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Structuring Change

Exploring the Potential of a Greenway at Omand's Creek, Winnipeg

By Eric Stephen Stadnyk

A practicum submitted to the Faculty of Graduate Studies
in partial fulfillment of the requirements for the degree of

Master of Landscape Architecture

Department of Landscape Architecture
University of Manitoba

August 1999



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STRUCTURING CHANGE
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WINNIPEG

BY

ERIC STEPHEN STADNYK

A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
of Manitoba in partial fulfillment of the requirements of the degree

of

MASTER OF LANDSCAPE ARCHITECTURE

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to patty,

and

in loving memory of

ann stadnyk

Abstract

Alternative open space design strategies need to be sought which work in concert with those qualities of a landscape which contribute to its inherent sense of place. Traditional planning strategies at Omand's Creek in Winnipeg have recently seen this area evolving from an industrial locale into a typical, big-box retail superstore site. Barely a shade of what it used to be, the waterway has become merely an industrial drainage ditch, with little benefit for wildlife or recreational opportunities. Traditional notions of park space development places islands of parks within the urban fabric, unconnected and unrelated to one another, few and far between.

Greenway design is a recent movement that brings together nature, recreation and the potential to re-think the way cities and green spaces are put together. Re-integrating nature as a greenway at Omand's Creek explores the exciting potential of the revitalisation of the creek, the reuse of the railway corridor, enhancement of the existing park spaces at Bluestem and Westview, and future linkages to the regional context. As well, as a means of urban design, a greenway may resolve the area's changing and temporal land uses and natural and pedestrian activities. A framework is illustrated which will allow for change to continue to occur on the site as it continues to evolve.

Acknowledgements

I would like to take this opportunity to offer thanks to the many people whom have supported me and offered me guidance throughout this experience.

To my committee: Professor Ted McLachlan, chairperson, Professor Richard Perron, and Cynthia Cohlmeier, for their experience, advice and direction.

To my family for their support - especially my mother, who let me move in and turn her home into a national disaster area in order to complete this practicum.

To all my friends. I would have never made it without their support, encouragement, and belief in me.

To anyone who has ever taught me anything.

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1

Introduction

1.1 Introduction

Modern commercial development has often taken place within the urban context with a lack of cohesive planning or an appreciation for place making or the natural landscape. This development typically operates for profit, production, efficiency, and other short-term motivators that tend to ignore exterior environmental conditions or aesthetics. With a global move from an industrial to an information-based society, many urban industrial areas are at a state of great change. As industrial functions decline, buildings and sites are left vacant or are taken over by commercial outfits out to "make a quick buck" from available urban land. Lack of planning within these changing landscapes has led to ad-hoc development, insensitive to the social, historical, natural or symbolic features of a particular site. Subsequently, open space design is often overlooked, from an aesthetic point of view. Inevitably the site becomes uni-functional, and seldom serves the needs or comfort of the pedestrian.

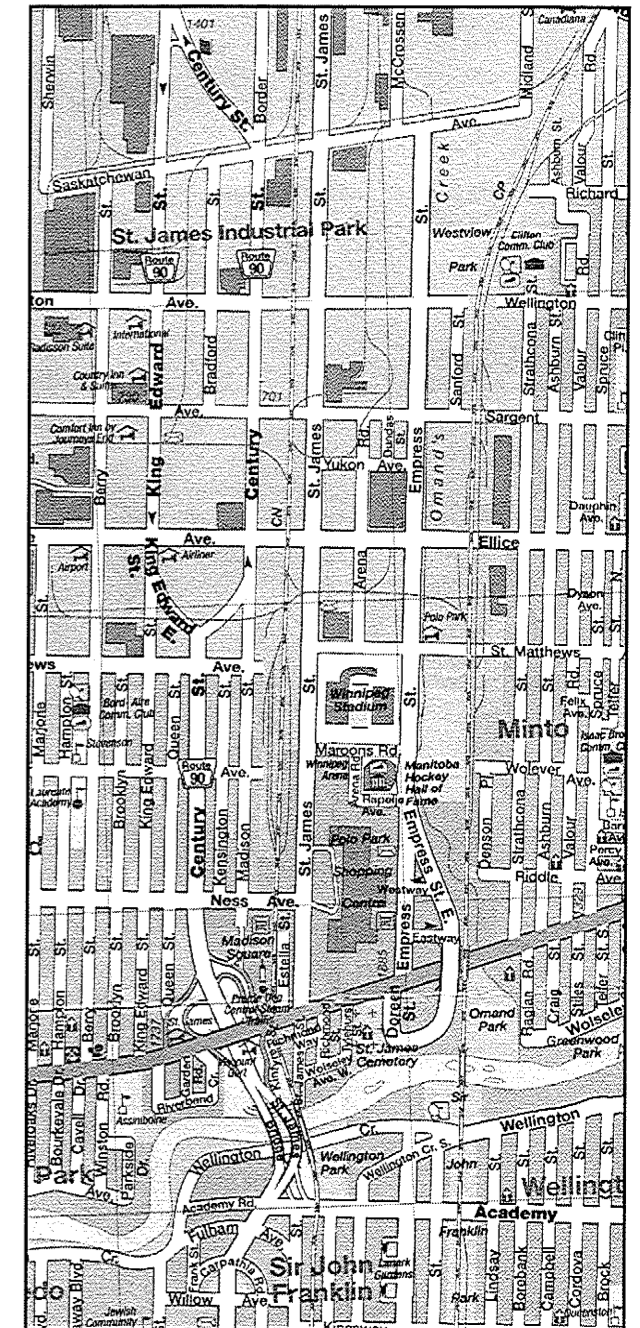
While a focus on consumer activity and productivity is integral to the operation and economic survival of these areas, it need not be with blatant disregard for the outdoor landscape. In fact, commercial and industrial operations, with little upfront investment, can create pleasant, attractive, and multi-functional exterior spaces that can attract consumers and/or create pleasant work environments for employees in the long term. Businesses can use the surrounding landscape to benefit from complimentary uses such as parks and plazas, which draw potential customers seeking out quality surroundings where recreation and nature need not be isolated from work and shopping-related activities. With the development and enhancement of the natural landscape, pedestrian paths, and surrounding recreation facilities, businesses can only benefit by an increased number of potential customers, drawn to the area by alternative attractions. Commercial and industrial operations can also improve their public image through environmentally sensitive planning and ecological design which take into account the various site specific landforms, natural features, and wildlife.

Greenway design is a way to draw together the natural, cultural and functional aspects of the urban landscape. With a focus on ecology and the enhancement of a sense of place, an otherwise anonymous commercial landscape can acquire and draw from its own character based on the surrounding landscape - a landscape that weaves together land uses and activities along a linear green corridor.



City of Winnipeg

Site Location



Local Context (MapArt Publishing 1998)

1.2 Site Selection and Context

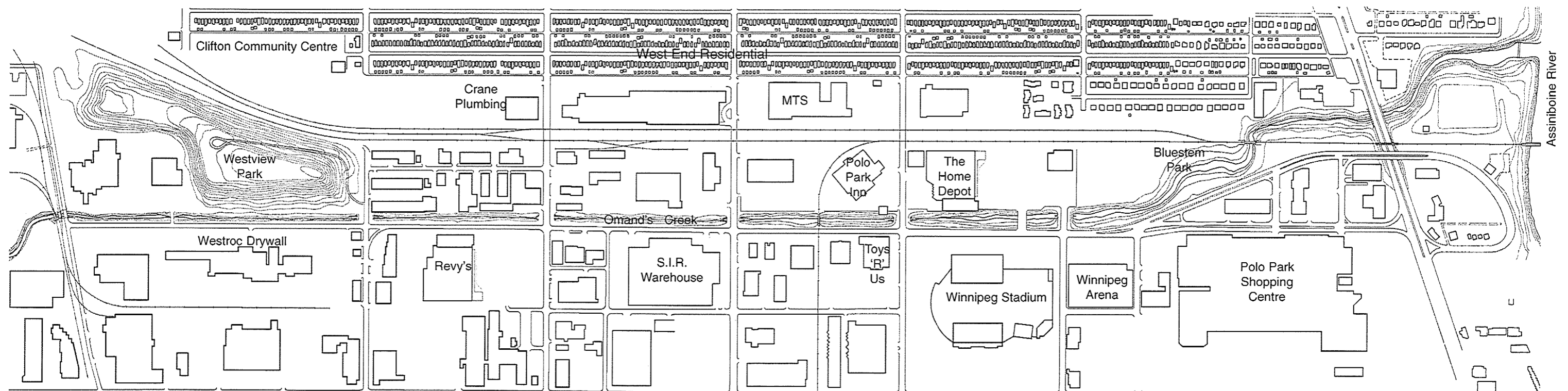
The site to be examined in this practicum is located in the Polo Park/St. James area of Winnipeg. It centres on Omand's Creek, an existing railway corridor, and includes the peripheral buildings and spaces of these two systems. It is bounded by Portage Avenue and Saskatchewan Avenue to the south and north respectively. Since 1973, there has been an effort to "reclaim Omand's Creek" and establish a linear parkway in two stages along the waterway. The first stage, which is already under development, is from Omand's Park to Bluestem Park. The second stage extends the parkway north along Empress St. to Westview Park. This practicum builds on this proposal by including the adjacent railway corridor, which runs parallel to the creek along the east side of Bluestem and Westview Parks.

There are a number of issues that make this site attractive as a focus for this practicum. The creek is a hub of natural activity on the site and is even more interesting because although it is perceived as a natural element, it is, for the most

part, a constructed site feature. Declining use of the railway corridor begs the question *What will it become in the future?* These two linear systems run parallel to each other and connect a variety of open spaces, including many parking lots, the naturalized open space of Bluestem Park, sports fields of the Clifton Community Centre, and the anomalous hill that is Westview Park. The relationship of these to the commercial/industrial buildings and functions of the site, and the adjacent community of the West End, make it a worthwhile place to explore the stated background issues and provide open space development which can serve the population of an existing community.

For approximately the last decade, the site has experienced a rapid rate of commercial development. As there is still a surplus of available undeveloped land in this area, it is particularly attractive for the enhancement of natural habitat, outdoor recreational functions, and complimentary activities to existing land uses.

Finally, the location of the site in the regional context, places it at a good position for the development of an urban greenway. The site is a natural extension of Omand's Park on the south side of Portage Avenue, which links to bicycle/pedestrian paths across and along the river. The Wolseley and Wellington Avenue bicycle paths connect the site to a wide region and to Assiniboine Park. A plan by the city to implement a riverwalk extension from Kildonan Park to Assiniboine Park could include this extension of a greenway along Omand's Creek. The greenway then has the potential of continuing north along the creek to Brookside Cemetery or beyond, although that development is viewed as beyond the scope of this practicum. The presence of all these factors gives the site the unique advantage in demonstrating the potential development of a greenway system through an industrial/commercial area of Winnipeg, Manitoba.



Site Plan, 1997

1.3 Goals & Objectives

The goal of this practicum is to design a greenway system through the Polo Park commercial and St. James industrial areas of Winnipeg, focusing on the linear corridors of Omand's Creek and the Burlington Northern Railway right-of way, and the peripheral spaces of these two systems. Inherent to this goal are these two objectives:

- Creating a sense of place which acknowledges the site's changing context, its existing land uses, as well as the landscape's natural functions, and
- Establishing a network of circulation which links and combines nodes of opportunity for human and natural activity.

1.4 Scope and Site Issues

There are a number of issues to be addressed in understanding the practicality of this exercise as a practicum.

1) The site is developing rapidly. Since I began to look at this site as a focus for the practicum only two years ago, there have been at least four new large-scale commercial buildings to be constructed on and adjacent to the site (Revy's, Home Depot, Chapters and a Tootsies), the demolition of an old firefighter training facility and the Winnipeg Velodrome, and three closures of large-scale businesses (Serca Food Services, Robinson Lighting and Bath Centre, and Tritec/Steels Construction Products). Given this rate of change, the newest buildings have been either left out of the master plan, or their sizes and positions estimated. Regardless of the changes in the existing conditions, the intention is to provide an opportunity to illustrate concepts and guidelines which can be applied to whatever type or form of construction that may take place on the site, and accommodate most types of development.

2) The railway is still in use, and may be in use for many more years to come. However, in this academic exercise, I recognized the potential for this site to better demonstrate the ideas and concepts in this practicum than other sites in Winnipeg, if the railway line was made available. With the use of rail transport on the decline across North America, it is not unrealistic to acknowledge a future without an active railway line on this site. I therefore decided to assume that the railway was available.

1.5 Methodology

Initial research to establish precedents and issues relating to greenway developments and industrial/commercial areas is undertaken as the first step of the practicum. The information gained through this step provides the background for fundamental design ideas and concepts for application to the particular site.

The following site inventory and analysis step examines and records the existing physical characteristics and psychological impacts of the specific site, such as vegetation, wildlife, water quality, zoning, land use, climate, views, and circulation. Further, the analysis reviews the issues drawn out of the literature review within the context of the particular site and notes their implications for design, denoting site specific opportunities and constraints.

Finally, a site design proposal is presented as the culmination to the project. A synthesis of the information gathered and generated during the previous stages generates a program of appropriate activities and spatial organization of the site. This design proposal is presented as a master plan with accompanying detail plans, drawings and appropriate written text.

2

The Greenway Movement

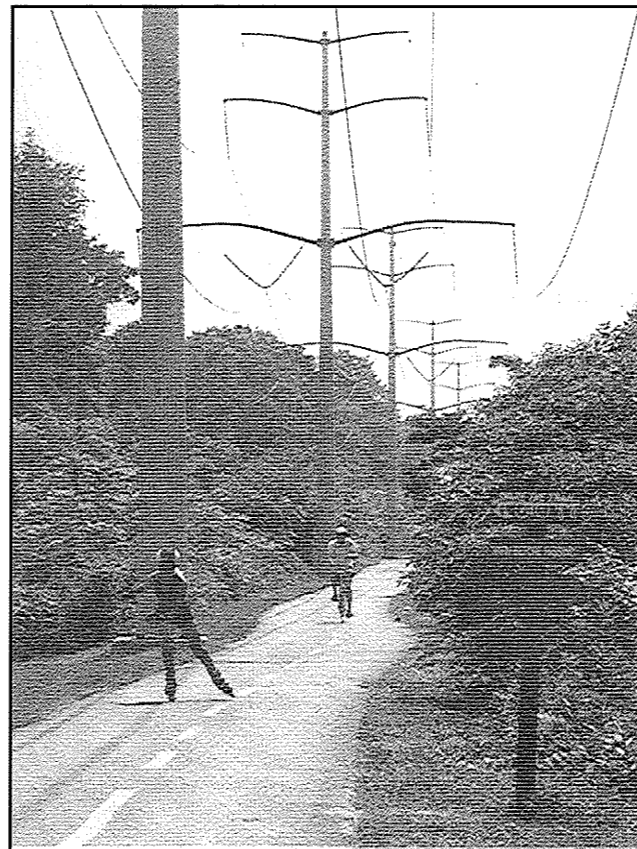
2.1 History & Objectives

The tale of the greenway movement is an obscure one. While modern notions surrounding the term 'greenway' have been a post-war phenomena, most historians, planners and landscape architects attribute the genesis of the idea to Frederick Law Olmsted and his linear parkway designs of the late 1800s (Little, 1990). The concept that parks and open-spaces could be linked via scenic walks and drives was a new innovation in park planning. While his plans were based on scenic boulevards and axes, which have dated back centuries to the streets and thoroughfares of European cities which connected landmarks and important sites, Olmsted's designs were first to incorporate these types of connective devices as integral linkages between natural and recreational park-spaces. These plans included schemes for the cities of Brooklyn, Buffalo, and perhaps the best known example, Boston.

Olmsted's vision of integrating nature as purely a scenic amenity for linking parks laid the foundations for greenway design. However, his ideas are seen now as only the first stage in what is now considered a three-generation evolution of the greenway (Searns in Fabos & Ahern, 1995). The second generation in the 1960s, as a reaction to the overwhelming proliferation of the automobile, produced the trail oriented greenway. This generation also saw the first use of the term *greenway*, by William Whyte. In his monograph, *Securing Open Space for America*, Whyte identifies the many urban strips and corridors which provide immense opportunity for the creation of non-vehicular trail routes. The 1970s and 80s fostered the development of this type of greenway by identifying sites of railway corridors, utility line right-of-ways, waterways, and other geographical site features which could accommodate this proposed use.

The trail type of greenway also helped spawn a new awareness of and respect for nature within the urban context. Growth of vegetation along railway right-of-ways, or urban stream corridors, for examples, awakened an interest in learning about ecology and natural processes. This new interest came to the forefront of the environmental movement in the late 1980s and 1990s.

The final generation of the movement is embodied in the multi-objective greenway. Ian McHarg's milestone book *Design With Nature*, he explains how regional planning can use overlay mapping techniques to draw out inherent physiological characteristics from the landscape that which can in turn guide planning and design strategies. The importance of integrating natural habitat, historic preservation, flood reduction, and education becomes paramount in this approach to landscape and land-use planning, and figures prominently in the most recent advance in greenway planning. The greenway is no longer merely a scenic nature trail, but plays a vital role as a part of the infrastructure and layout of the urban landscape. McHarg's ideas are demonstrated in his own firm's work in the planning of the Woodlands in Texas, where a series of greenways serve to structure the layout of the plan.



Greenways encourage reclamation of many strips of otherwise under-utilised lands. (Flink & Searns, 1993)

2.2 Function of Greenways

"It is important to recognize that greenways of all sorts are a synthesis of both natural and cultural influences." (Smith, 1993, 12)

Greenways are designed for both human amenity and for sustaining some measure of natural functions. The function of the greenway takes place at social and ecological levels, and perhaps more importantly, creates a dialogue between the two.

Ecologically, linear greenways serve both natural habitat and the welfare of human beings. Greenways protect and link natural areas, and through their linear character, can over a longer distance, provide varied habitats for a greater number of wildlife species. Allowing for movement along the corridor can also support the seasonal needs of each species as well as promote biodiversity through genetic exchange linking different populations of species (Formon and Godron, 1986). Ecological processes, particularly within riparian systems, can also serve to filter out pollutants and contaminants from adjacent land uses, improving water quality and the subsequent health of people and wildlife that would be otherwise adversely affected by environmental hazards such as acid rain and higher concentrations of toxins in the food chain (Ward and Dubos, 1972, 62).

The predominant perception of greenway as a social benefit is that of recreational use. Biking, jogging, walking, cross-country skiing are all leisure uses that greenways cater to with their linear layout, and often connect to other active and passive recreational open space activities in parks, historic sites, and sports facilities. Just the daily walk along an aesthetically appealing natural corridor to work, school, or shopping can introduce a recreational facet to the daily routine where the present-day banal and often dismal task of driving would otherwise have to take place. Aesthetic appeal can add to the physiographic significance that the greenway's location already has, and consequently promote a sense of place for the community (Smith, 1993, 16).

"The edge effect is almost magical." (Little, 1989, 35)

Due to their linear character, greenways can connect a greater number of people to nature over a greater distance. Providing opportunities for people to experience nature close to where they live and go about their daily lives helps to awaken an awareness of, and respect for, nature. Scarcely a person alive is without fond childhood memories of playing in an open field, or having a forest adventure or other 'wilderness' experience, be it on a rural property or a vacant city lot. Manicured parks and suburban open space management denies children this experience that so many adults take for granted, and so many designers and planners fail to include in contemporary developments (Cooper-Marcus in Van Der Ryn & Calthorpe, 1986, 124). Greenway implementation can recreate those landscapes where people and children may explore and discover, and helps to educate them about nature and their community.

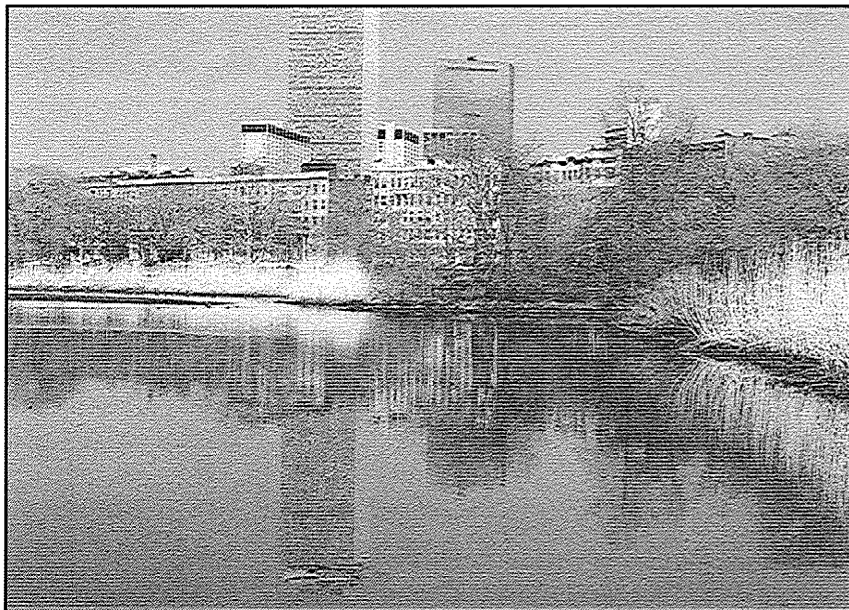
The potential for greenways to redefine the way the urban context is thought about is immense. These linear corridors allow greater numbers of users to travel to greater numbers of destinations throughout the city. While this practicum addresses merely a segment of one greenway through urban Winnipeg, it is important to note that the success of greenway planning relies on a network of greenways integrating nature, circulation routes, and outdoor activities connecting the built environment. These green fingers running through the city can act as an amenity, infrastructure, and a demonstration of the human potential to live in a more harmonious way with nature.

2.3 Case Studies

2.3.1 The Boston Parkway, Boston

Boston's Emerald Necklace is a landmark in urban park planning. Probably the most renowned of the first generation of greenways, Olmsted's park system became a model for linear park design on a number of levels.

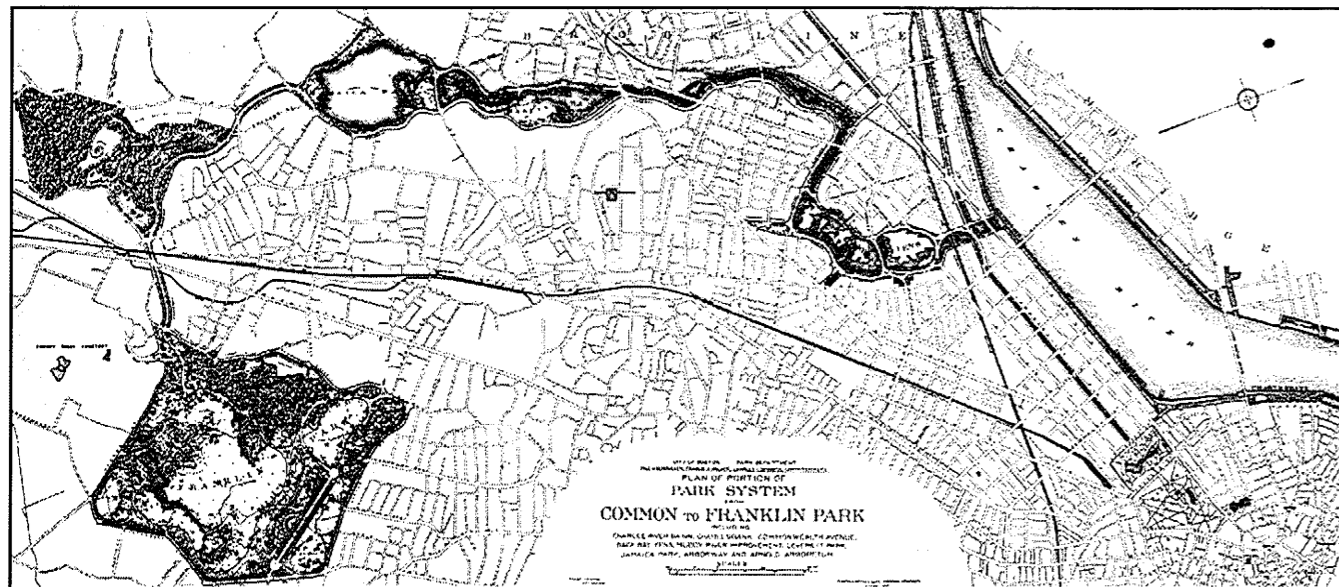
Olmsted's plan is hailed as a success in connecting the city centre with suburban areas through the greenery of its scenic drives and walks. Some of these routes are merely tree-lined carriageways connecting one activity area to the next and



The Back Bay Fens in the Boston Parkway (Zaitzevsky, 1982)

highlighting axes and vistas through the use of green walls of trees and carpets of lawns. Even though these have little diversity of natural materials or any recreational function unto themselves, they demonstrate the use of vegetation as architectural features and as creating natural connective tissue between park spaces.

While the Boston parkway is hailed as a success along with Olmsted's many other park designs for its pastoral natural character and provision for passive recreational activities and scenic attributes, it is also triumphs in its understanding and incorporation of ecological and natural processes, which is often overlooked (Spirn, 1984). Approximately a third of the greenway is not actually intended for recreation or visual amenity, but for the retention of water runoff from adjacent urban areas. The Riverway and Back Bay Fens were almost exclusively developed for this purpose, and because of this function, Olmsted rejected the use of the word 'park' when referring to them. (Perhaps 'greenway' would have been a better word.) Marsh area restoration was a practice that Olmsted implemented generations before its time - it wouldn't be until the late twentieth century that landscape architects would embrace naturalization techniques within the developing city. His design of the fens, in its configuration and regulation of water levels, included a diversity of shrubs and trees and within a decade, Olmsted's inherent comprehension of natural processes was demonstrated by a



Plan of Boston's 'Emerald Necklace' (Zaitzevsky, 1982)

landscape which appeared entirely native and untouched by the designer's hand.

The design of this early greenway provides an initial demonstration of the varied ways that these linear corridors can have recreational, scenic, functional and ecological value in the application of natural landscape elements and processes.

2.3.2 The Woodlands New Town, Texas

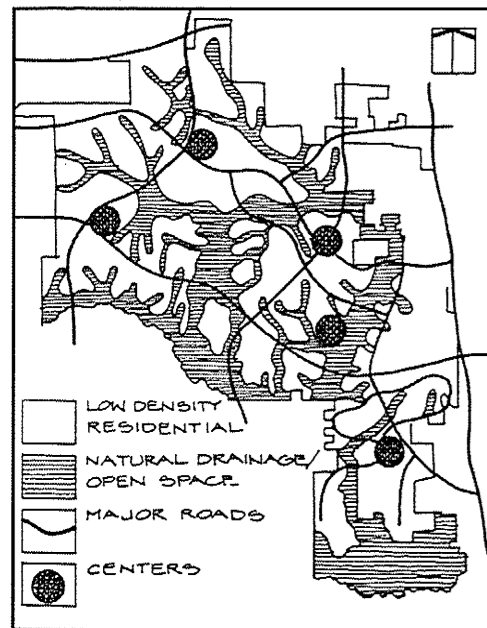
From Boston to just outside of Houston, and one hundred years forward in time to the 1970s, contemporary planning efforts were to demonstrate Ian McHarg's ideals of 'designing with nature'. The Woodlands is a planned community which was envisioned as "a city that would spring up in the middle of the woods" (Spirn, 1984).

The plan itself integrates a series of greenways to create a network of open spaces for scenery, flood control, recreation, and wildlife habitat. Hired to execute the plan was McHarg's own firm of Wallace McHarg, Roberts and Todd (WMRT). WMRT used McHarg's method of land use planning as he had outlined, which summarized, included (Smith, 1993, 196):

- 1) Ecological inventory and analysis
- 2) Town development intensity based on site sensitivity and impact potential
- 3) Establishment of guidelines for site design

In the analysis, it was discovered that poor soil permeability and consequently poor drainage was the limiting factor, and affected water quality, vegetation and ultimately wildlife. Hydrology becomes the form-generator in this scenario, as drainage channels exploit well-drained soils and forested swales (to soak up moisture) in order to prevent flooding downstream, and in turn save millions of dollars. These drainageways then define the structure for the layout of the greenway network, and include trails and recreational activities through and along the wooded riparian corridors.

WMRT's recommendations included large-scale design and planning strategies, such as development concentrated on the poor soils of upland areas, and the protection of forest types,



Plan of The Woodlands, Texas (Spirn 1984)

recharge ponds, and wildlife, all the way down to decisions to maintain roadside buffer strips and guidelines for low-key signage to keep the natural setting pleasing to the eye (Smith, 1993, 198-201). Optimum development of the area was outlined to maintain 30% natural open space, with an additional 14% for recreation space. This combined figure of 44% has since decreased to 25% due to the sacrifice of one major upland area for development. Regardless, a significant portion of the landscape remains wooded and in a natural state and the Woodlands new town has been fairly successful in its objectives of ecological design.



The Woodlands, Texas (Smith & Hellmund, 1993)

2.3.4 The Don River Valley, Toronto

The Don River flows southward through metropolitan Toronto into lake Ontario. In 1989, a task force was struck to clean up and restore the Don River Valley, which had by then become such a desecrated river system through neglect and abuse, that environmental groups had already written it off. At this time the residents and city Council of Toronto got together to form the Task Force to Bring Back the Don. This was a result of a mood shift, in which hope was reborn: a hope that those who once could swim in the Don as children, could swim there again as seniors.

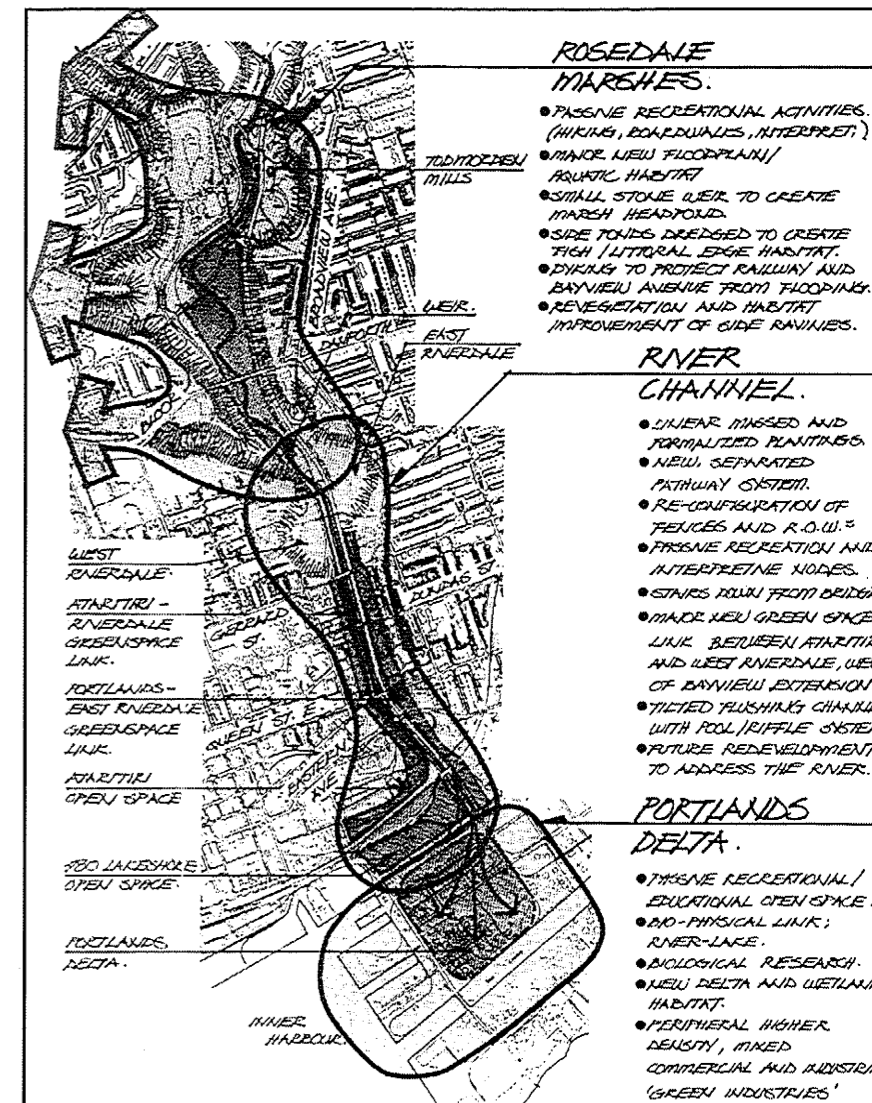
Employed to provide a master plan for the restoration and redesign of the river valley was the firm Hough, Stansbury, Woodland Limited (HSW). HSW's approach was to really rethink how the Don was going to evolve and what potential purposes it could serve area residents and the city.

As both a place of habitat and one of recreation, HSW prescribes a sequence of both natural and manicured open spaces along the river corridor. The valley is subdivided into 3 areas:

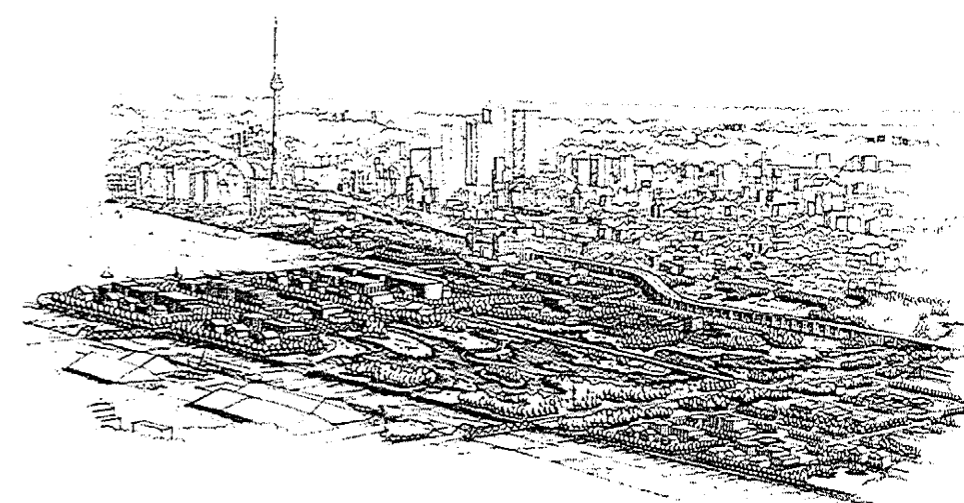
1. Rosedale Marshes
2. The River Channel
3. The Portlands Delta

Within each of these areas: land uses, reforestation, soil/water quality, access, open space, and hydrology are major foci of the project. Of particular note in the Don River Strategy is the rethinking of land uses along the river. Specifically in the Portlands Delta area, HSW recommends the retrofit of industrial operations as 'green industries.' Whereas traditional planning practice lays out areas surrounded by parking lots and turf landscapes, HSW's plan reorganizes industrial operations within a setting of wetland marshes, which can then filter out pollutants before they enter the waterway. HSW as well incorporates areas for the river to be viewed and appreciated as a natural amenity within the urban context.

The plan is large scale, incremental, and long-term in its strategies to revitalize and restore the health of the river.



Lower Don Strategy Plan (Task Force to Bring Back the Don, 1991)



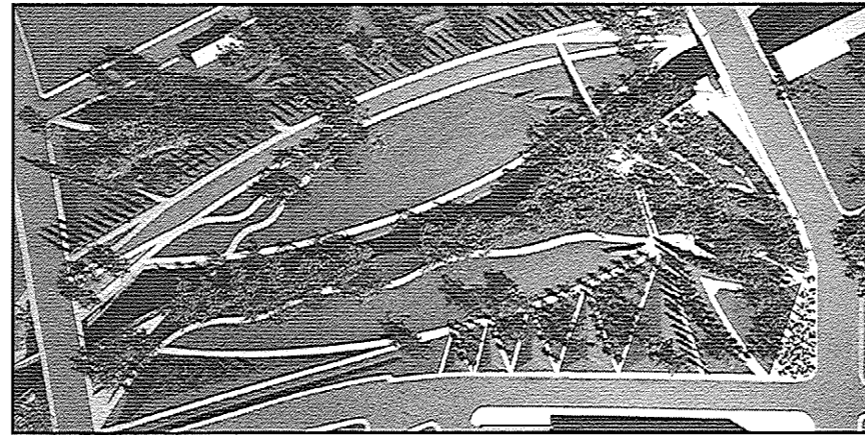
"Green Industries" in the Portlands Delta (Task Force to Bring Back the Don, 1991)

2.3.3 Guadalupe River Park, San Jose

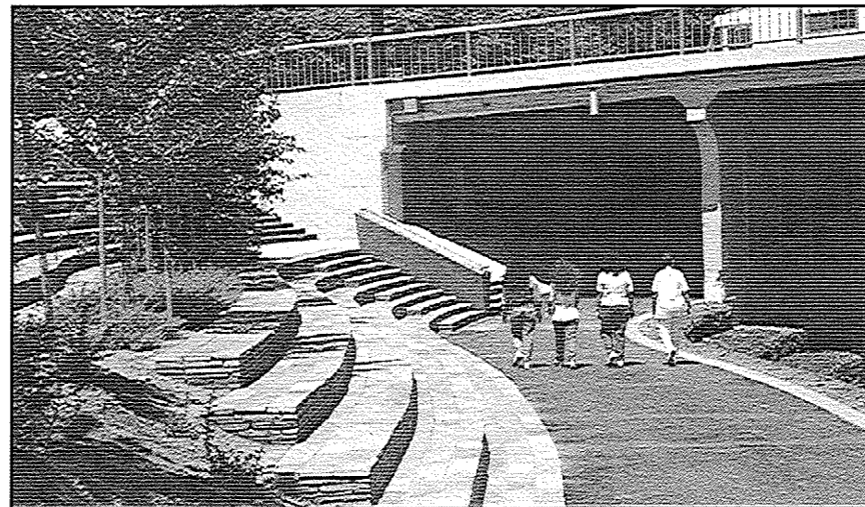
The centerpiece of Guadalupe River Park in San Jose, California is the Guadalupe River corridor. Due to extremes in California's wet-dry climate, this river channel is subject to extreme flooding during some periods of the year, while at others, water levels are minimal. Engineering efforts in the past have confined waterways such as this one to a concrete channel with regulated flood controls. However, in this case, the San Jose Redevelopment Agency employed the expertise of Hargreaves Associates to design the river corridor to incorporate recreation space and natural habitat creation along the riverbanks with flood controls.

Hargreaves' approach to designing the corridor speaks of dynamics and change. He strongly acknowledges the human creation and its relationship with nature, as opposed to attempting to replicate nature and erase the human presence. Focusing on the abstractions of natural hydrological patterns, the park becomes an assemblage of serpentine terraces and sculptural wave-like berms. These patterns order the space, and create strong associations with the river corridor. During high water levels, the differing elevations interact with the flows of water along the river, and while even during low water levels, the forms still carry associations with the character and movement of water. This approach explores an open-ended aspect of design - aspiring to the realm of art, while embracing the dynamics of chance and change through natural processes (Meyer, 138). The terraces in the park are not provided for any

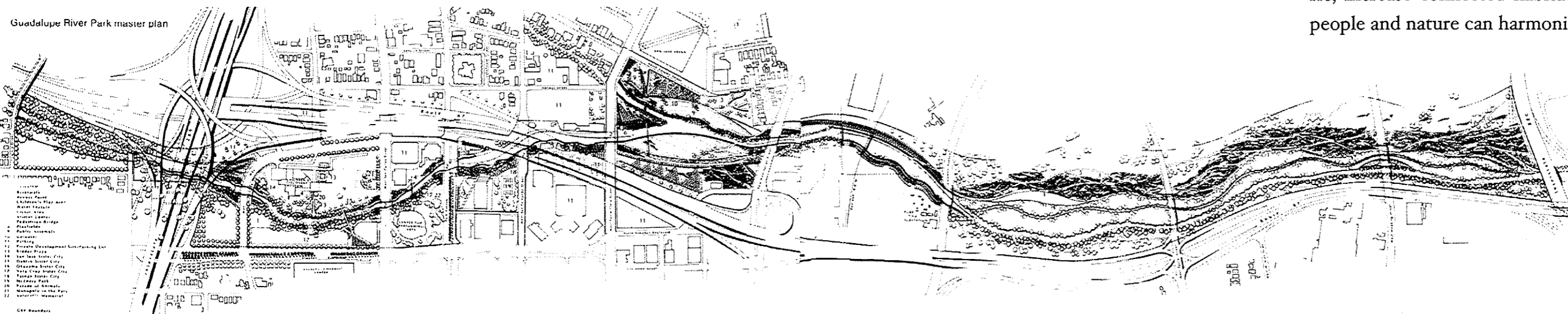
restorative approach to nature, but instead create an underlay which will allow natural vegetation and habitat to evolve and develop in whatever way it chooses.



Confluence Point Park (Woodbridge, 1991)



Terraces reflect the water's character, and respond to flood conditions (Woodbridge, 1991)



Guadalupe River Park Plan (Woodbridge, 1991)

Hargreaves and Associates' design responds to the cyclical dynamics of seasonal changes, while providing open public park space for San Jose. The park also becomes a linear spine along which future urban development may take place.

2.4 Conclusion

From the historical overview and the design precedents it is apparent that the role of a greenway is multi-faceted.

A greenway provides natural ecological areas for diverse wildlife habitats which are otherwise unavailable within the cultural mosaic, and can allow natural processes and phenomena to occur.

Greenways can also be developed to provide natural flood controls.

They can provide areas of both active and passive recreation, where people can walk, jog, socialize, play sports, or relax and admire and enjoy nature. They can create places to bring people together or provide spaces of solitude and retreat from the urban environment.

The lineal quality of a greenway means it is not only a place to go to, but one to move through: a destination and avenue.

It can influence peripheral urban development.

It is for people and wildlife inclusive.

Greenways provide an opportunity to restructure the urban fabric, increase connected habitat, and establish a setting where people and nature can harmoniously coexist.

3

Site Analysis

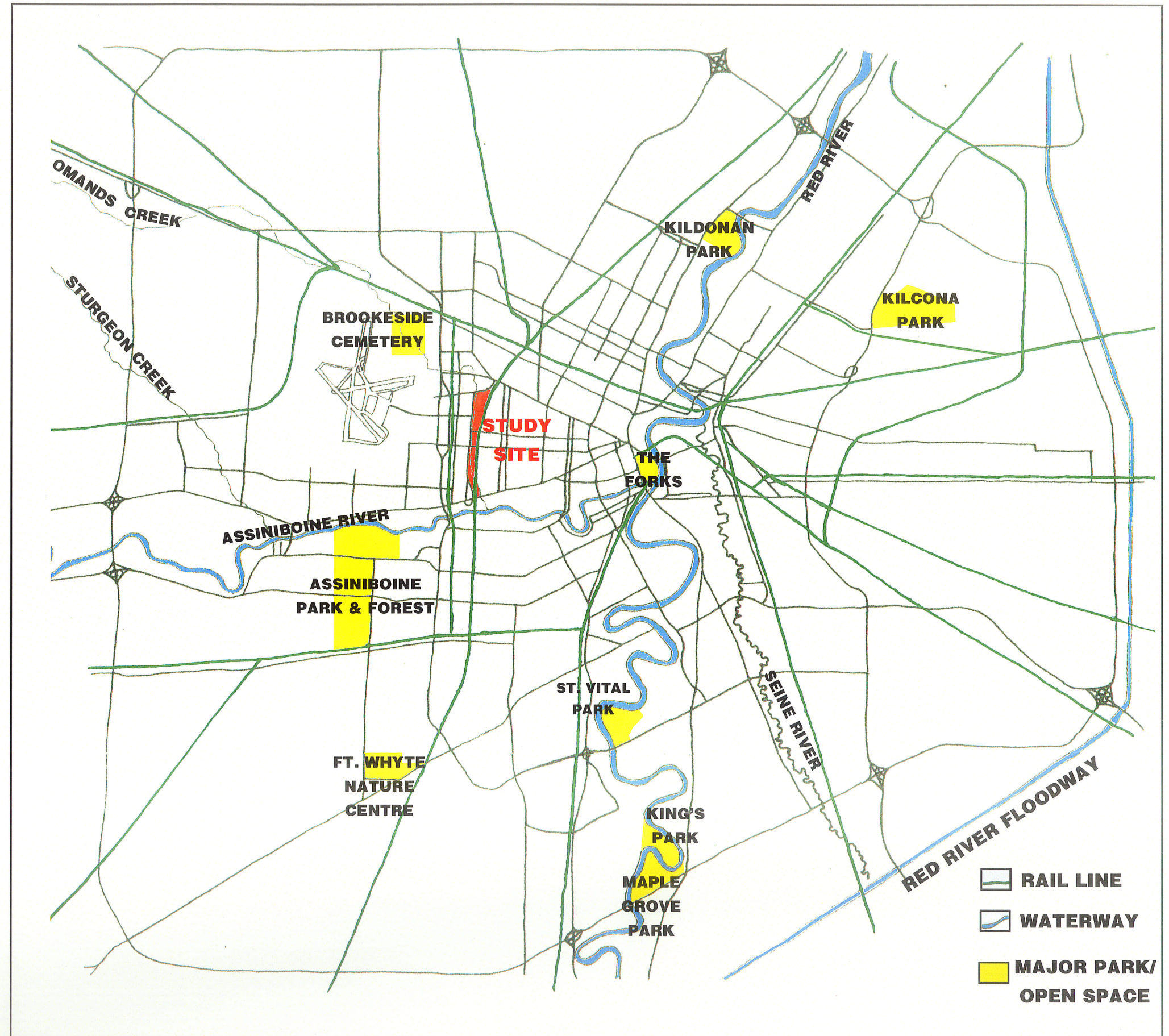
3.1 Regional Context

While the site is located at the outskirts of the city's West End, visitors come from far and wide. There are many regional draws to the site, including parks, entertainment and recreation facilities, and shopping. The arena and stadium complexes are the city's principal sports and entertainment facilities, home to the football and hockey teams and host to special events, concerts and other functions which draw large amounts of people to the site from across and outside of the city. Polo Park Shopping Centre is another regional attraction due to its status as Winnipeg's largest shopping mall. Westview Park attracts tourists and visitors for its magnificent view of the city skyline.

There is also a great potential to branch out from this area and develop a greenway network throughout the entire city. Utilising the railway corridor south of the site for the creation of additional greenway routes could connect it to suburbs like Whyte Ridge, Fort Whyte and Linden Woods through River Heights and across the Assiniboine River. From the north-east, the tracks run between West Kildonan and Garden City, and travel south through the historic North End. The potential here is to connect these residential areas and open spaces such as Fort Whyte Centre along the greenway rail lines.

The creek on the other hand continues north-west past the airport, to Brookeside Cemetery where it rejoins the original meandering channel which was once the path of Colony Creek which continues out to rural agricultural areas.

East and west, the site connects to already existing and proposed circulation paths. There is a proposal to extend the downtown river-walk all the way from Kildonan Park along the Red River and up the Assiniboine River to Assiniboine Park and Forest. This connects the site directly with downtown, the Forks and these other regional parks. Designated bike routes along Wolseley Avenue and Wellington Crescent already link cyclists, inline skaters, and pedestrians to and from the site via Omand's Park and the railway bridge over the Assiniboine respectively.



Winnipeg - Regional context and greenway implications

The implications, for the design of the site, are in the potentially high volumes of non-vehicular traffic from the north and south. The area will pulse with people for special events, peak shopping hours, and everyday recreation activities, and the design of the immediate context needs to cater to these concerns. Other programs can be implemented that address the site's ecological qualities. For instance, nature hikes could be organised from Fort Whyte Nature Centre to Bluestem and Westview Park along the railway corridor. Therefore these routes would need to cater to a good number of people while being sensitive to the local ecology.

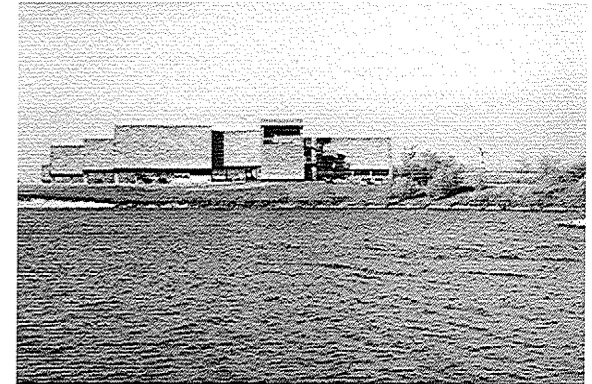
Further, the connections to the regional urban environment can have even greater implications if one examines the potential beyond these direct links to the site. Alternative creek corridors like Sturgeon or Truro Creek, or railway right of ways (used or unused) can provide other trails to establish great circuits of greenways throughout the city, of which this site can become an integral piece.



Omand's Creek, as it runs through Brookside Cemetery



The Red and Assiniboine Rivers can link major regional parks like Kildonan Park to the site.



Fort Whyte Centre can link to the site via a trail system along the railway right-of-way.



The riverwalk can be an integral part of a greenway network in Winnipeg.

3.2 Site History & Development

3.2.1 Natural History Pre-settlement

Prior to the coming of the European settlers, the land which the site now occupies was covered by the vegetation of the Aspen Parkland bio-region. This ecological community acts as a transitional zone between the Great Plains to the south and the northern Boreal Forest, running from the Canadian Shield to the Rocky Mountains. In and around Winnipeg, this bio-region is characterised by two ecological communities, the aspen forest and the tall grass prairie, and is complimented with a third, the river-bottom forest.

These two Aspen Parkland ecosystems lived in a dynamic equilibrium with each other. Aspen forest, characterised by its dominant tree species, trembling aspen, would spread through its suckering habit across the plains, establishing ever-expanding bluffs, until a prairie fire was sparked by a lightning strike or local aboriginals to clear the area. Prairie grasses such as big bluestem, prairie cordgrass, and Canada wild rye, and herbaceous species, like aster, goldenrod and black-eyed susans quickly blanketed the area with new growth, until the aspen re-established itself again.

The vegetation of the site may have also been characterised by river-bottom forest species that would have spread from the banks of the Assiniboine up along the length of Omand's Creek. The canopy of a river-bottom forest is thick with a diversity of ash, linden, elm, cottonwood, and maple. The shady under-story is typically composed of herbaceous species like sasparilla, strawberry and sedge.

Nearly all the native species of the Aspen Parkland were cleared by the settlers for shelter, fuel, and agricultural purposes within the last two centuries. While these fertile soils have become an economic treasure for the prairie provinces, the scope of destruction of natural habitat and wildlife communities by agriculture and urban development has been drastic. Greenway design attempts to reintroduce nature into the human system.



In the aspen forest

3.3 Site Organisation

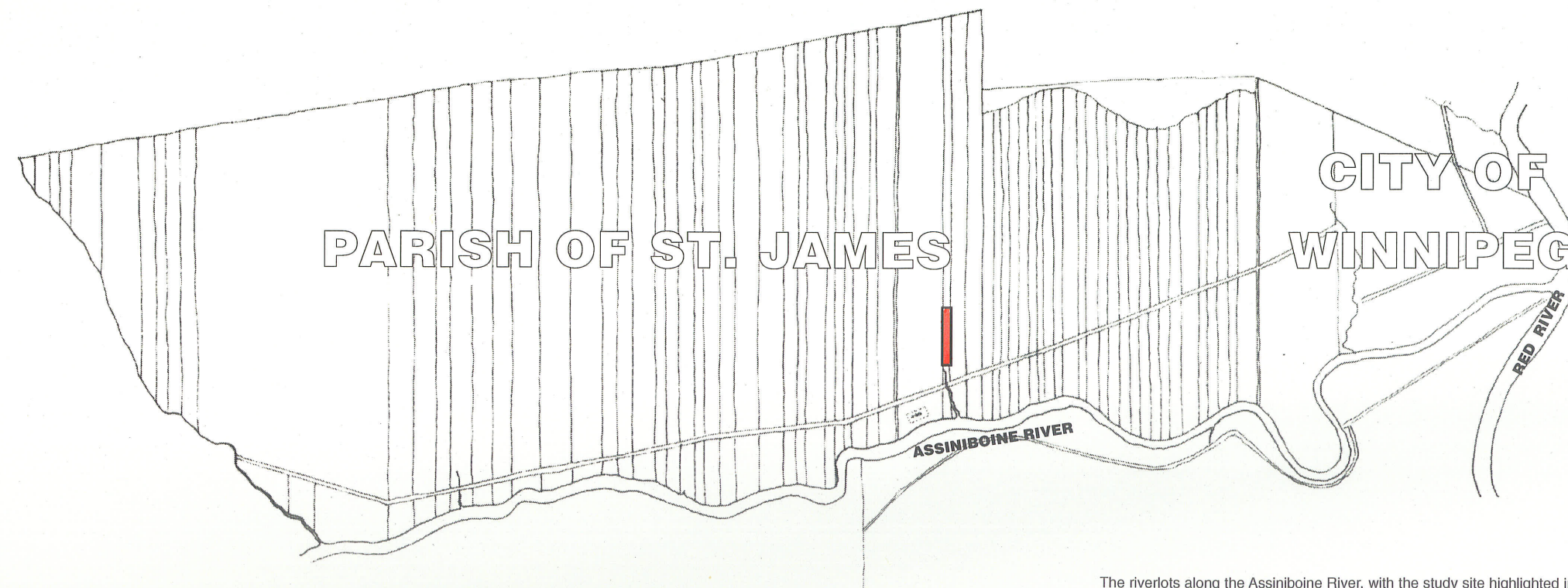
3.3.1 The French Riverlot System

The City of Winnipeg and its five parishes were originally laid out by early settlers in the French Riverlot system. This meant that long, narrow lots were laid perpendicular to the Red and Assiniboine Rivers so that a greater number of landowners had access to river transportation and water for irrigation for agricultural purposes. The study site centres on lot 43 of the Parish of St. James. The Railway marks the boundary of lots 43 and 44, and when the Colony Creek Diversion was constructed in 1880, its water was diverted along the border of lots 42 and 43 to where they connected to Omand's Creek. Riverlots averaged two miles (3.2 km) in length, and widths averaged 10 chains - the chain being an old imperial unit of length equivalent to 20 metres (66ft).

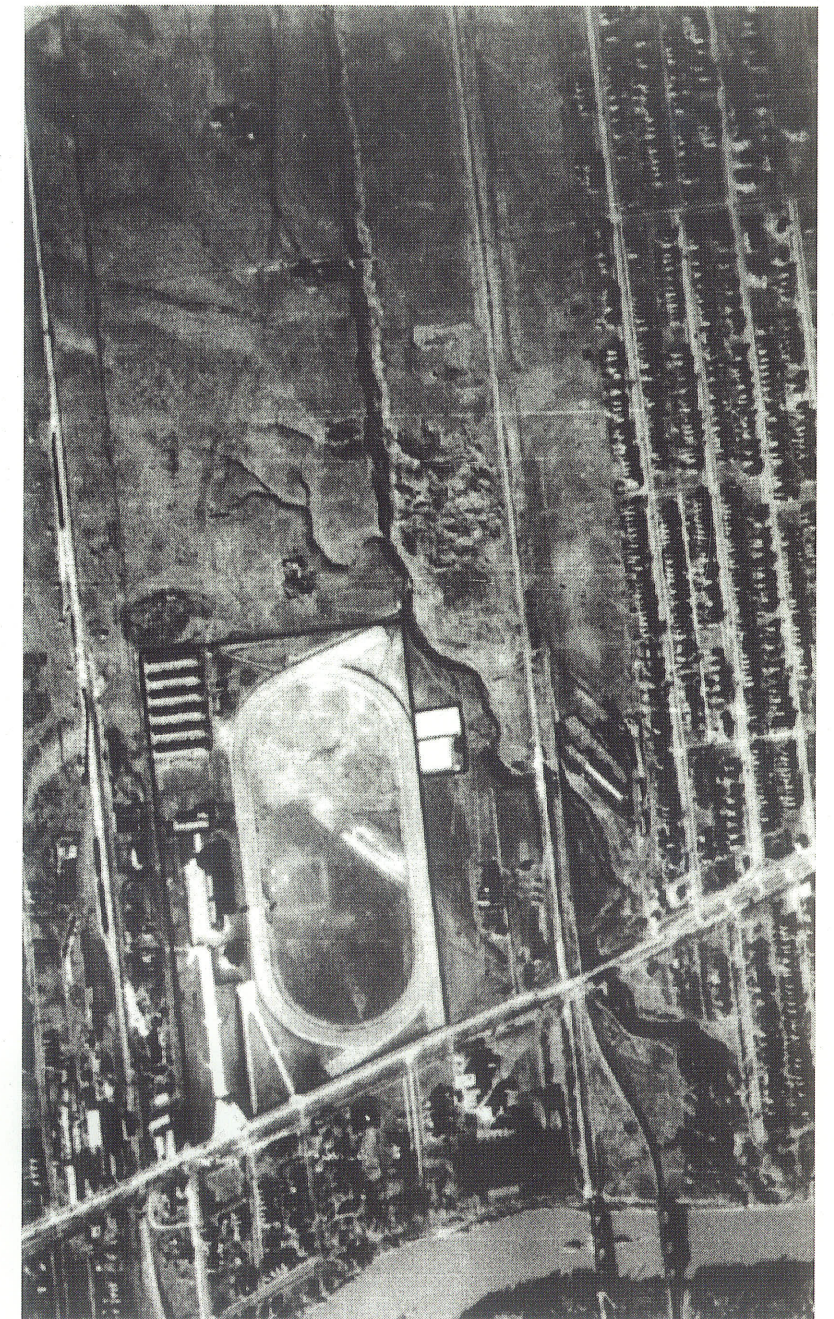
3.3.2 Street and Block Patterns

When urban development took place, streets were laid out parallel to and perpendicular to these lots creating a grid pattern, and forming the present city block pattern in the area. The site is characterised by large blocks, over 375 metres (over 1200 ft.) long from north to south. While these extremely long blocks of the site originally allowed for less railway east-west street crossings and the potential to have larger parcels of land for industrial development. However, they also leave fewer opportunities for pedestrians to cross east-west, turn more corners, and thus prevent the opportunity for alternate routes to their destinations.

Private lots have since been laid out in varying sizes within the grid block pattern, and developers often built across many at a time. The city street grid is really the only organisational form which is still physically apparent on the site.



The riverlots along the Assiniboine River, with the study site highlighted in red



The original stream bed of Catfish Creek is still visible in this 1927 air photo.

3.4 Roads and Circulation

Nearly all the streets in the study area lack a sense of place. Unlike the residential streets to the east, there are few trees to create enclosure or definition to the roadways, and most buildings are set back too far to relate to the street. The roads consequently seem extremely wide. Signage competes for the driver's eye as he/she speeds by, and are laid out as a series of disparate elements along the roadways. Utility poles and wires along some of the roadways contribute to the site's industrial character. Without a unified design, the collection of poles, signage, bus stops, lighting, and fences appears, haphazard and disparate. Although all the streets are only categorised as local roads (MapArt 1998), volumes of traffic concentrated at the south end of the site near the stadium and Polo Park Shopping Centre can be quite high, particularly during special events.

Generalizations about pedestrian activity on the site were made through visual observations during summertime site visits and studying trails through freshly fallen snow in winter. Pedestrians generally move along streets and in a north-east/south-west direction across the site. This would seem to indicate that people from the West End are walking across vacant lots and parking lots to and from the stores of Polo Park.

Pedestrians are poorly provided for. While in most cases, sidewalks are provided along streets and avenues, even these are scarce, and often located along only one side of the street. Movement in winter along sidewalks can be restricted by snow plowed onto boulevards. Many people walk their dogs along the railway right-of-way, away from traffic.

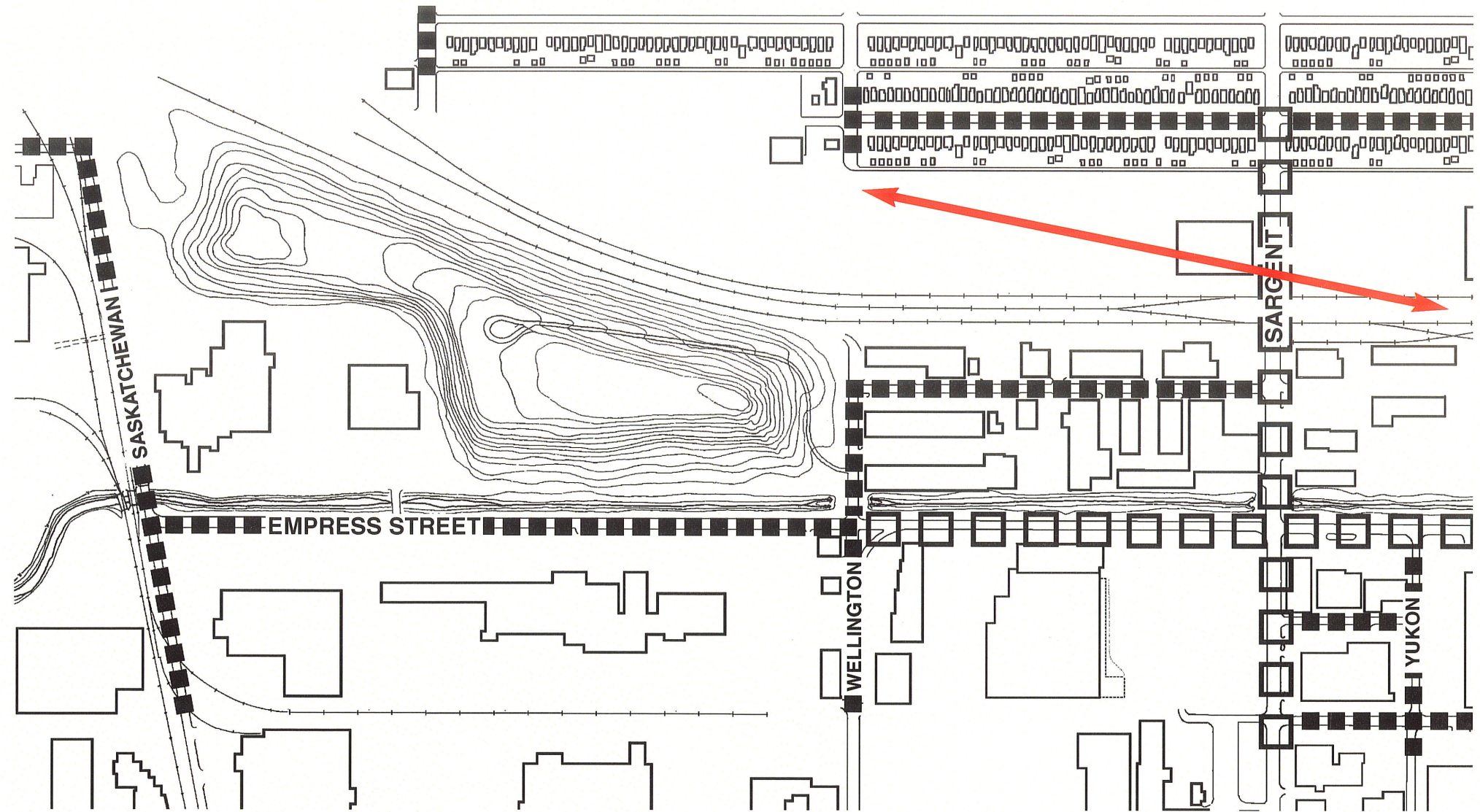
There are bus stops on Sargent, Ellice, and St. Matthews Avenues, and on Empress Street at the Stadium, as well as a bus loop at the shopping centre.

3.4.1 Regional Routes

Portage Avenue

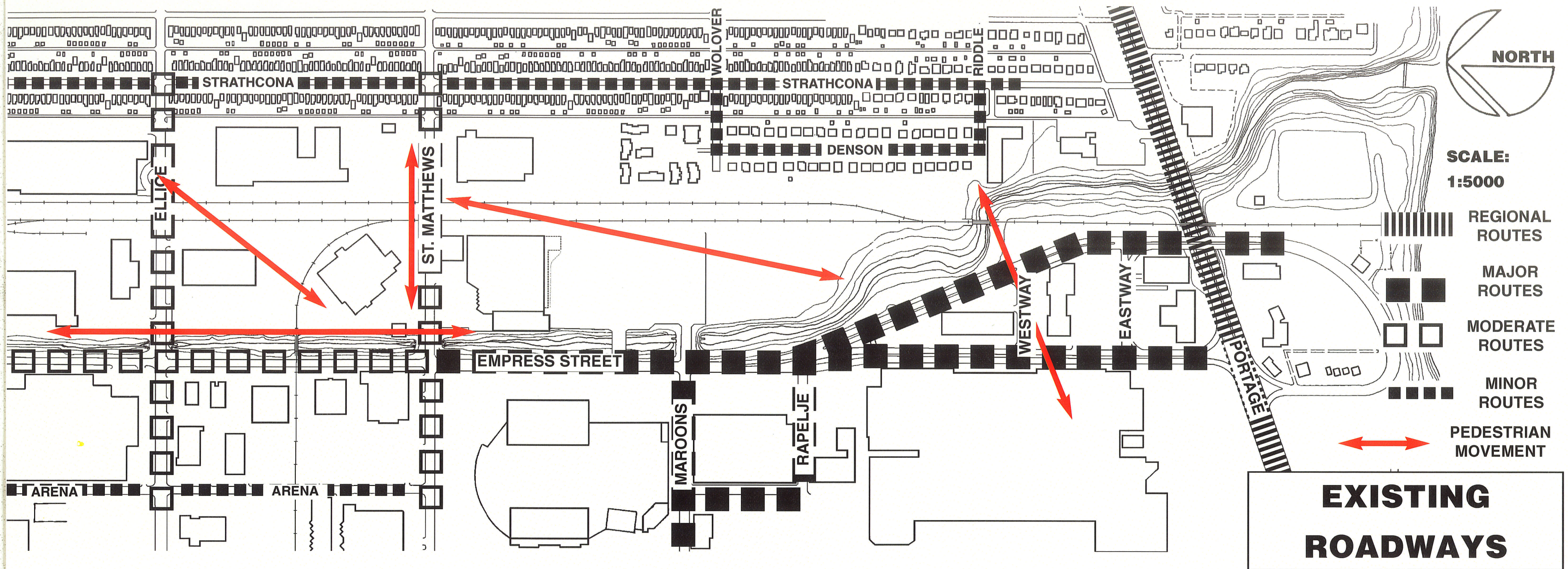
— *High volume traffic flows, moderate pedestrian movement*

Portage Ave. is the main regional thoroughfare serving the site. Part of the Trans-Canada Hwy., it brings people into the city



Graffiti under Portage Avenue

from other cities and provinces to the west. It is essentially a highway, with few trees, and a concrete barrier at the median. Portage is six lanes across at the creek. Sidewalks are provided and used mainly by residents of the West End and Wolesley moving between home and the shopping mall. Otherwise Portage creates a barrier to pedestrians moving north-south. A pedestrian overpass is provided at Empress street, although people also cross over on the railway bridge. An underpass along the creek is currently planned, for pedestrians to use during low-water conditions.



3.4.2 Major Routes

Empress Street (South of St. Matthews Ave.), Westway, Eastway, Maroons Road, Arena Road (South of Maroons Road), and Rapelje Ave.

- High traffic volumes, moderate pedestrian movement

Empress Street is the main north — south roadway on the site. There is major traffic on Empress between Portage and St. Matthews Avenues. This portion of the street takes on the character of a major arterial, with a concrete barrier at the median. Volumes of traffic are concentrated around Polo Park Shopping Centre and the Arena/Stadium on four lanes. Another four lanes bring traffic around an overpass to south portage. There are

sidewalks provided on both sides of Empress Street north of Portage Ave, to St. Matthews Ave. Swedish aspen provide a buffer between the Polo Park parkade to the street, and a few mature elms line the creek between maroons Road and St. Matthews.

Arena, Rapelje, and Maroons carry much of the traffic around the stadium and arena, and tend to disappear between parking areas, lacking the legibility of being a street. Pedestrian activity is high along these routes, particularly during special events at the entertainment venues or during Christmas shopping season.

3.4.3 Moderate Routes

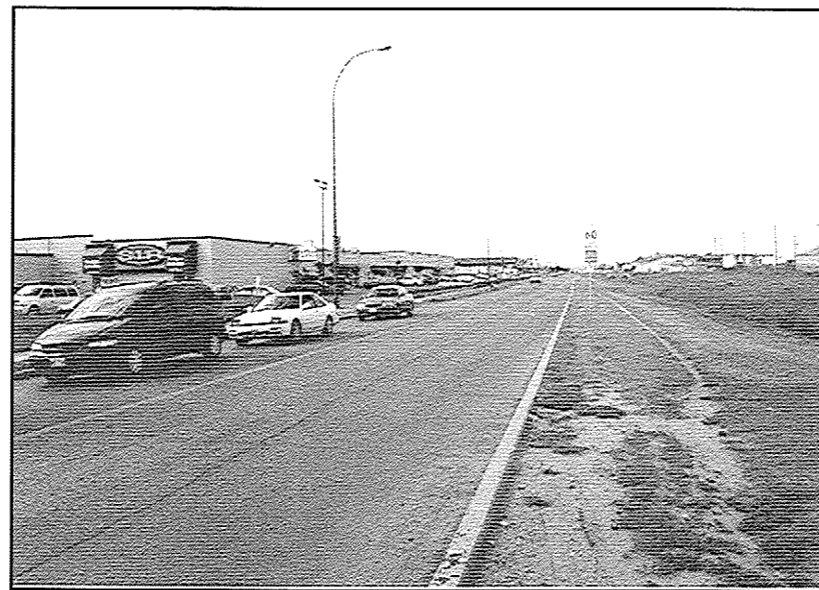
St. Matthews, Ellice and Sargent Avenues, Empress Street (between Wellington and St. Matthews)

- Moderate traffic volumes, moderate pedestrian movement

Ellice and Sargent are the main image routes between downtown and the airport, carry large volumes of traffic. St. Matthews is also another route running through the West End from Maryland Street to St. James Street, and thus another high volume route for shoppers and visitors to the arena and stadium. These streets are four lanes of traffic, with lights at Empress St. Empress, north of St. Matthews, is only two lanes wide and can therefore become very backed up during rush hour traffic and



View down Sargent Avenue



Empress Street, looking north from Ellice Ave.

during events at the entertainment venues. North of Ellice Avenue the lanes narrow even further.

All these routes are dull and industrial-looking in character, especially on Sargent and Ellice which have overhead lines on utility poles lining the street.

There is more pedestrian movement on St. Matthews than on Sargent or Ellice. Most movement appears to be from the West End to Polo Park Shopping Centre. Ellice and St. Matthews have only one sidewalk, along the south side of the streets. Likewise, Empress also has only one sidewalk along the west side. However, trails along the creek indicate that there is pedestrian and bicycle activity.

3.4.4 Minor Routes

Saskatchewan Avenue/Midland Street, Wellington Avenue, Empress (North of Wellington)

- Minimal traffic flows, minimal pedestrian movement

Saskatchewan Avenue runs through the mainly industrial area

between St. James St. to Midland, and on Midland to Notre Dame Avenue. There are two lanes of traffic here, with a stop-sign at the end of Empress St.

These streets provide access to Westview Park's north parking lot, which is used mainly during tobogganing season. The area has an industrial character, which is enhanced by the abandoned spur lines which run beside the avenue. There is little pedestrian activity here.

Wellington Avenue is another east-west thoroughfare similar in character to Saskatchewan Avenue. Although it becomes the major entrance to the airport, it is not continuous between downtown and the airport, as it is partitioned by the railway line on the site at Westview park, and therefore has much lower traffic volumes. To the east, the avenue is primarily a local residential street.

Wellington has two lanes of traffic, with a four-way stop at Empress St. It has fewer commercial functions than other avenues, and is instead industrial in character. It provides access to Westview park from the south.

While there is no sidewalk across the railway right-of-way, worn trails indicate some east-west pedestrian traffic. There is little pedestrian traffic along the street itself.

Empress, along Westview Park, has much the same character as Wellington and Saskatchewan Avenues.

All these routes are important to large trucks for access to the local industries.

Arena Road, Yukon, and Sanford St. north of St. Matthew's Ave.

- Minimal traffic flows, minimal pedestrian movement

These streets have much lower volumes of traffic to local businesses from the other main routes. They are typically two lanes of traffic with street parking and stop-signs at intersections.

There is little pedestrian activity on these streets, and no sidewalks on Sanford St.



Intersection of Empress at Saskatwewan Avenue, looking east

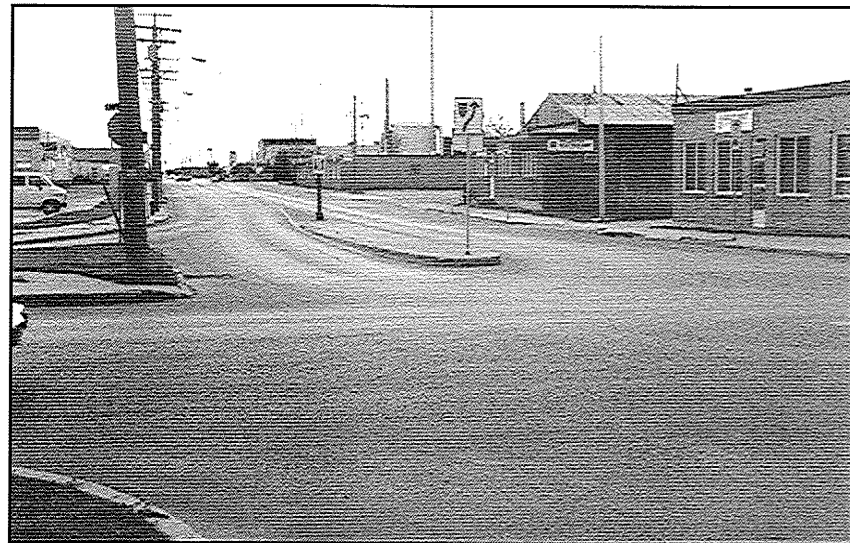
Residential Streets: Strathcona St., Denson Place Wolever, Riddle, and Richard Avenues.

- Moderate traffic flows, moderate pedestrian movement

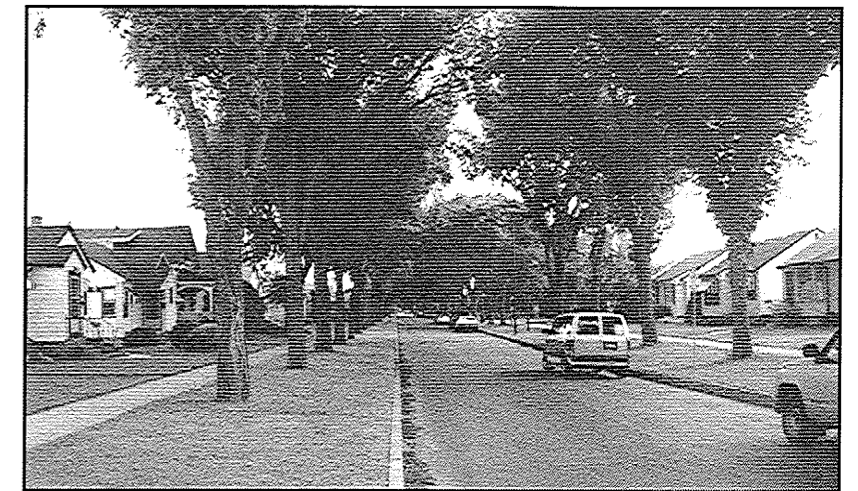
These are the two residential streets which border the site along the east side. Strathcona is a typical street of the West End, lined with small one-story homes dating from the beginning of the century, and mature elms approximately 7 metres apart. Its traffic is mainly local. Strathcona has a sense of place, with its continuous façade of small houses and canopy of trees and is pleasant to walk or drive along. It is served by back lanes. Sidewalks are provided along both sides of the street, and children can often be seen playing.

In contrast, Denson Place and its homes were constructed in the late 1980s. The one-story homes are larger and farther apart, on wider lots. Young Shubert chokecherries line the street here. The west side of Denson has front driveways instead of a backlane. The street has no sidewalks, and lacks the pleasant character that Strathcona has.

Wolever and Riddle Avenues extend east from the site, and have similar character and qualities as Strathcona. Richard Ave. is industrial along its north side. All could extend onto the site and create stronger links with the West End community.



View west down Wellington from Empress



Strathcona Street

3.5 Land Use

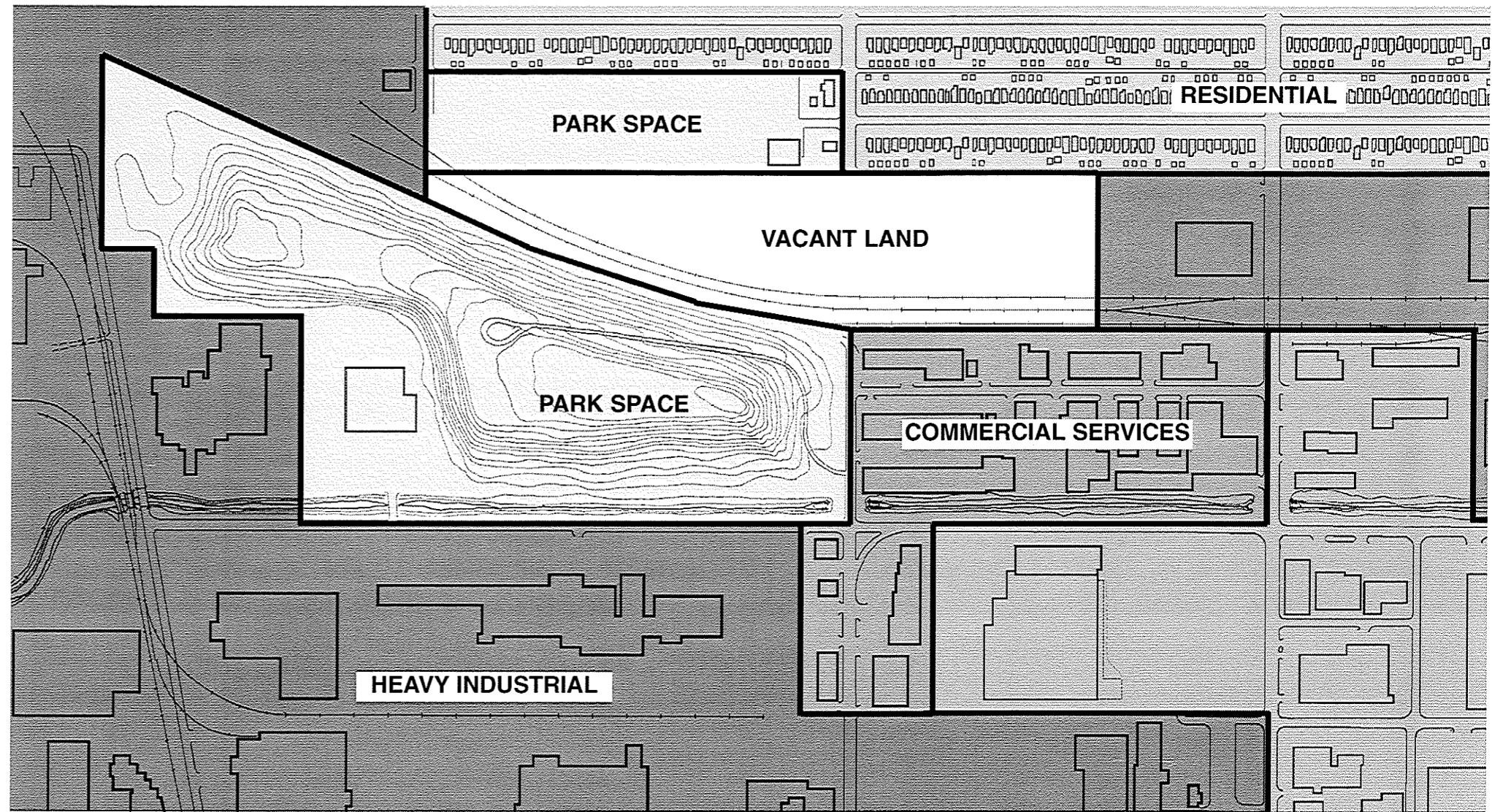
Land use on the site is changing rapidly, from industrial to large-scale commercial. With the park spaces anchoring the site at either end, the challenge involving land use is how to integrate the various existing businesses along with providing a landscape framework within which these and future operations can adhere to. This is essential to the success of the greenway, and includes establishing and enforcing guidelines and regulations specific to businesses located in or wanting to locate in the greenway corridor.

Because of the rapid changes, and diversity of land uses on the site, the proposal for a greenway design will have to create a series of strategies to serve any number of different land uses, at any given location along the site.

3.5.1 History - Industrial Use & the Railway

Until recently, the site has been dominated by industrial operations. The railway was integral in initiating development on the site, and specifically this type of land use, as it provided the all-important transportation link to other regional centres for the supply and distribution of goods and supplies. Early heavy industries characterised the land around the turn of the century. Companies involved in coal storage, bridge construction, iron works, ice production, as well as the garbage dump located themselves along the rail line. The site was an advantageous one, because it was near enough to have all the benefits of the urban services, yet far enough away that they would not be perceived as a hazard to residents' health and welfare. It was an area which lay right between two major centres, namely the City of Winnipeg and the settlement of St. James.

The zoning of the site as an industrial area facilitated the development of both heavy and light industries through the early to mid-twentieth century. Commercial manufacturing and light industrial companies on the site are typified by Crane and Westbourne Plumbing, Steels Construction Products, and Manitoba Telecom Services. These companies embraced this available inexpensive urban land which provided access to both



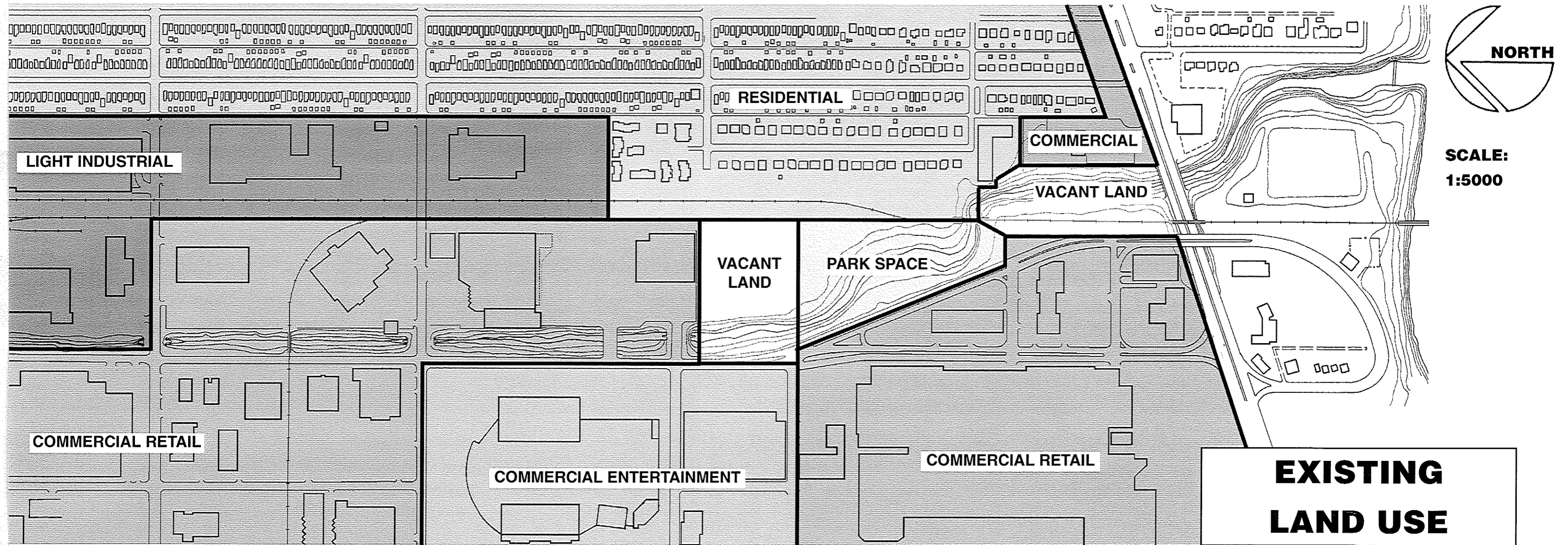
the railway and highways for transportation routes.

Heavy industries such as Westroc drywall and the now shut-down Dominion Bridge construction companies characterise the north and north-west areas of the site. Lighter industries characterise the eastern edge of the site, between the new commercial development and the residential area.

Both these types of operations are characterised by extremely large, one-story buildings, which are fairly austere, conservative and windowless. Parking lots of these land-uses, while not as large as the big-box retail operations nearby, are still generally quite large, and are frequented typically by large trucks and service vehicles. Some have gravel lots, and most, lack any landscape aesthetic treatment.



Industrial Use along the creek



Recent Trends - The Changing Landscape

The use of the railway for these types of operations has greatly declined in favour of highway transportation, which is cheaper and offers greater flexibility. Industrial operations on the site which are looking toward expansion are typically moving to other sites near major highway corridors as opposed to water or rail transportation routes (Little, 1989, 35). Some are being bought up by commercial developers, who have identified the area as an ideal area for retail development. Other industries, such as Dominion Bridge, are closing down completely. These sites are often snapped up by developers.



Typical commercial retail development

3.5.2 Commercial Growth

The growth of the area and of the city in general has placed it at an ideal location for a retail commercial centre between the West End and St. James neighbourhoods. The urban growth that has taken place in Winnipeg, particularly during the latter half of the twentieth century has placed this site, no longer at a fringe-suburban area, but instead at a place which has become highly urban. While industries move out of the area to find larger sites, commercial businesses take advantage of the newly available land within this now central area. These post-industrial lands are also typically less expensive and therefore also more attractive to commercial developers.

Initial large scale retail development set foot on the site when the equestrian grounds were demolished to make way for Winnipeg's first shopping mall, Polo Park Shopping Centre, which opened in 1959. While this brought a regional commercial destination to the area, it focused activity on the south end of the site along Portage Avenue, and left the areas north as predominately industrial.

However, the expansion of Polo Park Mall in the 1980s, to firmly establish itself as Winnipeg's largest shopping centre also served to influence intensified development of the surrounding area. That is, it attracted other peripheral commercial development - restaurants, retail chains and superstores that were geared to compete with the mall for the consumer's dollar. Industries have given way in as recent as the last 5 years to such large corporations as Winners, The Home Depot, Revy's, and Chapters, and the development continues to be voracious.

The commercial operations on the site are a strange mix of building types and styles. Older strip malls on the site are clustered near Westview Park, between Empress and the railway. Many of these are special services which include a limousine service, a printing service, and an audio repair shop. These do not serve high volumes of customers, and therefore limit parking to the street or small side lots. This area is made up of many older one-story brick buildings which are rather plain-looking.

More recent development is geared towards the style of the big-box retail store. These operations are housed in extremely large buildings lacking in architectural features, except for elaborate façades, typically comprised of garish, large-scale signage above the main entrance. Bright colours fight for the consumers' eye and subsequent buying dollar. These buildings typically do not address the street, but instead a grand carpet of a parking lot. Additional street signage is typically a tower sign in a similar flashy, colourful style to attempt to catch the driver's eye. The overall architectural quality of the site with this type of land use gradually taking over is a bizarre one, where businesses are fighting for attention, fighting to appear unique. The result of these 'unique' buildings is a homogenous,

albeit eclectic landscape.

There is also another aspect to the character of this land-use which is seasonal-based. That is, during peak shopping season, at Christmastime and the preceding weekends, the parking lots are full of cars and the stores become a hustling, bustling hub of people and consumer activity. However, during off peak shopping times, much of these parking lots are left empty, and there is less activity on the site.

3.5.3 Commercial Entertainment Venues

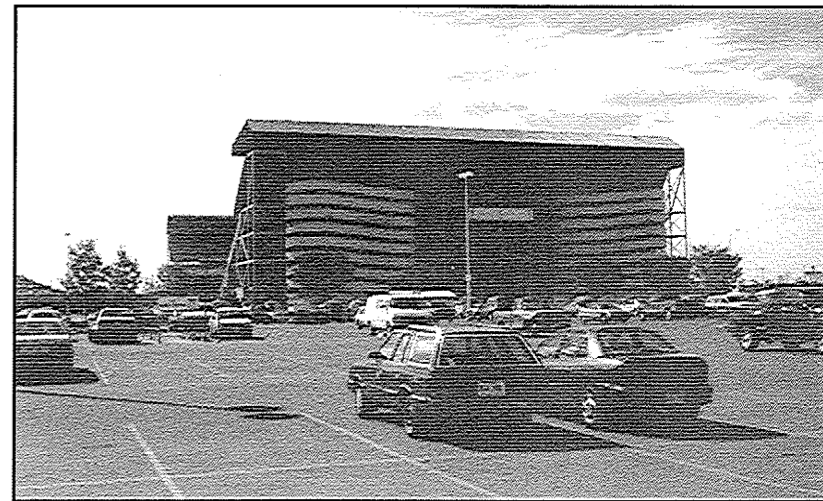
- The Stadium & Arena

Early in the twentieth century, the Polo Park equestrian race track at Portage Ave. and St. James St. was a notable exception to the industrial land uses of the area. This early landmark created a regional landmark where live entertainment could be enjoyed. The location of the track made sense because, like the industries, it was near the city for convenience, and far enough away from residents, so that the noise, commotion and the smell of the stables was not a nuisance. This facility paved the way for similar land uses, like the sports and entertainment venues that now occupy the site.

The construction of the Winnipeg Stadium in 1950, and later the Winnipeg Arena provided the city with some much-needed and well-appreciated sports facilities succeeding the equestrian facility. The arena and stadium complexes have become the hub of large-scale commercial entertainment and sporting events in Winnipeg, as home to the city's football and hockey teams and hosting many other live entertainment performances.

These operations marked the first development of large-scale non-industrial development northward on the site, encroaching on the industrial area. Due to these operations, the site has become a major destination.

The character of these venues is one similar to the commercial businesses. The stadium and arena sit out in a virtual field of parking lot, their mammoth sizes unconnected with anything else on the site. They lack much of a focus on the out-



Winnipeg Stadium, From the east

door landscape simply because their focus is on the events that they house.

3.5.4 Parks and Recreation Spaces

Clifton Community Centre

The community centre serves many sports-recreational functions, including an outdoor rink, ball diamonds/ sports fields, children's play structure and a small administration/ facilities building. The centre is a local focus to the nearby residents of the West End.

There are currently plans to develop the vacant open space to the west of the centre, which is already used as informal sports fields, into additional ball diamonds and soccer/ football fields. These plans can enhance and complement the existing facilities as a local focus and better anchor the community centre to the greenway.

Westview Park

The park was originally the site of the Saskatchewan Avenue Dump. The landfill was in use for 63 years, from 1884 until it closed in 1948. In 1959 it was covered over, graded, capped with clay, and the anomalous hill which is Westview Park was created, looming up 74 feet above the streets below. The park still retains the nickname "Garbage Hill".

The capping of the hill began the erasure of a stigma that the site carried - as a place to dump garbage. The hill became an

attraction to visitors to the area, for skiing and sledding, instead of a visual and environmental blight. While it is still merely a grassed hill squeezed between the creek and railway, it has become a place of celebration during the summer (Core Fest, a 3-day alternative music festival, is held on the hill annually in July.), and recreation for mountain bikers, toboggan sliders, and visitors enjoying the view. The few existing trees planted on the hill are growing poorly, likely due to the combination of poor soil conditions and the harsh climatic conditions that they endure.

While the park, from a macro-scale, is itself an oddity on the prairie landscape, at the pedestrian scale it is relatively banal, lacking any striking physical features. A few benches dot the hill without shelter. Visits are often brief due to the hill's exposure to high winds and lack of shade or shelter.

One important restriction about the park is that, as a capped landfill, the clay cap is not to be penetrated by construction, although planting on the hill is allowed.

Bluestem Park

Bluestem Park is the result of an urban prairie restoration attempt in 1987. While the east bank has been considered a successful restoration, with at least 70% of the key prairie species present, plans are underway with the city to reattempt a restoration of the west bank, which has less than 25% of key species present.

Bluestem Park anchors the site as a large park space at its south end. With the creek running through it, it has become a hive of wildlife activity, and thus a place for adults and children alike to enjoy nature in a prairie oasis. Site elements include native limestone blocks as retaining walls and informal seating, crushed limestone paths and a bridge to cross and view the creek. Vandalism in the park – graffiti on signage and the pedestrian bridge, and items such as shopping carts or bicycles are thrown into the creek from the bridge leave areas somewhat unsightly.

Bluestem Park also suffers a problem with peoples' perception. Some don't recognise the park as anything other than an open field, and the design must therefore celebrate it as an

open prairie and special place.

Both Bluestem and Westview Parks are parks which, for the most part, cater to passive recreation activities. Neither areas have any provisions for organised activities to take place, but are generally enjoyed by the visitors, dog-walkers, joggers, and cyclists who frequent them.



Westview Park, Entrance from Saskatchewan Av. & Midland St.



Bluestem Park, looking northeast, toward the West End.

3.6 Special Places and Features

There are a number of cultural and natural features on the site which can be highlighted within a master plan for the greenway, and others which present opportunities for open space development. Most of these areas go unnoticed within the existing development of the site and are subsequently neglected.

3.6.1 Omand's Creek

Throughout all the cultural development on the site runs Omand's Creek, and through the years, this creek has somehow survived (though not unaffected by the cultural activity). In some ways the creek is barely a fraction of the original waterway that it once was, and in others, it is much more.

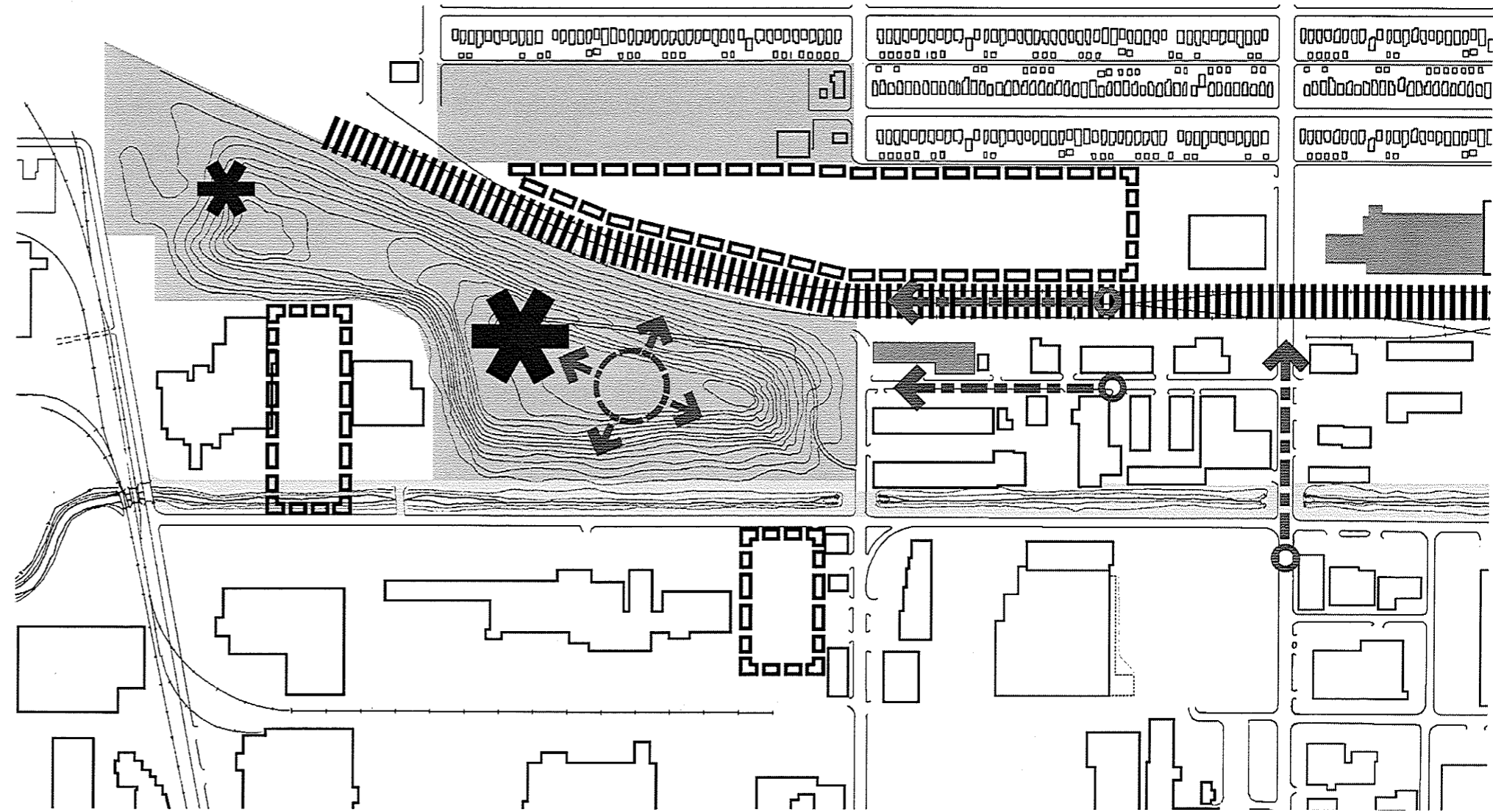
History and Form

Originally called Catfish Creek, Omand's was a small tributary of the Assiniboine River draining land only from as far as where the arena-stadium complexes now stand. Although the tail end of the creek's course was trimmed off by the construction of Empress Street, the remaining channel to the river traces out the original path with only relatively slight alterations in its meanders.

The rest of Omand's Creek north and west, is a result of human engineering. Flooding along Colony Creek downtown during the 1870s led to the solution that Colony Creek be divided in 1880, and its downtown course redirected through storm sewers and pipes, while west and north of the city, the waters would be redirected through a drainage ditch south and east to Catfish Creek. The two creeks and their connective channel were renamed Colony Creek, and later renamed again Omand's Creek. The stream corridor is, for the most part, a wide drainage ditch where waters, struggling to regain their meandering pattern, and over-burdened by the addition of unnatural surface drainage, inflict erosion and slumpage along the banks.

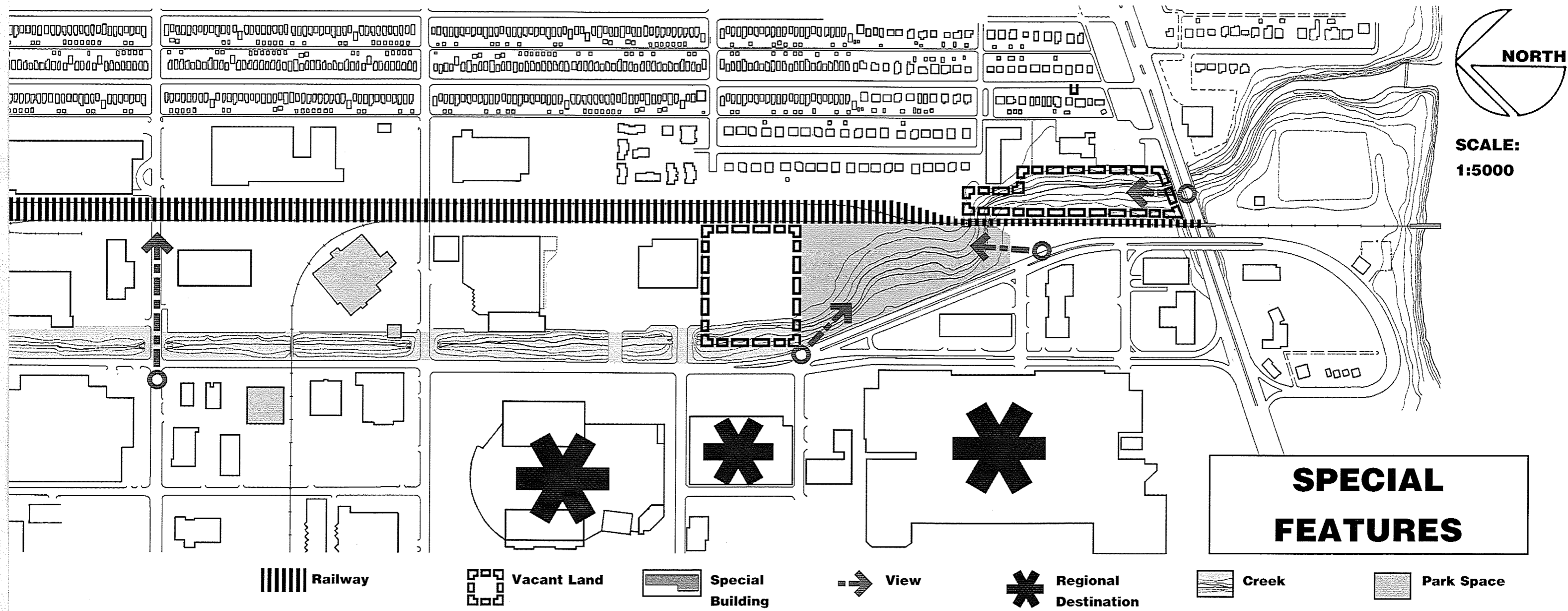
Perception

Public perception of the creek appears mixed. To most, the creek is invisible, lacking any definition from its surroundings. Commercial and industrial developers generally see the creek as



what it was built for - a utilitarian drainage ditch which takes water away fast and efficiently. These businesses commonly build outfalls into the creek. Others see the creek from its working and potential as a natural habitat and recreation resource, where riparian plant communities and wildlife may and do thrive.

Local activists have continued to protect Omand's Creek, identify its potential, and work towards its enhancement. The creek has recently been the subject of more debate as commercial development further encroaches and narrows its banks. The organisation Friends of Omand's Creek continues to fight the development that threatens the waterway and holds annual events and tree-plantings to raise public awareness of the creek,



and aid the development of natural ecology. Without the concerns of people and organisations like these, incremental development along the waterway would see it gradually disappear through culverts and sewers, as did Colony Creek.

Habitat Along the Creek

Doug Collicut, in his book, *The Wildlife of Winnipeg's Small Waterways*, summarises plant species in the portion of the site between Portage Ave. to the Railway bridge at Bluestem Park, which he refers to below as Area 1:

"This area supports a variety of plant communities. Near the

water's edge, prairie cord grass, cattails, sandbar and pussy willows, and various sedges dominate. Higher up the banks a grassland community dominates. It consists of smooth brome, quack grass, Kentucky bluegrass and a variety of native prairie grasses such as big bluestem, green needle grass and spear grass, with various forbs including sweet clovers, Canada thistle, graceful goldenrod, crocus, and yellow lady's slipper. Dense patches of snowberry occur throughout this area and there are small stands of young Manitoba maple, cottonwood and other trees scattered throughout. At the north end of Area 1 is a small woodland consisting of several medium sized Manitoba maple,

American elm and peach-leafed willow trees, with various shrubs forming a dense underlayer." (Collicut, 1994, 12)

Collicut goes on to describe some of the fauna in the area. Species recorded include Canadian Toad, Leopard Frog, Wood Frog, Red-sided and Western Plains Garter Snakes, Richardson's Ground Squirrel, Beaver, Muskrat, Meadow Vole, and 76 species of birds. Creek Chub and Brook Stickleback were the only two fish species recorded by Collicutt, although there have since been reports of White Sucker being caught at Bluestem Park. As well as some of the animals Collicutt lists, I have personally seen a rabbit on the site, along the creek. Scat along the rail right-of-way indicates some animal activity, particularly concentrated around wet areas.

3.6.2 The Railway

The railway is another special place, due to the significant role it has played in the history of prairie settlement. Without it, Winnipeg would not have even come into existence (Artibise, 1979). It has given the genesis to the site through the reliance of industrial land uses on it as an essential means of transportation and therefore has had a critical role in shaping the entire study area.

The railway right-of-way creates one of the two main north-south axes through the site. While the right-of way itself is only 22m (75ft.) wide between Bluestem Park and Wellington Avenue, the width of the corridor varies, depending on the number of tracks. Unfortunately with this with, the railway has successfully severed the residential area from the new commercial growth to the west.

3.6.3 Special Buildings

There are a number of vacant buildings on the site which provide design opportunities, either through re-use or through redevelopment as open greenspace along the greenway.

Anomalous buildings can also better be integrated into the greenway through landscape treatment. This would include the Polo Park Inn, which sits at nearly a forty-five degree angle

to the city grid, and its nearby beer vendor which sits virtually in the creek. A parking lot built over the creek at Wellington Avenue is a testament to the neglect of the creek within the existing land use.

3.6.4 Views

There are many views and vistas on the site which should be preserved or celebrated.

1. The view of the city skyline from the hill.
2. From Portage Avenue north, there is a pleasant view overlooking the creek and its pioneer floodplain forest species.
3. Ellice and Sargent Avenue have a terrific view, as one drives or walks, toward downtown.
4. Views of the hill:

The park terminates the view north down Sanford street, south down Saskatchewan Ave, and from both directions along the railway and Empress St. It is a major landmark in the area.

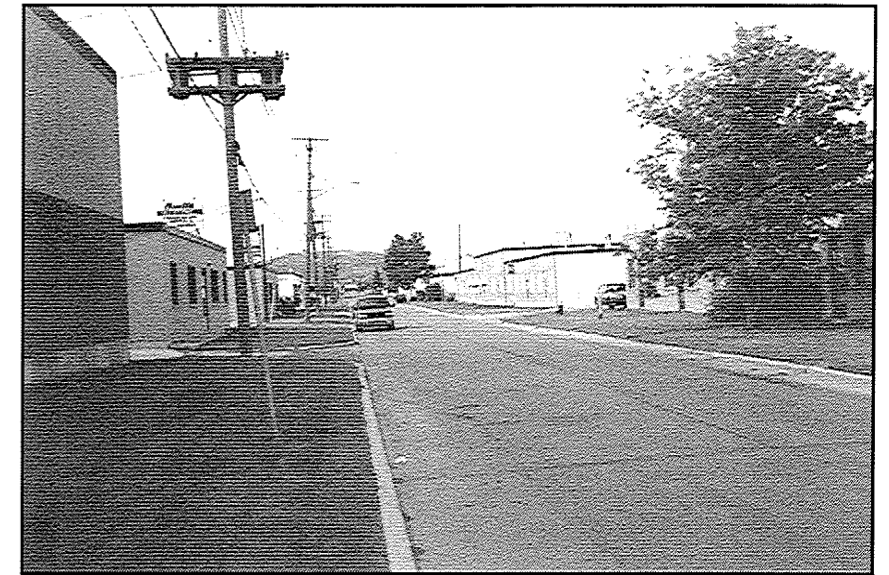
5. Views overlooking Bluestem Park from the north and south.

3.6.5 Other Special Sites

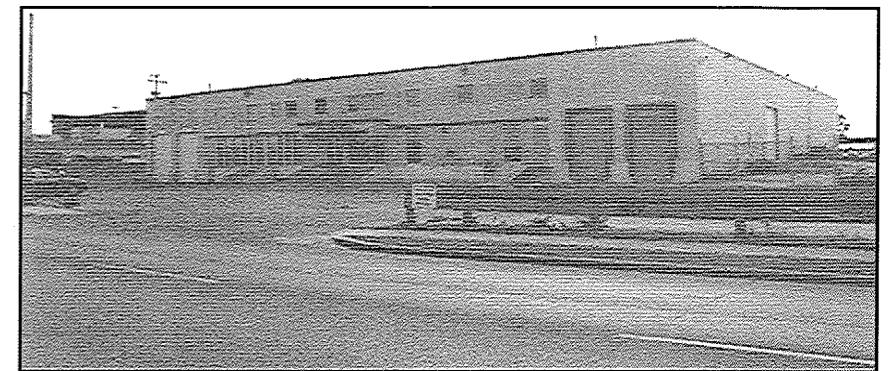
A number of other sites already discussed fit into the category of Special Features, including the existing parks, Bluestem and Westview, and Clifton Community Centre.

The Shopping centre, arena, and stadium also are special, in that they draw such large amounts of people to the area.

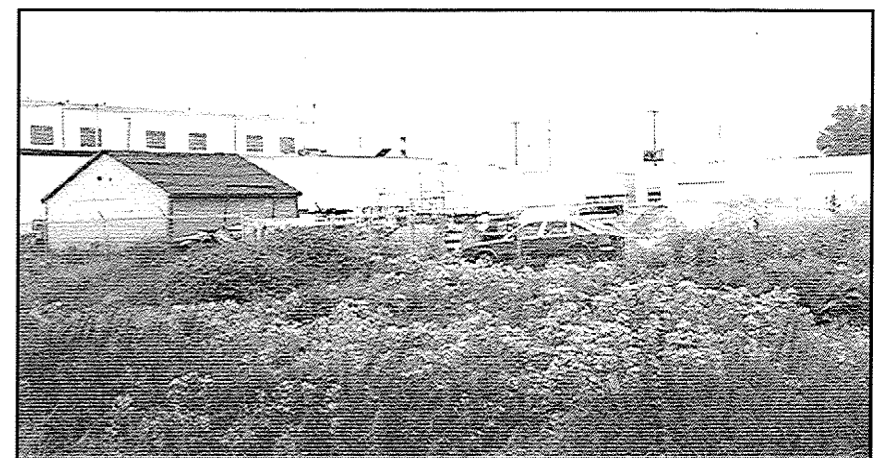
Vacant spaces provide the opportunity for renewed uses for either cultural or natural activities.



View down Sanford street to Westview Park



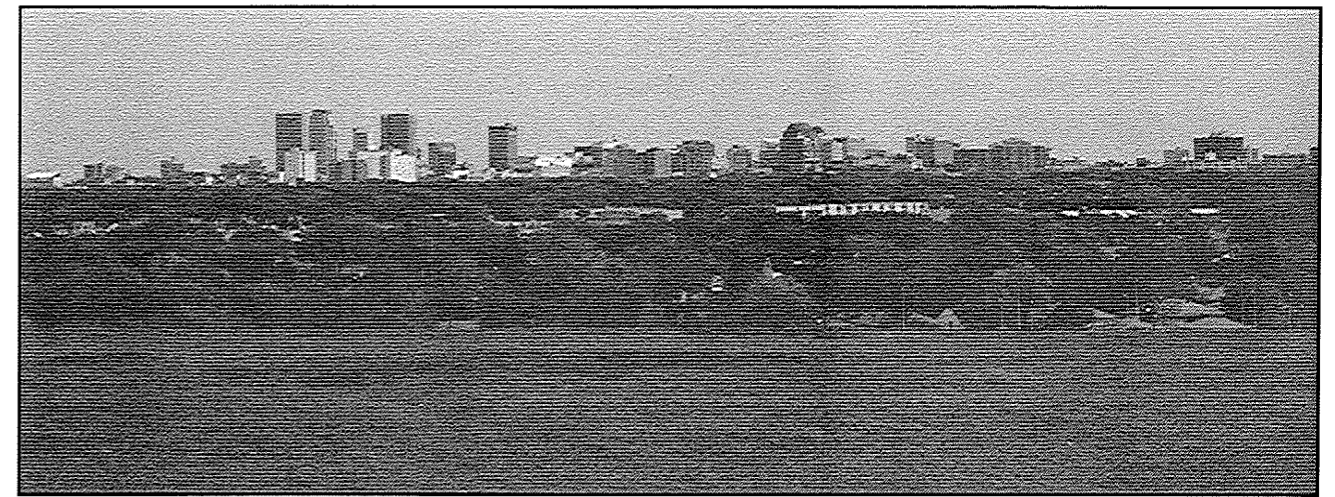
Vacant buildings offer opportunity for reuse or removal for increased open space.



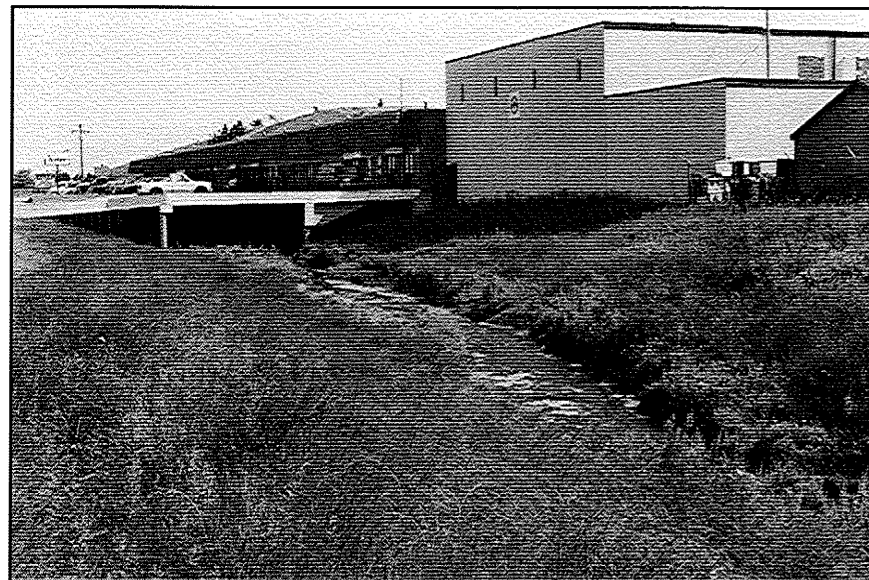
Vacant open space along the creek used for the storage of junk. These are neglected areas become eyesores.



View along the railway north, from Portage Avenue.



View of the city skyline from the Hill at Westview Park



A parking lot built over the creek is a strange but dramatic site response.



View from Portage Avenue, looking north

3.7 Spatial Character

As the figure-ground (right) illustrates, when compared with the fine texture of the residential area to the east, the site is a disorganised collection of large buildings set within large open spaces. The disparate, formless nature of these spaces and buildings, and the limited use each has, contributes to their lack of cohesion. The end result is a series of lost spaces.

"Generally speaking, lost spaces are the undesirable urban areas that are in need of redesign - antispaces, making no positive contributions to the surroundings or users." (Trancik, 1986, 4)

Most of the site fits into this category. Lost space has little benefit for people or nature. These spaces lack definition and a sense of place.

In the medieval city, below, one can see how space is carved out of the urban fabric, formed, connected, intimate, and meandering. Each space had its own sense of place within the city. This type of urban form also gave a cohesive structure to the city, unlike the study site.

Here, at the study site, vast open space pours, formless, from one area into another. There is no definition between the Stadium parking lot and the roadway of Empress, or Empress



Part of medieval Rome, at a similar scale to the figure-ground of the site, above. (Source: Jacobs, 1996)

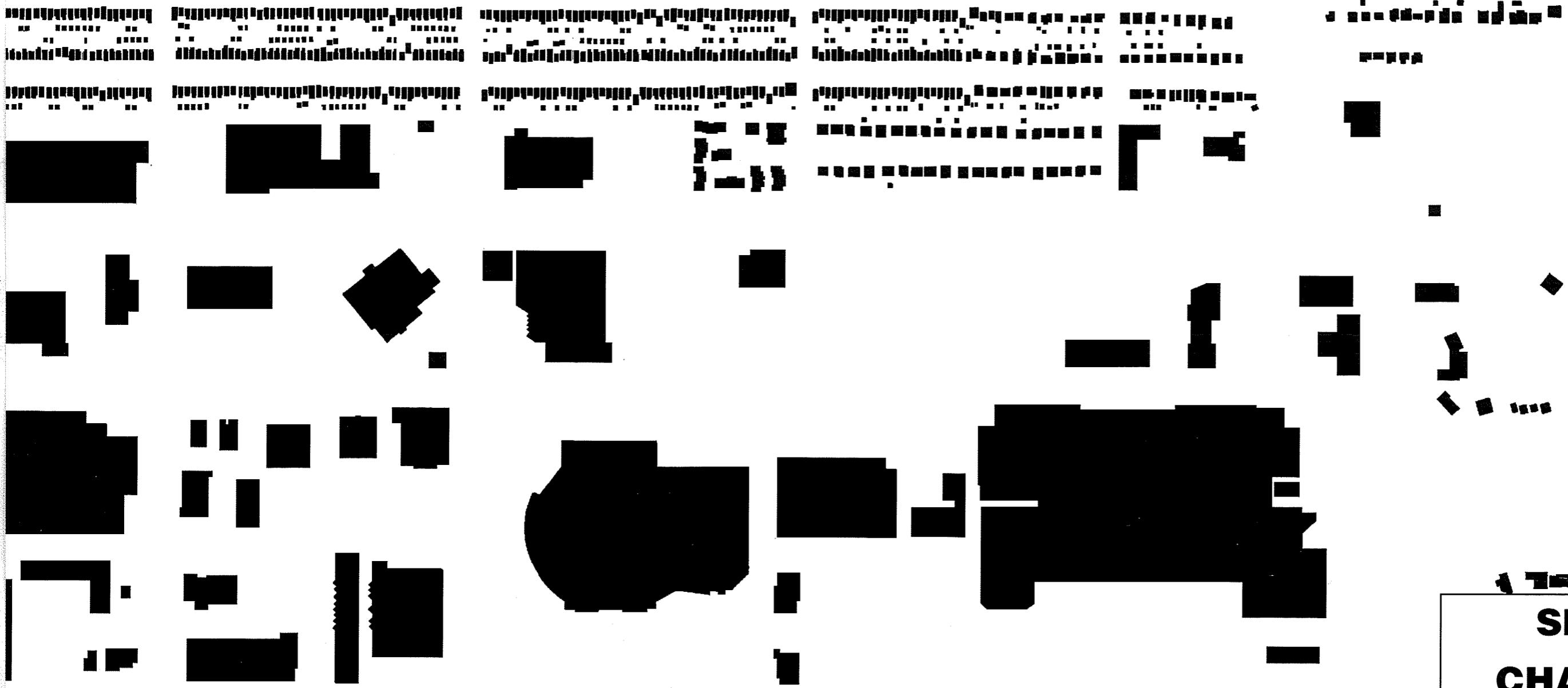


and the creek, the creek and the parking lot of Home Depot, the parking lot and Bluestem park, the park and the railway, etc. None of these areas bears any spatial distinction from the next. Alternatively, each area fails to lead one to the next through any successive means. Kevin Lynch addresses the importance of providing an order and structure to the environment for people to make their way through it, and describes this order as the "legibility" of the environment. Legibility and lost space are two critical issues on the site.

"Complete chaos, without hint of connection, is never pleasurable." (Lynch, 1960, 6)

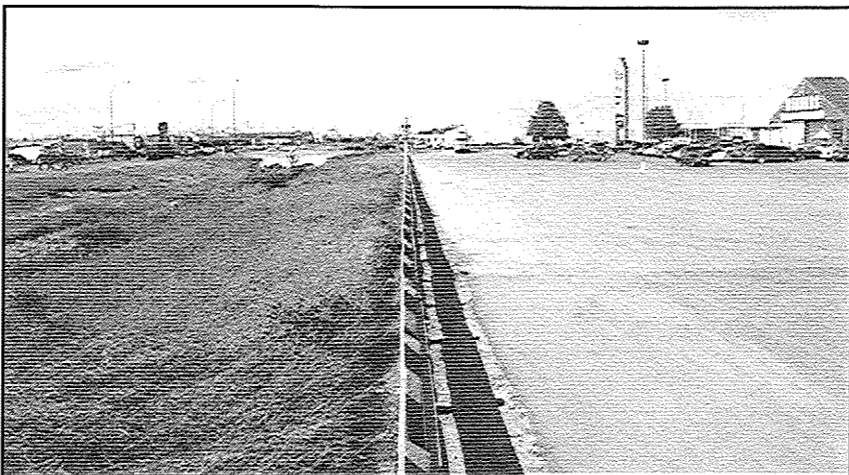
3.71 Wayfinding and Human Scale

The walk from one end of downtown Winnipeg to the other, the Osborne Bridge to Old Market Square in the Exchange District, for example, is an interesting and pleasurable one. There are many sites to see along the way, a diversity of areas to stop at, and many places to stop and watch other things happen. The walk across downtown Winnipeg might take 20 – 30 minutes, depending on the stops made along the way. There are many corners to turn and therefore more choices of different routes to take. These types of experiences and opportunities

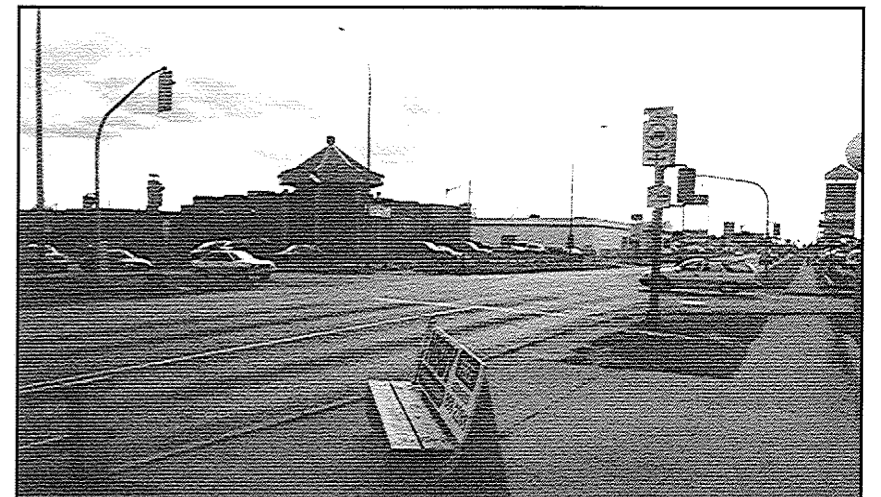


**SCALE:
1:5000**

**SPATIAL
CHARACTER**



Lack of definition between open space contributes to the creation of lost space.



Intersection at Ellice and Empress

contribute to a pleasurable pedestrian environment (Jacobs, 1961, 178).

A walk from Bluestem Park across the site to Westview Park, one of similar distance to the one above, is a laborious. There are few things to see along the way from the pedestrian scale: a graffiti wall behind the Polo Park Inn perhaps. The intrigue of a finding a frog in the creek channel seems unimportant and becomes lost within the expansive spaces of the site. There are few elements about this environment that the pedestrian can relate to at his/her own scale. Scale is an important issue in any environment, as distances need to be sufficiently small for a space to be rich in human experiences (Gehl, 1987, 135). Along this walk, there are no edges for the pedestrian to pass through or along, there are no variations in spatial quality, there are no places to sit, stop, watch, or chat. There is no shelter from the wind; the rain, the sun. This is just one long walk, difficult to break up into a series of smaller, more intimate experiences.

Spaces truly cater to the vehicle in this place. Wide roads move them; vast parking lots store them. Garish signage and façades are designed to be noticed at high speeds and far distances. Being a pedestrian in this environment is a challenging occupation.

The scale of the site is part of its sense of place however, and it would be an inappropriate, apart from a very difficult, undertaking to retrofit a medieval city-type of scale into the site. The endeavor here is to create places within this very large scale landscape which are suitable to a more intimate, pedestrian scale.

3.7.2. A Single-Use Landscape

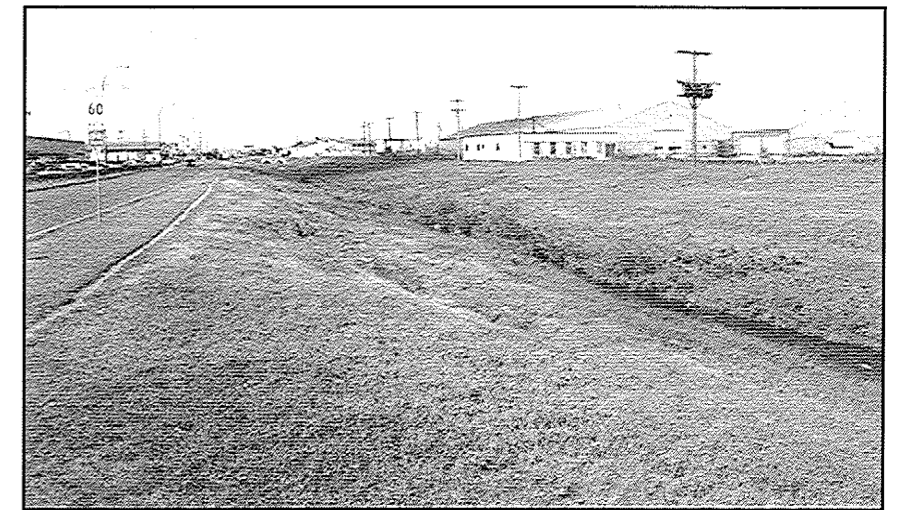
This landscape also suffers from a lack of spatial functions. That is, most of the exterior environments serve single purposes, contributing to their manifestation as lost space (Trancik, 1986, 6). If society could view open space as a resource to be used efficiently, sites like the one at hand would be full of different uses at different times of the day. The single function of the parking lot epitomises this point. Parking areas which are full of Christmas shoppers on December 15th may sit vacant one month later.

3.7.3 Existing Green Space

Much of the site's natural vegetation, with the exception of Bluestem Park's prairie restoration and portions of the creek channel, consists of grassed areas which are maintained through regular mowing. This type of landscape characterises much of Westview Park, the railway right-of-way, the upper banks of the creek, and most vacant lots.

Pockets of wet areas along the railway corridor provide the conditions to initiate the growth of emergent wetland species such as reeds and cattails. Fringe areas between properties and along the right-of-way have allowed pioneer species like Manitoba maple, American elm, green ash, and willow to seed themselves, and have most often grown to a scrubby, ragged form. A few properties on the site are lined with trees, but not many. Most trees, planted as ornamental features, stand lonely and out of place, struggling to survive.

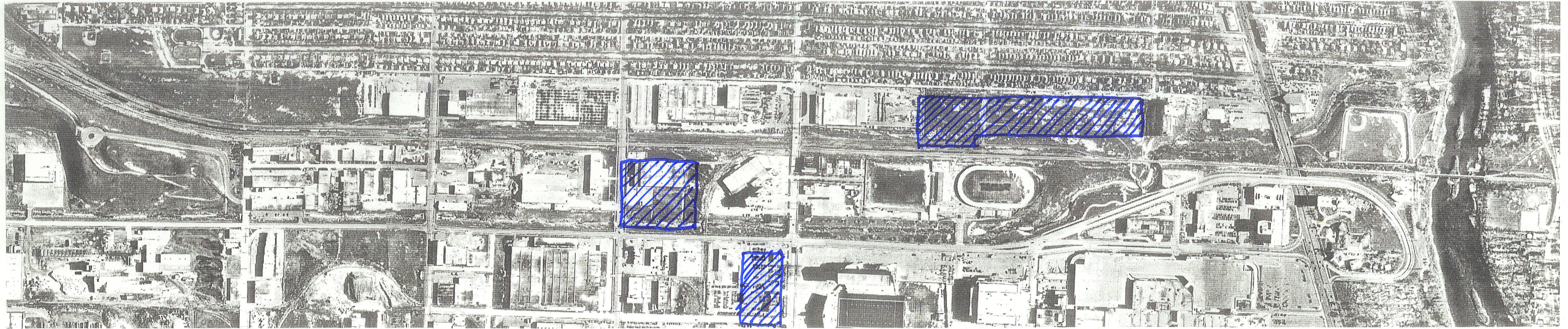
There is ample undeveloped green space on the site to create more wildlife habitat in these areas.



A well-mown waterway



Wetland species behind the Polo Park Inn

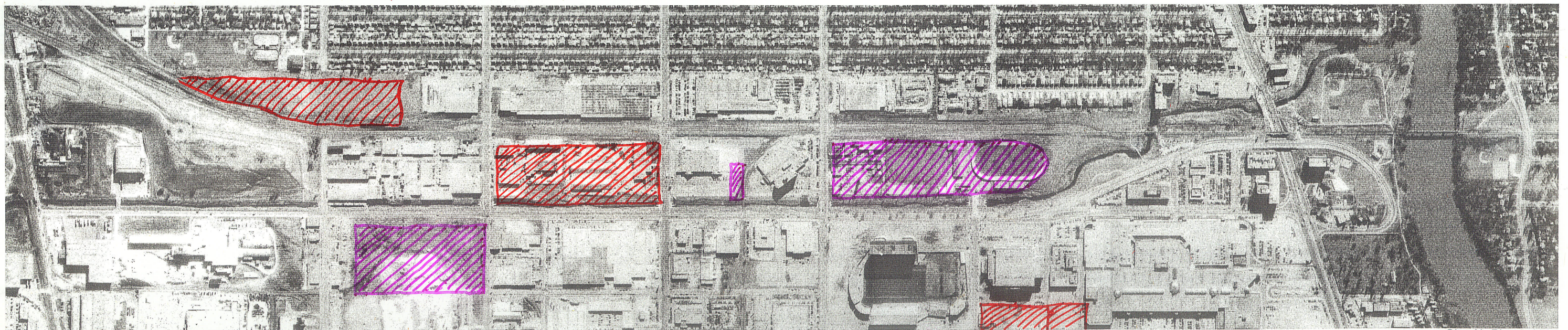
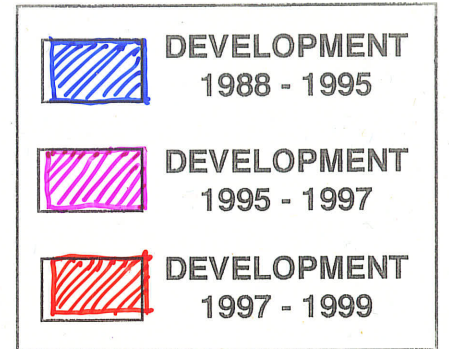


Site Air Photo, 1988

The Changing Site

From its initial development as an industrial area, the site stayed relatively the same until the expansion of Polo Park Shopping Centre in the mid-1980s. The completed expansion, and the rest of the site, as it has existed for the previous twenty years, is illustrated in the 1988 air photo above. A few changes begin to take place between 1988 and the 1995 air photo, as are highlighted in the overlay. These include the addition of Denson Ave. and the residential development along it, as well as the construction of the Winners store and Toys 'R' Us store near the Stadium.

Development has continued at an increasingly rapid rate as can be seen in the overlay on the 1995 air photo. The different colours indicate the changes which have taken place, first, between 1995, and the time this study had begun in 1997 (see site plan, page 3), and secondly, since 1997 including changes on the site taking place at the time of the completion of this study in 1999.



Site Air Photo, 1995

4

Design

4.1 Design Concept

The design concept creates a point of departure for the design of the master-plan. In order to get to a design concept, the previous material must be reviewed: precedents in greenway design, site analysis issues, and the design opportunities and constraints generated from the analysis. The question can then be asked: *What kind of conceptual form can the site take that does not ignore what it already is, but instead responds to, enhances, and improves upon what is already there?* Or better yet: *What does the site really need?* The design concept proposes an answer to these questions, and creates an arena within which ideas may present themselves.

The "Armature"

Armature - The word has many connotations. First and foremost, it is itself a framework, a skeleton, a structure or support upon which things may be hung. Further, it implies energy, as in the armature of an electric motor, spinning with activity. It hints at the industrial, the mechanical, the structural.

The site needs an armature. It needs a structure upon which to order a greenway and a device which can create activity within the greenway. The armature is that cohesive element which brings together the eclectic character of the site and brings form to what is otherwise formless space.

4.1.1 Design Strategy

The armature needs something to support. Attained from the previous sections, there are a number of recurring issues that can provide the elements which form the armature.

-Pedestrian Circulation

Pedestrian circulation is central to the realization of a greenway design. Over and over, again throughout the site analysis, the issue of poor pedestrian circulation continued to surface. Circulation must impart ease of movement to the greenway corridor, in an interesting and pleasurable way.

-Habitat

The industrial, asphalt-laden landscape of the site does not lend itself very well to becoming a greenway. All greenways involve vegetation and wildlife of some sort. While there are already some park spaces and ecological functions within the site, these demand enhancement if this is to be a successful greenway.

-The Temporal Landscape

The final aspect to the design of the armature is the designing for the temporal activities. This recurring theme from the site analysis concerns itself with the staging of daily activities of employees in the area, the seasonal activities of shoppers, and the spectators of sporting events at the stadium, for examples.

These three elements combine to form the armature and the final master plan.

4.1.2 Ordering Principles

Aspects drawn from the site analysis are used to order the site. First, the linear character of the site lends itself to an axial organisation, with the creek and the railway corridors as the main longitudinal axes, with the avenues crossing the site at regular intervals. Using these axes as a datum, a grid, reminiscent of the urban grid that subdivided the riverlots into streets and avenues, is used to shape the spaces and places of the greenway. The measurement of the chain (20 metres) which was used to layout the riverlots is used to measure spaces and widths which are appropriate to their function and the scale of the site. (It is halved and quartered in certain instances) The layers of the site then fit themselves within these ordering principles to give form to the armature.

4.3 Pedestrian Circulation

Currently, pedestrian movement and activity comes second to the movement and storage of the automobile, as revealed in the site analysis. Pedestrian movement in this area must be developed as a priority over and above vehicular circulation. Most of the following enhancements are applied to already existing circulation routes as well as introducing new ones.

4.3.1 North-South Circulation

Major Regional Pedestrian Routes

The railway and the creek define the two major north-south axes on the site and are thus developed as the two main regional connectors. The railway connects to Omand Park and across the Assiniboine river southward, and also curves and continues north-east through the city. The creek continues on to further reaches of the greenway north-west. The pedestrian connection to Westview Park is strengthened by extending the main North-South axis of the railway line up to the top of the hill with stairs then cut into the slope.

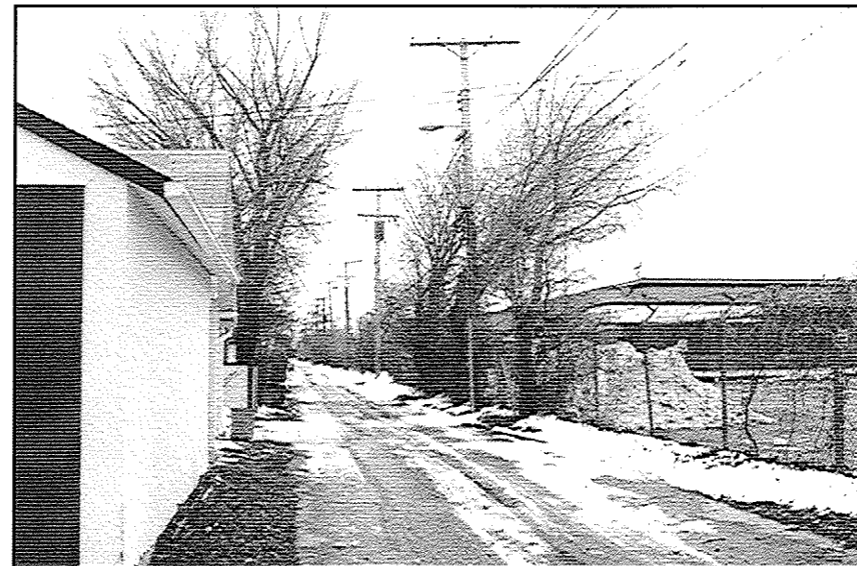
The pedestrian route along the creek is enhanced through the removal of 2 1/2 blocks of vehicular traffic on Empress St. north of St. Matthews Ave., and its conversion to a pedestrian-only corridor. This also widens the creek width, contributing to habitat enhancement, and brings the greenway up



Pathway character through Bluestem Park



Snow on boulevards in winter creates a barrier to pedestrian circulation



This could make a nice mixed pedestrian/vehicular green lane.

to the local businesses, better connecting them to the waterway.

Local Neighbourhood Vehicular/Pedestrian Traffic

A third, minor longitudinal axis runs the course of the site as well. The backlane of Strathcona St. which runs along the eastern edge of the site is converted to a mixed vehicle/pedestrian use "green lane". While cars are still allowed access to garages, this tree-lined alley-way is re-paved in a more pedestrian scale material, and extends from Denson Pl. past the Community Center and connects with the rail line to the north. This local-oriented pathway, for the nearby residents connects with the community center and better links the site to the West End.

4.3.2 East-West Thoroughfares

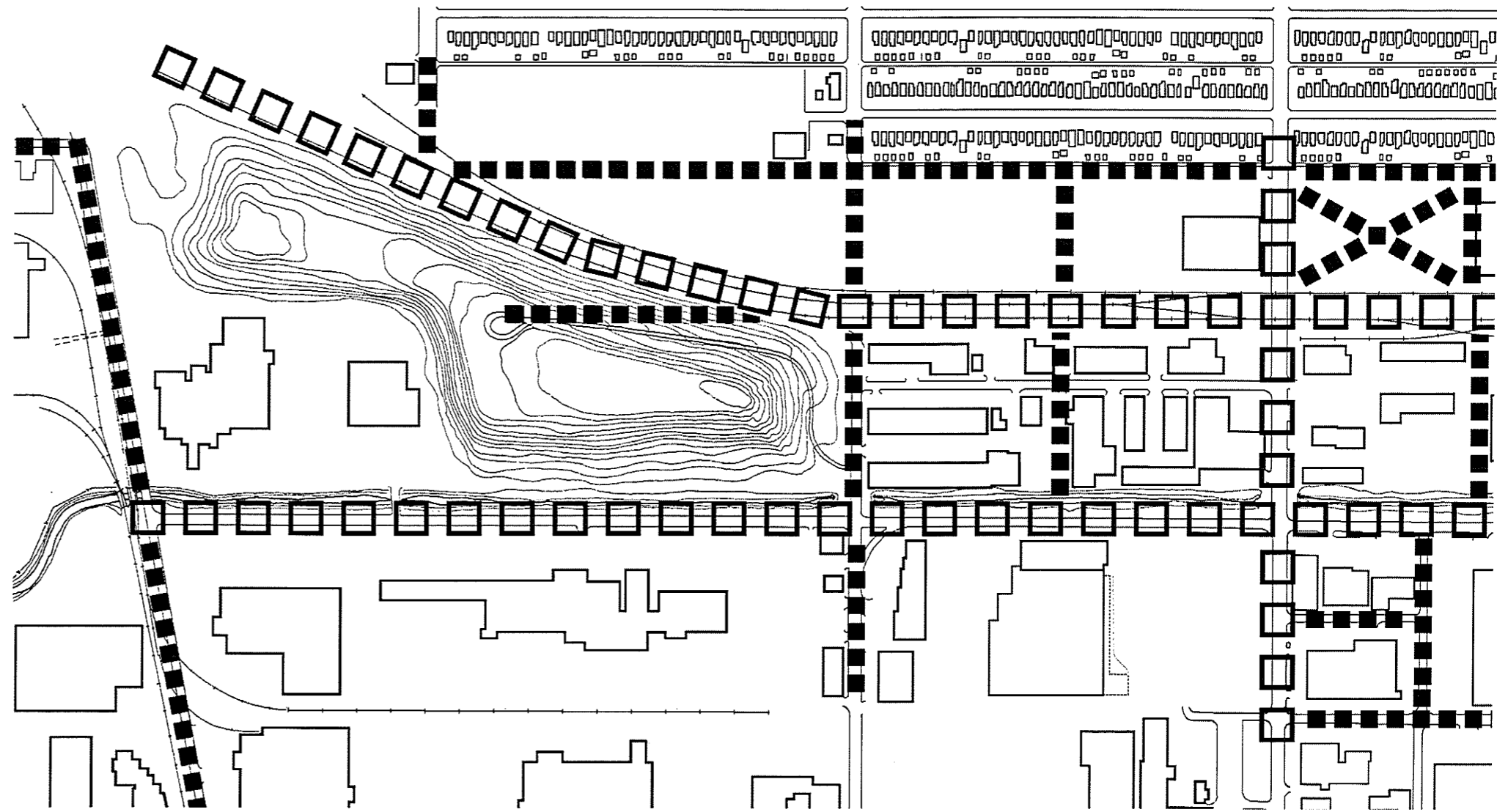
Crossing the site are the avenues. These major vehicular thoroughfares are complimented with sidewalks for pedestrian use. More crossings are necessary though, in order to connect the circulation of the site better to its adjacent east and west context, and give the pedestrian more of a choice of routes to take. These are provided in three ways.

First, by extending the other avenues, like Wellington Ave., Wolever Ave., and Riddle Ave. across the site as formal pedestrian paths. These walkways effectively complete the urban grid which subdivided the original riverlots, and better stitch the site into its location.

Second, existing railway spur lines and desire lines across



Pedestrians use abandoned spur lines and rail bridges as walking paths.



parking lots are developed as formal pathways (and parking lots appropriately designed to accommodate them). Desire lines are an important feature in the design of public open space. People will not move only where the path goes, but typically in a straight line from point A to point B, and these lines become essential determinants for the form a design is to take (Gehl, 1987).

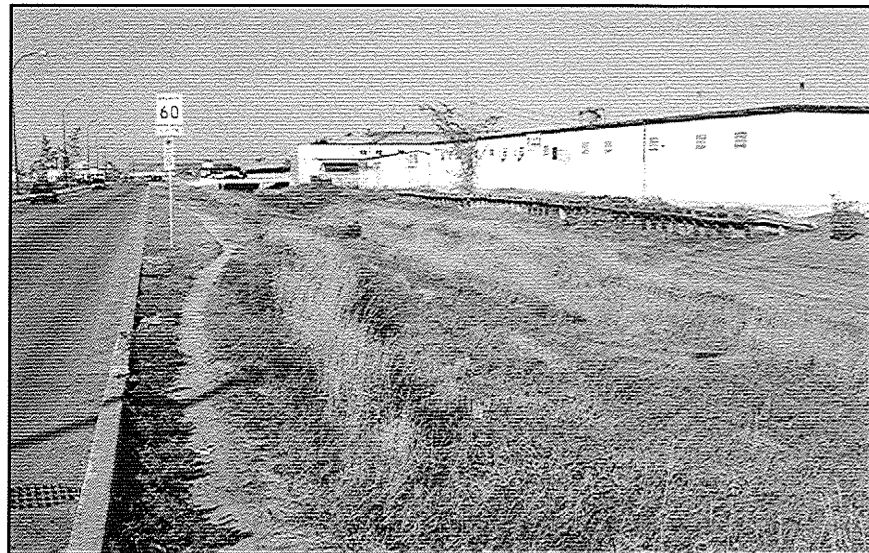
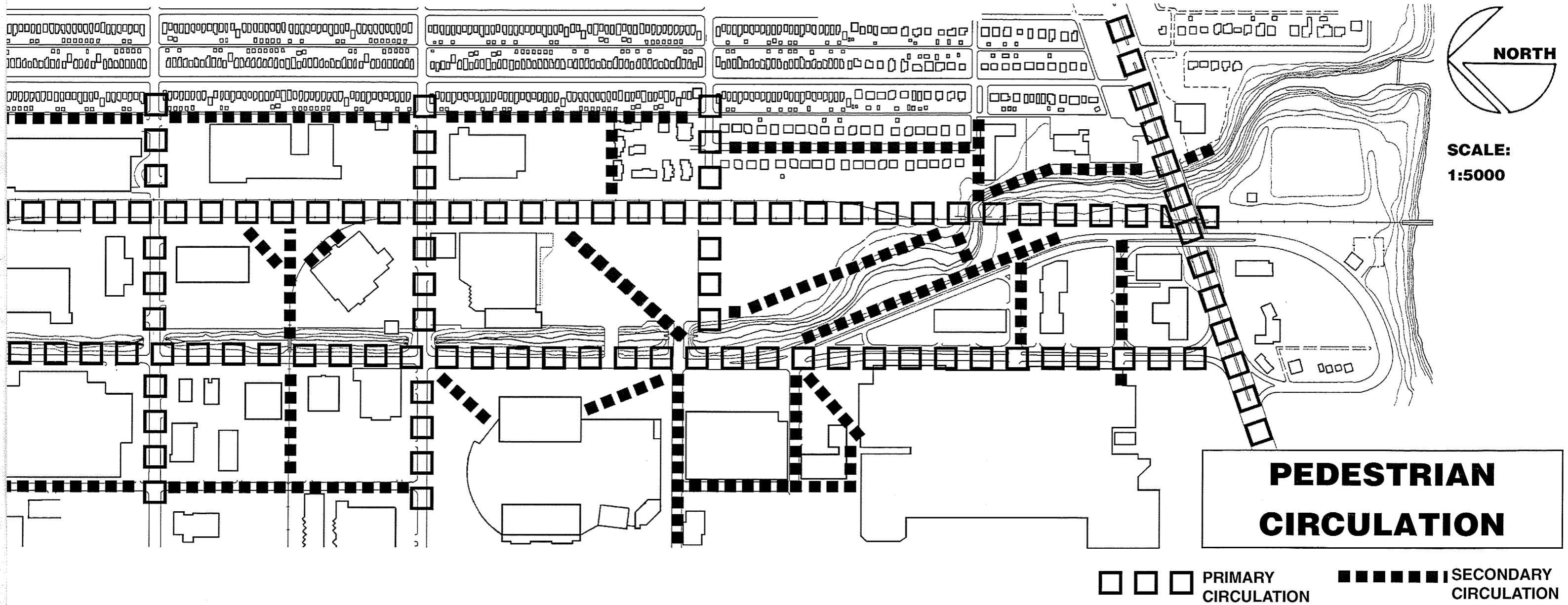
Third, additional easements are made on properties so that blocks such as those between Wellington and Sargent, and Sargent and Ellice can have added crossings. The elaboration of these secondary east-west pedestrian crossings on the site is an important one as it aids in stitching the site to those areas on either side of it.

4.3.3 Street Enhancement

Roads should be enhanced to make them more pedestrian friendly. Sidewalks should be added to all streets where they are currently non-existent. Trees are effective means of separating vehicular and pedestrian traffic, creating a pedestrian zone that feels safe. All the streets on the site would benefit from being greened up with vegetation to add definition to the street, soften its industrial character, and slow down the traffic. The major avenues crossing the site could be enhanced with dense lines of trees to define these image routes, to connect them visually to the residential streets of the West End, to soften the industrial



View from railway, east down Wolover Avenue

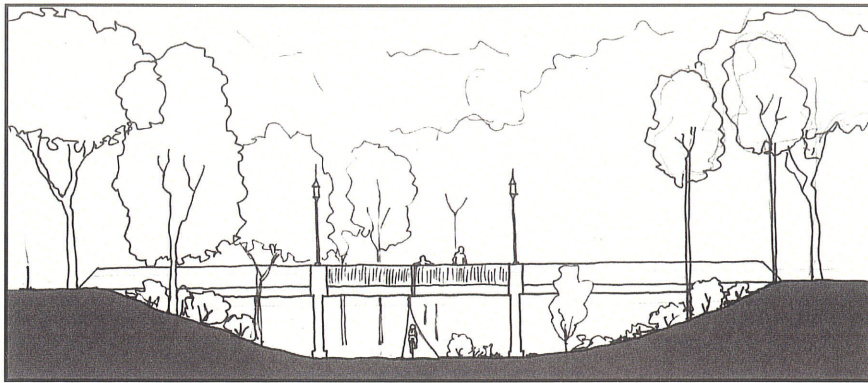


Trails along Empress indicate pedestrian and cyclist activity

quality of the area, and to slow traffic. Alternative paving along those roadways would make the driver aware that he/she is driving through a special place.

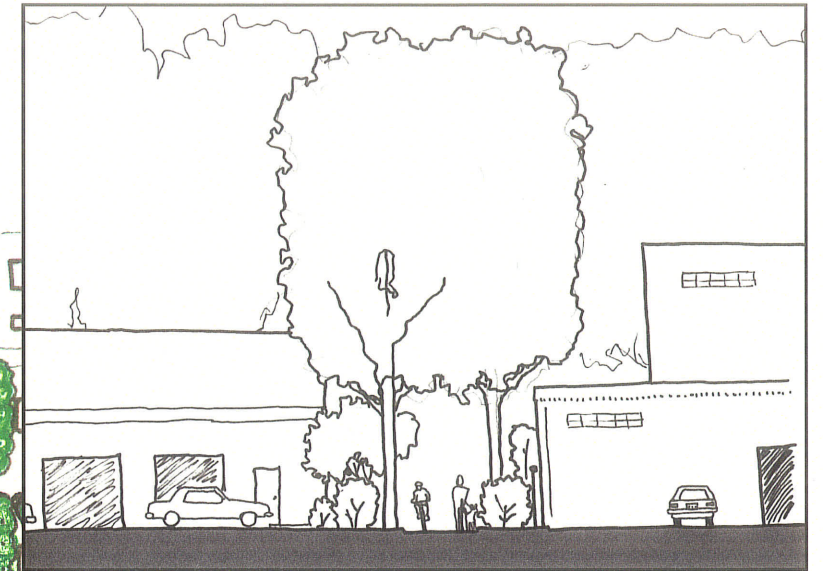
Portions of Empress to the north of St. Matthews Ave. could be removed or made narrower. This would allow for the widening of the creek corridor as well as creating a strong pedestrian path where Empress was removed. The under-used minor routes, such as Arena Road and Sanford St. could easily be enhanced to take on the re-routed traffic.

Pedestrian Circulation Development



Underpasses aid in pedestrian and natural circulation.

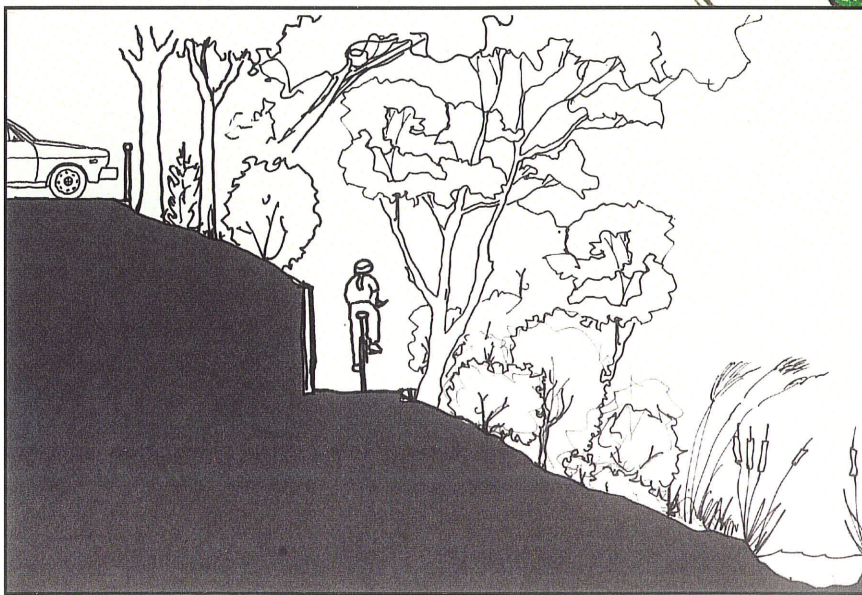
Backlane converted to a 'green lane' - mixed vehicular/ pedestrian use for local residents., linking peripheral neighbourhood to the greenway.



Secondary routes within existing and uses present pedestrians with more potential routes to take, and disperse activity throughout the site.

Vegetation, street furniture, lighting, and paving create a comfortable, pedestrian-scale street environment.

The design of parking areas responds to major desire lines. Trees and hedges break up large parking areas so that they are more comfortable to move through.

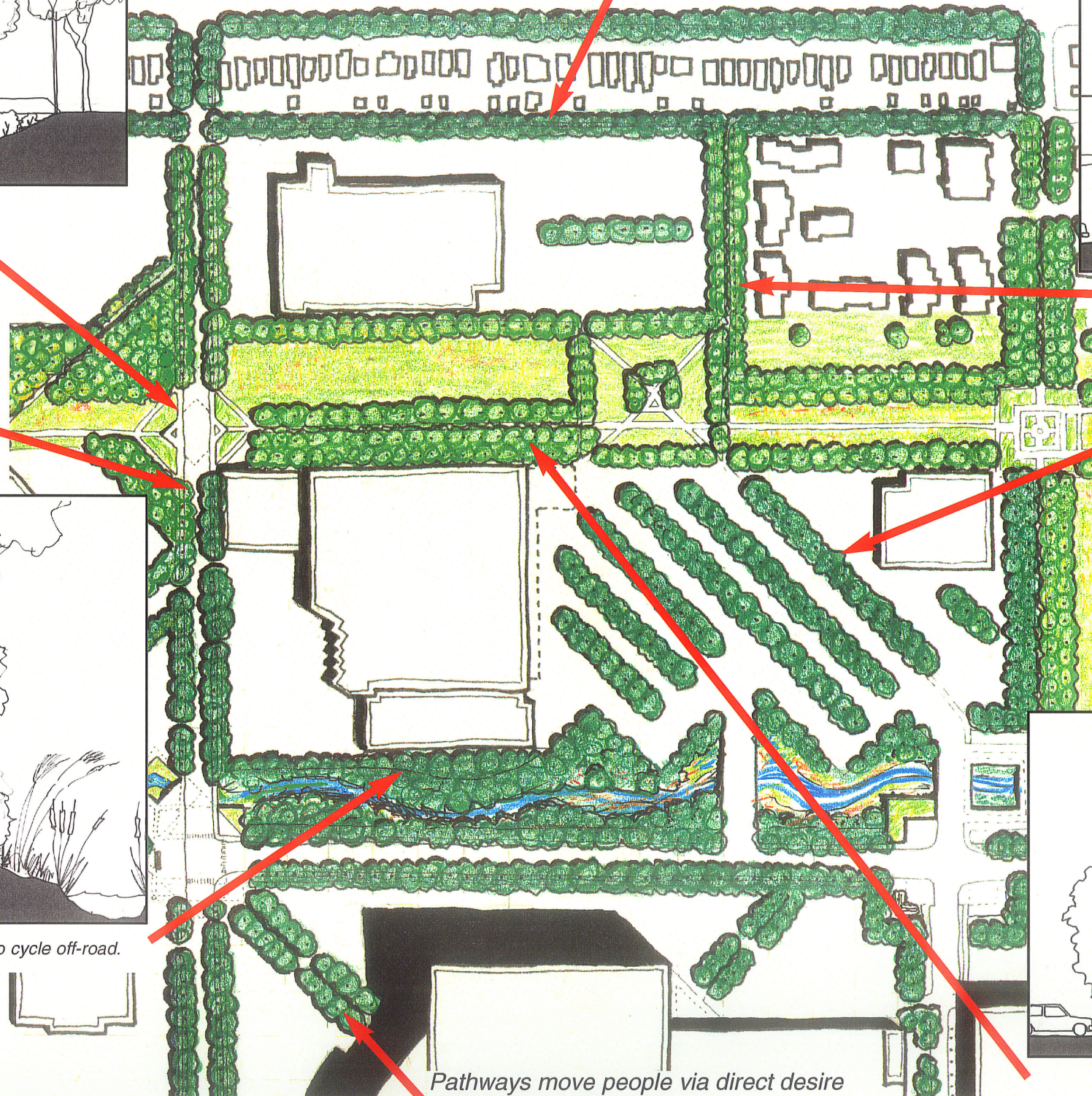


Creek terraces can aid bank stabilization and provide areas to cycle off-road.

Pathways move people via direct desire lines from the greenway to the entrances of major destinations, where areas accommodate large crowds.



Buffers between private land uses and public circulation routes



4.2 Habitat

A lack of vegetation and habitat within the existing developed land needs to be dealt with. The enhancement of, and addition to, existing park space throughout the site will also be necessary. As discussed earlier, the site has undeveloped open space which, while already serving to some degree as home to wildlife and plants, has a potential for the development of more diverse habitat. These areas can provide a resource for nature-oriented recreation opportunities. The areas having potential for the development of habitat include the creek corridor, the railway corridor, vacant undeveloped or abandoned open space, and existing park spaces. The master-plan must provide conditions for habitat to succeed in these areas by creating a diversity of patches, corridors, and edge conditions throughout the greenway. Evolution and succession is key in all these areas. Maintenance regimes are to be structured to sustain maximum ecological diversity.

4.2.1 Landscape Ecology Principles

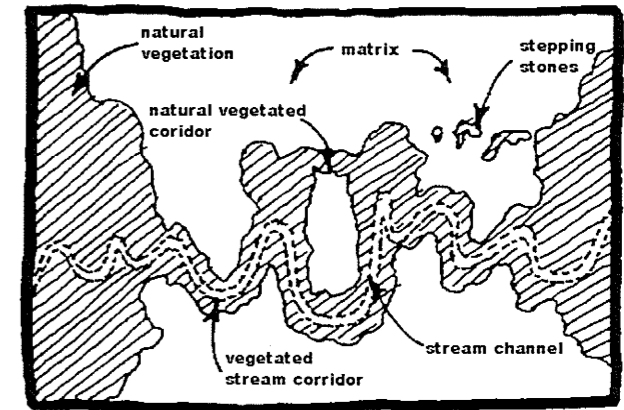
For the development of natural habitat, some basic landscape ecology principles were used as outlined in the book *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning*, by W.E. Dramstad, J.D. Olson, and R.T.T. Forman (1996). Landscape ecology sets out a framework of concepts, principles, and ideas which can be applied to most landscapes in order to optimise ecological diversity and numbers. In this approach,

landscapes exhibit three characteristics. *Landscape structure* is the arrangement or pattern of landscape elements within a landscape. *Landscape function* is the flow of energy and materials (species, wind, water) through the landscape. *Landscape change* is the alteration or dynamics of a spatial pattern over time.

Within the structure are three types of elements. *Patches* are those elements which are nonlinear in surface area, differing from their surrounding area, and have a heterogeneous interior which repeats itself within the patch. Patches allow the development of ecological communities. Larger patch areas serve to increase the diversity and number of species in an ecological community. An existing patch on the study site would be Bluestem Park: a patch of prairie. Large patches, such as this one, should be preserved and enhanced to optimised interior populations. Small patches can actually act as stepping stone corridors to the movement of some species.

Corridors differ from patches in that they are linear in character. Corridors are important connections in a landscape for species movement. The site itself can be seen as a corridor, or, at a smaller scale, the creek or railway serve as corridors, albeit with little landscape structure (ie. few vegetation types or gradients within their boundaries). These can both be enhanced to facilitate movement along the greenway, adding to diversity.

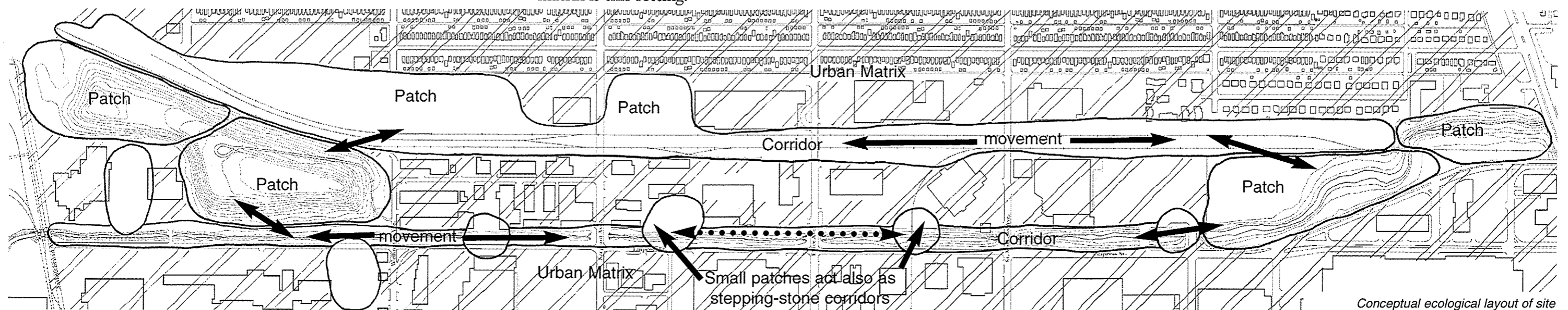
Both patches and corridors are set within a landscape *matrix*, the background setting. At Omand's Creek, the urban matrix is this setting.



Alternative corridors between two landscape patches, within a matrix (Source: Dramstad et al., 1996)

Patches and corridors of differing types and shapes were applied to the site using a palette of four native ecosystems. The intention here is to use the landscape ecology approach to create successful habitats and optimize diversity and numbers of species within the greenway. A diversity of patch sizes were applied in order to optimize interior species numbers in large patches and edge population numbers in small patches.

Landscape ecology provides the general principles to approach the site as a series ecological systems.



4.2.2 The Urban Forest

Currently the built elements of the site are its dominant features. However, because this is the design of a greenway, vegetation and ecology must be made dominant. It is important that natural habitat and the built landscape play equal roles within the urban greenway. The ecological and cultural systems of the greenway be integrated so that each may function without being unduly restricted by the other.

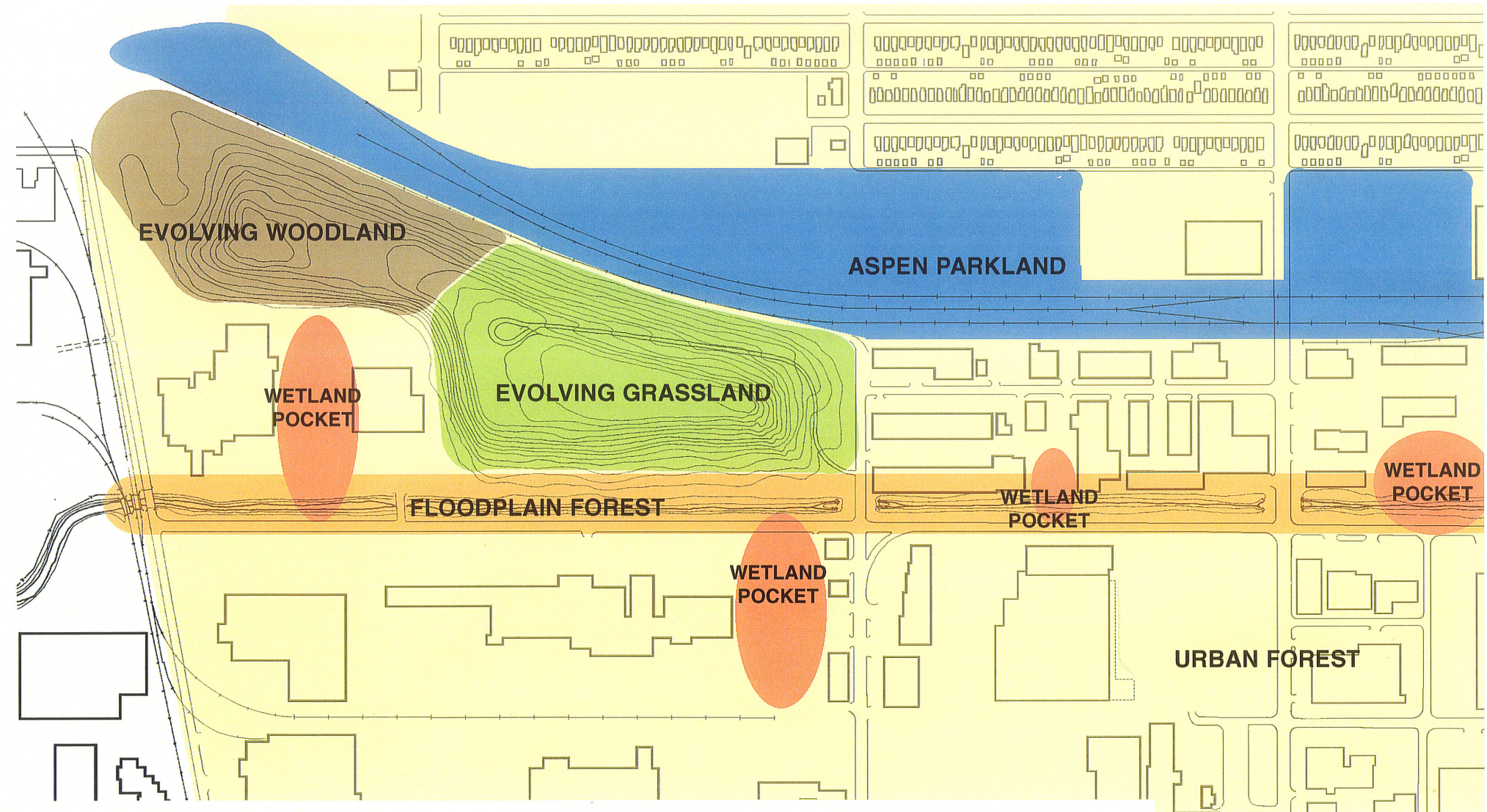
There are a number of strategies to use vegetation as part of the built environment, and thus create what may be termed an "urban forest". In this ecological niche, the cultural landscape can operate within a vegetated setting, creating additional habitat along the greenway. Vegetation can be used within the built environment as architectural features. Vegetation can divide open areas into more intimate, pedestrian-scale environments. Trees define allees and paths, and can slow traffic (Greenbie, 1967, 43). Hedges divide property, and groundcovers absorb runoff. All are effective in increasing habitat. Planting can also be used to highlight signage and improve building aesthetics, improving the quality of the site's open space edges.

Regulating Human Development

While land-use and development is allowed within the greenway, the total area of natural open space on the site is frozen at its current area, approximately 48% of the entire site area. Once established, the proposed areas of habitat on the site should be protected from development. In the unfortunate event that an area of natural habitat on the site is destroyed to build something else, an area of the built landscape elsewhere on the site would have to be replaced with the creation of new habitat.

4.2.3 Existing Park Space of the Site

Existing park space includes Westview, Bluestem Park, and the site between Bluestem and Portage Avenue. These spaces comprise large vegetated areas at either end of the corridor, and in this way justly anchor the greenway with large patches of habi-



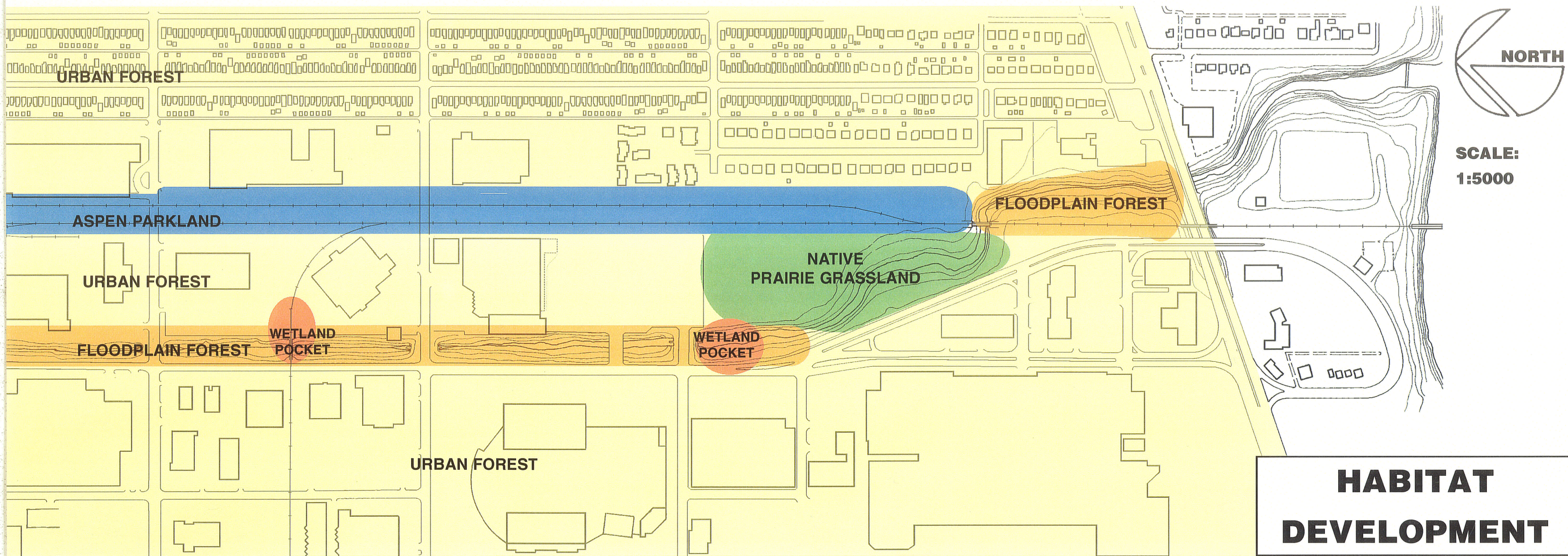
tat. However their differences can be highlighted through design, by addressing their individual unique character.

Bluestem can be extended north into the vacant lot adjacent to it. This act, effectively doubling the park's size, increases the prairie habitat and also creates a more dramatic expanse of space, which is more reminiscent of the original expansive prairie landscape.

As essentially a pile of garbage covered with soil, the hill of Westview Park becomes a large test plot for the natural regeneration of a totally artificial landscape. It is the poignant northern natural space counterpoint to the nearly native quali-



Mallard on Omand's Creek



HABITAT DEVELOPMENT



Goldenrod in Bluestem Park

ties of the open spaces at the southern end of the site. To highlight this, the south end of Westview is left as a grassed hill, to evolve however it may, as a contrast to the tall grass prairie landscape of Bluestem Park. The north hill is planted with a woodland pioneer species, Manitoba maple, which is common to disturbed sites, and serves likewise as a contrast to the pioneer floodplain forest site Portage Avenue at the far south of the site. The south side of the hill is also graded to a rectilinear shape to emphasise its 'constructed' quality. Maintenance levels of Westview would similarly mimic the low maintenance levels in the Bluestem-Portage sites, such as periodic burning of the

grasslands. The hill is allowed to evolve into whatever it may: a forest, a grassland, or a mixed ecosystem.

4.3.4 The Linear Corridors: The Creek and the Railway

These corridors are central to the development of a greenway habitat. Linking the two parkland areas at the north and south ends, these connective tissues can influence ecological processes through the dispersal of species along the length of the greenway, and thus increase the potential of greater habitat distribution (Dramstad, Olson, & Forman, 1996, 37). While encroach-

ment by urban development along these corridors over time may be inevitable, minimum unobstructed widths should be established through the imposition of design guidelines, to allow species movement and maintain the visual quality of the greenway.

The Creek as a Floodplain Forest

Omand's Creek corridor currently may not be wide enough to create or replicate the complexity of a river-bottom forest ecosystem. However, key floodplain species can be used along the corridor to create a much more diverse forest-like ecology than presently exists along the creek, which in most cases is mown as closely to the water's edge as possible. Less intensive maintenance regimes along the banks of the creek would encourage succession and increase vegetation mass. To increase the potential for the establishment of a forest ecosystem, three blocks of Empress street are removed and the creek corridor's width is subsequently increased by 12 metres. Buffers between the creek channel and trails of the greenway can also be widened to minimise human disturbance along the channel. These increased widths would also allow the development and evolution of the creek channel into slight meanders along its channel length, and decrease stream velocity and the subsequent undesirable effects of erosion and bank slumpage. Future development should strive to expand the creek corridor to width of

40 metres, which is currently 15 metres wider than the narrowest portion of the creek corridor (between Sargent and Wellington Ave.), and recognised as a minimal width for a riparian corridor (Davis, 1993). Pools and riffles need also to be constructed and enhanced, in order to improve water quality and aquatic habitat.

Aspen Parkland along the Railway Corridor

The other linear element of the site, the railway corridor also lends itself to habitat creation. As a contrast to the creek corridor's floodplain species, the railway right of way becomes home to upland species of the Aspen Parkland. The palette of vegetation applied to this includes grassland species of the tall grass prairie and those of the aspen forest, assembled along the right of way in patches and corridors that are reminiscent of the native landscape of the region (as aspen bluffs), and conducive to species dispersal and habitat diversity. This becomes an essential corridor for connectivity between the grassland species of Bluestem and Westview Parks. Like the creek corridor, minimal widths would have to be imposed in order to maintain this strip as an effective corridor. This width would not fall below its current minimum of 40 metres. Three underpasses would make it possible for continuous species circulation across the avenues of the site, which are currently barriers.

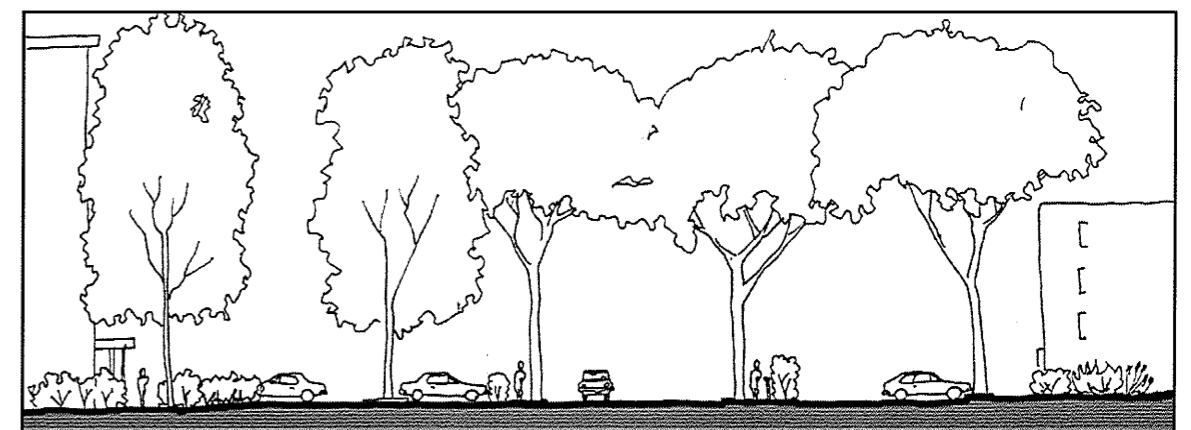
4.3.5 Vacant Lots, Open Space Pockets, & Wetland Creation.

Throughout the area there are other pockets of open green-space along the periphery of buildings and in vacant lots, which can take on new importance as sites for habitat along the corridor.

Many outdoor areas are merely used for the storage of junk and discarded industrial materials. The reclamation of these sites would contribute greatly to the ecological well-being of the greenway, by getting rid of rusting metals and other potential pollutants in exchange for patches of new habitat.

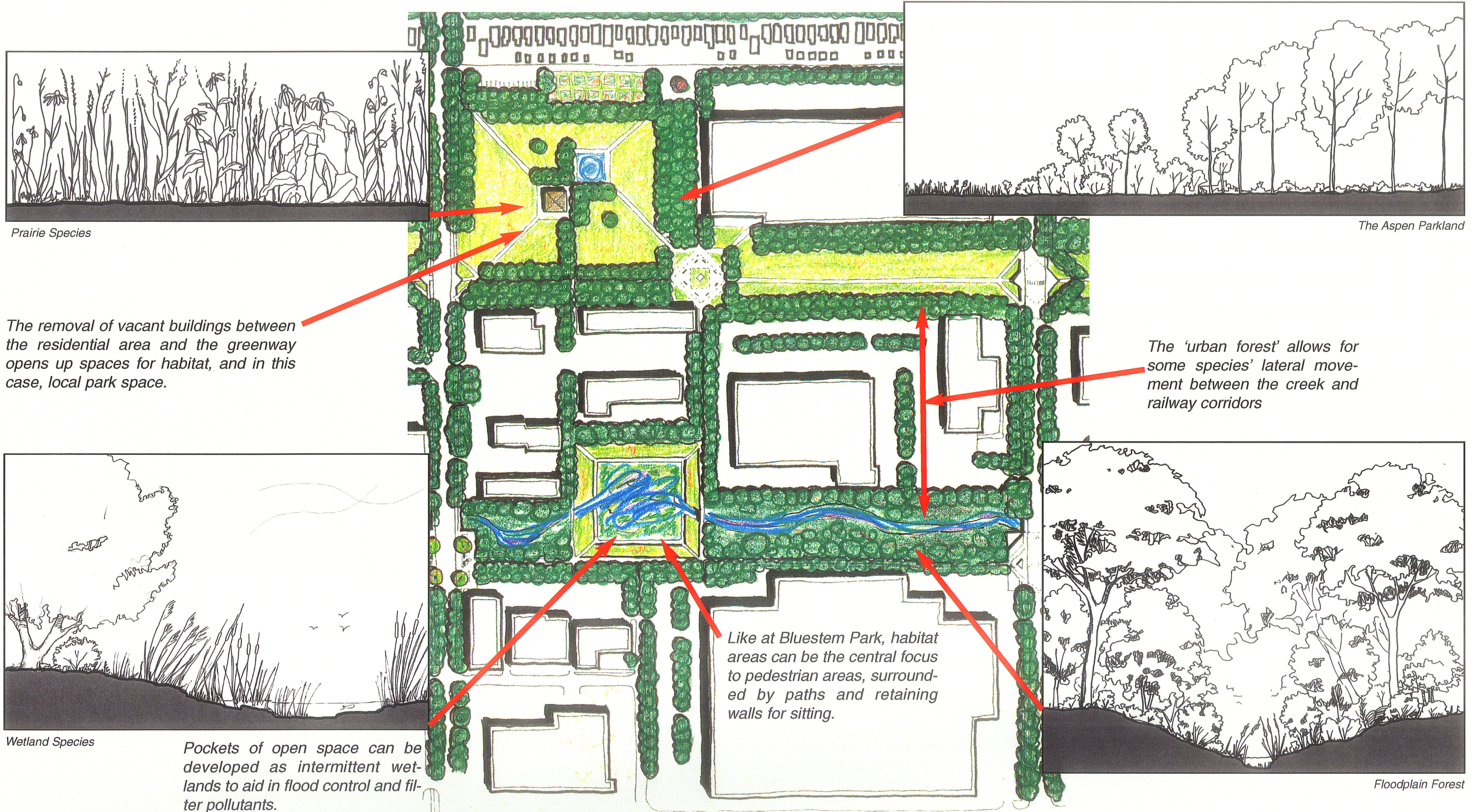
There are two different strategies for treatment of these spaces. Throughout the area empty lots can be used as larger patches for species of the ecological communities like the ones already mentioned: the floodplain forest, tall grass prairie, and aspen forest.

Alternatively, these spaces along the creek can aid in flood control, filling with water during peak runoff conditions to become intermittent wetlands. Marsh areas along the railway corridor can filter out pollutants from runoff from the nearby streets and parking lots. As wildlife habitat, these ecosystems become 'stepping stone' patches along the migratory paths of birds, much like the prairie potholes served before settlers appeared and agriculture was introduced to the region.



The Urban Forest

Habitat Development



Prairie Species

The Aspen Parkland

The removal of vacant buildings between the residential area and the greenway opens up spaces for habitat, and in this case, local park space.

The 'urban forest' allows for some species' lateral movement between the creek and railway corridors

Wetland Species

Floodplain Forest

Pockets of open space can be developed as intermittent wetlands to aid in flood control and filter pollutants.

Like at Bluestem Park, habitat areas can be the central focus to pedestrian areas, surrounded by paths and retaining walls for sitting.

4.4 Temporal Activities

Much of the human activity of the study site depends on time of day, season, or special events which take place. Thus there are times of high use of the businesses and facilities of the area, contrasted with those periods where few people are present.

Ideally, through the implementation of a greenway, the site will not often be vacant. Just the addition of park space alone can increase the amount of activity on the site by attracting more people. The design can also influence adjacent land uses trying to tap into a new market of greenway visitors — cafes, restaurants, bars, and pubs can supplement the greenway with activities as well as draw customers from the trails.

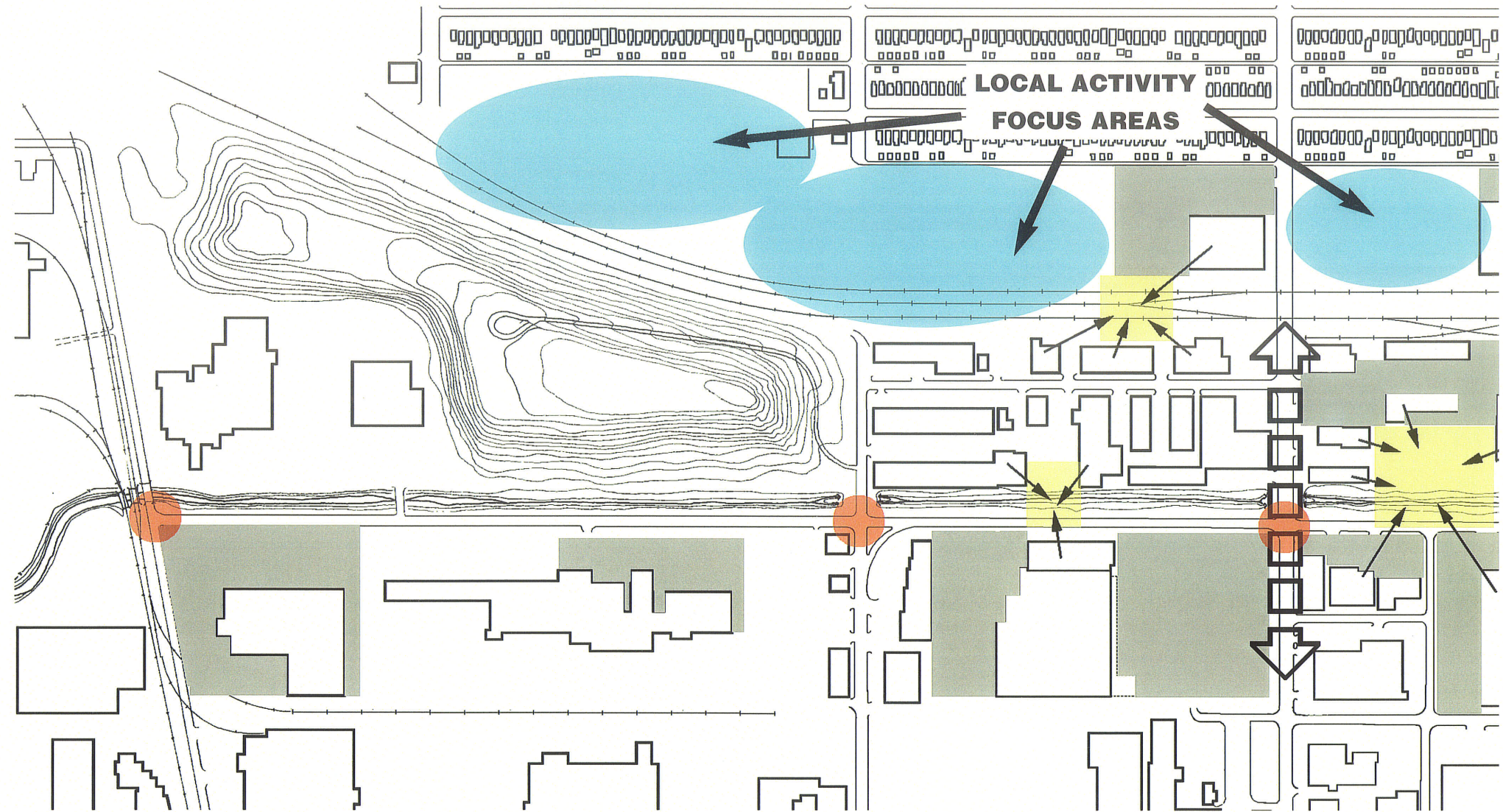
However, there is still an extremely temporal aspect to the site, periods of high—density use, and periods of vacancy. In some cases, sites will stay vacant longer than they actually are in use. The design of these spaces must address both these extremes as well as use at times of only moderate activity.

4.4.1 Designing for Temporal Events

Areas need to be designed with the question in mind: *how does the space change when it's in use versus when there's no one around?* Often when vacant, these sites can meld into other activities or areas, as part of the natural habitat, circulation path, or streetscape. The type of design depends upon the type of temporal event being provided for.

4.4.2 The Low-density Event

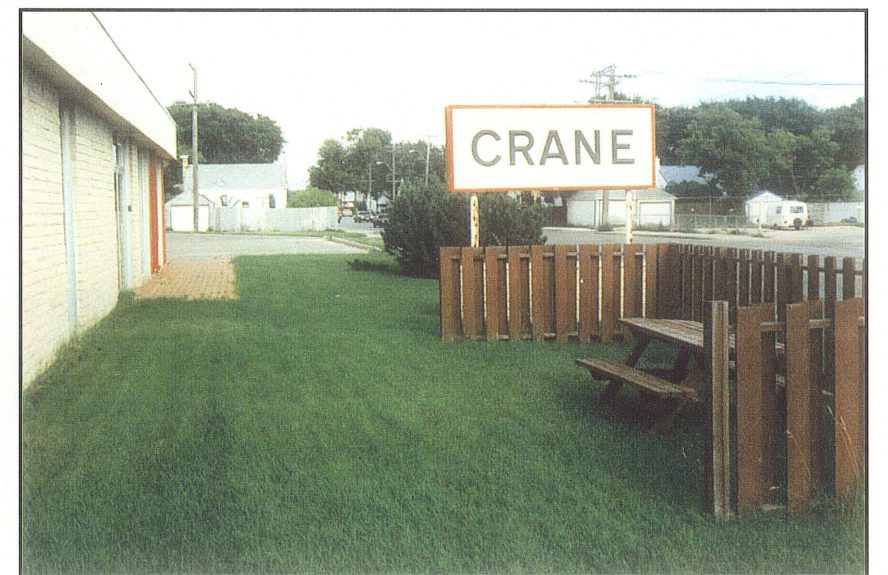
Lunch is a regular temporal event, when shoppers, visitors and employees in the area all partake in the same activity, although not at the same place, and only approximately at the same time. This is a low-density event. As it is, restaurant-goers in the area have few locations to choose from, and employees are subjected to the token outdoor picnic table just outside the door. The staging for this type of event is provided for through a series of subtle plazas dispersed evenly along the greenway. They provide places for employees and shoppers to have lunch or a coffee break, or for visitors to stop for a picnic. These are primarily



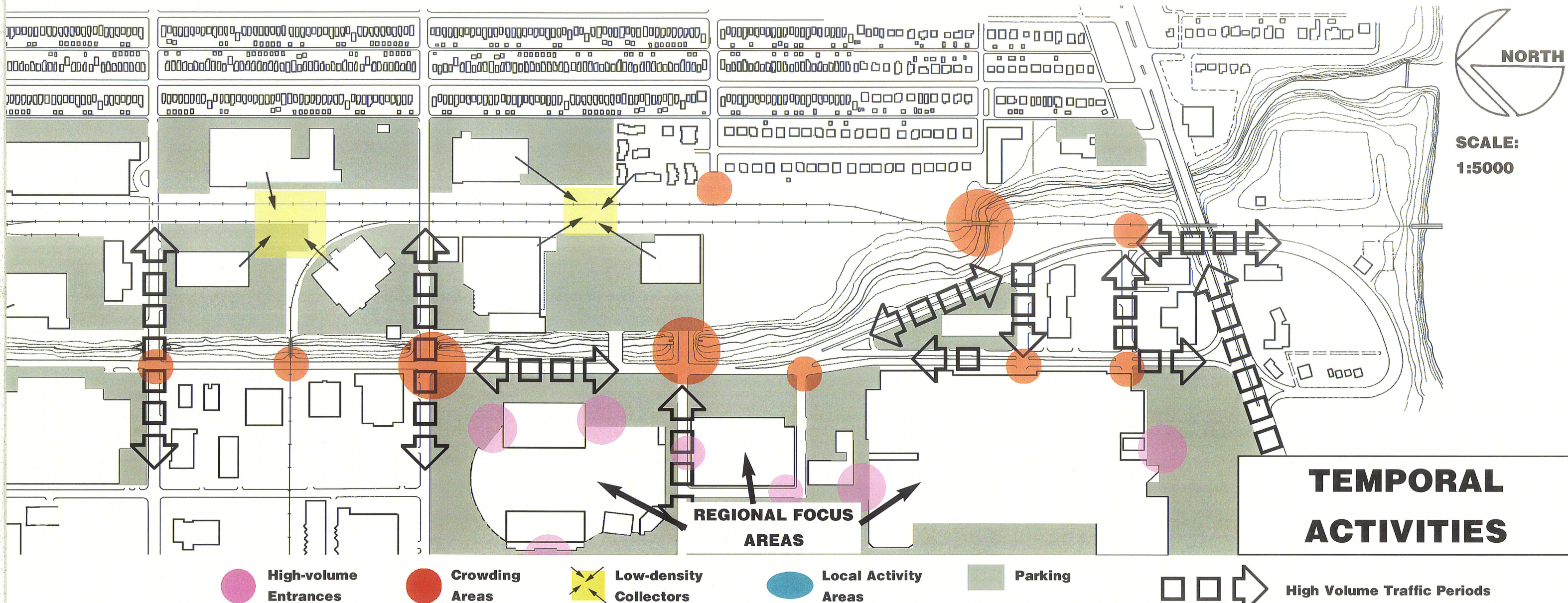
located mid-block, away from traffic and noise, and are designed to be low-key enough so that when not in use, they become integrated into a habitat area and/or pedestrian path, as opposed to standing vacant for the rest of the day. The scale of these spaces is quite large, so that they fade into the surroundings, but are also of comfortable size for pedestrians to congregate.

4.4.3 The High-density Event

High density events are events include sporting events and concerts, for instance, which draw a great volume of people all to one location. The primary concern here is not providing areas for active new uses along the greenway, but alleviating or pro-



A picnic table is the only typical provision for employee lunch areas on the site



viding areas for crowding.

Alleviating crowding can be done to some degree if people are travelling by greenway to or from their destination. The additional circulation paths can disperse people throughout the area. Paths need to be wide enough and follow logical desire lines so that groups do not trample through vegetated areas and consequently destroy wildlife habitat.

At intersections, crowding can be served by supplying stopping nodes at corners for people to wait to cross the street. Large spaces, landscaped with seating, lighting, and vegetation can provide a meeting place, casual seating or just a comfortable space to wait to cross the street. These spaces can also act dou-



Parking lots have seasonal variations in their use. This one is mostly empty on a Friday August evening

bly, as extensions of adjacent restaurant patios, viewing platforms into the creek, or landscaped signage for businesses.

4.4.4 Businesses, Parking Lots and Streets

Commercial businesses and light industrial operations are affected daily by higher traffic periods. The entire area flows with shoppers during retail hours, with higher flows during evenings and weekends. The pinnacle of retail activity is a seasonal phenomenon. During the weekends and evenings for about six weeks before Christmas, retail lots are jammed full of holiday shoppers' vehicles, while during summer months, these lots may get only between two-thirds to three-quarters full on

weekends at peak times.

Because parking lots also have daily as well as seasonal fluctuations in use, they present the potential for a different type of treatment. Paving is to be designed with more concern for aesthetics, particularly in the larger lots and like those at the arena and stadium, which are vacant for longer periods. Paving and vegetation can make these areas pleasant for pedestrians to walk through. Turf or porous paving can be applied to the outskirts of commercial lots. This allows for parking during the winter Christmas season, when the ground is frozen, but also reduces runoff and encourages plant growth during the growing season, when the demand for parking is considerably lower. In summer, the lot visually shrinks into the 'green' of the greenway. Additional parking for greenway visitors can be kept at a minimum. More popular during the summer, the less-used lots of the commercial operations of the area may set aside designated parking stalls for greenway visitors. A similar practice currently takes place at Dominion Shopping Centre, at Main St. and Marion Avenue, where visitors park and walk to the Forks.

The design of some areas of parking lots can even include alternative recreational functions for those times when the lots are less in demand. This can merely take the form of installing a basketball hoop, or can involve flooding areas after the holiday season is over, for skating activities. Even skateboarders need a place to play.

The streets can be landscaped using alternative paving materials, street furniture, and vegetation. These not only contribute to the pedestrian scale and habitat creation on the site, but will make drivers slow down, and realise that they are passing through a special area.

4.4.5 Activities Linking the Local Neighbourhood

The seasonal activities on the site also include areas for the nearby neighbourhood, in order to better stitch the site onto the WestEnd. Since the private lots are small, the edge of the greenway can provide an extension of the local area through the incorporation of community gardens. To further strengthen the

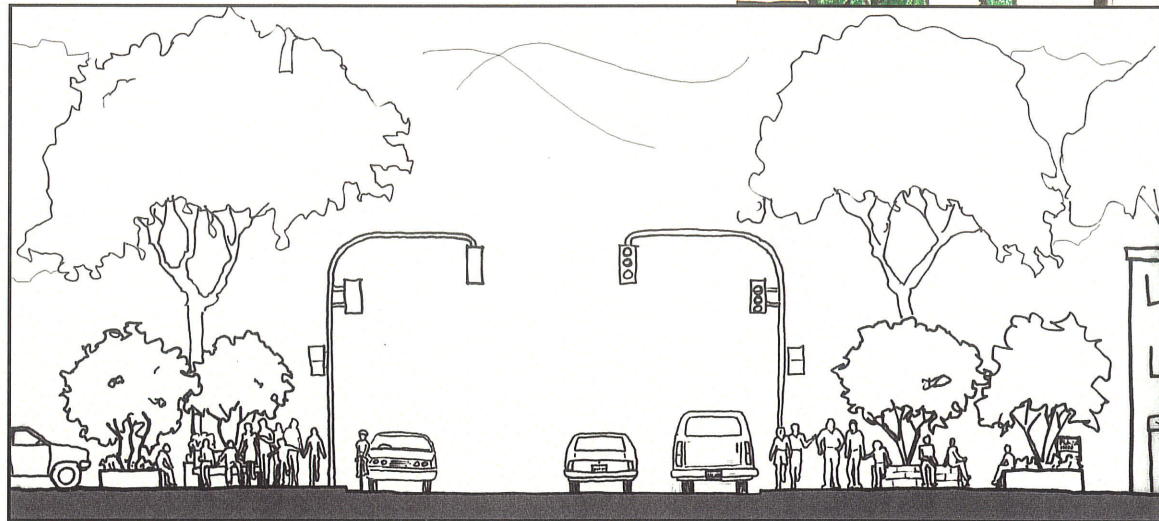
link to the community, a large vacant building on Sargent Avenue is to be removed and the land redeveloped as a passive local park space. These two elements give the local residents community involvement in the greenway, with the hope of making this place a source of personal pride and a place that they can be strongly associated with, and in turn care for. These also create a balance between the already-existing regional venues at the south end of the site.



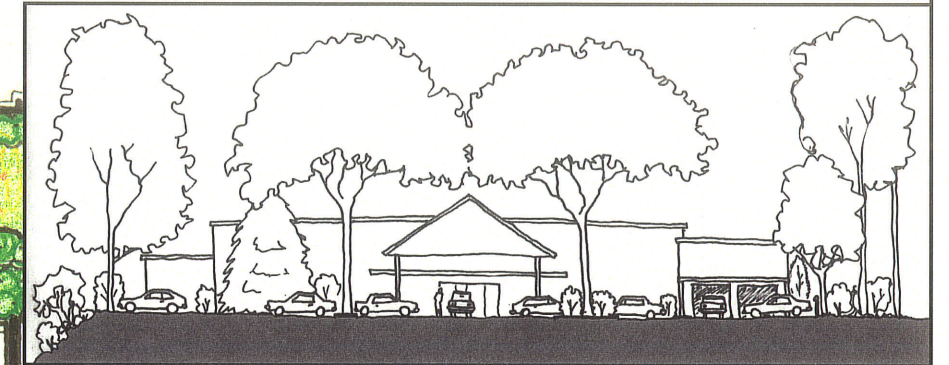
The Winnipeg Stadium during a high-density event (Paul Martens, 1999)

Temporal Activity Development

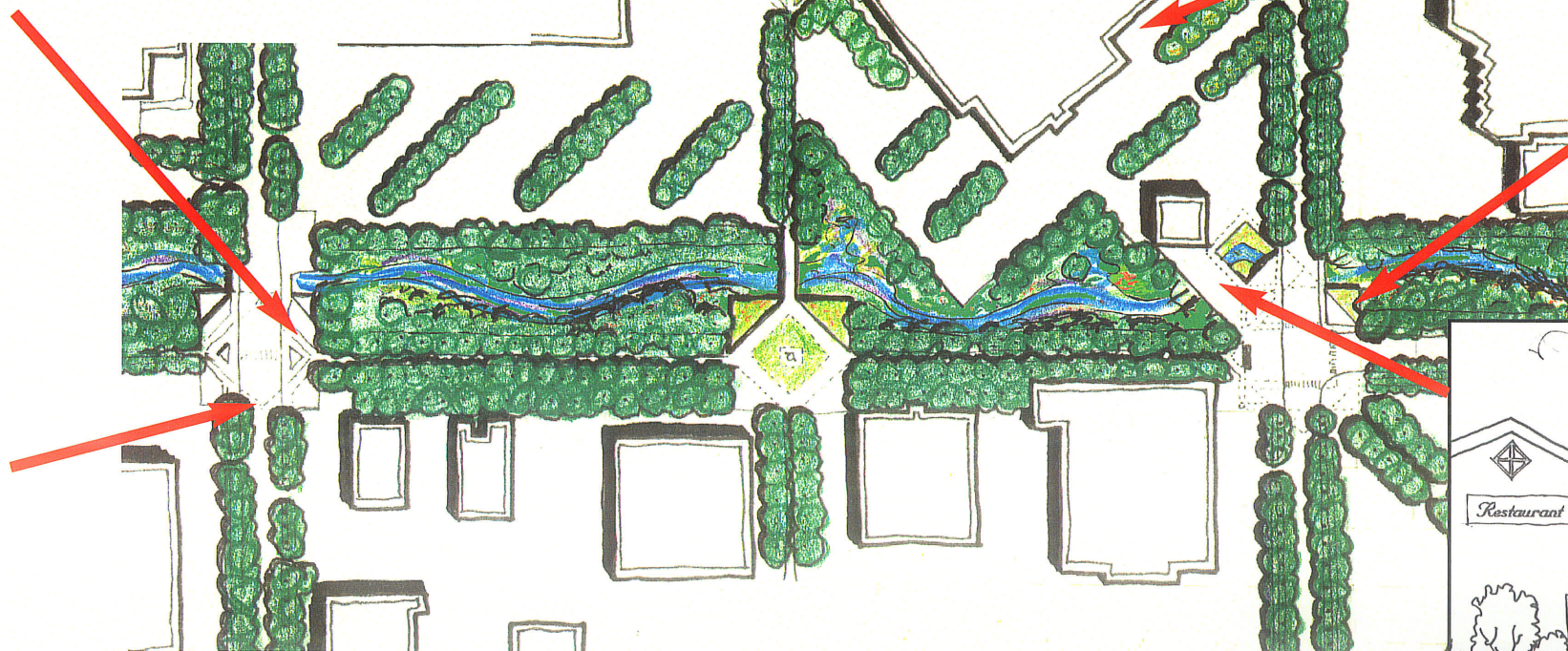
Informal outdoor patios can provide a congregation area for low-density events, and are at a large enough scale, so that at other times, can disappear into the circulation system or act as habitat.



Crowding at intersections needs to be accommodated.



Parking areas should be attractive places when vacant as well as when used.



Terraces and nodes at the meeting points of paths give the pedestrian a place to stop and admire the natural ecology of the greenway.

Street trees and paving along the roadway slow traffic and let the driver know that he/she is passing through a unique place.



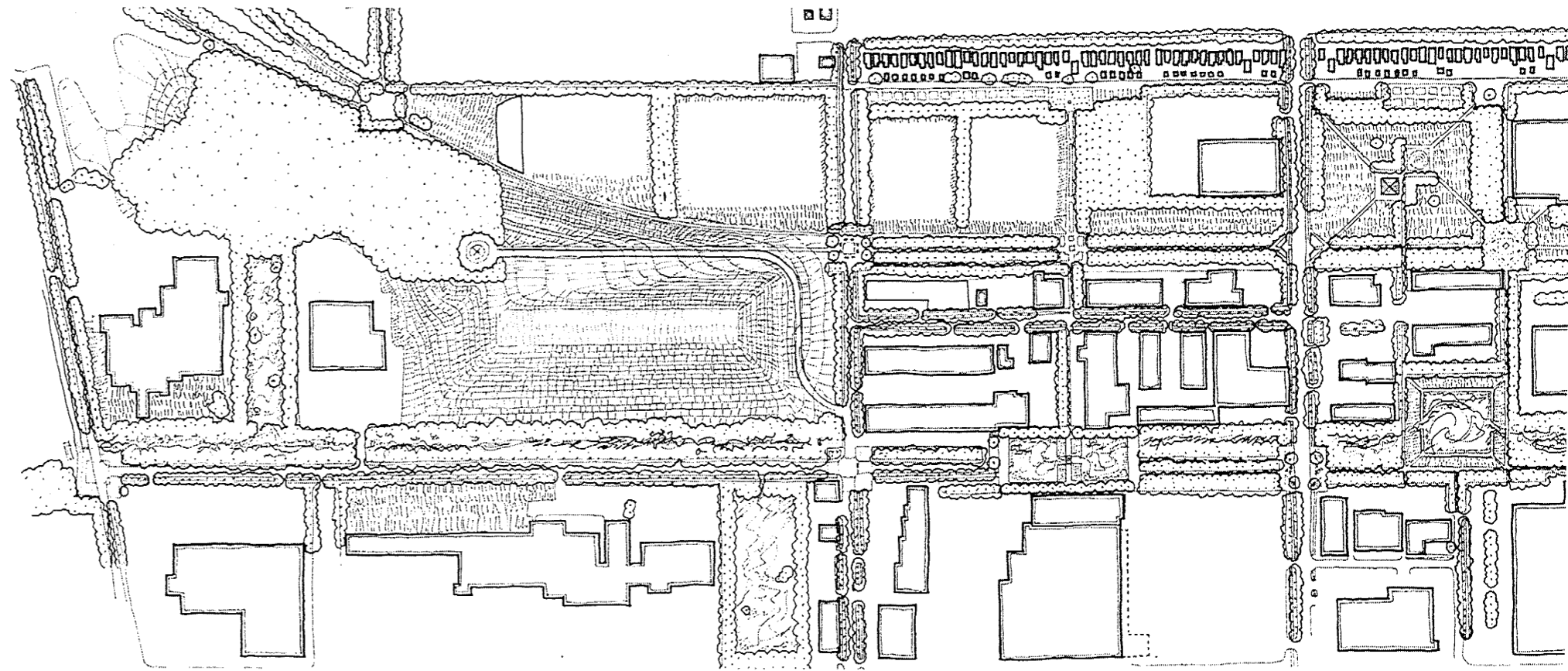
Greenways can influence new land uses.

4.5 Conclusion

Landscape architecture can play an integral role in the shaping of urban development, which often fails to recognise the potential role open space and naturalised areas may have in the city. Traditional urban practices have little regard for planning and the integration of park lands or wildlife areas within the commercial context. The recent trend in Big-box retail development leaves most areas without an association with the regional or local context, often taking a "rubber-stamp" approach to the design and layout of their operations. They cater to the quick and efficient movement and storage of the automobile instead of the creation of pleasant pedestrian areas. This practicum demonstrates that landscape architecture and greenway design can contribute much more to the city through enhancement and enrichment of the uniqueness of a place.

Greenway design, through its intrinsic form and qualities, is an effective means of reuniting a location with its own inherent sense of place, its natural, cultural and symbolic heritage. Its linear character can create either route or destination for a greater number of people and species. Through the further development of greenway branches, an urban network can be constructed to redefine what the city is about - people and nature - neither exclusive of the other. This in a greater sense may influence the way we as human beings co-operate with other species in our efforts to survive on the planet.

A greenway on the site can perform many roles. Currently, the wide-open spaces of the creek and railway right-of-way create a psychological barrier between the residential area of the West End, and the major local and regional destinations at Polo Park. Greenway design can effectively stitch the two areas together from east to west through extending local streets like Wolever or Riddle Avenues into the site, highlighting and enhancing existing circulation routes, and creating alternative connections along desire lines and between land uses. Instead of a barrier, the site can become a connective element for the residents of the West End. By providing these people with activities like community gardens, expanded sports facilities and local park

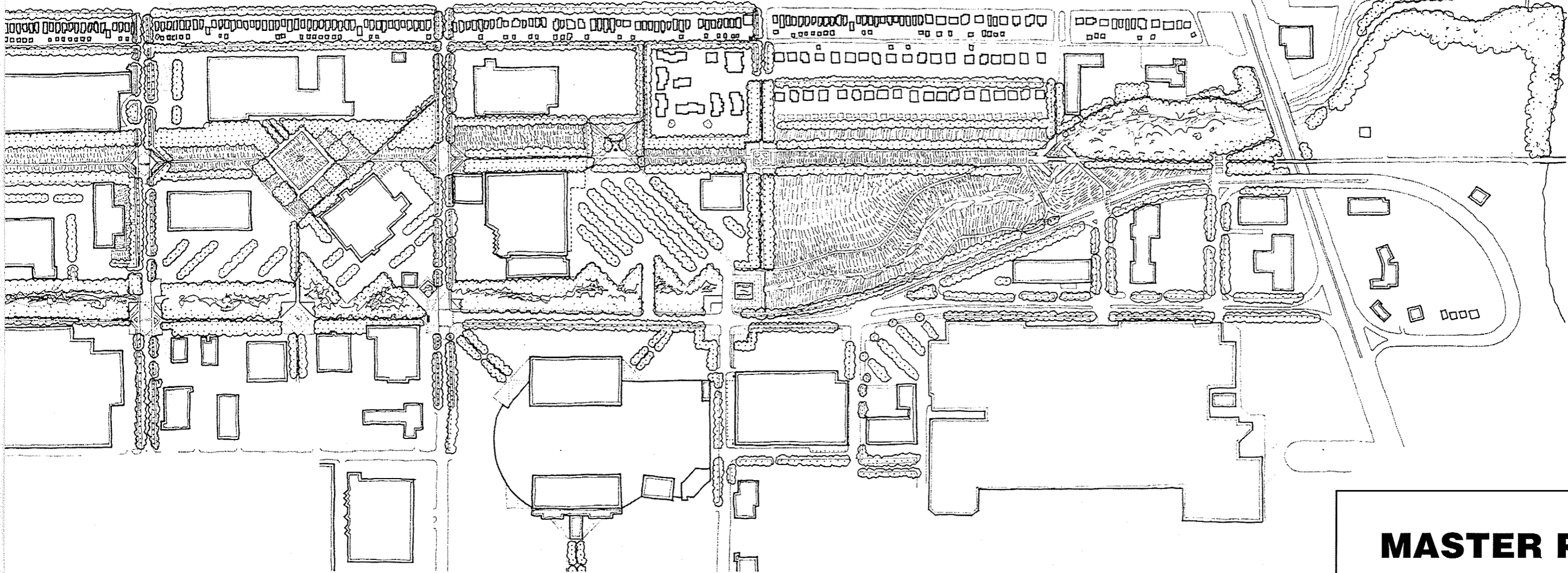


space, this proposal can instil neighbourhood interest and support in the public open space of the greenway. As its own place of business, the public spaces of the greenway can provide areas for employees and visitors alike to gather in their day-to-day activities.

Within the regional setting, the greenway can become part of an impressive series of natural thoroughfares in the city, and bring people to the greenway as a regional destination, and to the regional destinations nearby, like the arena, stadium, and shopping centre. The corridor can become a component of a citywide network, as a cross-country skiing, cycling, or hiking route. The natural vegetation can create habitat, and thus an effective wildlife corridor between the Assiniboine River and rural areas to the north. Vegetation can also be applied as architectural features and enhancements to the area's businesses in

order to reach the same end, to improve the aesthetics, and to create intimate pedestrian spaces.

The City of Winnipeg needs to recognise the potential of the location and area surrounding this little waterway as a beginning of a greater plan, and act quickly to embrace some of the possibilities outlined in this practicum. While the railway right-of-way is not currently available for development, the creek itself can be immediately developed through the subdivision and purchase of lands along the waterway, or through the granting of easements and tax incentives to existing businesses for the development of this corridor. The city can more than regain these investments through the area's increased land value and consequent tax base from businesses wanting to locate along the corridor.



SCALE:
1:5000

MASTER PLAN



Typical

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