit stop, at these locations could also be of benefit. It is understood from discussions with ERRS that the crossing of the existing rail line within the park would be feasible.


PROPOSED MULTI-USE TRAIL AND TROLLEY CAR EXTENSION
FROM THE FRONT ENTRY TO FORT EDMONTON, THE PROPOSED MULTI-USE PATHWAY AND THE PROPOSED EXTENSION TO THE TROLLEY CAR TRACKS COULD RUN PARALLEL OR SHARE THE SAME ALIGNMENT. THE LATTER OPTION WOULD REDUCE THE AMOUNT OF REGRADING AND IMPACT ON NATIVE VEGETATION.
POSSIBLE LOCATION OF FUTURE TRAIL AND TROLLEY CAR BRIDGE
QUESNELL BRIDGE
SASKATCHEWAN RIVER
RIVER EDGE TRAIL OPTION AND ROUTE OF EXISTING GRANULAR NATURE TRAIL
EXISTING FORT SERVICE ROAD AND BOUNDARY FENCE
FORT SERVICE ROAD TRAIL OPTION
CONTROLLED ACCESS TO FORT SERVICE ROAD
OVERFLOW PARKING AREA
FORT EDMONTON PARK
MAIN ENTRY AND RAILWAY STATION
EXISTING NATURE CENTRE SERVICE ROAD
JOHN JANTZEN NATURE CENTRE
EXISTING NATURE CENTRE SYCHOMIS SHEDS
EXISTING NATURE CENTRE LOOP TRAIL
EXISTING NATURE TRAIL
PROPOSED 'FORT-VIEW' TRAIL ROUTE - NATURE CENTRE TO WHITEMUD CREEK
FROM THE NATURE CENTRE TO QUESNELL BRIDGE, THE PROPOSED TRAIL SHARES THE EXISTING NATURE CENTRE SERVICE ROAD AND WIDE SIDEWALK TOWARDS THE FORT EDMONTON ENTRY. SOME SECTIONS OF THE EXISTING PATH MAY REQUIRE MINOR WIDENING TO ACCOMODATE INCREASED USE. AS THE TRAIL NEARS QUESNELL BRIDGE, IT COULD BE CONSTRUCTED ON THE EDGE OF THE EXISTING ROAD TO AVOID REMOVAL OF NATIVE VEGETATION. CROSSING FACILITIES WOULD BE PROVIDED AT THE ENTRY TO THE FORT SERVICE ROAD.
APPROX. ALIGNMENT OF EXISTING SECURITY FENCE
EXISTING YORK BOAT DISPLAY
POSSIBLE LOCATION OF FUTURE TRAIL BRIDGE
MODIFY TURNAROUND TO ALLOW SPACE FOR TRAIL JUNCTION AND BRIDGE CONNECTION
PROPOSED TRAIL LINK ALONG WHITEMUD RD.
POSSIBLE FUTURE MULTI-USE TRAIL
POSSIBLE LOCATION OF FUTURE TRAIL BRIDGE
PROPOSED IMPROVEMENTS TO EDGE OF WHITEMUD RD TO ACCOMODATE TRAIL NODE
PROPOSED 'FORT-VIEW' TRAIL ROUTE - NATURE CENTRE TO WHITEMUD ROAD
EAST OF JOHN JANTZEN NATURE CENTRE, THE PROPOSED TRAIL WOULD RUN SOUTH OF THE FORT EDMONTON SECURITY FENCE AT THE EDGE OF THE PRESERVATION ZONE. THE NEW TRAIL CAN BE GENERALLY ACCOMODATED ON A RELATIVELY EASY GRADE ALONG AN EXISTING BENCH IN THE SLOPE. FOR THE MAJORITY OF THIS ROUTE THE EXISTING NATURE TRAIL CAN BE RETAINED IN ITS CURRENT ALIGNMENT. TOWARDS WHITEMUD RD, IT MAY BE NECESSARY TO RELOCATE THE NATURE TRAIL FURTHER UP SLOPE OR HAVE THE 2 TRAILS SHARE A COMMON ALIGNMENT FOR A SHORT DISTANCE .
LEGEND
EDGE OF EXISTING VEGETATION
EXISTING TREES
EXISTING CONTOURS; 0.5M INTERVAL
APPROXIMATE LOCATION OF EXISTING BUILDINGS
EXISTING RAIL LINE
EXISTING TROLLEY CAR LINE
EXISTING GRANULAR NATURE TRAIL
EXISTING WALKWAYS
EXISTING GRAVEL OR SEALED ROADWAY (WITHIN FORT)
EXISTING FENCING
PROPOSED MULTI-USE TRAIL ALTERNATIVE RIVER EDGE TRAIL ROUTE
ALTERNATIVE SERVICE ROAD TRAIL ROUTE
POSSIBLE ROUTES FOR TROLLEY CAR TRACK EXTENSION
PROPOSED MULTI-USE TRAIL AND TROLLEY CAR LINE - WHITEMUD CREEK TO WHITEMUD ROAD
0 25 50 100 150 250m
CORRIDOR OPTIONS
JUNE 25, 2002 fort1f_sd.dgn
EDA


PROPOSED MULTI-USE TRAIL AND TROLLEY CAR EXTENSION
FROM THE FRONT ENTRY TO FORT EDMONTON, THE PROPOSED MULTI-USE PATHWAY AND THE PROPOSED EXTENSION TO THE TROLLEY CAR TRACKS COULD RUN PARALLEL OR SHARE THE SAME ALIGNMENT. THE LATTER OPTION WOULD REDUCE THE AMOUNT OF REGRADING AND IMPACT ON NATIVE VEGETATION.
QUESNELL BRIDGE
POSSIBLE LOCATION OF FUTURE TRAIL AND TROLLEY CAR BRIDGE
RIVER EDGE ROUTE OF EXISTING GRANULAR NATURE TRAIL
EXISTING FORT SERVICE ROAD AND BOUNDARY FENCE
ALTERNATE ROUTES FOR EXTENSION OF TROLLEY CAR TRACKS
CONTROLLED ACCESS TO FORT SERVICE ROAD
OVERFLOW PARKING AREA
FORT AND NATURE CENTRE CAR PARKS
FUTURE TRAIL CONNECTION TO BRIDGE
TRAIL RAMP TO ROADWAY; END OF STAGE 1 TRAIL
FORT EDMONTON PARK
FORT MAIN ENTRY AND RAILWAY STATION
EXISTING NATURE CENTRE SERVICE ROAD
JOHN JANTZEN NATURE CENTRE
EXISTING NATURE CENTRE SIGNAGE SHEDS
EXISTING NATURE CENTRE LOOP TRAIL
PROPOSED 'FORT-VIEW' TRAIL ROUTE - NATURE CENTRE TO WHITEMUD CREEK
FROM THE NATURE CENTRE TO QUESNELL BRIDGE, THE PROPOSED TRAIL SHARES THE EXISTING NATURE CENTRE SERVICE ROAD AND WIDE SIDEWALK TOWARDS THE FORT EDMONTON ENTRY. SOME SECTIONS OF THE EXISTING PATH MAY REQUIRE MINOR WIDENING TO ACCOMODATE INCREASED USE. AS THE TRAIL NEARS QUESNELL BRIDGE, IT COULD BE CONSTRUCTED ON THE EDGE OF THE EXISTING ROAD TO AVOID REMOVAL OF NATIVE VEGETATION. CROSSING FACILITIES WOULD BE PROVIDED AT THE ENTRY TO THE FORT SERVICE ROAD.
APPROX ALIGNMENT OF EXISTING SECURITY FENCE
EXISTING YORK BOAT DISPLAY
POSSIBLE LOCATION OF FUTURE TRAIL BRIDGE
FORT EDMONTON PARK
FUTURE TRAIL LINK ALONG WHITEMUD RD
EXISTING NATURE TRAIL
PROPOSED PEDESTRIAN TRAIL CONNECTION DOWN EXISTING DISTURBED CORRIDOR
PROPOSED 'FORT-VIEW' TRAIL ROUTE - NATURE CENTRE TO WHITEMUD ROAD
EAST OF JOHN JANTZEN NATURE CENTRE, THE PROPOSED TRAIL WOULD RUN SOUTH OF THE FORT EDMONTON SECURITY FENCE AT THE EDGE OF THE PRESERVATION ZONE. THE NEW TRAIL CAN BE GENERALLY ACCOMODATED ON A RELATIVELY EASY GRADE ALONG AN EXISTING BENCH IN THE SLOPE. FOR THE MAJORITY OF THIS ROUTE THE EXISTING NATURE TRAIL CAN BE RETAINED IN ITS CURRENT ALIGNMENT. TOWARDS WHITEMUD RD, IT MAY BE NECESSARY TO RELOCATE THE NATURE TRAIL FURTHER UP SLOPE OR HAVE THE 2 TRAILS SHARE A COMMON ALIGNMENT FOR A SHORT DISTANCE .
POSSIBLE FUTURE MULTI-USE TRAIL
PROPOSED ENTRY NODE AND LIMIT OF STAGE 1 TRAIL
POSSIBLE LOCATION OF FUTURE TRAIL BRIDGE
RIVERBEND DRIVE
WHITEMUD DRIVE
88 AVE
85 AVE
83 AVE
75A ST
75B ST
LEGEND
EDGE OF EXISTING VEGETATION
EXISTING TREES
EXISTING CONTOURS; 0.5M INTERVAL
APPROXIMATE LOCATION OF EXISTING BUILDINGS
EXISTING RAIL LINE
EXISTING TROLLEY CAR LINE
EXISTING GRANULAR NATURE TRAIL
EXISTING WALKWAYS
EXISTING GRAVEL OR SEALED ROADWAY (WITHIN FORT)
EXISTING FENCING
PROPOSED STAGE 1 MULTI-USE TRAIL ALIGNMENT
FUTURE TRAIL EXTENSIONS TO BRIDGE CROSSINGS
POSSIBLE ROUTES FOR TROLLEY CAR TRACK EXTENSION
PROPOSED MULTI-USE TRAIL AND TROLLEY CAR LINE - WHITEMUD CREEK TO WHITEMUD ROAD
0 25 50 100 150 250m
SITE PLAN
Feb. 18, 2003
fortlg_sd.dgn
EDA

6. SUMMARY OF ASSESSMENT AND RECOMMENDATIONS

The three main potential routes for a multi-use trail corridor in the vicinity of Fort Edmonton Park are all affected by physical and operational constraints to some degree. There are no unconstrained or 'easy' options in this section of the River Valley.

The fact that the potential river edge trail route is subject to flooding makes it unsuitable from safety, operational and asset preservation perspectives. Widening, upgrading and adding a large number of extra users to a trail, which is popular in its current condition, would also not seem supportable.

The potential Fort service road (options) would either require an unreasonable amount of vegetation removal and grading or unreasonably affect the operations of Fort Edmonton Park. Although this was the route proposed at a strategic scale in the Ribbon of Green Master Plan (1992), it does not seem practical on close inspection. Fort Edmonton Park has grown considerably and has become reliant on secure access to the service road. The costs associated with modifying the current arrangement would be prohibitive.
The recommended Nature Centre / Fort View multi-use trail route is supportable from cost, environmental and operational perspectives. The proposed trail alignment is not flood affected and provides an attractive and functional alternative to the existing river edge trail.

It should also prove popular with residents of the adjoining residential neighborhoods as it provides them easy access onto the River Valley's multi-use trail system. Increased exposure for trail users to both Fort Edmonton Park and John Jantzen Nature Centre could benefit both attractions.

The recommended alignment for the extension of a trolley car line out of Fort Edmonton to the east seems most practical from a cost perspective due its shorter run. This alignment also provides a functional link to the entries of both Fort Edmonton Park and John Jantzen Nature Centre.

Considering both proposed facilities will utilize the entry space to the east of Fort Edmonton, it will be important in the design development phase to carefully accommodate the current, proposed and potential future uses of this important area.

Appendix 1
Preliminary Cost Estimate for Nature Centre Multi-use Trail Corridor

Proposed multi-use trail aligned south of Fort and through Fort Entry; overall trail length 2145m

	Item Description	Location	Quantity	Unit	Unit Rate	Cost
1	New trail through woodland	Nature Centre to Whitemud Road	980	M	$150	$147,000
2	New trail on exist road	Fort entry road	145		$130	$18,850
3	New trail through open area	along edge of Whitemud Road	235	M	$100	$23,500
4		Bridge to Whitemud Creek	320	M	$100	$32,000
5	Widen exist path (add 1m conc.)	Nature Centre towards Bridge	340	M	$65	$22,100
6	Trail on existing pavement	Nature Centre service road	125		$20	$2,500
7	Street crossings	in vicinity of Fort entry	1	each		$10,000
8	Construct new gravel trail	Nature Centre to Whitemud Road	980	M	$40	$39,200
9	Tree replacement	Compensation for tree removal	item			$50,000
10	Signage	General	item			$15,000
11	Furniture	General				$12,000
12	Planting / landscape rehab	General				$25,000
13	Lighting	General				$15,000
14	Fencing (new and modify existing)	General	item			$20,000
15	Roadway modifications	River end of Whitemud Drive	item			$25,000
16	Roadway modifications	south end of Whitemud Drive	item			$10,000
	Sub Total					**$467,150.00**
	Design & Engineering (12%)					**$ 56,058.00**
	Contingency (20%)					**$ 93,340.00**
	GST (7%)					**$ 43,158.36**
	TOTAL					**$659,706.36**
	Optional					
A	Timber stairs to 66 Ave		90	M	$250	$22,500

APPENDIX 2

Public Meeting Summary Comments

Public Meeting
Whitemud Integrated Plan
Tuesday, June 6, 2000
John Janzen Nature Centre

An open house was held from 5:30 – 7:00 p.m. This was followed at 7:00 p.m. by a presentation by the committee, along with a "question and answer" period.

Agenda

1. Introduction of Committee Members
2. Project Background
3. Review of the Plan
4. Break and Informal Discussion
5. Question Period
6. Wrap-up

Meeting Chairperson: Dave McInnes
Meeting Co-Chair: Mildred Richardson

A copy of the agenda, a background information sheet and a written questionnaire/survey was made available to all.

1. It was mentioned that members of the committee were in attendance, and would be available to answer questions.

2. Dave M. provided some comments in regards to the history of the project. Information was given about how the City of Edmonton initiated the Whitemud Integrated Plan Study after a number of groups had put forward proposals for individual areas.
   EDA Collaborative Inc. was retained to carry out the review. A committee was set up with the following stakeholder representatives:

   - Edmonton Community Services
   - The Edmonton Equine Society
   - Fort Edmonton Historical Foundation
   - Edmonton Radial Railway Society
   - Edmonton Nature Centres Foundation
   - FEESA, an Environmental Education Society
   - Edmonton Natural History Club
   - Grandview Community League
   - Riverbend Community League
   - Citizen-at-Large

   The first meeting was held in December of 1999, continuing on a regular basis to-date.

The purpose of this committee was to come up with a preliminary conceptual plan for the area, with information being used from the Ribbon of Green Master Plan.
Comments and suggestions from the meeting tonight will be taken back to the committee, who will then re-visit the preliminary plan and incorporate any changes.
The next step in the process will be for the committee to take the plan to the City of Edmonton's Community Services Committee, and then to City Council, possibly in the fall of 2000.
The Community Services Department will take on the task of working towards the allocation of capital budget funding to start the implementation of the plan.
Stakeholder groups and individuals will be continuing to work towards their own goals of achieving funding goals for their specific tasks within the plan.

Mildred Richardson commented that the conceptual plan and this proposal were built and modified on the consensus of the committee members. The advisory committee agreed to the following:

- That there will be a no net loss of vegetation through this development.
- Current attractions will continue to operate as they are now, within their boundaries, following existing master plans.
- All areas will continue to be accessible to the citizens (residents) and visitors of Edmonton.
- Alternative means of transportation to get to these facilities will be looked at, with new parking facilities being a last resort.

3. Penny Dunford took everyone through a review of the plan, following the green Open House Comment Form. It was noted that Fort Edmonton Park and the Whitemud Equine Centre both have their own approved master plans, which have already been approved by City Council.

4. As the presentations were fairly concise and took less time than anticipated, the attendees agreed not to have a coffee break. The meeting moved directly into the question period.

5. Questions were asked and responses given by various members of the committee.

- How are you (the Radial Railway) going to Fox Drive?
  - (Harvey) Phase 1 of the project will bring the streetcar to Fox Drive, to connect with an existing transit bus stop. It will follow Fox Drive along Belgravia Road until it reaches 72nd Avenue. Given the demand for the use of the Whitemud Equine Centre, this might be a way to use the existing parking lot here at the Nature Centre and a way to get people over to the Whitemud Equine Centre. Phase 2 will probably not get approval until the 114th Street LRT line/station is in place.

- Who would be responsible for funding the streetcar expansion?

- "You can't get funding until you get approval.....and you can't get approval until you get funding".
- Figures discussed included $1.7 million dollars and $3.1 million dollars.

❖ What are the ridership levels on the streetcar line?
- The streetcar has been running for four (4) years. In 1999 the ridership was 40,000. It has been increasing on an average of 7,000 to 8,000 per year.

❖ Belgravia community league is within the boundaries of the Whitemud Integrated Plan. Why aren't they included in the stakeholder list? Belgravia needs to be a major part of this project.
- This could be looked at, but it would be up to the Community League to make the contact to get involved.

❖ Pedestrian walkway – CP bridge. Loop for Whitemud park? What is the long-term plan for this?
- Not in the plan at this point. Could possibly go back to City Council to get a loop added in. Long term plan would be looking at the year 2009?? Would probably not get looked at until the 114th Street LRT is in.

❖ Ralph – A question about the South LRT extension (and the Streetcar). How much is this going to cost and who is going to pay for it?
- It was noted that the Edmonton Radial Railway Society has their plans included in the conceptual plan, to be there for future use.
- Because this is just a conceptual plan, there are no budget dollars assigned.
- The Society and other Not-for-Profit groups are going to be working really hard to self-fund their parts of the project. When the Streetcar was put in on 109th Street in 1994, the Society did not ask the City for any funding.

❖ Public washrooms – A question about having two (2) public washroom facilities so close to each other. It was suggested that Keillor Road might be a better location for a second facility.
- There is a public washroom located at the Whitemud Equine Centre, although this doesn't seem to be widely known.

❖ Why not have only one washroom facility, more centrally located? Or move one of the proposed facilities to the eastern edge of the area for this plan?
- It was noted that facilities are need in the winter for people using the tobogganing hills and the other one for the use of kids during programs that are being held in that area (Whitemud Creek Ravine is heavily used by groups for programming).

❖ Would both washroom facilities be used/operational all-year-round?
- The trail system is used extensively year-round (all seasons).

- "I think that you should look very seriously at having just one washroom facility".
  - This will be looked at with the other comments/suggestions that were received tonight.

- Another suggestion was made to have just a "seasonal" facility for the toboggan hill users, and one available for the summer users.
  - Again, this will be looked at with the other comments/suggestions that were received tonight.

- Are there any plans on extending the trail going from the bridge to Whitemud Park, to Westbrook, Whitemud Hills area to 23 Avenue?
- This trail already exists and there are no plans to make any changes to it.

- What are the feelings in regards to the participation of FEESA?
  - FEESA decided not to continue being a part of the committee about half-way through the process.

- Edmonton Natural History Club – involved in the Fox Farm issue.
  - They feel that the natural vegetation and reforestation process is very important in maintaining the natural species.
  - The South area of Fox Farm will be helped along in it's regeneration to a natural state, but other areas will be left alone to reforest naturally.

- It was suggested that a "mini work farm" may have been a good idea.
  - The proposal for Fox Farm was very extensive, but this was not considered.

- A citizen was concerned about the horses from Fort Edmonton Park "eating the last blades of grass" in the Fox Farm area.
  - Bryan M. spoke on these horses. FEP would like to be considered for keeping their horses on a small portion of Fox Farm.
  - Long term – looking at a lesser number of horses and re-seeding so that their would be a natural way for horses to eat.
  - FEP would like to be involved in the re-naturalization and re-seeding of this area.
  - The horses originally grazed on FEP lands, but it was insufficient to feed them over the winter and there wasn't enough land to keep the horses properly.

- Is the area at Fox Farm being used by the department right now on a long term basis?
  - The department will only being using this area until a more permanent facility can be found for the C/RV service area staff. All equipment would be moved out of the Fox Farm area at that time.

As there were no other questions, people were asked to leave their comments or suggestions with the committee, along with their name and address (which was optional). Information from this meeting would be mailed out to those leaving their mailing address.

Members of the committee would be available for a short time to answer any other questions.

The formal part of the meeting adjourned at approximately 7:50 p.m.