

A Spirit of Place:  
A Landscape Design for the 1999 Pan American Games Athlete's Village at the University of  
Manitoba Fort Garry Campus

By

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Submitted to the Faculty of Graduate Studies in Partial Fulfillment of the Requirements for  
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**A SPIRIT OF PLACE: A LANDSCAPE DESIGN FOR THE 1999 PAN AMERICAN GAMES  
ATHLETE'S VILLAGE AT THE UNIVERSITY OF MANITOBA  
FORT GARRY CAMPUS**

**BY  
RICHARD GENDRON**

**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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## Abstract

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The Pan-American games are going to be held in Winnipeg in 1999. The University of Manitoba campus, the oldest academic institution in Western Canada, will play host to many important events, the foremost being the site for the main Pan-American Village. Over six thousand athletes, coaches, and officials will be housed within the secured perimeter around the University. In addition, there will be daily influxes of hundreds of security personnel, media, dignitaries, and volunteers. The University of Manitoba Campus will literally be in the international spotlight.

Massive exposure, such as the Games promise, demands that the exterior environment of the Campus reflect the positive image of the University as a forward-thinking institution; a place of creativity and insight. The hosting of the Pan-American Games provides the University of Manitoba with a unique opportunity to develop an exterior environment which is more sensitive and expressive of the native landscape vernacular of the Prairies. Utilizing indigenous materials in a landscape design for a demonstration site within the Athlete's Village at the University of Manitoba is an important first step towards endowing the University with an identity more in keeping with it's location on the Prairies. Indeed, an expression of the regional native landscape will facilitate the cultural understanding the games strive to impart, by giving a sense of place to all the participants.



## Acknowledgments

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-Rick.

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# Introduction

## Synopsis

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This practicum is an investigation of the intricacies associated with placemaking, and how landscape is intimately tied with place. The University of Manitoba Fort Garry campus will play host to thousands of international athletes and officials during the upcoming Pan-American Games, and as such should embody the 'gold standard' of quality to which these Games aspire. The premise of the project is that the landscape of the University of Manitoba should display the distinct characteristics of the region, in order to impart a strong 'sense of place' to the international officials and athletes who will be visiting the site. The focus for the project is the exhibition of the strength of regional landscape influences in the shaping of place as demonstrated through the design of a demonstration site within the Athlete's Village on the University of Manitoba Fort Garry campus. It is hoped that this initiative will provoke some thoughts and discussion regarding the direction of the development of the Fort Garry campus' exterior environment.

### The Pan-American Games

In 1940 the Argentine Olympic Committee called a congress of the 21 countries of the Western Hemisphere, for the purposes of discussing the creation of an international Games in addition to the Olympics. The purpose of these games would be to build new and closer bonds among the nations of the Americas, and give the amateur athletes in these countries additional international competition between the Olympic Games.

Sixteen National Olympic committees sent representatives to the meeting, and they decided to hold a Pan-American Games every four years beginning in 1942. World War II, however, presented a scheduling problem, and coupled with one or two other false starts it was nine years before the first Pan-American Games were opened in Buenos Aires, Argentina.

Twenty-one countries took part in 19 sports during the 1951 Pan-American Games. In 1999 there will be 42 nations and 41 sporting disciplines. There will be over six thousand athletes, coaches, trainers, and officials, over a thousand referees and judges, and at least two thousand media people from the Pan-American Nations. Additionally, there will be millions of spectators both in person and viewing live broadcasts, these will be the most televised Pan-American Games in history. These Games promise to be the largest celebration of sport and culture ever staged in Canada, according to the Pan-American Games Society.

The Pan-American Games have become a massive sporting event, the Pan-American Games Society ranks the 1999 Games on par with the 1984 and 1996 Olympics. Certainly the organization and execution of the 1999 Games will be an Olympian undertaking. There will be many construction projects initiated in preparation for these games. Existing sporting facilities will be upgraded, new facilities will be constructed, and of course the landscape will be modified to reflect this festive event. This construction will endow the city with an architectural legacy that will persist for years to come. Subsequently it is of paramount importance to plan these projects with clear, long term goals established, in order to assure that the legacy facilities and landscapes can be used and enjoyed by the local residents after the games are finished.

### **The University of Manitoba**

In July and August of 1999, the University of Manitoba Fort Garry Campus located in Winnipeg, Manitoba, Canada will serve as home for over six thousand international athletes, judges and officials during the Pan-American Games. The oldest academic institution in Western Canada, it will play host to many important events, the foremost being the site for the main Pan-American Village. Nearly six-thousand athletes, coaches, and officials will be housed within the highly secured perimeter which will surround the Athlete's Village within the campus. In addition, there will be daily influxes of hundreds of security personnel, media, dignitaries, and volunteers.

The University of Manitoba Campus will literally be in the international spotlight. The hosting of the Pan-American Games provides the University of Manitoba with a unique opportunity to develop an exterior environment which is more sensitive and expressive of the native landscape vernacular of the Prairie region, allowing this time in the spotlight to be memorable for both participants and guests. Utilizing indigenous materials in the expression of the landscape design for this Athlete's Village at the University of Manitoba is a step towards endowing the University with an identity more responsive to its location on the Prairies. Indeed, an expression of the regional landscape will facilitate the cultural understanding the games strive to impart, by giving a sense of place to all the participants.

## Goal:

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- demonstrate the potential landscape development opportunity of the Pan-American Games Athlete's Village for the University of Manitoba Fort Garry Campus through the design of a demonstration landscape within the Athlete's Village

## Objectives:

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- creation of a plan for exterior social spaces for both passive and active socialization uses by the resident population during the Pan-American Games
- account for possible future uses of the Fort Garry Campus' exterior environment after the Games are completed, focusing on the creation of a legacy landscape
- exhibit the potential of indigenous construction materials to impart a 'sense of place' to Pan-American Games guests through the design of a demonstration landscape on the Fort Garry Campus



## **(Re)Creating a Spirit of Place**

Early American campus plans have been the accepted status quo for all academic campuses. Harvard, Cambridge, Yale, Jefferson's classic University of Virginia, are some examples of campus layouts which were considered exemplars of their period, and were recreated in some form at other sites. Indeed, the planning ideas seen at Harvard and the University of Virginia were drawn upon for both Stoughton's and Mudry and Stovel's redevelopment of the Fort Garry Campus<sup>1</sup>. Both these schemes succeeded at creating a distinct sense of place for the university, however, they were precedents drawn from an American history of campus planning, and not fully celebrating the rich landscape character of the region. The schemes focus more on the aspect of the academic campus as a place removed from the community which surrounds it, as a place which is unto itself. The landscape aesthetic, which is typical on campuses of this Beaux Arts style, although not fully articulated in either scheme for the University of Manitoba is one of formal ordering and ornamental plantings, typically maintained in a very manicured condition to reinforce this notion of the campus as a singular entity.

Any academic landscape, regardless of location, cannot support a landscape ethic which requires extensive energy inputs. Heavily manicured landscapes, on a grandiose level, cannot be maintained in a static condition indefinitely. Financial restraint on the part of public education institutions have forced the evolution of a new landscape design ethic, based on low energy inputs, replacing the traditional notion of an exotic, manicured oasis.

Richard Dober (1985) echoes this sentiment noting that financial strain on the part of universities have created landscapes which are marked not so much by a grandiose landscape theme, but rather influenced by a landscape ethic which gives priority to saving and savouring existing plant materials and historic landscapes. In this context a cultivated green, or its equivalent, and a viable landscape not only signifies institutional continuity and fiscal stability, but a campus that cares about its image, traditions, physical environment, reasons for being, and the people it serves (Dober 1985: 191).

The natural landscape is a strong part of our culture. More so than architecture, the landscape can broadcast clues that locate a site ecologically. To see, sense, and appreciate the differentials of landscape, consciously or otherwise, is to participate in a universal concern for habitat, natural resources, and perhaps, world survival. A campus designed to illuminate such fundamental issues is consistent with higher education's teaching and research mandates (Dober 1985: 169).

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<sup>1</sup> Refer to Appendix 1 for a more complete history of the University of Manitoba.

The University of Manitoba campus planning schemes of the Olmsted brothers, Stoughton, and Mudry & Stovel were exemplars for the time, a time which has passed. The sporadic building initiatives on the campus have subverted any intent which these designers had, and has left the grand campus searching for a clearer expression of self. Now, with an international sporting event due to be staged on the site, an coherent image of the campus and its place within the larger context of the region is critical. A reintroduction of indigenous materials into the landscape of the campus will reinforce the uniqueness of the University of Manitoba Fort Garry campus as a special place.

“A place is not the ‘where’ of something: it is the location plus everything that occupies that location seen as an integrated and meaningful phenomenon.” (Relph 1981: 3)

The potential of the Fort Garry campus’ exterior environment has not been fully realized; it is on a crux. The rapid proliferation, and general placement of buildings in the 1960’s partially eroded the potential of the development of a distinct ‘place’ sensitive to its regional context. With the outdoor spaces on the campus poorly defined as a result of new building placements, the campus has not developed a unifying quality with regards to the exterior environment. It would be very easy and convenient to blindly adopt generic planning strategies which would serve to unite the campus with a flurry of catalogue street furniture, ornamental plantings, and popular international campus design trends. However, the character of the Fort Garry campus is more than just this, and must be reinforced. The initiative of the campus planning department to utilize native plantings in the campus landscape is an encouraging example of an attempt to maintain the regional character of the landscape. The premise under which University Centre was created<sup>2</sup> is an excellent paradigm for the continued shaping of the campus’ exterior environment and the strengthening of the distinct regional character of the place.

It would also be very easy for the Pan-American Games Operations Committee to utilize a generic design scheme to articulate the exterior environment of the Fort Garry Campus during the Games. Temporary elements installed to satisfy the basic needs of the participants, such as essential signage and perhaps some new benches could be the extent of

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<sup>2</sup>University Centre was created to be a focus for social life on the campus, a place where social contact and personal development could be fostered. The building contributed to the character of the campus and integrated into the overall building fabric of the campus.

the planning. A calculated assemblage of functional elements, fulfilling the base requirements, but lacking a strong visual impact, arousing no significant sentiments in the viewer.

A primary mandate of these 1999 Pan-American Games is cultural exchange, a message very strongly articulated in the Pan-American Games Bid Document. Creating a place within the confines of the Athlete's Village on the University of Manitoba's Fort Garry campus which, like the Olympic sites, celebrates the place through the revelation of the details of the place, will promote this cultural exchange. A common ground, an oasis away from the crush of the crowds and the roar of the pagentry, a place where the participants have opportunities to socialize, to meditate, or to stroll outdoors, wrapping themselves in the prairie summer. Above all, this place should provide the participants with a sense of 'hereness', a sense that they are on the Canadian prairies, a unique and special place.

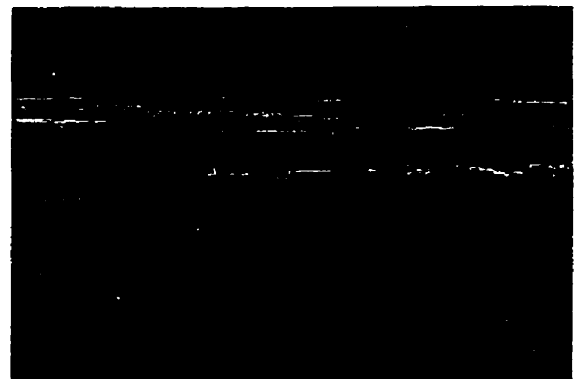
## Nature and the Spirit of Place

The essence, or spirit of a place is not something which reveals itself through a cursory examination of an area. It is something which must be uncovered gradually, through a firsthand experience of the details of the area. The spirit of a place, like a fine wine, has a different, subtle taste for each user, and as such cannot be presented as a series of generic absolute facts, but must be savoured carefully over time. The details of a place will have different meanings for each user, and as such each user must interpret the place on his or her own terms, and discover nuances about it which will serve to make the place special to them.

Details of an area are subtle threads which the designer must weave together to impart a character, a spirit of the place. Paving patterns, surface textures, articulation of vertical surfaces, and street furnishings are designed and placed in such a way as to capitalize upon and heighten the unique attributes of the place. Qualities of light, wind, terrain, water, and vegetation under the kaliedoscope of the overhead canopy which is the sky must be understood and articulated as essential characters of the place. The textures of natural elements must be revealed so that they can be caressed by the viewer's scanning eyes; the materials tell stories about the evolution of the place. The history of the place is also special, historical structures or artifacts mark special times in the life of a place and are essential threads in the tapestry of the site. There are a myriad of examples of details pertaining to place, however, there are some outstanding detail qualities which are more pertinent to the University of Manitoba and its geographical location.

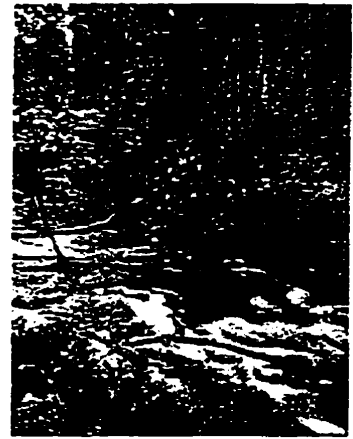
*This place is sky. Clouds thunder like gods across the vast blue roof, rolling and rumbling in a crushing chorus of sound. The sky is the home of the forever sunset, blazing out the day in a melodious melting of reds, oranges, and yellows. This place is sky.*

The prairie sky is an intimate part of the landscape, it provides a sense of the horizon, and acts as a varying ceiling to the vistas. The condition of the sky is also an important modulator of the ever-changing quality of light on the prairies. A grey, overcast sky can make a space seem incredibly dreary, while the same space can be bright and exciting if the sky is clear. Since the angle of the sun is constantly changing, the quality of light within a space changes with it. Morning sun is bright and crisp, revealing, while evening sun is soft, a melding of oranges and yellows and reds. Crisp morning sun will make the Eastern facades of buildings stand out, but as light diminishes with the evening, individual buildings can be seen in their entirety.



*figure 1: The sky forms a definite roof over the rolling prairie landscape (Otto/Comstock).*

The quality of light can sharpen or blur definitions, emphasize, silhouette, and reveal textures and colours. Light can be manipulated to bring out unsuspecting qualities of a space, entice users to see a space in a different way. Bright, warm colours can make spaces seem very cheerful when bathed in sunlight; however cold or neutral colours can drive people away, even more so when the sky is overcast. A lighted opening seen beyond darkened woods can be a dramatic vision and create a compelling focal point. Sunlight filtering through a canopy of trees is softened by the leaves, giving a serene quality to the space.



*figure 2: serenity within a shaded waterway (Gendron).*

Materials and surface textures are also revealed and enhanced by the quality of light. In the outdoor space, the ground plane depends intimately on the articulation of its surface to impart character and describe the landscape to the viewer. Fine ground textures emphasize the shape and the mass of the underlying ground, acting as more of a backdrop to the objects which rise from it. Coarse textures work oppositely, they call attention to the surface itself and become features rather than backgrounds. Floor textures can be used to guide movement through a space by channelling the choice of direction and preventing encroachment.

Materials can also tell stories about a place and how it has evolved. Indigenous building materials become associated with a place, such as Adobe clay in Mexico, redwoods in the Pacific Northwest, and the typical downtown district in most large cities is almost always associated with glass and steel. In Manitoba tyndalstone, or limestone, is the indigenous building material which is readily connected with the spirit of this place. Many buildings within the city of Winnipeg utilize limestone in their construction, and is mandated in the building code of the University of Manitoba.



*figure 3: the Avenue of the Elms, an historical artifact on the Fort Garry Campus (Gendron)*

A display of history, of the passage of time, through long wearing materials or seasonal variations of vegetation, is an important conveyance of the spirit of a place. Evidence of human usage over time, worn steps, pathways, or seating for example, imparts intimate feelings to the viewer, a stronger sense of connectedness with a place. Permanent site elements are indicators with which the passage of time can be measured. Contrasting old elements, paving materials or building styles for example, with the new gives the viewer an idea of the depth of time, a sense of the progress of history.

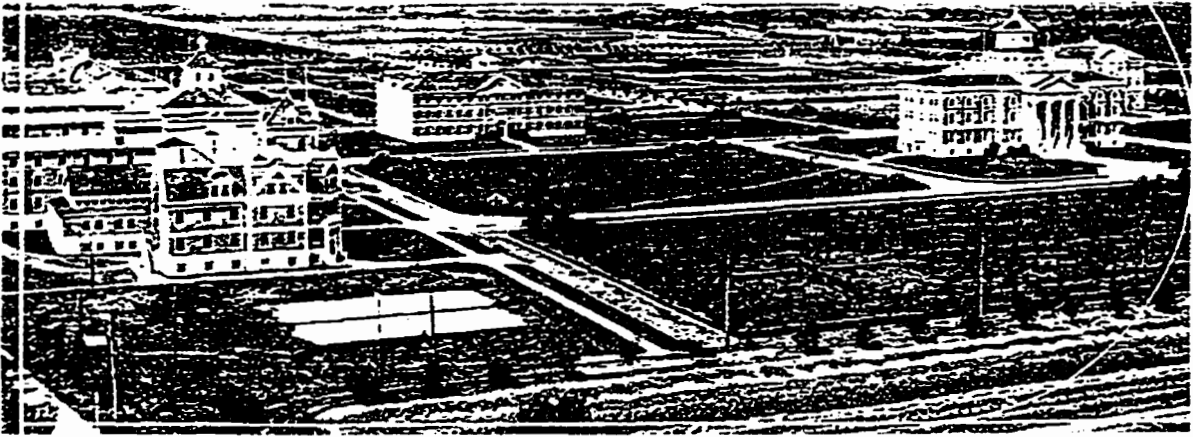


figure 4: buildings and structures tell the story of the evolution of a place, they are important markers of time (Ross)

*This place is trees. Buttresses of elms (*Ulmus americana* L.) support cathedral canopies along aged streets and wisend rivers; pinpoint of silver sunlight play on the ground below. Narcissistic willows (*Salix pentandra*) delicately stretch out from the riverbank, desperate for a glimpse of their reflection. Arcs of Manitoba maple (*Acer negundo* L.) explode from the ground in multi-stemmed clumps. Aspiring conifers, skyward stretching, harbingers of spring hopes during winter months. Oasis of aspen (*Populus tremuloides* Michx.) in sighing seas of grasses, shake their secrets out as the wind combs their canopies. This place is trees.*

The design of an outdoor environment must also depend on vegetation. Trees, shrubs, and forbs structure and influence outdoor spaces very effectively. Vegetation aids in focusing views and uniting a landscape through a continuity of materials. Vegetation takes on a wide variety of forms under the influence of the natural environment, and these forms changes as the plant grows, ages, and is impacted by its setting. However, each species has its own habit of growth, its own way in which the branches, leaves, and buds are connected, and this pattern produces the distinct characteristics, mass, and textures of the species. These characteristics vary for plant species depending upon the vegetation zone in which it naturally thrives, yet all impart character to a place.



figure 5: aspen (*Populus tremuloides*)  
(Johnson et al.)



figure 6: riverbank vegetation  
(Thomsen)

*This place is wind. Sighing through canopies, sheepishly showing itself in grass oceans; wordlessly winding itself through streets. It can caress like a lover on hot, tired days, and steal the breath from your body when cold days come calling. The sheltering green calms it down to a whisper, wrapping the forest in a sheltering silence. This place is wind.*

The wind is the voice of the prairie landscape; it speaks through the vegetation. The wind whispers through the leaves of the trees and sighs through the meadow grasses. When it is gusting, it howls like a banshee; becoming a reconing force as it crashes through the landscape. It is a chaotic element, difficult to describe in text and can only be fully appreciated through experience.

*This place is water. Veinlike waterways snake through the region. Churning liquid goliaths, they mask their silent history beneath a rolling surface, exposing themselves in a myriad of lakes and marshes. Torrential rains swell the mercurial highways to seething monsters of simmering rage, venting their frustrations on the terrain, settling back once their point is made. This place is water.*

An especially pertinent detail of place, due to the location of the University Manitoba in relation to the Red River, is water. The Red River encircles the university on three sides, but is rarely seen from the campus. Water is a primary element of landscape design. It has been used by craftsmen for centuries, in a myriad of forms. Water has an element of chaos to it, falling and splashing in unpredictable ways, which is perhaps what makes it so magnetic an attraction. Moving water gives a sense of vibrancy, of life, to a place. It affects touch, smell, and sight, and infuses hot areas with a sense of coolness. The sound of running water can be rejuvenating and can mask out any unwanted background noises which may interrupt the rejuvenation quality of the space. Still water infuses a space with a sense of calmness, serenity. A smooth surface of water will act like a mirror, capturing and reflecting the changing sky and any nearby features. Given the opportunity, people will frequently stare into still water in times of introspection.

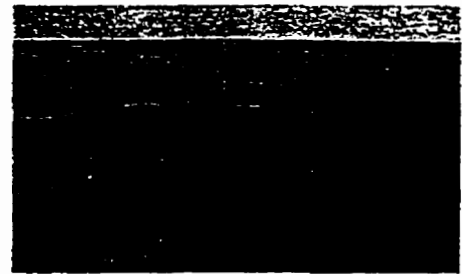


figure 7: grasslands (Johnson et al.)



figure 8: water plays an integral role in establishing the character of the region (Meyer).



figure 9: sky reflected in a tree-framed river (Thomsen)

*This place is people. A chorus of cultures, singing as one, rainbows of residents make up the place. A patchwork of neighbourhoods build something greater than the whole, something more expressive. Food, dance, clothing, languages, endless facets to the gem. People who have imparted a rich history to the place, footprints of buildings, writings, paintings; tangible legacies, symphonies for the senses. This place is people.*

Landscapes also pulse daily with human rhythms, affording each time of day, week, or season, its own distinctive temporal character. Lynch (1984: 158) indicates that “Wall Street on a Sunday is very different from Wall Street at a weekday noon.”

The natural environment is the key to the ephemeral character of a place. It is the personality which either attracts or rebuffs visitors and potential residents. These previous aspects are just some of the qualities of the place, but they are distinct qualities. They are the characteristics which stand out from the others, the tools which shape the memories that visitors make. Site design, regardless of location, should reveal these qualities to users. Architecture lost under a hegemony of style is still architecture, but a landscape reduced to a ‘flatscape’ is in effect, a silencing of character of a place.

These ephemeral qualities of the place are not readily apparent in the interior landscape of the Fort Garry campus, and need to be reasserted. One has to go to the perimeter of the campus, the banks of the adjacent Red River, to get a sense of the richness of the place. Celebrating the details makes places special, and make them distinct in the eyes of the participants. The role of nature, in the context of landscape, is to bring voice to the character of the place, to celebrate it through an expression of the details which are specific to it.



figure 10: outdoor spaces are used extensively when the weather is nice (Gendron)



figure 11: areas change their function depending on the event or time of day (Lynch)



# 2

## The Pan-American Games

## Introduction

### *Unum cum virtutie multorum*

#### **“One with the strength of many”**

This is the motto for the City of Winnipeg. It has also been selected as the theme for the upcoming 1999 Pan American Games, to which Winnipeg will play host. The University of Manitoba's Fort Garry Campus, Western Canada's oldest post secondary academic institution, will be the main site of the Pan American Games Athlete's Village. The Village will be home to over six thousand referees, judges, athletes, coaches, trainers and officials for 14 days. Every possible amenity will be provided for the Village residents: eating, sleeping, shopping, entertainment, tourist information, banking, communications, and socializing to promote cultural exchange. The accompanying iconography of banners, flags, posters, and videos will contribute the requisite layers of pageantry and celebration.

Security at the Village will be very high during the Pan-American Games; the residents will be restricted as to where they can circulate within the campus by a 3 metre high chain link security fence. It is also assumed that any scheduled tours of the surrounding City of Winnipeg will be heavily chaperoned. In order to mentally prepare themselves for their events, or even to escape from the expected high levels of pageantry, the athletes and supporting staff should have outdoor spaces where they can be secluded for a few hours. The Athlete's Village residents should have the opportunity for informal gatherings outdoors, without being heavily supervised by security staff.

Athletes engage in 'mental practice' before their events. They run through the event in their minds, reviewing all of their moves, critiquing their performance. It is a type of meditation integral to the performance. This meditation focuses the athlete's concentration, putting them in a state of mind colloquially known as "the zone", where all other distractions are tuned out and their attention is focused on the event and the performance. This can be very trying for the athlete, and once the event is completed they are both mentally and physically exhausted.

Typically, in many sporting events athletes have no place of seclusion where they can prepare for events in solitude away from the bland confines of a dormitory room. Conversely, once the event is completed, the athlete should be allowed some personal time for reflection, away from the hordes of spectators and media.

The Berlin and Helsinki Olympic Athlete's Villages allowed the natural landscape of the region to permeate the sites, which in turn could have provided outdoor refuges for the visiting athletes. There were no media, no gazing crowds, no profuse sponsor advertisements, just simple housing facilities clustered into the natural landscape. This is the precedent which should be established for the 1999 Pan-American Games Athlete's Village. The construction of an oasis, a garden with spaces for mediation and relaxation away from the madding crowds where the athletes can relax and socialize outdoors, experiencing the delights of the place.

## Precedents

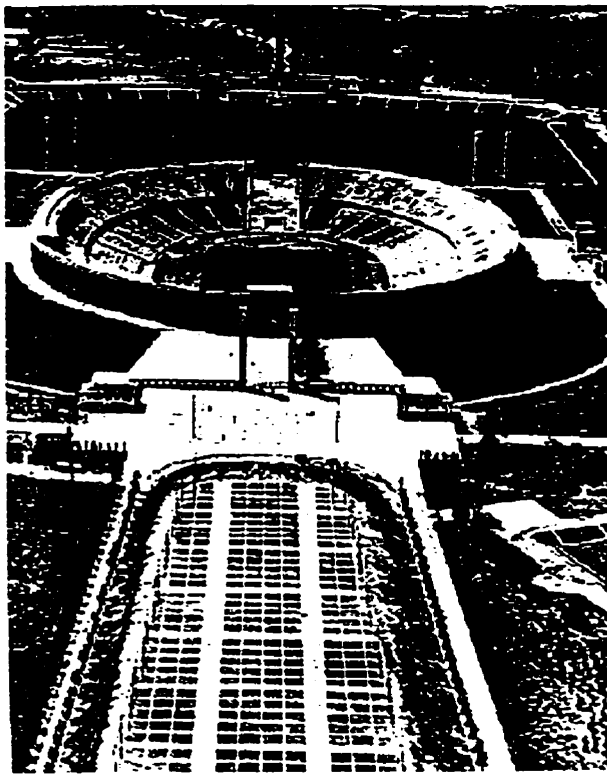
The Olympics have traditionally been a very high profile gathering of international athletes and officials. Each country sends their best of the best athletes to compete in an atmosphere of peace and friendship. It is the perception of the Olympics as something greater than any other sporting event, even as something special in the world, coupled with a long and distinguished sporting tradition that motivates the host countries to create venues and accommodations which will leave a lasting impression in the minds of the athletes and dignitaries, as well as the viewing public. The host countries recognize the fact that when history is written, the Olympic games are typically named after the country and city in which they are staged. Should the games go poorly, as they did in Munich in 1972, the host city will bear that cross for decades to come.

The enormous crowds of spectators and coupled with the international focus and legacy prompts the host countries to produce venues which will be remembered for years to come. The venue designers must be keenly aware that imparting a sense of place on the users and spectators is crucial to establishing lasting memories which establish the host city as unique in all the world. The following Olympic sites are some in which the designers were highly successful in establishing the uniqueness of the region in which the games were hosted, and also in creating an ease of navigation and orientation throughout the site.

### Berlin 1936

The 1936 Olympic Games still stand out as one of the most notable on record. The controversy surrounding participants, notably American Jesse Owens, and the incredible design for the complex mark these games still. The German designers had an incredible gift for instilling a sense of place to the user through the linking of culture and building, all tied together with a simple, but effective site design.

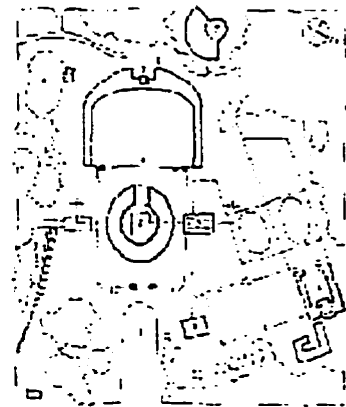
Laid out on a strong horizontal axis, the design of the Berlin Olympic complex relied on strong vertical elements to overwhelm the participants and attendees with a sense of grandeur. The monstrous scale of the towers and stone pylons, in conjunction with the broad entry promenade, the wide, massive stairs, the monumental scale of the buildings, all were intended to impress and intimidate visitors to the site. It was an exhibition of the increasing German power at the time.



*figure 12: Olympic Arena and entry plaza, east-west axis (Gordon)*

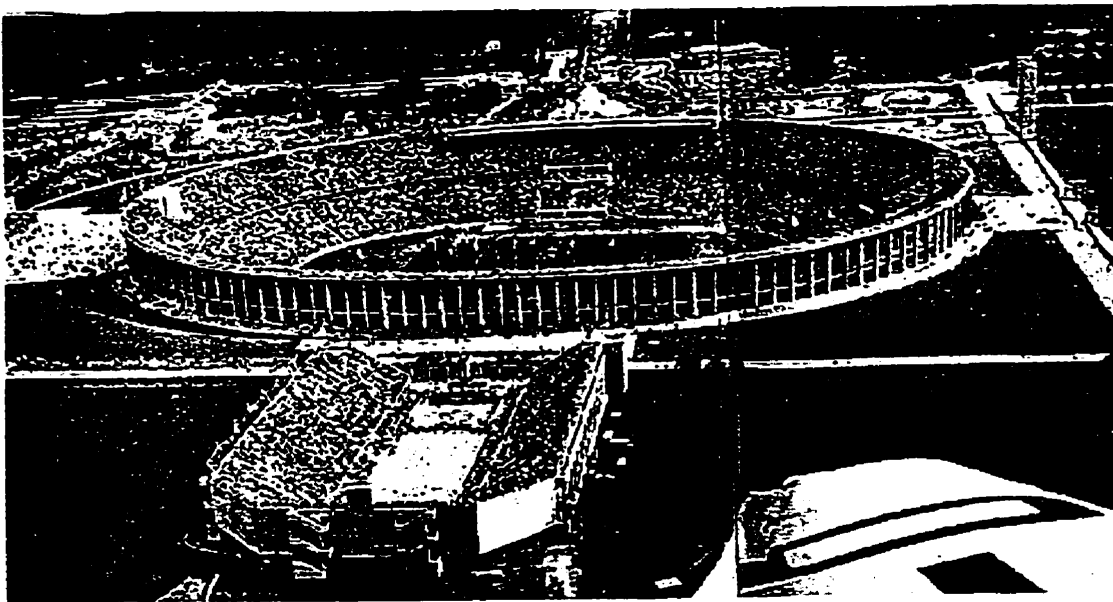
In addition to this, around the sports complex were statuary and relief carvings glorifying Aryan athletic youth. While the statuary itself may not have been significant, the calculated placement of the objects in areas chosen for their significant focal interest was a brilliant stroke of planning. As the users traversed the site, they were confronted with visual images of the German culture at every turn, literally.

The axial design of the complex, with its reliance on grand termination points and managed vistas,



*figure 13: site plan of the Reichssportfeld, the 1936 Olympic sporting complex in Germany (Gordon)*

may have appeared quite formal to the users; it was quite easy to navigate because of these qualities. The crowds which surged through the complex during the summer days utilized the axes and especially the dramatic vertical pylons which terminated them, as navigational points of reference. These monstrous pylons provided an easy wayfinding system enabling the visitors to navigate from venue to venue quite easily.



*figure 14: Olympic Arena, north-south axis (Gordon)*

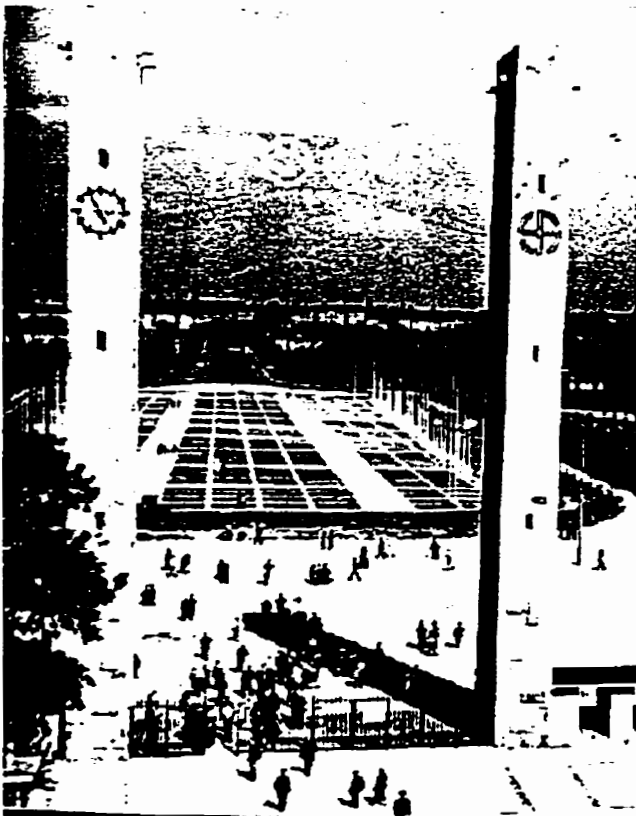


figure 15: entry features to the sports complex, excellent navigational features (Gordon)



figure 17: bell tower as termination to the East-West axis (Gordon)

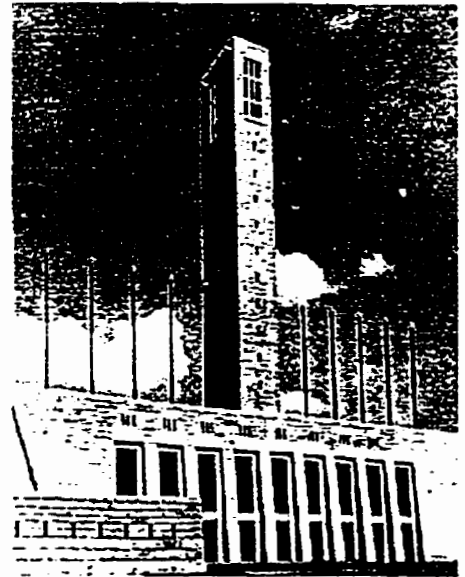


figure 16: monumental scale of bell tower (Gordon)

The German organizers also constructed a lavish Olympic Village for the attending athletes, one hundred and sixty tiled roofed bungalows in the lake district of nearby Doberitz, just west of Berlin. Clustered around a long, handsomely landscaped commons, the German designers spared no expense in equipping the village with every modern need and carefully integrating the architecture into the gently rolling site of lawns, lakes, and birch groves. The designers were keenly aware of the intimate connection of landscape and place, and fully exploited it in the creation of this athlete's village.

This village, unlike the one in Los Angeles in 1932, was not intended as a temporary facility. It would be used after the Games as a German officers quarters, further incentive to plan the facility with the greatest possible care.



*Olympic Village*

1. Entrance 2. Commons 3. Hall of Nations  
4. Training facilities 5. Commandant's house

*figure 18: site plan to the 1936 Athlete's Village (Gordon)*



*figure 19: Athlete's Village as constructed, sympathetic to the existing landscape features (Gordon)*

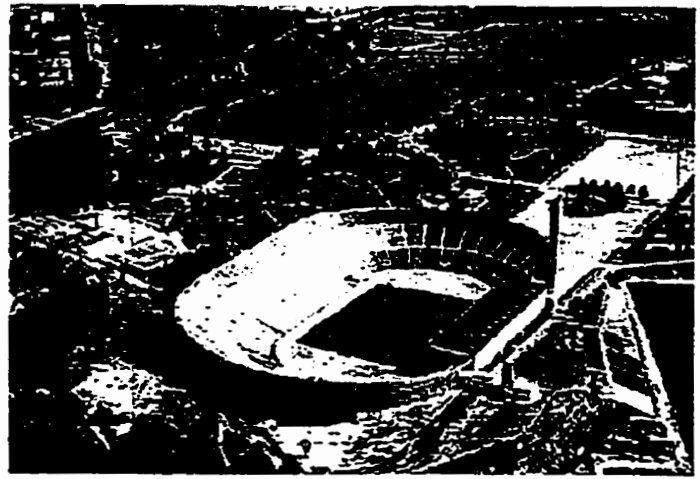


*figure 20: typical residence building, integrated into the existing landscape (Gordon)*

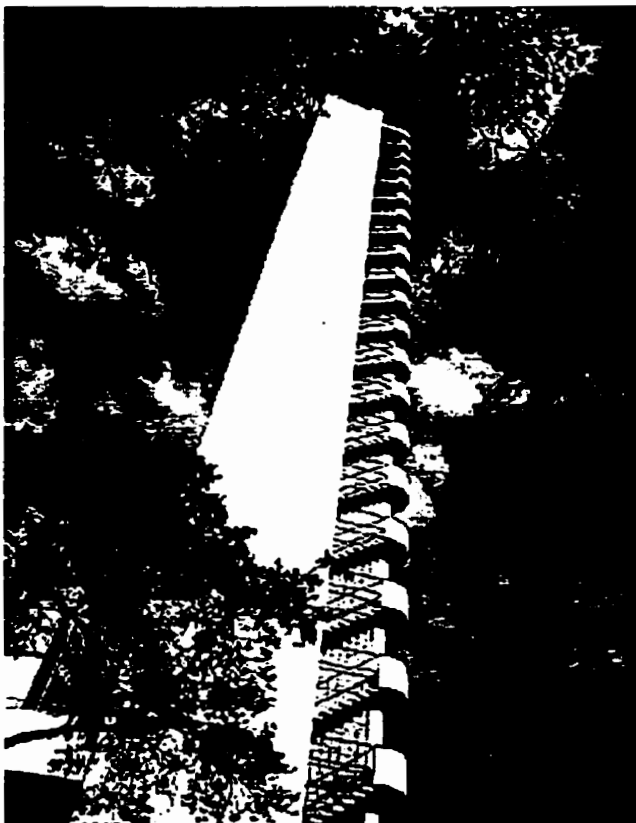
## Helsinki 1952

The Helsinki Olympics are notable, architecturally, for their common vocabulary of forms and materials. This holistic attention to the design created a “fresh” appeal to the architecture, and strongly contributed in the creation of a unique essence of place.

The architectural form of the tower was utilized again in these Olympic games. Architect Yrjö Lindegren designed a tower which, like Germany in 1936, was a commanding presence and a readily available object of orientation for the Olympic stadium site. The tower gives a vertical tension to an otherwise horizontal arrangement, and firmly establishes itself in the area of main Olympic activity.



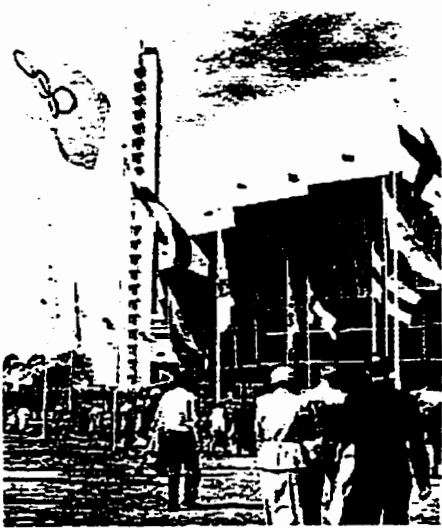
*figure 21: Olympic stadium in Helsinki (Gordon)*



*figure 22: Lindegren's tower (Gordon)*

The tower was an amazing 20 storeys in height, fixed by the length of Finnish athlete Matti Järvinen's 1932 gold medal javelin throw of 72.7 metres. An exterior staircase reached up to the top where an observation platform offered a superb view of the whole region. Unlike the Germans, who utilized the vertical form to instill a sense of awe and intimidate users, the Finnish tower opened up the landscape to all the users, and through this imparted a unique sense of the 'place' to the viewers.





*figure 23: Lindegren's tower was also an excellent orientation device (Gordon)*

The Olympic village in Helsinki was also quite spectacular. Like the German village, it had been well integrated into the rolling terrain of the region and carefully integrated with the preexisting roadway pattern. Notably, existing trees on the site were preserved wherever possible, enabling a sense of maturity in the complex, rather than a "freshly constructed" immaturity. The designers of the village, as with the 1936 Germany Olympics, fully intended the facility to be utilized as permanent self-sustaining residential quarters after the games, and kept this in mind when designing. This idea of reuse after the games is apparent with in the careful considerations the designers took when laying out the complex and its amenities.



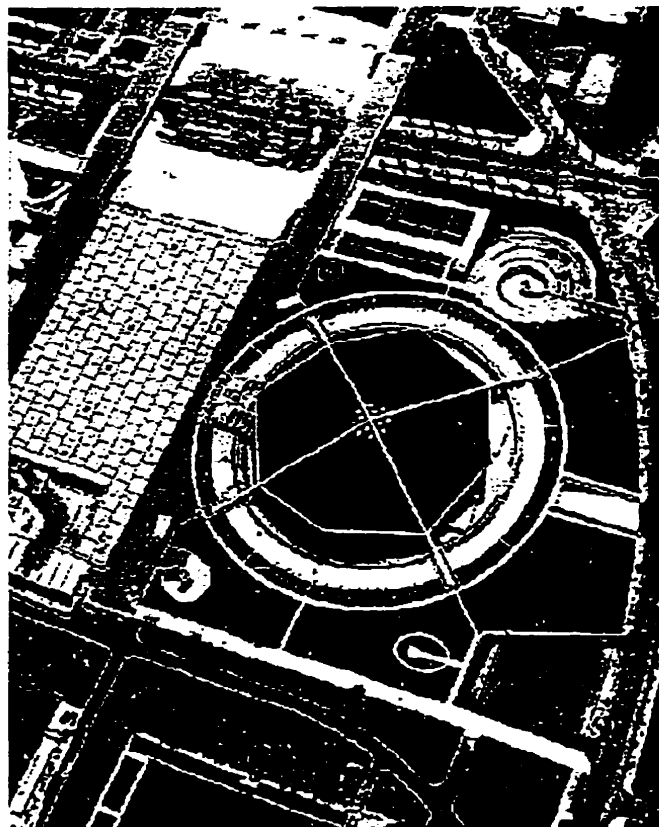
*figure 24: 1952 Athlete's Village (Gordon)*



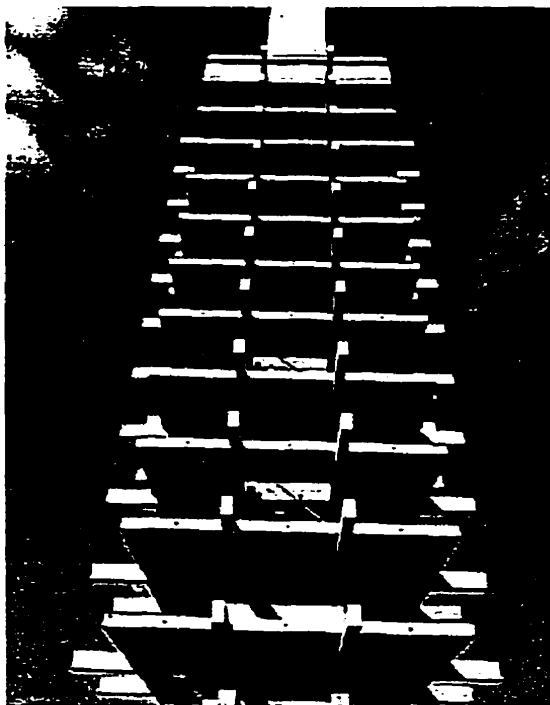
*figure 25: the design of the Village required the retention of the existing trees (Gordon)*

## Tokyo 1964

By this point in time, the idea of using a tower in Olympic site planning had worked its way into the realm of tradition and the Japanese hosts were not exempt from this tradition. Located at Komanza Olympic park's north end was a beautifully sculptured Control Tower, 76 metres tall, which was slowly revealed to the visitor as the 92 metre wide steps to the plaza were ascended. The tower was designed in precast concrete and was a lineal descendant of the tower at the Helsinki Olympics. Unlike the previous towers, however, the Control Tower was intentionally designed to reflect traditional Japanese timber construction. The design style, like previous Olympic towers, instills a strong sense of place in users of the plaza, and when taken in context with the surrounding plaza, is an excellent reflection of Japanese culture. At night, the tower was lit with blue and white lighting, becoming a strong focal point in the night-time landscape.

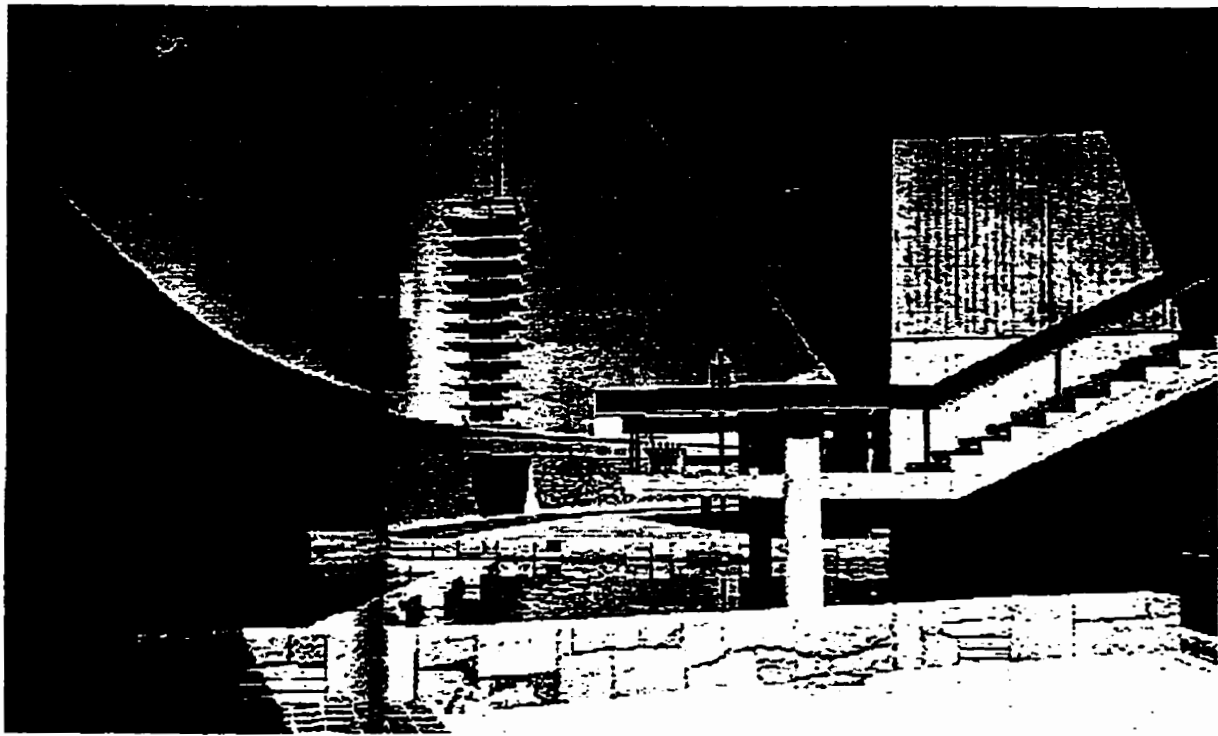


*figure 26: Komanza Olympic Park in Tokyo (Gordon)*



*figure 27: the Control Tower, concrete cast to simulate wood construction (Gordon)*

Other dramatic elements of the Tokyo Olympics, that could almost be considered a cultural cliché, were the giant scoreboards and electronic timekeeping devices. The main scoreboard at the Meiji Stadium was an amazing 11.2 metres high, 35 metres long, and utilized 17,500 individual bulbs. These electronic devices, which are so readily associated with Japanese culture today, produced a strong connection with all things Japanese, and set the place apart from other Olympic complexes.



*figure 28: architectural design is expressive of the culture of a place (Gordon)*

Another significant feature of the Tokyo games was the unfailing hospitality of the Japanese hosts. Place is more than a collection of buildings within a landscape, place is also about people. The friendliness of the Japanese hosts set them apart from other host cities, and reinforced the idea of culture being tied to place .

#### Mexico 1968

The Mexico Olympics set another precedent in Olympic planning. In the congested Mexico City the sporting venues were scattered throughout the metropolis, separated by as much as 10 kilometres. In order to facilitate the orientation and wayfinding of the attendees, officials designated each venue route with a different colour of banner which, in turn, were colour coded to information maps. The overwhelming impression was of a city in carnival (Gordon 1983: 99). Each venue was designated by huge balloons, or fibreglass figures that whimsically distinguished the different sports. All of the signage on streetcorners and plazas, buses and lampposts, kiosks and marquees, took the form of graphic symbols which replaced the words in many languages.



*figure 29: banners lining the streets of Mexico City in 1968 (Gordon)*

The decentralization of these games had an unexpected benefit also. The various existing facilities throughout the city were put to maximum use and daily visitors were coaxed into the bustling city, fostering cultural and social encounters on every level.

### Munich 1972

Munich was a prime example of a landscape reclamation project. The site was originally an abandoned airstrip approximately 5 kilometres from the centre of the city. Construction of the complex began in 1968, and the 500 hectare site was basically featureless save for a new television tower, a skating rink, and some heaps of construction rubble at the southern end of the site. In 1972 when the games opened, the area had been transformed into a landscape of hills, hollows, water, paths, trees, meadows and lawns. The rubble on the site was recontoured into a small mountain, resodded and planted with trees, and native wildflowers. At the base of this mountain, a lake was created by damming a section of the Nymphenburger Canal, which ran diagonally across the site. Along the lakefront were the 3 principal new Olympic arenas, specifically designed so that none of the structures dominated the landscape. "An Olympic Games in the Green" was the design imperative for the Olympic site. Structures were designed to fit harmoniously into the landscape, rather than a dramatic domination of it. Even the massive tensile roof structure was evocative of a

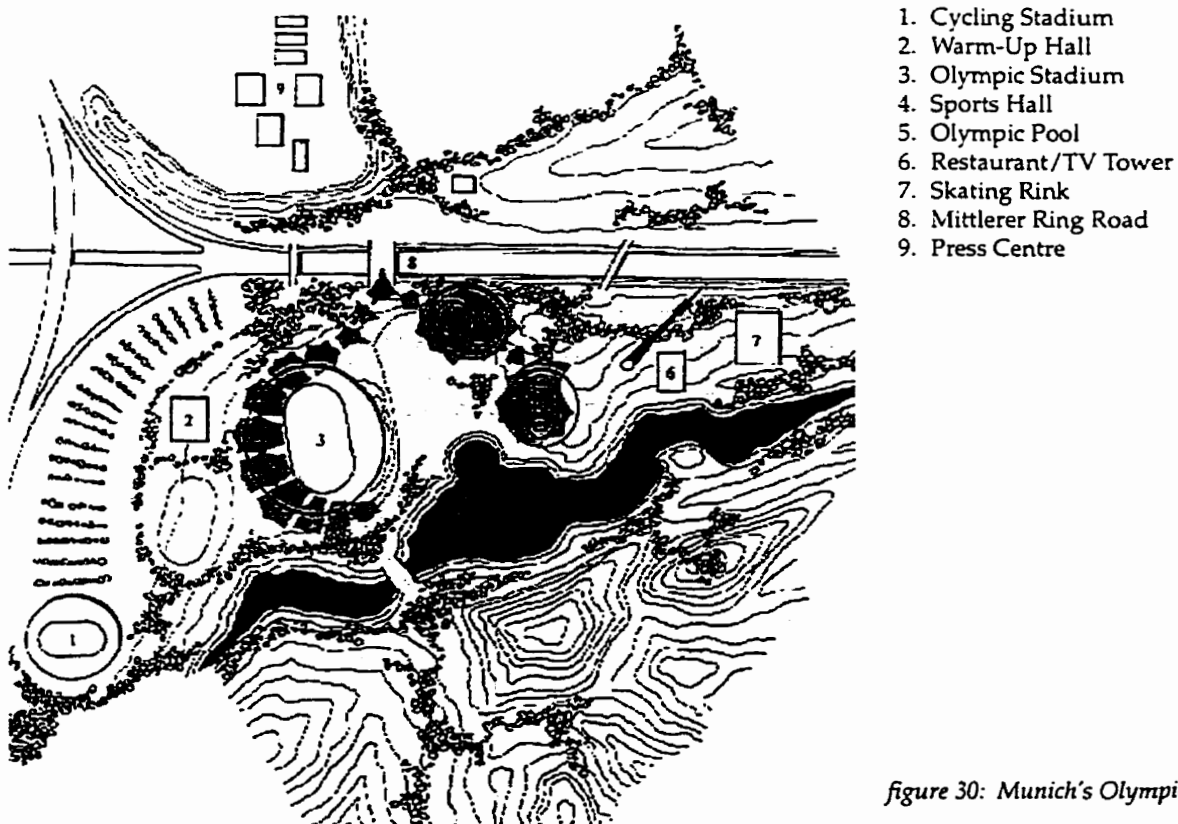
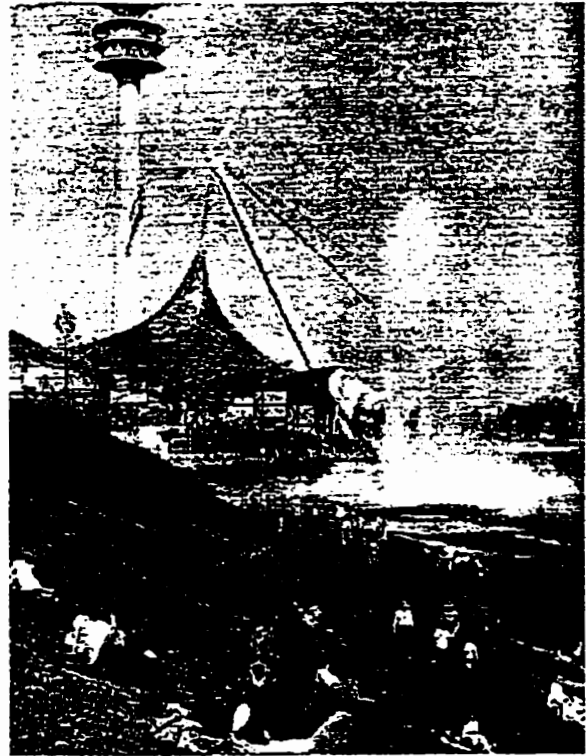


figure 30: Munich's Olympic Park (Gordon)

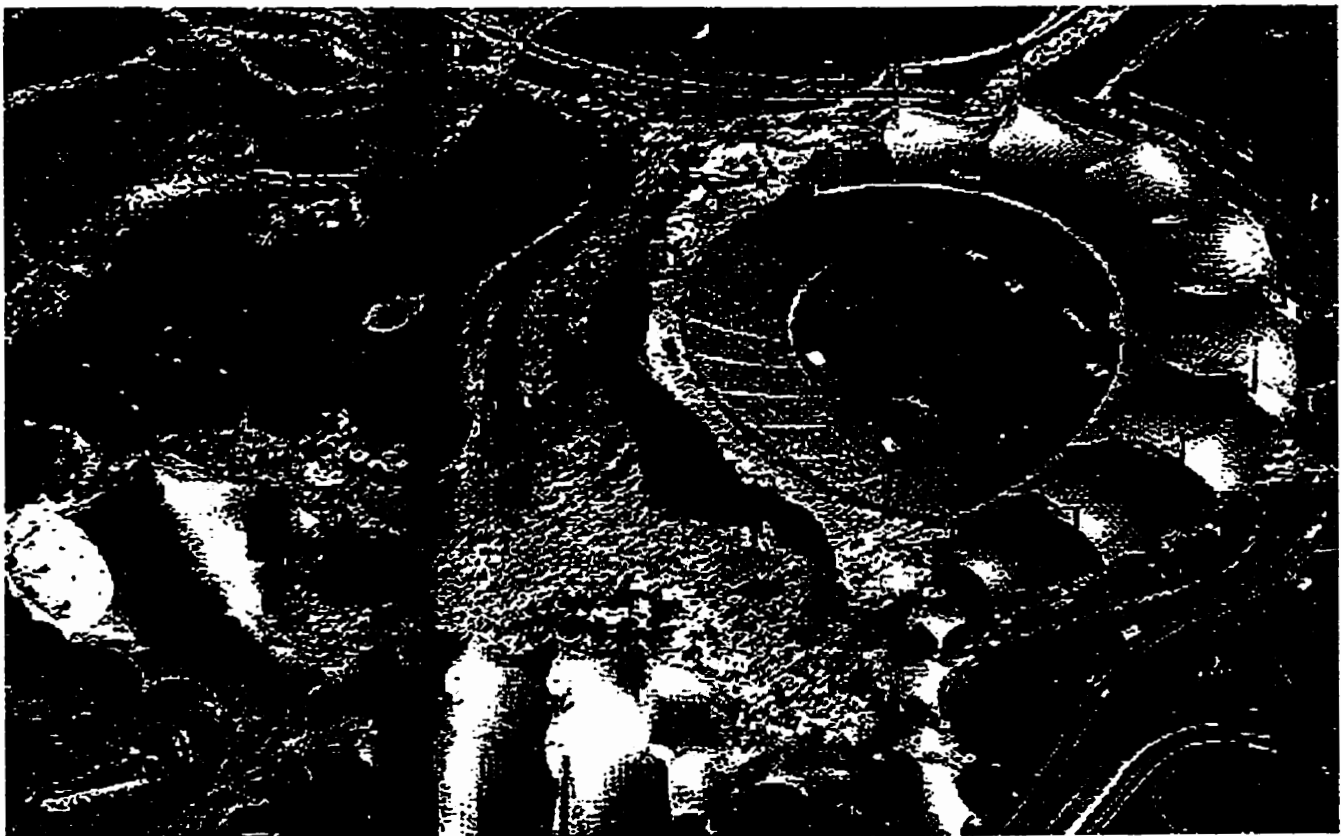
mountain image, or even a giant wave.

A landscaped plaza occurs Northwest of the largest structure, the new Olympic Stadium. As a central gathering spot, the plaza acts as the vertical structures did in the previous games, providing a point of reference, an area where the users can orient themselves and socialize.

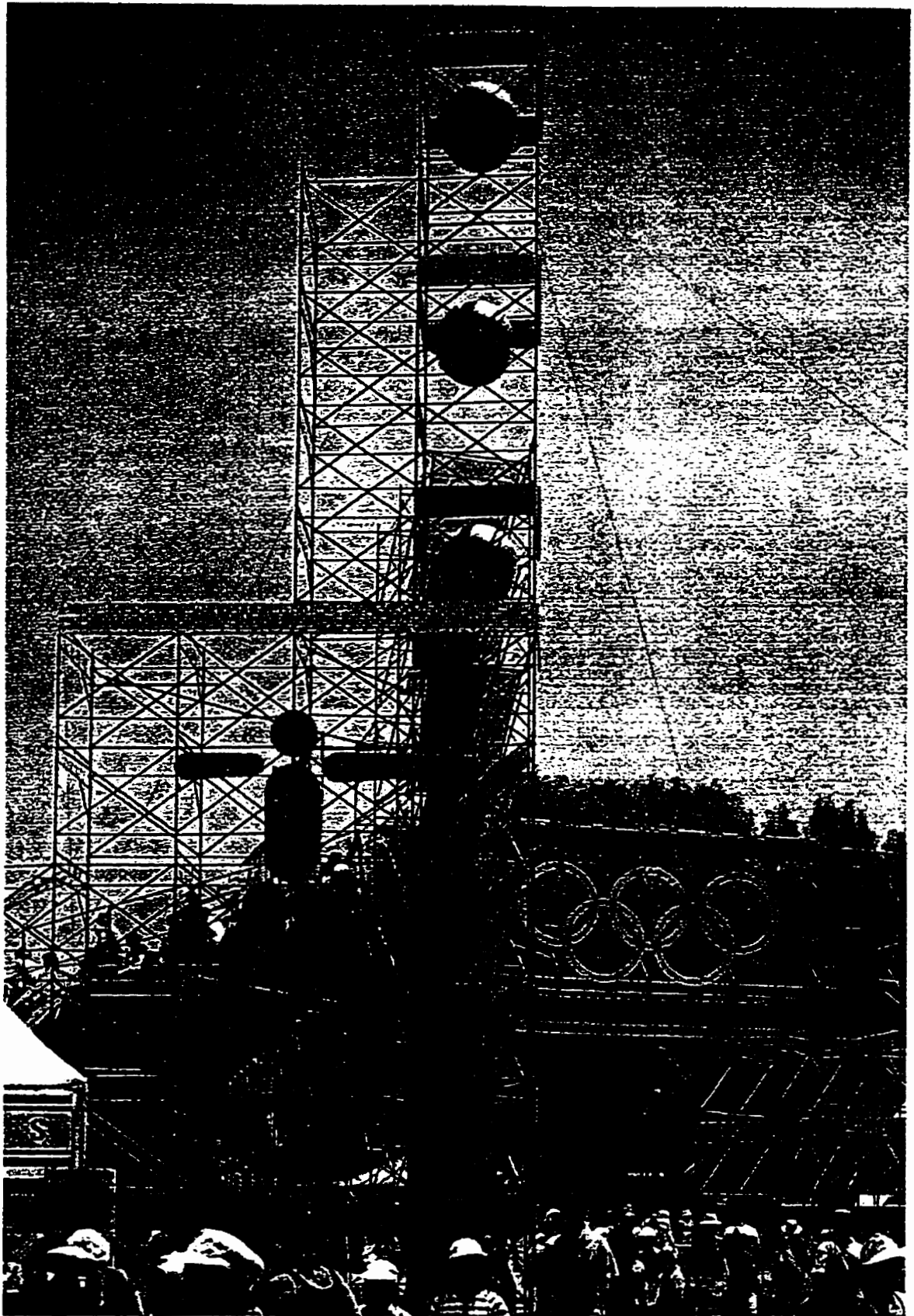
Munich organizers also created a “Spielstrasse” or Play Street where visitors had a chance to view performers on a more intimate scale than the sporting venues. The tiny stages and lighthearted performances on the Spielstrasse were intended to offset the “heroic pathos” (Gordon 1983: 128) of the competitions in the main Olympic arenas. As with the Tokyo Games in 1964, the Spielstrasse provided visitors with a chance to experience the German culture on a more intimate scale, and thus gain a better understanding of the place through the people.



*figure 31: the renovated landscape afforded the opportunity for plenty of socialization (Gordon)*



*figure 32: areal view of the renovated Munich Olympic Park (Gordon)*



*figure 33: rented, 'off the shelf' components customized to create a distinct identity for the 1984 Olympics (Del Zoppo)*

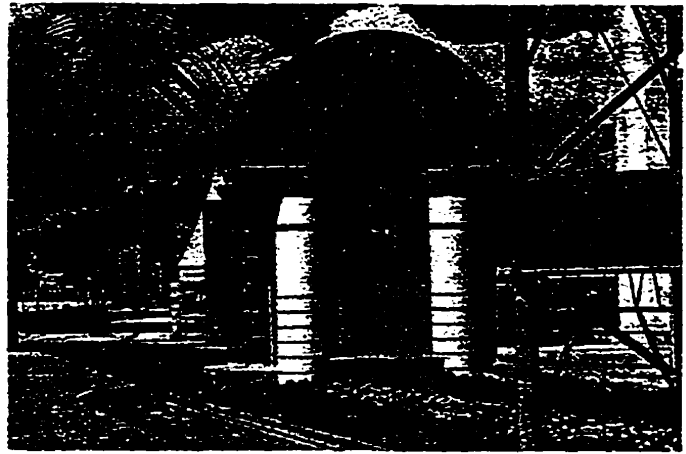
## Los Angeles 1984

Los Angeles had hosted the Summer Olympic Games in 1932. There was a massive building program then, leaving legacy facilities which could be capitalized on for the 1984 Games. Consequently, much of the construction for these Games took the form of temporary installations, “Olympic cladding” if you will. The architects created an exhaustive vocabulary for these temporary elements, referring to them as a “kit of parts”, which were essentially off the shelf construction components, such as sonotubes and scaffolding, painted in a dizzying array of colours. Keenly aware that these games would be widely televised, the designers used vivid colours which caught the eye and stood out from the everyday urban colours of asphalt and stone. Each venue site had a colour scheme within the prescribed palette, relating to the specific sport, and when combined with the massive structures of scaffolding, created a distinct presence within the city. The sporting facilities in Los Angeles were spread out over the city, like Mexico in 1968, and the distinctive venue colours and scaffolding towers provided easy navigation for spectators.



*figure 34: temporary elements used to create a main street in the Athlete's Village (Del Zoppo)*

The designers developed the theme of “urban confetti” for the construction of the temporary elements. This informed the choice of the vibrant colours and also the seemingly random placement of the elements. This theme captured the festive spirit of the Olympics, and was clearly articulated in the design. Like confetti, these elements could be cleaned up after the Games were completed.



*figure 35: customized entry feature (Del Zoppo)*

This ephemeral quality of the elements was also important in the establishment of ‘place’ for these Olympics. The architects utilized every movie set construction shop in Hollywood for the production of their kit of parts, a message which is completely appropriate for the setting of



*figure 36: another distinct street in the Athlete's Village (Del Zoppo)*

the Games. Los Angeles can be thought of as an ephemeral city with movie sets being erected and removed almost on a daily basis. The majority of the life within Los Angeles transpires behind a wheel or in a downtown office, a very transient and temporary culture on the whole.

The use of temporary structures and vibrant colour served the

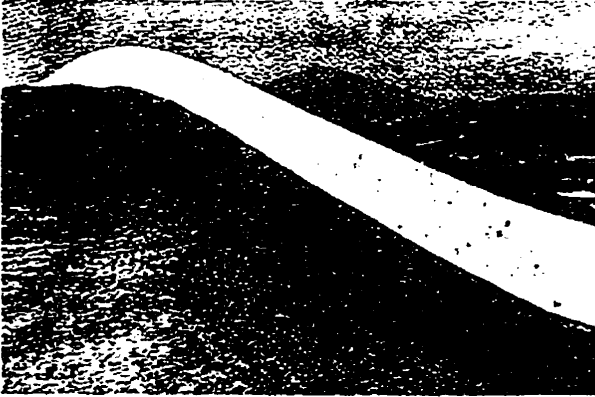
Olympic villages especially well. The campuses for the University of Southern California and the University of California-Los Angeles were utilized as Village sites. The temporary elements fit quite well with the exterior environment of the campuses, and served to create distinct spaces within each. Each village had a “main street” and by utilizing the elements in conjunction with banners, large plastic spheres and cubes within the scaffolding and trays of annuals, the scale of each street was sufficiently reduced to that of a intimate, “village like” space. The colours and festive cladding of the elements also masked the fact that the Olympic



*figure 37: chain link fence cladding disguises the secured perimeter (Del Zoppo)*



villages were high security areas. Without the decoration, they could have easily passed for detention camps. The architects creatively applied the confetti theme to the perimeter fencing of the Villages, utilizing fabric brightly painted with random confetti elements such as stars, squares, circles and triangles.



*figure 38: the confetti theme applied to the fence cladding, a 'Valley Curtain' -like effect (Del Zoppo)*

The planning of these Olympic games sites are very similar in theme, yet vary considerably in the details. Designing for multiple cultures is difficult, and not entirely practical. The end result could translate into a design which is not based on the richness of the resident culture of the place, but on the blandness of simple, generic visual elements, or visual cues. The key to a unique site design is to include enough easily understood cues in a design which celebrates the culture and people of the place. There is a distinct cultural expression conveyed through each of these Olympic site designs. There is no genericism in any of these venues, each exhibits the rich character of the host region. The sites impart a clear sense of hereness to the user; convey the idea that these sites are a special place. Each of the sites balance the physical and ephemeral details of the place, and convey these details to the users.

Most of the previous Olympic sites are set apart by dramatic vertical elements which are usually present at the main athletic venue, the stadium. While these towers vary from country to country, era to era, they all serve the same basic purpose within the collected Olympic complexes: they are dramatic vertical elements punctuating an otherwise horizontal layout; ideal as reference points and can also be strong cultural indicators. When used in conjunction with a strong axial layout, as was the case in Germany in 1936, they become even more effective as reference points. Indeed, the 1936 Berlin Olympics stand out as a hallmark of good wayfinding because of its commitment to exaggerated architecture infused with the ideals of fascism.

There is also a great sense of pride and enthusiasm on the part of the host nation. Great efforts are made to present the best qualities of the place; a celebration of culture and landscape. Each venue uses landscape to heighten the richness of the place. Germany, Helsinki, and Los Angeles are perhaps the best examples of the importance of landscape in conveying the character of the place. The athlete's villages, especially, are very sympathetic to the natural landscape.

3

The University of Manitoba

## University of Manitoba Regional Setting

The University of Manitoba campus is situated on the extreme eastern end of the Aspen Parkland region of the Western Boreal Forest, in the southern portion of the City of Winnipeg, Manitoba, Canada.

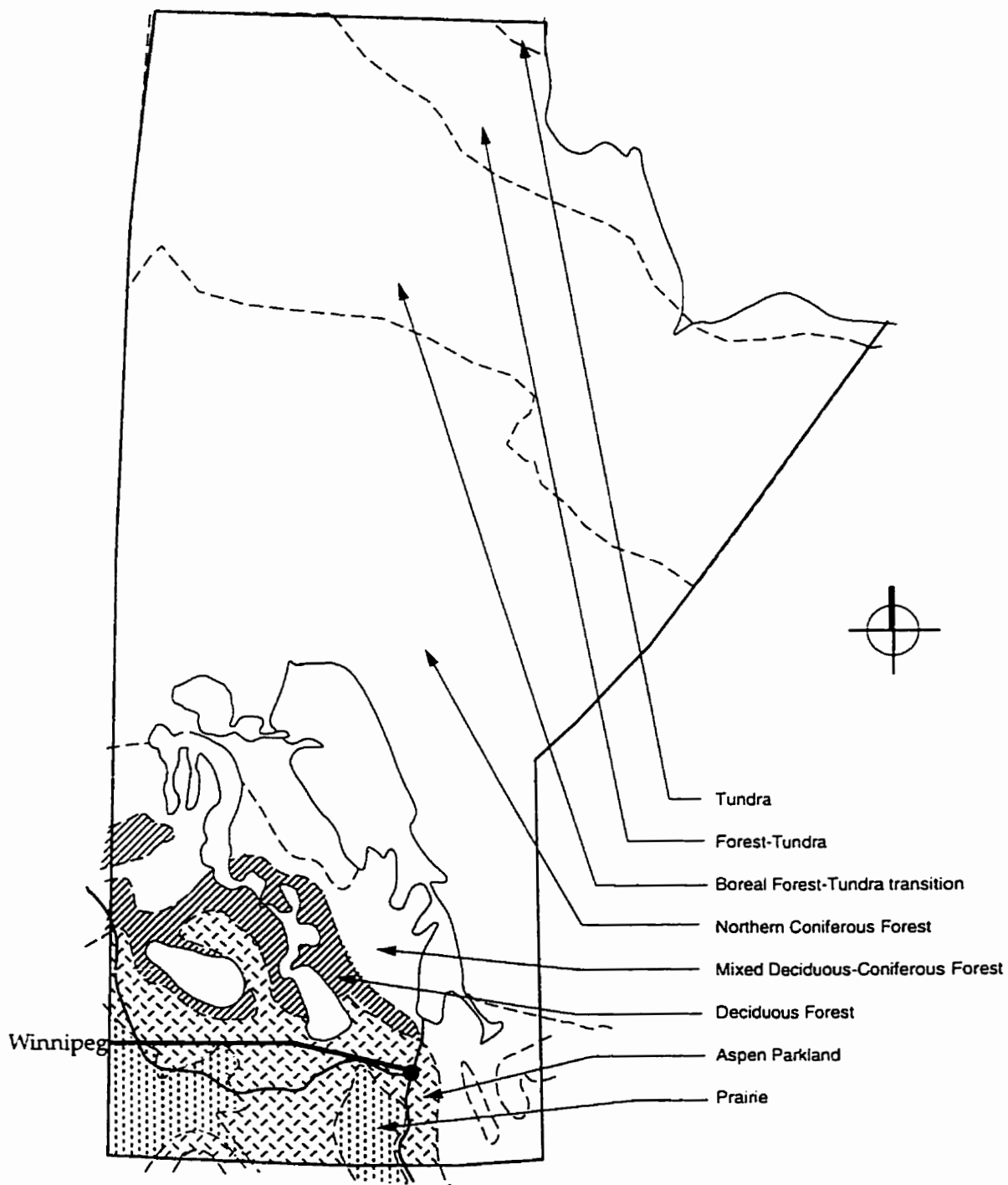


figure 39: the Province of Manitoba, showing the location of Winnipeg (Zoloadeski)

## University of Manitoba Urban Setting

The 277.22 hectare Fort Garry campus is located approximately 12 kilometres south of downtown Winnipeg. The Fort Garry campus has been in existence since 1877, making it the oldest post-secondary institution in Western Canada. The main building development is confined to approximately 66 hectares, approximately one quarter of the total property, located towards the centre of the campus. It is bounded by Pembina Highway to the Northwest; Sifton Road, which flows into Dysart Road to the North; Saunderson Street, the dike road, on the Northeast; and Freedman Crescent to the South and Southeast. The remaining three-quarters of the property are occupied primarily by agricultural research fields, followed by athletic fields, and finally private research institutions.

The main entrance to the campus is Chancellor Matheson Road, which runs east - west from Pembina Highway, a major arterial roadway within the City of Winnipeg. This is the historic entrance to the campus and originally the roadway continued right through the campus to the Administration Building, the significant landmark on the young campus' grounds. This central spine is the major organizational element for the campus. Previous masterplans for the grounds pay respect to this axis, and utilize it as an ordering device. Currently, Chancellor Matheson roadway is truncated by Frank Kennedy Centre and Max Bell Arena at the intersection of University Crescent, the other primary entrance into the campus from the city. It is important to note, however, that the buildings along this axis are stepped back, in order to maintain the visual connection to the Administration building.

The campus is easily accessible by car, bus, pedestrian, and bicycle traffic. The Fort Garry campus is also a major circulation hub for the city transit, considering that the student population is 23,000; the 3rd largest city in the province when classes are in session. The campus has an extensive roadway system, but is hampered by inconsistent and sometimes absent signage. Additionally, the roadway hierarchy is confusing, since it is frequently unclear where some of the interior streets lead to. Environmental cues, such as the historic Chancellor Matheson Road-Administration Building axis, tree plantings, street names, addresses and pedestrian pathways are not used effectively to help in orientation on the campus.

The campus is a pedestrian environment, mainly by necessity. Major parking areas lie on the perimeter of the campus and students walk to the interior to get to their respective classes, sometimes housed in many separate buildings. There is a major pedestrian thoroughway from U Lot parking, just to the west of Frank Kennedy Centre, to the hub of student life on campus, the University of Manitoba Student's Union (UMSU). Pedestrians frequently come

into conflict with motorists along this route and at other walking routes throughout the campus. Additionally, street services such as lighting and signage are designed to primarily accommodate circulation by automobile rather than by foot.

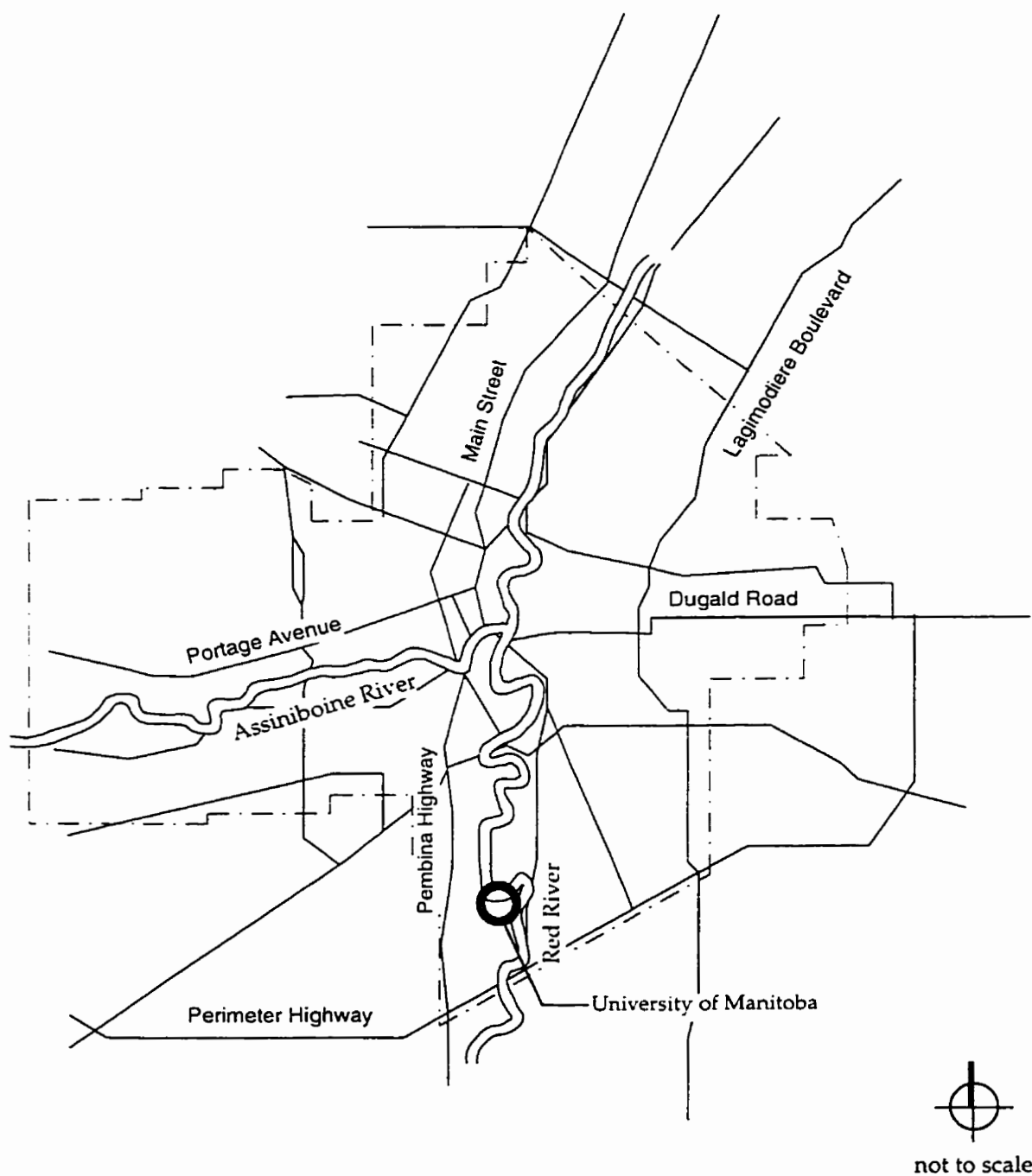


figure 40: the City of Winnipeg, showing the location of the Fort Garry Campus (Gendron)

There are also many open space areas within the campus. These areas are typically given to passive activities; small social gatherings or studying. There are some larger open spaces which frequently accommodate more active recreational activities such as football. During the spring and fall these open spaces function as exterior academic spaces for the University. They also play roles as significant visual spaces, like the Duckworth Quadrangle; as edges and transition zones between other spaces and adjacent buildings, and as modifiers of the micro-climate of the campus. Typically, however, these areas are mostly developed as turf-ed areas with the requisite token plantings, in keeping with the popular idea of what constitutes the “proper” landscape for a post secondary institution. Little effort has been made to take advantage of the unique natural context which exists along the adjacent riverbanks around the campus.

The Fort Garry campus is situated on a flood plain wrapped by the historic Red River, with some of the associated riparian vegetation still intact. The undeveloped riverbank is in sharp contrast to the campus proper which has, for the most part, removed any indigenous landscape material prior to the construction of the original campus buildings. This was, it could be said, the style of the times to cut back any existing natural vegetation and tame the landscape under a blanket of turf. Over the years, however, efforts have been made to reintroduce native vegetation to the campus interior, as can be evidenced in areas such as Carson Court, adjacent to the Bison Building.

Compounding the segregation of managed interior landscape and natural perimeter vegetation was the construction of the dike road, Saunderson Street, after the 1950 flood. The dike road was designed to provide an effective barrier from any floodwaters which might threaten the campus interior. It serves a dual purpose of providing an effective physical separation of the Eastern research fields and riverbanks from the rest of the campus. It should be noted, however, that some of the best vistas on campus can be seen from this elevated roadway.

Saunderson Street is part of a large circulation system which wraps the campus in a perimeter road. This roadway primarily addresses the attached parking areas which are situated along its course. In this manner, the campus has a more inward focus, rather than reaching out and embracing the natural environment which is literally on the doorstep.

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Refer to Appendix 1.0 for a more complete history of the University of Manitoba Campus.

## The Pan-American Games at the University of Manitoba



## Introduction

The 1999 Pan-American Games will be held in Winnipeg, Manitoba, Canada during the weeks of July 24 to August 8. The Athlete's Village at the University of Manitoba's Fort Garry Campus will begin operation on July 1, 1999 and will continue until August 15, 1999. It is assumed that the University will be closed to the public, and any necessary site preparations will take place during this time. The analysis of the campus and the study site is based primarily on the prescribed building program which identifies the uses of each building required by the Pan-American Games athletes, officials, and dignitaries who will be using the site during the event. Another aspect which must also be considered is that the design must also accommodate the university population once the Games are completed. Due to time constraints, some assumptions were made regarding the pedestrian circulation patterns and where the athlete's would spend most of their free time, since a full survey would not be possible. Empirical data, such as building uses, security fence alignment, and perimeter circulation were obtained from the Pan-American Games Operations Committee.

The inclusion of pageantry elements for this study site is not an overriding concern, at least not to the extent of the 1988 Los Angeles Olympics. The demonstration site is intended to be informal, a place where cultural exchange can take place between participants without the scrutinizing eyes of the public or media. UMSU and the Duckworth Quadrangle will be inundated with pageantry elements; UMSU will be the International Centre, the service centre for the athletes, and the Duckworth Quadrangle will be Pan-American Square, the site of the nightly entertainment. It is anticipated that the media will have access to these areas and that all the nightly entertainment events will be televised.

"Sport will be the catalyst, but education and cultural exchange will be the intent"  
(PAG Bid Document 1994: 37).

## Demonstration Site

The demonstration site for the project is Curry Place, within the interior of the Fort Garry campus. The demonstration site is anchored by University of Manitoba Student's Union (UMSU) to the East, and the Max Bell Arena / Frank Kennedy Centre to the West. Max Bell Arena and Frank Kennedy Centre have been designated as athlete training centres (refer to figure 55, building uses map).

Anticipated pedestrian circulation routes (refer to figure 51) were critical in the siting of the demonstration site. A direct walking route from UMSU to the training centres has been cut off by the current proposed alignment of the perimeter security fence, which runs northward from the Northeastern corner of the Architecture building. The decision to locate the demonstration area between UMSU and the training centres was based on the notion that the athletes should have the opportunity to walk to and from the training centres to UMSU and the residences without having to be shuttled en masse from the main gate or chaperoned by a security detail. A pathway seems a natural connection between these two venues. Since the site is outside the proposed security fence alignment, a realignment of the fence is necessary in order to accommodate the site. This now creates a significant open space within the Village, one which does not have a prescribed purpose. This informal open area can be developed as an outdoor refuge for the athletes, where they can talk and relax without the scrutinizing eyes of the media or the public (refer to figure 41 for the location of the demonstration site).

The perimeter building masses define the study site quite clearly. Most of the perimeter buildings address the study site; their main entrances front onto it. Architecture II, with its main entrance on the opposite side to the site; UMSU with its main entrance fronting onto Chancellor's Circle are the exceptions. The Bison building has its main entrances slightly recessed from the study site and front onto the adjoining courtyard, Carson Court.

Contained within the study site is the historic east-west axis, extending from Chancellor Matheson Road to the Administration Building. This is the axis around which the original layout for the University of Manitoba, at that time the Manitoba Agricultural College, evolved. Max Bell Centre and the University of Manitoba Student's Union (UMSU) have been designed with their building masses set back from this axis so that the sight lines to the Administration Building from Chancellor Matheson Road will not be obstructed. A roadway slices through the centre of the site, on axis with the Chancellor Matheson-

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Refer to Appendix 2 for a listing of regionally occurring vegetation species.

Administration Building axis. It is not clear as to whether the roadway is actually Curry Place, or if it is a part of a larger outdoor space which has been designated Curry Place. Regardless, the roadway currently contains 17 metred parking spaces, and leads to only one destination, V-Lot to the Northeast. As a circulation space it is quite confusing, since it implies that it leads somewhere, but only deadends in a parking lot. The roadway effectively divides the space into 2 segments, one with a perceived proprietorship of the Architecture and Architecture II buildings, the other to that of the Education building.

The Chancellor Matheson-Administration Building axis is also a critical desire line from

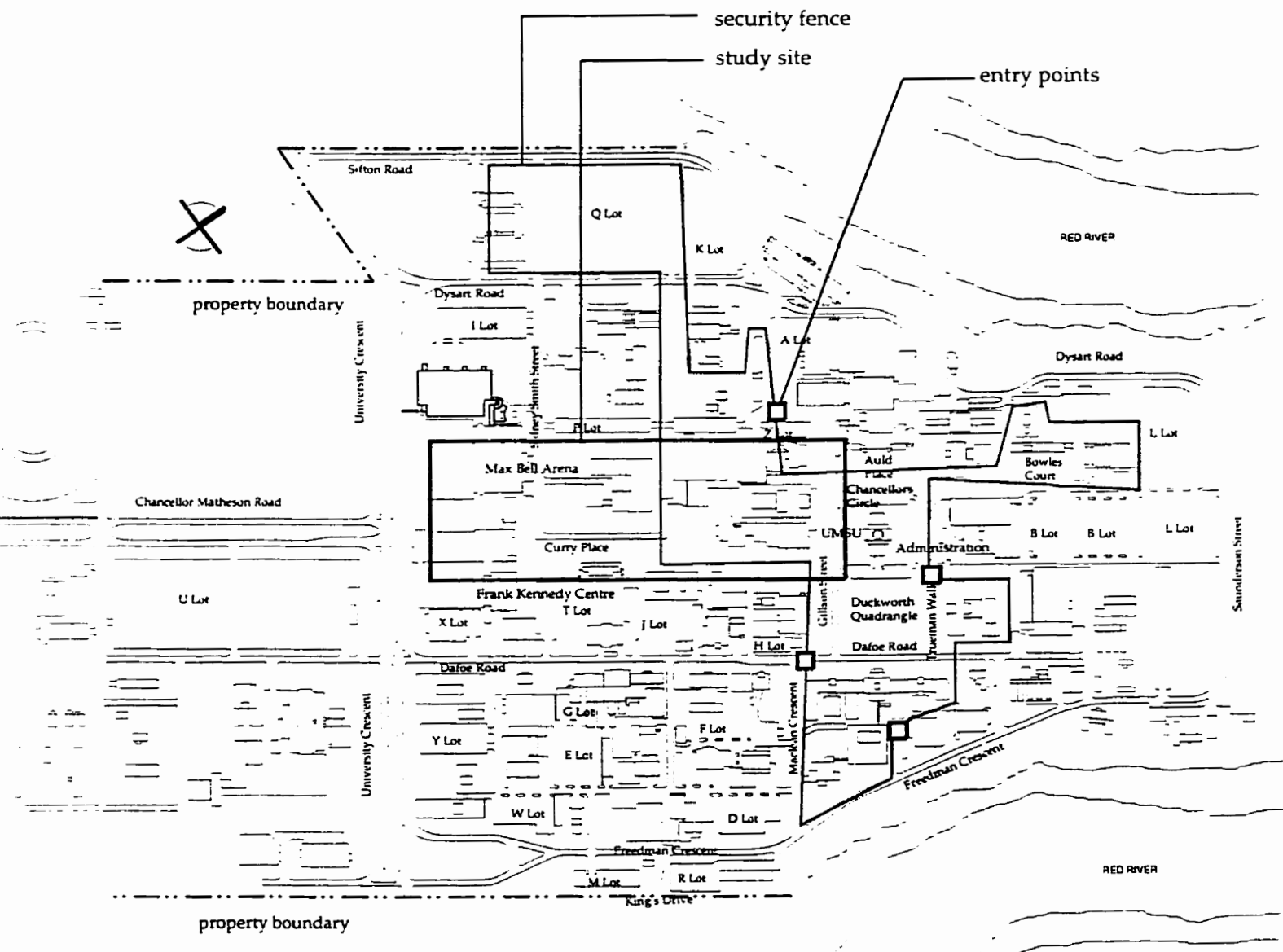


figure 41: University of Manitoba, showing demonstration site

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UMSU to Max Bell and Frank Kennedy, since this is the most direct route between the buildings. During the months of September to April, when classes are in session, this is a heavily trafficked pedestrian area. Pedestrians are regulated to the adjacent sidewalks, however, and primary circulation on the adjacent roadway is given to the automobile. This does not mean, however, that conflicts between pedestrians and motorists do not occur.

This area was an obvious choice for the demonstration site, due primarily to its historic importance as part of the Chancellor Matheson-Administration Building axis and its utility as a primary pedestrian thoroughway for both the Pan-American Games and the University of Manitoba. The Chancellor Matheson-Administration Building axis has been a primary organizational device for previous campus plans, including the Olmsted brothers, Stoughton, and Mudry and Stovel. The construction of UMSU respected the importance of this axis and the importance of the visual connection to the Administration Building. The building codes of the University now require that any new construction not obscure this critical sight line.

The historic Chancellor Matheson-Administration Building axis was originally defined by American elms and each tree corresponded to a fallen World War II soldier from Manitoba, hence the name "Memorial Avenue of the Elms". Over time, however, some of the elms have been removed or transplanted, other material has been planted either adjacent to or surrounding the elms in places, gradually eroding the character of the Avenue and subsequently its import. Subsequent tree plantings have been spaced at different intervals than the original elms; tree species restrictions on planting American elms within the Province of Manitoba have resulted in a mixture of deciduous tree species being planted in their stead. Recently however, with the control of dutch elm disease, planting of these historic trees is once again permitted in Manitoba presenting the opportunity to reinforce the visual and historic importance of this axis, and subsequently the character of the University of Manitoba.

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existing conditions

scale: 1:750

1 10 50 100

Chancellor Matheson Road

University Crescent

I Lot

Max Bell  
fieldhouse extension

Sidney Smith Street

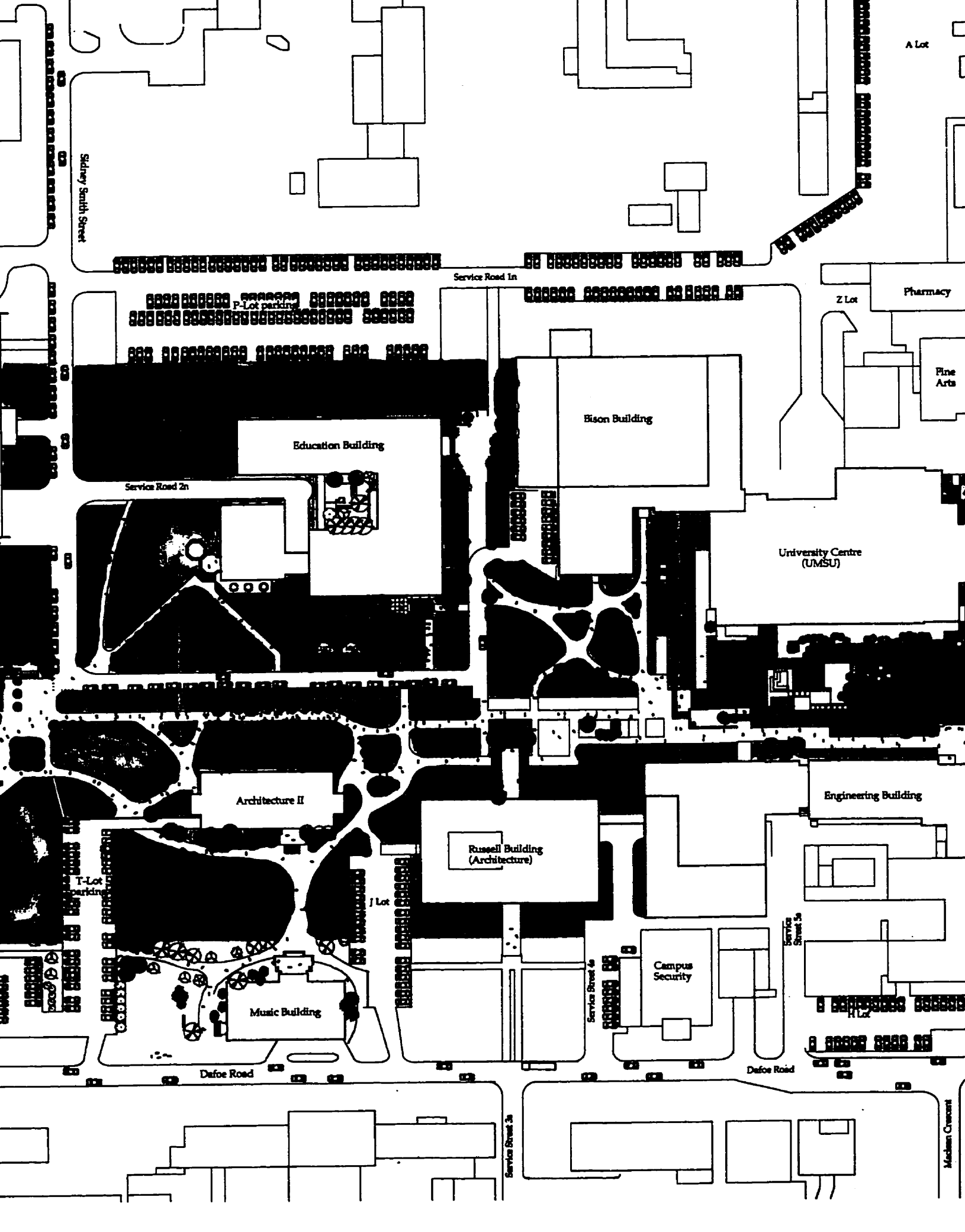
Max Bell Arena

Frank Kennedy Centre

X Lot

T-Lot  
parking





A Lot

Sidney Smith Street

Service Road 1n

P-Lot parking

Z Lot

Pharmacy

Fine Arts

Bison Building

Education Building

Service Road 2n

University Centre (UMSU)

Architecture II

Russell Building (Architecture)

Engineering Building

T-Lot parking

J Lot

Music Building

Campus Security

Service Street 5n

R Lot

Defoe Road

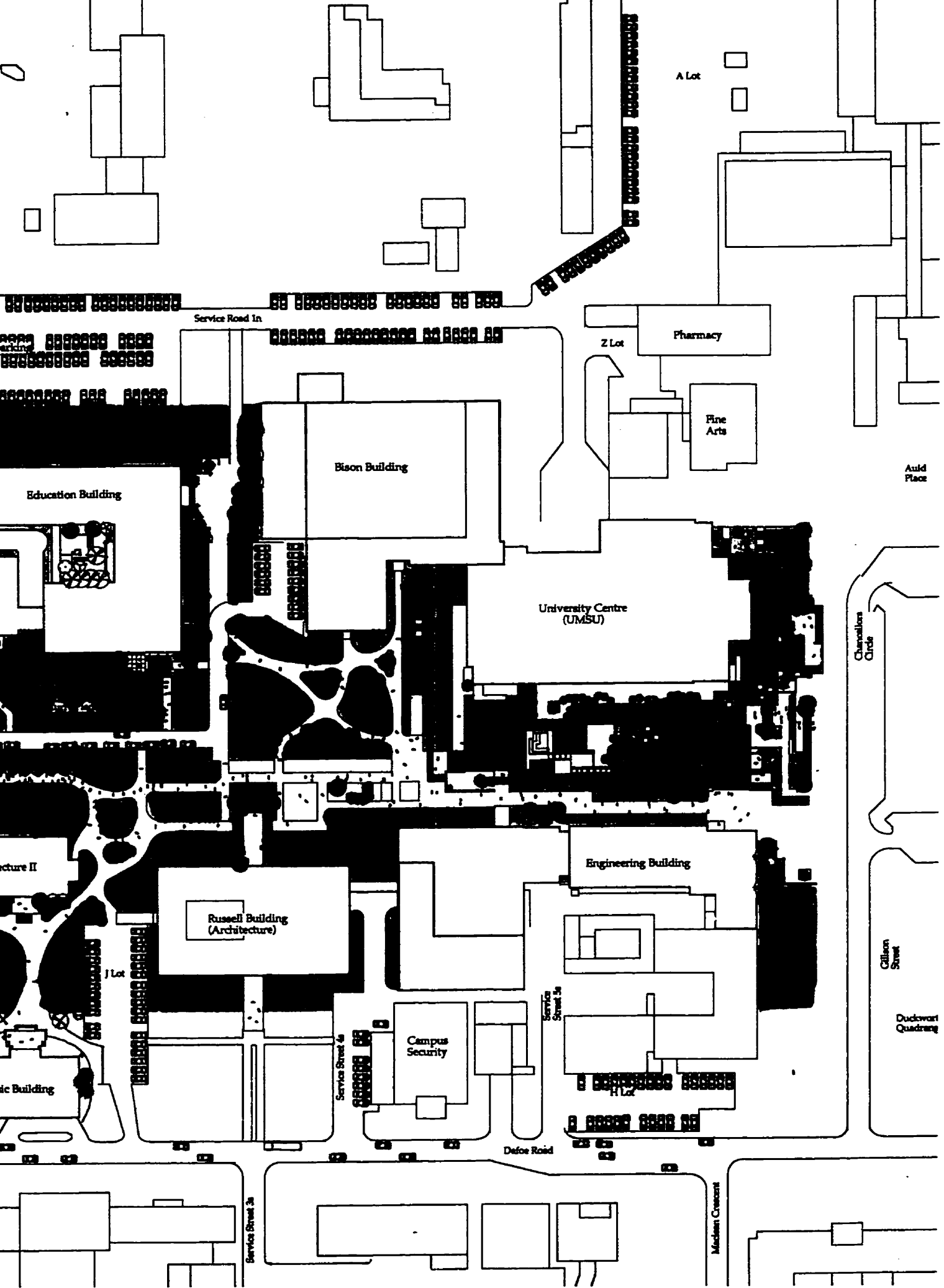
Defoe Road

Service Street 3n

Machan Crescent







A Lot

Service Road In

Z Lot

Pharmacy

Fine Arts

Auld Place

Education Building

Bison Building

University Centre (UMSU)

Chapel Circle

ecture II

Engineering Building

Russell Building (Architecture)

Gillen Street

Duckworth Quadrang

ic Building

Campus Security

Service Street 3a

Service Street 3b

H Lot

Deane Road

Service Street 3a

Medien Crescent



## Existing Vegetation on the Campus

Overall, the University of Manitoba campus is inundated with turfed areas, akin to the pastoral style of landscape design so prevalent in academic campus planning during the turn of the century. The pre-World War I plan of 1915 for the University, then the Manitoba Agricultural College was patterned after a typical American collegiate plan, with little to no consideration with regards to the distinct qualities of the region.

There is evidence of an effort to introduce native tree and shrub species in the landscape of the University of Manitoba Campus. Vegetation maps of the campus dating back to 1976 indicate a large amount of native tree species planting, albeit in somewhat of an ad-hoc arrangement. The more recent construction on the campus utilize more ornamental tree and shrub species in the landscape design. A good example can be found in former campus landscape architect Dennis Wilkinson's designs for Carson Court, adjacent to the Bison Building, and Bowles Court, adjacent to University College. These spaces are very serene, and use indigenous plant materials in their construction.

Perhaps the most notable planting scheme on the campus is the historic Memorial Avenue of the Elms, which demarcates the Chancellor Matheson-Administration Building axis. While the Avenue of the Elms is much more distinguishable along Chancellor Matheson Road, it is not as obvious once inside the campus. The Avenue is transformed into a roadway with adjacent metred parking spaces which represent its presence within the study site.

While the existing vegetation on the site is in good shape, a long range landscape design ethic which unifies the overall planting scheme of the campus, and emphasize indigenous plant materials, would be more effective in expressing the distinct character of the place.

## Existing Topography:

There are relatively small changes in the topography within the study site, which is also typical of the immediate surrounding topography. The grade change is no more 1.5 to 2 metres at most. The maximum rise in the terrain of the demonstration site is approximately 3.5 metres, occurring adjacent to the Southwest end of the Education building. Carson Court, adjacent to the Bison Building, contains gently sloping berms, rising to approximately a metre in height, and effectively containing the space. The Architecture II building contains a small depressed courtyard space, approximately 3 metres deep, on the North side of the building. This courtyard, however, is no longer in use.



*figure 43: view of study site from east end of Curry Place, looking west*



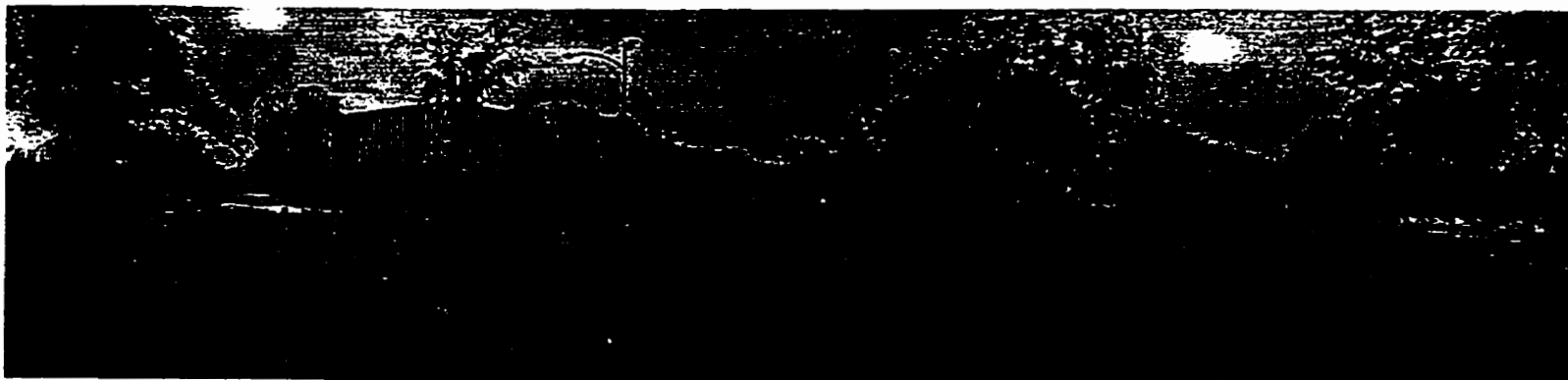
*figure 44: view of study site from west entrance of Education Building*



*figure 45: open area south of Architecture II building, looking southeast*



*figure 46: open area south of Architecture II building, looking southwest*



*figure 47: view of study site from east entrance to Frank Kennedy Centre*



*figure 48: open space between Max Bell Centre and Frank Kennedy Centre, looking east*



*figure 49: open space between Max Bell Centre and Frank Kennedy Centre, looking west*



*figure 50: looking east along historic axis, from Frank Kennedy Centre*

## Security During the Pan American Games

An international event of such a large scope as these Pan-American Games necessitates strong security measures and precautions. The Athlete's Village will be heavily policed, and the entire perimeter will be contained within a 2.4 - 3.0 metre high perimeter chain link security fence. The Operations Committee has determined that the security fence will be unbroken save for entries for the athletes, village services, medical transportation, and village officials. As of this writing, the existing alignment of the security fence prohibits the athletes from walking directly to Frank Kennedy Centre or Max Bell Arena.

The campus security office will double as the office for the Pan-American Games security staff. As of this writing, the only access for visitors to the Athlete's Village will be through the John A. Russell building (Architecture) which will also be the Mayor's Office and Games Headquarters for the duration of the Games. This will be the most heavily policed area during the duration of the games. It is assumed that there will be satellite security venues located at the other Village entries.

The entries to the Athlete's Village will also be high security checkpoints. In addition to security guards at each gate, there will be police officers with police dogs to deter entry to the Village by non-accredited personnel. Each entry will also be equipped with alarms, walk through metal detectors as well as hand-held ones. There will also be a secured loading area for those athletes who must travel to their respective venues by van or bus. The Organization Committee has not indicated the location of this loading area, but it is assumed it will be located within close proximity to the principal Village entry. Additionally, the Village will be inspected by security personnel each day.

The proposed alignment of the security fence prohibits the athletes from walking directly to the Frank Kennedy practice facilities. In order to get to the practice facilities, the athletes must leave through the principal entry at the intersection of MacLean Crescent and Dafoe Road. The Organizing Committee has specified that any athlete outside the secure zone must have a security escort, which would mean a barrage of shuttles would be required to access a building which is only a few metres from the secure area of the Athletes Village.

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Refer to figure 51 (*anticipated circulation*) for the prescribed alignment of the security fence and locations of entries for the Athlete's Village, as proposed by the Pan-American Games Operations Committee.

## **Predicted Circulation During the Pan-American Games**

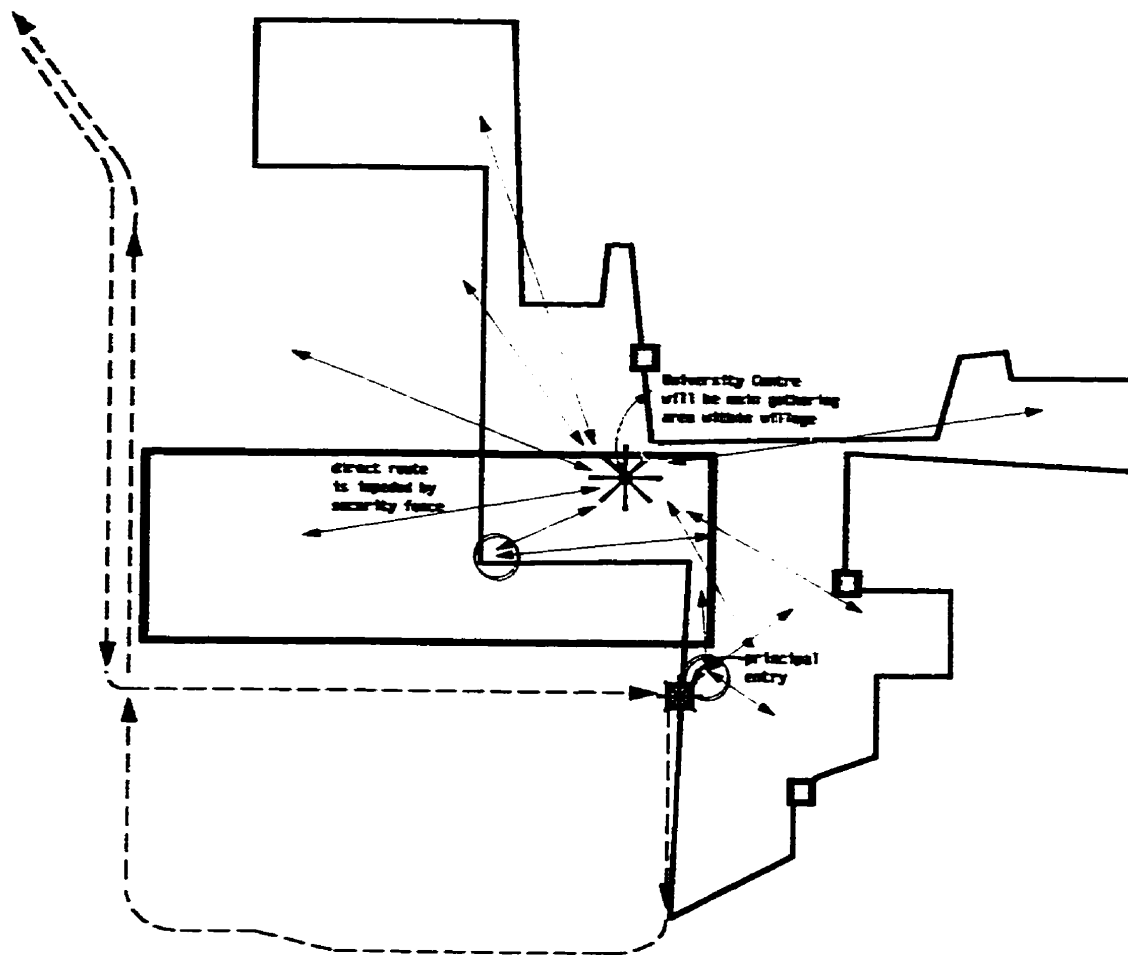
External circulation for both athletes and officials, as of the time of this writing, will occur primarily by bus. Automobile circulation by non-accredited personnel will not be allowed within the confines of the Athlete's Village; however the Operations Committee has speculated on requiring visitors to the campus sporting venues to park within the nearby Southwood Mall parking lot and be shuttled en masse to the campus. The vehicle parking areas adjacent to the venue sites on campus will presumably be occupied by media services vehicles. Support service vehicles have a prescribed route within the Village confines for the purposes of retrieving waste and depositing supplies. Internal circulation for athletes and officials within the Fort Garry campus will take the form of chauffeured electric carts. It is assumed that within the secured perimeter athletes and visitors will be able to walk around unescorted.







Within the secured perimeter the focus of indoor social activities will be within the University of Manitoba Student's Union (UMSU) and it consequently can be assumed that this facility will be the main circulation hub for the Village. Nightly presentations are scheduled in the Duckworth Quadrangle, which is also adjacent to the main entry into the Athlete's Village, and it is also safe to assume that pedestrian traffic to both these destinations will be fairly high when activities are in progress.

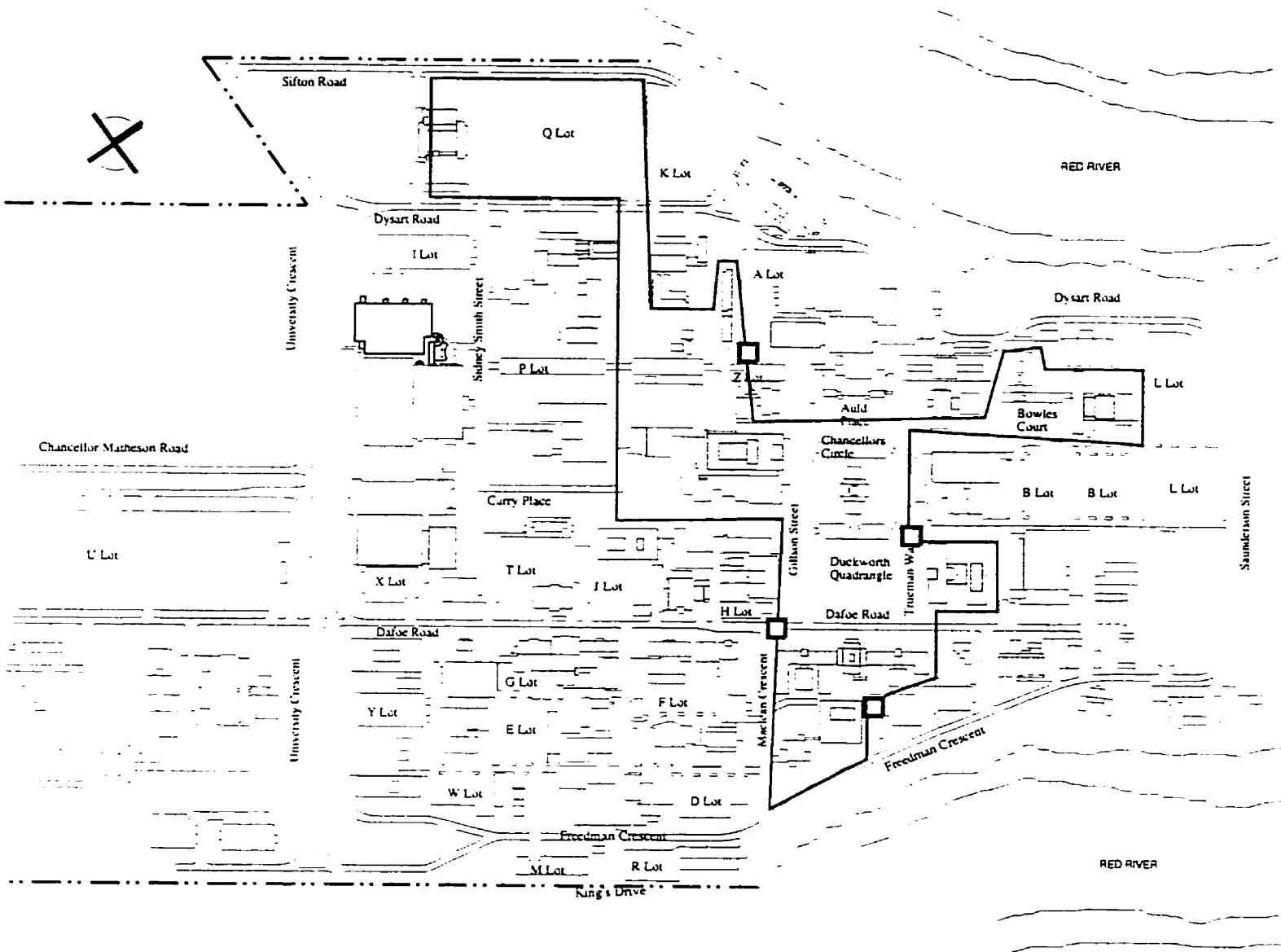
During the Pan American Games, there will be one main entrance into the Athlete's Village for the athletes, just southwest of Tache Hall residence at the intersection of MacLean Crescent and Dafoe Road. Currently, there are no plans calling for the creation of a formal entry at this point. Dignitaries and VIPs will be allowed entrance through the John A. Russell building (Architecture). This will be the only access to the village for accredited non-team members.

The athlete's entry will be a natural focal point, calling for a strong sense of entry, of crossing a threshold from the outside to the inside. It is the point at which the athletes will disembark from their buses and enter into the grounds of their new homes for the next two weeks. It should be visually distinct from the other entries, dominant even. It should clearly indicate that it is the main entry to use if one desires to enter the Village.





-  Village entry gates
-  prescribed security fence alignment
-  study site
-  predetermined bus route
-  anticipated desire lines
-  participant entry points



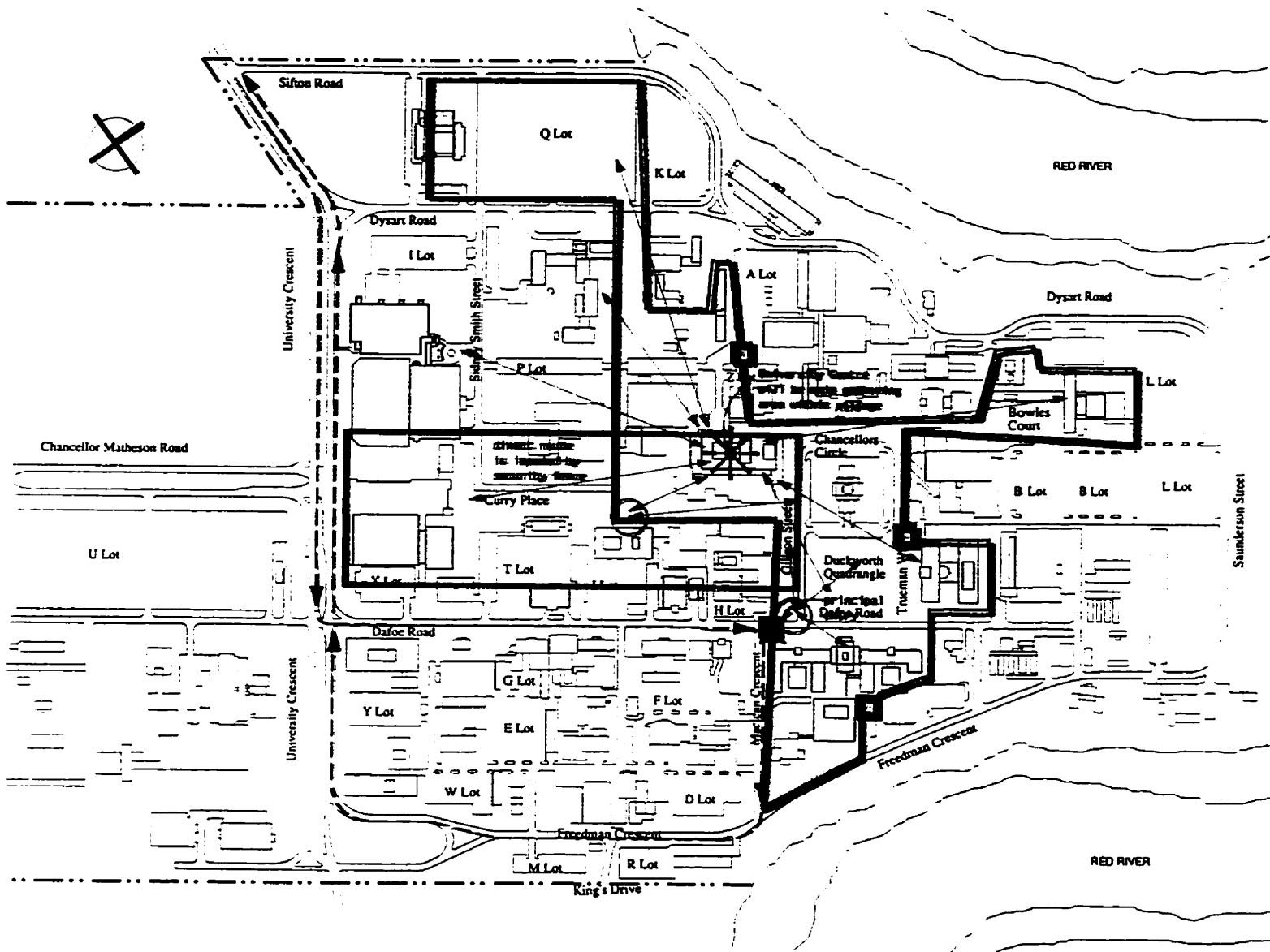
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figure 51: circulation during the Pan-American Games









-  Village entry gates
-  prescribed security fence alignment
-  study site
-  predetermined bus route
-  anticipated desire lines
-  participant entry points

figure 51: circulation during the Pan-American Games

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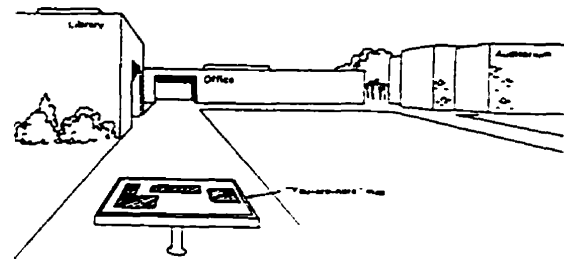
## Orientation

Athlete's from forty-two nations will be attending the 1999 Pan-American Games. Very few of them will be familiar with Canadian culture, and none of them will be familiar with the site of the Athlete's Village. As the participants circulate through the Village, the organization of the site's major facilities must be revealed and comprehended within a very short period of time, making the athletes comfortable as quickly as possible thus enabling full concentration on their respective events. For this reason it is especially important that the site have a clear layout allowing an easy orientation and circulation on the part of the users.

Architecture, like any language, is composed of a system of conventions or codes, and visual cues which convey meaning to the viewer. In any specific context, the meaning attributed to the built environment is not solely dependent upon its shape, size, or pragmatic function; rather the design and layout of buildings and landscapes may comprise a set of visual cues which are culturally specific (Lawrence 1987: 57). When people enter a new district or a new building for the first time, they do so in an exploratory mode. They proceed cautiously, searching for these visual cues as they go (Deasy 1974: 34).

Typically, the user looks for cues which are related to the cognitive maps have been built up during his or her lifetime. These place 'vocabularies' that are gathered through experience serve to inform users about new places, and act as a set of premises giving a general idea what to expect from the place. These cues, of course, are based on a specific culture. The points of departure would have to be relearned as the observer navigated and experienced a new place and culture. Orientation is thus a matter of both physical elements and sociocultural rules. 'Lostness' may result from inadequate or wrong information or because a given element is new and has not been fitted into the vocabulary- or because it is at odds with the existing schemata (Rapoport 1977: 147).

Therefore, orientation essentially concerns three questions - where one is, how to get where one is going, how one knows that one has arrived. For this, one needs to know one's location relative to the larger environment and the nature of that environment (relationship among



*figure 52: directional signage must be properly oriented if it is to be useful (Deasy)*

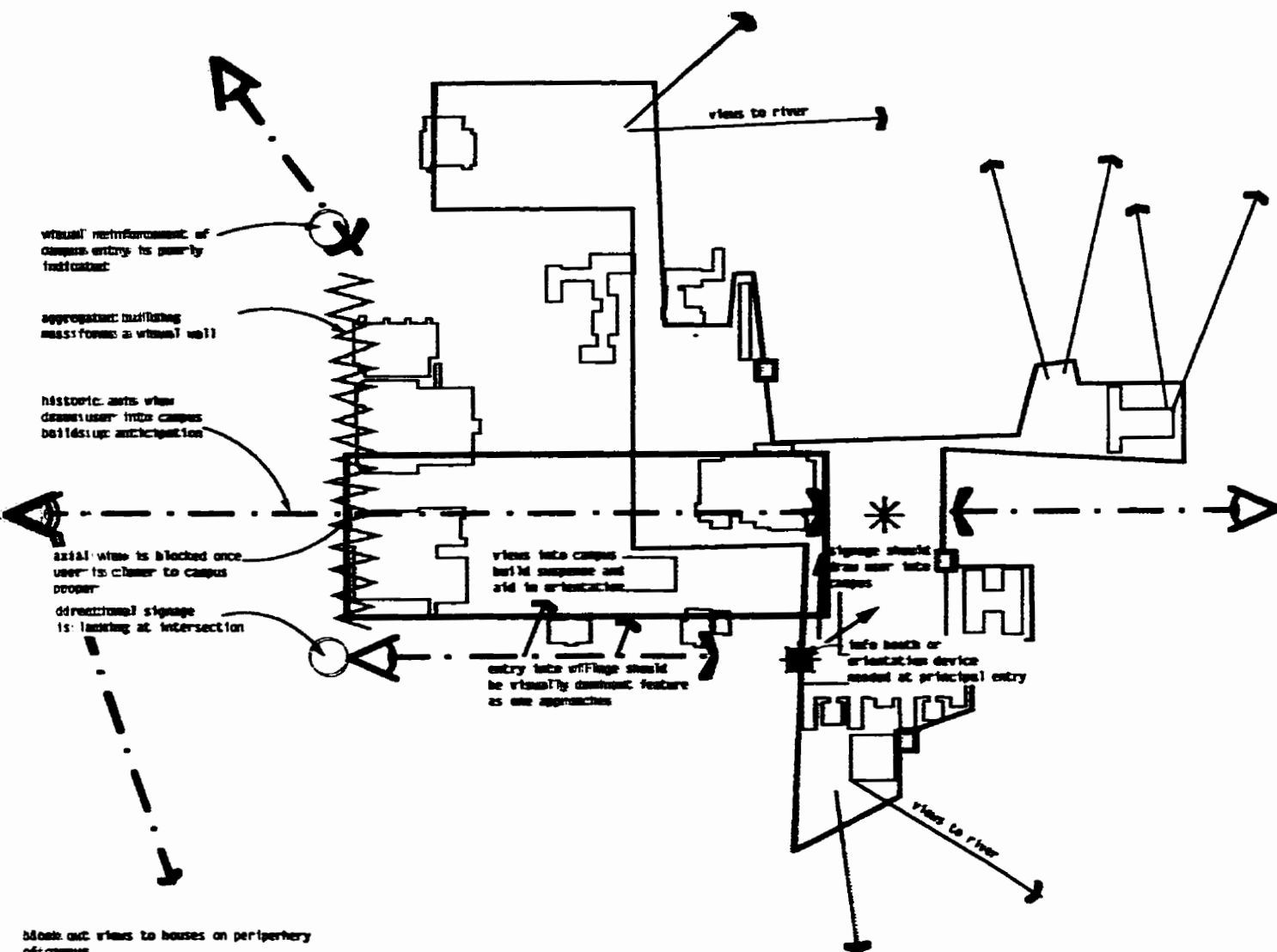


*figure 53: street activities can aid users in orientation through a district (Lynch)*

elements, distances, directions, paths, obstacles and barriers). Involved in this process are recognition and noticeable differences, informational systems, perceptual accessibility, spatial configuration and cognitive style, preferences and classification into desirable and undesirable, the meaning, significance of elements, distances or barriers and their symbolic importance and pathtaking - the paths taken given a choice (Rapoport 1977: 142).

Cognitive maps, or vocabularies, of small-scale and even medium-scale environments are acquired predominantly through direct experience. People have to move through and interact with the environment in order to build complete cognitive maps. In a walk from one place to another, knowledge is gained about the perceptual characteristics of the places. Spatial relationships between places and elements are also acquired when one moves from one place to another. Routes between places are stored mainly in the form of procedural knowledge, that is, as decisions at choice points (Garling and Golledge 1987: 212 - 213). Referential places, such as information booths, signs, maps, at choice points are more easily recognized and remembered than those at nonchoice points. Activities are also important. People orient themselves to activity centres - plazas in Latin American cities, shopping and amusement streets in Japan, temples in South India - and use paths which lead to them. These activities are reinforced by temporal orientation cues indicating periodicity and rhythms (Rapoport 1977: 147). Other factors which make these choice places distinctive, such as uniqueness in form, colour, and size, may also enhance acquisition of cognitive models of the environment. (Garling and Golledge 1987: 214). Generally people tend to concentrate on unusual, unpredictable contours, sharp curves and corners, unusual or novel elements, changes in states - any noticeable differences. People get lost in a desert or Arctic waste because they fail to recognize crucial features and have no schematic notion of how this visual information relates to the larger context.

Orientation can then be restated to be a process whereby individuals can reference themselves in space and time and are able to predict and use the environment. Elements based on noticeable differences (subjectively defined to an extent), and related to prominence, symbolism, meaning, use and so on are filled into some frame of reference (Rapoport 1977: 148).



■ Village entry gates

— prescribed security fence alignment

— study site

visual barrier

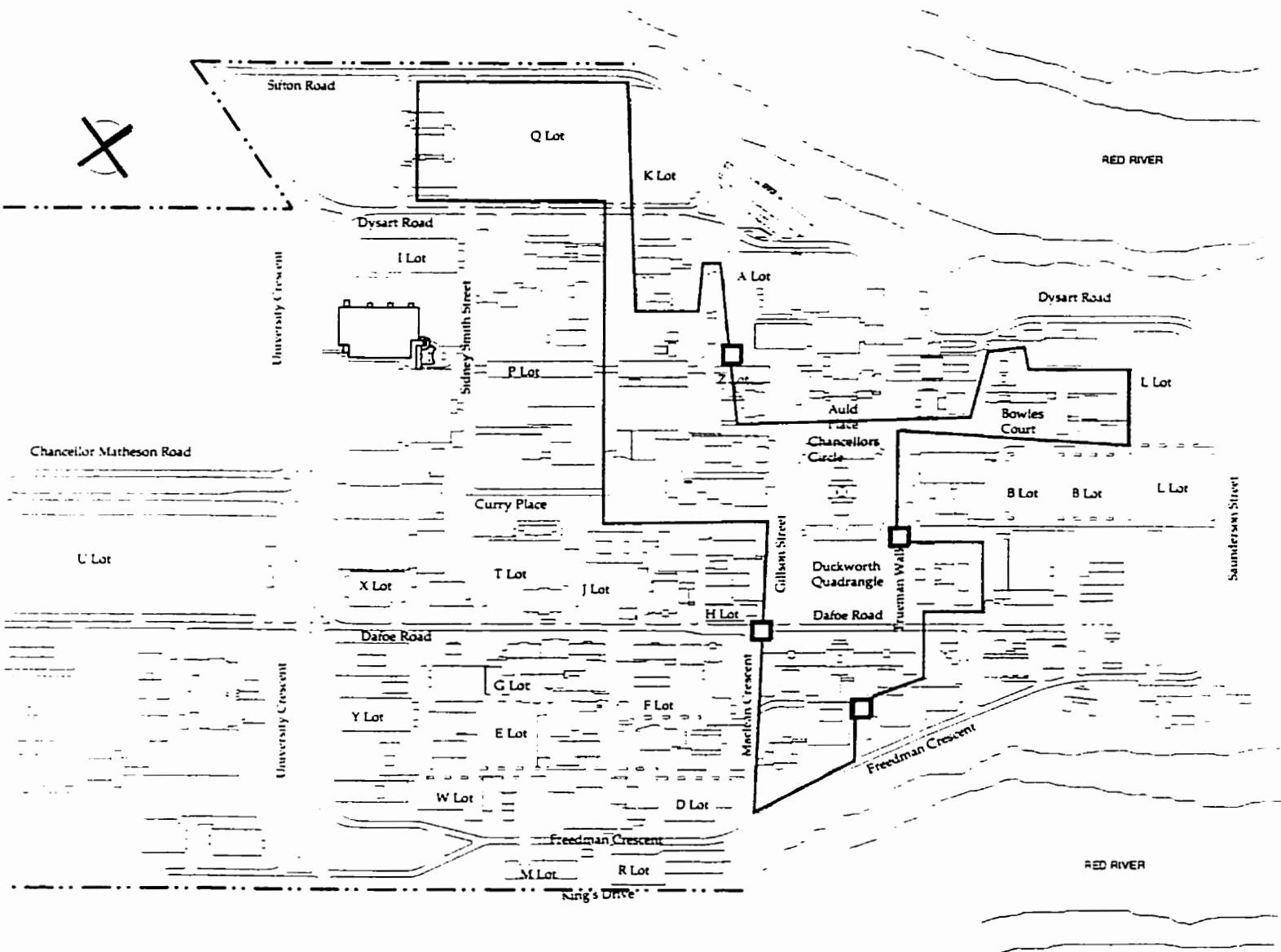
□ Pan-American Games occupied buildings

\* significant feature

— significant views

secondary views

# Significant Views within the Athlete's Village



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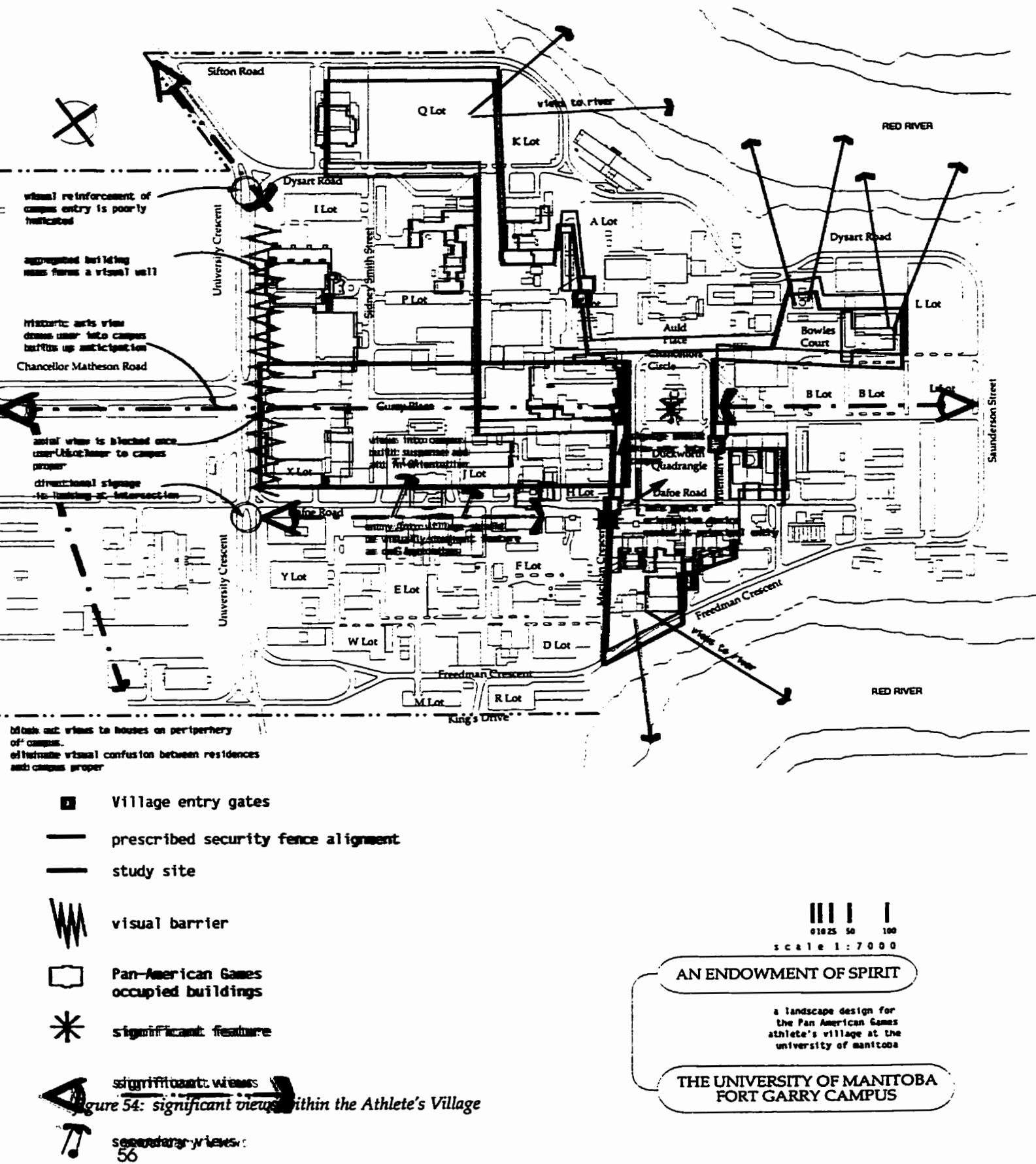
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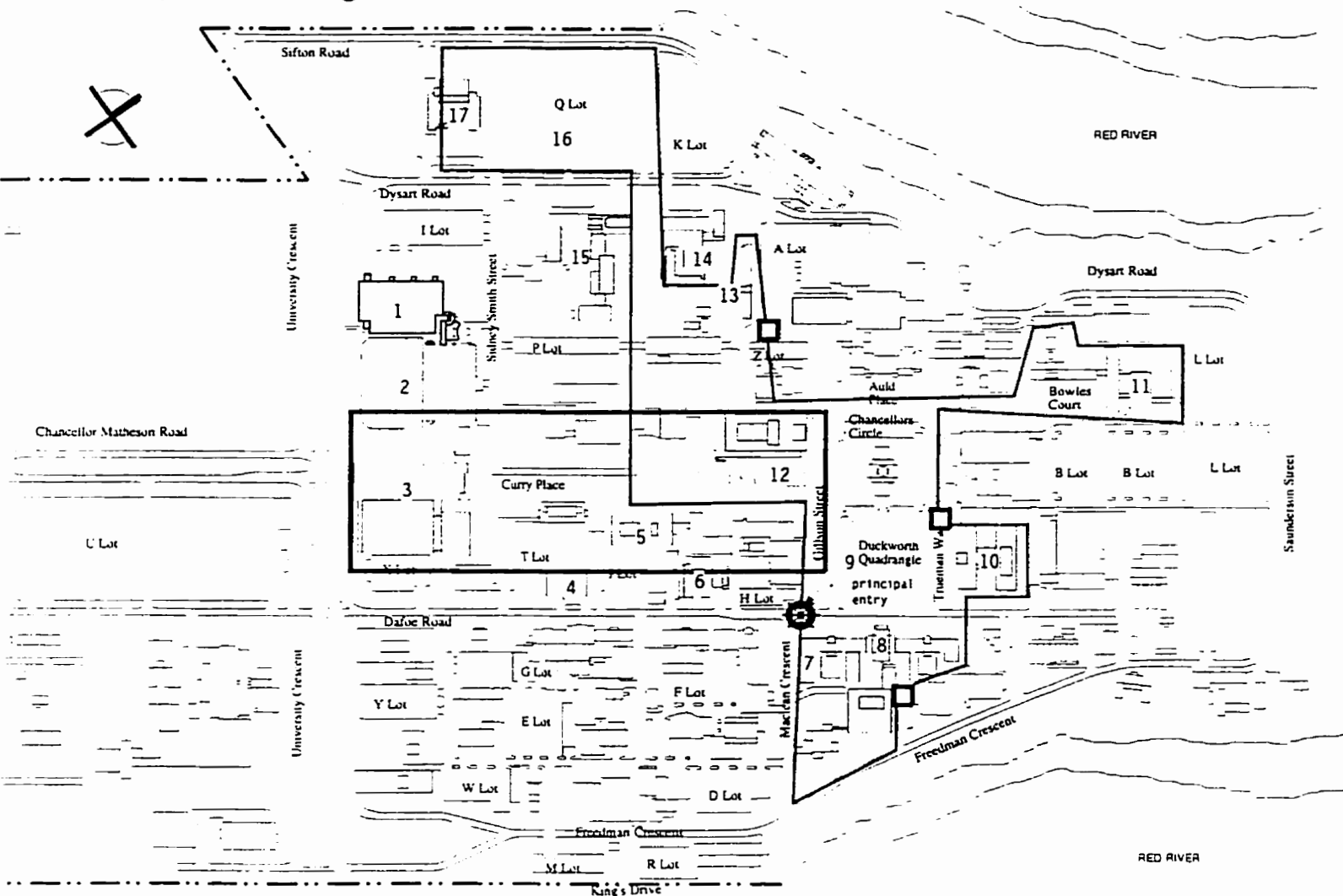
figure 54: significant views within the Athlete's Village

# Significant Views within the Athlete's Village





## Proposed Building Uses



- Perimeter Security Fence
- Village Entry Gates
- study site

1. Max Bell Arena - Athlete Training Centre
2. University Hall - Gymnastics, Judo & Wrestling
3. Frank Kennedy Centre - Athlete Training Centre
4. Eva Clara Hall (Music) - Athlete Interviews
5. John A. Russell Building (Architecture) - Mayor's Office, Games HQ
7. Tache Hall - Medical Services
6. Campus Security - Village Security
8. Tache Hall - Food Service, Accommodations
9. Duckworth Quadrangle - Protocol
10. Tier/Isbister Buildings - Mission Staff Offices
11. University College - Food Service, Accommodations
12. University Centre - Food Services, Marketing, Entertainment, Banking
13. St. John's College - Accommodations
14. St. John's College - Food Services
15. St. Paul's College - Food Service
16. Q-Lot - Temporary Accommodations
17. St. Andrew's College - Accommodations

figure 55: proposed building uses during the Pan-American Games

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## opportunities & constraints

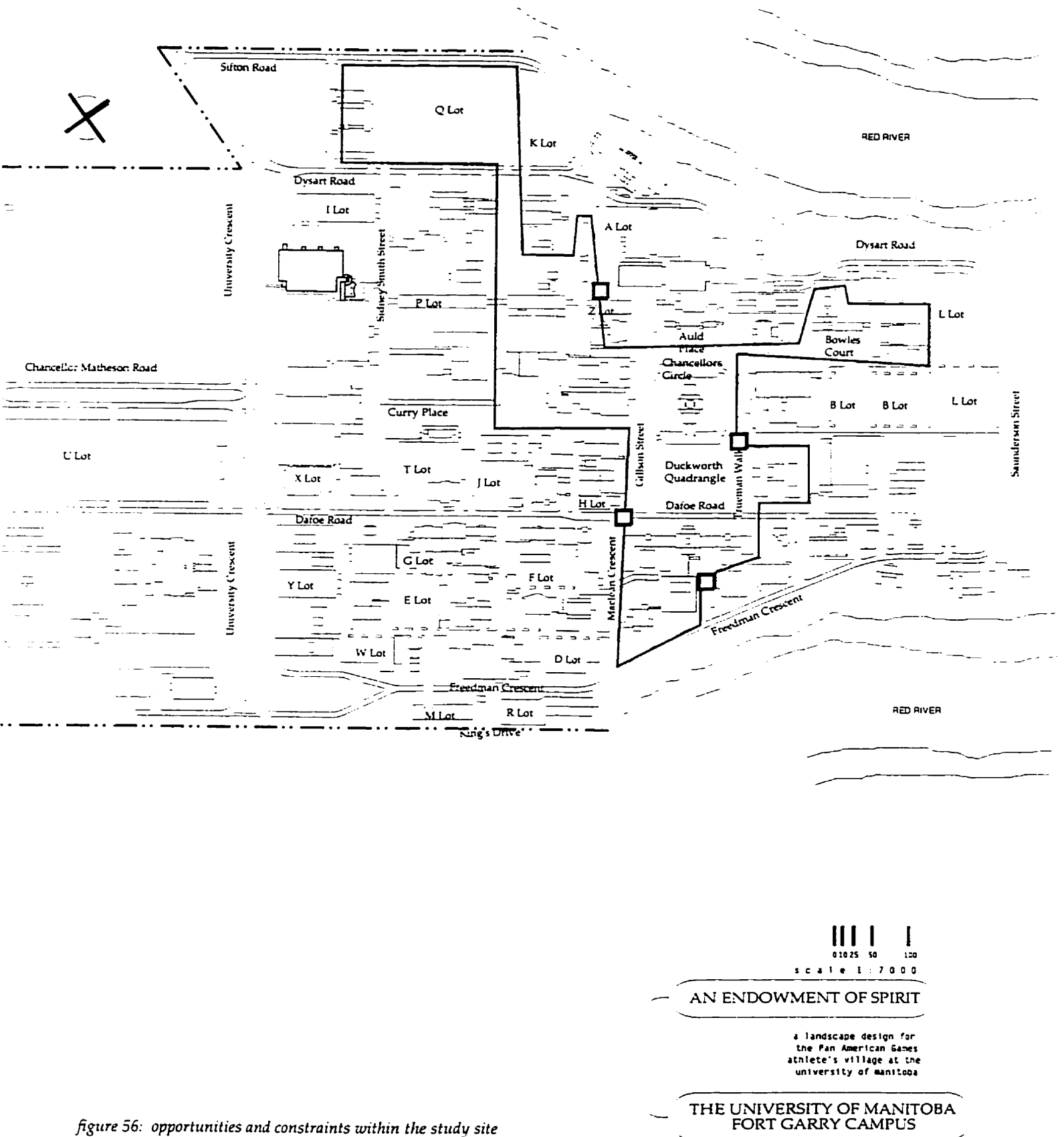
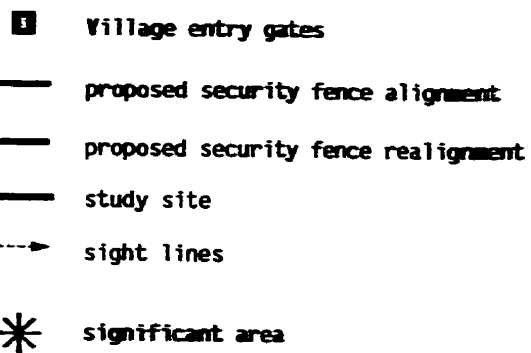


figure 56: opportunities and constraints within the study site



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Figure 5b. Opportunities and constraints within the study site

# 5

## A Spirit of Place

## Weaving

Design often speaks of patterns, of interlaced elements. The urban context is typically referred to as 'fabric', elements are constantly being woven or unwoven. Weaving also implies an aspect of time, a notion that the product develops over a period, and that it is necessary to employ careful effort to produce the final form. Weaving also suggests that one thread does not convey the entire meaning, but rather many threads are required, acting in concert and manipulated by the designer's skilled hands. This idea of weaving suggests that all design elements are interrelated and interdependent. Removal of one element weakens the carefully and purposefully interwoven; interlaced tapestry. One thread is merely a structural element of the greater whole.

In July of 1999 the Pan-American nations will come together in Winnipeg to celebrate the art of sport. The University of Manitoba's Fort Garry campus will serve as a home to many of the participating athletes. They will eat, drink, socialize, and celebrate in this Athlete's Village. Cultural exchange and understanding have been singled out as key mandates for the Games. These Games will be clothed in excitement, and infused with electric enthusiasm. The spirit of the place will also be infused in the participants.

The project is intended to provide the international athletes and officials an area where they can retreat to without being confronted with the constant crush of the Pan-American Games activities. The site is designed as a place of socialization, with areas for large gatherings and smaller conversation groups. A true village environment, where visitors can sit and watch people go by, sample the cuisine of the area, listen to local tales, and perhaps tell some of their own. A common ground where disparate cultures can come together in cultural exchange and understanding.

The landscape is an expression of local culture. A carefully managed landscape is an icon of civic pride and a hallmark of civic responsibility. Experiencing the natural landscape and all of its sensory delights will give the participants a sense of the region and its uniqueness. The articulation of the landscape of the Pan-American Games Athlete's Village should promote exploration, so that the participants can seek out public and private spaces that they can make their own, infusing the Village with a spirit of the Games. The landscape envelops the participants, allowing a secluded common ground on which to interact, effectively weaving together to create an Athlete's Village greater than the sum of the parts.

Once the Games are completed, the ideas put forth for the landscape of this Athlete's Village become a vehicle for rediscovering the spirit of the Fort Garry campus. The landscape of the campus could be rewoven utilizing the Athlete's Village landscape as the precedent thread. A natural landscape, which reveals the spirit of the place, changing and evolving as it weaves its way through the campus creating a richer landscape fabric.

Masterplans for the University of Manitoba campus, notably Stoughton's and Mudry-Stovel's, recognize the importance of the historic Chancellor Matheson - Administration Building axis. Each plan treats it as the main street of the campus, the main organizing device. The main street is the tie which binds. It implies the central public space of a community, a key component. It is also the common element which weaves through the Athlete's Village landscape and the University of Manitoba academic campus. The main street builds upon and strengthens the Chancellor Matheson - Administration Building axis around which the campus was created. It will be the main street for the Athlete's Village, as well as the campus once the games are completed.

## Weaving the Demonstration Site

The Pan-American Games Operations Committee has indicated that no provisions, outside of directional signage, have been made for landscaping the Athlete's Village. The introduction of indigenous materials in the design of the site would serve to aid in visually unifying the campus landscape, as well as reinforcing the sense of place for all the Pan-American Games international participants.

Currently, the site is mostly turfgrass, with mixed planting of native and ornamental tree and shrub species. The overall planting scheme is indicative of a typical Beaux-Arts campus landscape which could be located anywhere, for all intents and purposes. This is typical of most post secondary academic institutions. A certain predictability about these landscapes has become endemic with the image of what constitutes a proper university outdoor environment. Richard Dober (1985: 185) states that,

“The greens have become metaphors for institutional presence; sometimes even seeded, grown, planted and nurtured in environments hostile to their existence.... However, they are not a natural occurrence but a manufactured conceit, so prevalent on American campuses that they are taken for granted.”

Native vegetation aids in placing a site geographically. The native vegetation of an arid climate, such as that found in Arizona, will not be confused with the native vegetation in a more temperate climate, such as that of the interior of British Columbia. In order to impart a unique sense of place to the international participants of the Pan-American Games, a new precedent for the landscape of the Athlete's Village must be explored. It must be based on a landscape which will be perceived as unique, and impart a sense of 'hereness' to the participants so that they understand they are living in a venue which is unique in North America.

Weaving the riparian vegetation through the campus creates a 'superstructure' of woodlands, more heavily planted with regionally occurring tree and shrub species, unifying the landscape and distinguishing it geographically and ecologically. The woodland areas also function as connectors for the area wildlife; bring wildlife into the campus from the woodlands along the nearby Red River, accenting the uniqueness of the place. This weaving also allows areas of meadows, or areas which are dominated primarily by native grasses and wildflowers. The dimensions of the contained spaces can be varied to create larger public spaces or smaller, more intimate spaces. The planting density can be altered to allow for specific sightlines within the study site and campus beyond. If the view is significant or dramatic, as in the 1936 Berlin Olympics, it can be used as a visual cue for orientation, since perspective -dependent information can be retained in memory. Such perspective



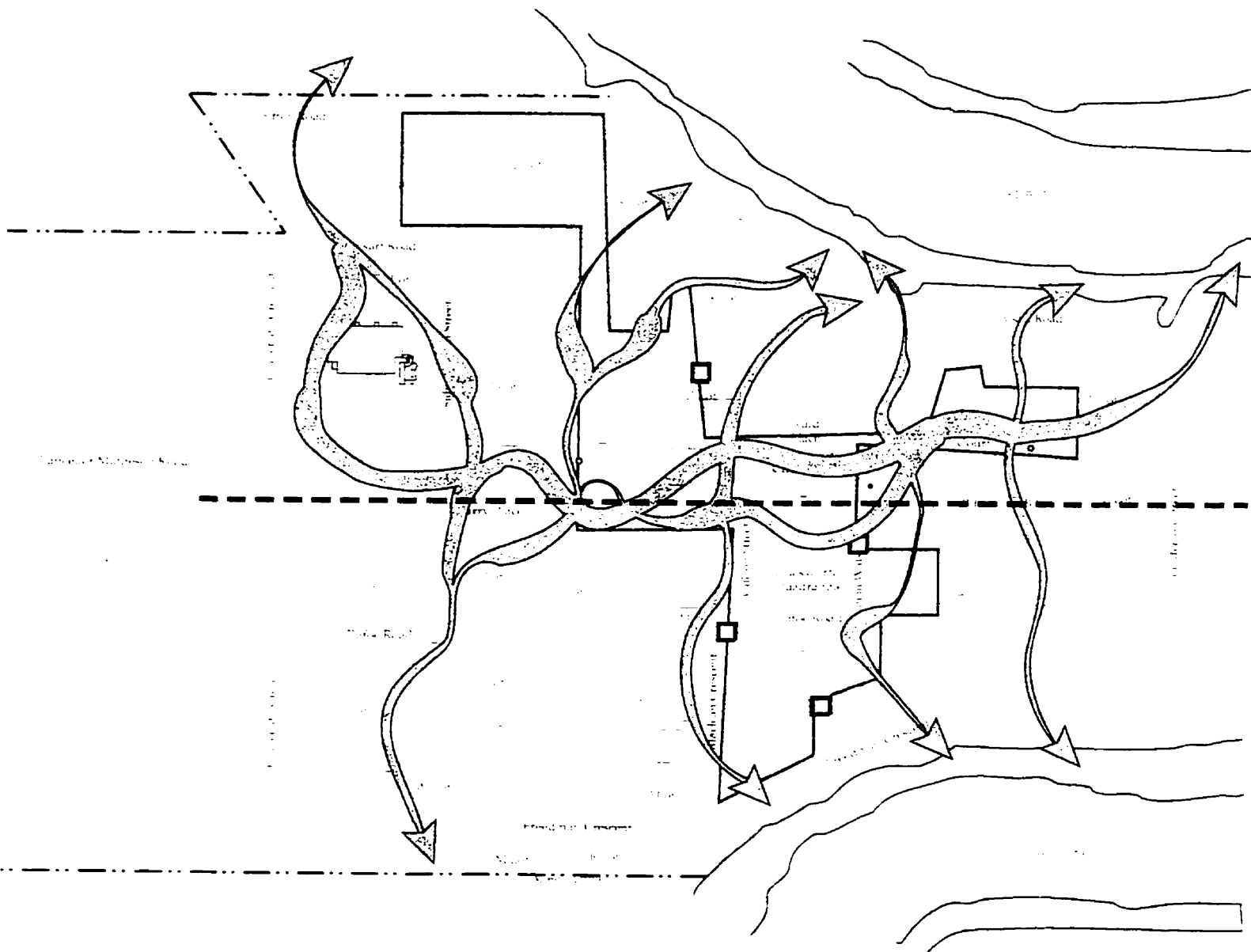
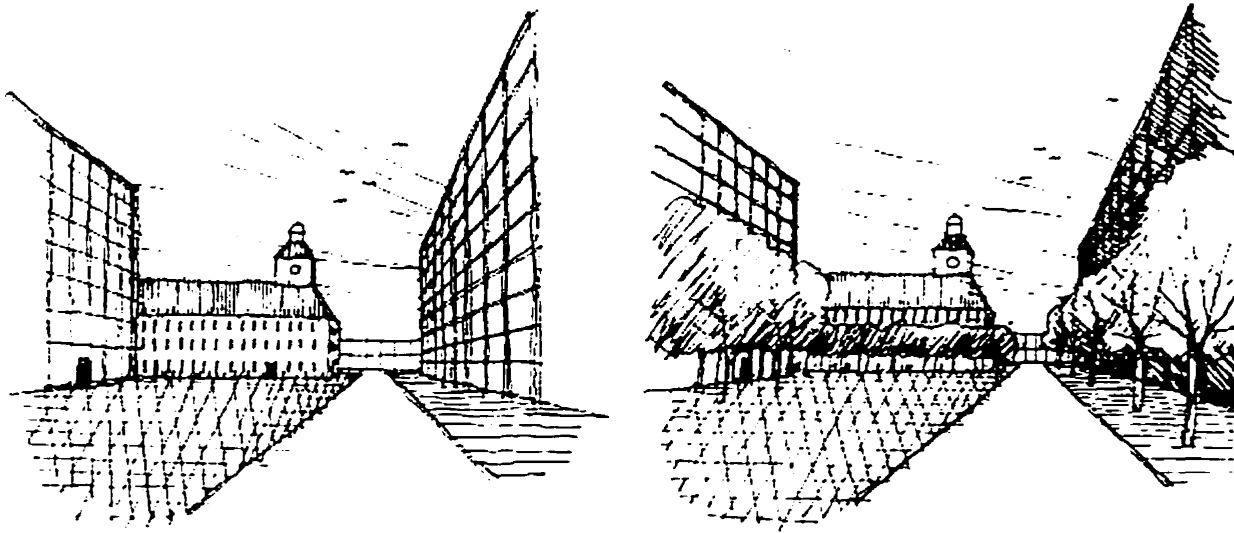


figure 57: concept graphic

The green bands represent the weaving of the woodlands together with the participants through the campus.

transformations may be used, even if they are non-continuous because of obscured sight lines during navigation through an environment, to infer a current location relative to previously occupied locations (Garling and Golledge 1987: 216).

Smaller areas enclosed by woodlands are usually perceived as serene, perhaps because of the intimate scale and the way the sunlight works on, through, and around the surrounding trees, filtering through them, casting moving shadows on walks and walls. Wind through the leaves of the trees acts as white noise to mask out any background noises. These areas provide a sanctuary, a refuge, a peaceful space for meditation. These types of spaces are a contrast to grassy open areas, which allow for larger groups of people to gather and are thus perceived as being more public in nature.



*figure 58: trees soften the edges of open areas and act as transitional scale elements (Laurie)*

It is also important to note that the weaving of the vegetation intersects with the existing building pattern. Trees have a unique attribute in that they are relatively large, massive elements when seen at a distance, yet on closer inspection they break down into a connected system of branches, twigs, leaves, and buds. This quality makes trees an excellent scale transition, being in scale with both people and large structures at the same time. Thus trees planted around a large building may be thought of as a scale transition from the multiple building complex to the individual; more comfortable scale, related to the user (Laurie 1986: 155).

It would seem however, that in order for a reintroduction of native plant materials to be successful and accepted in a campus context, some turfing areas are necessary. Generally, those areas within the study site which are currently perceived as open spaces for active recreation, such as the open area immediately south of the Architecture building; and the area immediately south of the Education building, have been retained as grassed areas (refer to figure —). Areas such as the formal lawn of the Administration Building, which are used for passive recreation, are quite well suited for turf also. The intent of the project is not to eliminate turfing areas completely. In some areas of the campus, turfing areas are the most appropriate type of vegetation. The establishment of well designed mown areas for both passive and active recreation as well as functional use, adjacent to naturalized parcels impart a sense design intent, and ultimately acceptance to a project of this nature. Spaces which are not conducive to active recreation, yet require unobstructed views for security or visual impact reasons, have been given over to meadows planted with indigenous perennial species. These open areas become the visual punctuations to the landscape, the hidden surprise views screened by the trees. The planting scheme for the meadows would consist of planting a 10m x 10m area with a dominant indigenous perennial species. Each of these different planting areas would then be arranged in a grid form. As the plants mature and propagate, this grid would gradually break down, dissolve as the plants migrated. It would be a sort of living art. The meadow planting scheme has been extended down the boulevard of Chancellor Matheson Road, along the periphery of the North and South boulevards, foreshadowing the open meadow spaces which occur within the campus interior.

Information signage is crucial for projects which involve introduction of native plant species on a large scale site. Projects which utilize native plant materials are still relatively new, and in some cases may be regarded as a lapse in maintenance on the site. In the light of a high profile event such as the Pan-American Games, this is not the message the design would be attempting to convey. Information signage which explained the project and the processes at work would help both participants and organizers better understand the natural processes and also help explain the aesthetic which would be evolving on the site.

AN ENDOWMENT OF SPIRIT

a landscape design for  
the Pan-American Games  
athlete's village at the  
university of manitoba

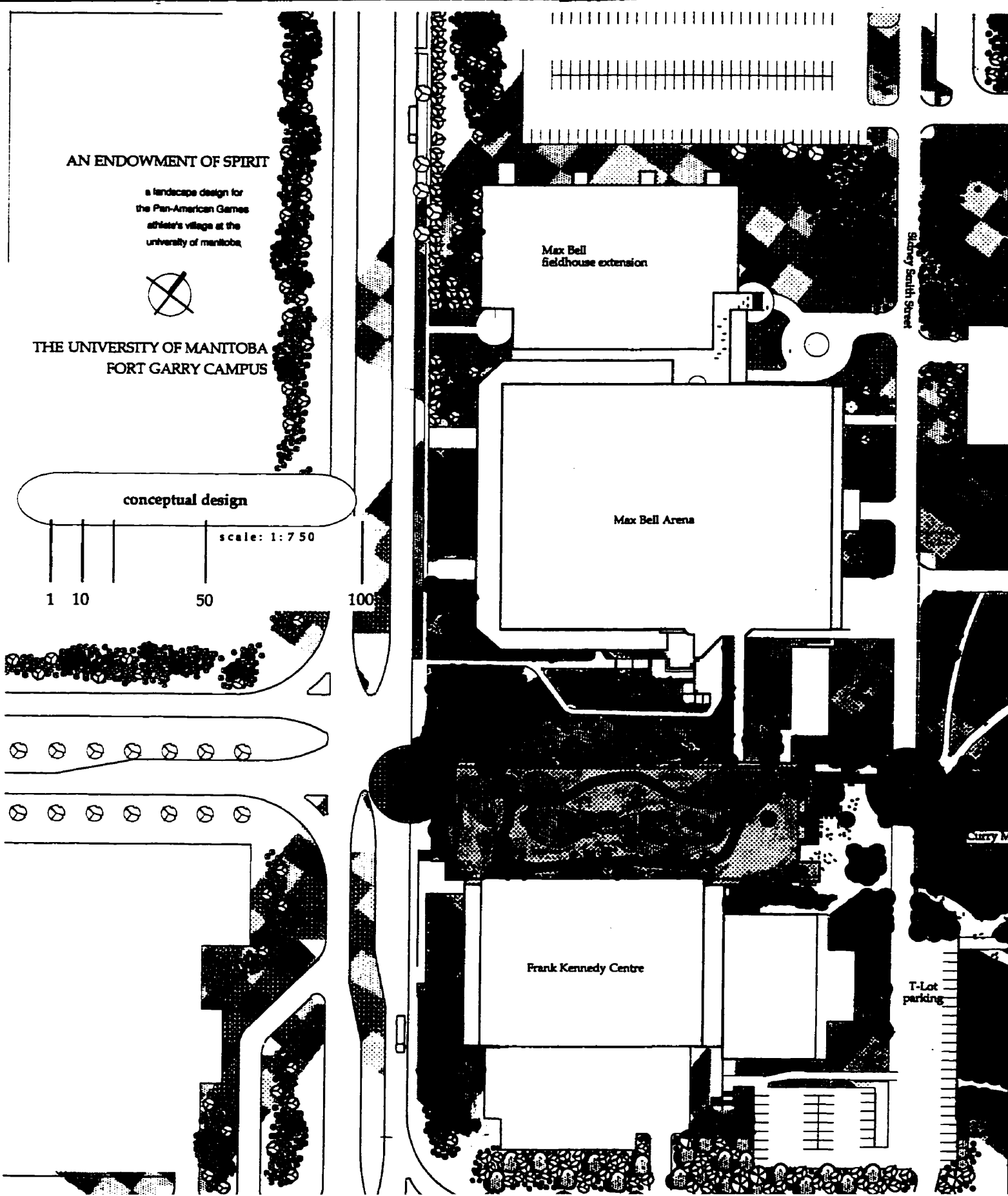


THE UNIVERSITY OF MANITOBA  
FORT GARRY CAMPUS

conceptual design

scale: 1:750

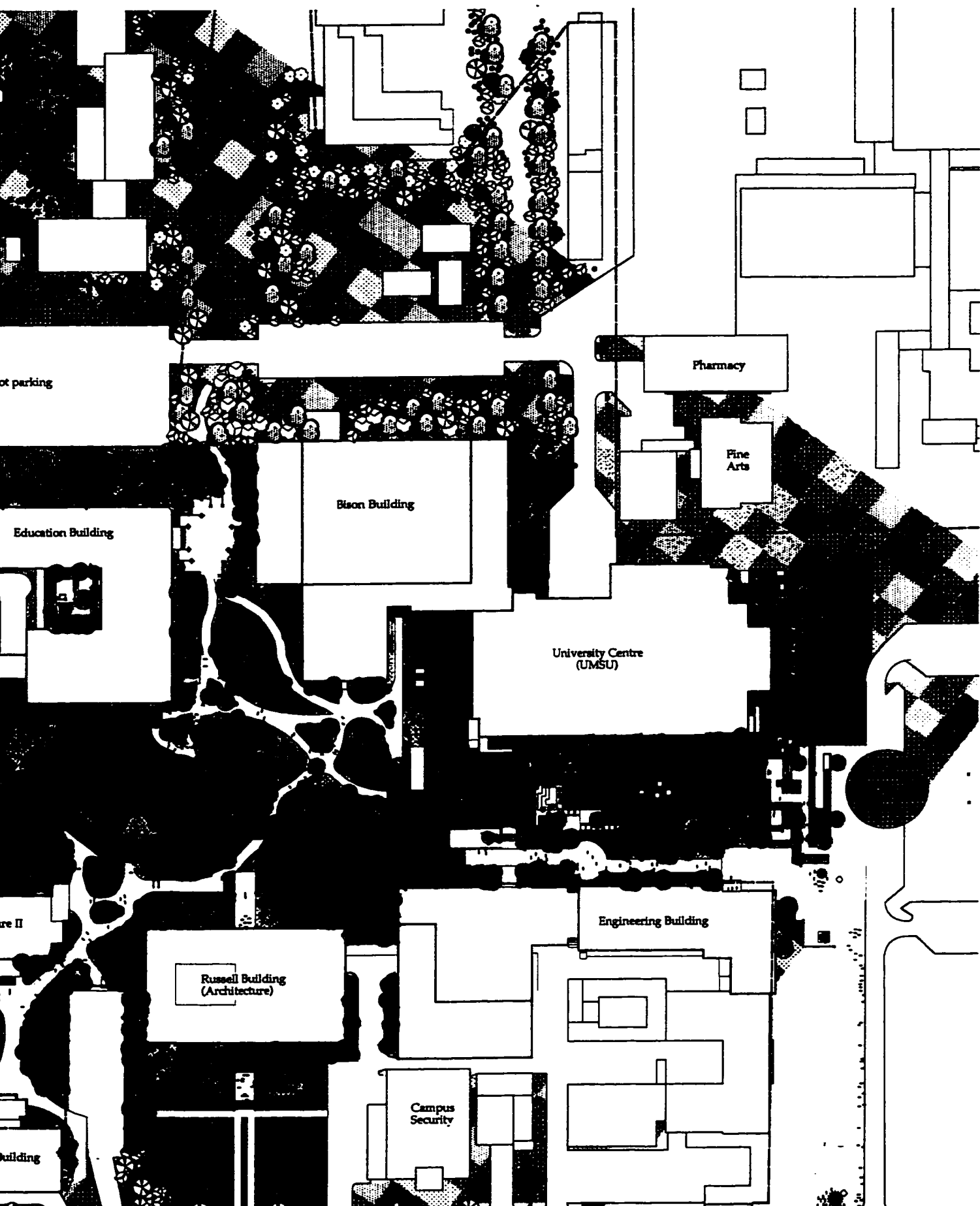
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## The Woven Street

### Main Street

Woven into the ribbons of green is the main hardscape element in the design, the outdoor street. A central social gathering space, the main street or central spine transforms itself as it winds through the demonstration site, with large and small areas located along its length allowing different levels of interaction to take place. This participation makes the community exceptional; giving it a sense of 'place'. The essence of 'place' within any community manifests itself in public areas, most notably the street.

"The traditional use of the street as a social space, a meeting ground, defined the importance of Main Street. ... Main Street has always been the social heart of Canada, the place where people meet, greet, and celebrate..." (Holdsworth 1985: 4).

The traditional Main Street is a linear activity area, alive with the flow of people moving through it. It is a crucial component of a village, the connective tissue which links places within the community, and as such it is the fundamental organizing element in the creation of the Pan American Games Athlete's Village. The Main Street is the heart of any community, it is the mainstage for the human theatre. It is the place where most of the activity takes place, it is the place which is most revealing about the culture of a place. Buildings tell the story of how the community developed, sidewalks are theatres for the residents where they both perform and observe. Every Main Street differs from region to region, yet each has the same role, that of a living history of the community.

It is also important to note that while the University of Manitoba is being used as a village for the Pan-American Games participants, the site is an academic institution. The Pan-American Games are but a temporary use of the site and once they are gone it will become an academic space once again. A focus on the creation of a landscape which will immediately serve the upcoming Pan-American Games and later the University of Manitoba Fort Garry campus is required when designing the landscape. Once the games are completed, the street will become the central pedestrian mall for the Fort Garry campus, since it is situated along one of the major pedestrian traffic routes during the months that classes are in session.

The main street connects the rooftop plaza of UMSU to Frank Kennedy Centre. Frank Kennedy will be the warm-up facility for the athletes and UMSU will be the main informal gathering space for the athletes, since it contains all of the support facilities the athletes require. A connection between these two locales seems only natural. The street is an extension of the spatial configuration found within UMSU, that of a series of activity spaces along a primary pedestrian thoroughfare. The basic layout consists of a main pathway, which threads through the centre of the site, allowing the athletes a chance to walk to Frank Kennedy Centre instead of being shuttled en masse. Tertiary pathways lead to adjacent faculty buildings and are patterned on the existing pathways within the study site. The tertiary pathways are intended more for use after the Games have been completed.

As with entries to an area, there should be notable starts and stops for any path system. They say, in effect, that one has arrived or left and provide a terminus to the path. If they are predominant, they can function as places to meet, or reference points. UMSU forms the Eastern anchor for the main street. The rooftop of UMSU is currently an outdoor plaza and is extensively used during the summer months. Building on this, the space has been retained as a plaza with flexible seating rather than fixed. Fixed linear seating makes it difficult for spontaneous social groups to form. Flexible seating, such as folding chairs, gives people a choice as to the arrangement of social groups, whether large or small, sun or shade, near the edge of the space or the centre. Choice is important to users in the manipulation of spaces. People tend to adopt a normal arrangement facing each other whenever seating makes this possible.

The rooftop plaza also contains a staffed information kiosk, identical to the one located at the main entrance to the Athlete's Village. The first rule of wayfinding is that nothing is as helpful as a knowledgeable human being who has been assigned to assist strangers. An information centre or a trained receptionist is more effective, and will be consulted by more people, than any combination of direction signs and maps (Deasy 1974: 35). The information kiosks also act as orienting devices for the users in the outdoor environment. They provide information not only on the site, but also on other events which

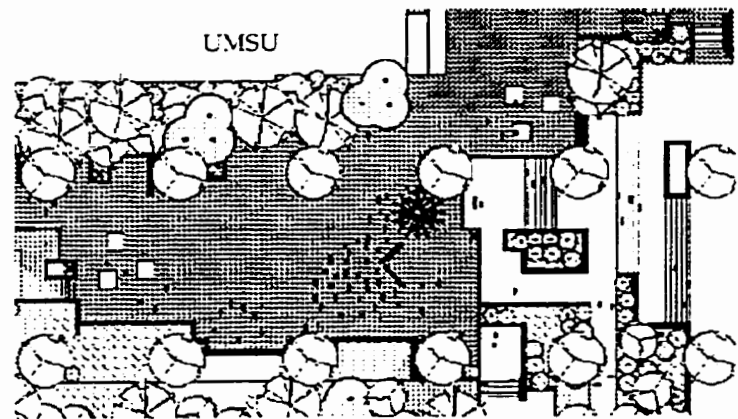


figure 60: UMSU plaza

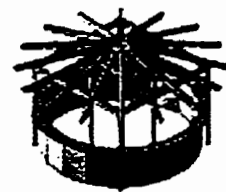
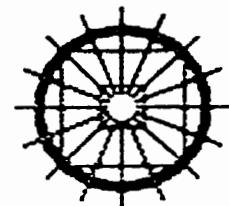
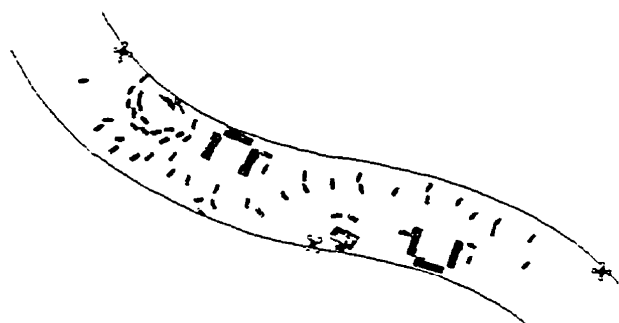


figure 61: information kiosk model

will take place off the site. In addition, users can purchase newspapers and magazines from their home countries, in order to keep up on events at home. In addition to the information kiosk, video terminals have been installed on the plaza to broadcast events from other venues around the province. News from the participant's home countries could be broadcast to correspond with the broadcast time in the home countries. This would create a daily gathering of athletes from the same country or region, a ritual of sorts, reinforcing the mixture of cultures which come together within the Village.

Plaza areas are generally locales of anticipated high traffic use, and thus choice locations for directional signage. Properly oriented, directional maps can be very helpful. They should be horizontal if possible, correctly oriented to the viewer, and relate to obvious landmarks in the vicinity. Signs remain the most versatile and widely used aids to wayfinding (Deasy 1974: 36). Directional signage for athletes and staff should be pictorial so it can be universally understood.

The street itself also contains gathering areas similar to the UMSU rooftop plaza. The main street is also wide enough to accommodate activities along the periphery, such as food vending, musicians, artists, or even mimes, helping to reinforce the idea that the pathway is more than a linear expression, but rather a linked series of activity areas. Diverse uses enliven the area and the pathway, bring different people for different purposes, and help to keep it alive. Activities along a movement space, like the outdoor street, serve to emphasize the small places, and reinforce it overall as a place.

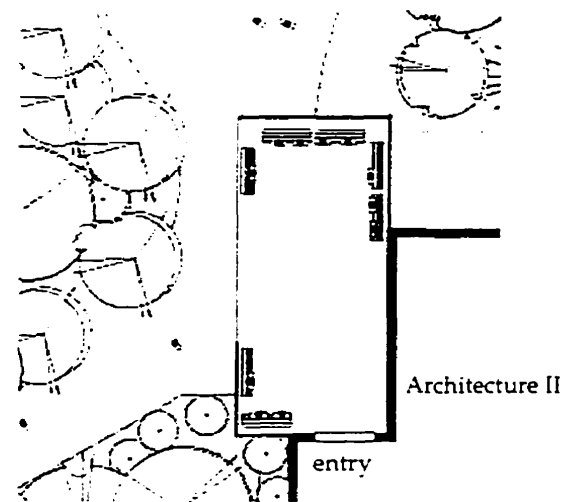


*figure 62: the main street is wide enough to accomodate pedestrians and activities*

Additionally, the spirit, or character, of the site is also dependent on people who inhabit the place. A landscape is as much a part of the people who inhabit the place, as they are reflective of it. In view of the fact that security for these Games will be incredibly tight, the opportunity to include local people within the village street should be capitalized on. The numerous seating areas and the abundant width of the street allow audience, performer, and pedestrian traffic to mix relatively unimpeded. Utilizing street performers such as artists, musicians, storytellers, or even food vendors, endows the street with an abundance of local character.

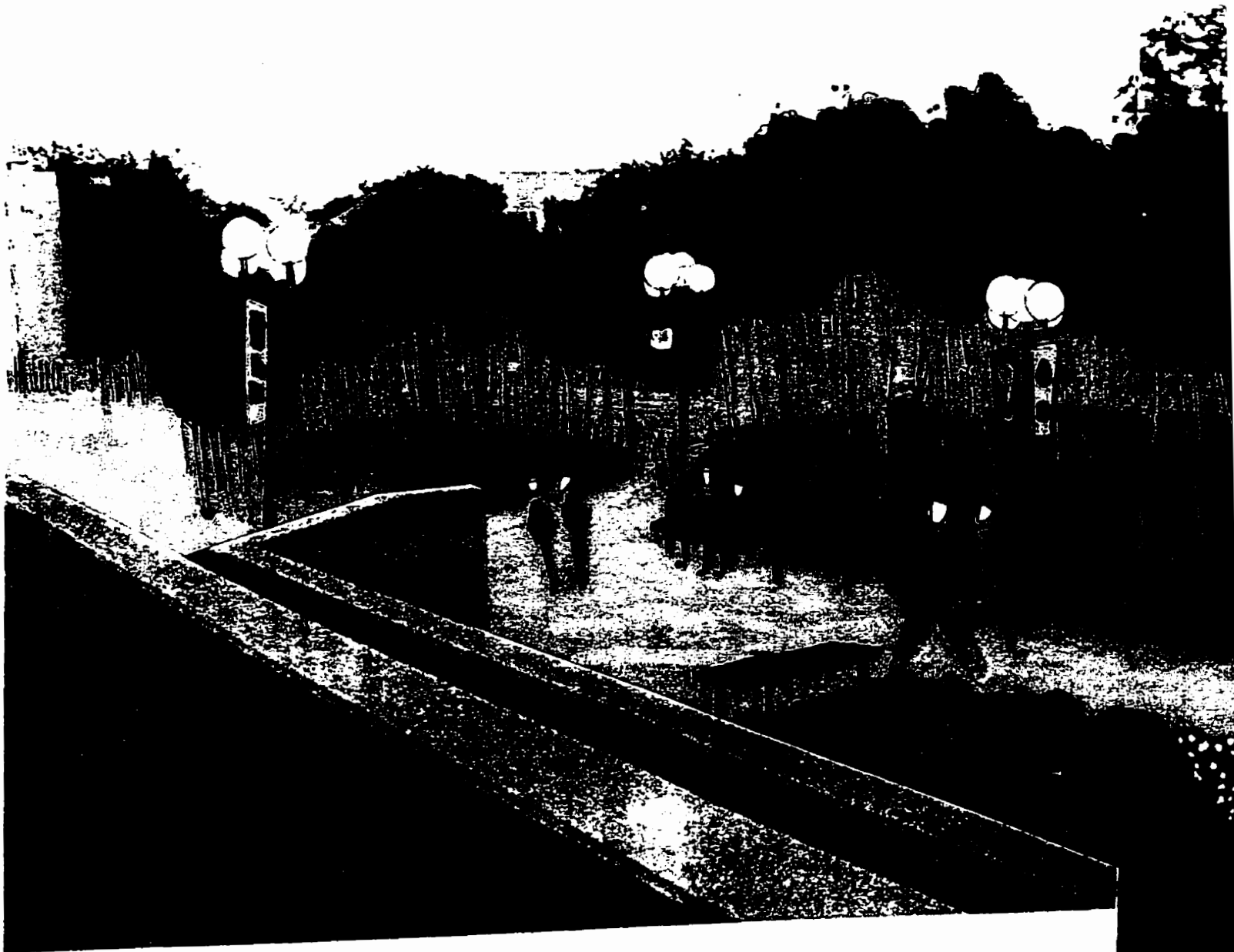
Wherever people gather for social purposes, they constitute a potential audience. An audience inevitably attracts performers. Seating areas allow for performers to be seen and appreciated. Benches invite pedestrian presence by permitting rest, conversation, waiting for a friend, passing time. Adjacent to the benches there are bollards fitted with electrical outlets, so that users can plug in their laptop computers or portable electronic devices. Since seating uses vary so greatly, the actual form of the seating also varies accordingly, from benches with and without backs to steps, retaining walls, fountain edges, and so on (Cooper-Marcus 1985: 59).

The buildings within the study site are situated off of the main path of the mall, in most cases. The transition from the pathway to the buildings has been developed as seating areas, so that the main building entry - or "front porch" - effect can contribute to the idea of the outdoor street. The front porch constitutes a critical transition space for casual meeting, socializing, eating, and study. The front porch should reflect a feeling of partial enclosure, so that a person passing through senses a place of transition, and so that a stationary user feels slightly apart from nearby pedestrian or bicycle traffic. (Cooper-Marcus 1985: 55). Each building has its own seating/gathering area immediately adjacent to the entrances, reflective of the architecture of the building, mixed with street furniture elements from the site. By shaping them as social gathering spaces, the presence of people near the entrances will help to reinforce the visual importance of the entrance.



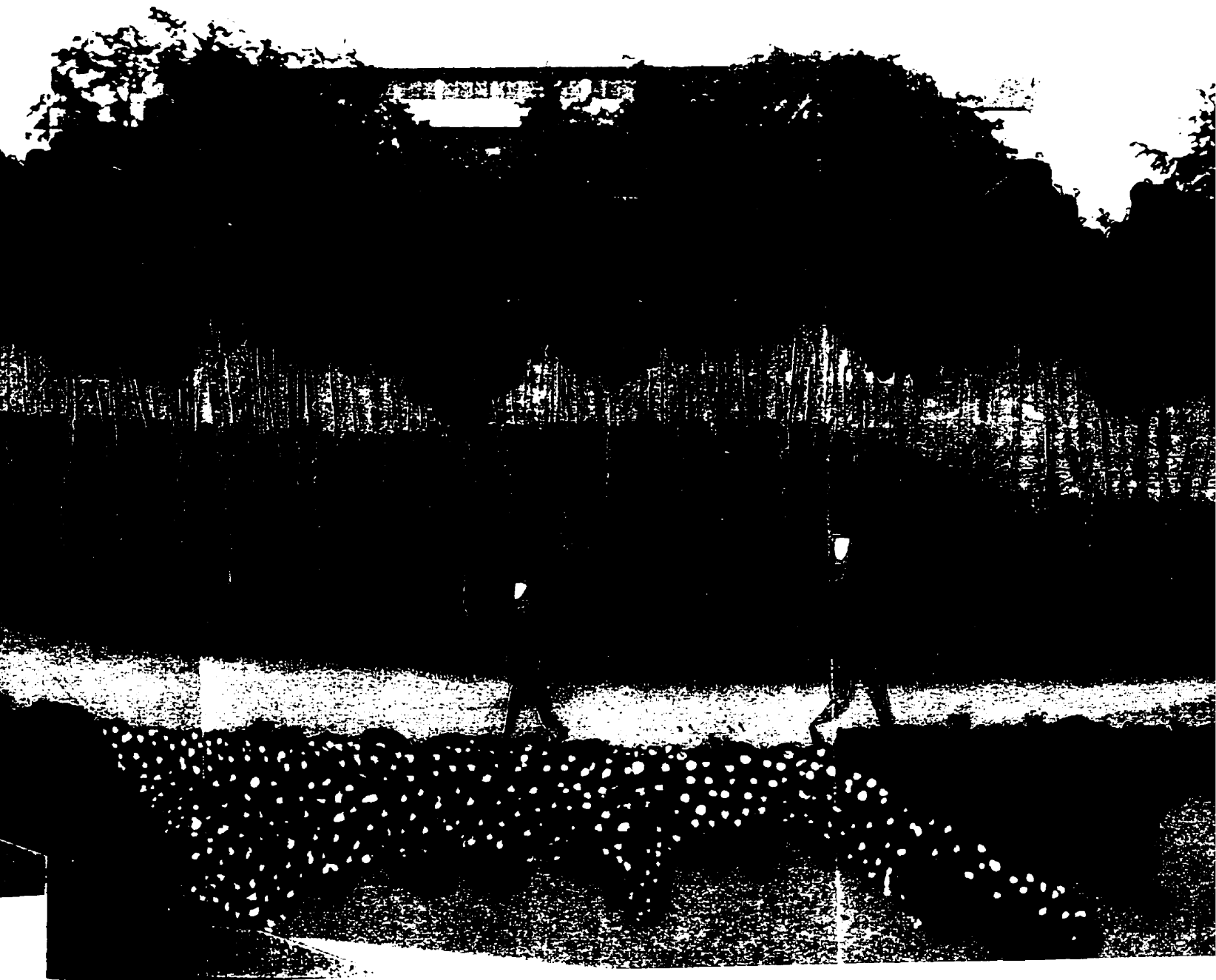
*figure 63: a typical 'front porch' layout*

Unlike the original straight roadway of the existing Curry Place, the outdoor street is curvilinear, gently winding through the site. The curving pathway leads users off the axial alignment of the Chancellor Matheson-Administration Building axis, and then swoops back. Coupled with the subtle alteration of the topography on the study site, the curving pathway is intended to instill a sense of mystery to the site, enticing users further into the site, promoting strolling, exploration. A visually diverse site enables for a multitude of different views. Radical alteration of the ground form has been avoided, since it would depart from the overall regional character.



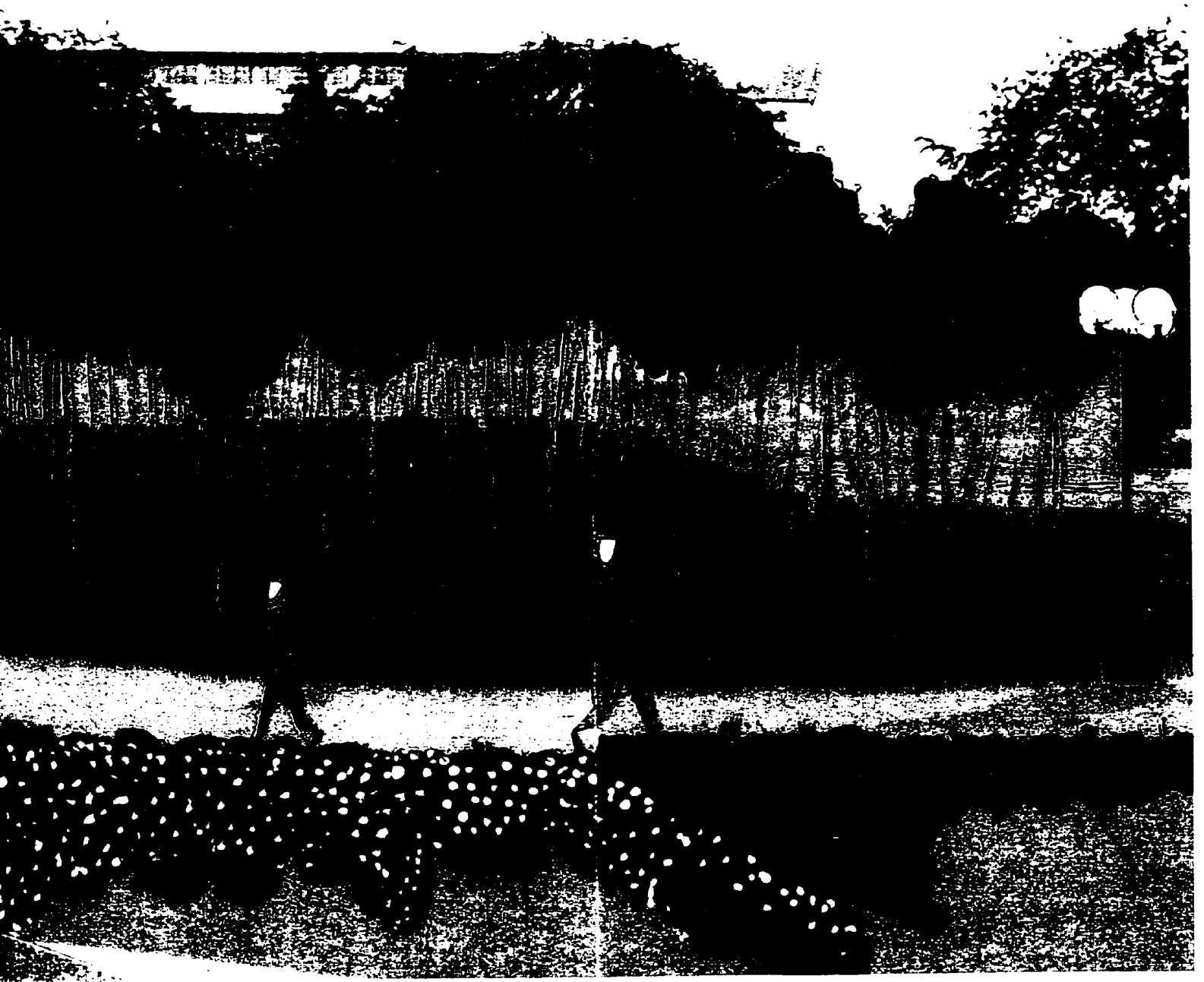
*figure 64: Education Building 'front porch' adjacent to building's Western entry*













At the points where the street crosses the historic Chancellor Matheson-Administration building axis, circular rest nodes have been created. Resting places are ringside seats for people watching, eating, waiting, schmoozing, or resting. The circular nodes have double sided wooden benches along the perimeter to facilitate conversational groups. The benches are designed without backs, so by sitting facing outwards each user has a different view and the outward focus has the reverse effect of dissuading conversation and thus users can be left alone.

These circular rest nodes only occur where the main pathway intersects with the Chancellor Matheson-Administration Building axis, to reinforce the importance of this axis in the development of the campus. These rest spots are intended to provoke the user to question why they are laid out in a single line and why it would be important to do this. Interpretive signage at the beginning and end of the pathway would help the user to decipher the importance of the node placement.

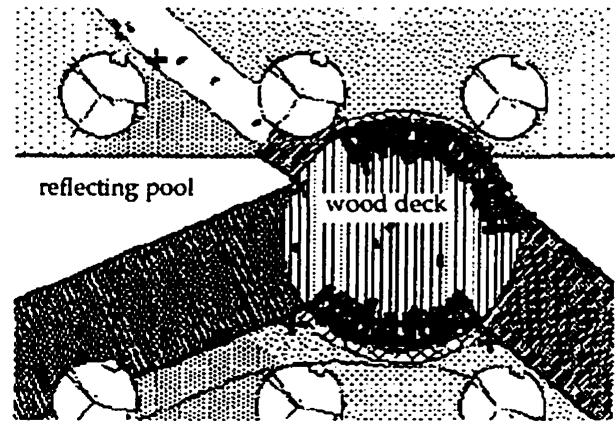


figure 65: wood deck rest area over the reflecting pool

Water, a basic component of landscape architecture, figures very prominently in the regional landscape. The region contains thousands of small lakes, and is home to the 12th largest lake in the world, Lake Winnipeg. A rectangular reflecting pool at grade level has been created to reinforce the visual importance of the historic axis. The pool also captures the images of the clouds passing overhead, serving to heighten the feeling of vastness inherent in the prairies of Western Canada. The water also provides a ready source of refreshment for birds and small mammals contained within the woodland areas within the demonstration site.

Terminating the reflecting pool is a small raised fountain. The fountain, located almost in the centre of the demonstration site, has been incorporated as part of a rest node, adding a focal element to the space and giving it importance over the others. The sound of falling or running water may also be relied on to blot out unwanted sounds and lend a vibrancy to the space (Laurie 1986: 169). Dr. Cal Bottiril (1996), sports psychologist at the University of Winnipeg, concurs that water can have a relaxing effect, enhancing pleasant outdoor environments and could be beneficial to the

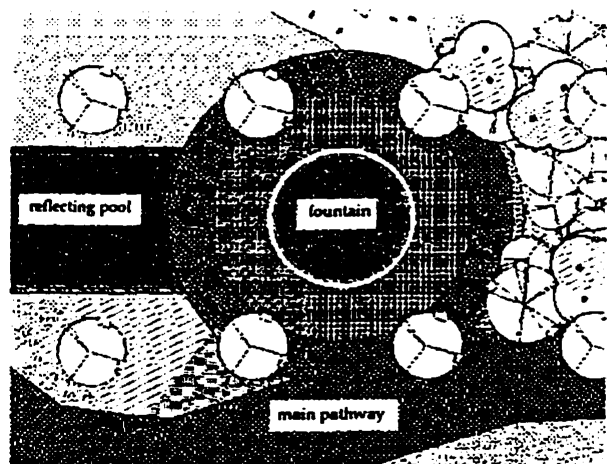


figure 66: water feature as a focal element

relaxing of anxious athletes.

The fountain space now becomes a natural focus for the study site, fulfilling the function of a "town square". Just as the traditional village or small town had its common green or town square, so each campus community seems to need a place for the "action" during the daytime. (Cooper-Marcus 1985: 57). The square fulfils a sense of arrival, it presupposes that events of some sort occur there lending it an importance over other spaces. A central plaza can also be an important orienting device in socio-psychological and perceptual terms. People focus on activity areas when navigating through an environment, and in areas without distinctive landmarks, one feels disoriented, and lost. (Cooper-Marcus 1985: 59)

The importance of the historic Avenue of the Elms is being constantly eroded through the installation of plant materials which do not conform to the original spacing or species of the original Avenue. Dutch Elm Disease further threatens to destroy the character of this space. While replanting the Avenue with elms will restore the configuration of the space, something further needs to be done to reinforce the importance of the trees themselves. Trees which are removed due to disease or extensive physical damage have been replaced with American elm (*Ulmus americana*) and have been encased in a metal tree guard, to which a plaque has been affixed. The original stone monument is located on the median of Chancellor Matheson Road, right at the intersection of University Crescent and it rarely is examined. The plaques tell the story of the Avenue of the Elms and how it came into being, reasserting a piece of the campus history.

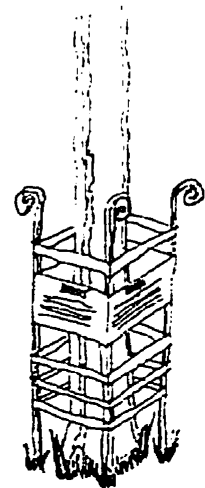


figure 67: ornamental tree guard for elm trees along the Avenue of the Elms

In order to accommodate the displaced traffic resulting from the conversion of Curry Place into a pedestrian mall, the existing perpendicular street, Sydney Smith Street, has been extended to join with T Lot parking. This, in turn, joins up with Dafoe Road, allowing traffic to loop through the campus interior rather than terminate in a dead end parking lot. Parking in T Lot has been retained, however only on the east side. This may necessitate enlarging one or more of the nearby parking areas. Similar to the circular seating areas, a tyndall stone paved area has been created where the street crosses the Chancellor Matheson Road-Administration Building axis, also to draw attention to the historic axis.

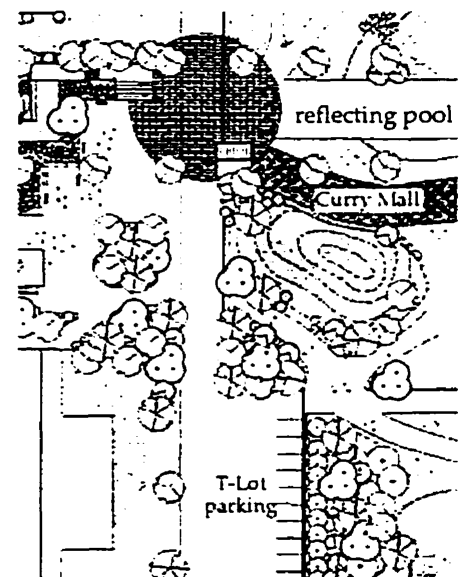
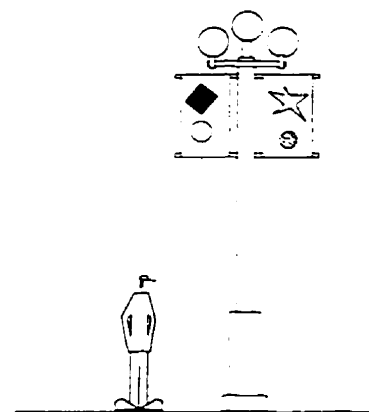


figure 68: Sydney Smith Street extension to T lot

Lighting is also an important streetscape element. Streetlights emphasize the linearity of pathways. The style of the lighting within the study site reflects the historical style of the original campus architecture. The original lights in front of the Administration Building serves as a point of departure for the design of the lighting. Light standards are placed so that the main gathering areas, pathways, and residence areas are well-lit at night. In areas where high level streetlighting is not appropriate, lower level bollard style lighting is utilized to achieve a more intimate effect. Ground level lighting also has also been utilized, for more dramatic lighting effects, lighting objects such as building facades, trees and shrubs, sculpture, fountains, and pools.



*figure 69: typical light standard with festive banners attached*

The Western anchor for the street is Frank Kennedy Centre. This building has been designated as a practice venue for the athletes, and it is anticipated that most of the activity will take place within its secured confines. The barren rooftop of Frank Kennedy Centre has been transformed into a rooftop meadow with a series of pathways for strolling. This area is separate from the main demonstration site, and is thus enclosed by a separate, but similar security. The rooftop meadow also overlooks the space contained by Frank Kennedy Centre and Max Bell Arena, which has been turned into a garden space. This garden can be contemplated looking from the rooftop of Frank Kennedy Centre, or entered into from Max Bell Arena provided the garden has been sufficiently secured first.

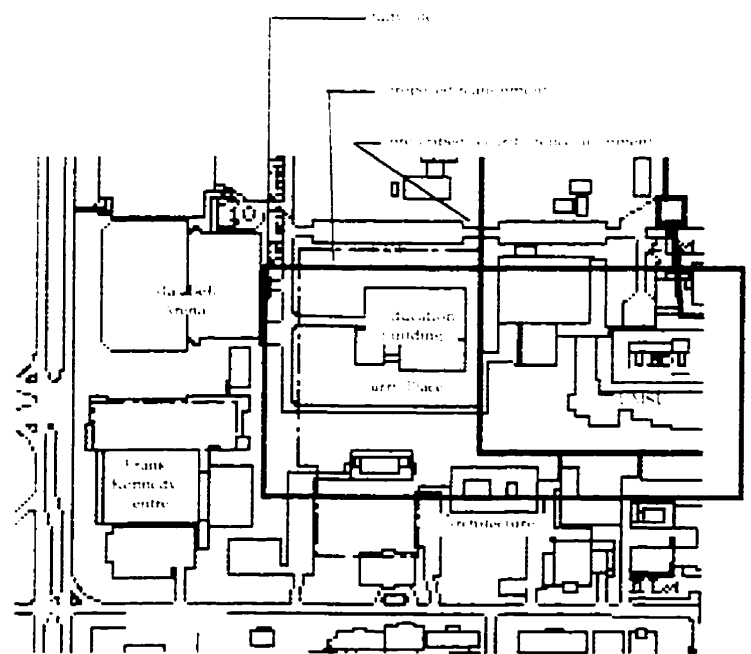
A secondary terminus for the main street is located at the intersection of Chancellor Matheson Road and University Crescent. This area is a point of visual confusion for most first time users of the site, since it is not clear how one can enter the campus from this point. A circular tyndalstone paving form marks the entry to a brick pathway which winds upwards on a gradual incline towards the existing concrete walkway adjoining the rooftop meadow of Frank Kennedy Centre. The original concrete walkway once led to a flight of steps which one could mount to gain entry to the roof of Frank Kennedy Centre, and subsequently the campus interior. The curving pathway becomes the visual indicator of entry into the campus. It should be understood, however, that this entry in to the campus will probably not be used extensively during the Pan-American Games. It will have more relevance once classes at the University of Manitoba resume in the Fall.

## Secured Perimeter

With the recent events of the 1996 Atlanta Olympics and the 1972 Munich Olympics, the need for security for the athletes and dignitaries is paramount. One of the primary problems with temporary security devices like chain link fencing is the fact that it leaves the Athlete's Village looking much like a gulag. The 1984 Los Angeles Olympics overcame this problem by applying a creative cladding to the fence and effectively blending it in with the background. These games used riotous colours and blending the fence in with the dramatically coloured elements was relatively easy. In a case like these 1996 Pan-American Games, where the design theme and elements are dramatically different, blending the fence is not quite as easy. However, by doing just the opposite, drawing attention to the fencing, it becomes a design element much the same way Christo did with his 'Valley Curtain' project. Through the application of an exterior cladding, perhaps containing images of the region of Western Canada, or abstractions of figures engaged in sporting events, or even the regional landscape, and the subtle alteration of the fence alignment, both vertically and horizontally, to reveal the landscape as Christo did, the fence becomes a design element unto itself. This should alleviate the 'gulag' effect and hopefully the athletes will not feel as though they are being contained within a prison.

The security fence alignment, as it has been prescribed, does not encompass the area of the demonstration site. It must be realigned to accommodate the site. Diverting the security fence as per figure 22 allows the demonstration site to be fully enclosed with a minimum of entries. There is one secure checkpoint along the western edge of the realigned fence, which enables the resident athletes to walk from the secure area of the Athlete's Village to the secure practice facilities which are Frank Kennedy Centre. This removes the potential for excessive shuttle transports from the principal entry, permitting the athletes to walk to the practice area with a minimum of fuss.

A secure zone has also been established around the Frank Kennedy Centre rooftop meadow, so that the athletes can easily go outside after or during practice, without having to go through two secure checkpoints.



1997-1998, 1999-2000, 2000-2001, 2001-2002, 2002-2003, 2003-2004, 2004-2005, 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021, 2021-2022, 2022-2023, 2023-2024, 2024-2025, 2025-2026, 2026-2027, 2027-2028, 2028-2029, 2029-2030, 2030-2031, 2031-2032, 2032-2033, 2033-2034, 2034-2035, 2035-2036, 2036-2037, 2037-2038, 2038-2039, 2039-2040, 2040-2041, 2041-2042, 2042-2043, 2043-2044, 2044-2045, 2045-2046, 2046-2047, 2047-2048, 2048-2049, 2049-2050, 2050-2051, 2051-2052, 2052-2053, 2053-2054, 2054-2055, 2055-2056, 2056-2057, 2057-2058, 2058-2059, 2059-2060, 2060-2061, 2061-2062, 2062-2063, 2063-2064, 2064-2065, 2065-2066, 2066-2067, 2067-2068, 2068-2069, 2069-2070, 2070-2071, 2071-2072, 2072-2073, 2073-2074, 2074-2075, 2075-2076, 2076-2077, 2077-2078, 2078-2079, 2079-2080, 2080-2081, 2081-2082, 2082-2083, 2083-2084, 2084-2085, 2085-2086, 2086-2087, 2087-2088, 2088-2089, 2089-2090, 2090-2091, 2091-2092, 2092-2093, 2093-2094, 2094-2095, 2095-2096, 2096-2097, 2097-2098, 2098-2099, 2099-2100, 2100-2101, 2101-2102, 2102-2103, 2103-2104, 2104-2105, 2105-2106, 2106-2107, 2107-2108, 2108-2109, 2109-2110, 2110-2111, 2111-2112, 2112-2113, 2113-2114, 2114-2115, 2115-2116, 2116-2117, 2117-2118, 2118-2119, 2119-2120, 2120-2121, 2121-2122, 2122-2123, 2123-2124, 2124-2125, 2125-2126, 2126-2127, 2127-2128, 2128-2129, 2129-2130, 2130-2131, 2131-2132, 2132-2133, 2133-2134, 2134-2135, 2135-2136, 2136-2137, 2137-2138, 2138-2139, 2139-2140, 2140-2141, 2141-2142, 2142-2143, 2143-2144, 2144-2145, 2145-2146, 2146-2147, 2147-2148, 2148-2149, 2149-2150, 2150-2151, 2151-2152, 2152-2153, 2153-2154, 2154-2155, 2155-2156, 2156-2157, 2157-2158, 2158-2159, 2159-2160, 2160-2161, 2161-2162, 2162-2163, 2163-2164, 2164-2165, 2165-2166, 2166-2167, 2167-2168, 2168-2169, 2169-2170, 2170-2171, 2171-2172, 2172-2173, 2173-2174, 2174-2175, 2175-2176, 2176-2177, 2177-2178, 2178-2179, 2179-2180, 2180-2181, 2181-2182, 2182-2183, 2183-2184, 2184-2185, 2185-2186, 2186-2187, 2187-2188, 2188-2189, 2189-2190, 2190-2191, 2191-2192, 2192-2193, 2193-2194, 2194-2195, 2195-2196, 2196-2197, 2197-2198, 2198-2199, 2199-2200, 2200-2201, 2201-2202, 2202-2203, 2203-2204, 2204-2205, 2205-2206, 2206-2207, 2207-2208, 2208-2209, 2209-2210, 2210-2211, 2211-2212, 2212-2213, 2213-2214, 2214-2215, 2215-2216, 2216-2217, 2217-2218, 2218-2219, 2219-2220, 2220-2221, 2221-2222, 2222-2223, 2223-2224, 2224-2225, 2225-2226, 2226-2227, 2227-2228, 2228-2229, 2229-2230, 2230-2231, 2231-2232, 2232-2233, 2233-2234, 2234-2235, 2235-2236, 2236-2237, 2237-2238, 2238-2239, 2239-2240, 2240-2241, 2241-2242, 2242-2243, 2243-2244, 2244-2245, 2245-2246, 2246-2247, 2247-2248, 2248-2249, 2249-2250, 2250-2251, 2251-2252, 2252-2253, 2253-2254, 2254-2255, 2255-2256, 2256-2257, 2257-2258, 2258-2259, 2259-2260, 2260-2261, 2261-2262, 2262-2263, 2263-2264, 2264-2265, 2265-2266, 2266-2267, 2267-2268, 2268-2269, 2269-2270, 2270-2271, 2271-2272, 2272-2273, 2273-2274, 2274-2275, 2275-2276, 2276-2277, 2277-2278, 2278-2279, 2279-2280, 2280-2281, 2281-2282, 2282-2283, 2283-2284, 2284-2285, 2285-2286, 2286-2287, 2287-2288, 2288-2289, 2289-2290, 2290-2291, 2291-2292, 2292-2293, 2293-2294, 2294-2295, 2295-2296, 2296-2297, 2297-2298, 2298-2299, 2299-2300, 2300-2301, 2301-2302, 2302-2303, 2303-2304, 2304-2305, 2305-2306, 2306-2307, 2307-2308, 2308-2309, 2309-2310, 2310-2311, 2311-2312, 2312-2313, 2313-2314, 2314-2315, 2315-2316, 2316-2317, 2317-2318, 2318-2319, 2319-2320, 2320-2321, 2321-2322, 2322-2323, 2323-2324, 2324-2325, 2325-2326, 2326-2327, 2327-2328, 2328-2329, 2329-2330, 2330-2331, 2331-2332, 2332-2333, 2333-2334, 2334-2335, 2335-2336, 2336-2337, 2337-2338, 2338-2339, 2339-2340, 2340-2341, 2341-2342, 2342-2343, 2343-2344, 2344-2345, 2345-2346, 2346-2347, 2347-2348, 2348-2349, 2349-2350, 2350-2351, 2351-2352, 2352-2353, 2353-2354, 2354-2355, 2355-2356, 2356-2357, 2357-2358, 2358-2359, 2359-2360, 2360-2361, 2361-2362, 2362-2363, 2363-2364, 2364-2365, 2365-2366, 2366-2367, 2367-2368, 2368-2369, 2369-2370, 23



figure 71: perspective of proposed secure entry along Western edge of re-aligned security fence



## Village Entries

The entries to the Athlete's Village are critical elements of the design. They mark the transition from the city into the campus, and subsequently into the Village, as well as into buildings and local areas. They present a strong public image and are the primary welcoming feature into both the campus and the Village. The landscapes surrounding the entries should be visually articulated so that once the user passes through the gateway, there will be no doubt that he or she has entered the campus. This would involve increasing the planting near the entries, effectively blocking out any superfluous views which do not reinforce the identity of the campus.

Building on the Olympic tradition of including massive vertical elements in site design, the principal gateway to the Pan-American Games Athlete's Village is designed to be a distinct orientation device on the site. A simple volumetric of a grain elevator, a common Western Canadian icon, this form was chosen primarily for its dramatic height, enabling it to be seen from a great distance and strongly establishing its presence as the main entry point, a clear and powerful indicator of arrival for the athletes. The entry along the western edge of the realigned security fence is similar in design to the main entry. The scale of this entry has been reduced, however, since it is not as visually important nor will it be required to accommodate a loading or unloading area for buses and vans. The entry points are also important locations for legible, well lit campus maps and directional signs, and to this end, an information kiosk has been established in close proximity. The kiosk will provide both visitors and those departing with information, directions, or even advice in their journeys.

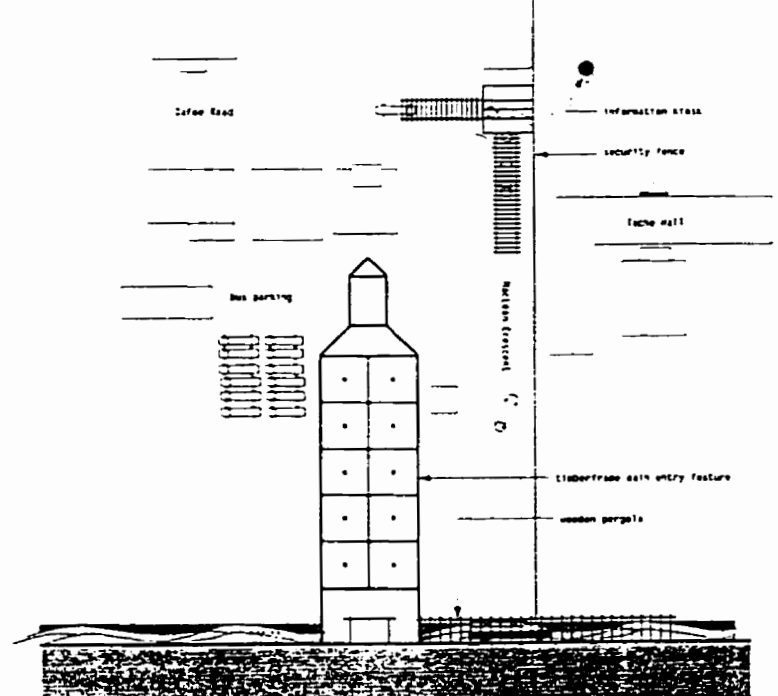
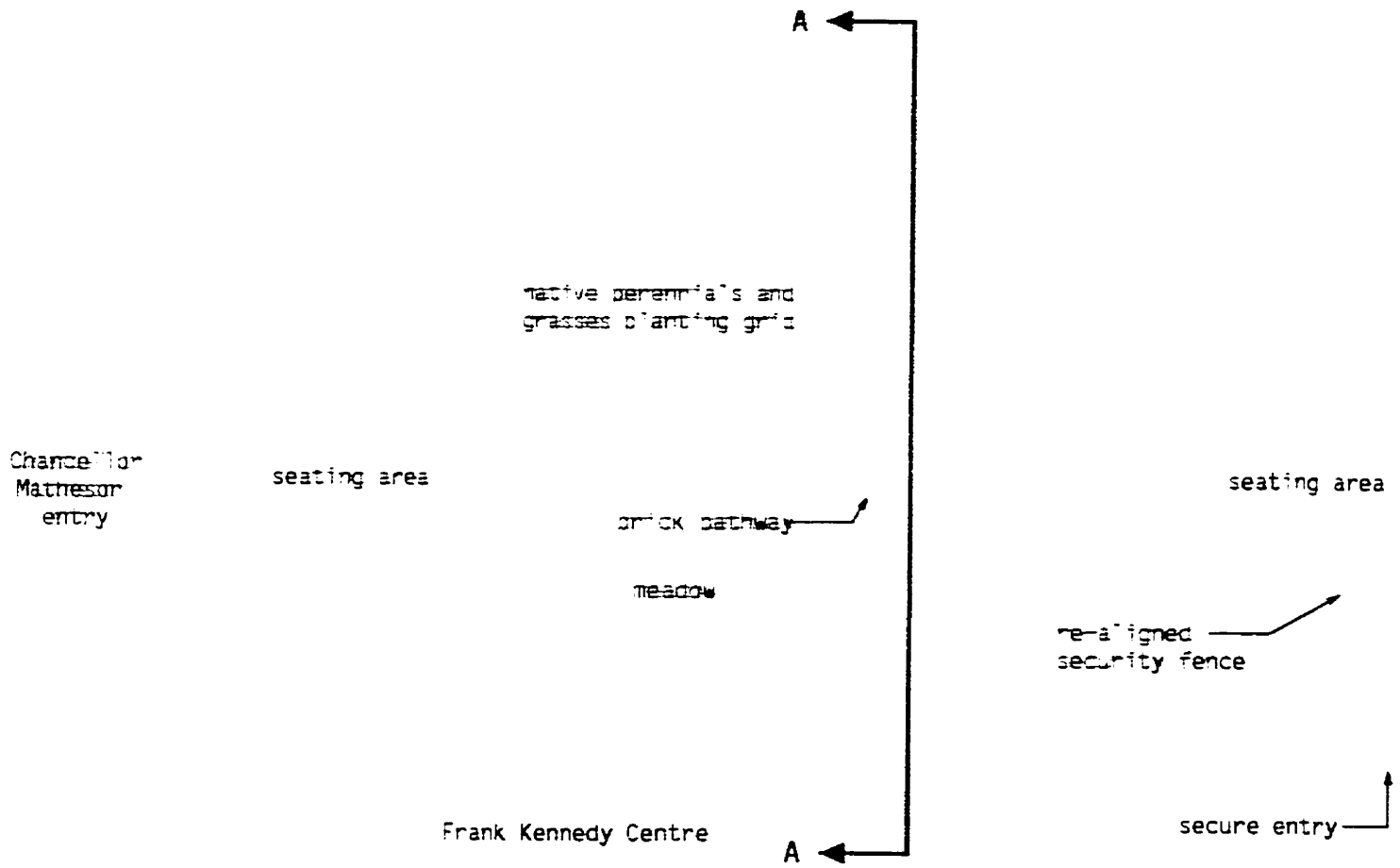
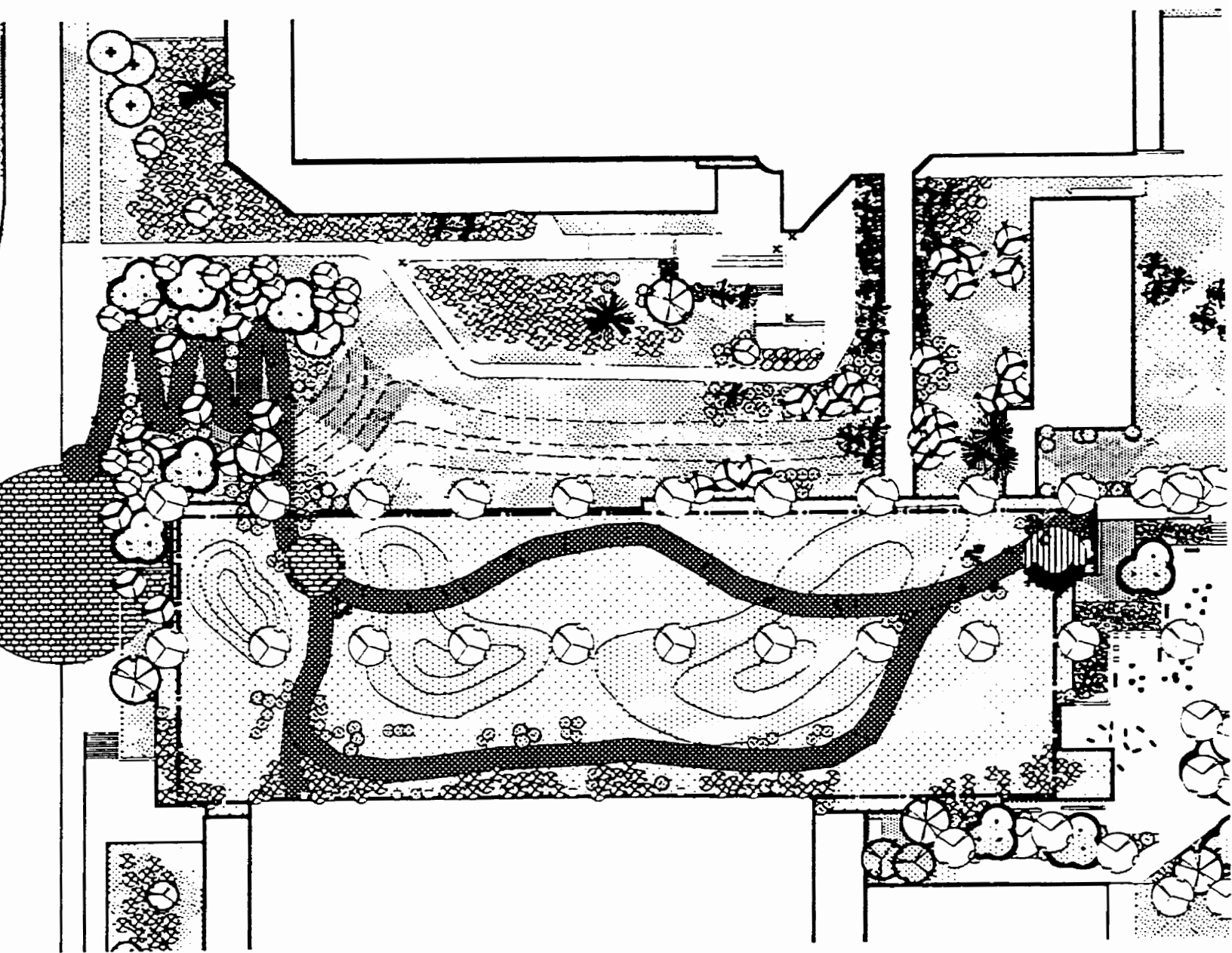


figure 72: Athlete's Village main entry

Max Bell Centre



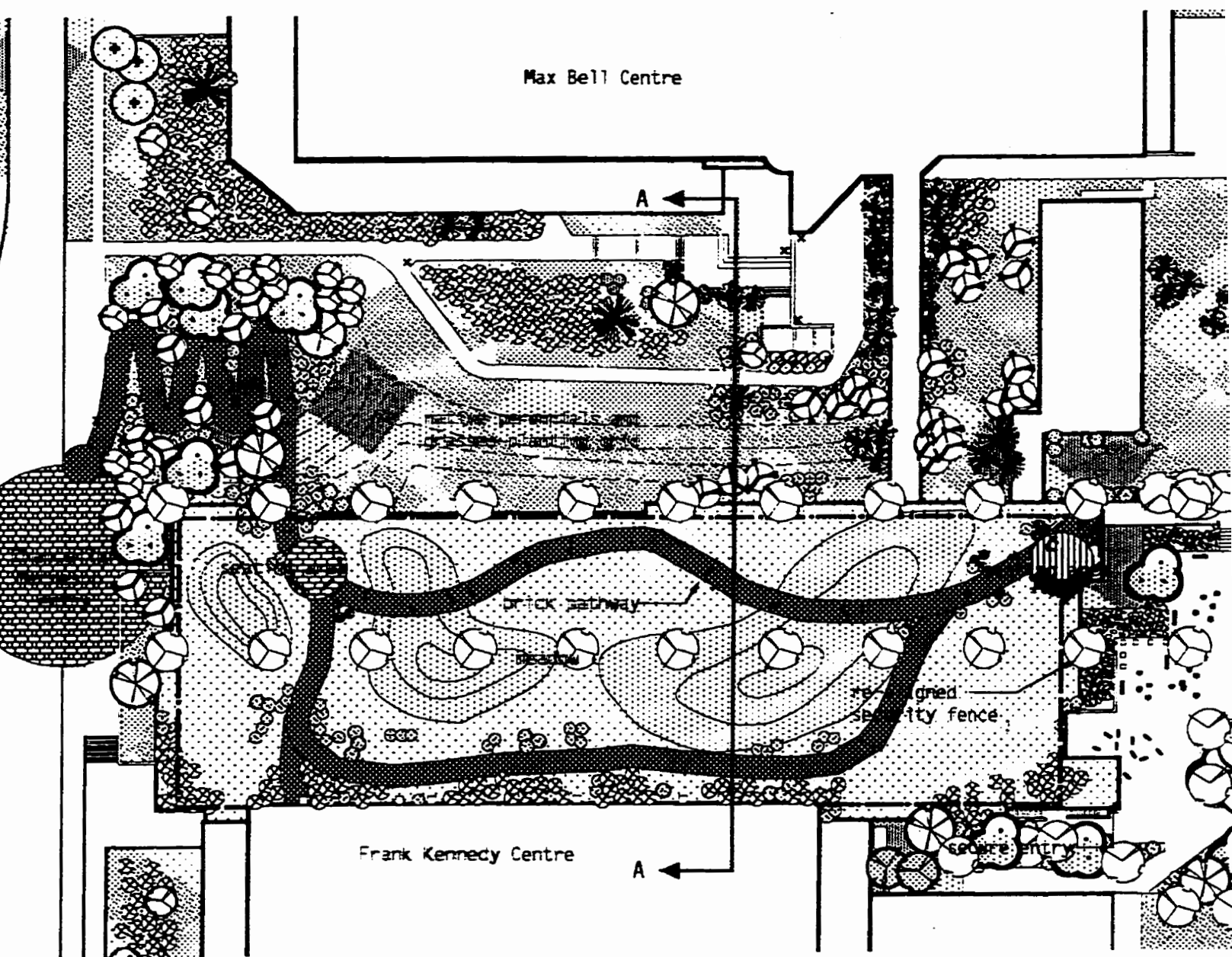


0 1 5 10 25  
scale : 750

AN ENDOWMENT OF SPIRIT

a landscape design for  
the Pan American Games  
athlete's village at the  
university of manitoba

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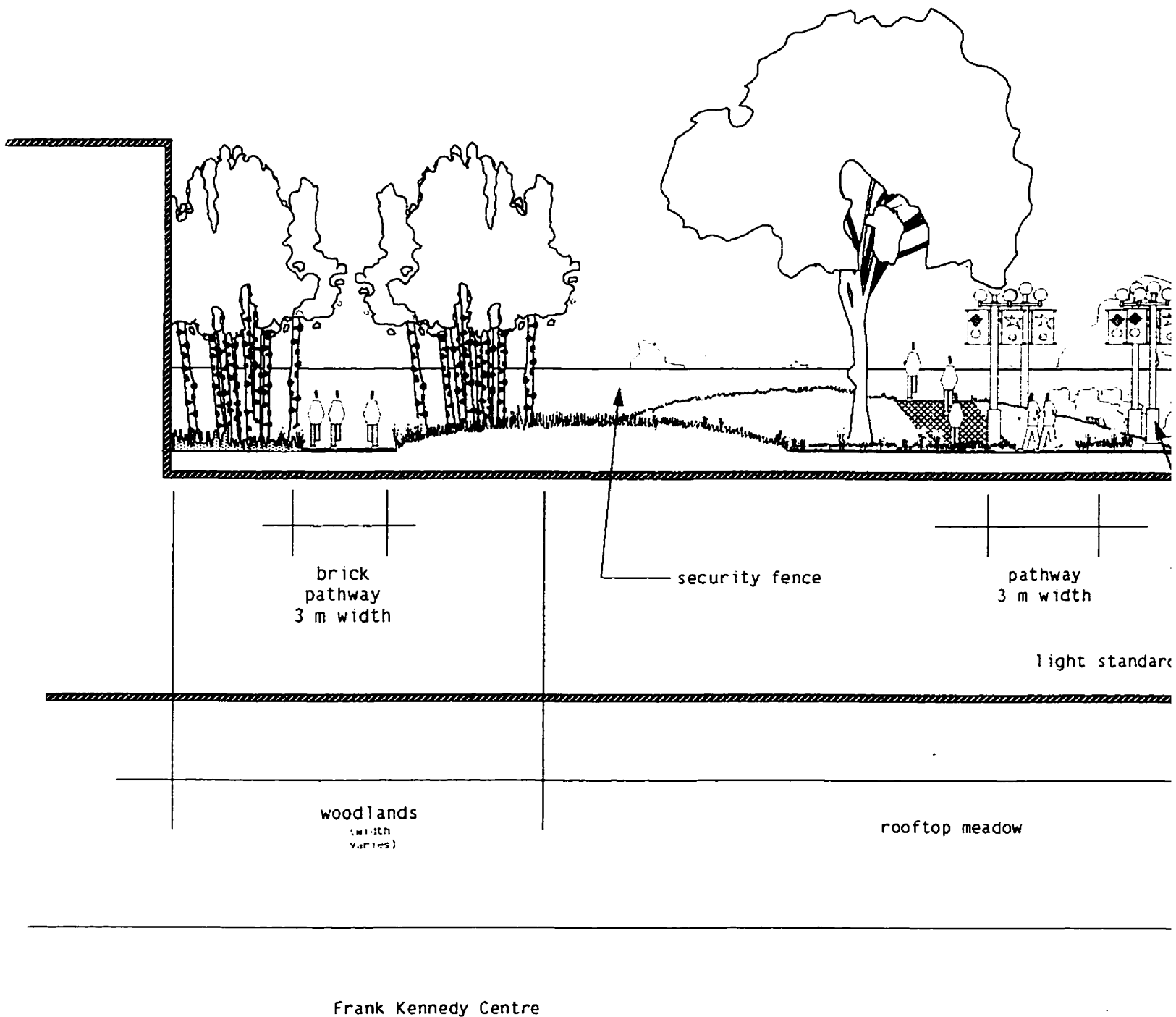
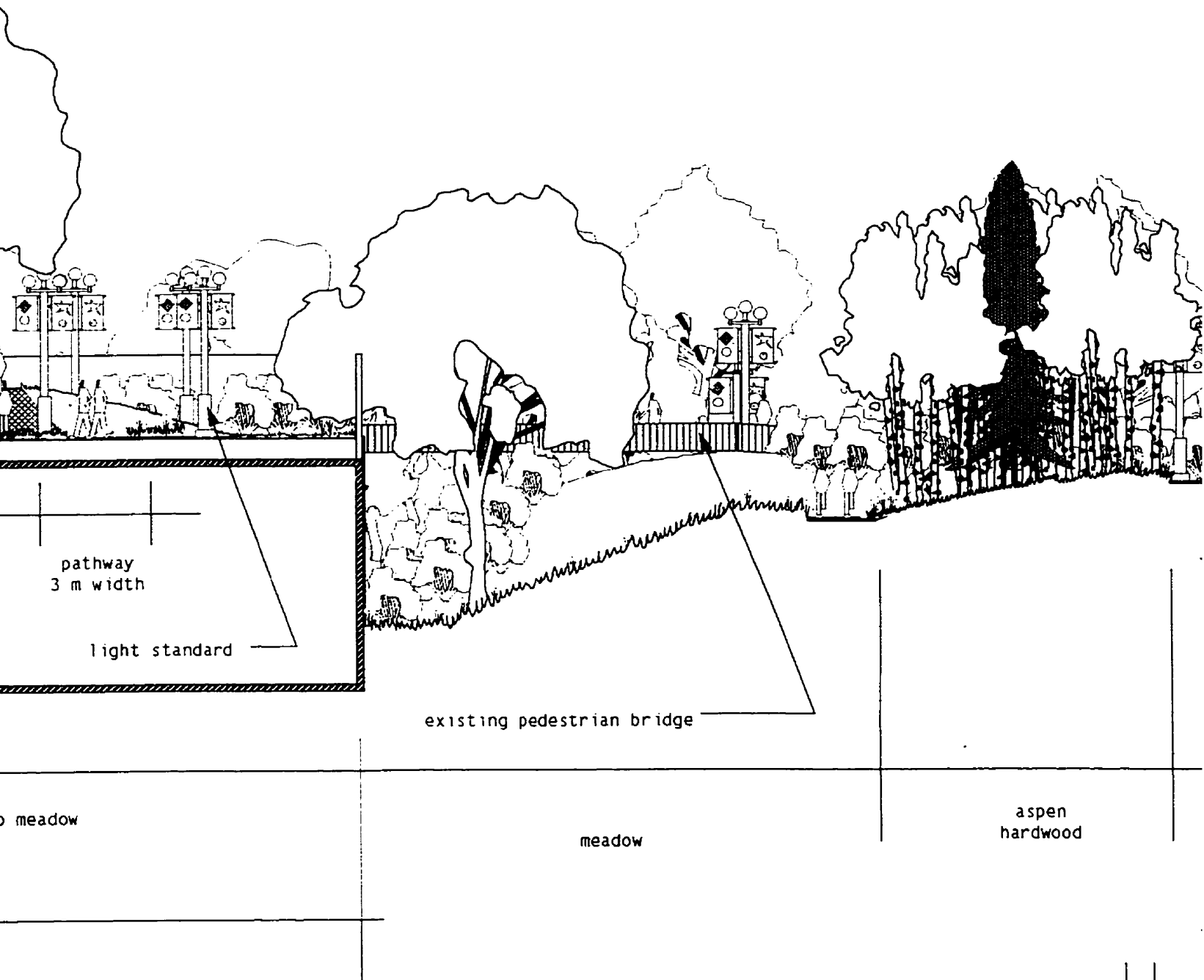


figure 74: section A - A: Frank Kennedy Rooftop Meadow





oftop Meadow

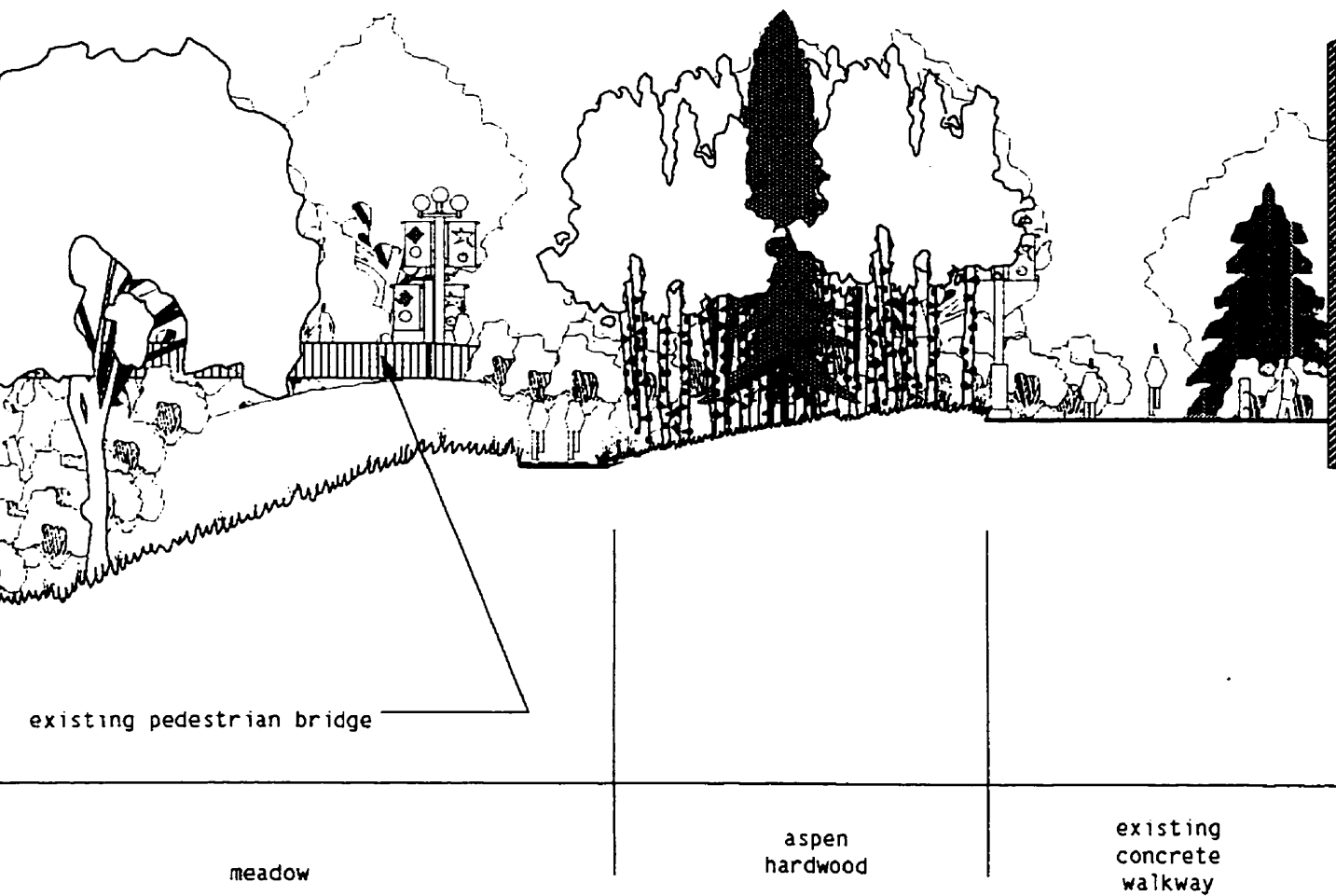
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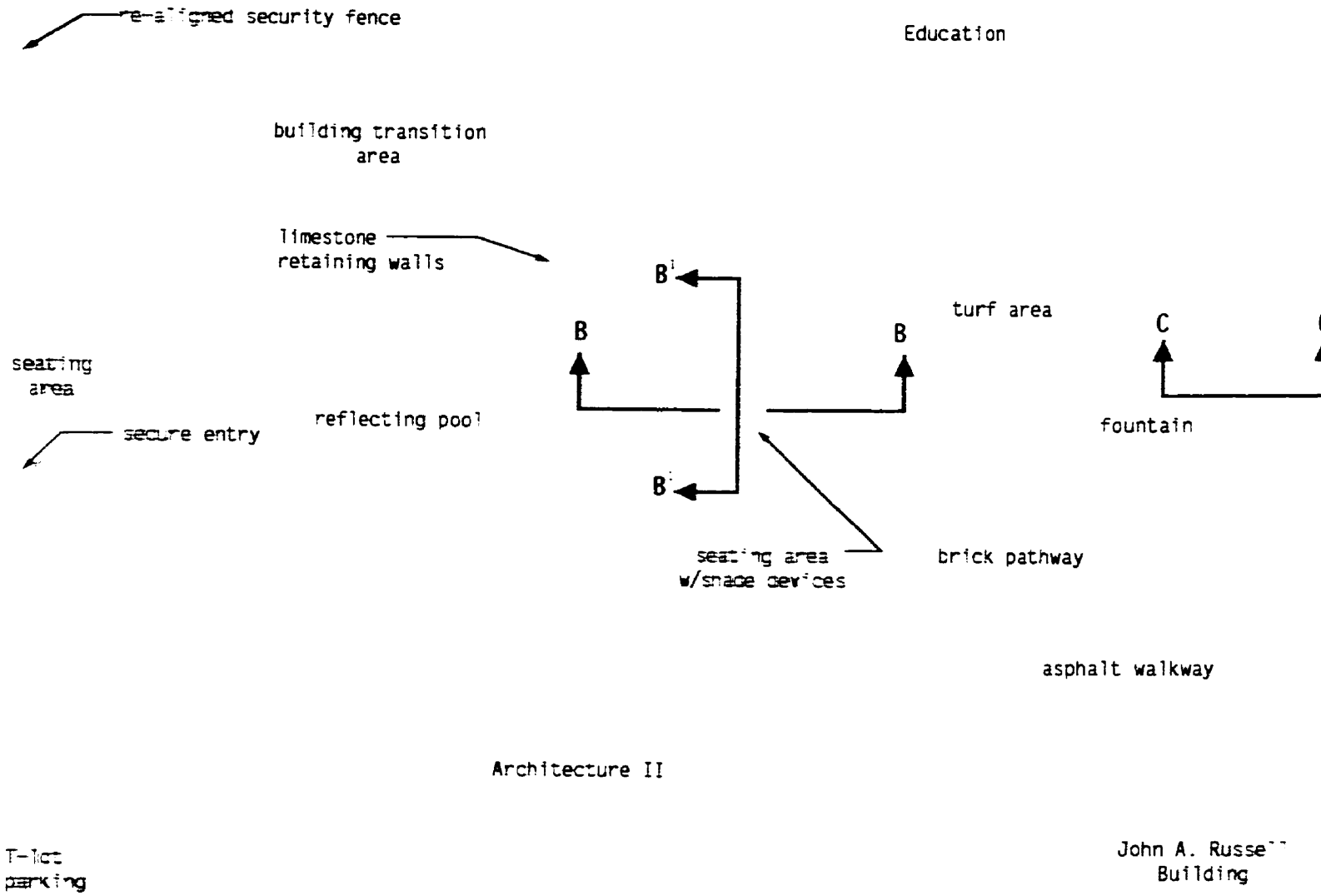


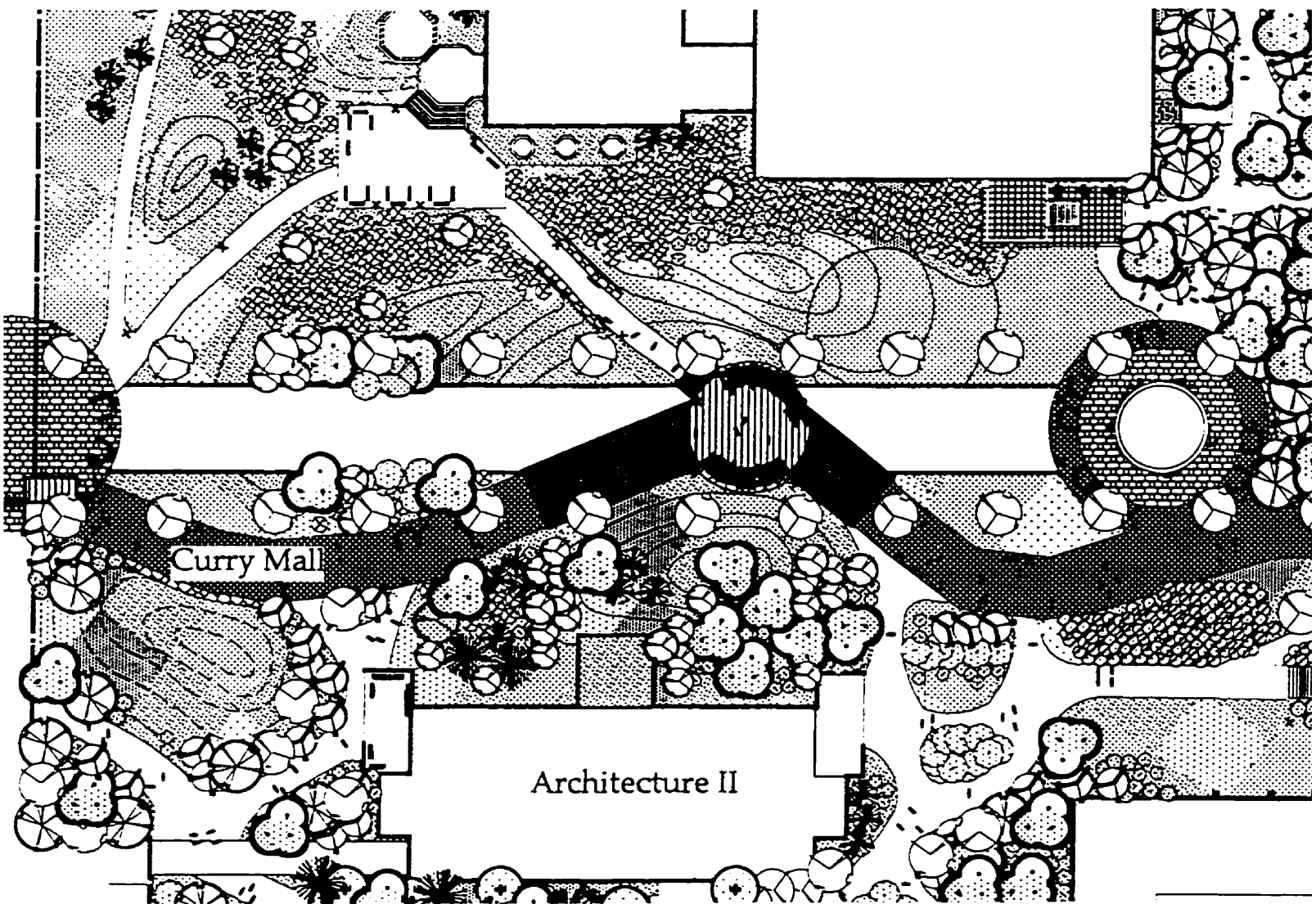
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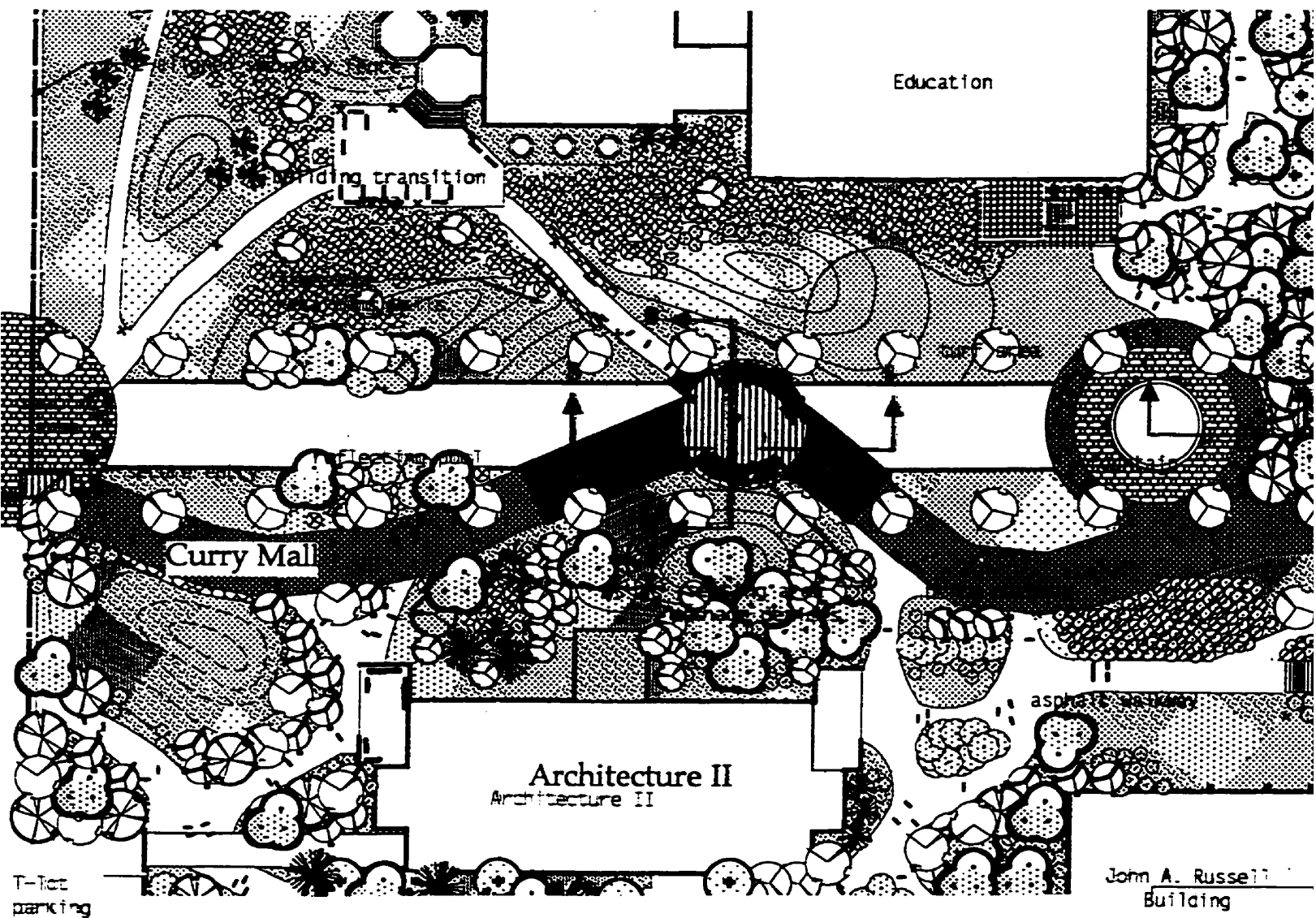
scale: 1" = 75'

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figure 75: detail area 2: plan: Curry Mall

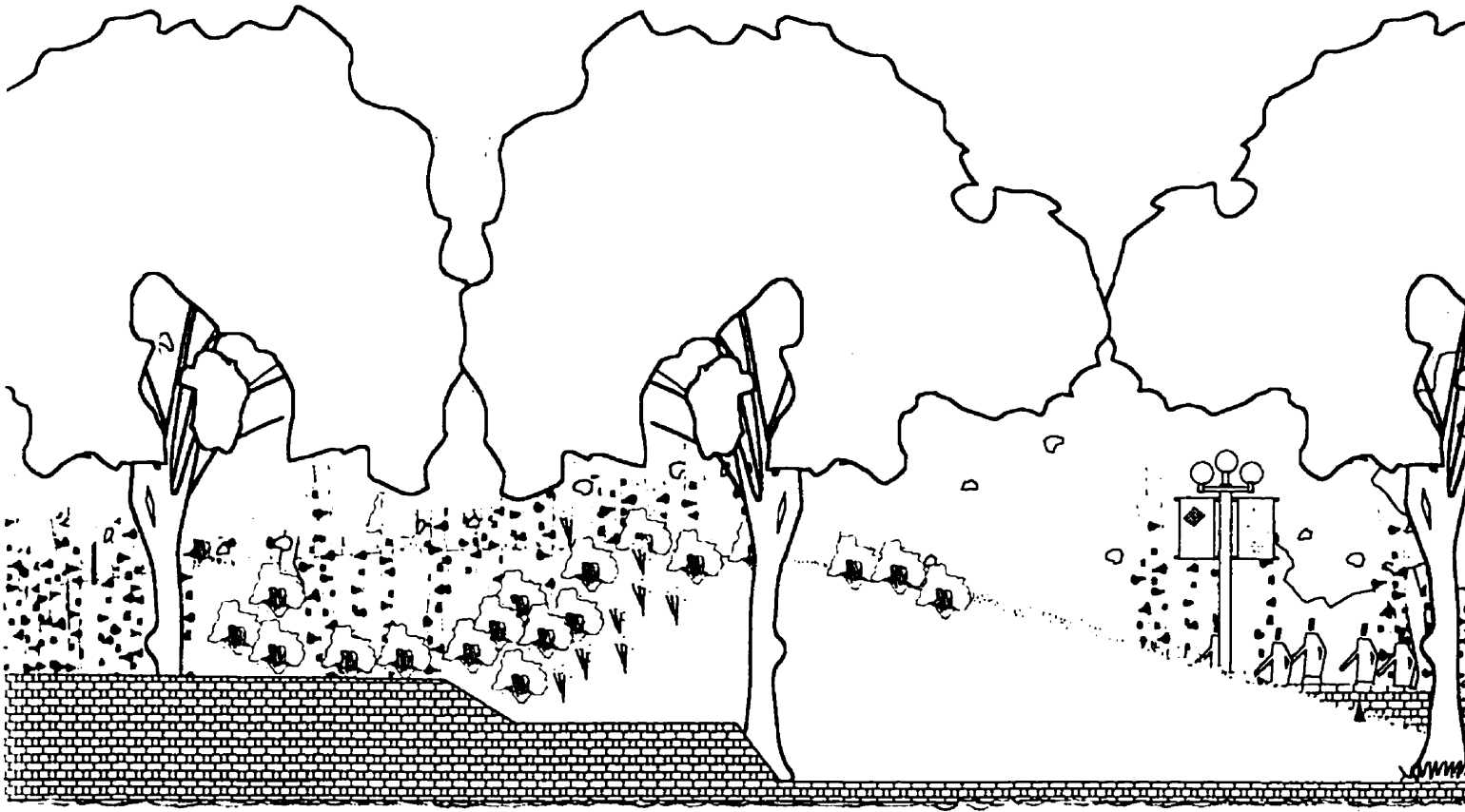


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figure 75: detail area 2: plan: Curry Mall



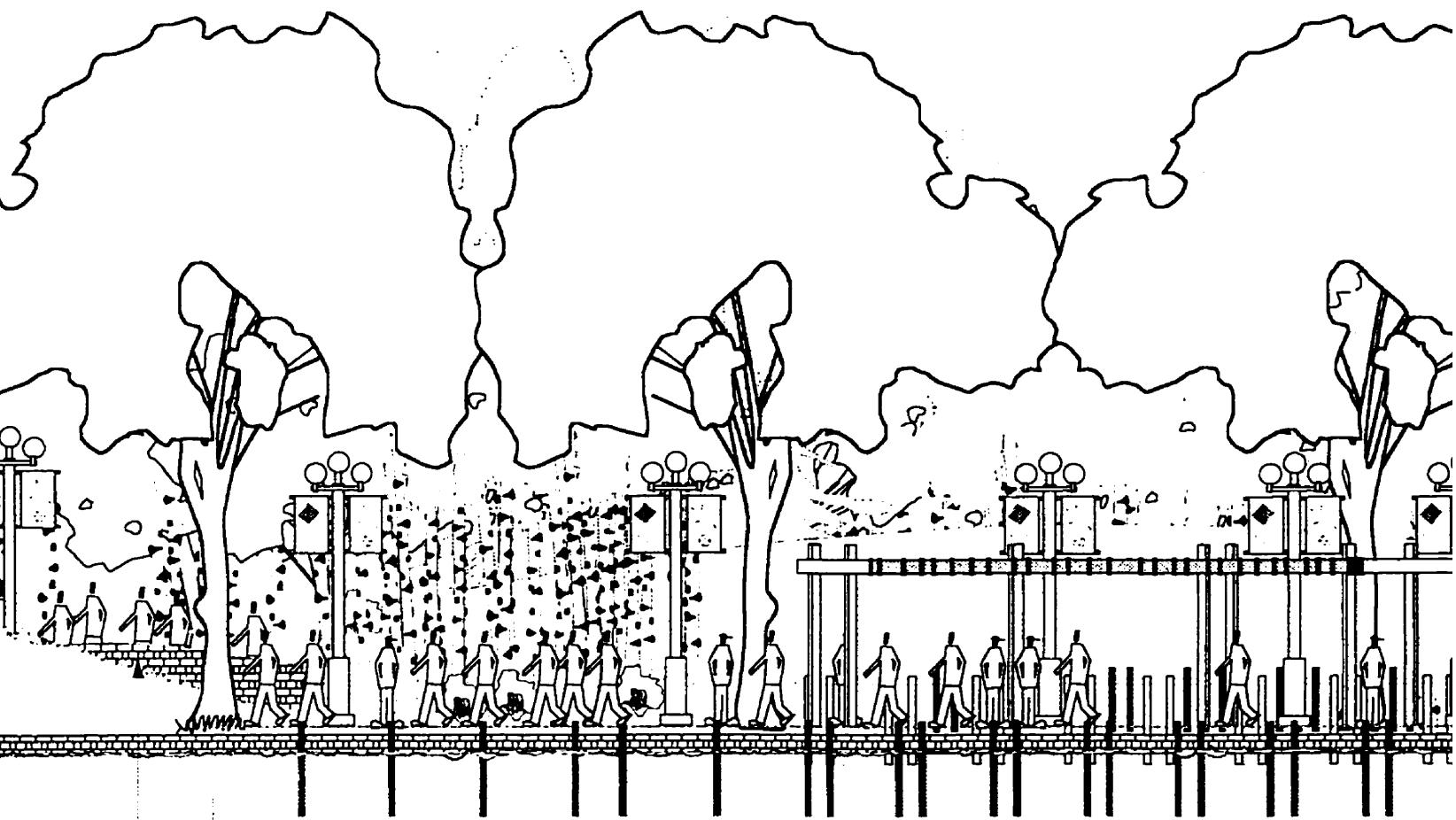
limestone retaining wall

reflecting pool

tertiary pathway  
w/ limestone  
retaining walls

figure 76: section B - B : Wood Deck



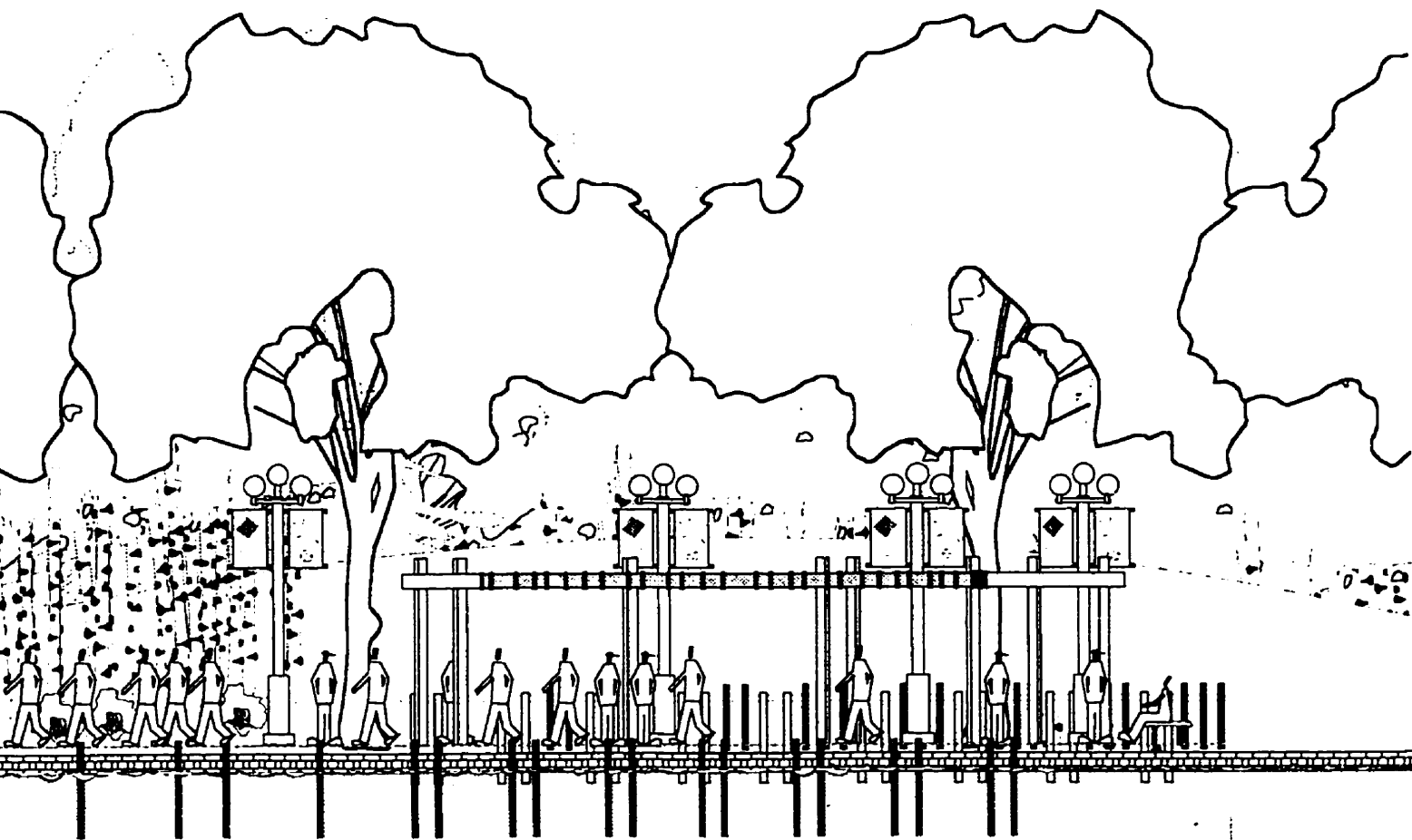


wood deck with overhead shade device

B: Wood Deck







wood deck with overhead shade device

0 1 3 5

scale 1:150

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university of manitoba

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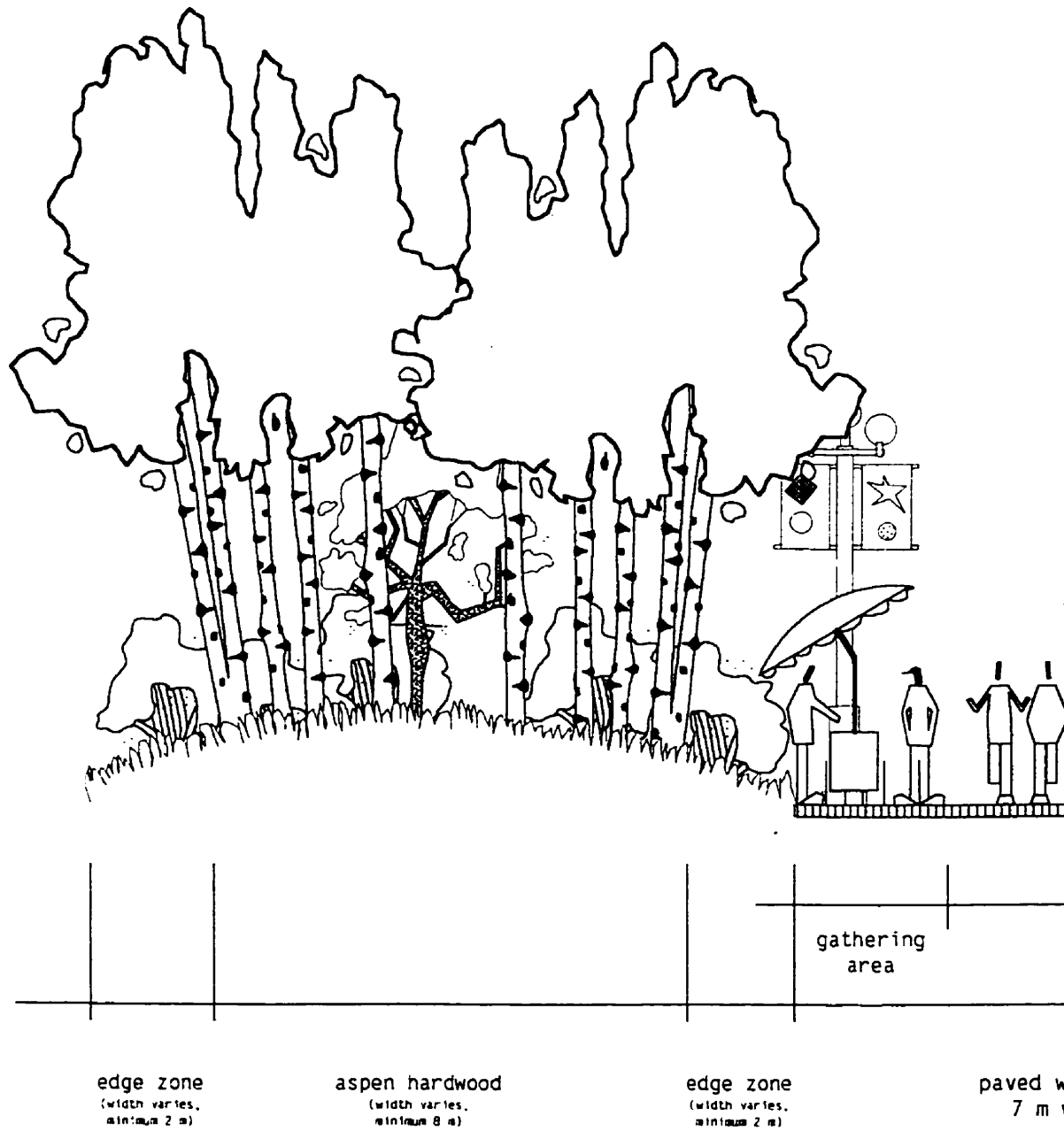
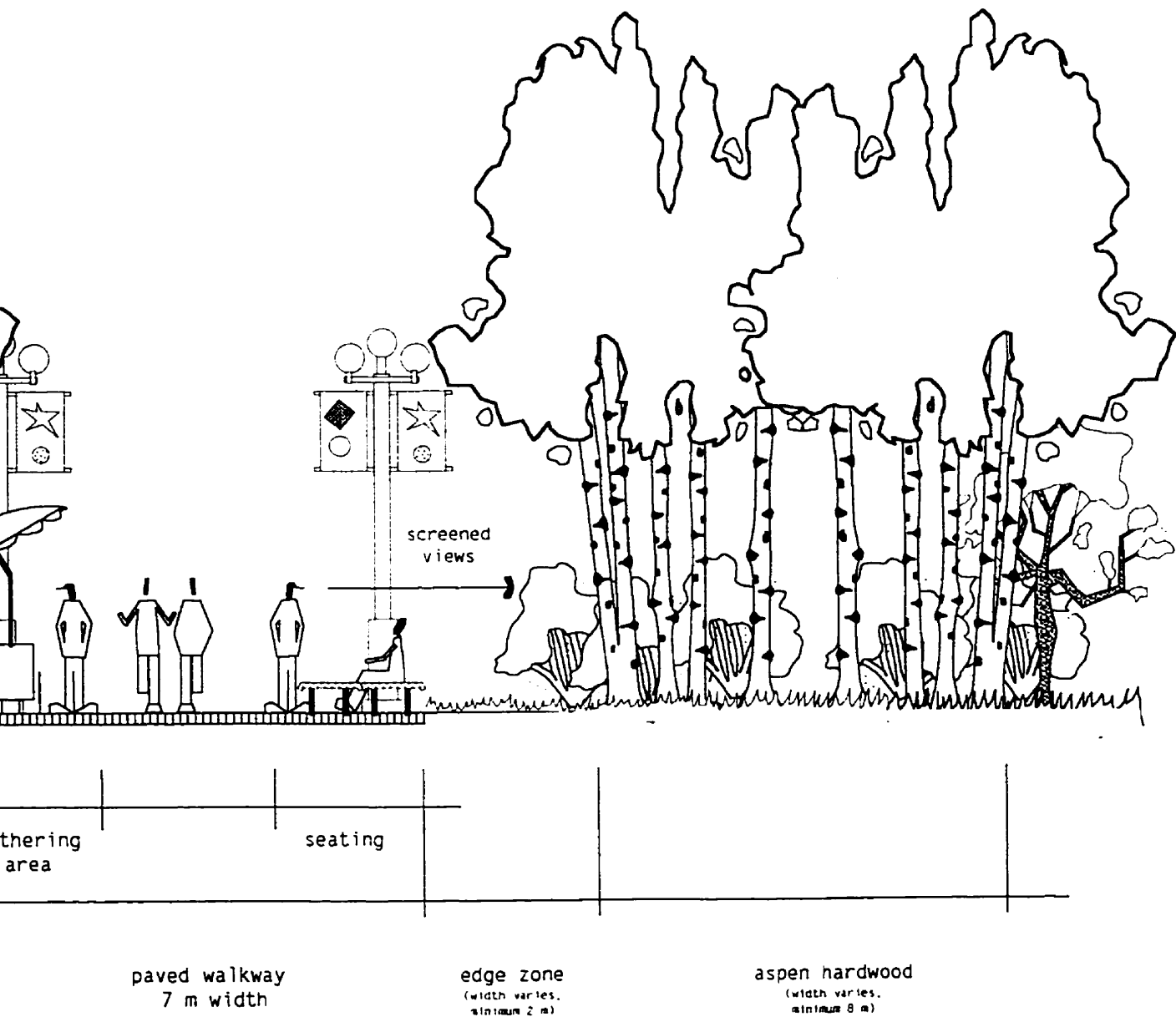
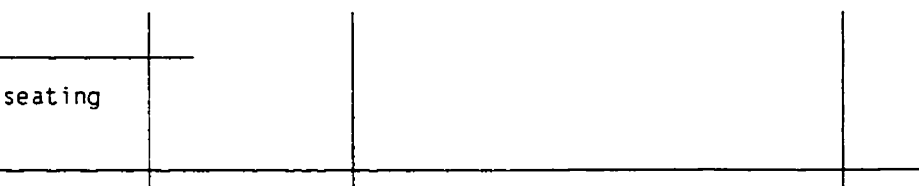
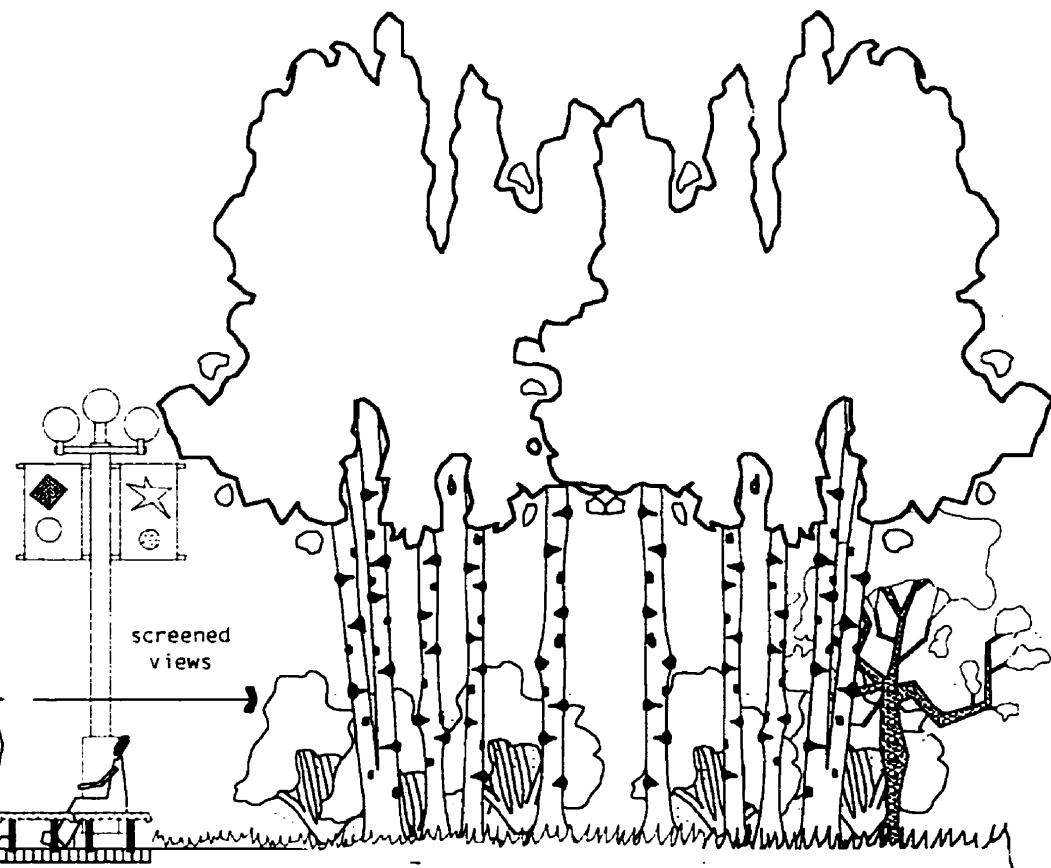


figure 77: typical main street cross section









seating

edge zone  
(width varies,  
minimum 2 m)

aspen hardwood  
(width varies,  
minimum 8 m)



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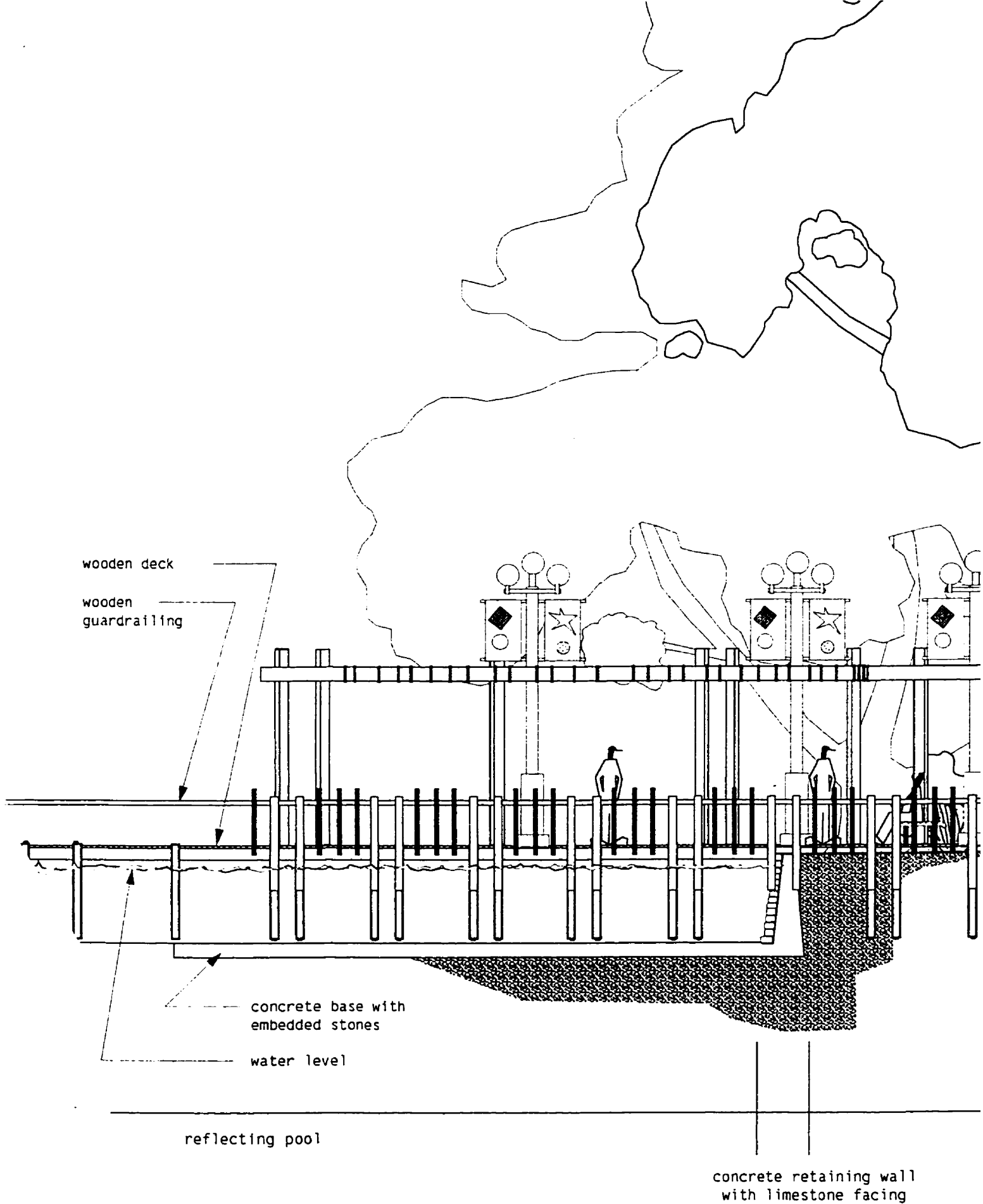


figure 78: section B<sup>1</sup> - B<sup>1</sup>: wood deck detailed cross section





leaf litter adds humus

shade tolerant shrubs  
in understorey

herbaceous materials and  
wild grasses provide cover  
for ground feeding  
and birds

0 1 3  
s c a

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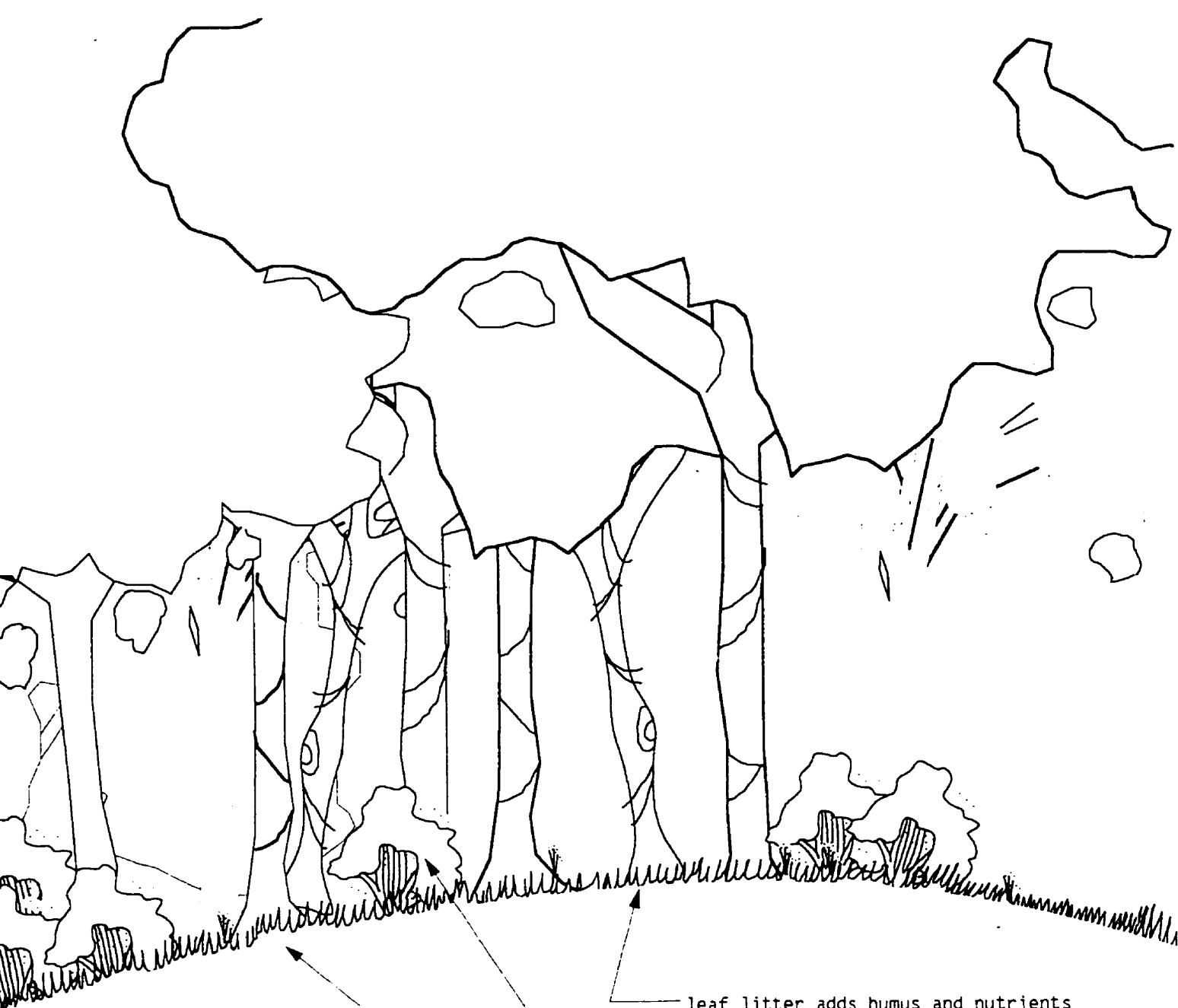
a lands  
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THE UNIVERSITY  
FORT GARRY

aining wall  
ne facing  
ss section

woodlands  
(width varies,  
minimum 10 m)





leaf litter adds humus and nutrients

shade tolerant shrubs  
in understorey

herbaceous materials and  
wild grasses provide forage and  
cover for ground feeding mammals  
and birds



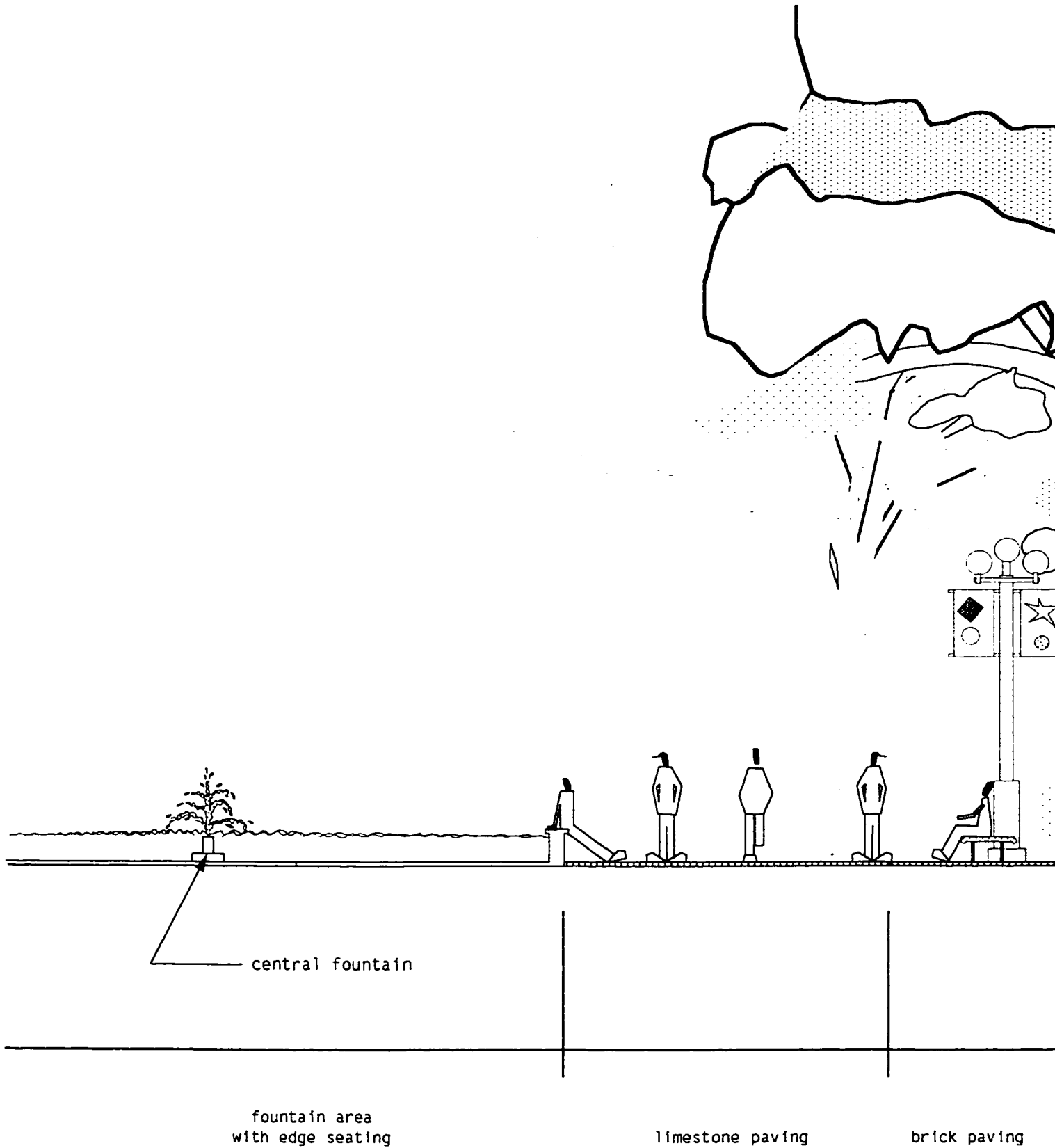
woodlands  
(width varies,  
minimum 10 m)

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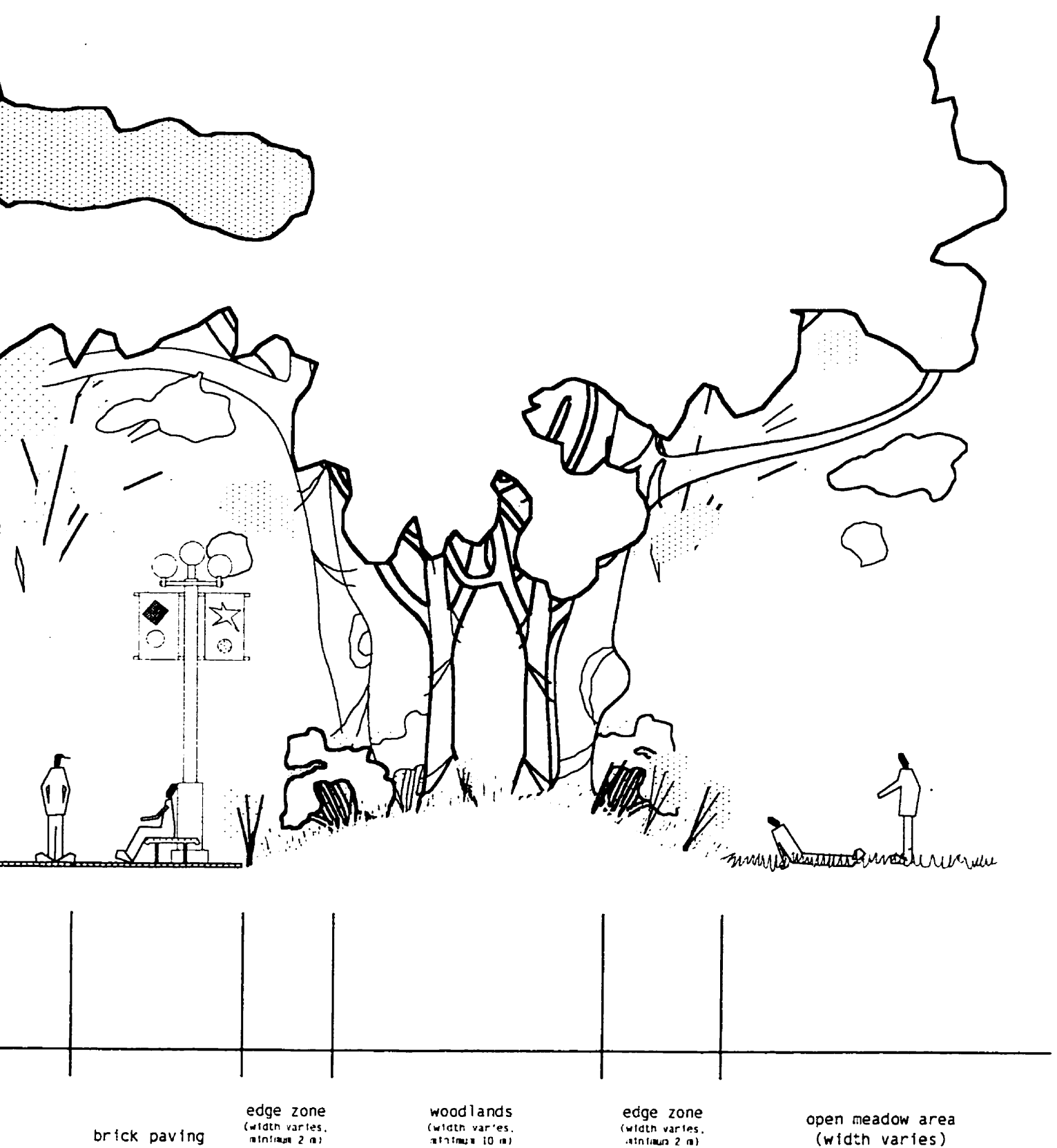




*figure : 79* section C - C: fountain area detailed cross-section







AN END

cross-section

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FOR





woodlands  
(width varies,  
minimum 10 m)

edge zone  
(width varies,  
minimum 2 m)

open meadow area  
(width varies)



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a landscape design for  
the Pan American Games  
athlete's village at the  
university of manitoba

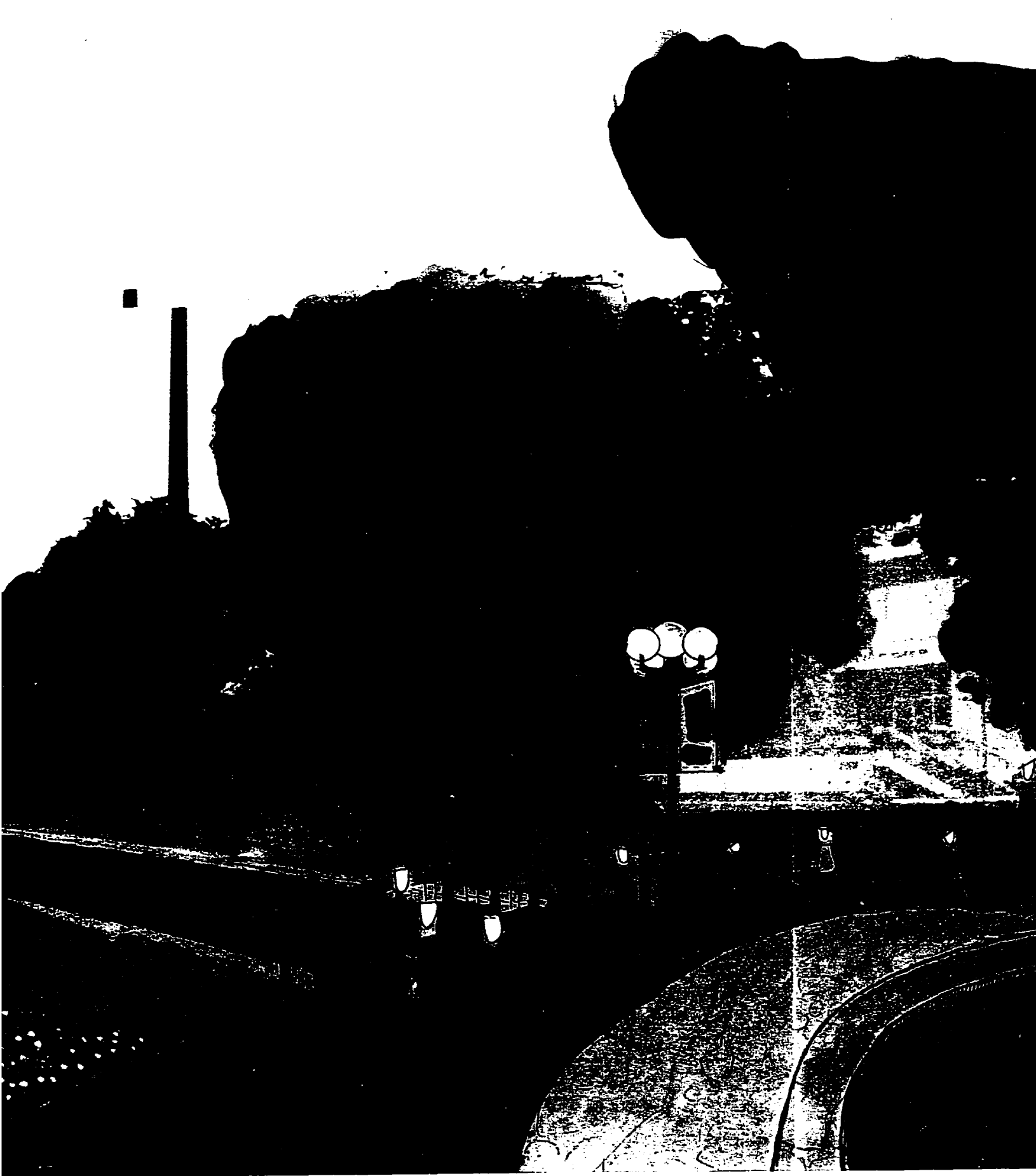
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FORT GARRY CAMPUS





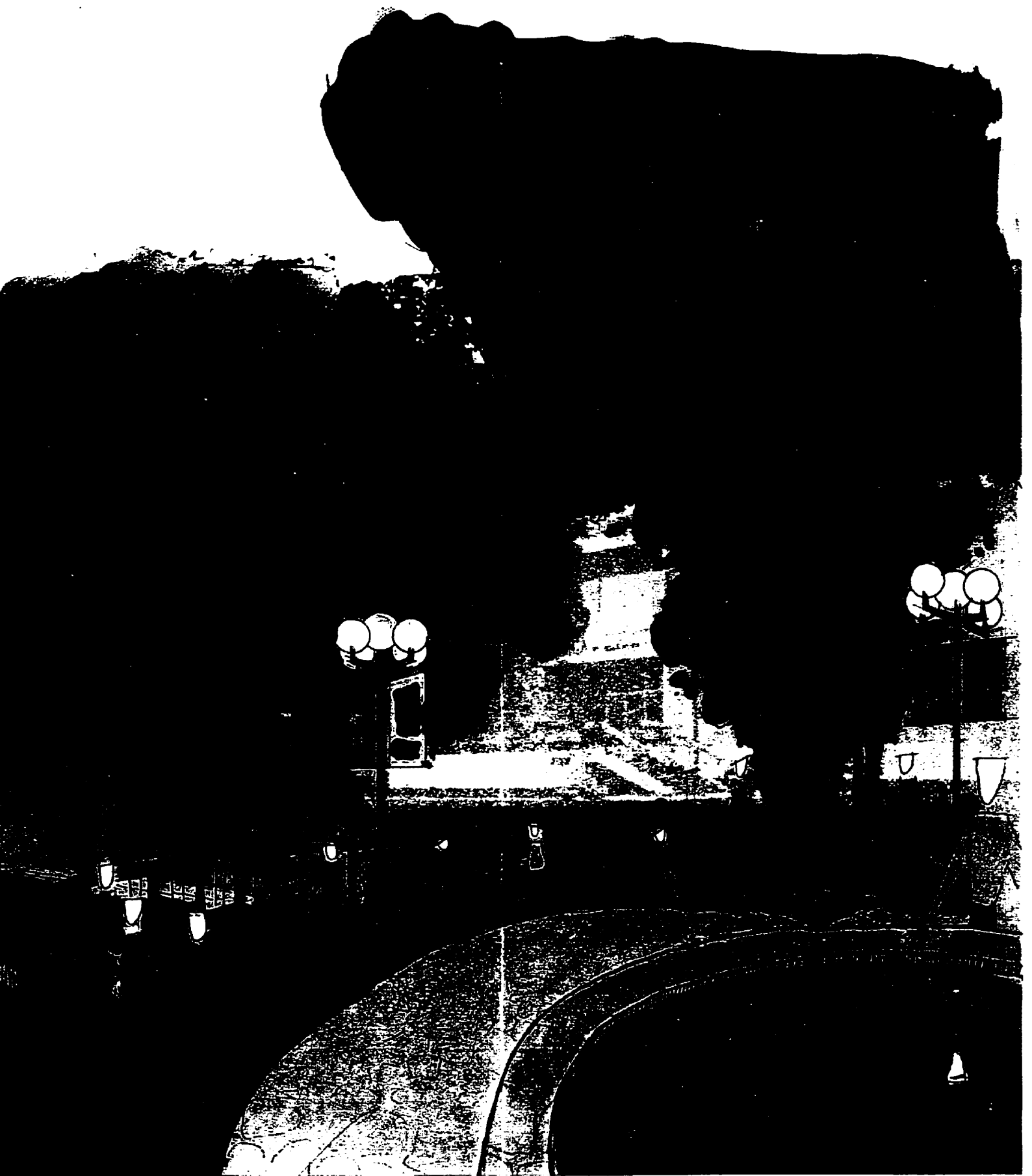
*figure 80: fountain area looking West*















*figure 81: plaza area adjacent to John A. Russell Building's North entrance*





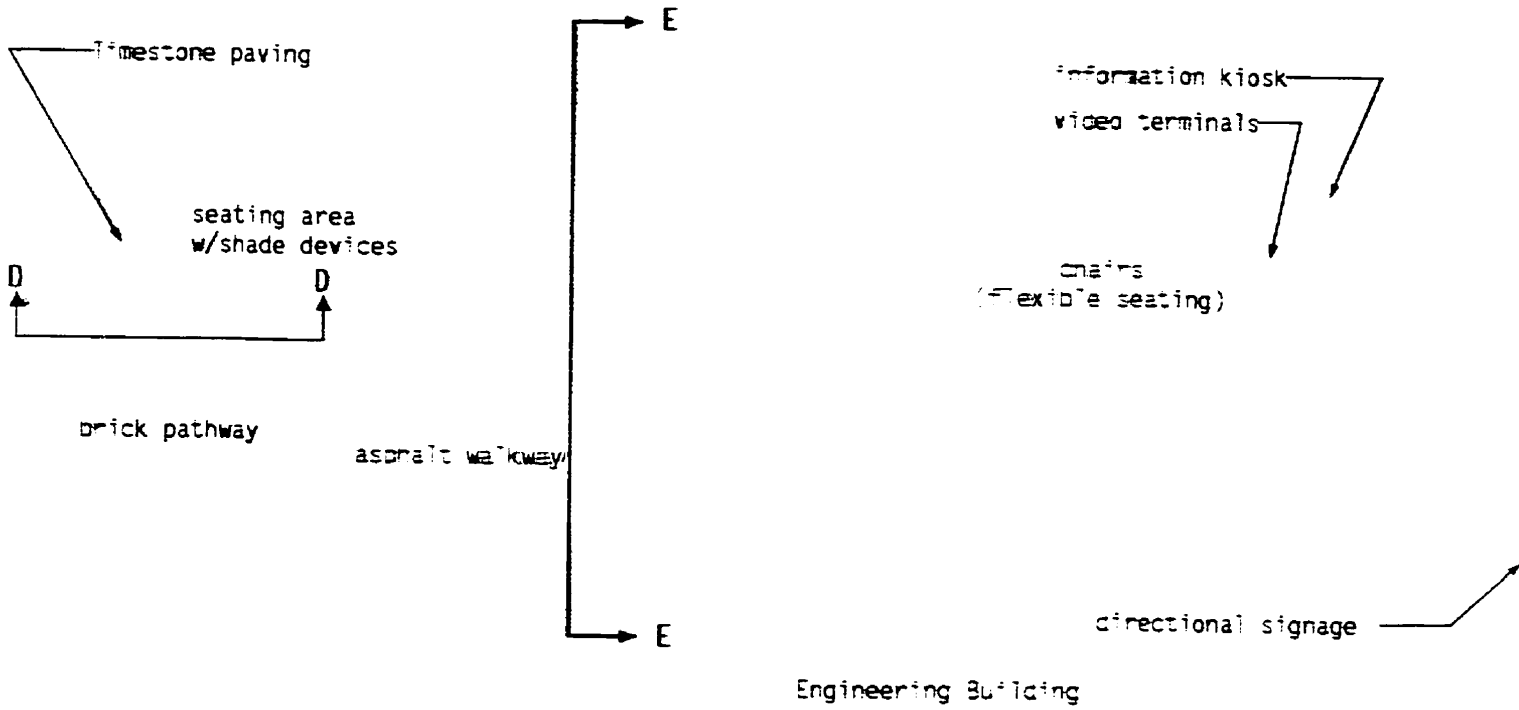








University Centre  
(UMSU)



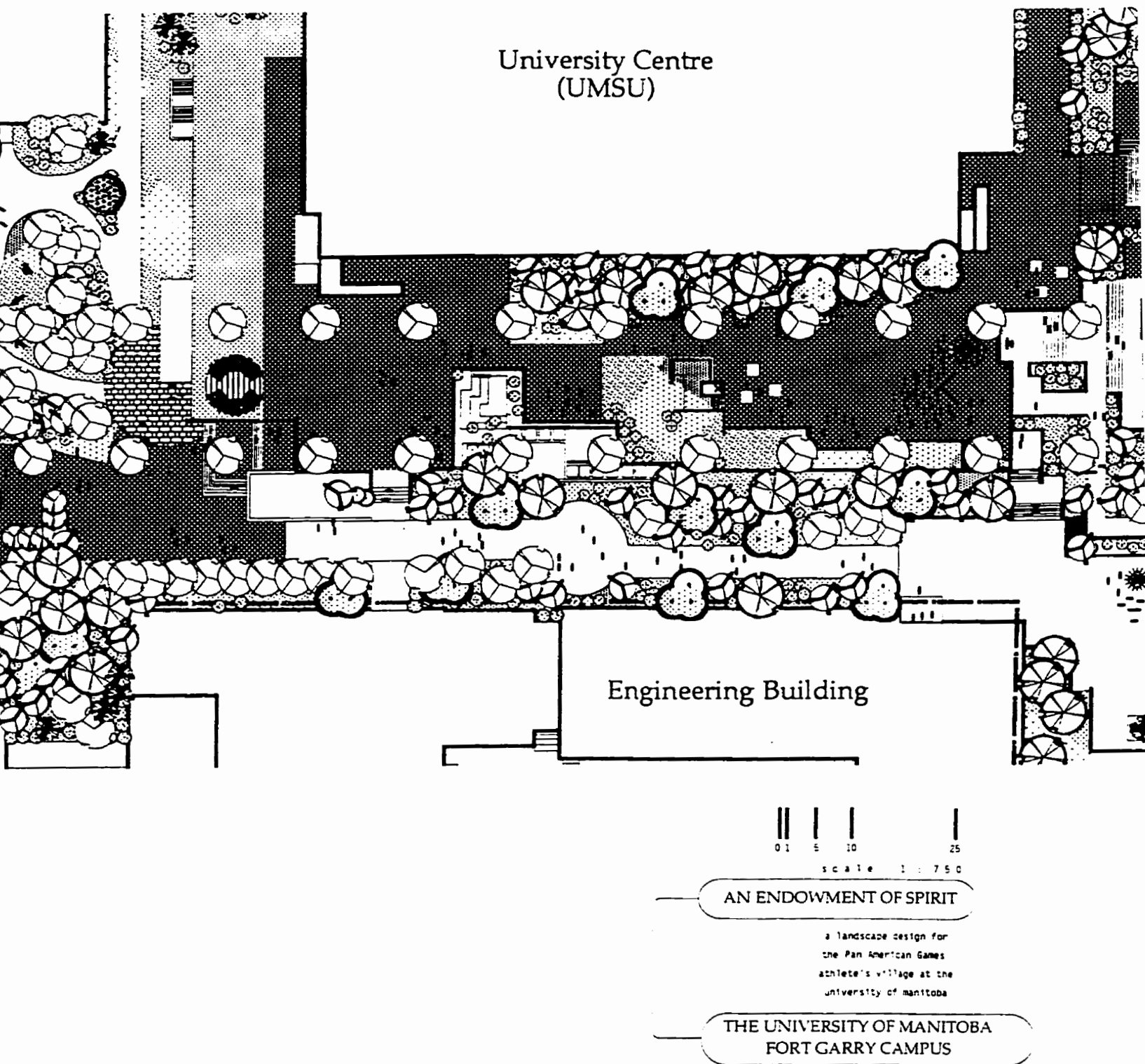


figure 82: detail area 3 : plan : UMSU plaza

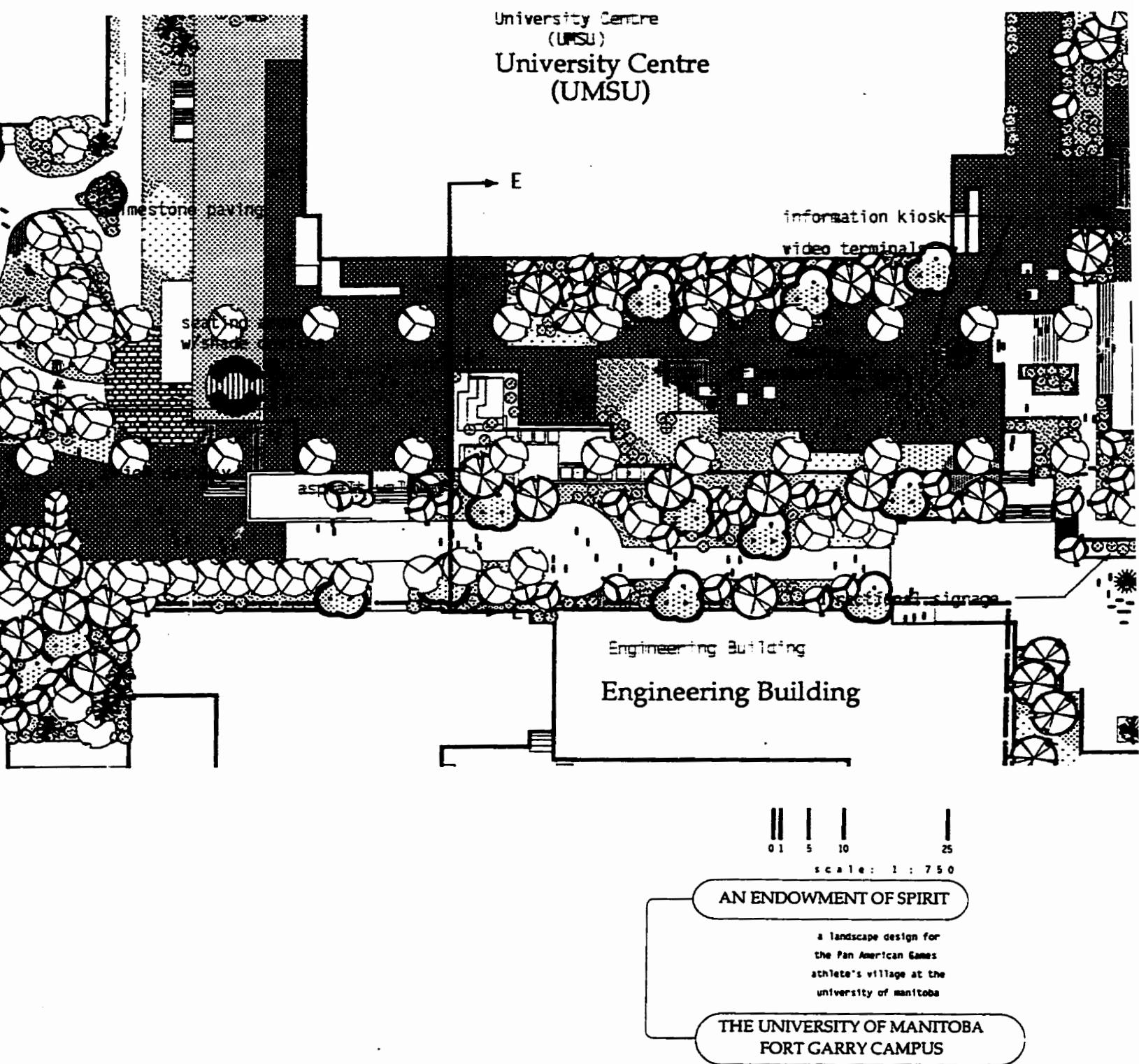


figure 82: detail area 3 : plan : UMSU plaza

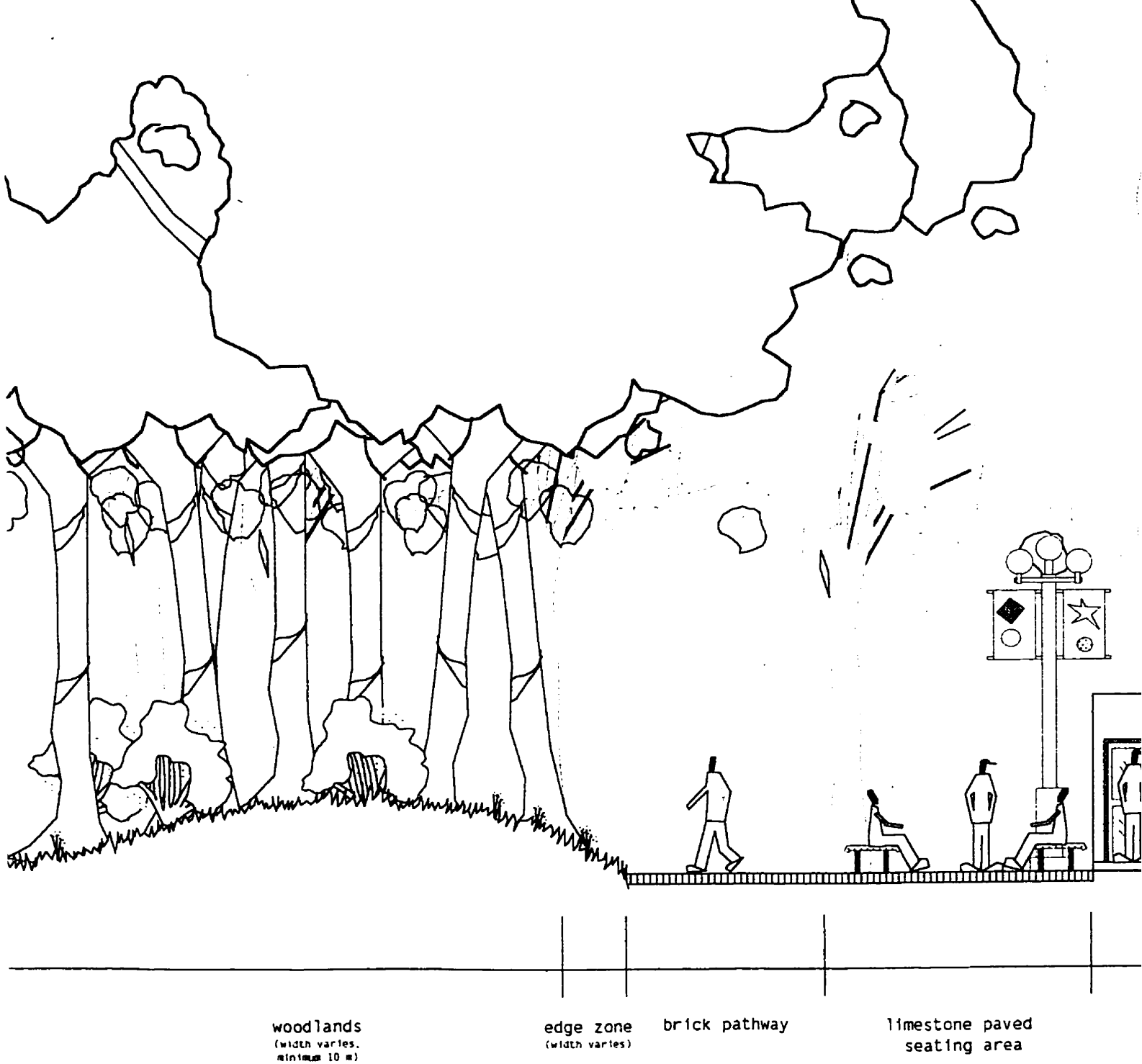
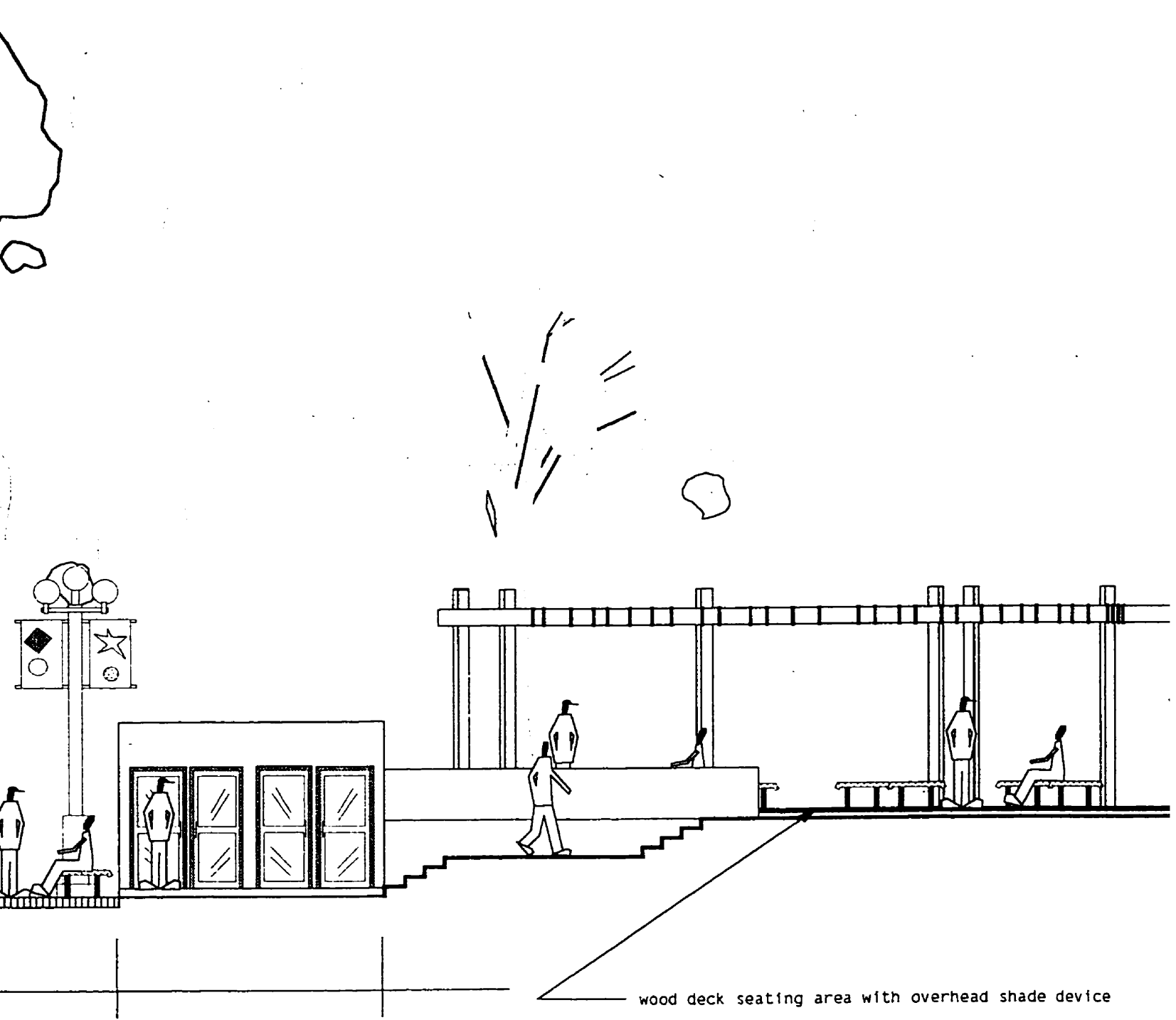


figure 83: section D -D: UMSU entry





paved  
area

UMSU entry

wood deck seating area with overhead shade device

0 1 3  
scale

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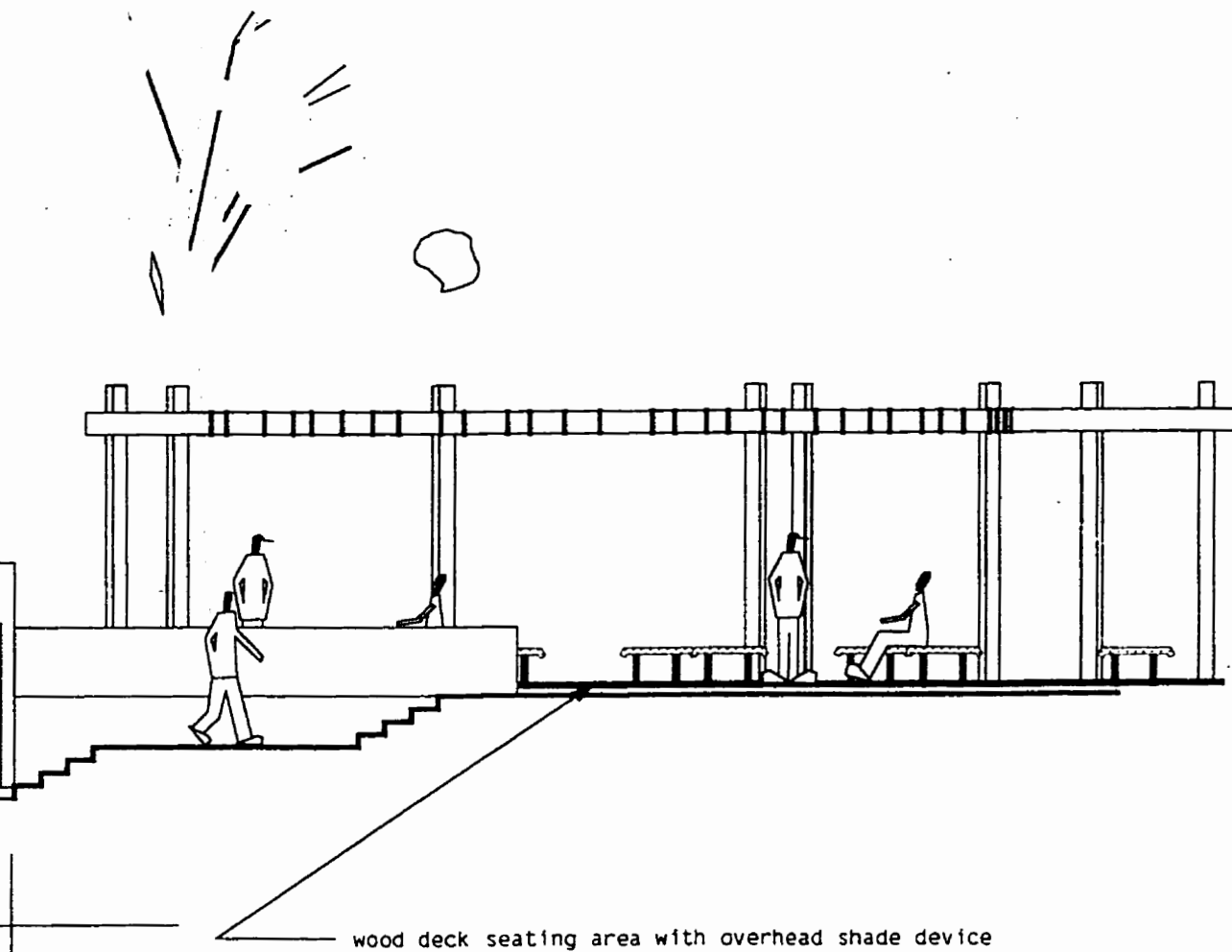
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UMSU entry







scale 1:100

## AN ENDOWMENT OF SPIRIT

a landscape design for  
the Pan American Games  
athlete's village at the  
university of manitoba

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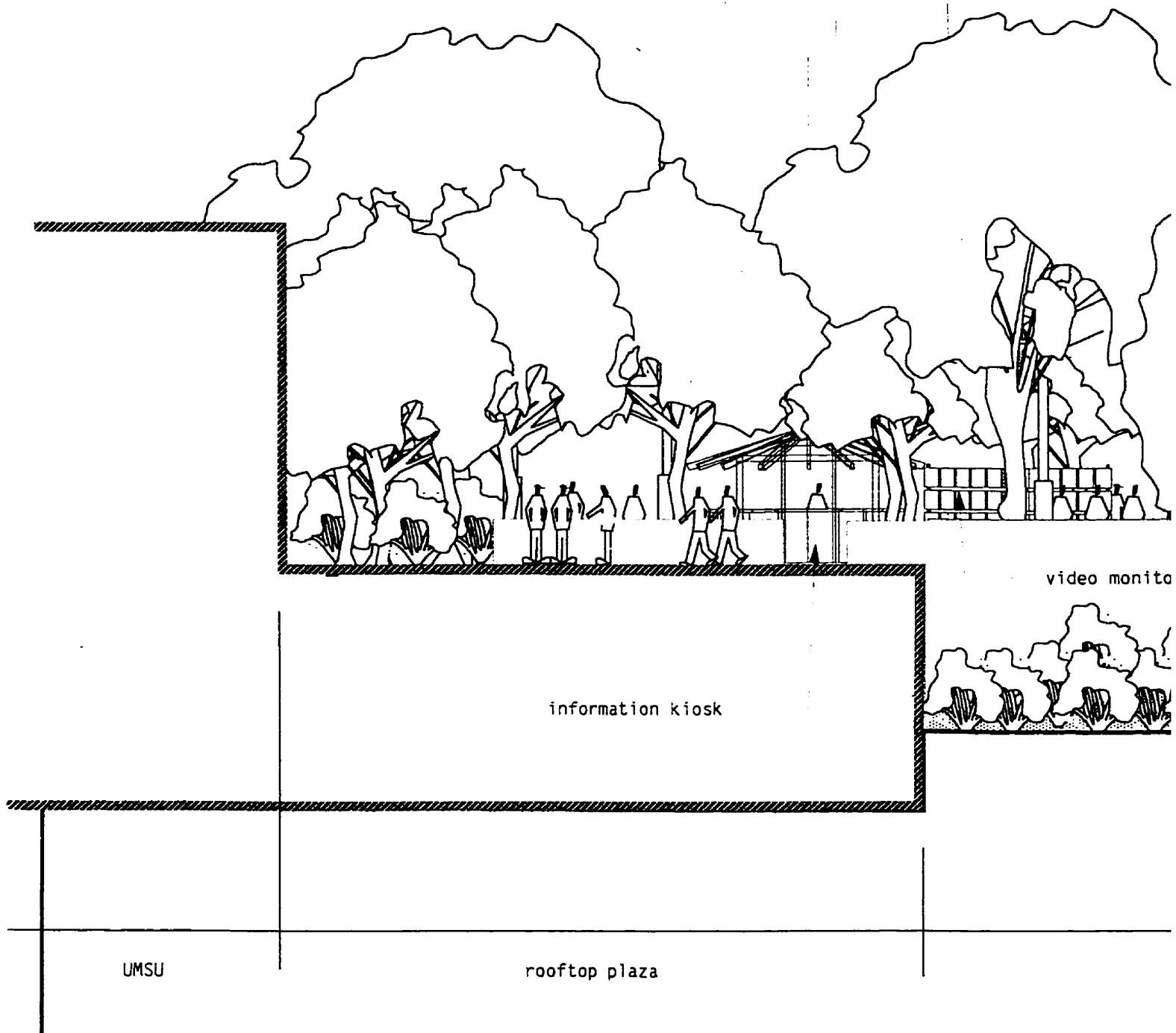
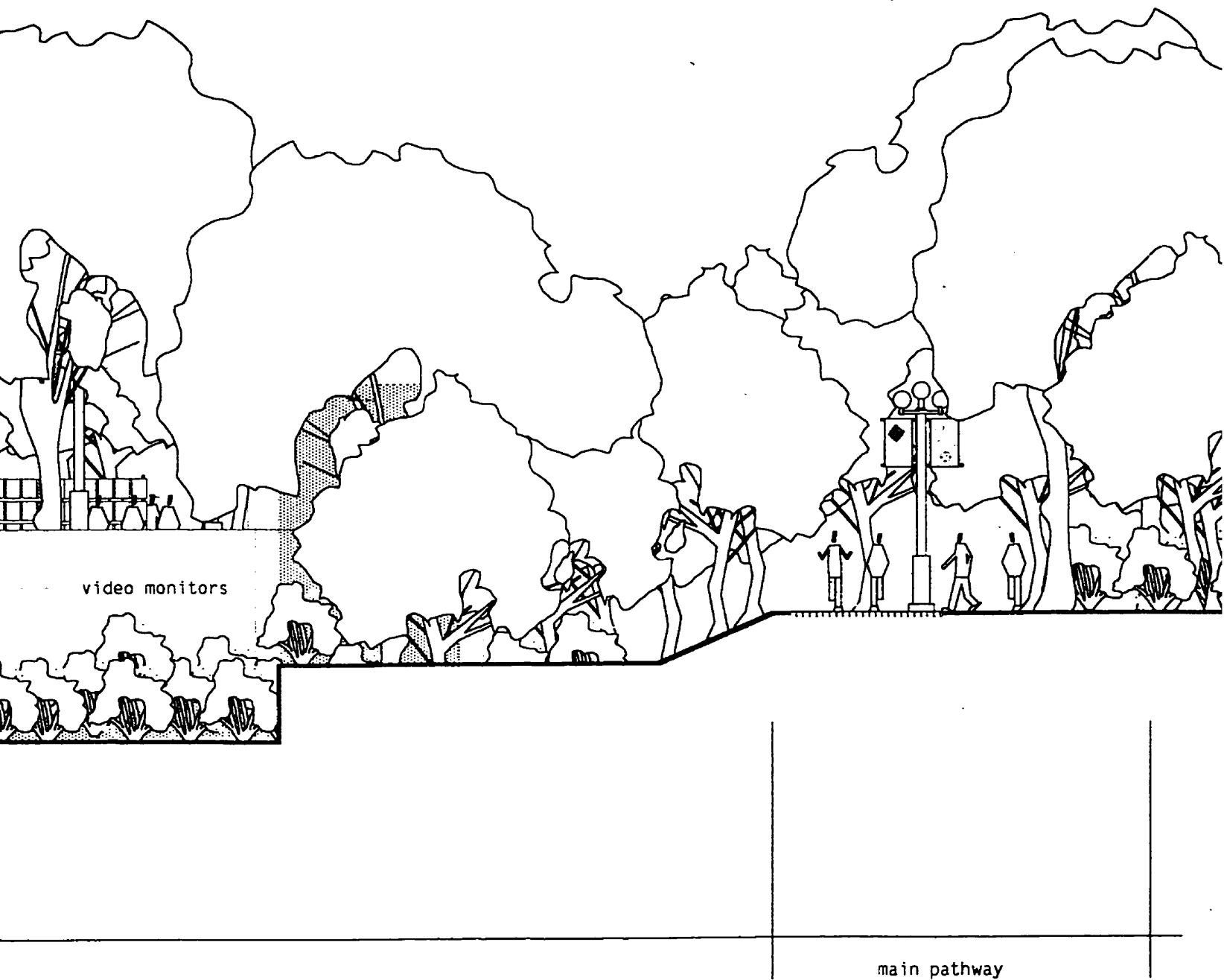


figure 83: section E-E: UMSU plaza





0 1

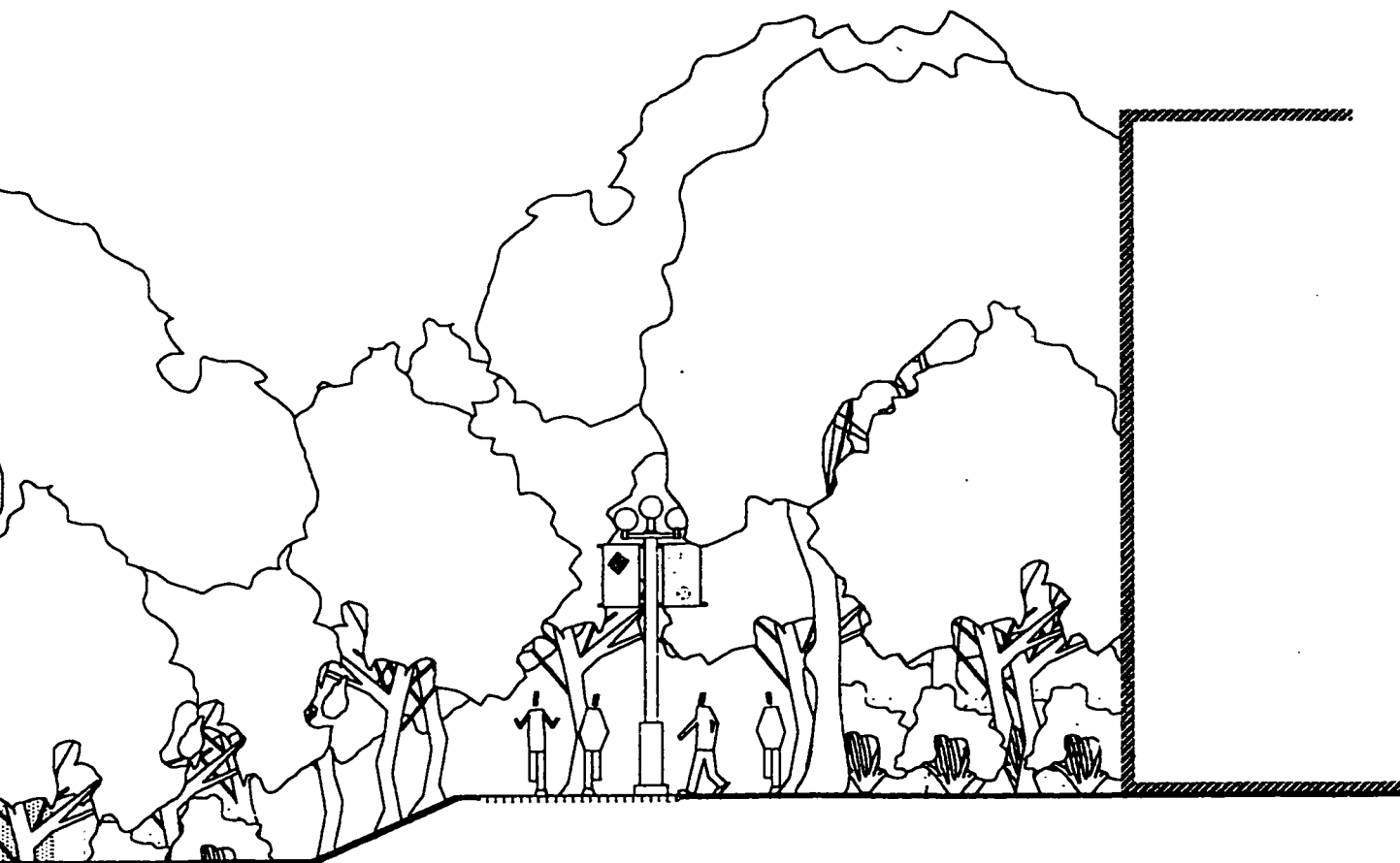
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UMSU plaza





main pathway

engineering

0 1 3 5  
scale 1:150

## AN ENDOWMENT OF SPIRIT

a landscape design for  
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athlete's village at the  
university of manitoba

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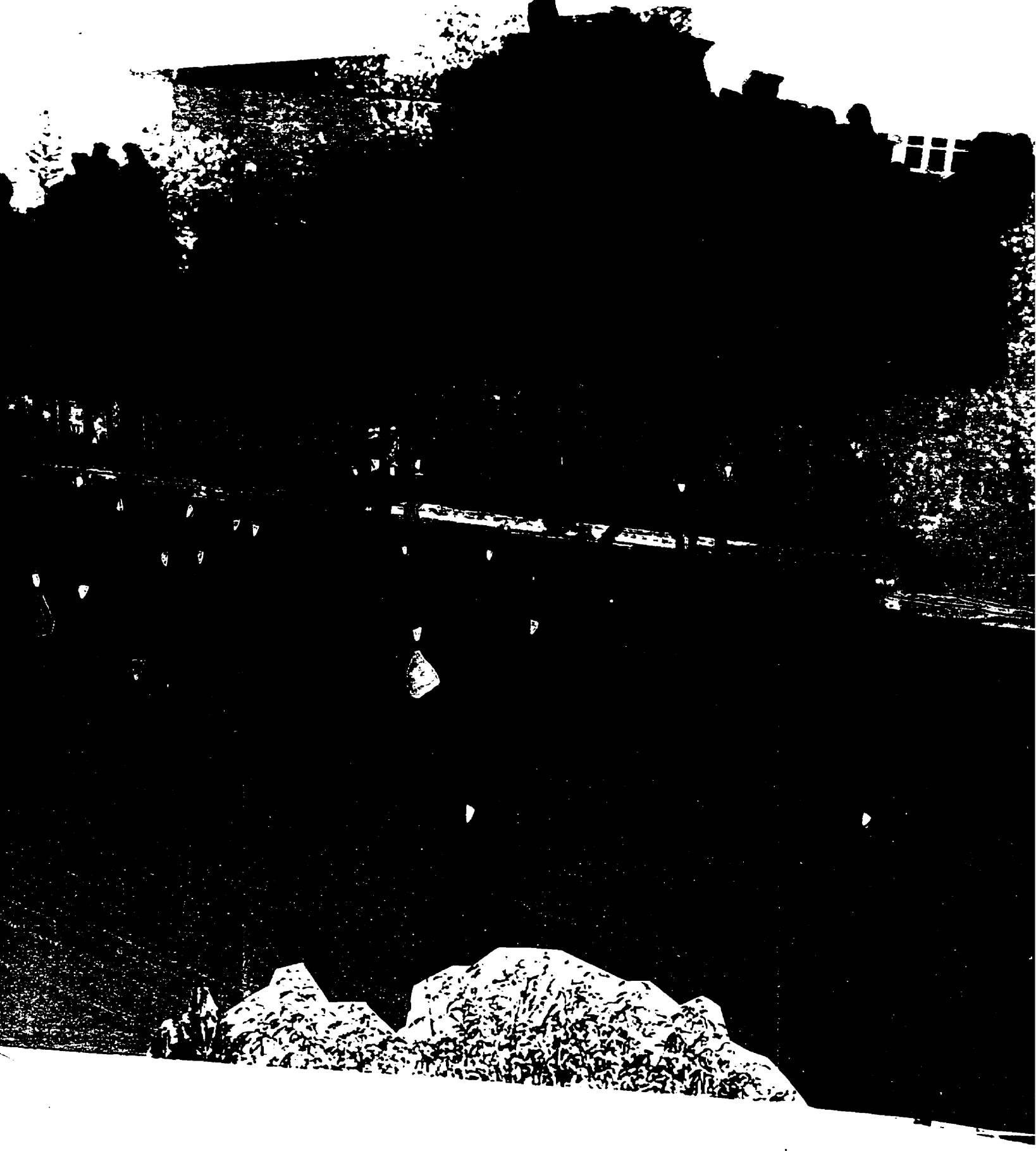






*figure 84: outdoor plaza on UMSU rooftop*

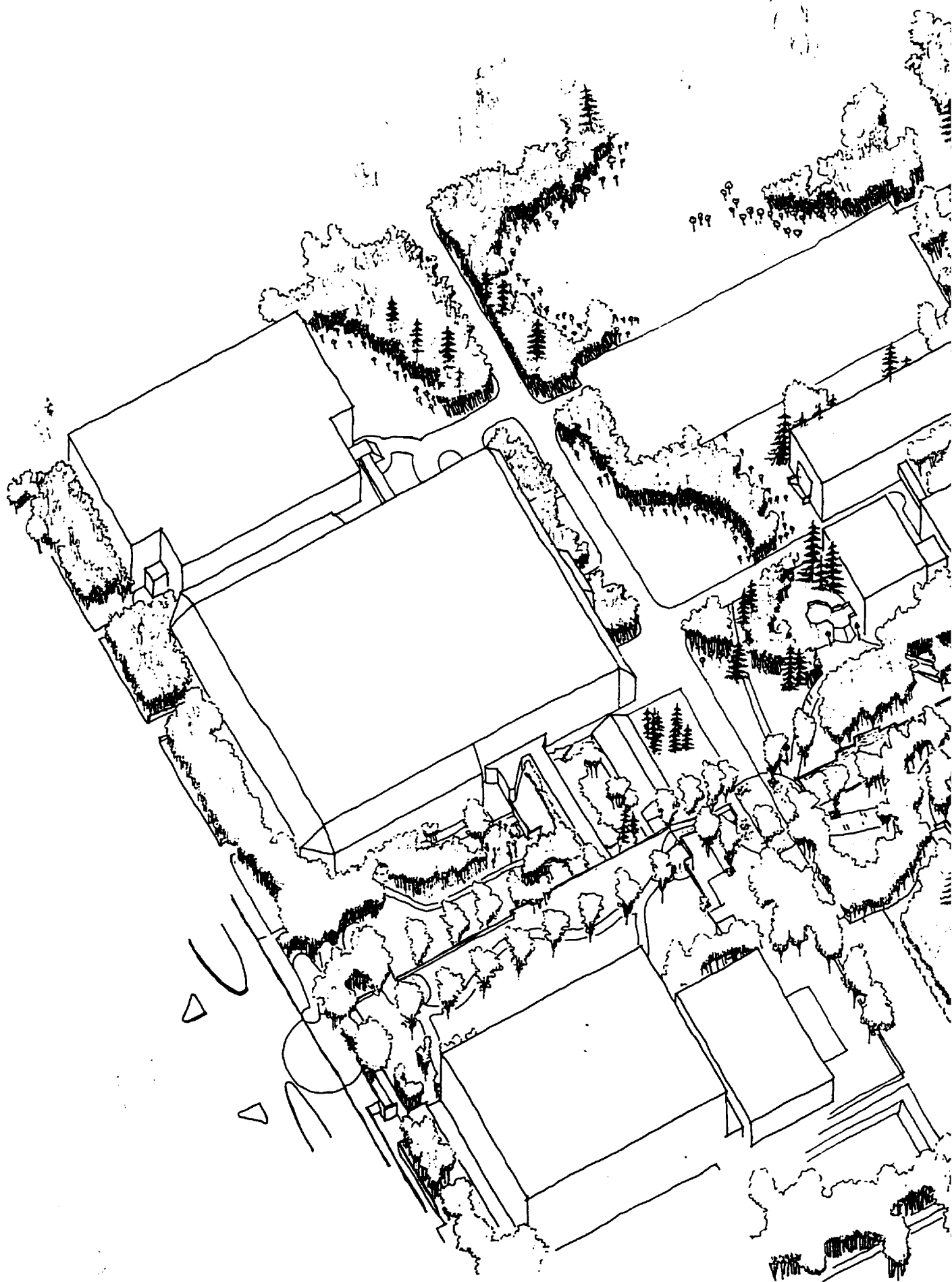


















*figure 81: site axonometric (after Pan-American Games are completed)*





Figure 81: site axonometric (after Pan-American Games are completed)



## Concluding Remarks

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Green in every direction, so green in fact it's hard to believe that the whole world isn't like this. It is Eden. The twenty mile clouds are cathedrals in the sky, they dwarf the landscape and destroy any sense of scale. The land travels beyond the horizon, the vista is unending and the sunset lasts for days. The wind becomes an animal, bending the trees like they were rubber. This is the prairie, this is home.

It is anticipated that the 1999 Pan-American Games will receive an abundance of media exposure. Most professional and high calibre amateur athletes have been elevated to celebrity status by a thrill seeking media, scrutinizing their performances with a critical eye. Demands are placed on the athlete not only to excel in performance, but also to be an upstanding representative of his or her country or organization when subjected to the media. Public relations has become a significant part of athletic events, a very close second to the event itself. The pressure to perform can be enormous for these athletes. The toll that the physical and mental strain exacts can be debilitating if the athlete does not have a means of escape. This ever increasing scrutiny by the media should be balanced by opportunities to escape from the public eye, even for a few moments. A retreat other than a stark, cramped dormitory room, typically shared with other members of the national team. Creating an oasis, a refuge, a garden of meditation on the Pan-American Games Athlete's Village at the University of Manitoba's Fort Garry campus will allow the Games participants to retreat and relax and be casual. Cultural exchange can take place on informal basis, without the pressure of the spotlight. Secluded spaces allow for some solitude before an event, or some personal peace to reflect on the outcome after it is over.

Hosting the Pan-American Games also presents a great opportunity for the University of Manitoba, an opportunity for a re-examination of the landscape of the Fort Garry campus. A creative design of the exterior environment of the Athlete's Village on the Fort Garry campus is a chance to showcase the incredible landscape of the campus' surroundings. The design of the Curry Mall, apart from being a demonstration site on the Athlete's Village, is an opportunity for reintroducing native vegetation and indigenous building materials into the campus landscape. It is the chance to embrace a new landscape precedent, one which celebrates the place through the revelation of the natural character of the site.

The 1999 Pan-American Games will leave the City of Winnipeg and the University of Manitoba with a legacy of new buildings and memories. Once the Pan-American Games were complete, the University of Manitoba would be left with an outstanding legacy landscape. One that would have a strong association with the event, much like the architectural legacy that the Games promise. It is important that these legacies persist, they are memory markers, part of the heritage of the community. The landscape design for the Curry Mall is a legacy project which can be woven into a landscape precedent for the University of Manitoba. The completion of the Games becomes a new beginning for the outdoor environment of the Fort Garry campus.

## Appendices

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Appendix 1.0: A History of the University of Manitoba

Appendix 2.0: Vegetation Species within the Aspen Parkland Region

Appendix 3.0: Climate Data

## 1.0: A History of the University of Manitoba

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One venue will have a special importance during the Games. It will be home to the visiting athletes and coaches for the two week duration of the events. Here the visitors will eat, sleep, socialize, and be exposed to the Canadian culture through a series of educational programs. This will be the primary site for the athletes, a space where they can retreat to in order to escape the pressures of competition, a space where they can prepare themselves for upcoming events, a space where they can gather and relax with one another.

The University of Manitoba's Fort Garry campus will be the main site for the Pan-American Games Athletes Village. The oldest post-secondary institution in Western Canada, is has undergone many evolutions throughout the years and has acquired a rich history and the potential for a strong landscape legacy.

### Evolution of the Campus

#### Manitoba Agricultural College

During the period of American Beaux-Arts campus planning, another academic institution was being created in Manitoba. The University of Manitoba was created out of the provincial University Act on April 8, 1877. It's inception was brought about to prevent a conflict among the three religious Colleges established earlier in Winnipeg (St. Boniface, St. John's, and Manitoba College), and other denominational colleges which might be established in the future. The focus of the fledgling University was to provide one standard for higher education in the province of Manitoba.

In 1902, before the University of Manitoba had any semblance of a permanent location or distinct physical presence, Premier Roblin appointed a royal commission which recommended that an Agricultural College, "separate and distinct" from the University, be established in Winnipeg.

The Manitoba government originally founded the Manitoba Agricultural College to provide for education in the rapidly expanding field of agriculture. Agricultural development, at the time, was on the rise, and Winnipeg was poised to become a major trading hub on the world grain market. Optimism about the future was at a high.



The Agricultural College was originally located on a site in the Tuxedo area in West Winnipeg. Approximately forty seven hectares of land costing \$15,000 were purchased along the South bank of the Assiniboine River for the construction of the Agricultural College in 1903. However, with increased requirements for farmland to conduct more research, the college was forced to expand from it's Tuxedo site. The cost for acquiring the surrounding land in the Tuxedo subdivision was prohibitably expensive, and the idea of an agricultural college in the neighbourhood conflicted with the resident's plans to develop the district into a distinct residential area within the city. Thus the provincial government was forced to look for another suitable site. So, in 1911 the provincial government purchased approximately 277 hectares of land 12 kilometres south of the city, in St. Vital, for the Agricultural College to conduct field experiments. The site was situated along the West bank of the Red River, and is now known as the Fort Garry site for the University of Manitoba.

Originally this site was heavily wooded, with a mixture of Aspen, oak, and riverbottom plant species. The significant vegetation present on the site had to be removed in order to accommodate the agricultural experiments which were to take place. Frontier homesteading patterns typically consisted of clearing the land of significant vegetation in order to establish shelter and agricultural fields, and then a gradual re-structuring of the plant materials in a pattern suit the new settlers, typically more functional than aesthetic. Manitoba was primarily an agricultural community, after all.

For the design of the Agricultural College's campus the natural character of the site mattered little to the planners of the time. Samuel Hooper, and subsequently V. W. Horwood after Hooper's demise, planned out the Fort Garry site of the College utilizing Beaux-Arts planning principles which were then popular in America. The site for the university was cleared to make room for the large educational facilities and, of course, the lawn. This approach, "destroy and rebuild", would have significant impacts on the landscape development of the University in the future.

Winnipeg had high expectations for the future during the period of construction of the buildings on the Fort Garry campus, and the formal campus plan was intended to reflect these high spirits. There was a tree lined boulevard, memorial avenue of the elms from what was then Jefferson Highway, now Pembina Highway, to the steps and Corinthian columns of the Administration Building, which was the focus of the campus, and served to reinforce the formal nature of the campus. The treed boulevard, reminiscent of the Long Walk at Yale, established the main axis of the college plan, around which were sited the main buildings.

The major buildings on the campus were quite large and elegant, done in typical collegiate gothic style (Ross 1978: n.p.), and were sited around two open quadrangles, one on each side of the Administration Building. The grandiose scale of these campus buildings, set in contrast to the virtually undeveloped countryside, provided a powerful image of a centre of “higher learning” for the people of Manitoba.

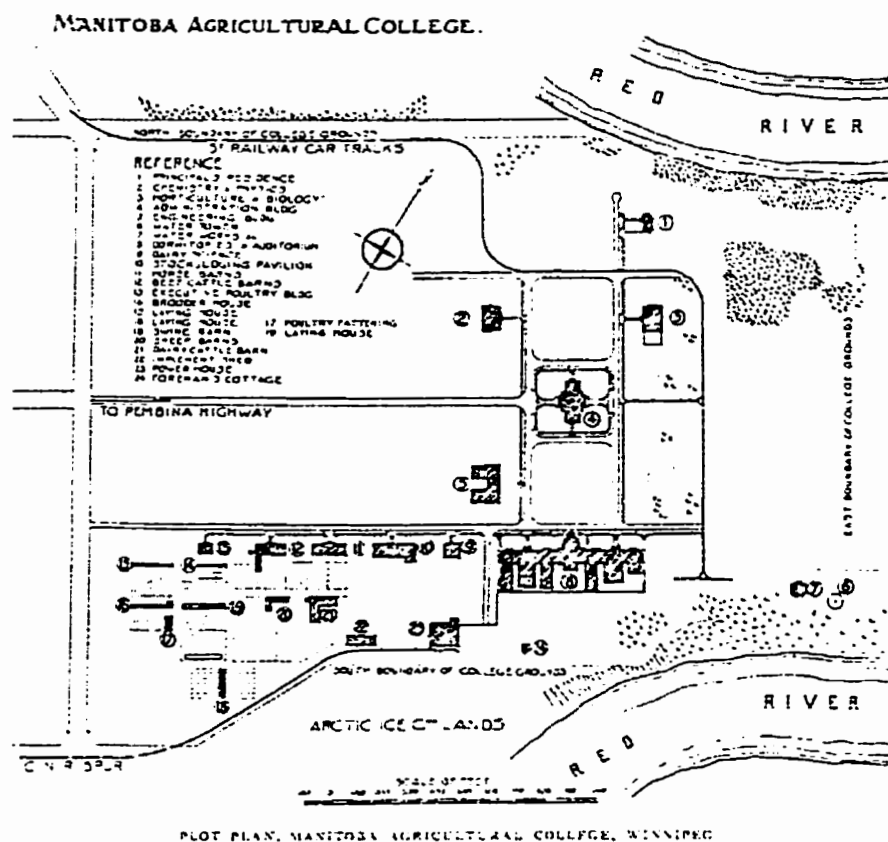


figure 87: early campus layout (Ross).

Despite the overall attempt at instilling a sense of grandeur into the plan of the campus, Hooper, who had no formal training in architecture, did not fully address the climatic influences of the region and the distinct character of the place when setting the campus buildings into the rural parkland (Foster 1978: 15). The utilization of Beaux-Arts planning principles in the original plan for the Agricultural college was intended convey the grand aesthetics and dignity befitting a post secondary institution at the era. Regional qualities of place could not interfere in this process.

Actual landscape development at the College was limited, however. Apart from the tree lined avenues, there were only some ornamental shrubs and perennial plantings as the foreground for the buildings. Some attention was paid to the effects of the Manitoba climate,

however, as is evidenced by the establishment of shelter belt plantings, but these could be considered a consequence of the vernacular site development styles of prairie settlers. The shelter belts were originally intended to buffer the winds blowing across the vast amount of open space on the campus.

### The University of Manitoba

The University of Manitoba was established as a separate institution in 1877, 6 years before the Manitoba Agricultural College. The University was housed at different sites throughout the city of Winnipeg during the time of construction of the Agricultural College.

In 1907, F.W. Heubach offered a 61 hectare site near Assiniboine park's south gate, not far from the Tuxedo site of the Agricultural College. Construction of the Agricultural College was flourishing at this time; the generous donation of land in proximity to the College prompted the University council in 1910 to approve plans for the development of this site as the University's main campus.

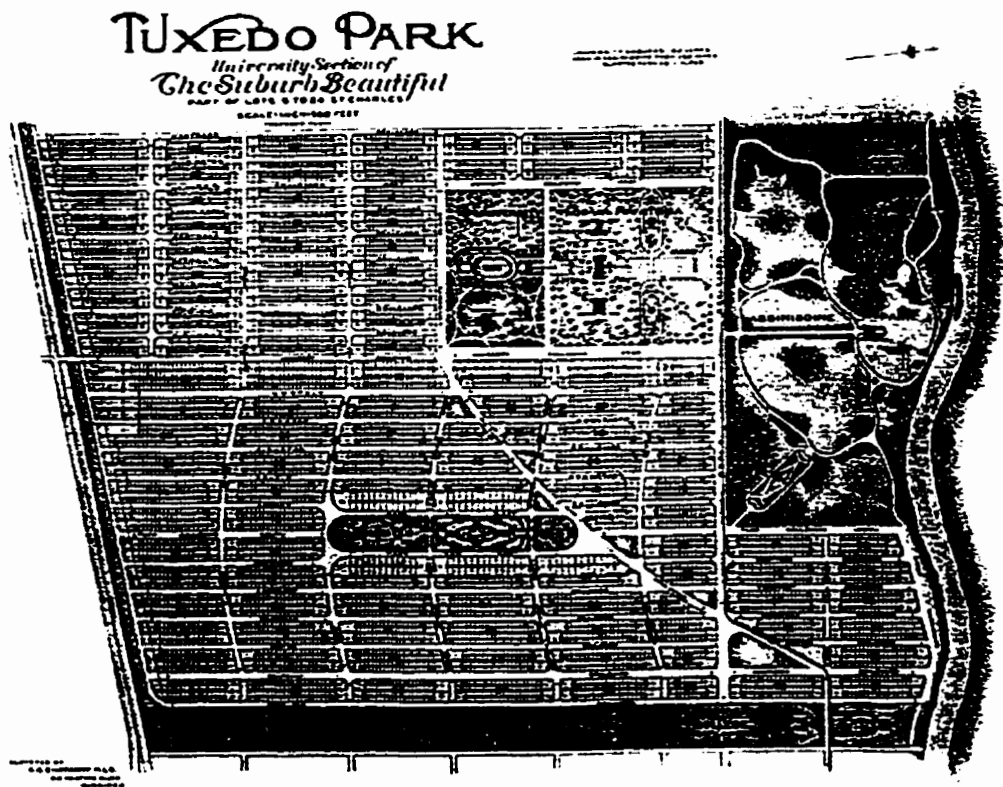


figure 88: site plan for the Tuxedo site of the University of Manitoba

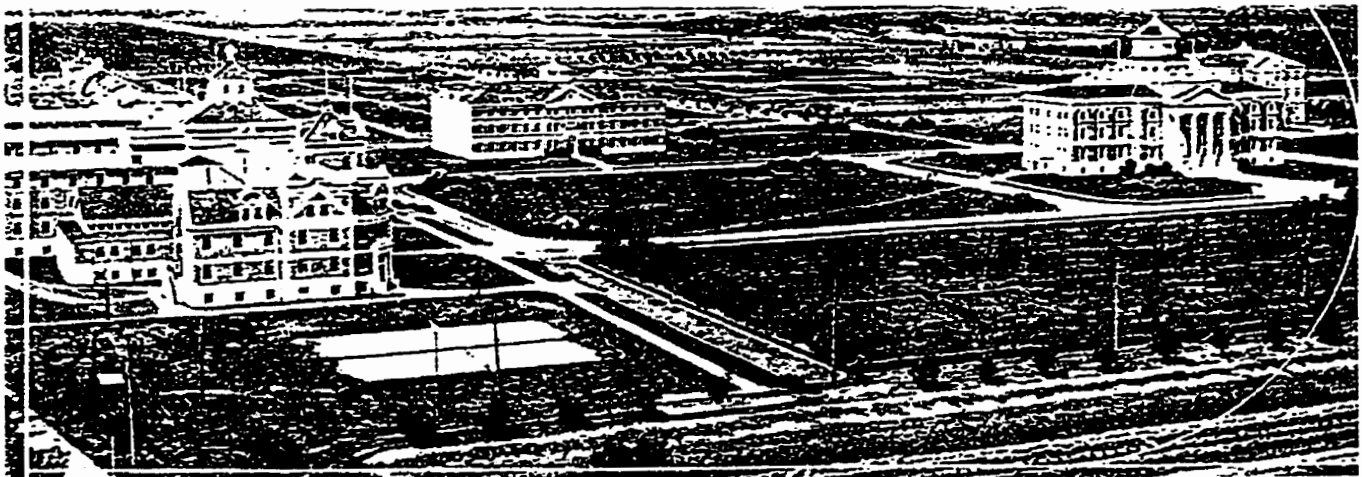
The relocation of the Agricultural College in 1911 caused the University government to reconsider the viability of the Tuxedo site. With the Agricultural college moving some distance away, the advantage of proximity that the site offered was lost. The University at this time, however, was committed to the Tuxedo site donated by Heubach. However, in 1913 the University Council accepted a government offer of 46 hectares of land adjacent to, and just East of, the Agricultural College on their new Fort Garry site. The Agricultural College at this period of time had just finished construction of the Administration Building and the dormitories now known as Tache hall.

The onset of W.W.I in 1914 caused a ceasure in all construction at the Fort Garry site. New faculties recently affiliated with the University had to be housed in temporary quarters both within the Fort Garry site and throughout the city of Winnipeg.



*figure 89: a very formal landscape for the University, c. 1922 (Ross)*

The lapse in significant construction on the Fort Garry site during the War years was sufficient enough reason for the government of Manitoba, under then premier Norris, to agree to a University Council request to establish the Tuxedo site as the permanent location for the University of Manitoba. The provincial government subsequently approved a substantial grant of \$333,000.00 towards the construction of new buildings on this site. However, John Bracken, who became premier of Manitoba in 1922, demanded that the issue



*figure 90: the University of Manitoba, Fort Garry site, c.1923 (Ross)*

of the permanent location for the University be reviewed. In 1923, 9 years after the construction of the Panama Canal and the end of Winnipeg's geographical advantage as a trading hub, a royal commission headed by Dr. Murray, then President of the University of Saskatchewan, recommended that "for both educational and economic benefits the University should join the Agricultural College at Fort Garry." (Foster 1978: 7). The provincial government concurred, and in 1924 by an act of the legislature, the Agricultural College was transformed into the Faculty of Agriculture and Home Economics as a part of the University of Manitoba.

The University, subsequently, was sued by the developers of the Tuxedo site in 1924, for failure to fulfill their obligations and develop the Tuxedo site (Foster 1978: 7, Ross 1978: n.p.). The University finally settled the matter in 1930, and construction was begun on the Tier building and the Buller building on the Fort Garry site.

In 1913, the same year that the Manitoba government offered the 46 hectares on the Fort Garry site, the Olmsted brothers, sons of Landscape Architect Frederick Law Olmsted, created a preliminary campus plan for the university grounds. Their design was very formal

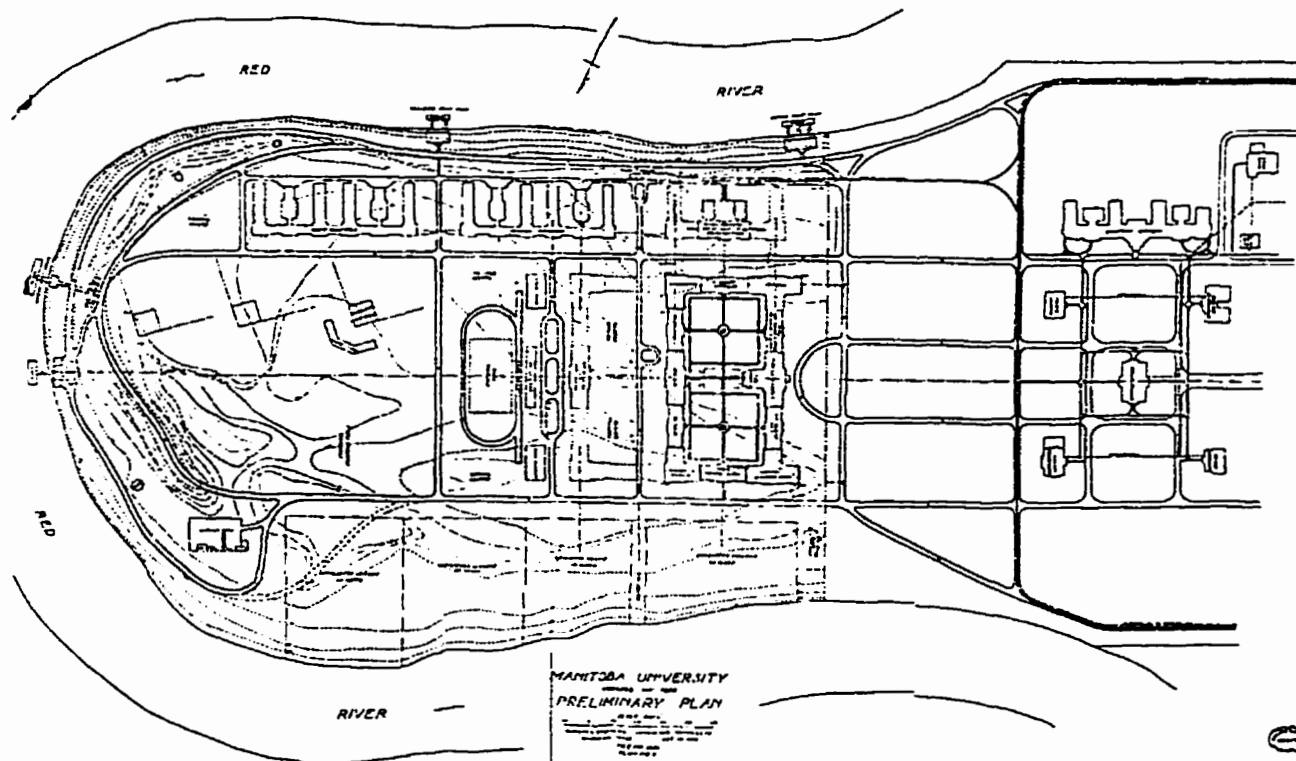


figure 91: Olmsted brothers plan for the new University of Manitoba, 1913 (Ross)

in its character, drawing heavily on Beaux-Arts influences and utilizing a strong axial layout for the main buildings, thus creating a clear hierarchy of focal points for the campus. The proximity of the University to the Agricultural college led the Olmstedes to attempt to tie the two institutions together by using the existing Administration building as a point of reference for the layout of the campus plan, and extending the main axis of the college into their design scheme. Incorporating Hooper's similar use of the Administration building as the main focal point, the two campus plans would thus have a common focus and, presumably, integrate better.

The main axis of the new University ran right through the Administration building and followed the Memorial Boulevard to the West. Cross axes bisected the quadrangles of the proposed facility, in the area of the main buildings which, in turn, had sub-axes perpendicularly bisecting those quadrangles. The layout of these new spaces was probably intended to reflect the existing quadrangle layout of the Agricultural college.

The Olmstedes scheme differs from Hooper's by the way the building to space relationships are handled. Hooper's design created buildings as separate objects, artifacts, overlooking a common outdoor space, objects on a green plane, essentially. The Olmsted's plan, paying particular attention to the regional climate of Manitoba, linked the buildings together, so that the amount of time spent outdoors during the winter months was kept to a minimum. The Olmsted's design also included a tunnel system within the University, a foretelling of what was to come. The plan was quite sympathetic to the Winter climate of Manitoba.

"The planning principles used by the Olmstedes illustrate more than a response to climate, however, they also reflect an institution which was at that time somewhat of a unique entity - a "place" quite separate from the city proper, and very much aimed at furthering academic learning and knowledge." (Ross 1978: n.p.).

The Olmsted's scheme recognizes the intimate connection of place with region by capitalizing on the opportunities afforded by the proximity of the site to the undisturbed riverbank. They integrated the formal aspects of the campus with the more informal aspects of the river by including several boat docks, a scenic river drive, plenty of open space for picnic areas, as well as sports fields. Reading from the plan, it is difficult to ascertain exactly how the clearing of the area would take place, but it can be assumed that the river walk/drive would retain at least some natural vegetation, and not be cleared completely of natural vegetation.

It was during the mid 1900's that yet another plan for the development of the Fort Garry campus was prepared. Professor A.A. Stoughton, professor and head of architecture at the University of Manitoba created a proposal which was much more formal than previous ones, and based even more strongly on Beaux-Arts planning styles than that of the Olmsted's.

Stoughton's plan primarily consisted of arranging classical Beaux-Arts planning features along primary and secondary axes. Stoughton also respected the climate of Manitoba by connecting the major buildings in his design with a series of covered colonnades, typical of campus buildings at Harvard.

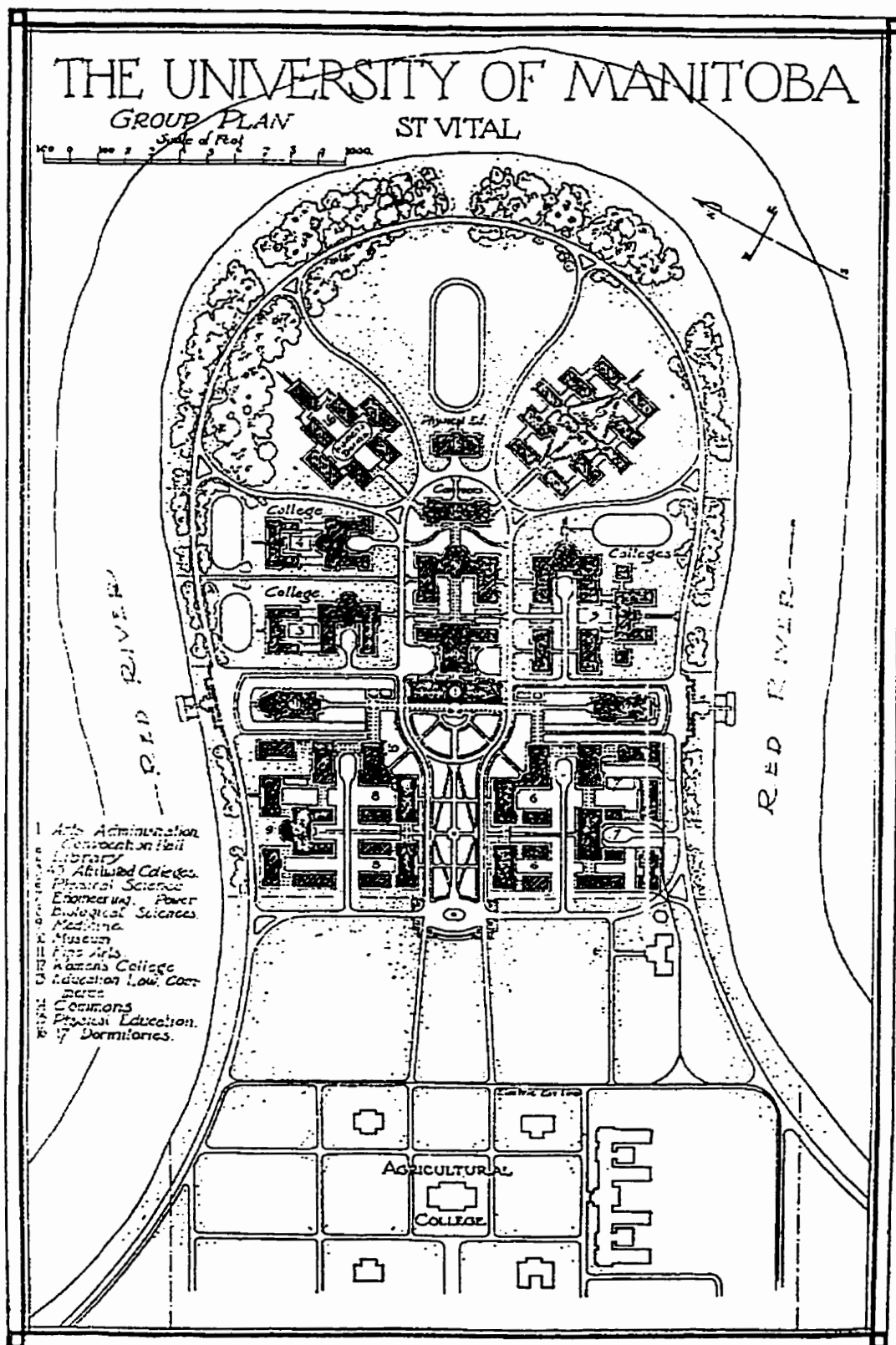
"Following the Harvard model of campus layout, Stoughton used building forms to create enclosed outdoor spaces which in turn, connected to larger, more formal spaces." (Ross 1978: n.p.).

Stoughton's plan contained the strong axial character of the Olmsted's, using the Administration building as the focal point also. The main axis for the University, as with the Olmsted's plan, ran east-west through the Administration Building, with major buildings arranged symmetrically around this axis, fronting onto a classic campus planning device, the mall. According to Stoughton's plan, it would be Arts, Administration, the library, Education, Law, and Commerce which would form the major components of this layout. The primary cross axis, which ran parallel to the facade of the proposed new Administration building, served to anchor the faculties of Fine Arts and the Women's College, which had about half the area as the other faculties.

Unfortunately, Stoughton's design, as well as the Olmsted's, failed to take into account that the area the University would be sited on was a floodplain, and was at a lower elevation than that of the College. The flood of 1950 resulted in a ceasure of planning attempts for this area, and the subsequent development of a dike road, Saunderson Street, just east of the Dafoe library.

During the period of the second World War, the Fort Garry campus was used as a training facility for the Canadian military. In order to accommodate the military needs, several temporary buildings were constructed within the campus. The numerous "huts" were not well sited with respect to any proposed or existing land use patterns within the campus, being at the time only a temporary measure.

With the return of the veterans following W.W.II, enrollment at the University increased dramatically and housing for students became a major concern. In response to this the



Plan of Grounds and grouping of Buildings, prepared by Arthur Alexander Stoughton, Professor of Architecture.

figure 92: Stoughton's design for the University of Manitoba, c.1900 (Ross)



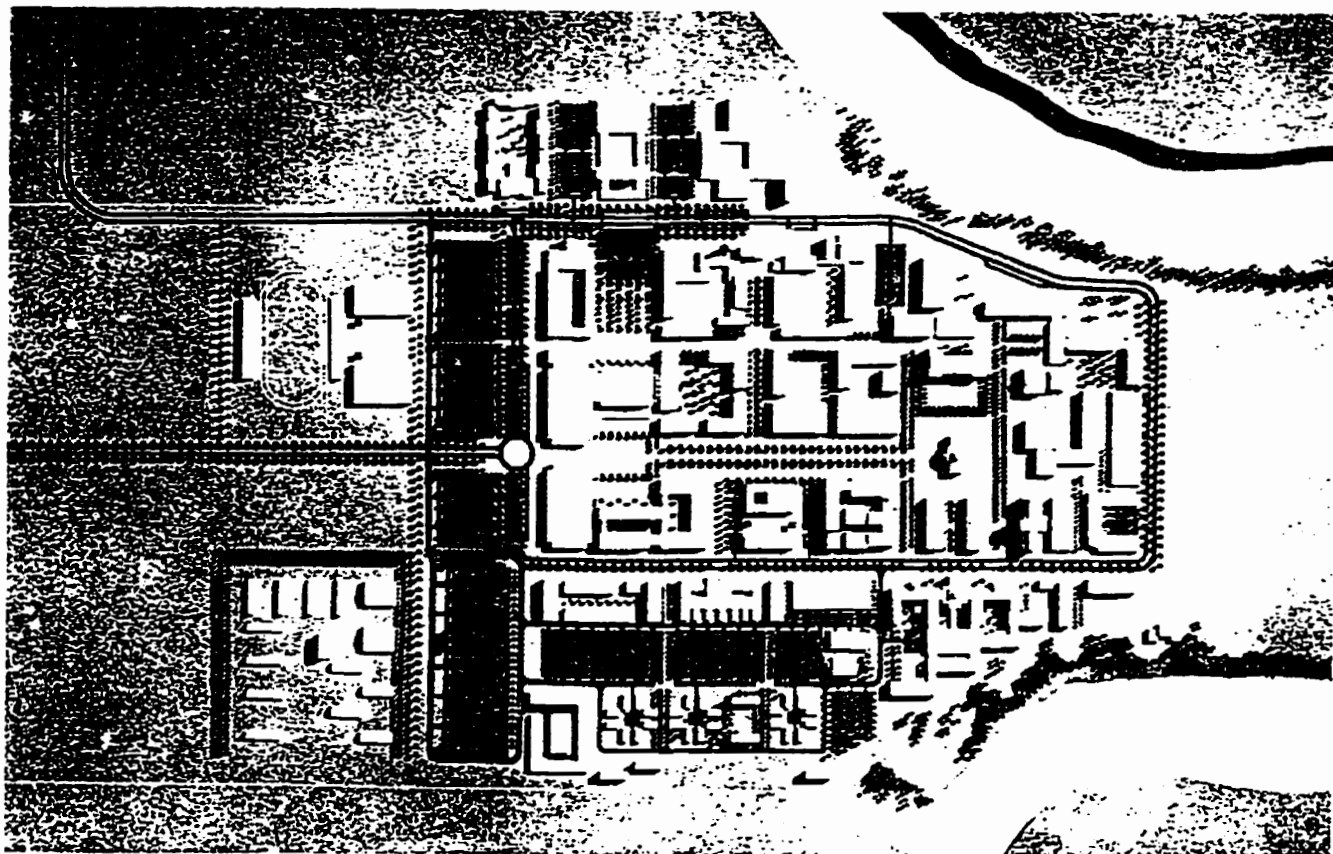
University constructed four “Veterans’ Villages”, essentially groups of huts surrounding a larger central hut containing facilities for washrooms and laundry. The flood of 1950 brought about a timely end to these housing types.

The University, seriously unprepared for the dramatic influx of students following the war, utilized the temporary facilities constructed during the war as classroom space. Students were cramped into the temporary war-time buildings (the “huts”), even though these facilities were ill-suited for lecture halls. Arts and Sciences actually used the Bison Gardens [Hut “D”] for lectures until 1951. From these conditions of rising enrollments and inadequate facilities came the realization that a more comprehensive long ranging plan was needed to guide and shape the development of the exterior environment of the University of Manitoba.

The war years also brought in a new change to the land use system of the University, generated by the influence of the automobile. The rising predominance of the automobile, coupled with the distance of the Fort Garry site from the young city of Winnipeg, initiated the need for an organized vehicular circulation system on the campus. Subsequent planning proposals responded to this need with the creation of a ring road system around the campus perimeter. In conjunction with the road system, major parking facilities would be located outside of the loop. This concept was implemented during the mid 1950’s, however parking was permitted within the loop. A strong access road and bus route directly to the Administration Building was retained as the formal approach to the University. Previous development plans for the Campus had also included a circulation system around the perimeter, perhaps anticipating the predominance of the auto.

“Planners of the post-war years would have welcomed the acceptance of a strong, ordered long-range master plan for the development of the Fort Garry campus. It would seem, however, that even with the severe problem of overcrowding, neither the money nor the administrative structure was available for the initiation of a large-scale, comprehensive building program. Even the damage caused by the Great Flood of 1950 did not initiate any significant construction (or demolition).” (Ross 1978: n.p.).

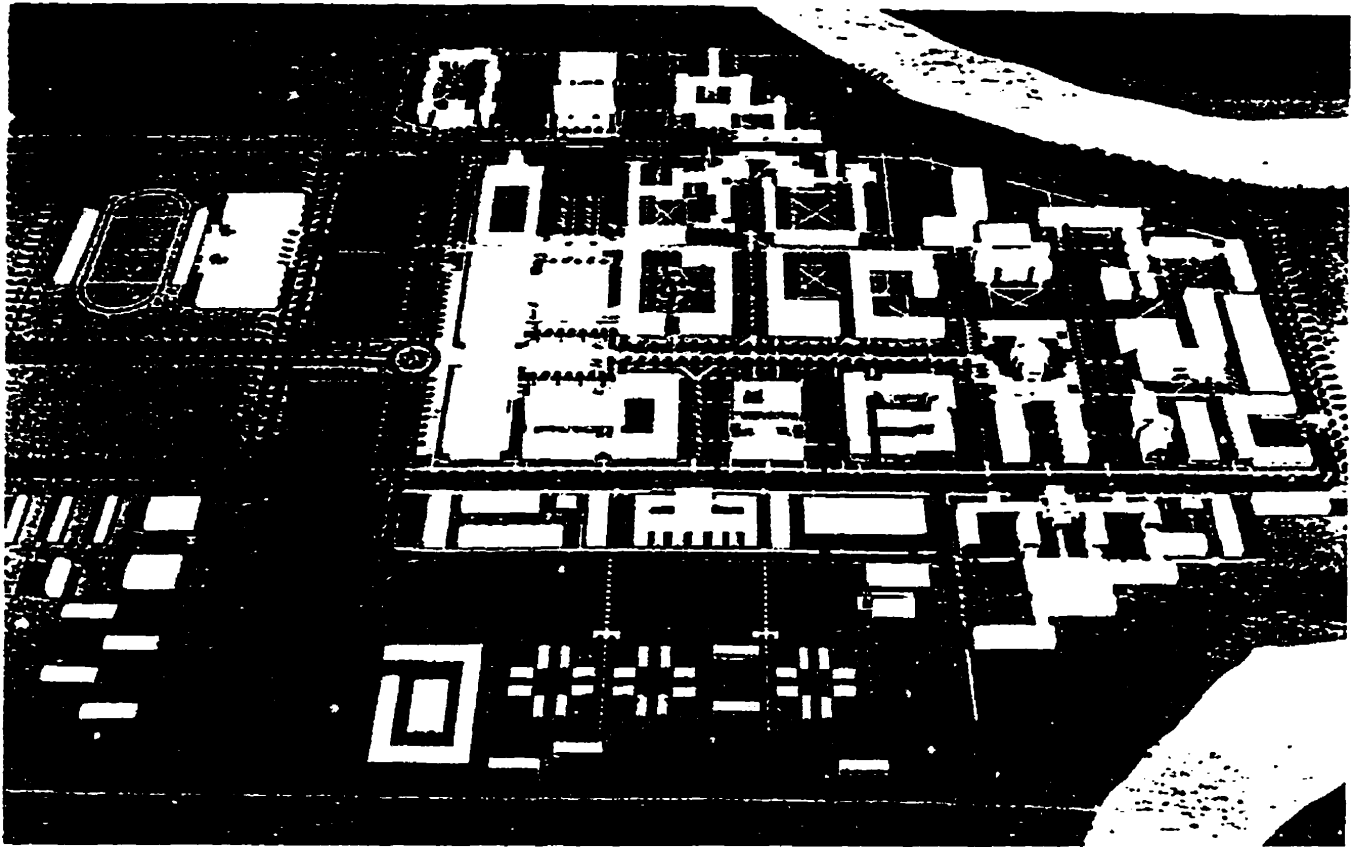
The growth in student population and the sporadic, almost haphazard construction of facilities on the Fort Garry campus brought about a realization within the University administration that some direction for future planning and construction was necessary. In 1958, the Campus Design and Planning Committee was formed with the mandate to develop a master plan for the Campus. Three main issues were outlined for the development of the master plan: unordered development; increased automobile traffic; urban/rural conflicts.



*Figure 93: Mudry-Stovel plan for the University of Manitoba, c. 1960 (Ross)*

During 1959- 1960 A.J. Mudry and J.C. Stovel prepared yet another master plan for the development of the Fort Garry Campus. Their plan, much like Stoughton's, followed the Harvard model of organization, proposing development of buildings enclosing open quadrangles, all centred around 2 main focal points and outdoor malls. Their major recommendations included:

- -simplification and strengthening of the ring road system with major automobile parking to be located outside the ring.
- development of Matheson Drive [now Chancellor Matheson] as a formal, symbolic mall linking the Administration Building to the proposed Convocation Hall [Frank Kennedy?]
- regional groupings/clusters of buildings (by related disciplines) arranged around outdoor quadrangles which are in turn connected by pedestrian circulation routes to the central mall
- residential development along riverbanks outside the ring road
- recognition of the growing importance of the campus within the community. (Ross 1978: n.p.)



*figure94 : model of the Mudry-Stovel design showing building massing (Ross)*

The Mudry-Stovel plan adopted the concept of a completely pedestrian environment which would restrict the majority of automobile traffic and parking to the periphery of the campus. The plan did not resolve the inadequacies of such a system for winter use in Manitoba's climate, nor did it deal in any depth with the structuring of the vast amount of open space resulting from such an organization of buildings. Finally, the master plan did not appear to strengthen the relationship between the University and the community. The ring road concept, in fact, reinforced the image of the University as an institution quite separate from the community. The inward focus of the buildings in the Mudry-Stovel plan served to further isolate the campus rather than it reaching out into the community.

At the time the Mudry-Stovel plan was prepared, the University of Manitoba had housed various schools in different locations throughout the city. The plan that Mudry-Stovel presented retained this idea of autonomy for the different faculties, by arranging them like small communities, neighbourhoods within the campus. Each cluster of buildings was, however, expected to contribute to an overall image of place for the University, an agglomeration designed to be greater than the sum of its parts. This organisation of schools

like Colleges is derived from the early American tradition of campus organisation, much like Harvard or Yale or even Jefferson's original idea of an "Academic Village" for the University of Virginia.

In 1961, Hideo Sasaki was hired to review the Mudry-Stovel plan. Sasaki approved of the quadrangle organisation of the plan, but recommended the buildings be interconnected for better response to the winter climate. Sasaki also stressed the need for a long ranging master plan, in order to reinforce the goals and objectives set forth in the Mudry Stovel plan. Sasaki put forth the idea of establishing an overall landscape "superstructure", using deciduous canopy trees planted in formal rows along both sides of the roads and walkways, as well as utilizing evergreen plantings to screen areas such as parking and service areas, provide windbreaks, define spaces and reduce winter barrenness. Sasaki, much to his credit, was also very sensitive to the climate of the area and the seasonal differences. He also recommended a landscape "sub-structure" utilizing loose and informal plantings of ornamental trees and shrubs to add colour and accent in the University's developing park like setting.

Sasaki did point out a major weakness in the Mudry Stovel plan by identifying the lack of programming for future needs. In Sasaki's opinion, without a reliable assessment of possible space requirements, Mudry and Stovel could not ensure that the proposed "order" of their scheme would materialize (Ross 1978: n.p.). Sasaki also identified a lack of available space for potential horizontal expansion in future years. He recommended that the University terminate it's lease options with the Federal and Provincial governments, and make provisions to acquire future property.

In 1963 the University contracted the services of landscape architect Dennis Wilkinson to initiate the landscape recommendations brought up by Sasaki. However, as Ross (1978) notes, Wilkinson's focus was on providing outdoor social conversation spaces, scattered throughout the campus, in order to promote more use of the languishing exterior environment. These outdoor spaces were to have been related to the adjacent faculties, and attempted provide a stronger sense of "place" to the adjacent faculty buildings on the campus. Unfortunately, the amount of open space left over from the construction of the buildings on campus was too large and awkward for Wilkinson's ideas to be fully implemented. They served, instead, to reinforce the increasingly fractured nature of the campus and establish the notion of the campus as a collection of individual buildings, a notion which still persists today.

Wilkinson, whose focus was primarily on form over functionality in design, did not fully address Sasaki's concerns for the regional climate. Outdoor spaces can only be used for a short time during the academic year before cool weather makes outdoor activities prohibitive. Spaces outdoors have their greatest impact in the Spring and Summer months, when classes are not in session, and the pedestrian traffic on the campus is at a comparative low.

In the 1960's, campus enrollment again increased rapidly. Subsequently a new building program was initiated to meet the demand for space. While much of the new building followed the Mudry-Stovel plan in regards to general location and organization, many of the new buildings were treated as monuments in a park-like setting, with little effort given to any sort of overall order. Slowly, the pastoral aesthetic of the campus' exterior environment was being altered by this new construction. The new buildings, according to Ross (1978), did little to shape or define the outdoor spaces in a manner which would contribute to a unifying strategy for the campus. The whole was still less than the sum of the parts. By the end of this period of construction, the University of Manitoba had lost much of its early pastoral quality, and resembled more of a collection of buildings set on a green plane, lacking any distinctive character. The construction of the School of Architecture building cemented the idea that the buildings which comprised the University of Manitoba were nothing more than individual artifacts, contributing little to a holistic statement of place on the campus. This reinforced the notion of "buildings as isolated pavilions in a rural parkland." (Allsopp 1971: 7, Foster 1978: 51).

The University in the late 1960's lacked a social focus, something which could bring together the individual faculties. Out of this need came the idea for University Centre, a building which was intended to unite the campus both physically and socially. Ross (1978) notes that University Centre was important for a number of reasons, most importantly was that it used landscape as an important component of building development, the building contributed to the outdoor environment, rather than just being placed on it. It was also important for the fact that it did what it was designed to do, become a central focus for "life" and activity on the campus. The idea of what constituted education was changing in the late 1960's, and subsequently so was the role of the University. Rather than a place removed from society,

imposing a strict, rigid educational discipline on students, the University was becoming a place where social contact and personal development could be fostered, and thus contributing to a more well rounded education. University Centre was a focal point in reflecting this change and exhibiting the potential that physical forms of buildings, as well as integrated landscaping, could have in stimulating learning and thus contributing to this changing idea of education.

This shift in the idea of what defined education brought about the need for a re-examination of old master plans for the campus, in order to determine to what extent they fit into the University's changing role. In 1971 Robert Allsopp, then head of the University's Campus Planning Office, presented *An Outline of Physical Planning Proposals for the Fort Garry Campus*. Prior to Allsopp's recommendations, plans for the long ranging design of the University consisted of creating a place apart from context, focusing more on what a proper post secondary educational complex should be, rather than allowing the context of the site to determine the form. Allsopp's study was a departure from what typically constituted campus planning for the time, since he presented his ideas in the form of strategies, which took into account the dynamic aspects of the University environment. In the report, Allsopp points specifically to this dynamism, and goes on to state that "accurate prediction is impossible when needs and techniques are constantly shifting and the values of judgment are often modified" (Allsopp 1971: 2). Allsopp's strategy paid particular attention to the efforts that had come previously, and also to the fact that these schemes were poorly initiated. His report focuses on creating a place for the University out of the existing context, rather than a 'destroy and rebuild' approach. The University should not be focused on a final utopian form, but rather concentrate on the required developmental processes. Allsopp's scheme was meant to serve as a general framework for a continuous decision making process. This idea is ultimately better suited to long term goals, and has the flexibility to react to both long and short term factors.

Allsopp stressed the development of the quality of academic space over the quantity. He describes the University as a community, which gives it a meaning above just "school" or "faculty". In the document he describes the University in terms of a place of both social and academic interaction, and remarks that there is a desire for a cohesive social and cultural environment. The key to a richer community, a richer educational experience, is therefore the creation of facilities which "provide a greater and more diverse range of opportunity." (Allsopp 1971: 9). Allsopp, like Wilkinson, pointed out the need for localized informal gathering spaces.

However, in 1972 enrollment at the University began to drop and the planning ideas presented by Allsopp were halted. Financial restraints also compounded this halt to these planning initiatives.

In 1985, another study was carried out again, in response to the growing concern over the poor quality of the exterior environment of the Fort Garry Campus. Similar to Allsopp's report of 1971, this report was not intended to dictate any final form for the exterior environment, but rather to suggest principles, guidelines, which could be followed when any renovation or construction on the campus was carried out. The study built on some of the ideas put forward by Sasaki in his review of the Mudry-Stovel plan, plants as unifiers of space, establishment of a landscape superstructure and substructure, and touched on issues brought up by Olmsted and Stoughton, such as a river focus, in their respective master plans. Perhaps most importantly, the study recognized the importance of the regional landscape as part of the experience of 'place' within the campus.

A more pragmatic vision is introduced in the 1985 planning strategy. The document touches on issues that were not dealt with in the earlier master plans by Stoughton and Mudry-Stovel, such as long term landscape maintenance, management, snow removal and the idea of production of landscape material on campus. The notion of rebuilding the campus in the image of the Mudry-Stovel plan is no longer viable. Long term viability of exterior environmental projects is important in the light of shrinking economic resources. This marks a change in thinking towards the long term potential of the campus, an issue which may have been assumed in previous documents, but was never explicitly stated.

This focus on long term viability was made material with the 1992 landscape renovations to the grounds around the Administration Building and the space bounded by the new Fitzgerald Building, Pharmacy, and the Buller Building. The construction of steam tunnels in that area allowed for landscape improvements to be initiated. It can be clearly seen that the designers focused on long term feasibility of the design through their choice of interlocking concrete pavers as a surface material, unfinished iron grates around the trees, simple concrete forms, and an abundance of evergreen plant material. Materials which, in the long run, have a good aesthetic quality and are also very durable over time.

Long-term viability of landscape development is now an important consideration for landscape development projects on most post-secondary campuses, especially the University of Manitoba.

## 2.0: Vegetation Species within the Aspen Parkland Region

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### Aspen Forest

	COMMON NAME	BOTANICAL NAME
Tree Species	White birch	<i>Betula papyrifera</i>
	White spruce	<i>Picea glauca</i>
	Black spruce	<i>Picea mariana</i>
	Balsam poplar	<i>Populus balsamifera</i>
	Trembling Aspen	<i>Populus tremuloides</i>
	Jack pine	<i>Pinus banksiana</i>
	Bur Oak	<i>Quercus macrocarpa</i>
Shrub Species	Mountain Maple	<i>Acer spicatum</i>
	Green Alder	<i>Alnus crispa</i>
	Speckled Alder	<i>Alnus rugosa var. americana</i>
	Saskatoon Berry	<i>Amelanchier alnifolia</i>
	Red Osier Dogwood	<i>Cornus stolonifera</i>
	Beaked Hazelnut	<i>Corylus comuta</i>
	Hawthorn	<i>Crataegus spp.</i>
	Bush Honeysuckle	<i>Lonicera</i>
	Wolf Willow	<i>Elaeagnus commutata</i>
	Pin Cherry	<i>Prunus pennsylvanica</i>
	Choke Cherry	<i>Prunus virginiana</i>
	Rose	<i>Rosa spp.</i>
	Dwarf Raspberry	<i>Rubus pubescens</i>
	Willow	<i>Salix spp</i>
	Buffalo Berry	<i>Shepherdia argentea</i>
	Snowberry	<i>Symphoricarpos alba</i>
	Squashberry	<i>Viburnum edule</i>
	Nannyberry	<i>Viburnum lentago</i>
	Highbush Cranberry	<i>Viburnum trilobum</i>
Grasses	Big Bluestem	<i>Andropogon gerardi</i>
	Awned Wheat Grass	<i>Agropyron subsecudum</i>
	Hair Grass	<i>Agrostis scabra</i>
	Slough Grass	<i>Beckmannia syzigachne</i>
	Side Oats Grama	<i>Bouteloua curtipendula</i>
	Blue Grama	<i>Bouteloua gracilis</i>
	Northern reed Grass	<i>Calamagrostis inexpansa var. brevior</i>
	Tufted Hair Grass	<i>Deschampsia caespitosa</i>
	Canada Wild Rye	<i>Elymus canadensis</i>
	Giant Wild Rye	<i>Elymus cinereus</i>
	Sheep Fescue	<i>Festuca ovina</i>
	Sweet Grass	<i>Hierochloe odorata</i>
	Foxtail Barley	<i>Hordeum jubatum</i>
	Switchgrass	<i>Panicum virgatum</i>
	Reed Canary Grass	<i>Phalaris arundinacea</i>
	Common Reed Grass	<i>Phragmites australis</i>



## Aspen Forest

COMMON NAME	BOTANICAL NAME
Bluegrass	<i>Poa spp.</i>
June Grass	<i>Koeleria cristata</i>
Little Bluestem	<i>Schizachyrium scoparius</i>
Indian Grass	<i>Sorghastrum Nutans</i>
Saline Cordgrass	<i>Spartina gracilis</i>
Prairie Cordgrass	<i>Spartina pectinata</i>
Prairie Dropseed	<i>Sporobolus heterolepsis</i>
Porcupine Grass	<i>Stipa spartea</i>
Green Needle Grass	<i>Stipa viridula</i>
Stipas	<i>Stipa spartea, stipa spp.</i>

	COMMON NAME	BOTANICAL NAME
Tree Species	Manitoba Maple	<i>Acer negundo</i>
	Green ash	<i>Fraxinus pennsylvanica</i>
	Cottonwood	<i>Populus sargentii</i>
	Balsam Poplar	<i>Populus balsamifera</i>
	Peach-leaved willow	<i>Salix amygdaloides</i>
	Basswood	<i>Tilia Americana</i>
	American Elm	<i>Ulmus americana</i>
	Black ash	<i>Fraxinus nigra</i>
	White birch	<i>Betula papyrifera</i>
Shrub Species	Beaked Hazelnut	<i>Corylus comuta</i>
	Rose	<i>Rosa spp.</i>
	Downy arrowwood	<i>Viburnum rafinesquianum</i>
	Red twigged serviceberry	<i>Amelanchier sarguinea</i>
	Choke Cherry	<i>Prunus virginiana</i>
	Red Osier Dogwood	<i>Cornus stolonifera</i>
	Highbush Cranberry	<i>Viburnum trilobum</i>
	Hawthorn	<i>Crataegus spp.</i>
	American Hazelnut	<i>Corylus americana</i>
	Dwarf raspberry	<i>Rubus pubescens</i>
	Twining honeysuckle	<i>Lonicera dica</i>
Forbs	Creamy Peavine	<i>Lathyrus ochroleucus</i>
	Wild Sarsparilla	<i>aralia nudicaulis</i>
	False Lily-of-the-Valley	<i>Maianthemum canadense</i>
	Asters	<i>Aster spp.</i>
	Northern Bedstraw	<i>Galium septentrionale</i>
	Bunchberry	<i>Cornus canadensis</i>
	Wild Strawberry	<i>Fragaria spp.</i>
	Twining Honeysuckle	<i>Lonicera dioica var. glaucescens</i>
	Wood Nettle	<i>Laportea canadensis</i>
	False Solomon's Seal	<i>Smilacena stellata</i>
	Common Burdock	<i>Arctium lappa</i>
	Wild Columbine	<i>Aquilegia canadensis</i>
	Virginia Creeper	<i>Parthenocissus spp.</i>
	Ostrich Fern	<i>Matteuccia struthiopteris</i>
	Moonseed	<i>Menispermum canadense</i>
	Poison Ivy	<i>Rhus radicans</i>
	Twisted Stalk	<i>Streptopus roseus</i>
	False Medic Grass	<i>Schizachne purpurascens</i>
	Rough-Leaved Mountain-Rice	<i>Oryzopsis asperifolia</i>
	Goldenrods	<i>Solidago spp.</i>
	Meadow Rue	<i>Thalictrum sp.</i>
	Harebell	<i>Campanula rotundifolia</i>

[illegible]

Source: Environment Canada - Winnipeg Climate Centre

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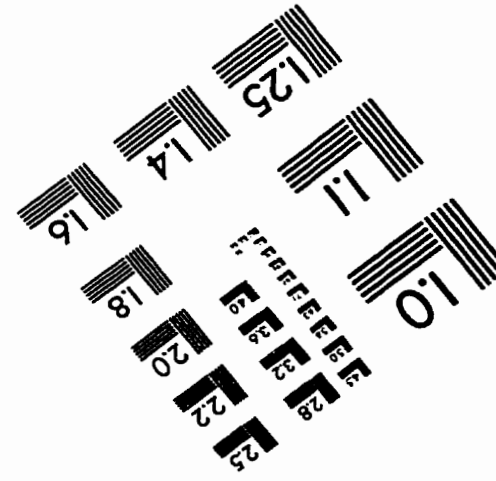
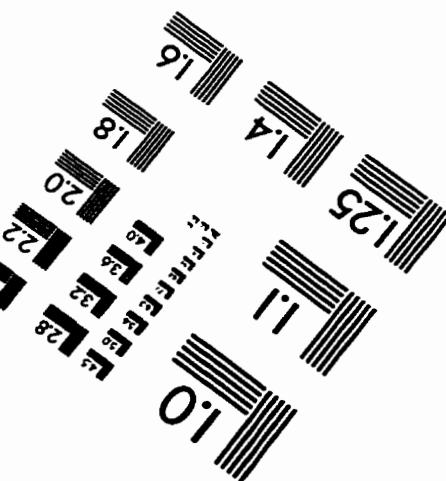
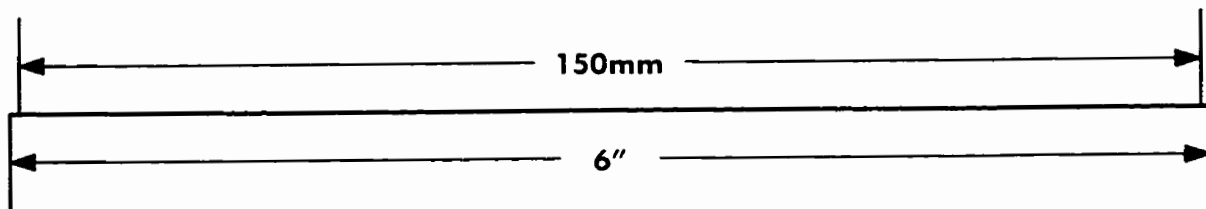
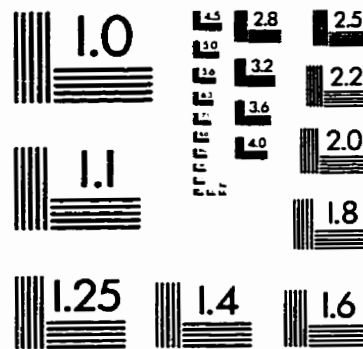
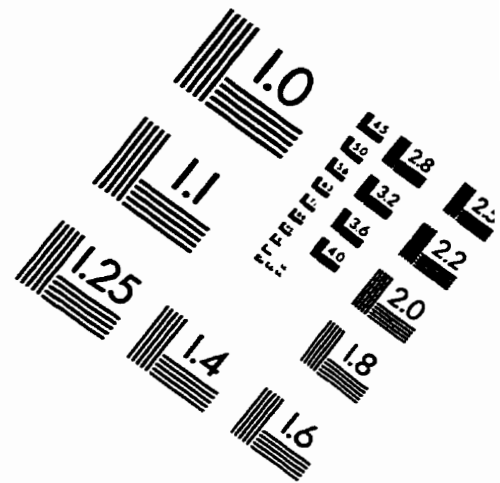
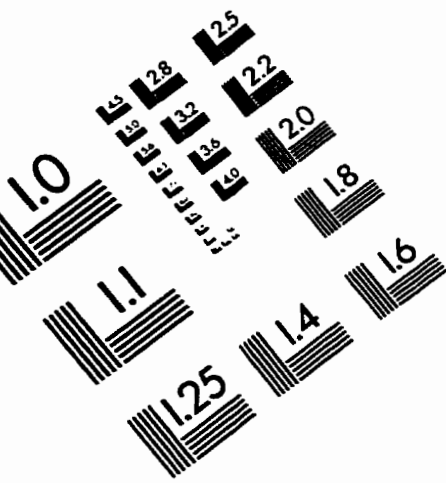
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