

Urban Open Spaces in Downtown Winnipeg, What Works?

By

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A Practicum submitted to the Faculty of Graduate Studies
In partial fulfillment of the requirements for the degree of
Master of Landscape Architecture

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FACULTY OF GRADUATE STUDIES

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**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
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MASTER OF LANDSCAPE ARCHITECTURE

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Abstract

This practicum addresses urban open spaces in downtown Winnipeg. Such spaces are often thought to be empty of users. The present study examines current user preferences in Winnipeg and aims to find out what might make them work better. The objectives of this practicum were: 1) to determine what works in urban open spaces: Common lessons learned from pertinent literature review and precedent case studies, 2) to analyze existing urban open spaces in Winnipeg against these lessons, and 3) to develop recommendations for redesign of these urban open spaces in order for them to respond to these common lessons. A thorough literature review was undertaken in order to understand the history and development of urban open spaces since the eighteenth century and its evolution into the late twentieth century development of small urban spaces. Two small open spaces in downtown Winnipeg were selected for analysis and proposed redesign – Air Canada Window Park and Carlton Square Park. The data was collected over a period of one month in spring 2005 in three different ways: a) the location of people and the activities performed by them were recorded with a dot on the map Males, females, and children were recorded separately, b) these observations were also recorded using still photography, c) 15 subjects were interviewed at both these spaces. Data Analysis comprised of density calculations, qualitative data analysis, and interviews. Density Calculations were carried out using GIS. However, these calculations were not self explanatory. They failed to explain the reason behind these usage patterns developed over a period of time. These calculations were, therefore, supplemented by qualitative data analysis and interviews. Based on the literature review, precedent case studies, density calculations, qualitative data analysis, and interviews, the following twelve principles were derived for urban open space design: a) visibility, b) comfort, c) image, d) safety and security, e) sittable space, f) universal accessibility, g) Activities h) food, i) access to water, j) adjacent property owner, k) amenities, l) maintenance. These design principles were successfully applied to redesign the above selected small urban open spaces.

Keywords: Urban Open Space, Users, User Needs, User Conflicts, Urban Microclimate, Social Life, Social Interaction, Geographic Information Systems

Abstract

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For my family, I dedicate this Practicum.

Acknowledgement

1. Introduction

1. Introduction

What is an Urban Open Space?

Carr and Lynch have said that

An urban open space is an expression of self and group, unflattered by routine constraints of workplace and family... It [allows] for communication, peaceful protest, and demonstration in ways that will not disrupt the ongoing function of the city. There must be a location where the demonstration will be visible and have symbolic weight, where access is easy and panic or entrapment unlikely. The crowd must be able to sense itself and its leaders, have ample room, and yet not be dwarfed. (cited in Taylor, 1981, p.18)

In a society in which increasingly more of daily life takes place in the private sphere – in private homes, at private computers, in private cars, at private workplaces and in strictly controlled and privatized shopping centres – there are clear signs that the city and city spaces have been given a new and influential role as [an urban open] space and forum. (Gehl and Gemzoe, 2000, p.20)



Fig. 1.1 - The Forks, Winnipeg, May 23, 05

Reasons for Study

Since the 1960s, there have been attempts by a number of scholars (see below) from different disciplines to study urban open spaces and their social life. Past researchers have attempted to answer some of the questions most frequently asked about urban open spaces: What makes an urban open space successful? Why do urban open spaces fail? What changes over time or with time? What does not? What works best? What does not?

Jane Jacobs (1961) revolutionized the concept of city spaces by introducing new principles of understanding the ways in which people use cities.

Dull, inert cities, it is true, do contain the seeds of their own destruction and little else. But lively, diverse, intense cities contain the seeds of their own regeneration, with energy enough to carry over for problems and needs outside themselves. (Jacobs, 1961, p.448)

Whyte (1980, 1988) observed people in small urban open spaces, "[their] schmoozing patterns, and the rituals of street encounters", exploring why "people went to some plazas and left others empty" (cited in Birch, 1986, online article). He suggested that urban open spaces are not designed for their users. Uses/activities, accessibility, comfort, safety, and security make successful urban open spaces.

Gehl and Gemzoe (2000, 1996), Halprin (1972), and Lynch (1972, 1981) have studied urban open spaces in terms of their physical environment and human behaviour.

Francis (2003) and Carr, Francis, Rivlin, and Stone (1992) have worked through the same issues of why some urban open spaces work and others do not.

Many open spaces work well but others are empty, unsafe, or dysfunctional. What makes a successful [urban] open space? This can be determined in part by looking at places that do not respond to human needs and are not used. They are often empty of people or, if used, have significant conflicts between different user groups or between users and management. (Francis, 2003, p.13)

These researchers have concluded that a deeper understanding of user needs and conflicts can help designers to create successful urban open spaces (Francis, 2003). User needs may vary from place to place, but the basic understanding of those needs remains the same.

Introduction

More case studies should be done by landscape architects, urban designers, and city planners to find out what works best in an urban open space (a particular place). User needs undergo change with time. Therefore, an ongoing evaluation and consideration for redesign is necessary through time (Cooper Marcus and Francis, 1998).

Users are the best source to find out their needs (Hester, 1990; Kretzman and McKnight, 1993). Community participation contributes to the success of urban open spaces (Hester, 1990). Surveys and interviews can help communicating with the users (Hester, 1990). Post occupancy evaluation from time to time would keep the places updated with current patterns of use (Cooper Marcus et al., 1998).

In Fall 2003 visiting Argentine Professor of Architecture Felipe Rumbo used Winnipeg as a case study to understand the use of open-air public spaces in a multicultural society. He reported that climate, low-density development, and scattered population were the three main reasons for low usage of urban open spaces in Winnipeg. Rumbo's study was completed at a city-wide scale. It was felt that there was an urgent need to examine downtown spaces in Winnipeg at detailed scale. The objectives of this practicum are addressed keeping this in mind.

Goals

The goal of this practicum is to formulate general design criteria based on the understanding of urban open spaces and the needs of its users and to apply those to the redesign of selected urban open spaces in Winnipeg.

The purpose is to observe and study two downtown open spaces in Winnipeg and develop design guidelines based on the following criteria:

- User types (age and gender)
- Uses/Activities
- Comfort and Safety
- Image
- Access and Linkages
- Microclimate (Sun and Wind)
- Landscape Elements such as trees and water (access to water)
- Provision of Food and Movable Seating

Introduction

The aim is to explore which common lessons from the past studies (Pertinent Literature Review and Precedent Case Studies) work best for urban open spaces in Winnipeg. It was necessary to examine current user preferences in Winnipeg.

The purpose is to investigate which urban open spaces work better: the one along the street or the one below or above the street level for Winnipeg. William H Whyte's observations show that spaces along the street work better than spaces below or above street levels. "The easier the flow between street and plaza, the more likely people are to move between the two and to tarry and sit (Whyte, 1980, p.33). "Ideally, the transition should be such that it is hard to tell where one ends and other begins (Whyte, 1980, p.57).

One plaza that people could be expected to use, but do not, is only a foot or so higher than two comparable ones nearby.

Sightlines are important. If people do not see a place, they will not use it. Unless there is a compelling reason, an open space should not be sunk. With two or three notable exceptions, sunken plazas are dead spaces. (Whyte, 1980, p.58)

The aim is also to examine the extent to which urban microclimate (wind and sun) influences the use of urban open space in Winnipeg. James Marston Fitch said:

Adverse effects are simply ignored, and the outdoor space designed as if for some ideal climate, ever sunny and pleasantly warm. Thus, [the spaces] fail in their central pretensions – that of eliminating gross differences between architectural and urbanite spaces, of extending in time the areas in which urban life could freely flow back and forth between the two. (cited in Whyte, 1980, p.44)

Objectives

The objectives of this practicum were as follows:

- To determine what works in urban open spaces: Common lessons learned from pertinent literature review and precedent case studies
- To analyze existing urban open spaces in Winnipeg against these lessons
- To develop recommendations for redesign of these urban open spaces in order for them to respond to these common lessons

Introduction

The first two objectives, together answered the following questions, which was necessary to develop recommendations for redesign of these urban open spaces:

1. What makes a successful urban open space?
2. Why do some urban open spaces work better than others do?
3. How do small urban open spaces work and not work? What gives them life and what kills them? What draws people into these urban open spaces and what keeps them out? What changes over time or with time and what does not?
4. What do people think works in regard to urban open spaces?
5. How much does the microclimate of a particular setting play a role in the use of an urban open space?
6. What is happening in urban open spaces in Winnipeg?
7. What works and what does not work in Winnipeg? Does it comply with the common lessons learned? How could it be made to work in Winnipeg?



Fig. 1.2 - On the way to The Forks, Winnipeg, May 23, 05

2. Methodology

2.1. Literature Review

2.2. Site Selection

2.3. Data Collection

2.3. Data Analysis

2.1. Literature Review: Background

Greek Agora: Greece experienced large-scale urban development during the sixteenth century B.C. These urban centres had small industries, commerce, and political activities (Rubenstein, 1992). Greek's outdoor life in these urban centres gave rise to an urban open space – the agora (public open space), where day to day political and commercial activities, formal and informal assemblies, councils, law courts, religious arguments, and social exchange took place (Carr et al., 1992; Rubenstein, 1992; Webb, 1990; Mumford, 1961). "For Greeks of the classical era, the agora was the essential component of a free polis, a symbol of democracy, and the rule of law" (Webb, 1990, p. 29).

The agora in mainland Greece lacked a sense of formal arrangement; instead, the space took its shape from the location of important commercial and political buildings sited along its periphery (Carr et al., 1992; Webb, 1990; Mumford, 1961); for example, the Agora in Athens. However, with growing population, the plan of the agora was systemized and strongly enclosed on at least three sides by arcades containing shops (Webb, 1990); for example, the Agora in Priene. The Greeks followed a proportioning ratio of vertical to horizontal, 1.618:1 in their architecture in order to achieve human scale and proportions (Rubenstein, 1992).

The Medieval Market Square in Europe (13th Century): With the decline and fall of the Roman empire and the increase in population, the urban centres in the medieval European cities developed as nodes of agricultural exchange; centres for production and exchange of goods (Rubenstein, 1992; Mumford, 1961); for example, the irregular marketplace of Goslar, an ancient Saxon mining town in Northern Germany (Webb, 1990). Trade and merchandize gave cities life. Arras in Northern France flourished as a medieval cloth town in the thirteenth Century (Webb, 1990). There was a clear distinction between rural and urban growth during the medieval period (Webb, 1990; Mumford, 1961). This changed the structure and function of urban landscape. Market squares and civic squares or piazzas evolved as the main component of urban centres (Carr et al., 1992; Rubenstein, 1992; Mumford, 1961).

The concept of the piazza, a utilitarian urban open space developed particularly in Italy. It functioned as an outdoor commercial space, a place for gathering in front of an important civic or religious structure, or, on occasion, as a stage for important civic festivals (Rubenstein, 1992);

Literature Review

for example, the Piazza del Campo, Siena, Italy. Piazzas had an ordered spatial structure and a sense of enclosure with narrow streets leading to them (Rubenstein, 1992).

Renaissance Square (16th Century): The plazas of the Renaissance period were monumental in size, dominated by strong lines (Rubenstein, 1992). They were carefully planned and formally designed (Carr et al., 1992). The late sixteenth century plazas emphasized civic and religious pride through designs based on symmetry (Carr et al., 1992; Girouard, 1985); for example, St. Peter's Square in Rome. During this period, the straight, wide, formal boulevards along these plazas were frequently used by people of all classes for social activities, which attracted urban growth along extended streets (Girouard, 1961; Mumford, 1961). As a result, Street markets developed and street shopping became a major outdoor urban activity.

Urban Open Space (18th Century onwards)

Since the eighteenth century, the design and development of urban open space has evolved in order to serve the diverse needs of its users based on time (era), social goals, promoters, types of users, and the activities within them (Cranz and Boland, 2004; Carr et al., 1992; Cranz, 1982).

A typology of contemporary urban open spaces has been formulated based on the above evolution: Public parks, squares and plazas, markets, streets, playgrounds, community open spaces, greenways and parkways, atrium/indoor market places, found/neighbourhood spaces, and waterfronts (Carr et al., 1992, p. 79-84). Public parks are further categorized into public parks (large-scale urban parks), downtown parks, commons, neighbourhood parks, and mini/vest pocket parks (Francis, 2003; Carr et al., 1992, p. 79-80).

This practicum deals with the mini/vest pocket parks in Winnipeg, which fall under the broad spectrum of urban open spaces. These parks are also known as small urban parks or small urban open spaces by different authors (Francis, 2003; Woolley, 2003; Tate, 2001; Whyte, 1980). The concept of small-scale urban parks came into existence in the late twentieth century. Prior to that, large-scale urban parks were the pre-dominant urban open spaces. This section takes the reader through the history and development of these urban parks since the eighteenth century and its evolution into the late twentieth century development of small urban spaces. It identifies the fundamental principles that defined and shaped the urban open space of that specific era. It also discusses the history of development of urban open space in Winnipeg.

Literature Review

Social Goals: Urban Parks built in the eighteenth and the nineteenth century were primarily based on notions of “passive recreation” (Wrede and Adams, 1991, p.118). The park development offered “both active play and contemplative experience” (Wrede and Adams, 1991, p.118). Parks originated as a means of visual appeal addressing “anti-urban” rural issues for example, Central Park, New York (Cranz, 1982, p.1) (Fig. 2.1.1.).



Fig. 2.1.1 - Central Park, New York (Jones in Tate, 2001, p. 153)

People were supposed to perceive the beauty of the parks. These parks were enclosed within physical boundaries such as trees and berms away from “unhealthy” city life. They were designed in the United States in response to the rapid rectilinear growth of cities (Cranz, 1982). In other words, early United States parks were an imitation of natural pastoral scenery.

Humphry Repton (1752-1818) and Capability Brown (1716-83) were two significant English landscape designers who influenced the beautiful picturesque styles of the 18th and the 19th century. Curvilinear order was meant to represent the natural world as opposed to the man-made world, a relief from straight rigid lines.

By the end of the nineteenth century, parks were built keeping in mind city revitalization at a larger scale. Public health was also considered as an imperative issue in park development. Parks in this era were sought to bring the whole city together. The park’s location sometimes even drew the plan of the city; Grant Park, for instance, was “conceived as the pivotal point of the plan of Chicago” (Tate, 2001, p. 101) (Fig. 2.1.2.). Parks also served as corridors connecting the city for example, the Minneapolis Park System (Fig. 2.1.3.).

Literature Review

In the 1930s, United States cities started reserving open spaces for the development of parks in densely populated downtowns as an antidote to rapid urbanization (Cranz, 1982). These urban open spaces were developed in order to provide a solution to congestion caused by the increasing population. The time period between the 1930s and 1960s was marked by understatement and irony. The word 'park' lost its uniqueness. Parks were any places where people congregated without any specific reason, such as sport stadiums, parking lots, asphalt ball courts, etc (Cranz and Boland, 2001).

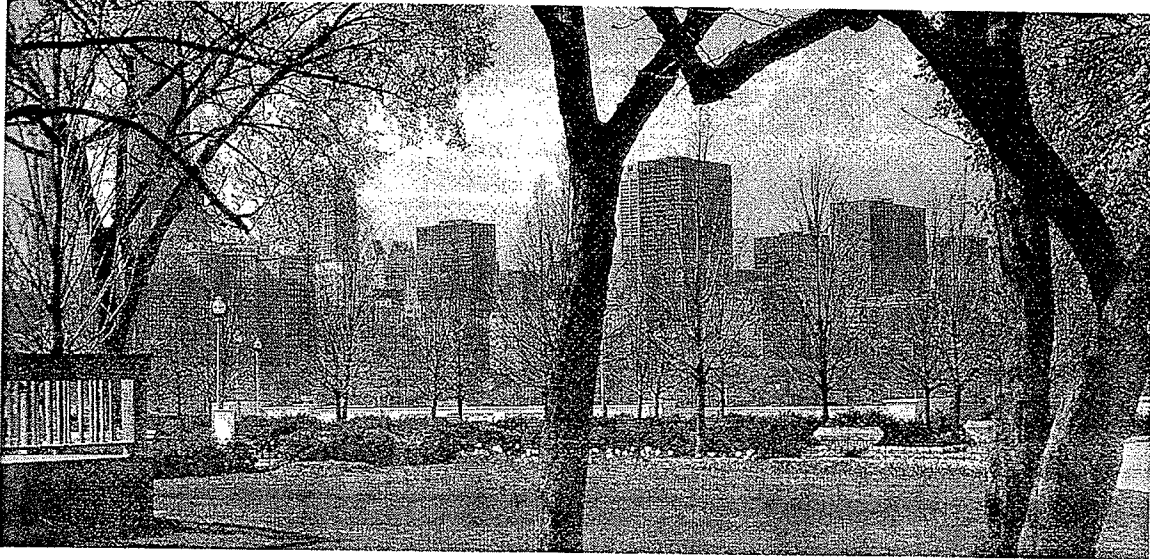


Fig. 2.1.2 - Grant Park, Chicago (Tate, 2001, p. 97)

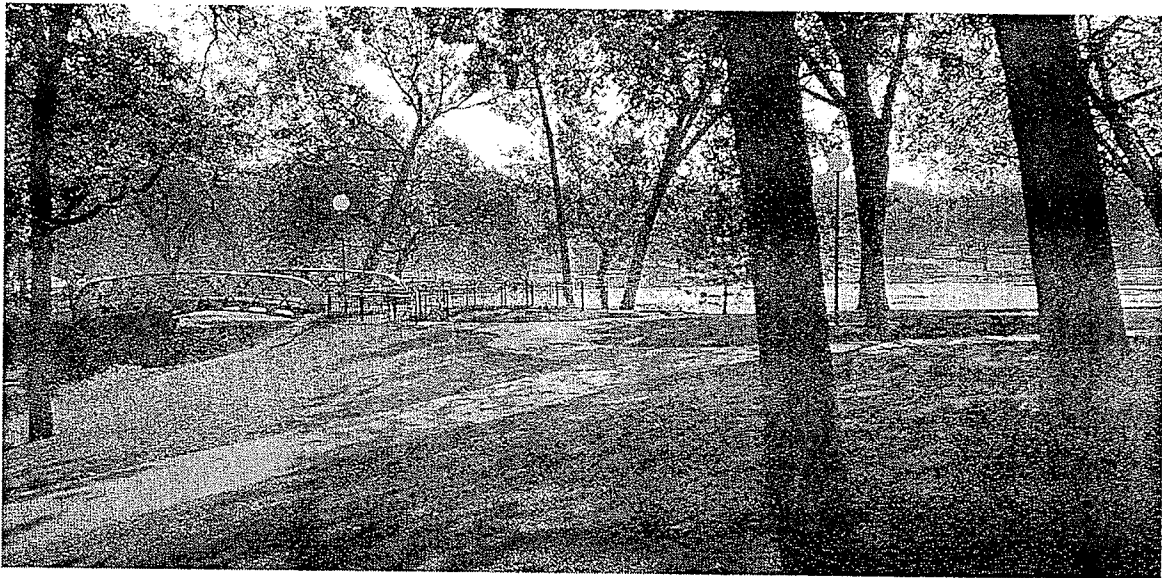


Fig. 2.1.3 - Loring Park, Minneapolis Park Systems (Tate, 2001, p. 189)

Active public recreation was introduced in parks during this era (Tate, 2001). An extensive range of sporting activities such as walking paths, biking/skating paths, recreation centres, golf courses, supervised beaches, outdoor ice rinks, baseball and softball diamonds, tennis courts, etc dominated the urban centers.

The definition of urban open space has changed in the last forty years. Cities are compared to “works of art” and urban open spaces present a breathing space in densely populated downtowns (Cranz and Boland, 2001, p.103). These urban open spaces provide freely accessible public spaces. These spaces are provided with outdoor cafeterias and restaurants. These outdoor food facilities generate revenue, which is used for the maintenance and management of the park itself, for example, Bryant Park, New York.

The urban open spaces are compartmentalized into smaller spaces commonly known as vest pocket parks; for example, Paley Park, New York (Fig. 2.1.4.). The provision of a comprehensive mix of vest pocket parks and other urban open spaces in city cores is necessary based on legal requirements and regulations depending on the population density, congestion criteria, residential development, and urbanization of the particular area (Cranz, 1982).



Fig. 2.1.4 – Paley Park, New York (Jones in Tate, 2001, p. 8)

Precedent Case Study: Bryant Park New York



Fig. 2.1.5 - Location Plan (Tate, 2001, p. 4)

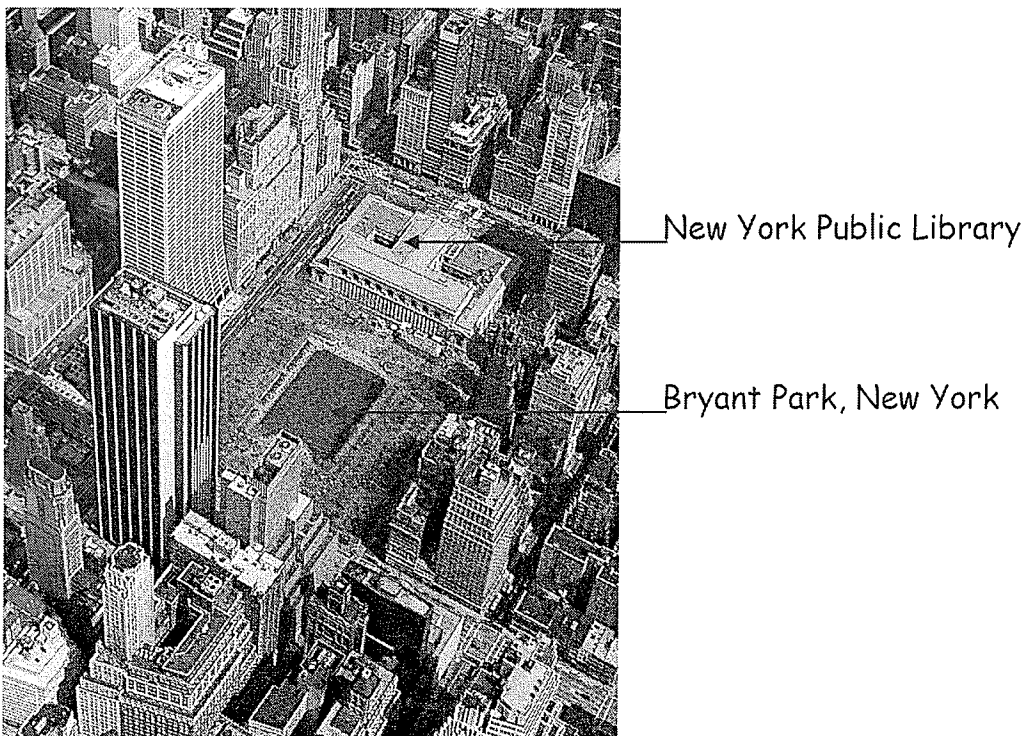


Fig. 2.1.6 - Bryant Park, New York (Jones in Tate, 2001, p. 29)

Literature Review

Bryant Park is considered one of the most successful urban open spaces in the twentieth century, in terms of its physical use. The contrast between the flows created by the movement of people over the rigid geometric space has attracted many researchers and commentators (Francis, 2003; Tate, 2001; Garvin and Berens, 1997; Thompson, 1997; Carr et al., 1992). The development of Bryant Park as an urban open space started in 1842, when the original Potter's Field (1823-1842) was converted into Reservoir Square Park (1842-1899), an extension to the city reservoir.

Biederman and Nager (1981) reported that it was then "a space for active recreation" (cited in Francis, 2003, p.47), i.e. a user-friendly space. The city reservoir was demolished in 1899 followed by the construction of New York Public Library, which was completed in 1911.

Robert Moses, head of the New York City Parks Department, completely redeveloped Bryant Park (1923-1930) as a "classically influenced formal space surrounded by a fence, laid out in a symmetrical fashion" (Francis, 2003, p.47). The park deteriorated and became a place for crime and drug dealing in the 1960s (Francis, 2003; Tate, 2001; Thompson, 1997). Average users started avoiding or simply not using the park (Thompson, 1997).

William H Whyte (1980) rendered a thorough analysis of Bryant Park using methods such as observations, behavioural mapping, and interviews and concluded that "Bryant Park is dangerous" (cited in Tate, 2001, p.25). In addition, a study on the same park by Olin (1982) reported that "A sense of neglect pervades the place – pigeon shit and drugs" (cited in Thompson, 1997, p.8).

In order to address the user needs based on the principles of Whyte's analysis of urban open spaces, Bryant Park Restoration Corporation (BPRC) was founded in 1980. Hanna and Olin, Landscape Architects, were hired to redesign the park in the 1990s. The design of the park was completed in three phases between 1991 and 1995. A fifteen year agreement was signed by BPRC with New York City for the management and improvement of Bryant Park in 1988.

The designer's intention was to make the space once again "user friendly urban open space" (Francis, 2003, p.48). The aim was to provide comfort, safety (especially for women), and accessibility (universality) to average users (including the disabled people) of the space.

Literature Review

The other goals were to make it attractive and draw more people by increasing activities in the park (Francis 2003; Whyte, 1980). The last (but not the least) objective of the redevelopment was to generate revenue to manage the park by introducing food kiosks and restaurants (Thompson, 1997). The overall form and composition of the space remained similar to the one developed under Robert Moses, but with a few alterations such as introduction of new entrances, widening of existing entrances and paths, construction of a ramp at the library terrace to make the park universally accessible, and addition of a 90 metre long bed of herbaceous perennials on either side of the gravel walk beside the lawn. The introduction of movable chairs was one of the important additions to the park, increasing flexibility of use.

Conclusion: The project serves the purpose of promoting healthy socio-economic growth by integrating and revitalizing the built, natural, and cultural assets of the Park. Bryant Park without people in it would have been a lifeless, blank, two-dimensional geometric form in between the tall buildings. The introduction of movable chairs in the park offered an interesting intervention into the future because of “the unpredictability of future events and circumstances” (Franck, 1994, p.369). In other words, it allowed users the chance to make a choice for the future design and use of the space. Here, the path is shown by the designer, and it is left for users to make the decision of following or changing that path “in the form of future actions” (Franck, 1994, p.369). The designer partially answers the question “What will be” and “ask us to experiment” to find the answer for ourselves (Franck, 1994, p.369).



Fig. 2.1.7 - Seating at Bryant Park (Jones in Tate, 2001, p. 28)

2.2. Site Selection

Fig. 2.2.2 - Air Canada Window Park

Site Selection for this Practicum was based on my daily interaction with Downtown, Winnipeg; thus, my personal values, assumptions, and biases regarding the usage patterns of those selected urban spaces, have played an important role in my investigation of the selected sites.



Fig. 2.2.1 - Downtown, Winnipeg

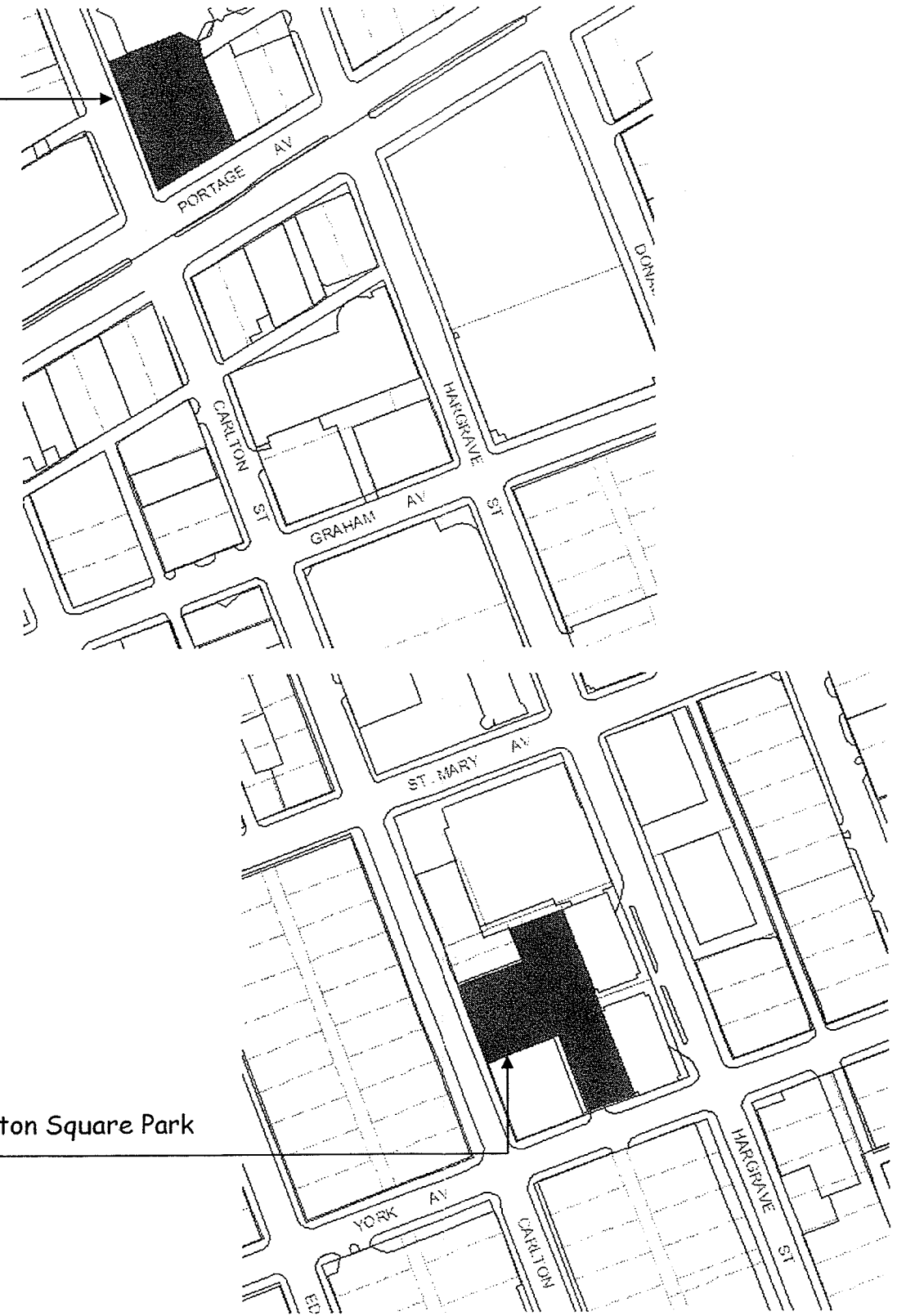
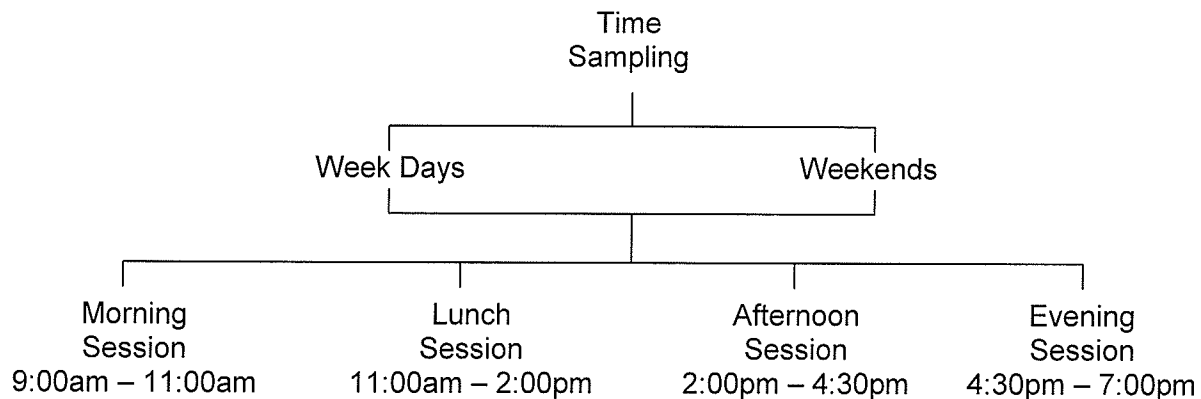


Fig. 2.2.3 - Carlton Square Park

2.3. Data Collection

Data collection protocol is explained here. The data collection was distributed over two time groups - weekdays and weekends. It was further divided into four different sessions: Morning session, Lunch session, Afternoon session, and Evening session. This way it was easier to segregate and then eventually analyze the data over a period of time. Still photography, time lapse photography, annotated diagrams, maps, and note taking were the devices used in the field (Lofland, 1971). Permission was obtained from Air Canada Finance and Data Centre and Aboriginal Peoples Television Network (APTN), offices surrounding the Air Canada Window Park, to fix the observation equipment at necessary positions. Most of the observations at Air Canada Window Park were made from the terrace of APTN. Carlton Square Park was observed from the skywalk at Winnipeg Convention Centre, which is opposite to the park.



Field study included observations and interviews. Ethics approval was obtained from the Joint Faculty Research Ethics Board of University of Manitoba (See Appendix A). Physical surroundings, image, access, linkages, landscape elements such as trees, water (access to water), behaviour of people in respect to their surroundings, microclimate, comfort, safety, behavior of people with respect to other people, gender, verbal interactions, uses/activities, provision of food and seating were observed. More specific information about those two urban open spaces was collected through the interviews. The company employees from the adjacent office buildings were interviewed as key informants for the study. These employees were assumed to be the regular users of the spaces selected for study. The observations also involved interviewing people other than those company employees, who were using the studied spaces during data collection. They were short (five minute) interviews. Written consent was obtained from the subjects being interviewed.

Data Collection

2.4. Data Analysis and Conclusions

Data analysis was carried out in the form of interpretations of data collected in the field. Geographical Information System (ArcView GIS) was used as a tool for mapping people (Platt, 2003). Whyte (1980) mapped people in his study *Social Life of Small Urban Spaces* and carried out the analysis manually to find out patterns of behaviour. In the current study, the location of people (standing, sitting, and engaged in an activity) in the study area was recorded with a dot on the map. In other words, their location and movement at any given time was abstracted using point, line and plane.

The location was then digitized into a map with the aid of GIS. These maps were then merged together to get one map showing all the different positions of people on different days at the different times of survey. Density calculations were then completed directly from the points on the maps. These density calculations gave different patterns of use of the space and, in turn, presented areas of intense use, moderate use, and no use. GIS software enabled the quantitative data analysis to be completed with increased accuracy. If done manually the analysis would have been very time consuming.

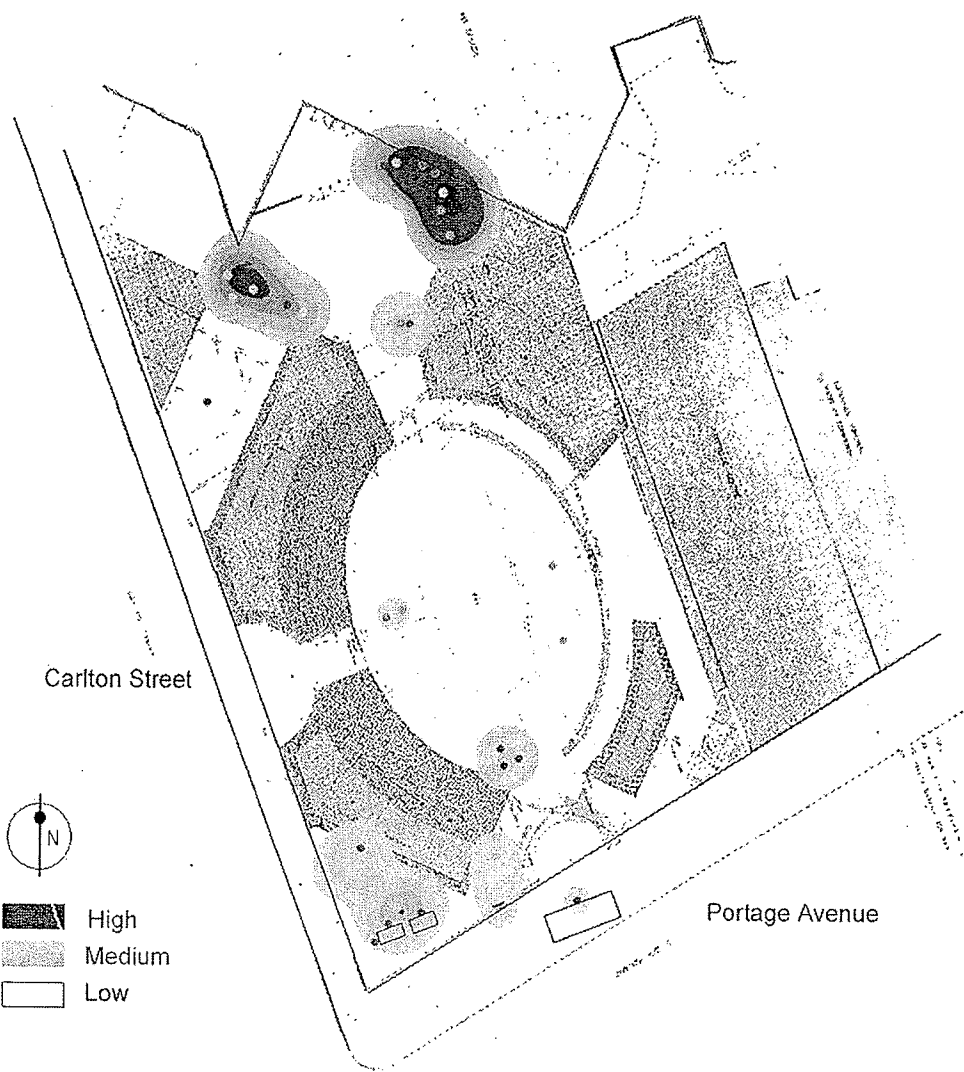
Dominant, repeated patterns and common occurrences, typicality, unusual, rare, atypical, events were noted (Baker, 1988). However, these calculations were not self explanatory. They failed to explain the reason behind usage patterns developed over a period of time. These calculations were, therefore, supplemented by direct observations of the researcher. These observations were of crowds of people performing their daily activities.

The photographs were taken from a distance so as not to identify the faces of the subjects. Any illegal activity seen through the field was ignored and was not recorded. These photographs were used to confirm the positions of the subjects. All the data collected was grouped together and not analyzed on an individual basis. The analysis was carried out separately for both the sites. Qualitative analysis, along with the interviews, formed a basis for redesigning of those selected urban open spaces (Zeisel, 1975, 1981). Conclusions were drawn based on these three attributes: literature review, precedent case studies, density calculations, qualitative data analysis, and interviews. Thirty subjects were interviewed for the study, equally distributed over the selected sites.

Data Analysis

Density Calculations

Air Canada Window Park

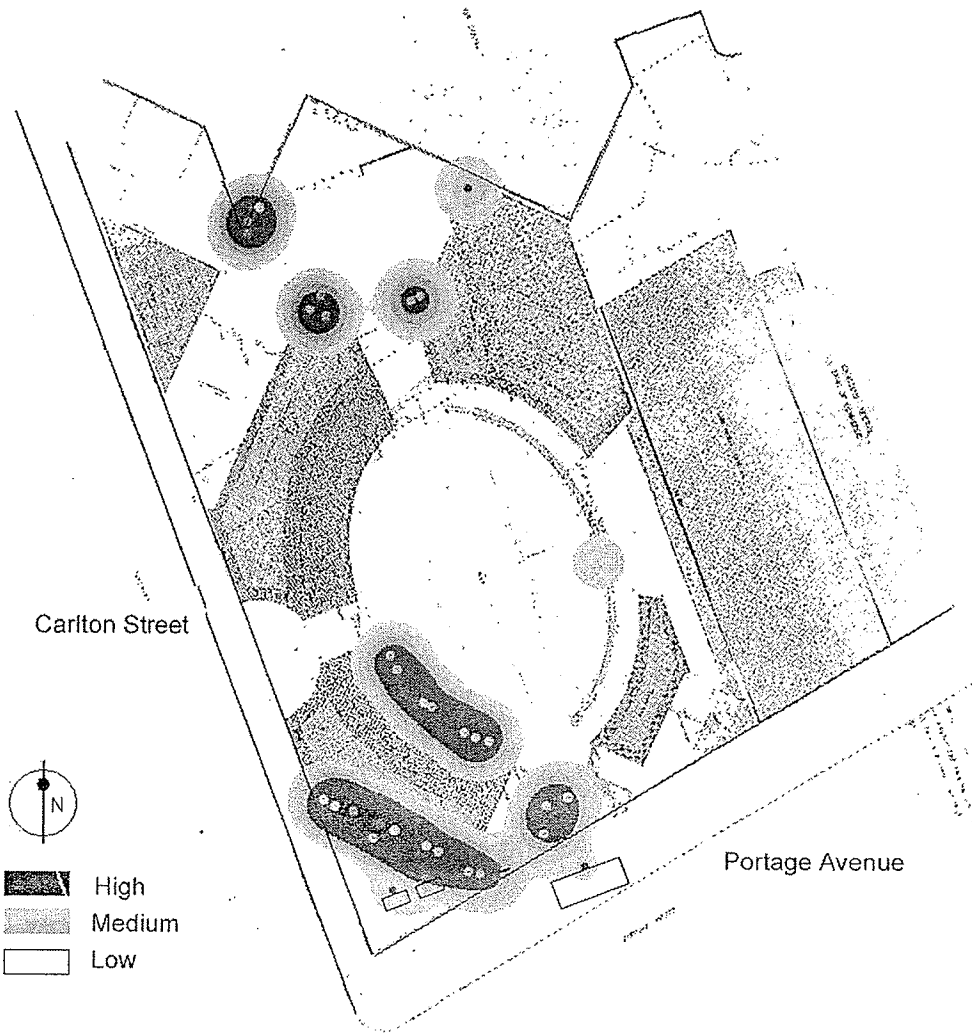


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
● F: Sit/Chat	2	● M: St/Smoke/Chat	6	● M: Bike	2
● F: Sit/Read	1	● M: Stand/Chat	3	● M: Guitar_player	1
● F: Sit/Watch	1	● M: Stand/Eat	1	● M: Security	2
● F: St/Smoke/Chat	6	● M: Vendor	2	● M: Seller	1
● F: Stand/Eat	1	● M: Walk	1	● M: Sit	4
● F: Walk/Chat	1	● M: Walk/Chat	1		

F - Female M - Male K - Kid St - Stand

Date: May 03, 05 Day: Tuesday Time: 5:00pm Session: Evening
 Temperature: 11c Wind: WNW 17km/hr Sunny
 Count M - 24 F - 12 K - 2 Total - 38

**Fig. 2.4.1 - Density Calculation 1
 Air Canada Window Park**

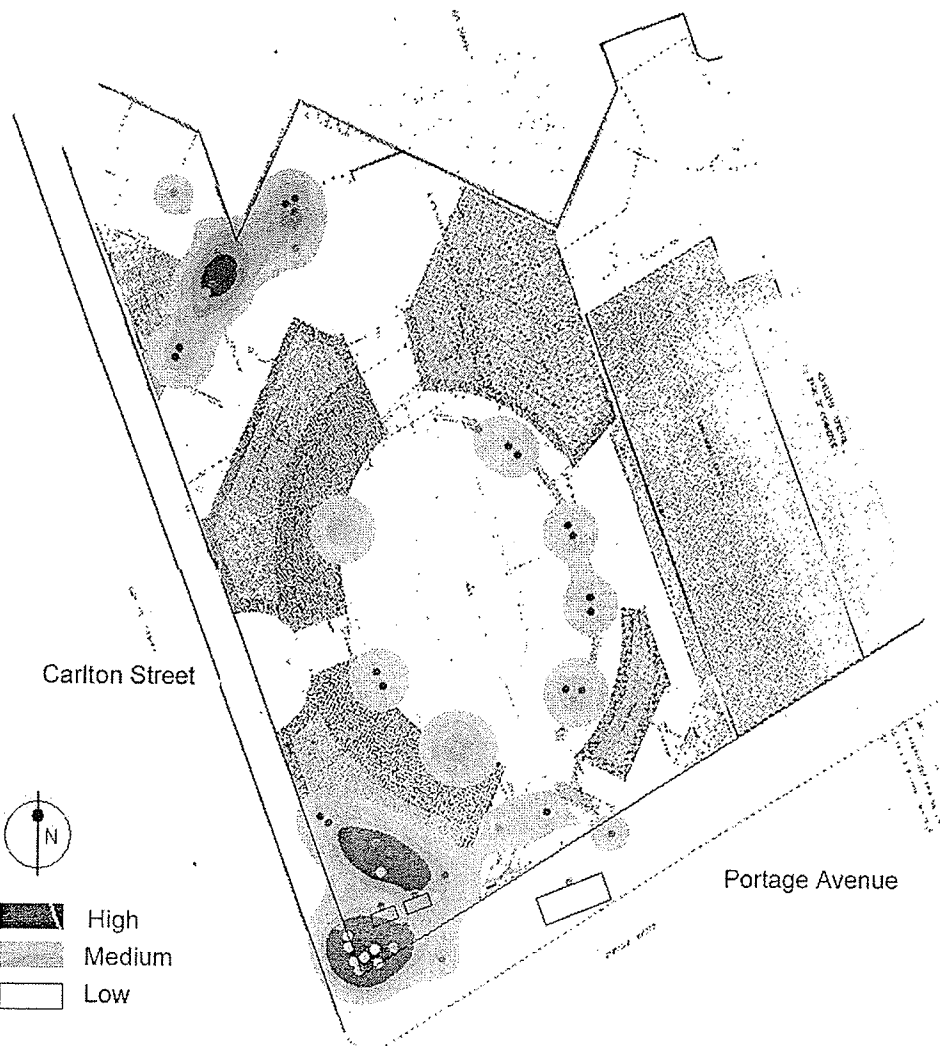


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
● F: Sit/Chat	8	● M: Sit/Chat/Eat	1		
● F: Sit/Chat/Eat	1	● M: Sit/Read	1	● M: Disable/Chat	1
● F: Sit/Eat	1	● M: Sit/Watch	1	● M: Guitar_player	1
● F: Sit/Smoke/Chat	2	● M: Stand/Smoke	1	● M: Seller	1
● F: Stand/Chat	1	● M: Vendor	2	● M: Sit/Chat	12

F - Female M - Male K - Kid St - Stand

Date: May 04, 05 Day: Wednesday Time: 1:30pm Session: Lunch
 Temperature: 15c Wind: SSW 6km/hr Sunny
 Count M - 21 F - 13 Total - 34

Fig. 2.4.2 - **Density Calculation 2**
Air Canada Window Park

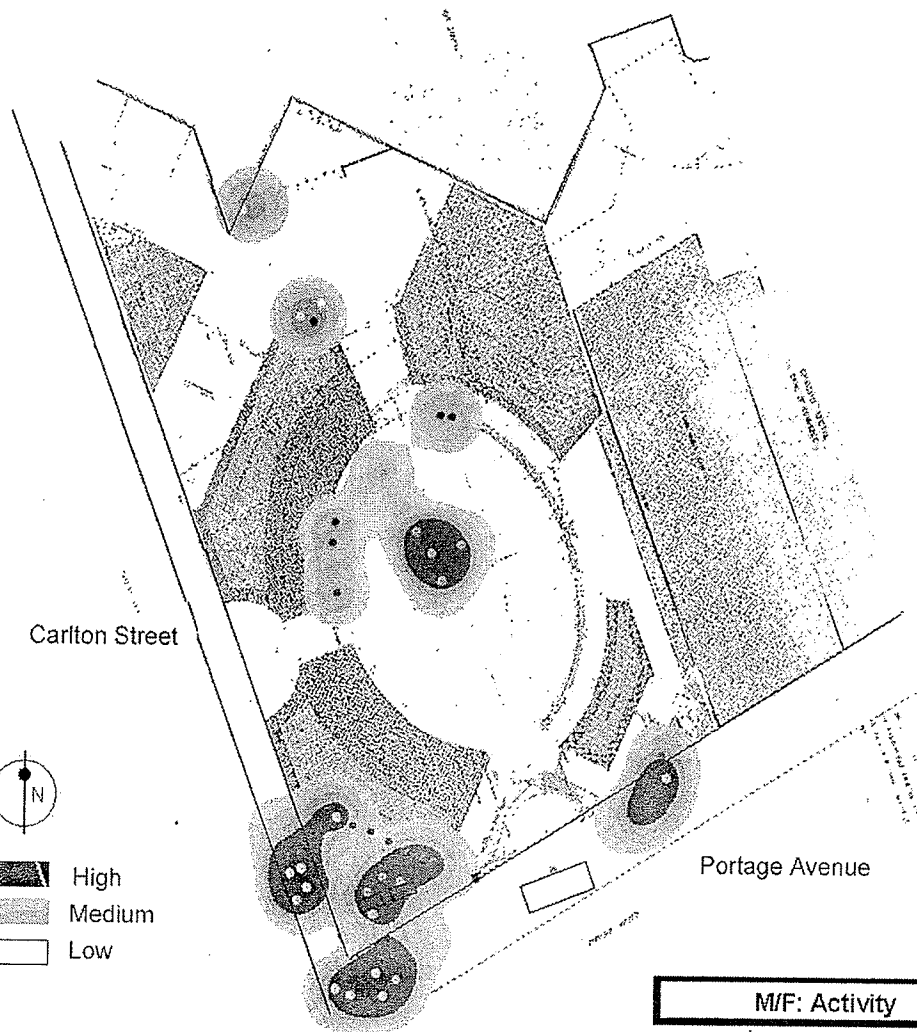


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
F: Sit/Chat	8	M: Sit/Chat	8	M: Disable/Chat	1
F: Sit/Chat/Eat	7	M: Sit/Chat/Eat	4	M: Disable/Watch	1
F: Sit/Eat	1	M: Stand	2	M: Guitar_player	1
F: Sit/Watch	1	M: Stand/Chat	2	M: Passerby	9
F: Stand/Chat	1	M: Stand/Smoke	3	M: Seller	1
F: Walk/Chat	1	M: Vendor	2	F: Passerby	9

F - Female M - Male K - Kid St - Stand

Date: May 04, 05 Day: Wednesday Time: 2:00pm Session: Afternoon
 Temperature: 15c Wind: SSW 6km/hr Sunny
 Count M - 34 F - 28 K - 2 Total - 62

**Fig. 2.4.3 - Density Calculation 3
 Air Canada Window Park**

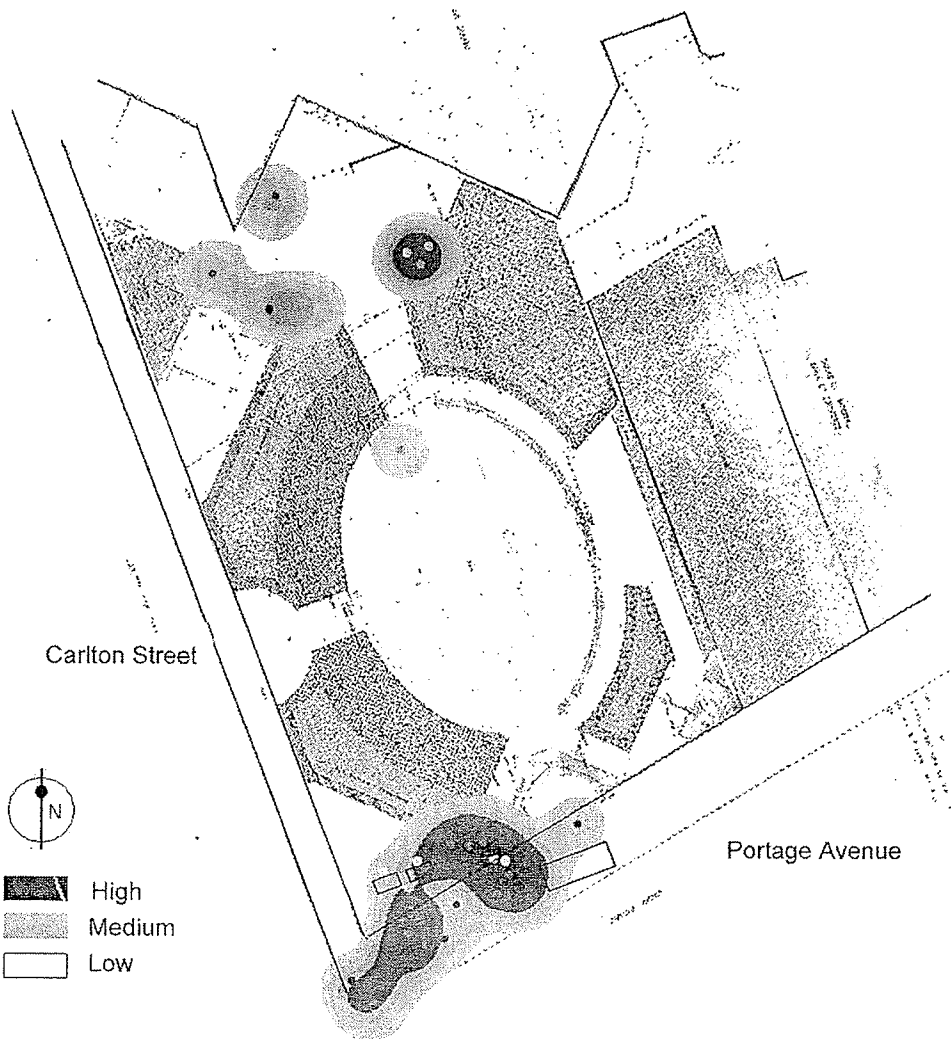


M/F: Activity	No	M/F: Activity	No
⊙ F: Passerby	4	● M: Seller	1
● F: Sit/Chat	5	● M: Sit	4
⊙ F: Sit/Chat/Eat	1	● M: Sit/Chat	1
● F: Sit/Eat	1	● M: Sit/Chat/Eat	3
⊙ F: Stand/Chat	1	● M: Sit/Watch	1
⊙ M: Buy	1	● M: St/Smoke/Chat	2
		⊙ M: Stand	1
		⊙ M: Stand/Chat	2
		● M: Stand/Chat/Eat	1
		● M: Vendor	2
		● M: Disable	1
		⊙ M: Guitar_player	1
		⊙ M: Maintenance	4
		⊙ M: Passerby	7

F - Female M - Male K - Kid St - Stand

Date: May 04, 05 Day: Wednesday Time: 2:30pm Session: Afternoon
 Temperature: 15c Wind: SSW 6km/hr Sunny
 Count M - 32 F - 12 K - 2 Total - 44

Fig. 2.4.4 - Density Calculation 4
 Air Canada Window Park

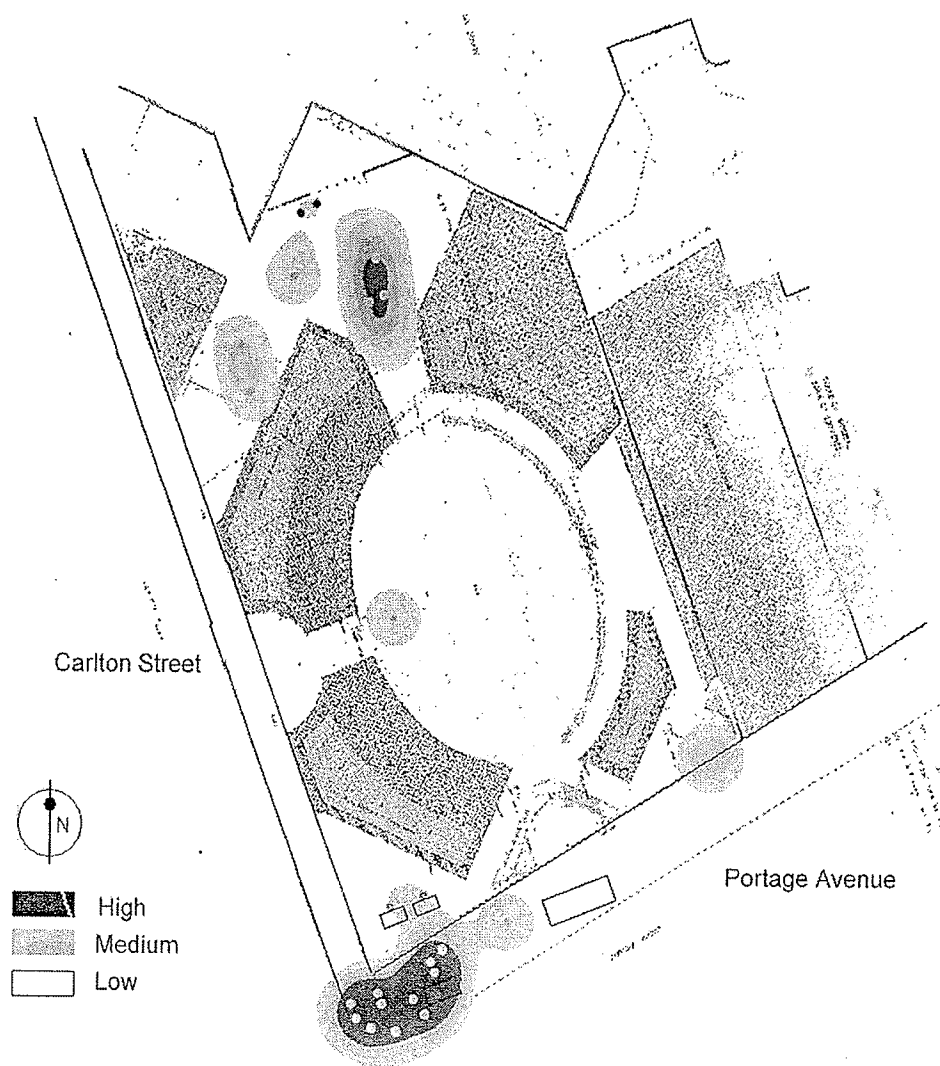


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
F: Sit/Chat/Eat	1	M: Sit/Chat/Eat	2	M: Buy	2
F: Sit/Smoke	1	M: Stand/Chat	1	M: Passerby	18
F: Sit/Smoke/Chat	1	M: Vendor	2	M: Seller	1
F: St/Smoke/Chat	1	F: Passerby	1	M: Sit	1
F: Stand/Chat	1	F: Sit	1	M: Sit/Chat	2

F - Female M - Male K - Kid St - Stand

Date: May 05, 05 Day: Thursday Time: 11:00am Session: Lunch
 Temperature: 12c Wind: NNE 9km/hr Cloudy
 Count M - 29 F - 7 Total - 36

**Fig. 2.4.5 - Density Calculation 5
 Air Canada Window Park**

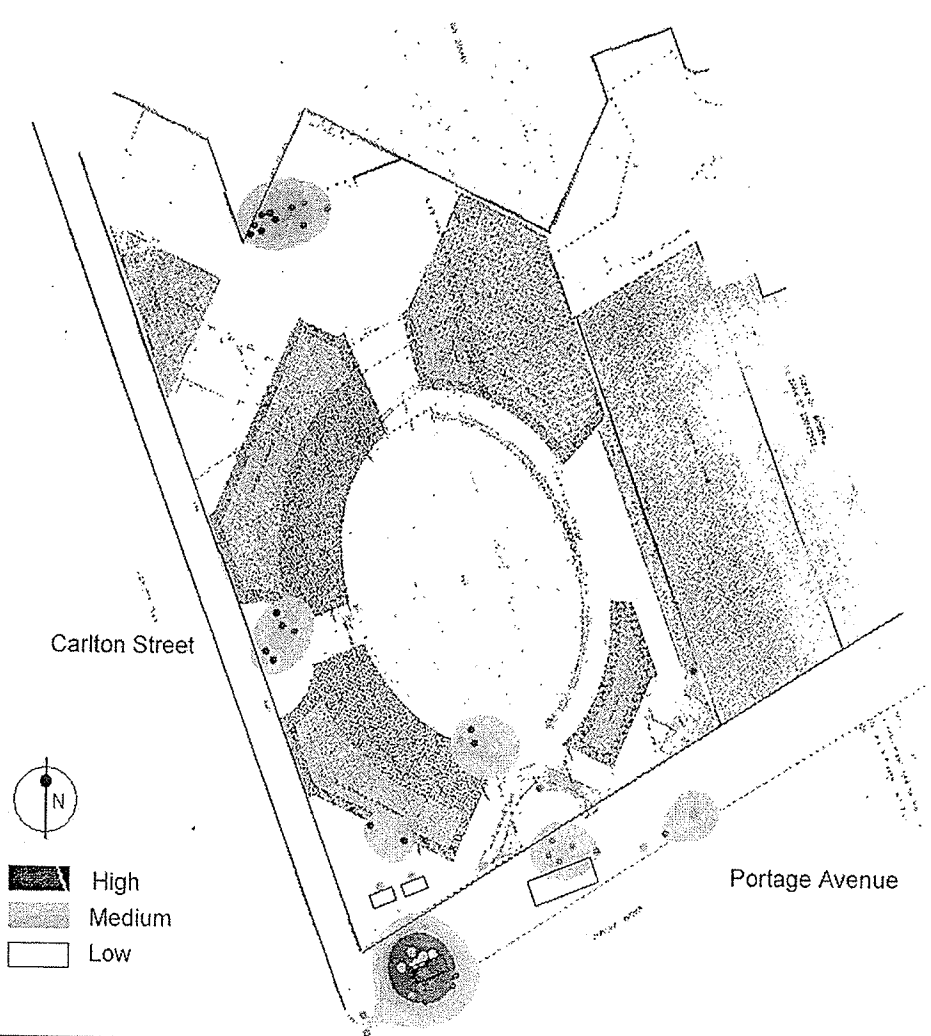


M/F: Activity	No
♀ F: Passerby	9
♀ F: Seller	1
♀ F: Sit	1
♂ M: Passerby	12
♂ M: St/Smoke/Chat	2
♂ M: Vendor	2

F - Female M - Male K - Kid St - Stand

Date: May 12, 05 Day: Thursday Time: 6:00pm Session: Evening
 Temperature: 8c Wind: 28 km/hr Cloudy
 Count M - 16 F - 11 Total - 27

Fig. 2.4.6 - Density Calculation 6
 Air Canada Window Park

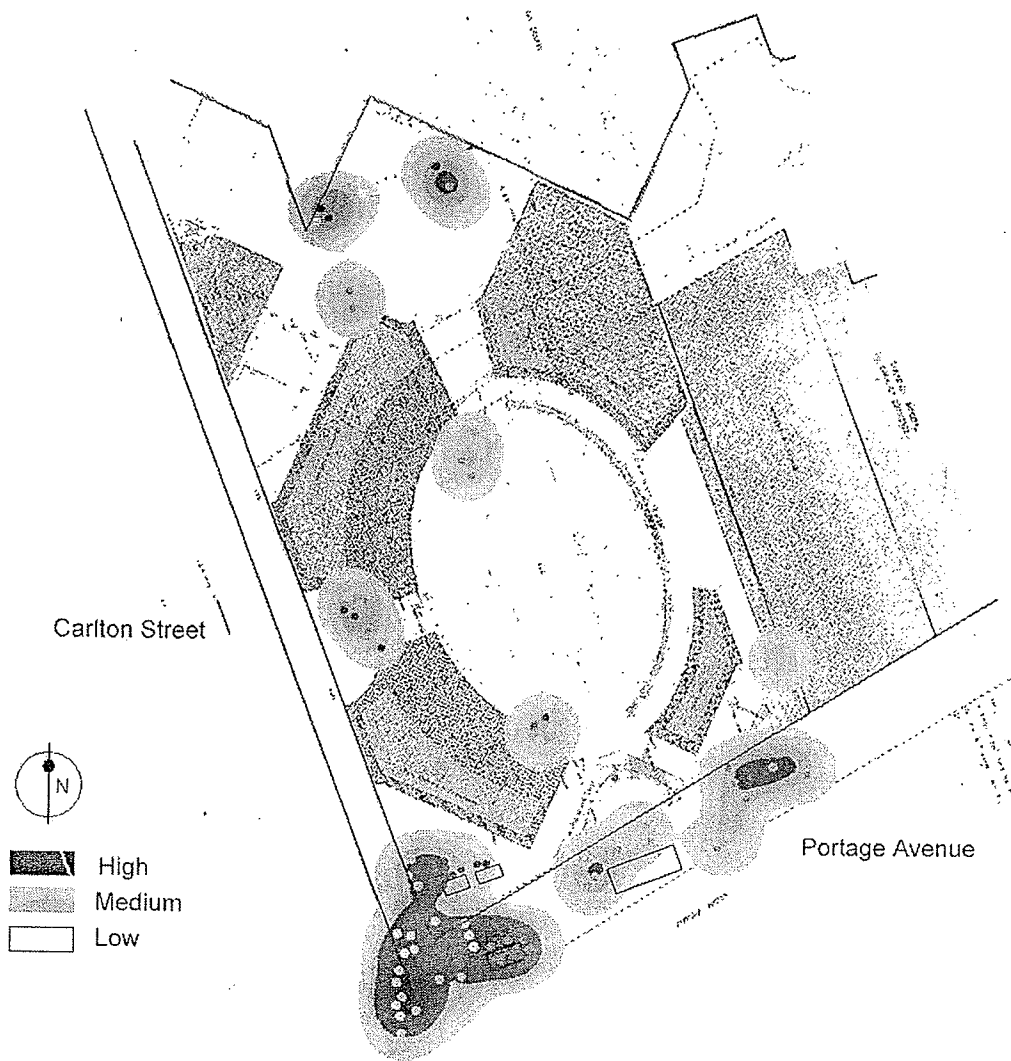


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
F: Buy	2	M: Sit/Chat/Eat	1	Baby: Female	1
F: Maintenance	1	M: Sit/Eat	3	Baby: Male	2
F: Passerby	1	M: Sit/Relax	2	M: Sit	2
F: Seller	1	M: St/Smoke/Chat	1	M: Sit/Chat	2
F: Sit	3	M: Stand/Chat	5	M: Buy	3
F: Sit/Chat/Eat	1	M: Stand/Chat/Eat	1	M: Maintenance	8
F: St/Smoke/Chat	2	M: Stand/Smoke	4	M: Passerby	11
F: Stand/Smoke	1	M: Vendor	2		

F - Female M - Male K - Kid St - Stand

Date: May 20, 05 Day: Friday Time: 9:30am Session: Morning
 Temperature: 20c Wind: S20km/hr Sunny
 Count M - 45 F - 15 Total - 60

**Fig. 2.4.7 - Density Calculation 7
 Air Canada Window Park**

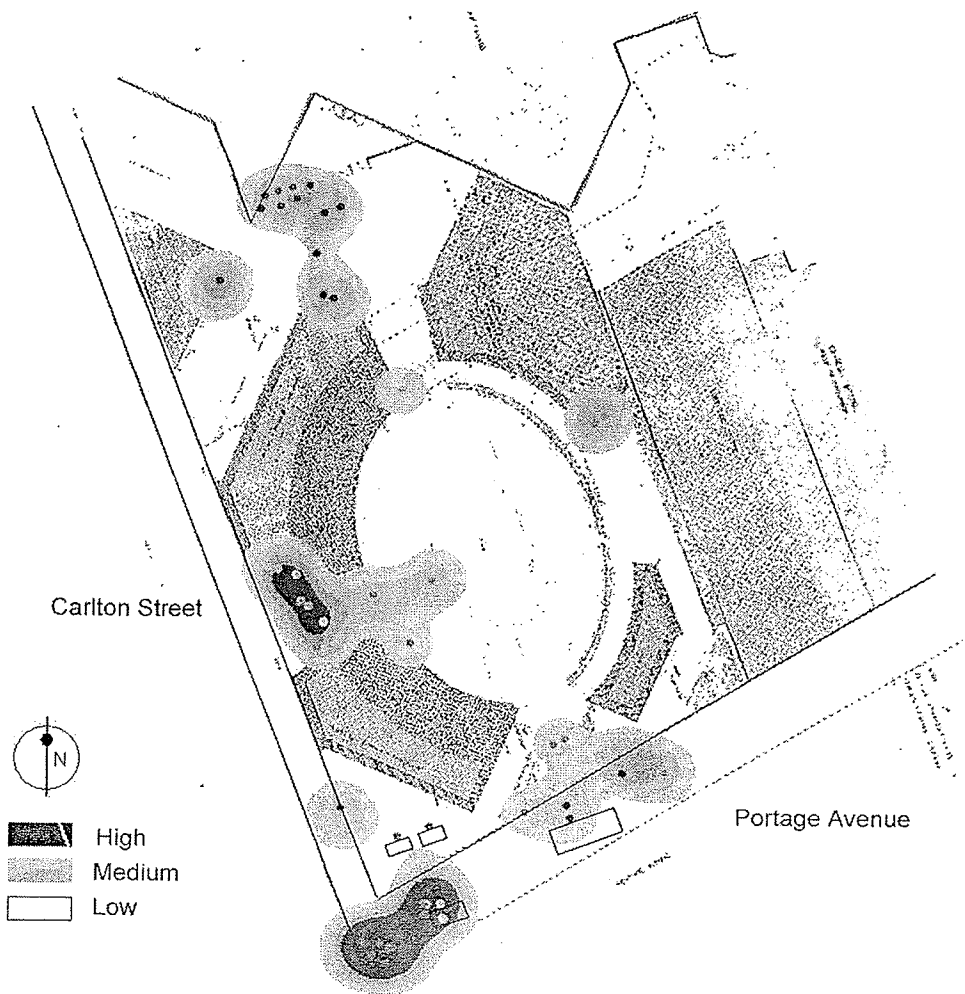


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
● F: Seller	1	● M: Sit/Chat	6	● F: Passerby	13
● F: Sit	1	● M: Sit/Read	1	● M: Bike	1
● F: Sit/Chat	1	● M: Stand/Chat	6	● M: Buy	5
● F: Stand/Chat	4	● M: Stand/Smoke	2	● M: Passerby	26
● F: Stand/Smoke	2	● M: Vendor	2	● M: Sit	2

F - Female M - Male K - Kid St - Stand

Date: May 20, 05 Day: Friday Time: 10:00am Session: Morning
 Temperature: 20c Wind: S 20km/hr Sunny
 Count M - 43 F - 22 Total - 65

**Fig. 2.4.8 - Density Calculation 8
 Air Canada Window Park**

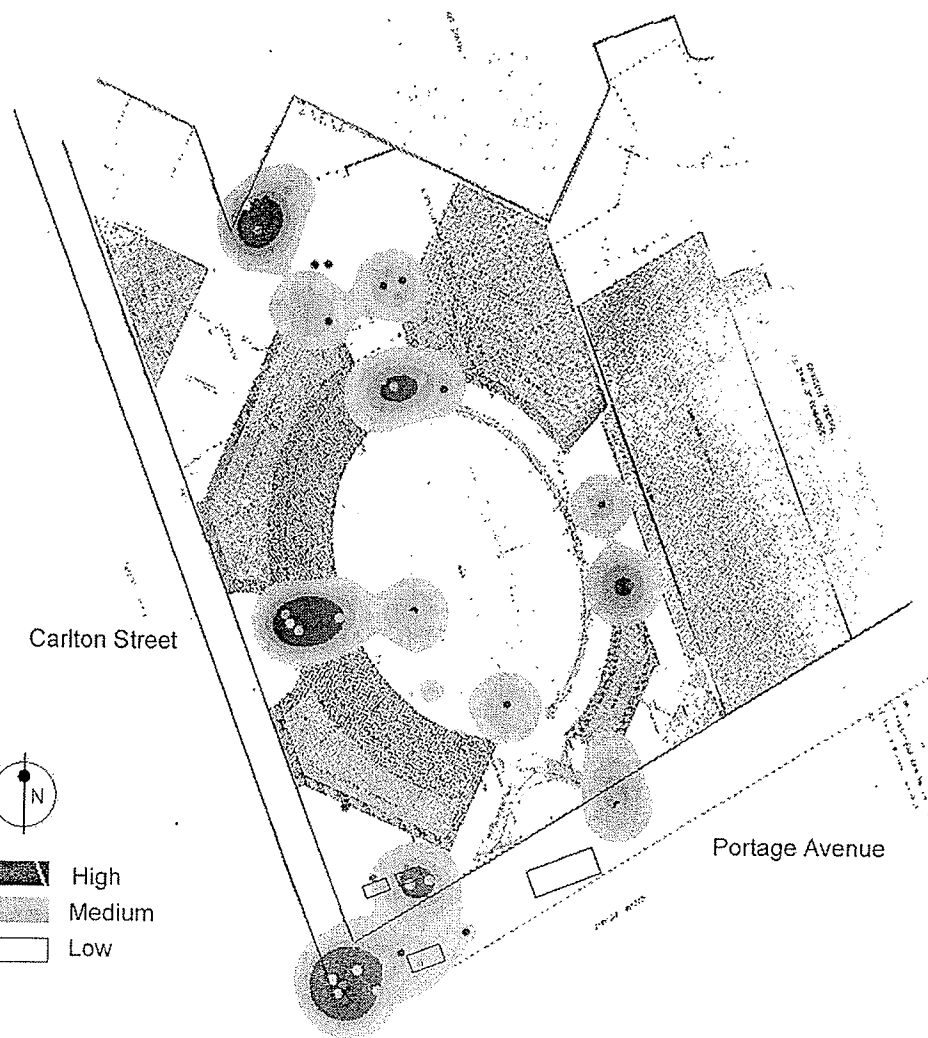


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
• F: Sit	2	• M: Sit/Chat/Eat	4	• M: Disable/Sit	1
• F: Sit/Chat	2	• M: Sit/Smoke/Chat	1	• M: Passerby	5
• F: Sit/Chat/Eat	3	• M: St/Smoke/Chat	4	• M: Playing	4
• F: Sit/Smoke	1	• M: Stand/Chat	2	• M: Sit/Chat	2
• F: Sit/Smoke/Chat	3	• M: Stand/Read	1	• F: Buy	2
• K: Passerby	1	• M: Stand/Smoke	4	• F: Passerby	14
• K: Playing	4	• M: Vendor	2	• F: Seller	1

F - Female M - Male K - Kid St - Stand

Date: May 20, 05 Day: Friday Time: 12:00pm Session: Lunch
 Temperature: 20c Wind: S 20km/hr Sunny
 Count M - 30 F - 33 Total - 63

**Fig. 2.4.9 - Density Calculation 9
 Air Canada Window Park**

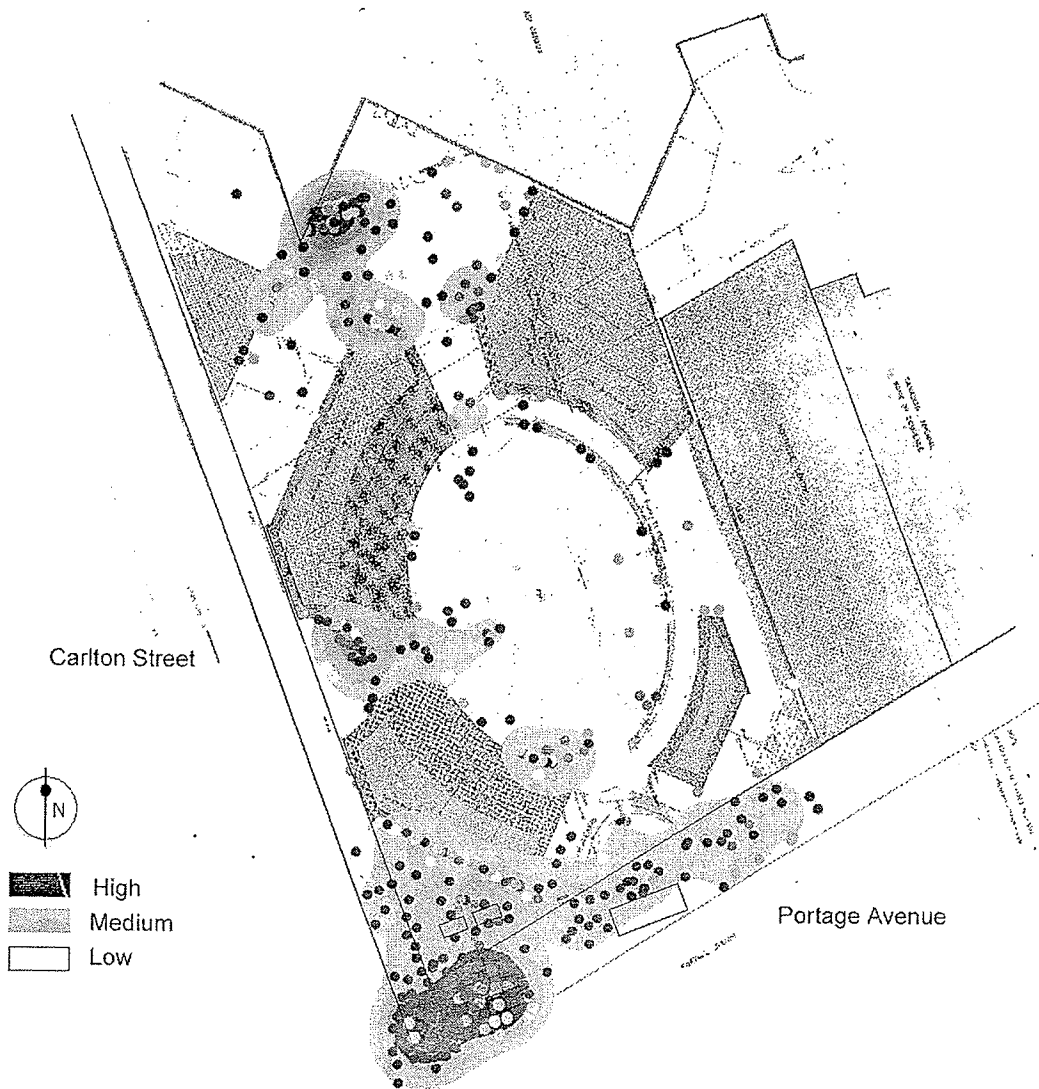


M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
● F: Seller	1	● M: Sit/Eat	3	● M: Buy	2
● F: Sit	1	● M: St/Smoke/Chat	4	● M: Passerby	9
● F: Sit/Smoke	1	● M: Stand/Chat	2	● M: Playing	1
● F: Stand/Chat	4	● M: Stand/Eat	1	● M: Sit	1
● F: Stand/Smoke	1	● M: Stand/Smoke	1	● F: Bike	2
● K: Passerby	5	● M: Vendor	2	● F: Buy	1
● K: Playing	1	● M: Walk/Smoke	3	● F: Passerby	9
				● F: Security	2

F - Female M - Male K - Kid St - Stand

Date: May 20, 05 Day: Friday Time: 12:30pm Session: Lunch
 Temperature: 20c Wind: S 20km/hr Sunny
 Count M - 26 F - 22 Total - 48

**Fig. 2.4.10 - Density Calculation 10
 Air Canada Window Park**



M/F: Activity	No	M/F: Activity	No	M/F: Activity	No	M/F: Activity	No
F: Sit/Chat	26	M: Disable	1	M: Disable/Chat	2	M: Sit/Smoke/Chat	1
F: Sit/Chat/Eat	14	F: Sit/Eat	3	M: Disable/Sit	1	M: Sit/Watch	2
F: Buy	5	F: Sit/Read	1	M: Disable/Watch	1	M: Sit/Smoke/Chat	19
F: Maintenance	1	F: Sit/Smoke	3	M: Guitar_player	4	M: Stand	3
M: Sit/Read	2	F: Sit/Smoke/Chat	4	M: Maintenance	12	M: Stand/Chat	23
Baby: Male	2	F: Sit/Watch	2	M: Passerby	97	M: Stand/Chat/Eat	2
F: Bike	2	F: Sit/Smoke/Chat	11	M: Playing	5	M: Stand/Eat	2
M: Bike	3	F: Stand/Chat	12	M: Security	2	M: Stand/Read	1
M: Buy	13	F: Stand/Eat	1	M: Seller	5	M: Stand/Smoke	15
F: Passerby	60	F: Stand/Smoke	4	M: Sit	14	M: Vendor	20
F: Security	2	F: Walk/Chat	2	M: Sit/Chat	33	M: Walk	1
F: Seller	5	K: Passerby	6	M: Sit/Chat/Eat	15	M: Walk/Chat	1
F: SR	9	K: Playing	7	M: Sit/Eat	6	M: Walk/Smoke	3

F - Female M - Male K - Kid St - Stand

May Month Alltogether

**Fig. 2.4.11 - Density Calculation
Air Canada Window Park**

Density Calculations

Carlton Square Park

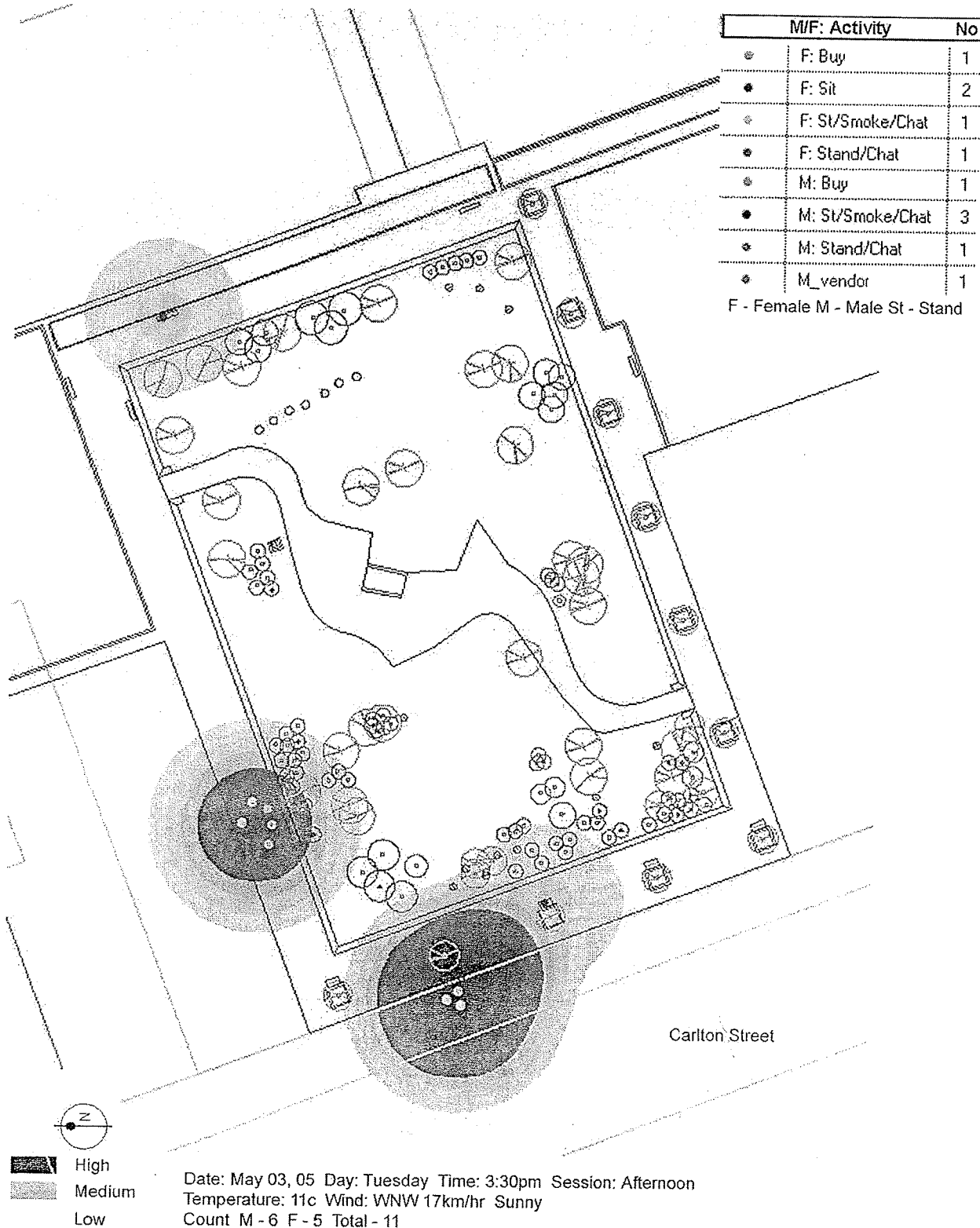
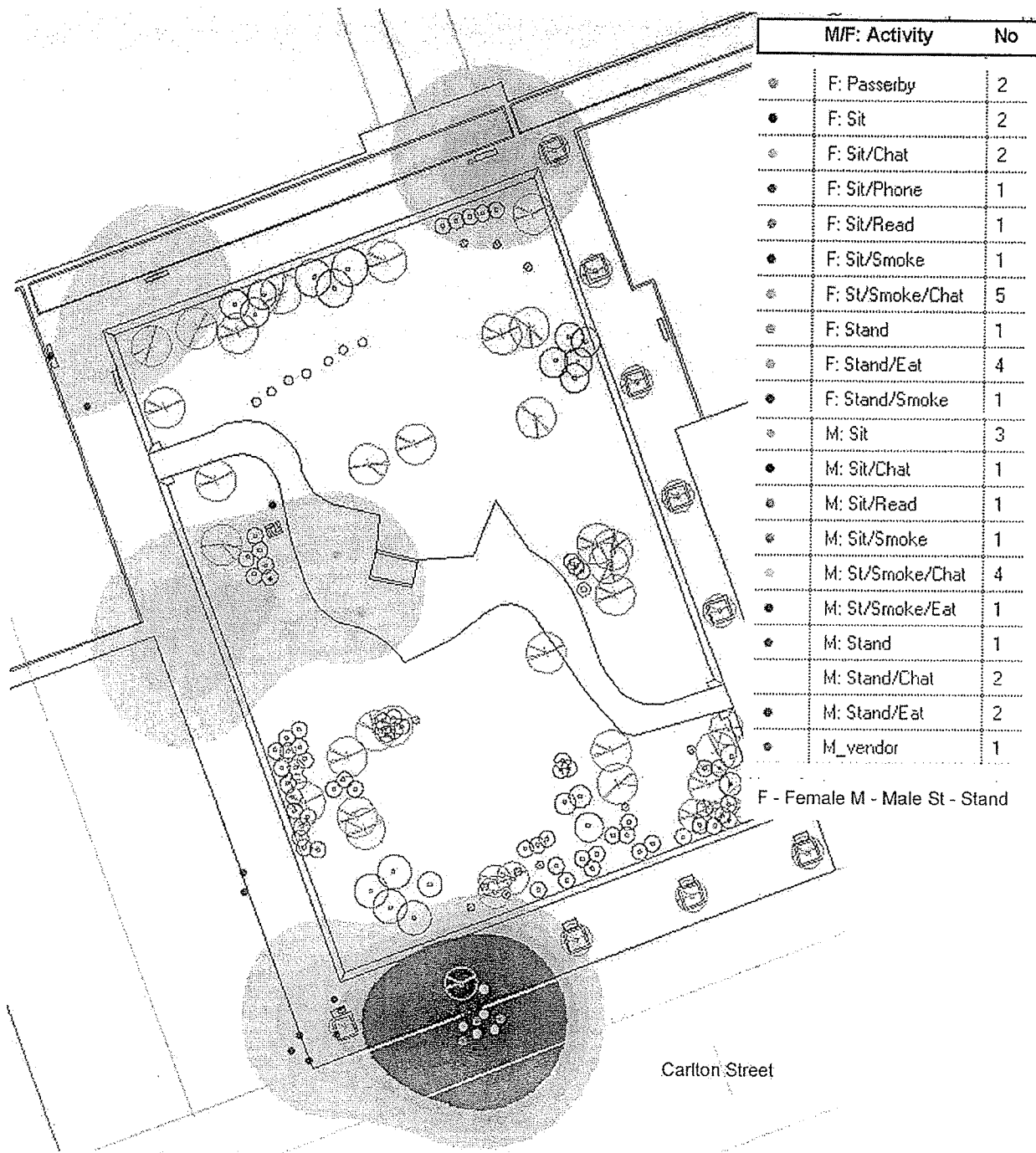





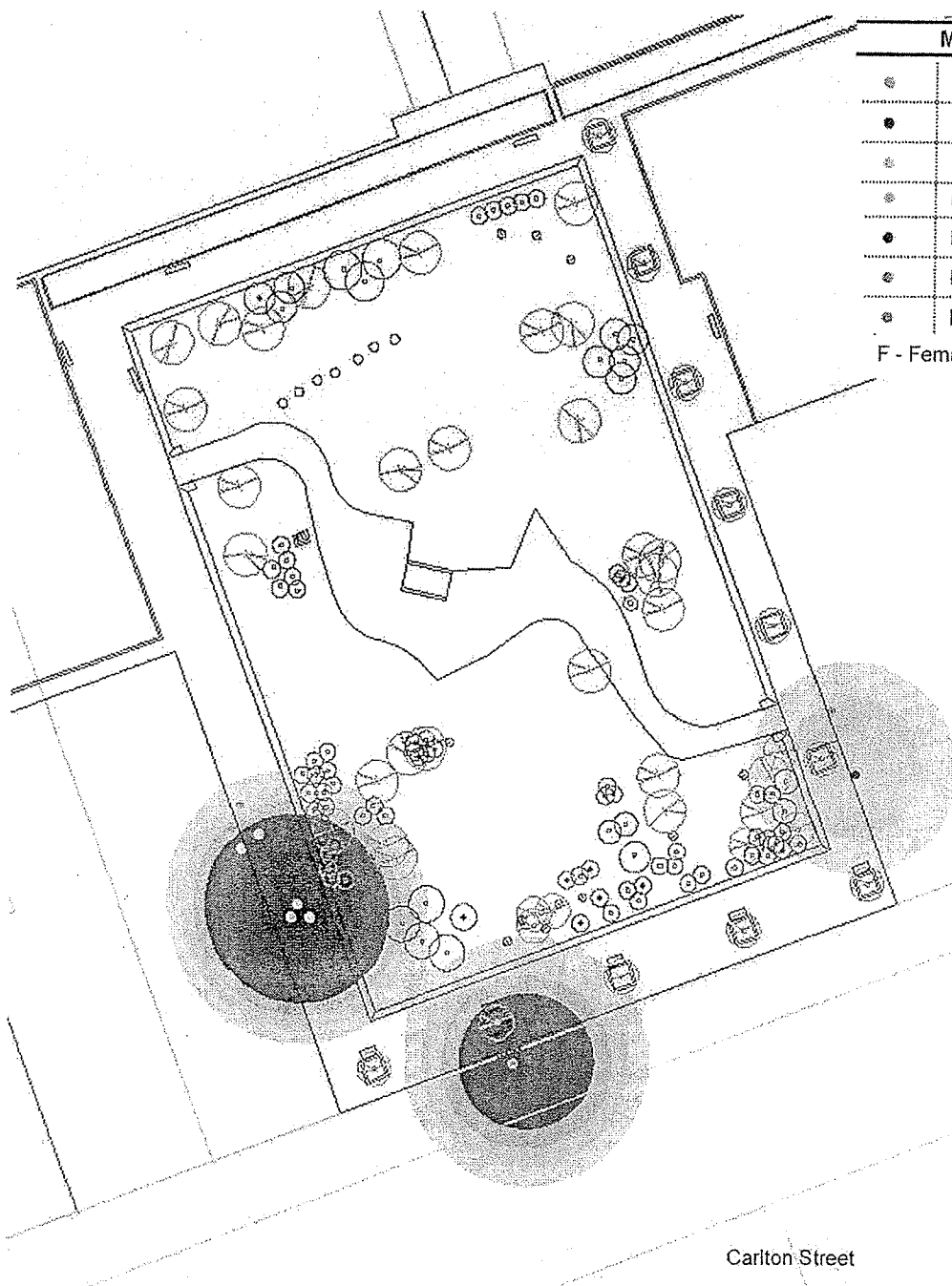
Fig. 2.4.12 - Density Calculation 1
Carlton Square



 High
 Medium
 Low





Date: May 04, 05 Day: Wednesday Time: 12:45pm Session: Lunch
 Temperature: 15c Wind: SSW 6km/hr Sunny
 Count M - 17 F - 20 Total - 37

Fig. 2.4.13 - Density Calculation 2
Carlton Square



M/F: Activity	No
● F: St/Smoke/Chat	4
● F: Stand/Chat/Eat	1
● F: Stand/Smoke	1
● M: St/Smoke/Chat	3
● M: Stand/Chat/Eat	2
● M: Stand/Eat	2
● M_vendor	1

F - Female M - Male St - Stand


 High
 Medium
 Low

Date: May 05, 05 Day: Thursday Time: 11:30am Session: Lunch
 Temperature: 12c Wind: NNE 9km/hr Cloudy
 Count M - 8 F - 6 Total - 14

**Fig. 2.4.14 - Density Calculation 3
Carlton Square**

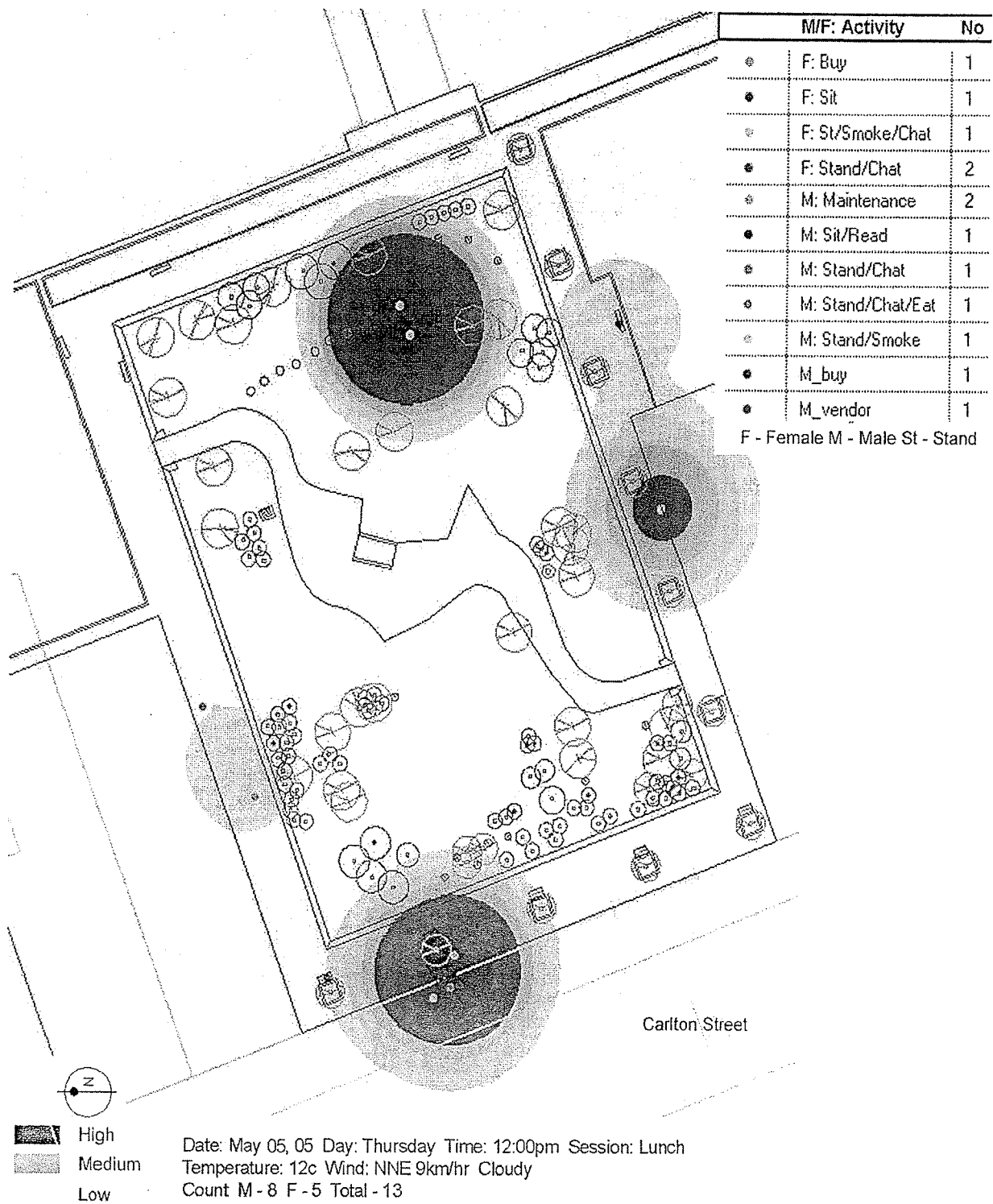


Fig. 2.4.15 - Density Calculation 4
Carlton Square

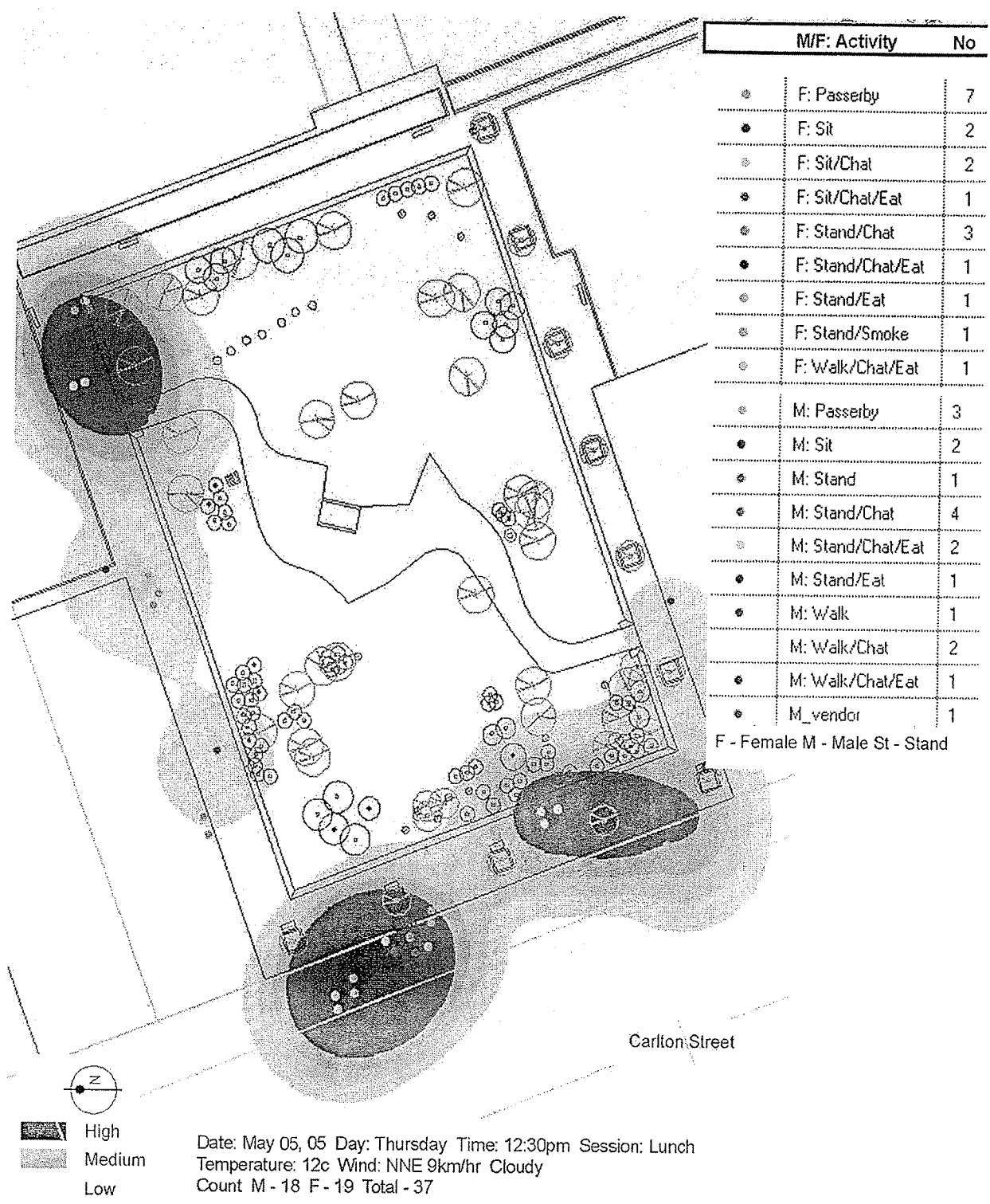
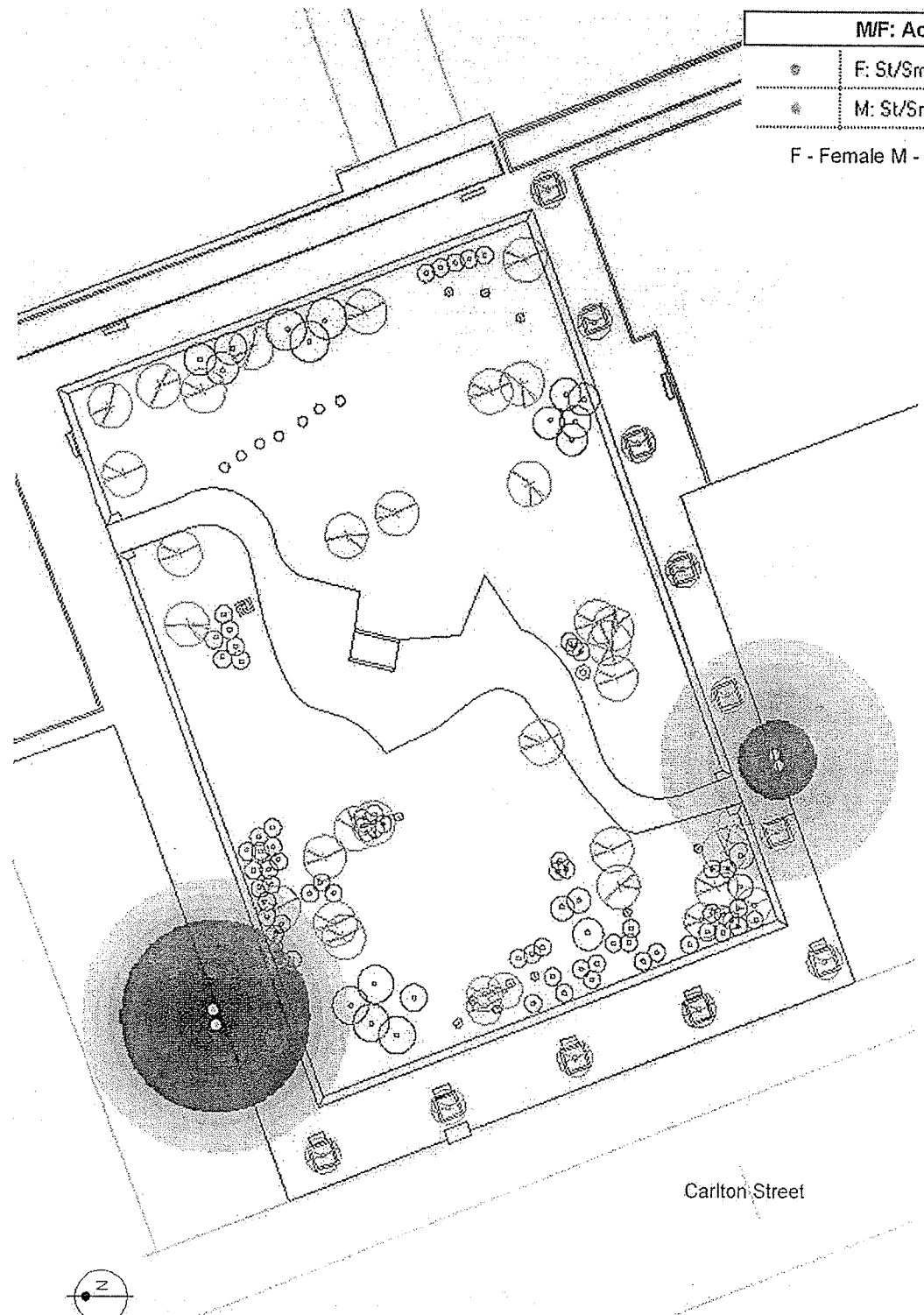






Fig. 2.4.16 - **Density Calculation 5**
Carlton Square

M/F:	Activity	No
♀	F: St/Smoke/Chat	2
♂	M: St/Smoke/Chat	2

F - Female M - Male St - Stand



Carlton Street


 High
 Medium
 Low

Date: May 12, 05 Day: Thursday Time: 10:00am Session: Morning
 Temperature: 8c Wind: 28km/hr Cloudy
 Count M - 2 F - 2 Total - 4

**Fig. 2.4.17 - Density Calculation 6
 Carlton Square**

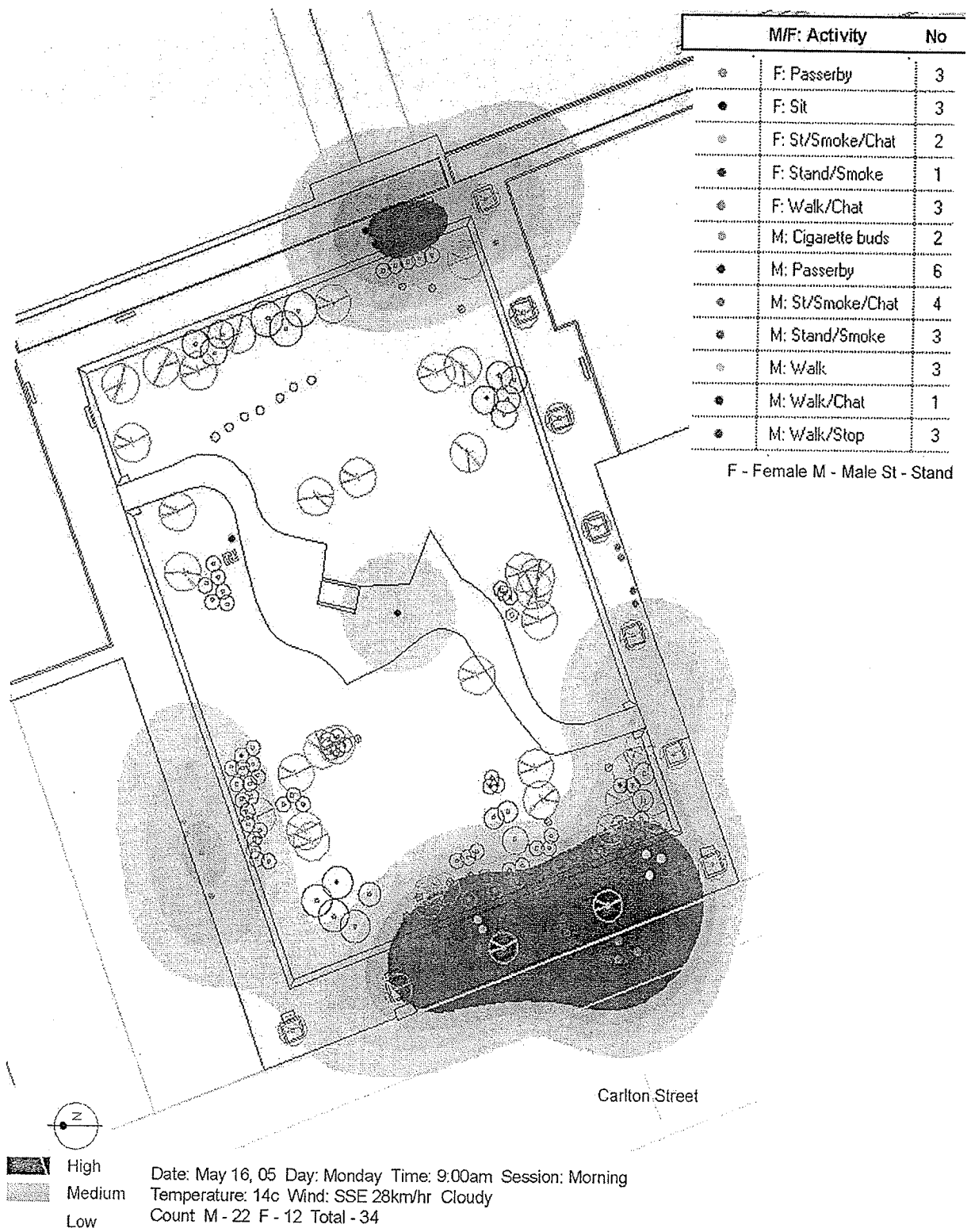
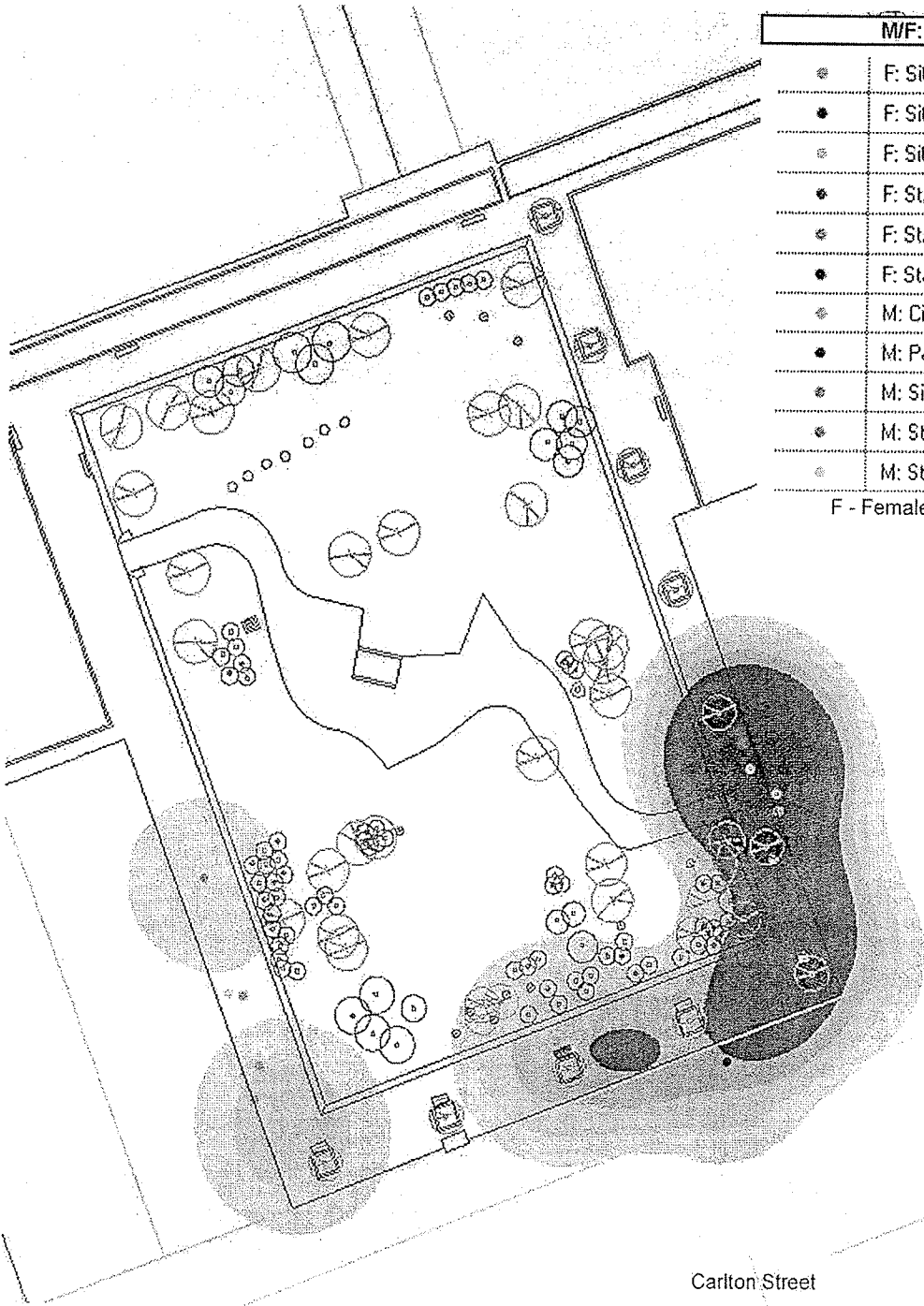


Fig. 2.4.18 - Density Calculation 7
Carlton Square



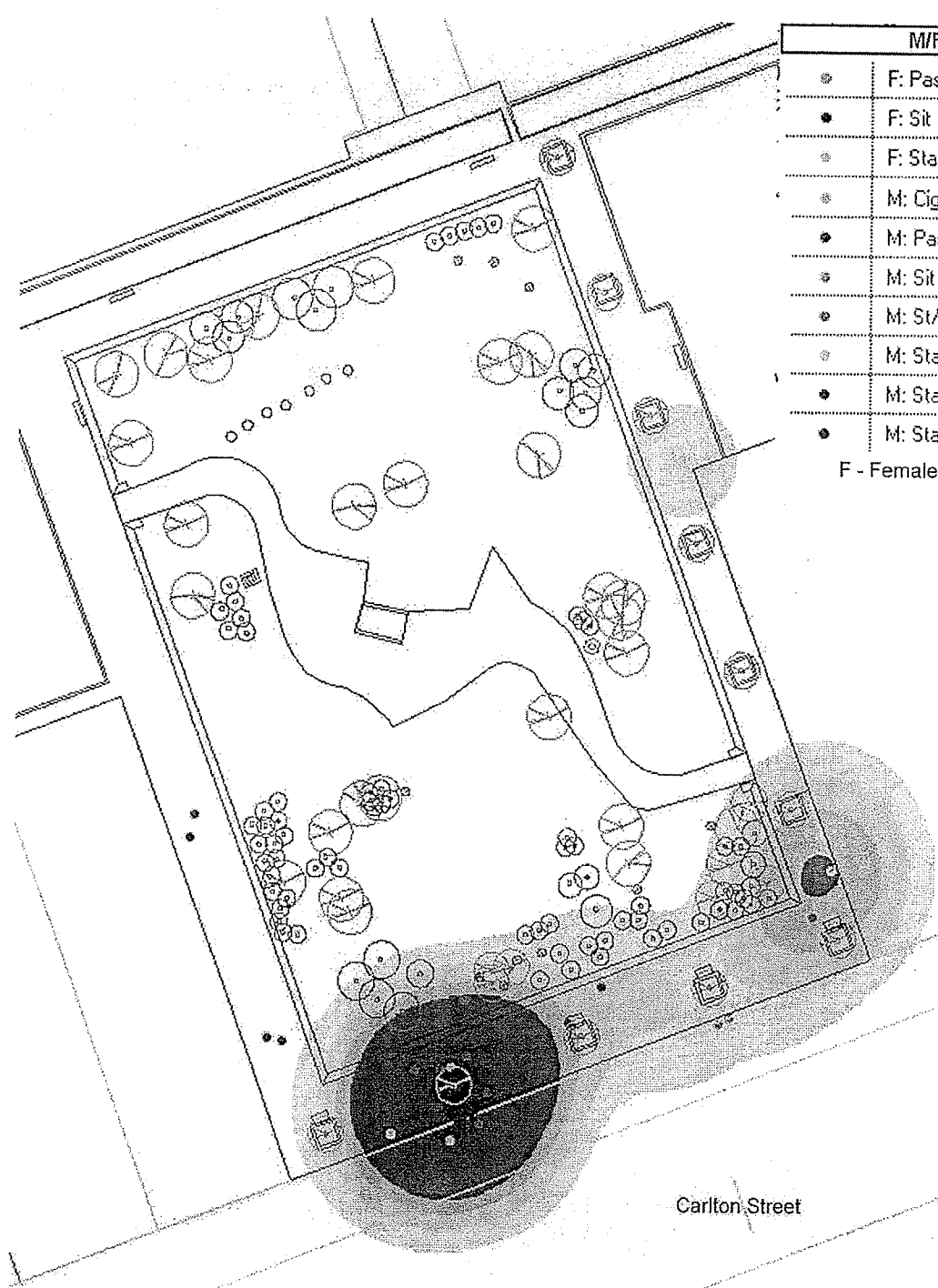
M/F: Activi	No
• F: Sit	2
• F: Sit/Chat/Eat	3
• F: Sit/Smoke	2
• F: St/Smoke/Chat	4
• F: St/Smoke/Eat	2
• F: Stand/Smoke	2
• M: Cigarette buds	1
• M: Passerby	1
• M: Sit/Chat/Eat	1
• M: St/Smoke/Chat	3
• M: Stand/Smoke	2

F - Female M - Male St - Stand

High
 Medium
 Low

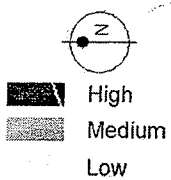
Date: May 16, 05 Day: Monday Time: 4:00pm Session: Afternoon
 Temperature: 14c Wind: SSE 28km/hr Sunny
 Count M - 8 F - 15 Total - 24

Fig. 2.4.19 - **Density Calculation 8**
Carlton Square



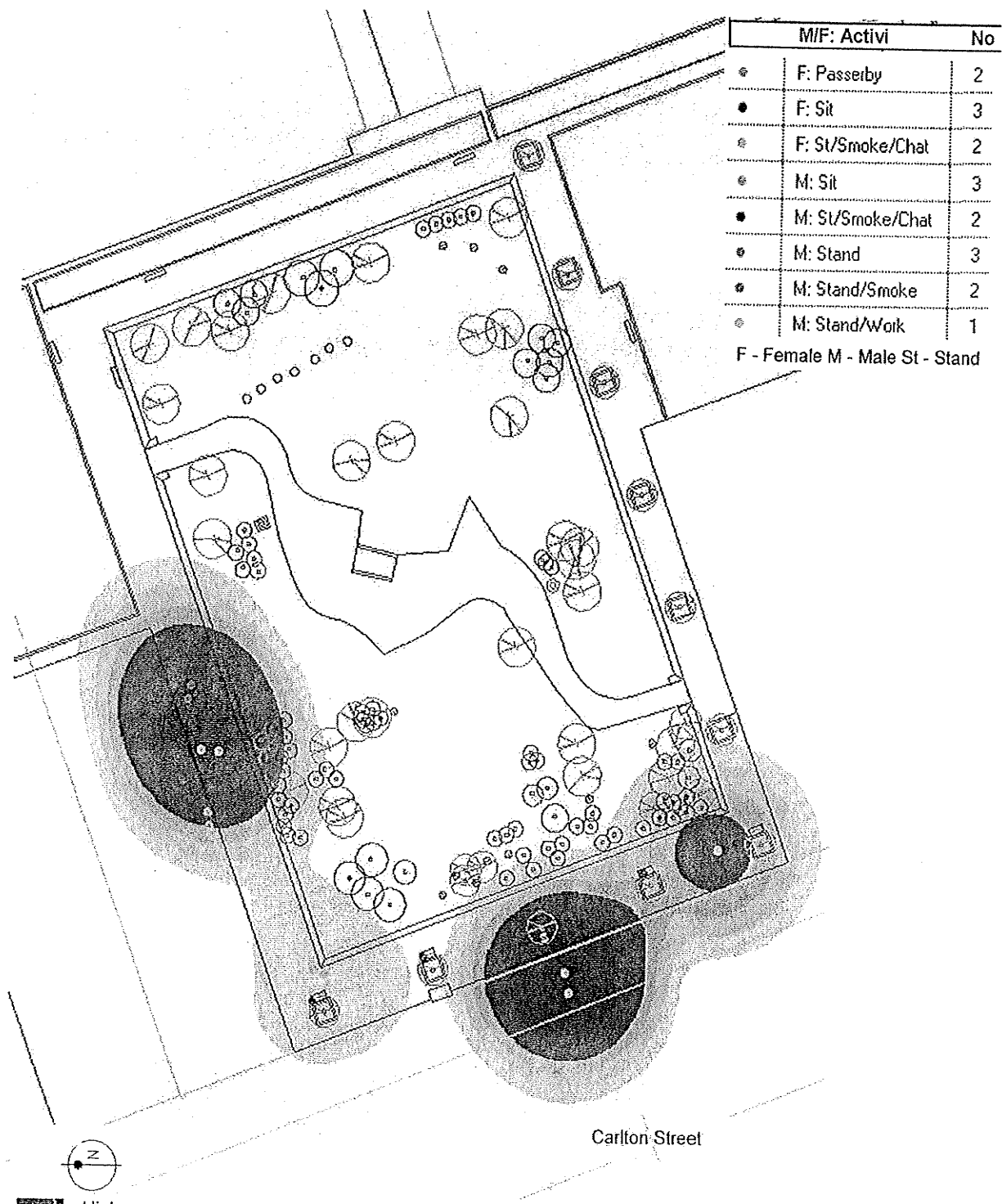
M/F: Activi		No
○	F: Passerby	1
●	F: Sit	2
○	F: Stand/Read	1
○	M: Cigarette buds	1
●	M: Passerby	5
○	M: Sit	2
○	M: St/Smoke/Chat	4
○	M: Stand	2
●	M: Stand/Smoke	1
●	M: Stand/Work	1

F - Female M - Male St - Stand



Date: May 16, 05 Day: Monday Time: 5:00pm Session: Evening
 Temperature: 14c Wind: SSE 28km/hr Cloudy
 Count M - 16 F - 4 Total - 20

Fig. 2.4.20 - Density Calculation 9
 Carlton Square



M/F: Activi	No
● F: Passerby	2
● F: Sit	3
● F: St/Smoke/Chat	2
● M: Sit	3
● M: St/Smoke/Chat	2
● M: Stand	3
● M: Stand/Smoke	2
● M: Stand/Work	1

F - Female M - Male St - Stand

High
 Medium
 Low

Date: May 16, 05 Day: Monday Time: 6:00pm Session: Evening
 Temperature: 14c Wind: SSE 28km/hr Cloudy
 Count M - 11 F - 7 Total - 18

**Fig. 2.4.21 - Density Calculation 10
Carlton Square**

M/F: Activity	No	M/F: Activity	No
F: Buy	2	M: Buy	1
F: Passerby	15	M: Cigarette buds	4
F: Sit	17	M: Maintenance	2
F: Sit/Chat	4	M: Passerby	15
F: Sit/Chat/Eat	4	M: Sit	10
F: Sit/Phone	1	M: Sit/Chat	1
F: Sit/Read	1	M: Sit/Chat/Eat	1
F: Sit/Smoke	3	M: Sit/Read	2
F: Sit/Smoke/Chat	21	M: Sit/Smoke	1
F: Stand	1	M: Sit/Smoke/Chat	25
F: Stand/Chat	6	M: Stand	7
F: Stand/Chat/Eat	2	M: Stand/Chat	8
F: Stand/Eat	5	M: Stand/Chat/Eat	5
F: Stand/Read	1	M: Stand/Eat	5
F: Stand/Smoke	6	M: Stand/Smoke	9
F: Stand/Smoke/Eat	2	M: Stand/Smoke/Eat	1
F: Walk/Chat	3	M: Stand/Work	2
F: Walk/Chat/Eat	1	M: Walk	4
		M: Walk/Chat	3
		M: Walk/Chat/Eat	1
		M: Walk/Stop	3
		M_buy	1

F - Female M - Male St - Stand

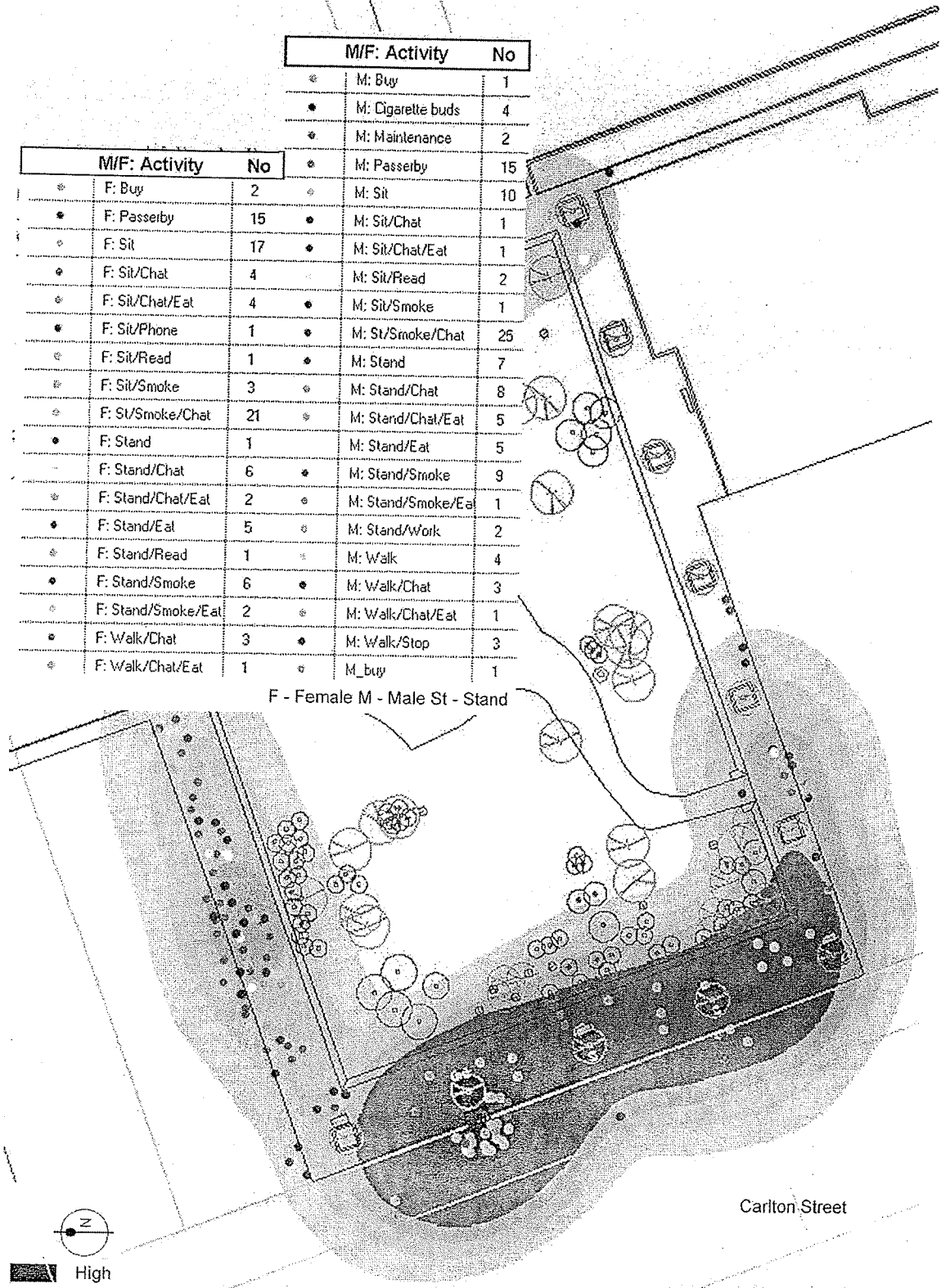


Fig. 2.4.22 - Density Calculation Carlton Square

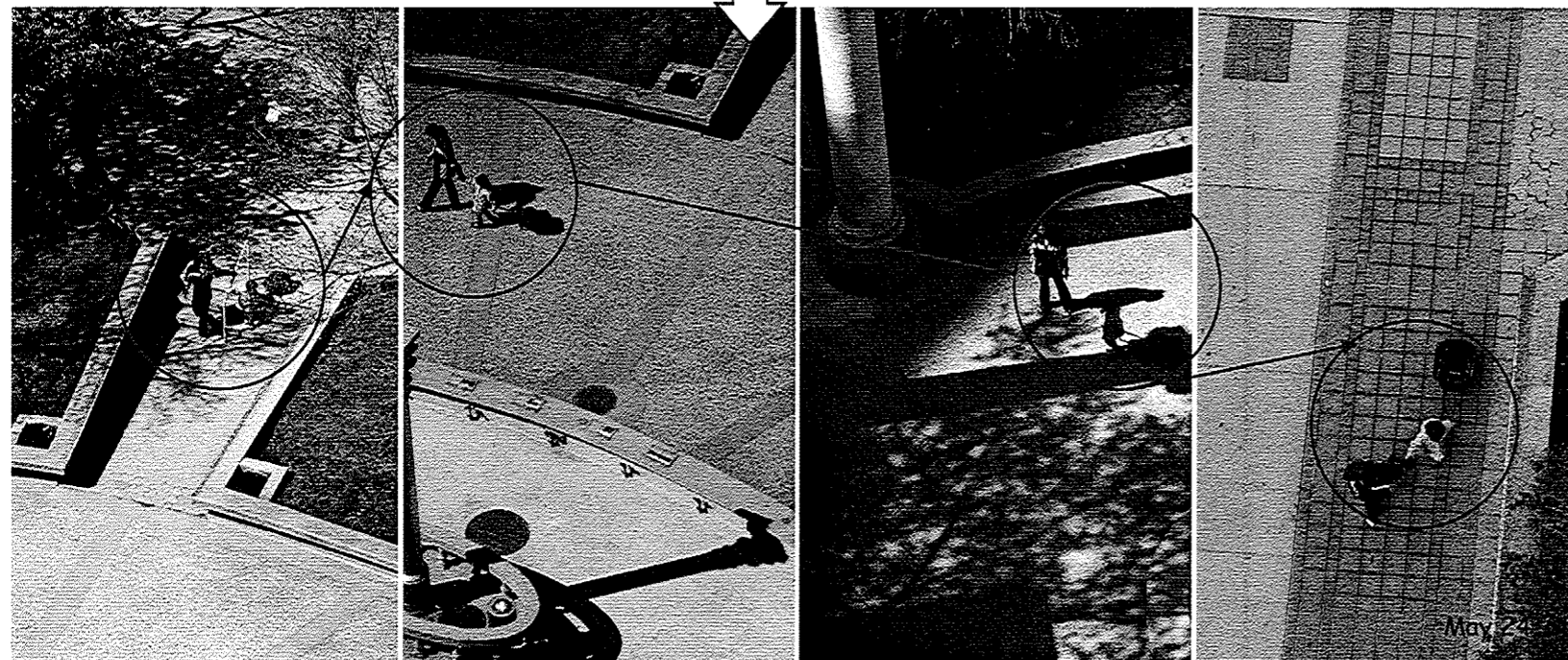
Qualitative Data Analysis

Air Canada Window Park



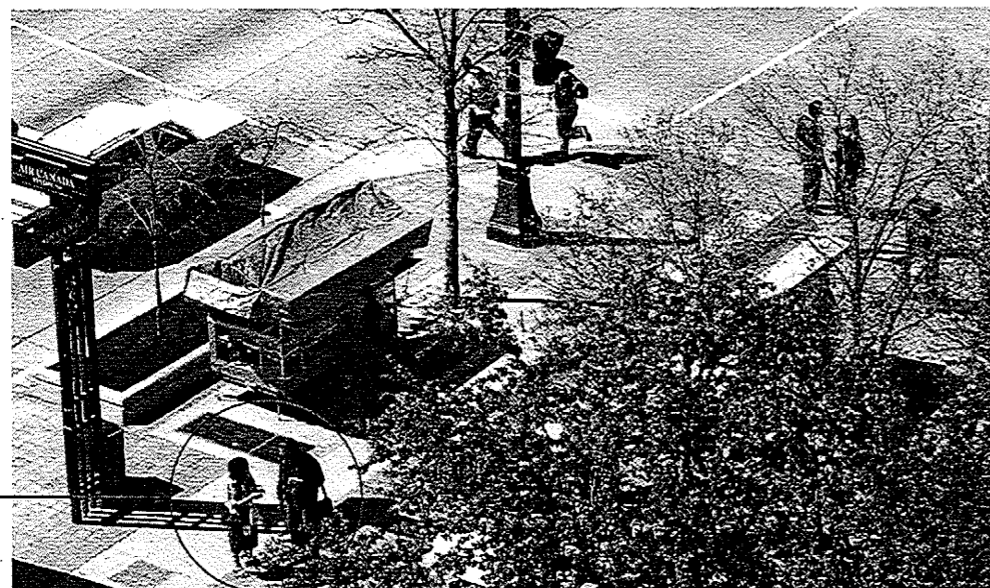
Air Canada Window Park is located on the north-east corner of Portage Avenue and Carlton Street. The park is visually accessible to the public from the streets.

Observations: Passersby cut through the park between these two streets, walking down towards the pool and have the benefit of a refreshing break from the busy streets. Similar movement patterns of cutting through were observed on different days at different times.



Conclusion: The Park offers an easy access between Portage Avenue and Carlton Street. Thus, it forms an important pedestrian link between these two streets.

Fig. 2.4.23 - **Visibility**
Air Canada Window Park






The sidewalk next to a busy street is a great place to meet friends. People stop right in the middle of the sidewalk to chat (Whyte, 1980).

Observations: Air Canada Window Park is located on a very busy street corner. The sidewalk next to park is full of activity during weekdays. Food vendors, object vendors, and street performers were seen regularly in the park.

According to Whyte (1980), a busy street corner full of activity contributes to a successful urban open space.

The plans on the right show a busy street and a busy street corner with high density of people passing by Air Canada Window Park.

-  High
-  Medium
-  Low

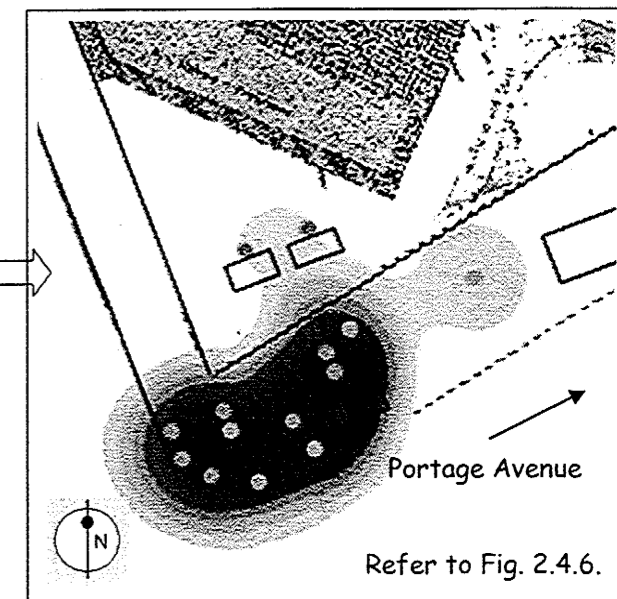
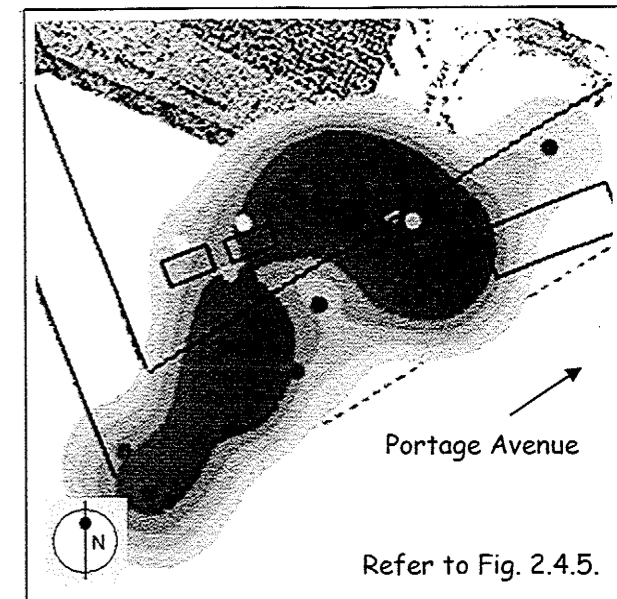


Fig. 2.4.25 - **Visibility**
Air Canada Window Park

The plans demonstrate the density of people surrounding the small trader on the side walk of Air Canada Window Park at different times of different days.

While some initiate a dialogue with the vendor.

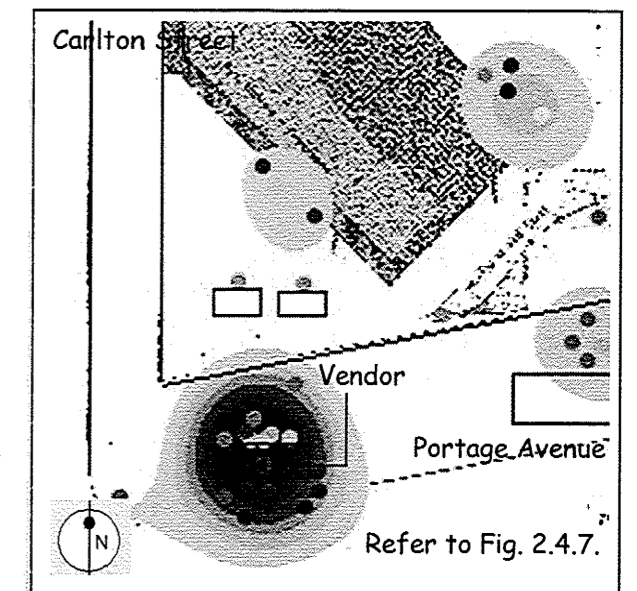
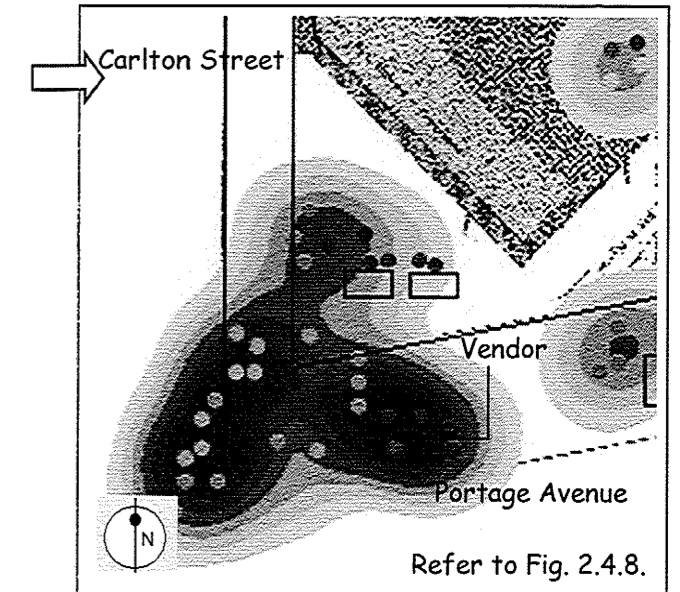


Some also make a purchase.



Conclusion: This is a two way process. The vendors earn a livelihood from street vending while adding life to the urban environment. They arouse the interest of the people walking down the street and prolong the time spent by them in an urban setting.

Observation: Some people take a stroll along the sidewalks, window shop (an expression used for an activity of looking at goods in shops without an intention of buying them), and explore the variety of items available to shop. They are the casual observers.



- High
- Medium
- Low

Fig. 2.4.26 – **Activities**
Air Canada Window Park

Observations: Teenage guys walk past the street vendor.

They turn back to approach the street vendor and spend half an hour at the vending station.

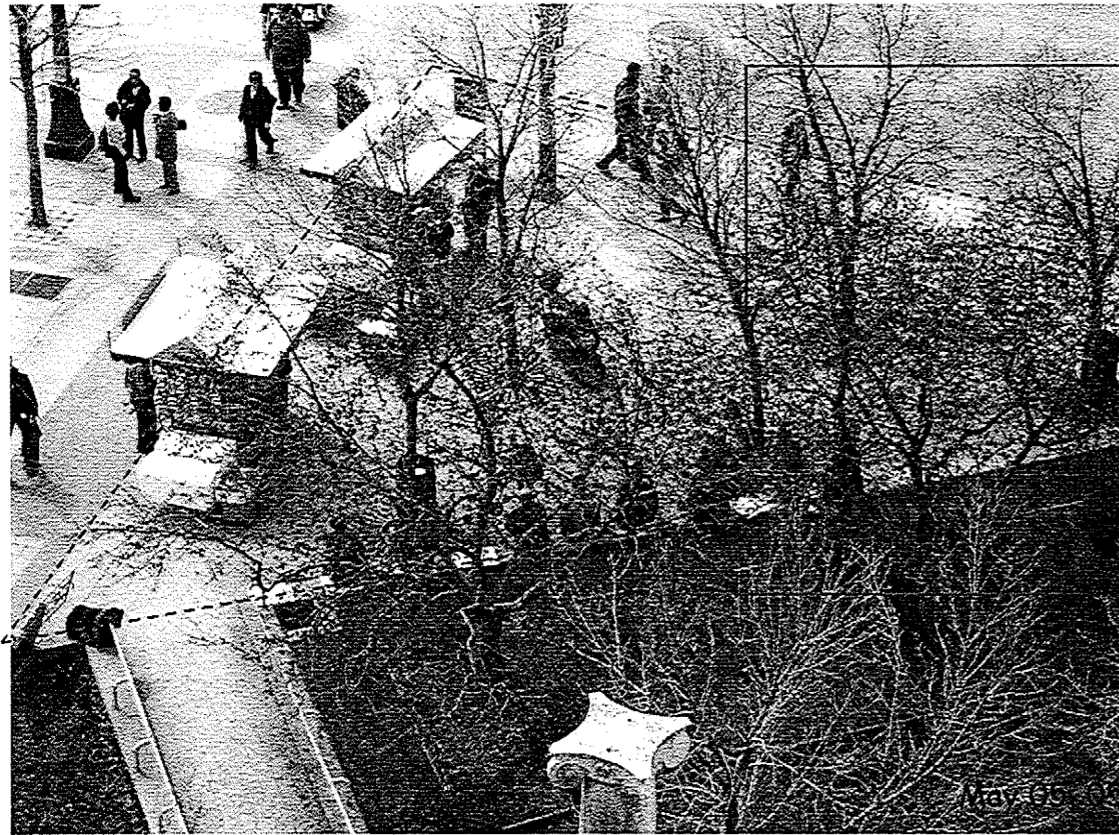


Fig. 2.4.27 - Conclusion: Street Vendors tempt the passerby to turn around, stop, taste, and explore.



Fig. 2.4.28 - Observations: Street Performers at Air Canada Window Park draw people from farther away and promote activity between the sidewalk and the park.

Activities Air Canada Window Park



Observations: The food kiosks, the peripheral ledge and the sidewalk at Air Canada Window Park form an enclosed space, triangular in shape.

This triangular space provides a safe and secure environment for the outdoor food lovers being away from the vehicular traffic.

The ledge is very busy during lunch hours. It is used by people for sitting, eating, relaxing, reading, chatting, smoking, etc.

Food Vendors provide seating mats on the peripheral ledge for people to sit and eat comfortably.

The plans to the right show the usage pattern of people along the peripheral ledge resulting from the food kiosks along the sidewalks.

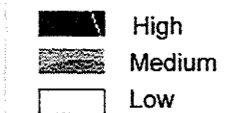
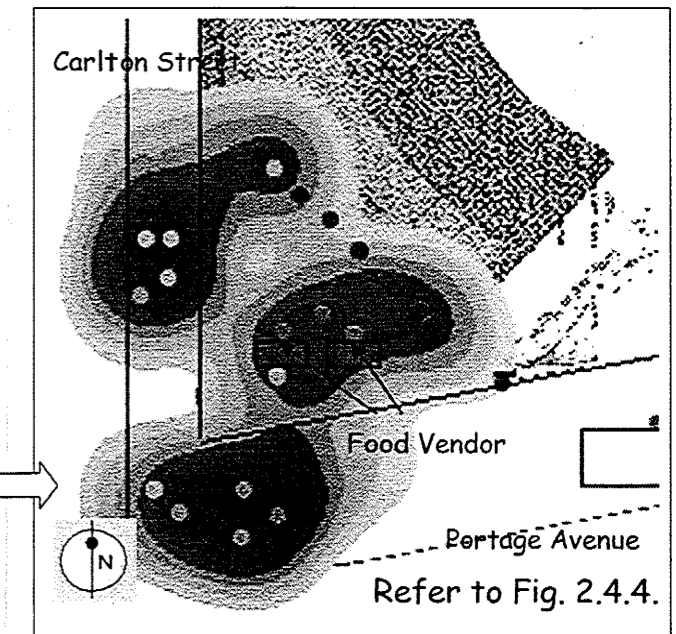
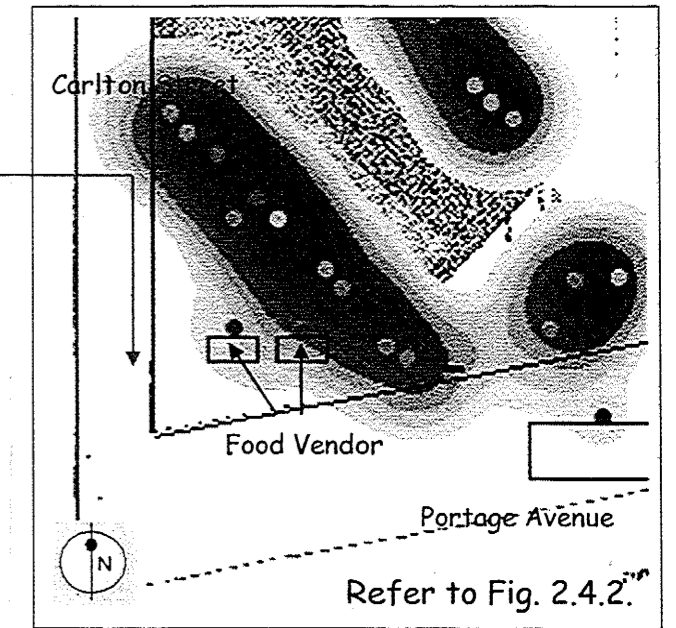
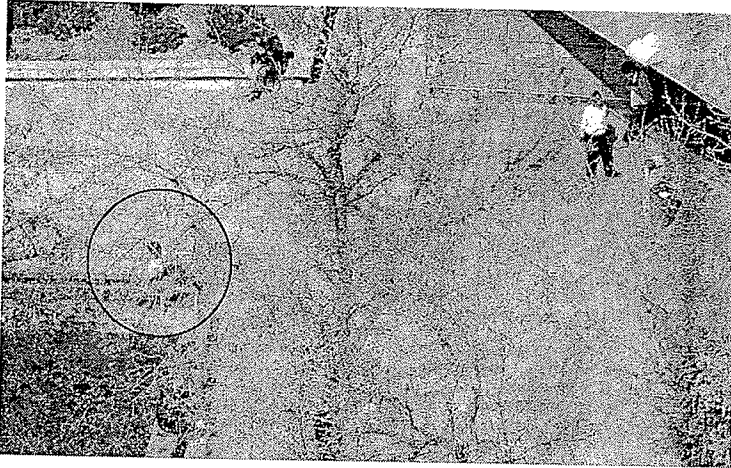
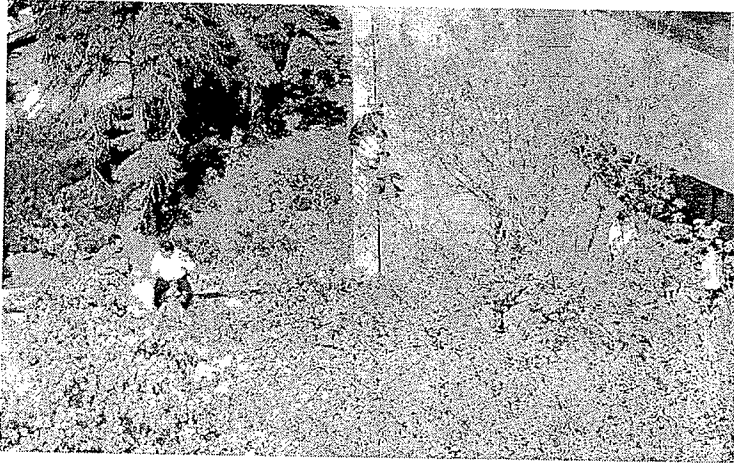


Fig. 2.4.29 - **Activities**
Air Canada Window Park

Conclusion: "Food attracts people who attract more people" whether it is New York or Winnipeg, Air Canada Window Park or Carlton Square Park in Winnipeg (Whyte, 1980, p.52). Food attracts people from different ethnicities.



Observations: Some people even sit on the handrails along the ramps.

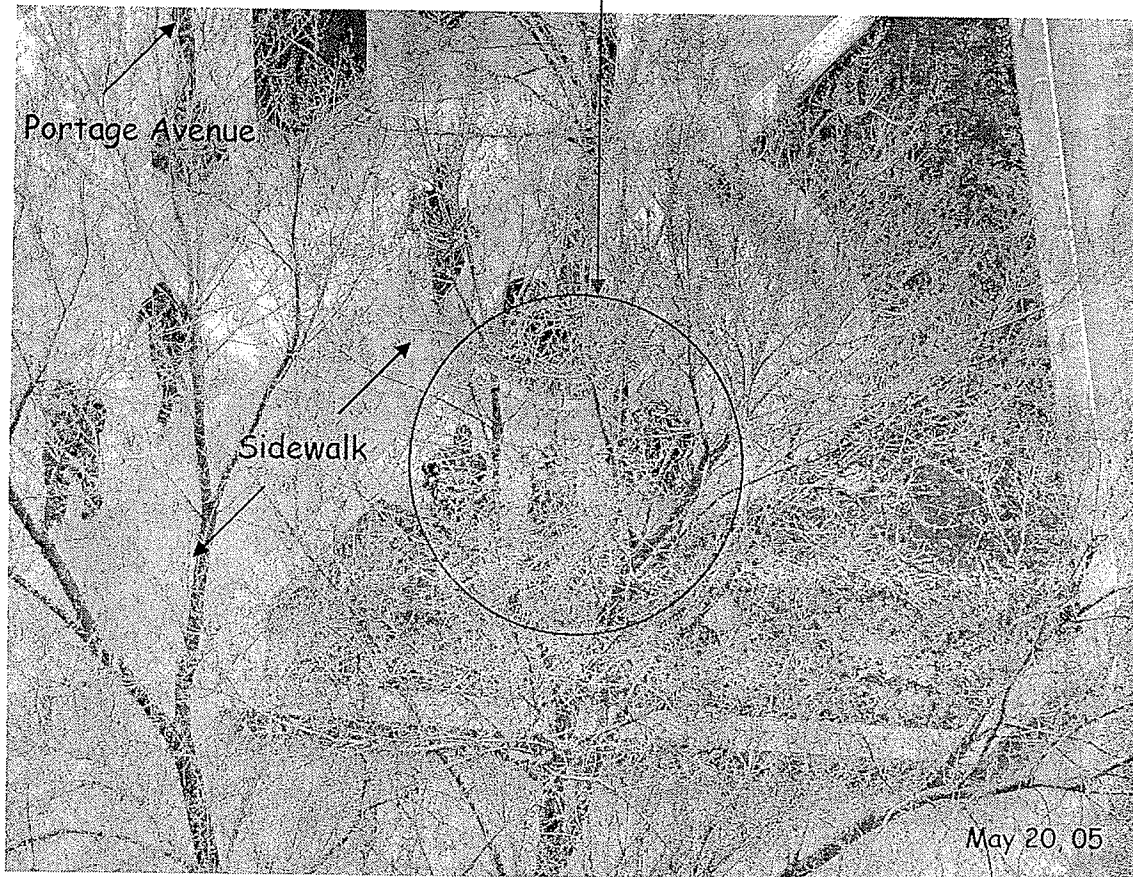


People tend to sit along all the available ledges at Air Canada Window Park.

Conclusion: Air Canada Window Park offers considerable amount of "sittable space" (Whyte, 1980, p.27).

Fig. 2.4.30 – **Sittable Space**
Air Canada Window Park

Observation: These niches are sufficiently wide to allow for use by wheelchair users. Disabled people can park their chairs in front of the ledge and be a part of the group.



Conclusion: Air Canada Window Park offers small, private, and secured niches along the sidewalk for people to sit by themselves and/or in groups. These semi-circular niches are very appropriate for seating in groups.

Fig. 2.4.31 – **Sittable Space**
Air Canada Window Park

Observation: People walking by sit on the ledge next to the sidewalk and relax for a while. Here the sidewalk shares a kind of "Togetherness" with its users (Jacobs, 1961, p. 61).

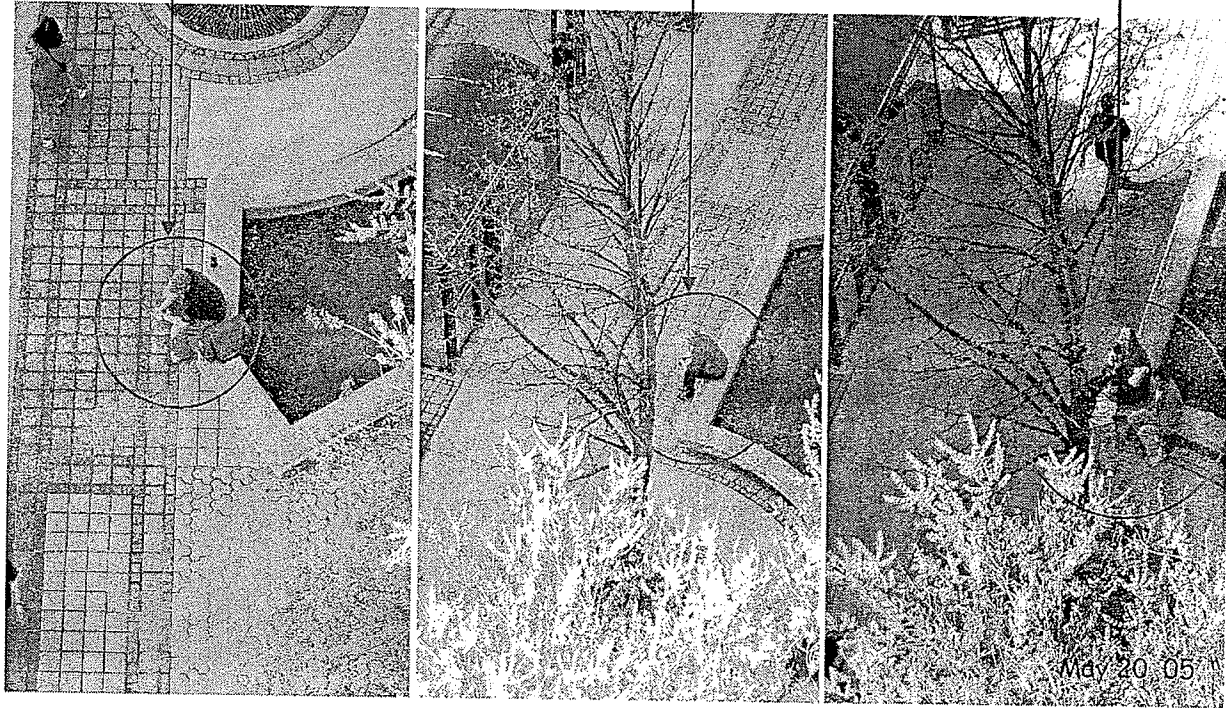
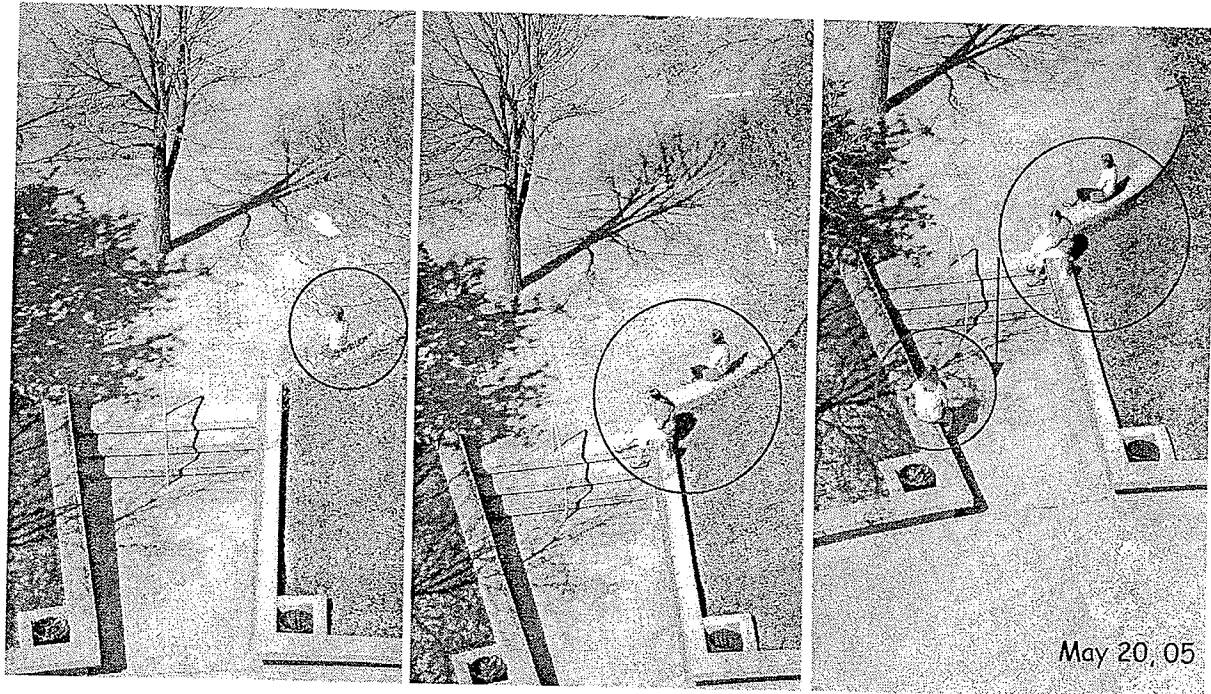


Fig. 2.4.32 – **Sittable Space**
Air Canada Window Park



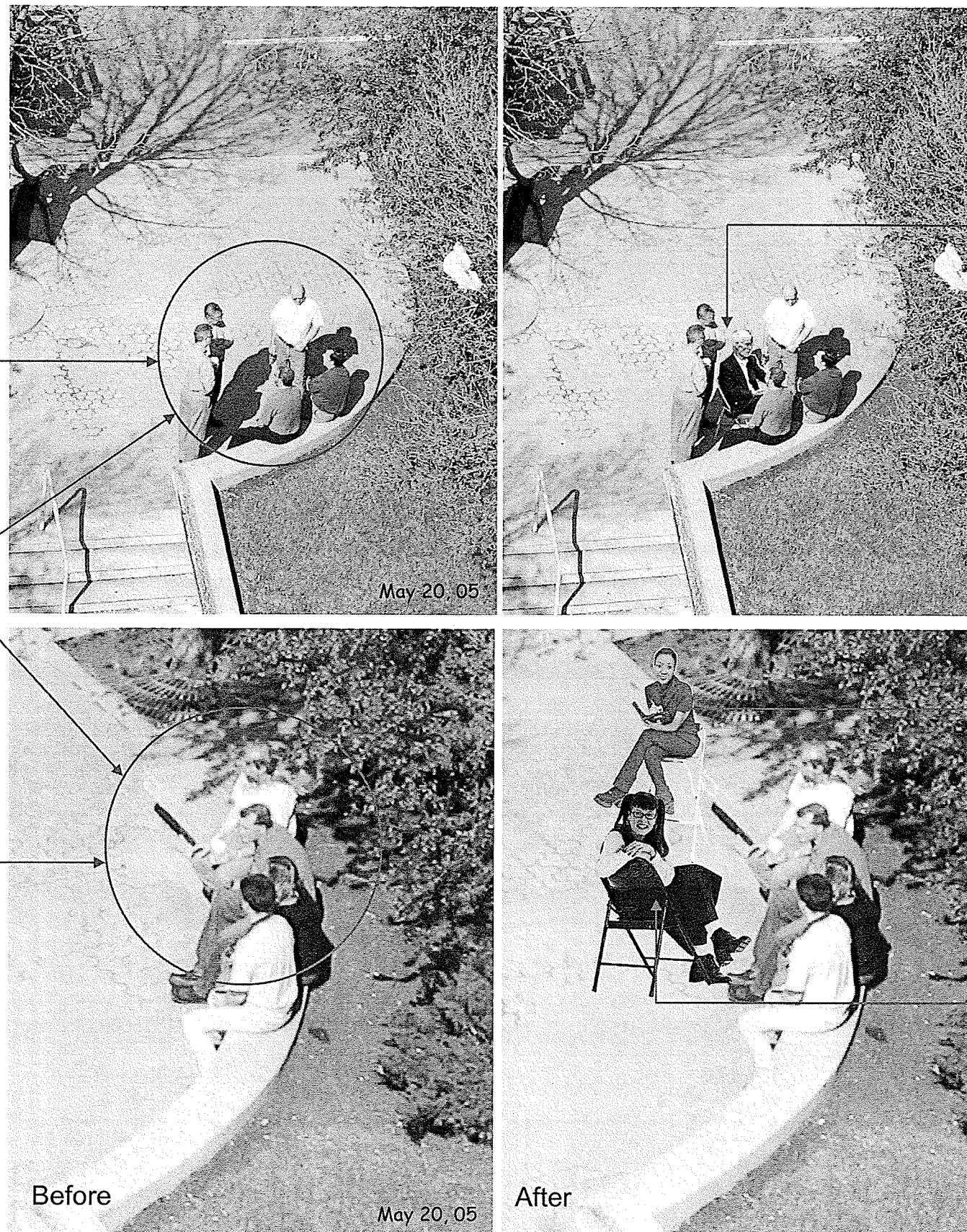
Observation: The example above illustrates what attracts people most is other people.

Fig. 2.4.33 – **Sittable Space**
Air Canada Window Park

Observations: The first group of people decided to face each other forming a circle. The people who were standing kept on shifting their legs to attain a comfortable position.

Both the groups shown in the photo to the right were chatting for a long time. Since there were no movable chairs provided at Air Canada Window Park, when in a group all people could not sit. People either sat in a line or stood to face the other.

The second group formed a line along the niche, all sitting next to each other, but not all of them were able to communicate with each other. So, eventually, this group ended up forming two smaller groups.



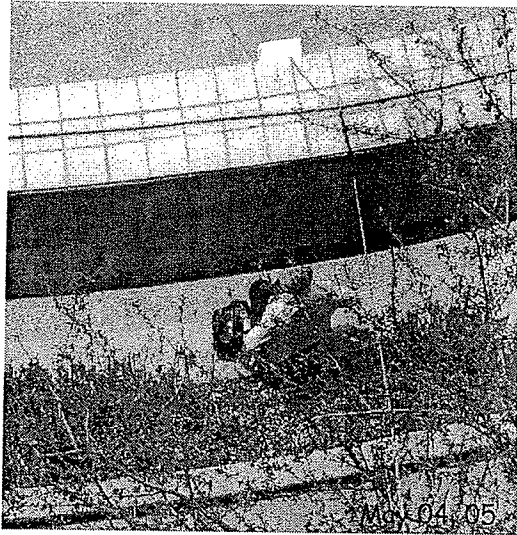
Recommendation: An introduction of a movable chair would present a choice and increase the flexibility for people to decide whether they want to sit or stand. Movable chairs are excellent for group discussions and for being alone as well.

People can easily choose to face each other without obstructing anyone's view.

A movable chair also allows the person to move away from the group. A person could place the chair a little distance away from the group and be alone.

Similarly, a person can easily move a chair and join in the conversation without any further difficulty.

Fig. 2.4.34 – **Sittable Space**
Air Canada Window Park



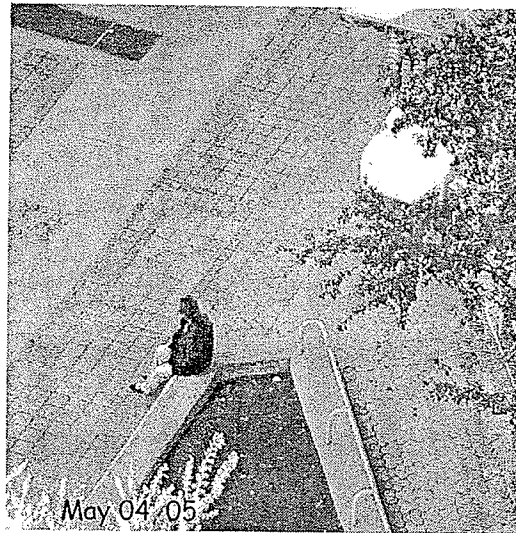
Central Ledge near the pool



Ledge of the Circular Niche



Ledge near the building



Peripheral Ledge

Observation: All the ledges at Air Canada Window Park are the same in width and height. They lack variety.

Conclusion: The Park could offer more built-in variety in regards to size (width and height), shape, and arrangements.

Fig. 2.4.35 – **Sittable Space**
Air Canada Window Park

Observation: Some people prefer to sit in the sun while some prefer the shade of the bordering shrubs.

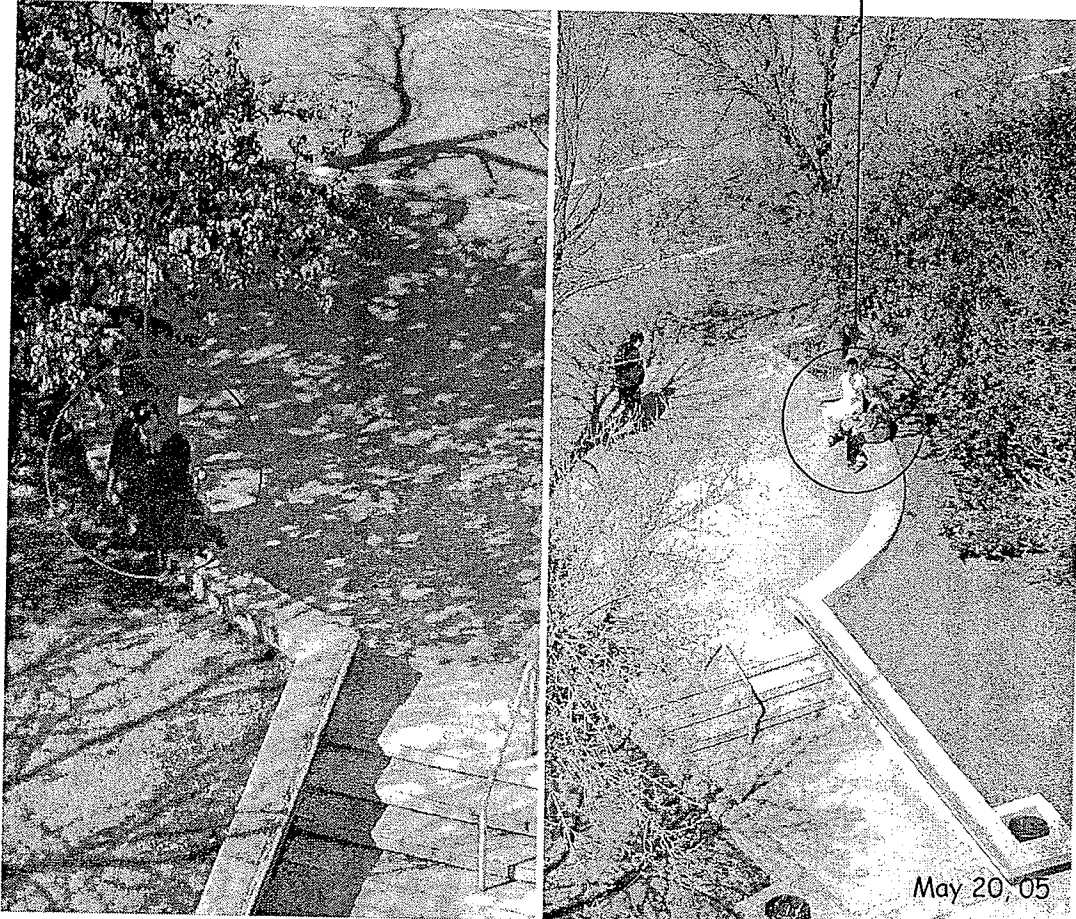


Fig. 2.4.36 – **Comfort**
Air Canada Window Park

Observation: Some people choose between variable seating heights.

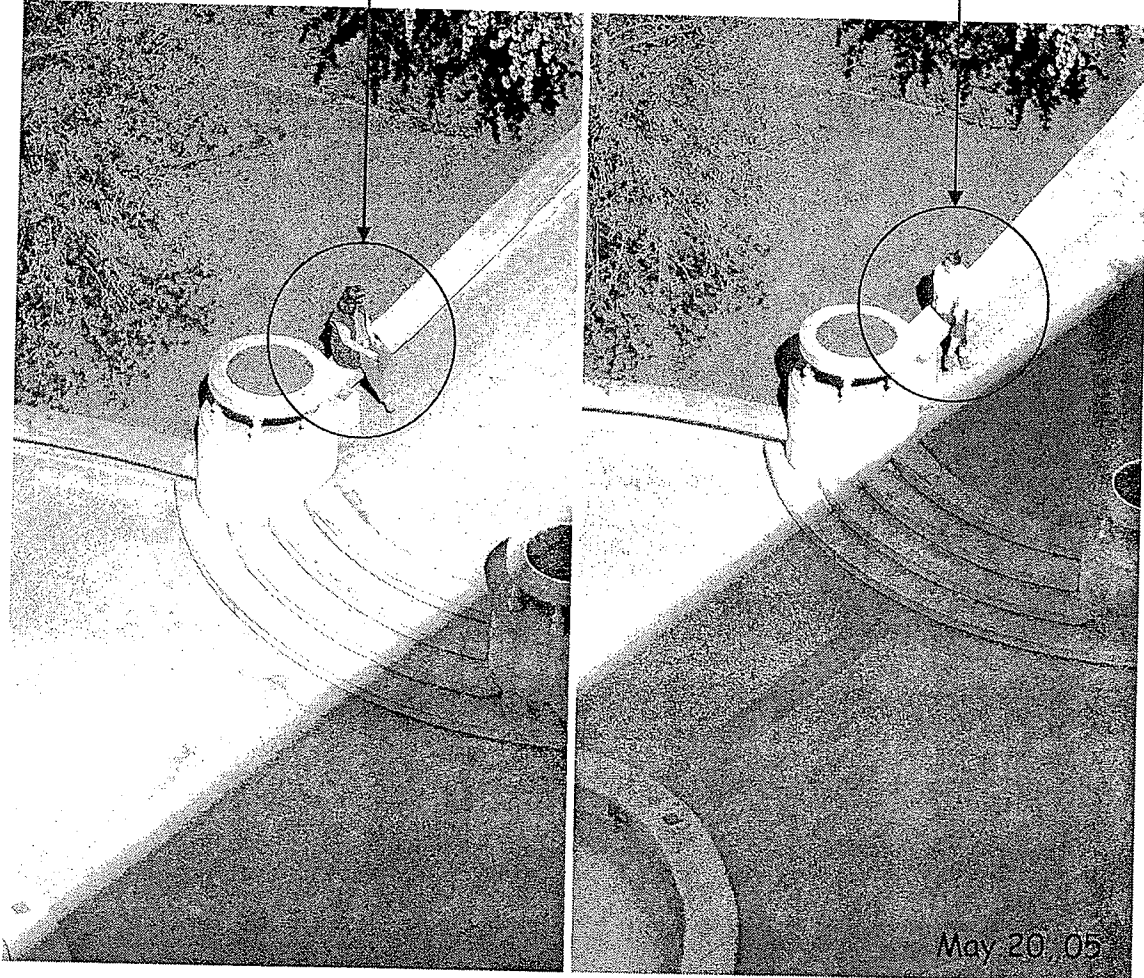


Fig. 2.4.37 – **Comfort**
Air Canada Window Park

Observation: Same spot, different sitting positions for different people: Some may prefer to sit straight while some prefer a backrest.

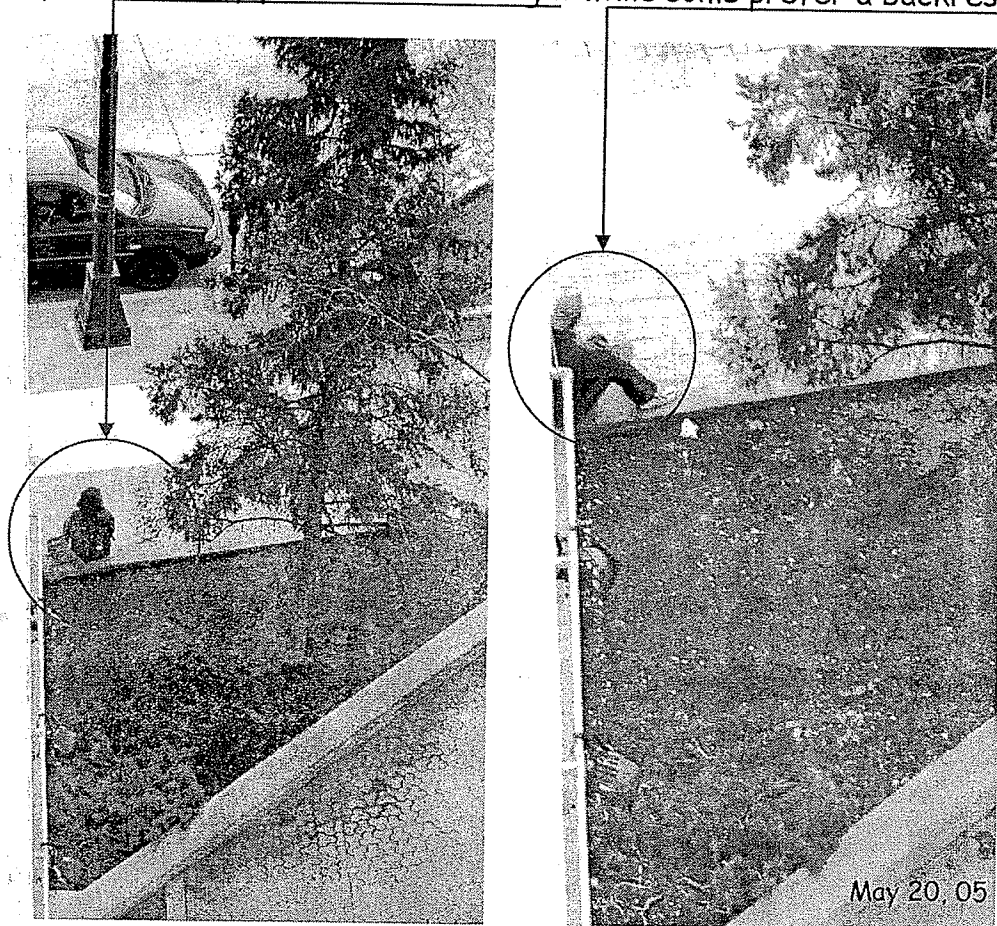
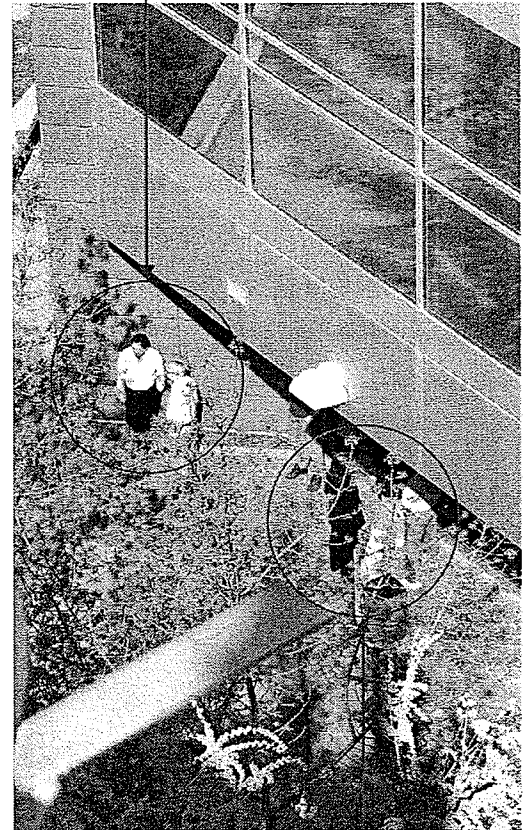


Fig. 2.4.38 – **Comfort**
Air Canada Window Park

Observations: Some people try to relax by leaning next to a wall while smoking.



Some prefer shade and coffee while smoking.

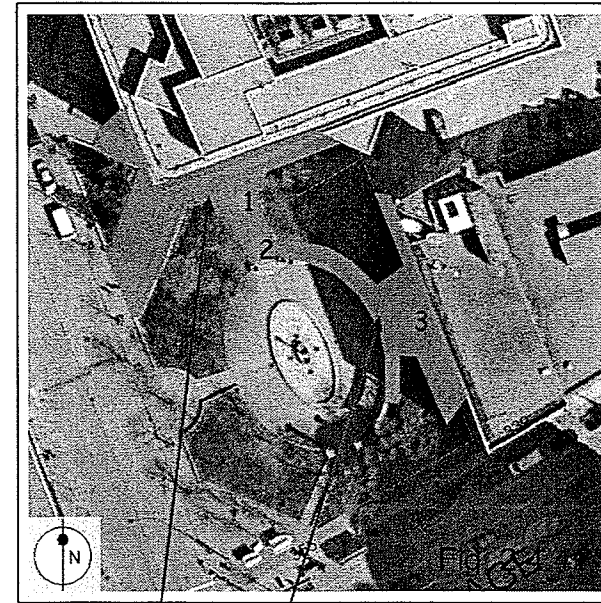


May 20, 05

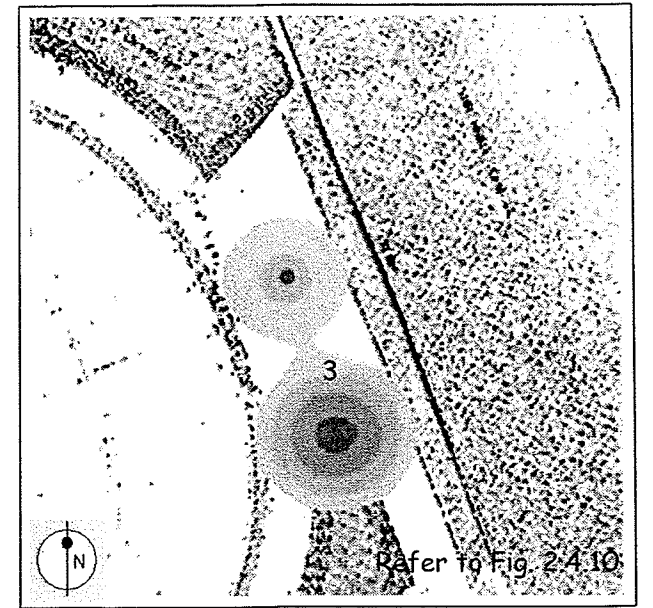
Some people enjoy the company of others while smoking.

The plans to the right illustrate the areas where smokers were usually found at Air Canada Window Park.

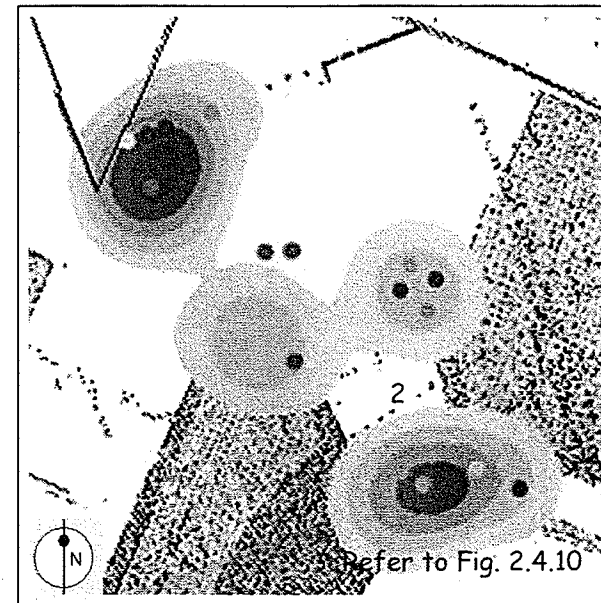
Conclusion: The smokers themselves draw an imaginary boundary within the park to form a smoking zone; thus, limiting themselves to certain areas of the park. They rarely go beyond this periphery while smoking,



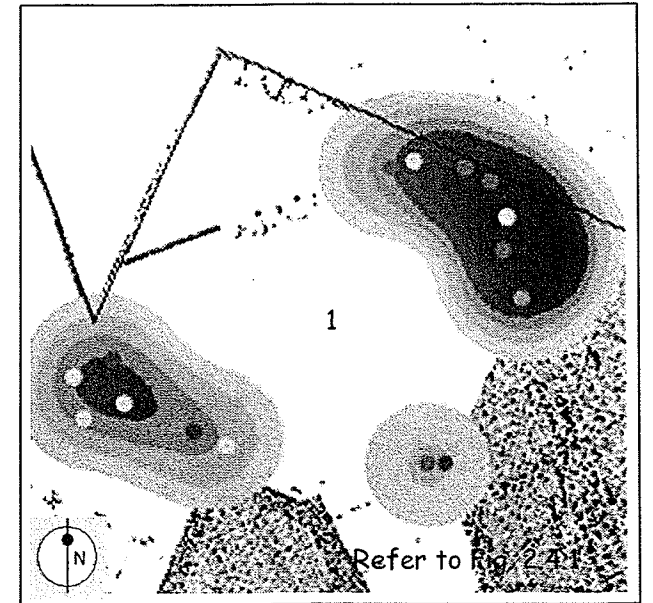
Smoking Zone at Air Canada Window Park



Refer to Fig. 2.4.10



Refer to Fig. 2.4.10



Refer to Fig. 2.4.10

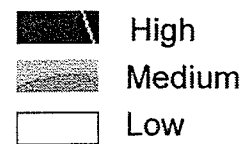
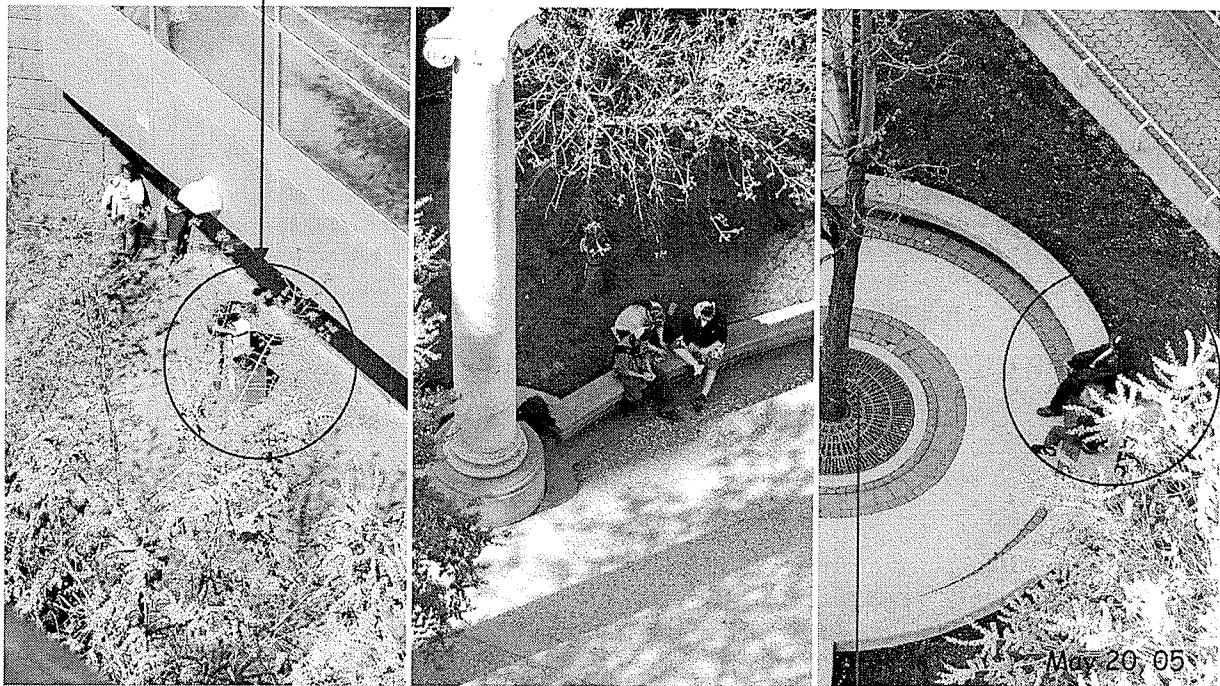


Fig. 2.4.39 – Users and Space
Air Canada Window Park

Observations: Outdoor smoking has encouraged panhandlers to come to the park, looking for cigarette butts.



Air Canada Window Park provides a place for people to rest.

Conclusion: Poor deprived people, poor urban youth, jobless people, outlaws, vagrants, drunks, etc., are no longer undesirable at Air Canada Window Park; instead, they along with the office workers are the regular users of this park.

Fig. 2.4.40 – **Users and Space**
Air Canada Window Park

These edges are wide enough for a child to walk comfortably.

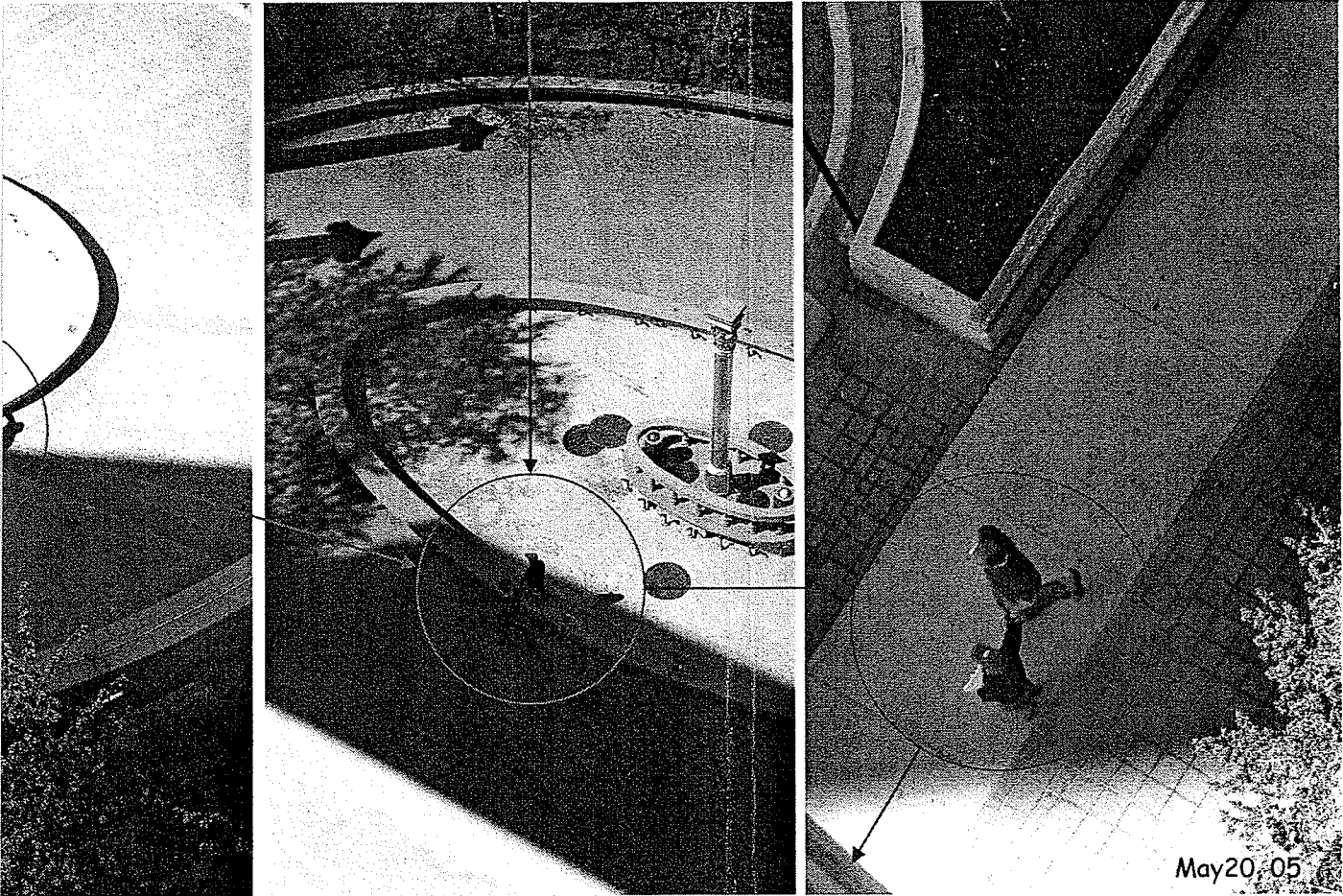
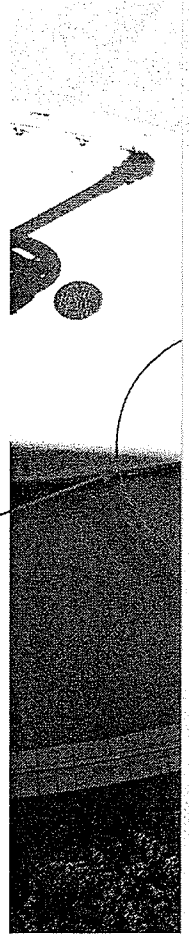
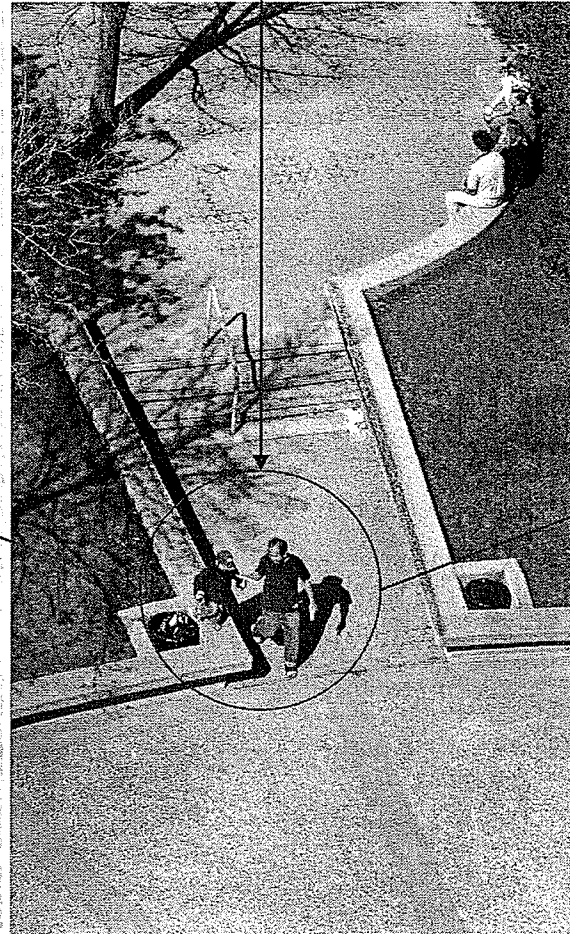
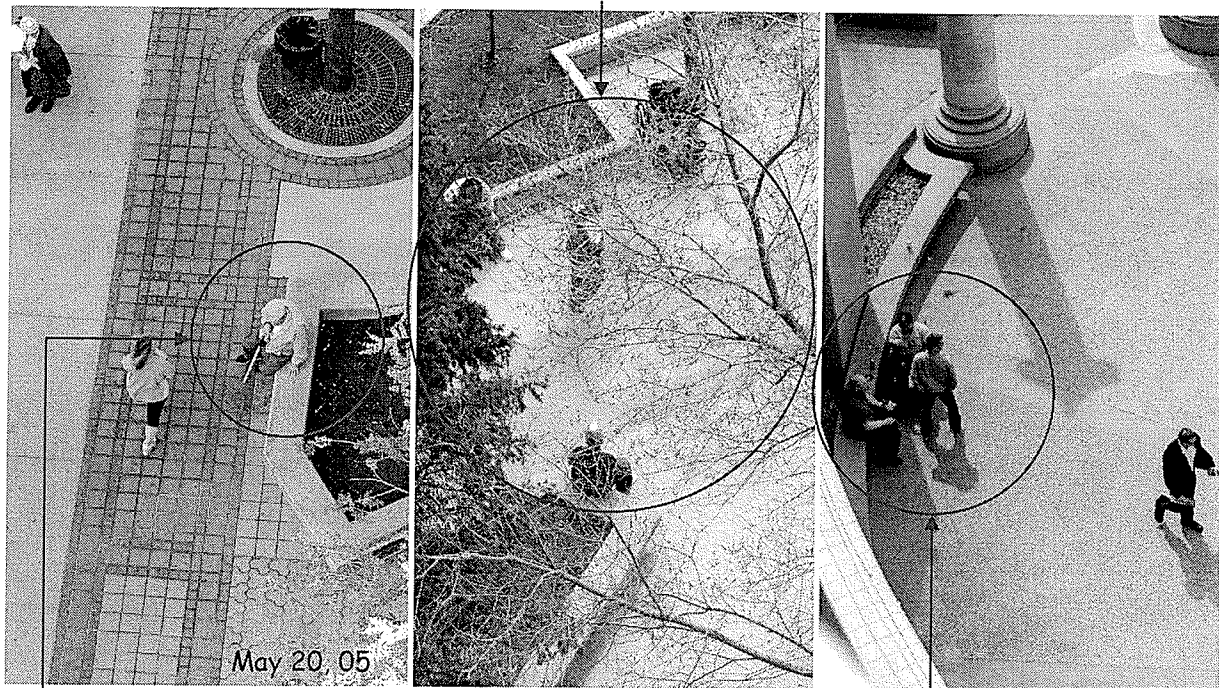


Fig. 2.4.41 – **Users and Space**
Air Canada Window Park

Observations: Most kids balance and walk along the edges at Air Canada Window Park.



Planter bed along the edge of the sidewalk forms a psychological buffer between the sidewalk and the street and merges the sidewalk into Air Canada Window Park.



Observations: Elderly people sit back, relax and enjoy the scene along the sidewalk.

Disabled people can socialize and meet people. They are treated like anyone else.

Conclusion: Air Canada Window Park is universally accessible. It offers an outdoor environment for everyone. Universally accessible spaces encourage more use by elderly and disabled people.

Fig. 2.4.42 – **Accessibility**
Air Canada Window Park

Qualitative Data Analysis

Carlton Square Park

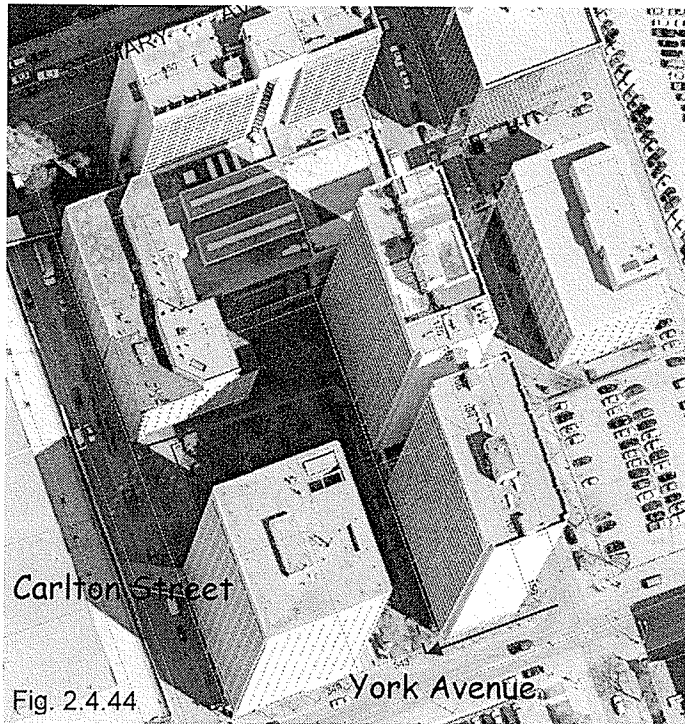


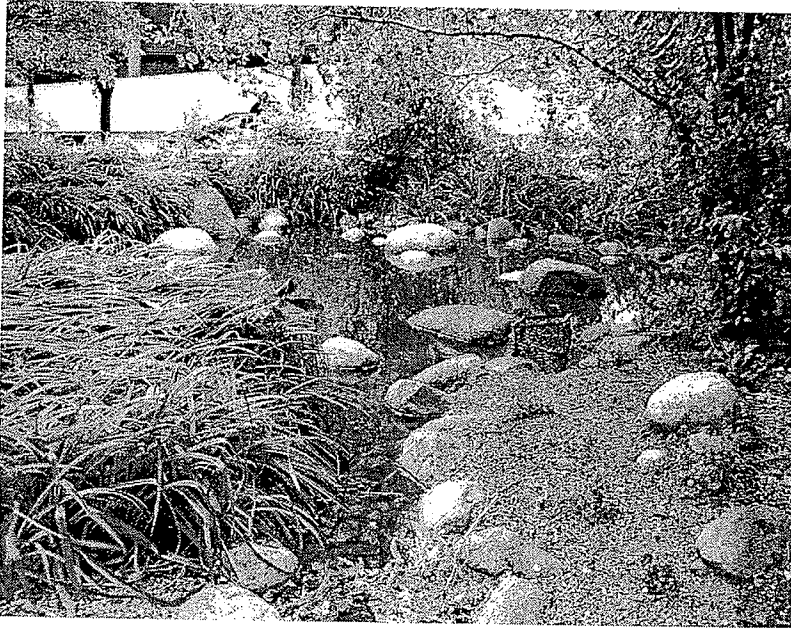
Fig. 2.4.44

Observation: Carlton Square Park is located along Carlton Street and York Avenue. It is accessible from both the streets. In other words, it connects the sidewalks along the two streets, enabling open space/pedestrian linkage. The Park is hidden underneath the building envelope surrounding it.

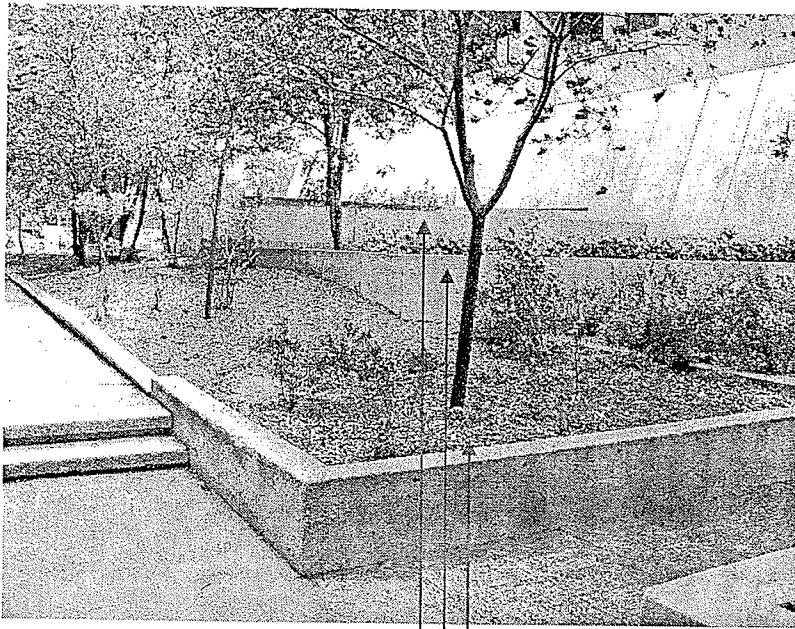


Cars parked on the street formed a buffer zone between the sidewalk and the busy street and thus, safeguard pedestrians from the vehicular traffic.

Fig. 2.4.43 – **Visibility**
Carlton Square Park

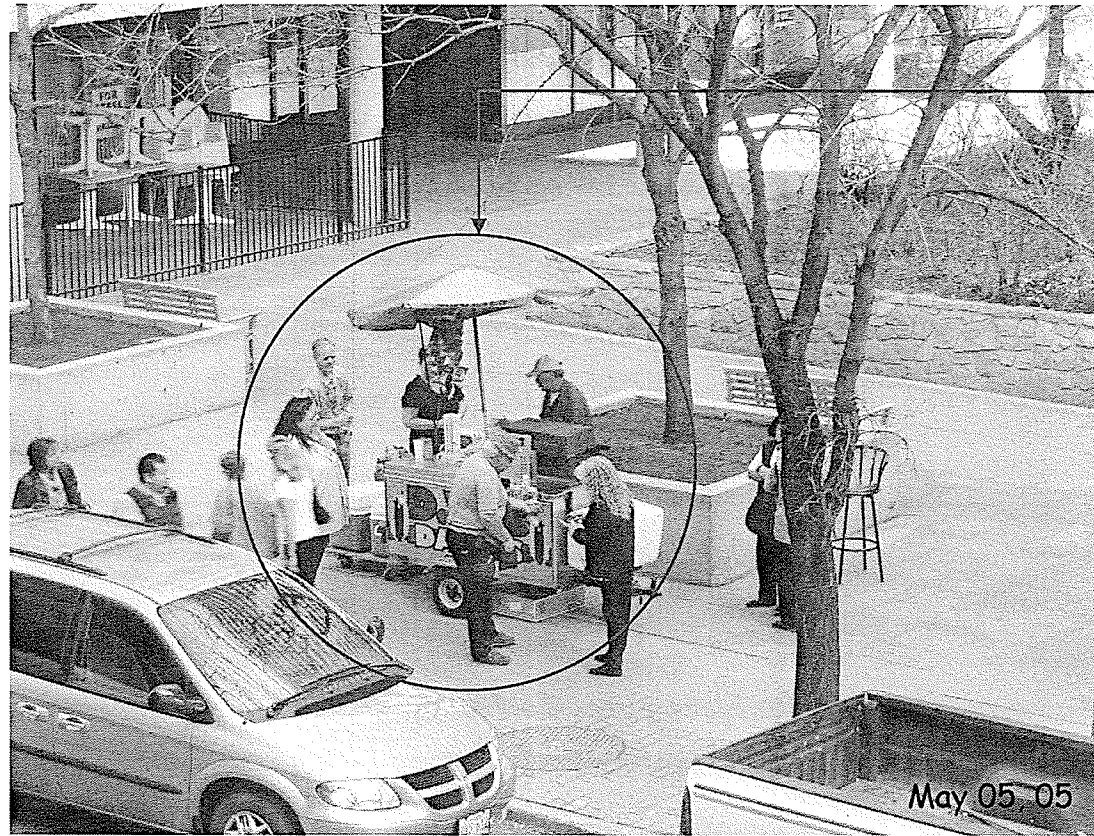


Observation: The space around the pond at Carlton Square Park was an overgrown jungle of dead shrubs and ground cover and it was very muddy. The pond was not maintained properly resulting in very unclean water, which was also not accessible to its users. The pond was not seen by pedestrians on the sidewalk.



The terraces above the entrance to the basement parking were covered with trees, shrubs, and ground cover plants. These were not available for physical use.

Fig. 2.4.45 – **Visibility**
Carlton Square Park



Observations: The food vendor at Carlton Square was located along the sidewalk next to Carlton Street. There was no secure space near the kiosk for people to sit comfortably and eat. They had to either stand while eating or take the food inside.

The pedestrian movement along Carlton Street is less compared with Portage Avenue. The only users of the Carlton Square Park are the office workers from the adjacent buildings, which in turn influenced activity in the park.



There were no object vendors or street performers observed at the park during the entire study period. There was only one food vendor present to take care of the limited number of users.

The maps illustrate the density of people surrounding the food vendor along the sidewalk next to Carlton Street.

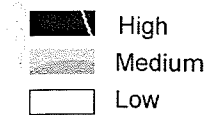
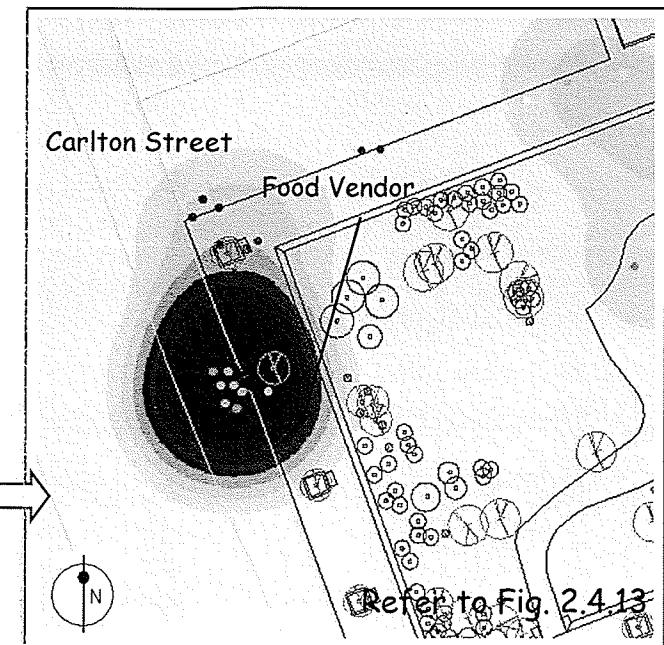
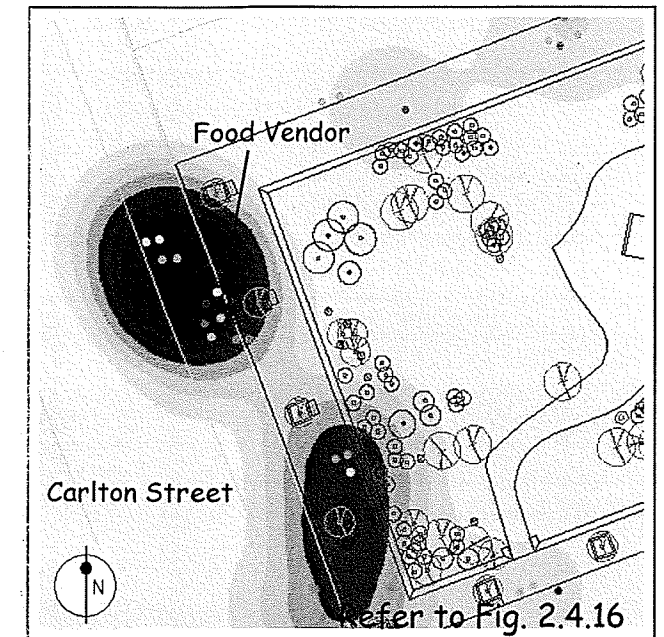
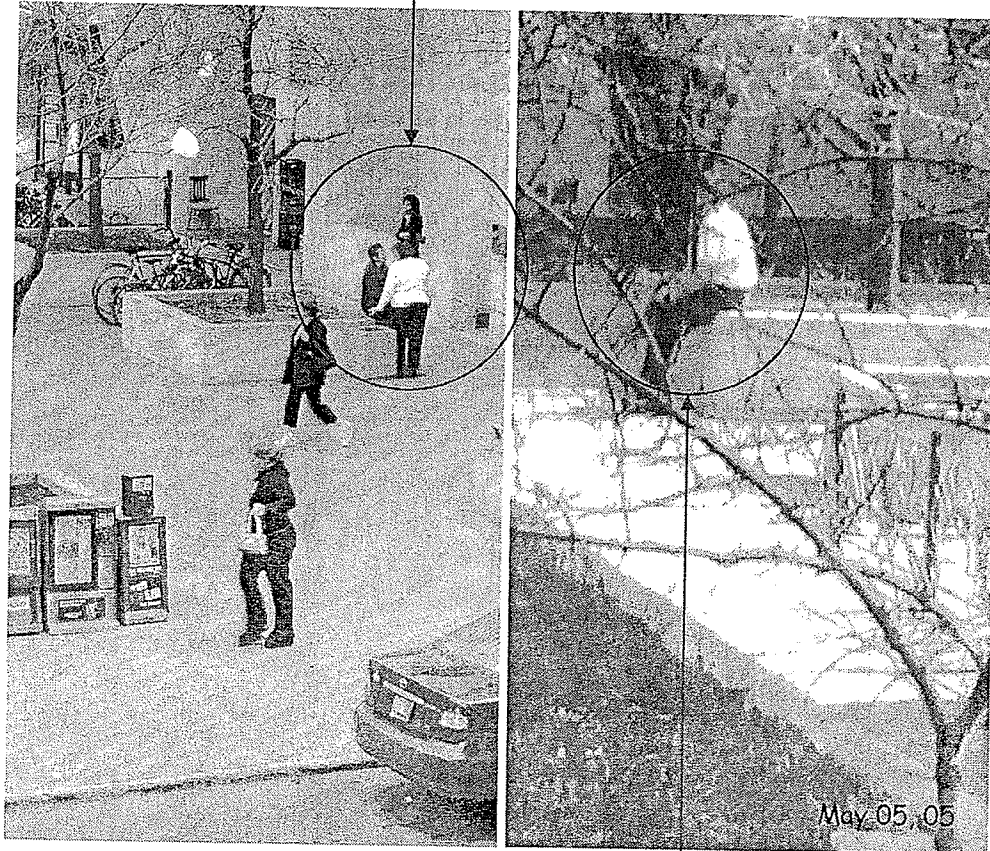


Fig. 2.4.46 - **Activities Carlton Square Park**

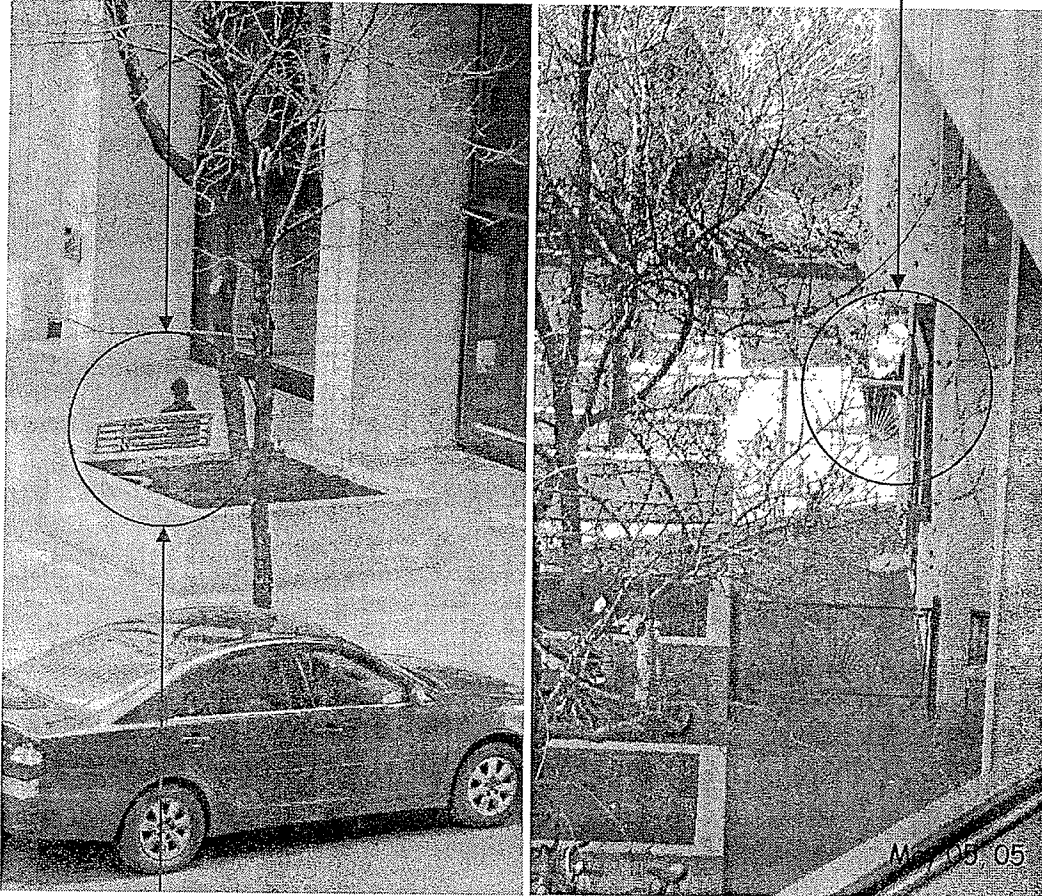
The ledges along the planter beds are very narrow reducing the amount of sittable space.



Observation: The seating at Carlton Square Park is not very comfortable. People need to adjust their positions to achieve comfort.

Fig. 2.4.47 – **Sittable Space**
Carlton Square Park

Observation: There are only a few benches provided at Carlton Square Park for people to sit on.



Some people prefer to sit near the street and close to the office entrance.

Fig. 2.4.48 – **Sittable Space**
Carlton Square Park

The wall around the Japanese Garden varies in height with the highest point on the east side at around 1.00m and lowest point on the west side at around 500mm. The 1.00m height makes it impossible for people to use the ledge for seating.

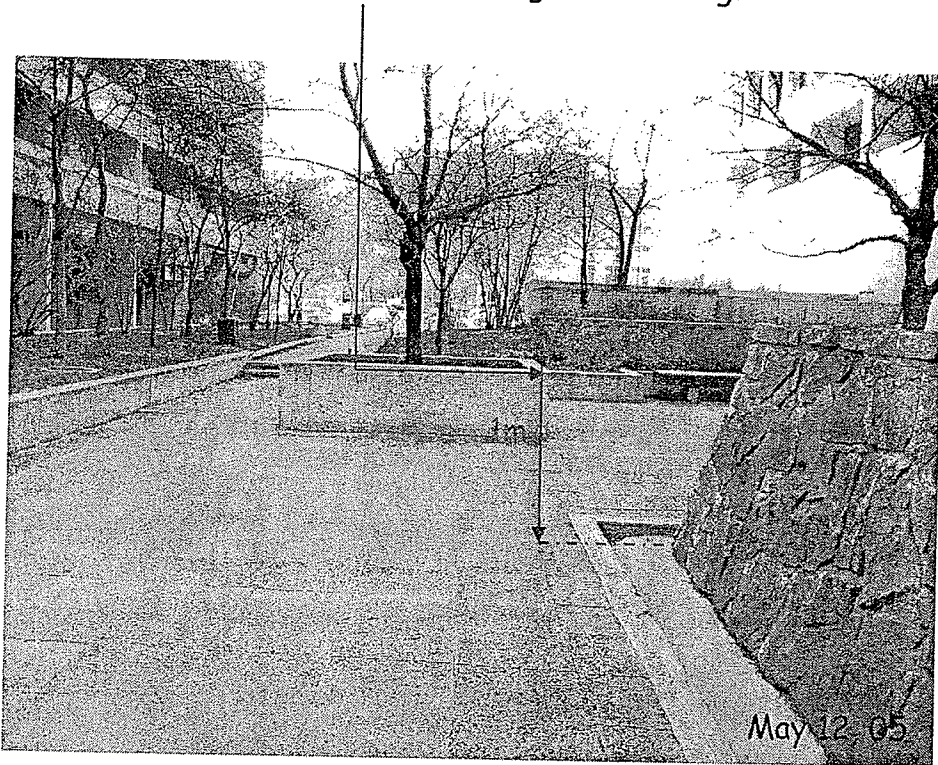
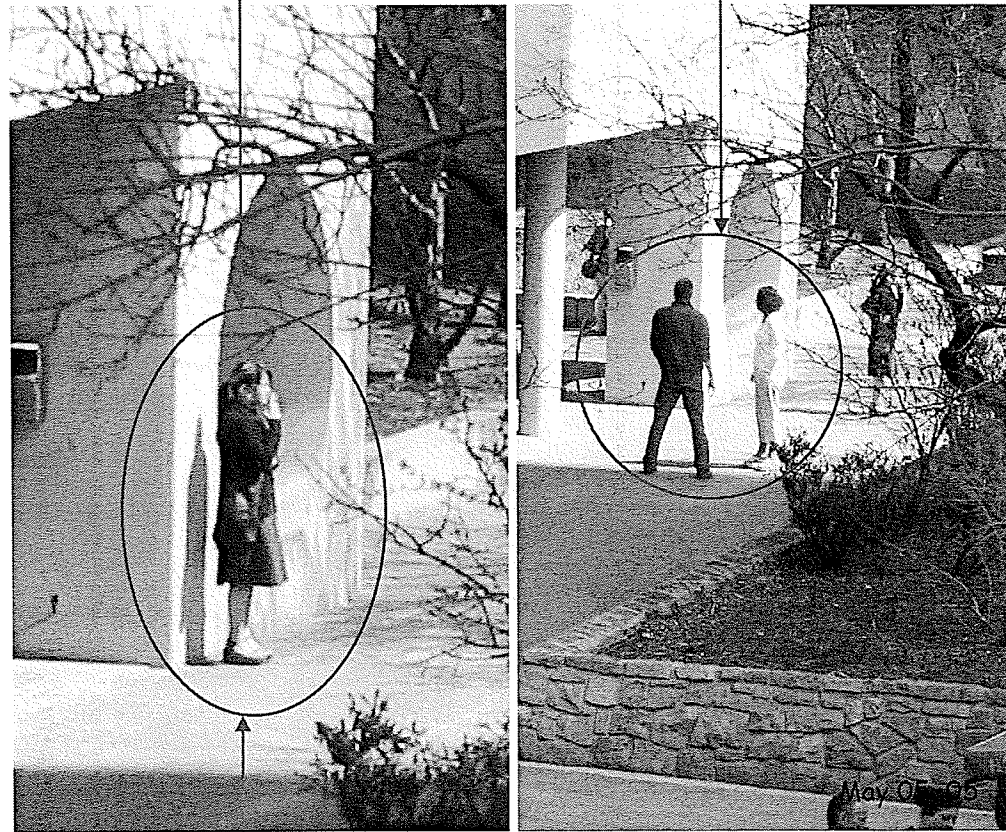


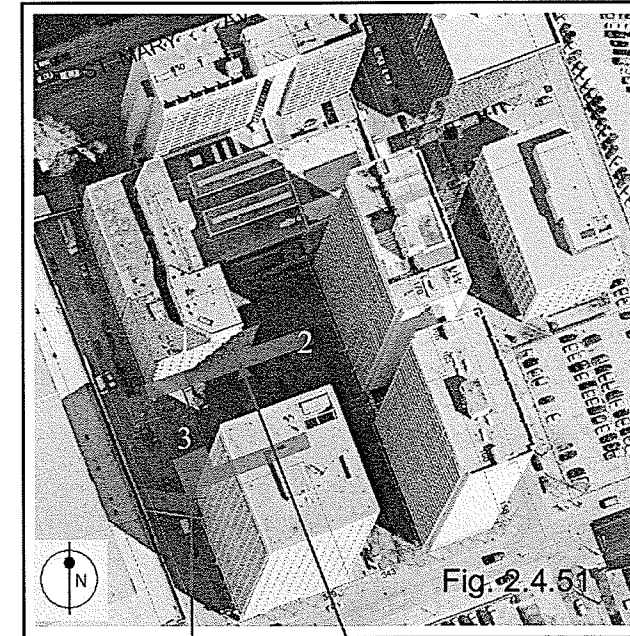
Fig. 2.4.49 – **Sittable Space**
Carlton Square Park

Observation: Some prefer being alone while some seek company while smoking.

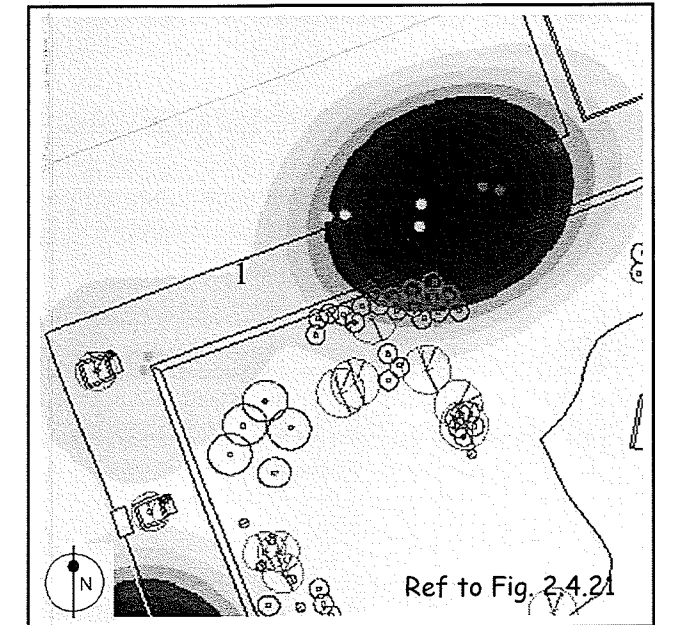
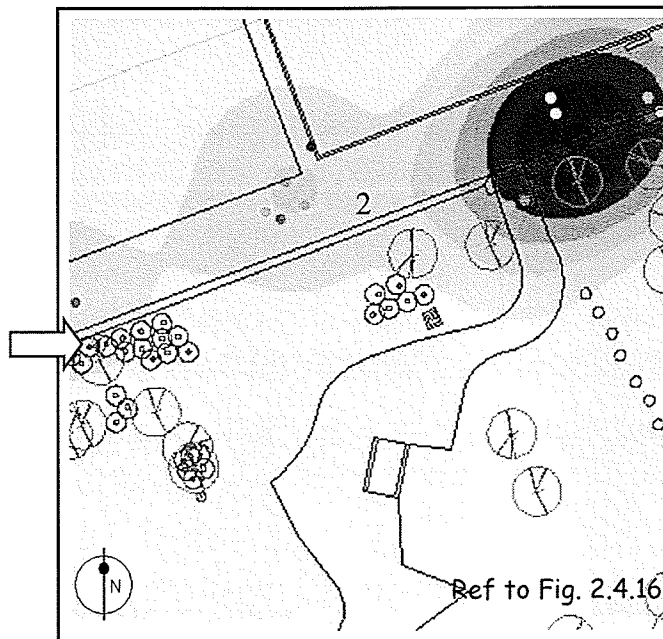
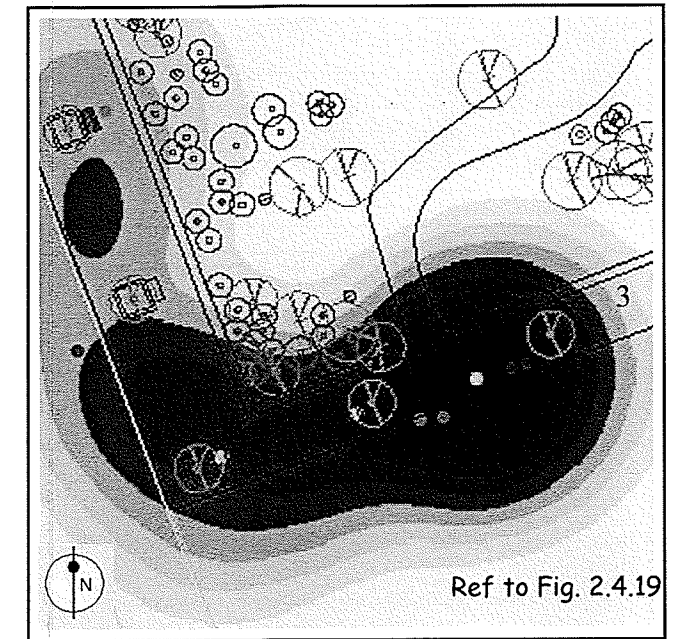





Some people choose to stand beside a wall and smoke.

The plans to the right illustrate the areas where smokers were usually found at Carlton Square.



Smoking Zone at Carlton Square

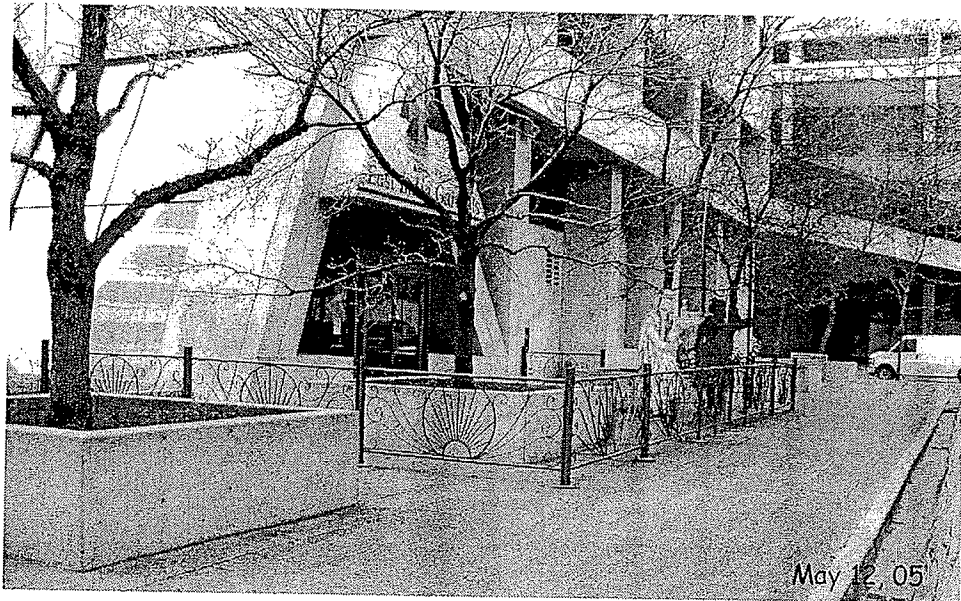


-  High
-  Medium
-  Low

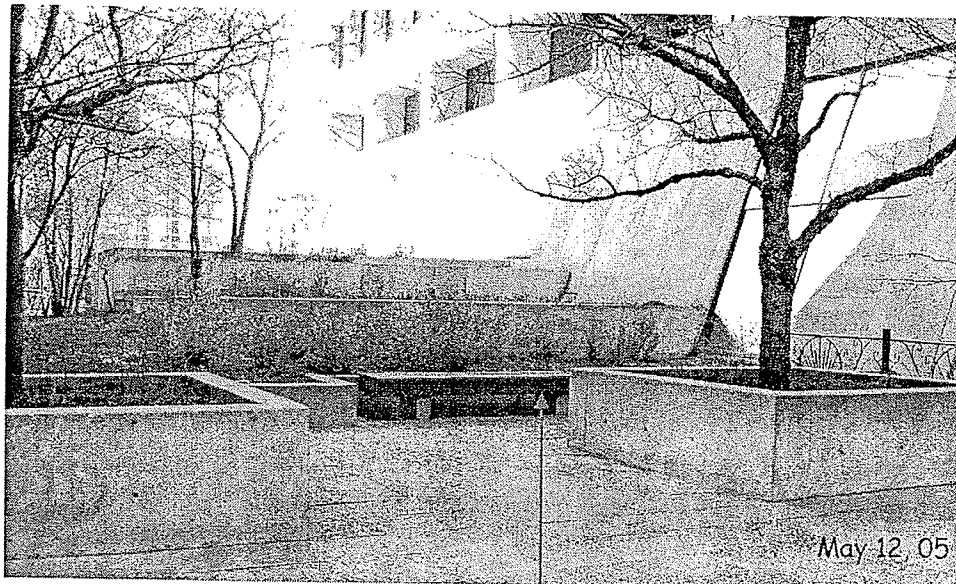
Conclusion: The observations made over a known period of time and the data obtained from the interviews showed that the nearby office workers use these spaces mostly for smoking.

The City of Winnipeg enforced The Smoking Regulation Bylaw on July 01, 2003. The Bylaw prohibited a person from smoking in any enclosed public place. This is probably the reason that the smokers are the regular users of the urban open spaces in Winnipeg.

Fig. 2.4.50 – Users and Space
Carlton Square Park



Observation: The design of Carlton Square Park is cluttered, lacks coordination, reducing its effectiveness significantly. The restaurant "East India Company" was separated from the park by a fence.



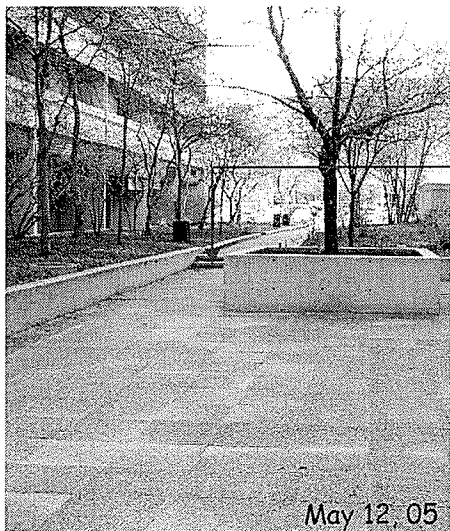
The bench was hidden behind planter beds.

Fig. 2.4.52 – **Adjacent Property Owner
Carlton Square Park**



The stone curb at the edge of the pathway acts as a barrier that prevents a wheelchair user from accessing the garden.

Observation: A pathway that leads through the garden gives access to wheelchair users. However, this pathway is very narrow for two-way pedestrian traffic. There is a footbridge, a stone slab 100mm deep over the pond. Wheelchair users can reach the bridge but cannot cross it and also cannot turn back as there is not enough turning radius.



Carlton Square Park is not wheelchair accessible from York Avenue. The pathway that goes through the park from York Avenue is levelled via steps.

Conclusion: Carlton Square Park was not designed to accommodate all the users. The Japanese Garden at Carlton Square Park is inaccessible to people with disabilities.

Fig. 2.4.53 – **Accessibility**
Carlton Square Park

Interviews

Air Canada Window Park and Carlton Square Park

Interviews: Analysis

Air Canada Window Park (Table 2.4.1)

Fifteen subjects (54% males and 46% females) were interviewed at Air Canada Window Park. All of these subjects were company employees from adjacent office buildings. The subjects belonged to a wide range of age groups: 30-39 (53.5%), 40-49 (40%) and 50-59 (6.5%).

The interviews suggested that the convenience (26.5%) and closeness (73.5%) to the workplace was the main reason for visiting this park. One subject even mentioned that the main reason for his visit to the park was observing other people.

The interviews further revealed the fact that 47% of people came to the park on a daily basis in all weathers. 20% of the subjects enjoyed the summer season while 26% visited the park only during optimum weather conditions. The rest (7%) were casual visitors. They used the park a few times a week.

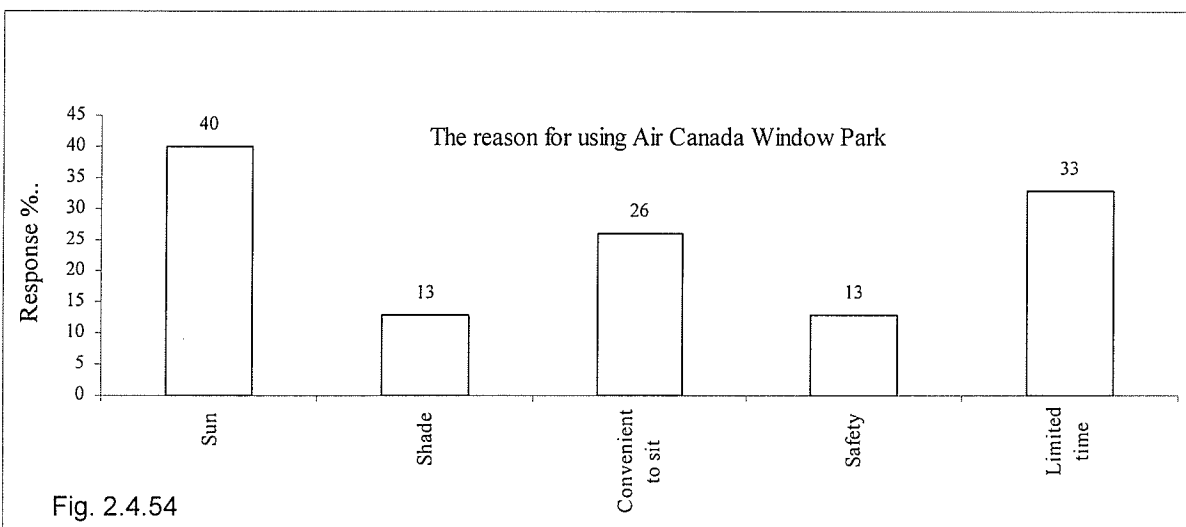
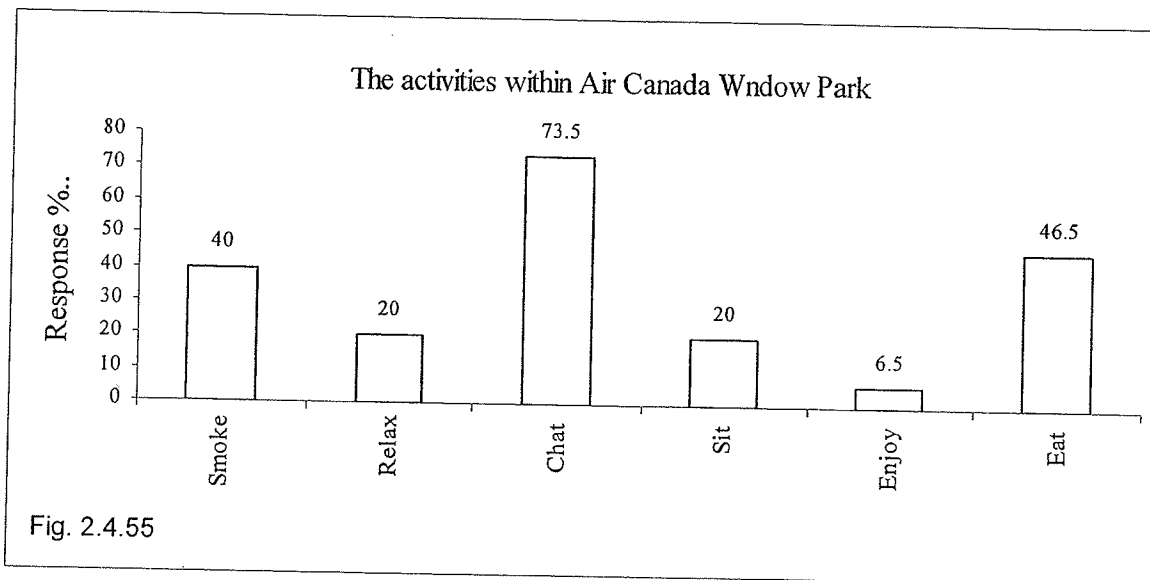


Fig. 2.4.54

The bar chart (Ref to Fig. 2.4.54) shows different reasons for using a particular space in the park. From this chart, it is clear that people mostly preferred sun (40%) to shade (13%), closely followed by convenient seating areas (26%). Few subjects (13%) felt that certain areas of the park were unsafe. Subjects (33%) mostly gathered closer to the building entrance doors because of microclimate and the limited time available to them.

Interviews

Fig. 2.4.55 reveals the fact that 73.5% of the subjects are attracted by other people and visit the park in groups. Eating (46.5%) and smoking (40%) were next most important activities taking place in the park. 20% of the subjects sit back, relax, and enjoy the park.



For both the bar charts, percentages do not add up to one hundred percent as all the responses by individual subjects were considered separately.

Carlton Square Park (Table 2.4.2)

Fifteen subjects (33.5% males and 77.5 % females) were interviewed at Carlton Square Park. All of these subjects were company employees from adjacent office buildings. The subjects belonged to a wide range of age groups: 20-29 (6.5%), 30-39 (53.5%), and 40-49 (40%).

The interviews at Carlton Square Park also suggested that convenience (20%) and closeness (80%) to the work place was the chief reason for visiting the park.

86% of the subjects stated that they used the park throughout the year for all seasons. Two subjects reported that they used the park everyday in the summer season while standing inside the building during winter season.

The bar chart (Ref to Fig. 2.4.56) here shows that 33% of the subjects prefer being closer to the entrance.

Interviews

Sun (26%) and peace (26%) were next important issues that lead them to use that particular space in the park. 20% of the subjects enjoyed attractive views of the park. Few subjects considered convenient seating (13%) and comfort (6.5%).

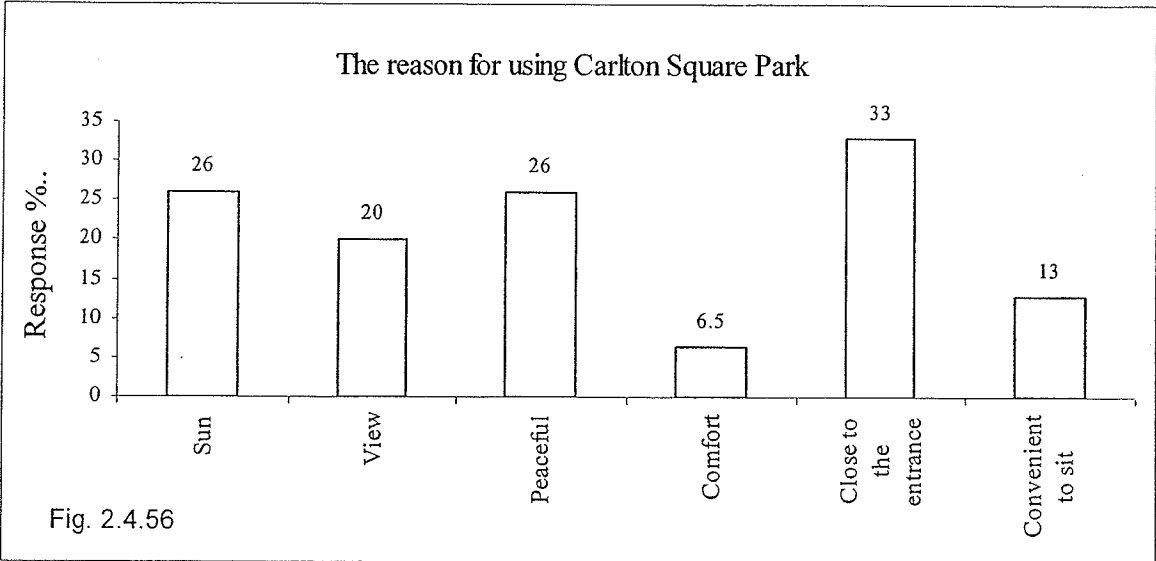
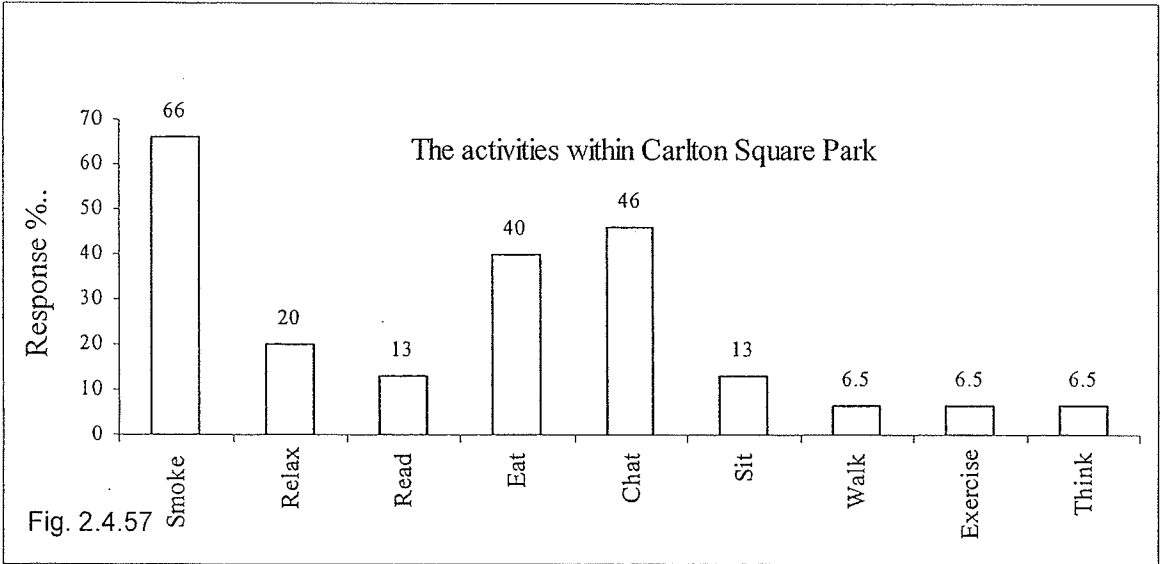


Fig. 2.4.57 shows that smoking (73.5%) was the most significant activity happening at Carlton Square Park. Chatting (46%) and Eating (40%) were the other two important activities in the park. The park was also used for relaxing (20%), sitting (13%), walking (6.5%), exercising (6.5%), and thinking (6.5%).



Interviews

Interviews: Conclusion

The last type of data collected was to record the ages and types of persons using the two parks. It was observed that the company employees between the ages of 30-50 were the primary users of these parks.

The surveys indicated that busy work schedules and limited break-times compelled the office workers to use these parks immediately outside their office buildings.

Choice of space or location within spaces was influenced by different factors: safety and security, comfort, peace of mind, convenient seating, sun, shade, closeness to the entrance due to limited time, and available view of the park.

The analysis suggested that smoking was one of the most important year round activities in the park. Smokers used these parks on a daily basis, even twice or thrice a day. These interviews also showed that smoking was a social activity. People sit, smoke cigarettes, drink coffee and enjoy small conversations with each other.

Following activities were encountered in these parks: smoking, reading, relaxing, eating, drinking coffee, chatting, sitting, walking, exercising, thinking, and enjoying the park.

It was noticed that most people preferred eating food in the outdoors during their lunch hours.

Interviews

Air Camdow Park							
Subject No	Gender	Age	Do you work here?	Why this park?	How often do you come here?	Why this space?	Purpose
1	F	30 - 39	Yes	Close to work	Everyday in summer	Sunny/If very hot prefer shade	Relax, Chat
2	F	30 - 39	Yes	Close to work	Nice weather - Not in rain	Sunny	Relax, Chat
3	F	30 - 39	Yes	Convenient	Once a day - Depends on weather	Sun, avoid pot smokers, pan handlers	Chat
4	M	30 - 39	Yes	Close to work	Few times a week	Sun, not safe all the time, during lunch hours and afternoon, when pan handlers come in and sleep	Sit, Chat
5	M	30 - 39	Yes	Close to work. Other people	Couple of times of day	Shade	Smoke
6	F	40 - 49	Yes	Close to work	Three times a day even in winter	Convenient to sit	Sit, Lunch, Smoke, Chat
7	F	40 - 49	Yes	Close to work	Three times a day even in winter	Limited time - Close	Coffee, Chat
8	M	40 - 49	Yes	Close to work	Twice a day even in winter	Convenient to sit	Sit, Coffee, Smoke, Chat
9	F	40 - 49	Yes	Close to work	Twice a day even in winter	Convenient to sit	Sit, Coffee, Smoke, Chat
10	F	40 - 49	Yes	Close to work	Twice a day even in winter	Convenient to sit	Sit, Coffee, Smoke, Chat
11	M	30 - 39	Yes	Close to work	Whenever weather is nice	Sun, Limited time - Close	Lunch, Enjoying the day
12	M	50 - 59	Yes	Convenient	Everyday in summer	Little break time- Close	Sit out on breaks, Lunch
13	M	30 - 39	Yes	Convenient	Everyday	Limited time - Close	Chat
14	M	30 - 39	Yes	Convenient	Everyday in summer	Limited time - Close	Relax, Chat
15	F	40 - 49	Yes	Close to work	Once a day - Depends on weather	Sun	Smoke

Table 2.4.1 – Interviews, Air Canada Window Park

Carlton Square Park							
Subject No	Gender	Age	Do you work here?	Why this park?	How often do you come here?	Why this space?	Purpose
1	M	30 - 39	Yes	Close to work	Everyday same time	Sun	Smoke, Sit
2	M	40 - 49	Yes	Close to work	Twice a day	View, Peaceful	Relax, Smoke
3	F	30 - 39	Yes	Close to work	Summer - Everyday	Comfort, Sun, Peaceful	Relax, Read
4	F	20 - 29	Yes	Close to work	Everyday - Smoke in winter	View	Lunch
5	M	40 - 49	Yes	Close to work	Summer - everyday, Winter - Stand inside the building	Sun, Peaceful	Lunch, Smoke, Read
6	M	30 - 39	Yes	Close to work	Couple of times a day	Close to the entrance	Smoke
7	F	40 - 49	Yes	Close to work	Three times a day - Winter too	Close to the entrance	Coffee, Chat
8	F	30 - 39	Yes	Convenient	Three times a day - Winter too	Close to the entrance	Smoke, Chat, Sit
9	F	40 - 49	Yes	Close to work	Three times a day - Winter too	Close to the entrance	Coffee, Smoke, Chat
10	M	30 - 39	Yes	Close to work	Everyday - Winter too	Convenient to sit	Smoke, Chat
11	F	30 - 39	Yes	Close to work	Everyday - Winter too	Convenient to sit	Smoke, Chat
12	F	40 - 49	Yes	Close to work	Everyday - Winter too	View	Smoke, Coffee
13	F	30 - 39	Yes	Close to Work	Everyday - Winter too	Walk, Exercise, Think, Peaceful	Relax
14	F	40 - 49	Yes	Convenient	Six times a day	Sun	Smoke, Chat
15	F	30 - 39	Yes	Convenient	Six - Seven times a day - Rain too	Close to the entrance	Coffee, Chat

Table 2.4.2 – Interviews, Carlton Square Park

3. Design Principles

3. Design Principles

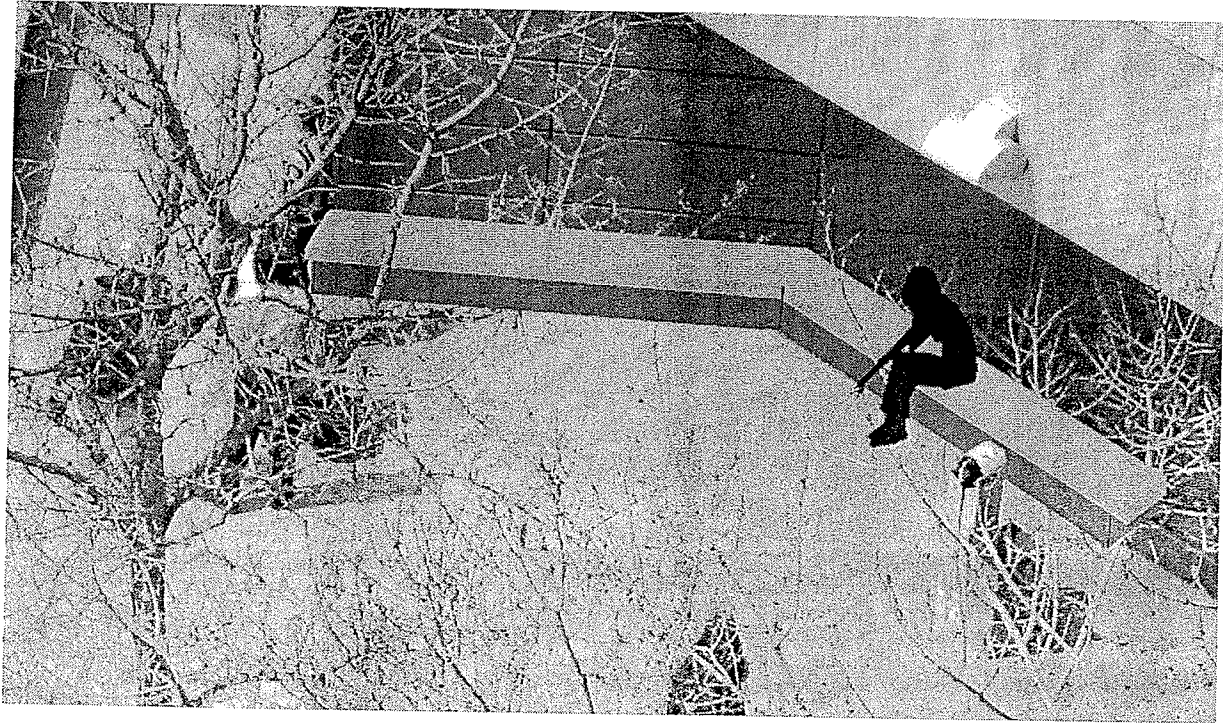
Based on my literature review, precedent case studies, direct observations of the researcher, and interviews, the following principles were derived for urban open space design. These principles combine recommendations presented by William H Whyte in *The Social Life of Small Urban Spaces* (1980) and by Mark Francis in *Urban Open Space: Designing for User Needs* (2003) with my own site analyses:

1. **Visibility:** Small urban spaces should be visually accessible from the street.
2. **Comfort:** Spaces should be comfortable in terms of access to sun and shade as and when desired by its users.
3. **Image** plays an important role in the "success" of an urban open space. People judge comfort by the image of a space.
4. **Safety and Security:** Enough light should be provided to create a safe environment. The presence of patrol officers, security guards, and maintenance workers is critical to the safety and security of the space.
5. **Sittable Space:** The design should offer a considerable amount of built-in seating. This should offer a wide range of variety in regards to size (width and height), shape, and arrangements. The design should offer opportunities for group seating – possibly through the provision of movable chairs.
6. **Universal Accessibility:** The space should be universally accessible. Mixed use should be encouraged to foster diversity of use. Special events should be organized to attract groups of people and generate additional revenue for the maintenance of the park.
7. **Activities:** The design of an urban open space should accommodate street vendors, hawkers, street performers, etc. or, as in Paley and Bryant Parks, management-provided food facilities.
8. **Food:** Food vendors, food kiosks, outdoor cafes should be encouraged in an urban open space to attract people with various ethnic and economic backgrounds and also to generate revenue for the maintenance of the park.
9. **Access to Water:** Water in urban open space should be accessible to its users.
10. **Adjacent property owners** should be encouraged to become a part of these spaces.
11. **Amenities:** Amenities such as litterbins, telephones, information booths, water fountains, and lavatories should be provided in the proper locations.
12. **Maintenance:** The space should be maintained on a regular basis.

Design Principles

Design Recommendations

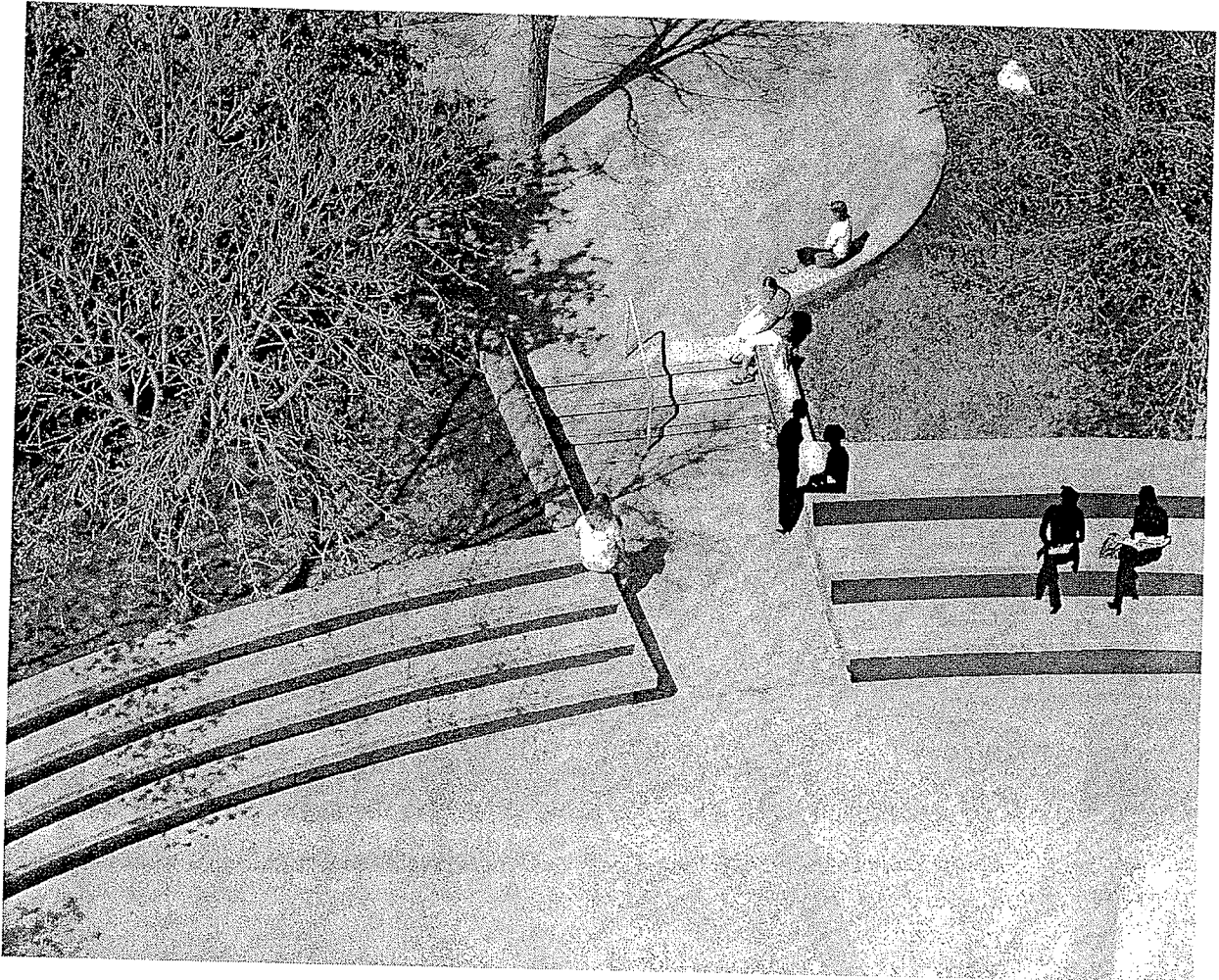
Air Canada Window Park



Principle Applied: Sittable Space

Recommendation: Here the sitting is provided for smokers to sit comfortably and smoke.

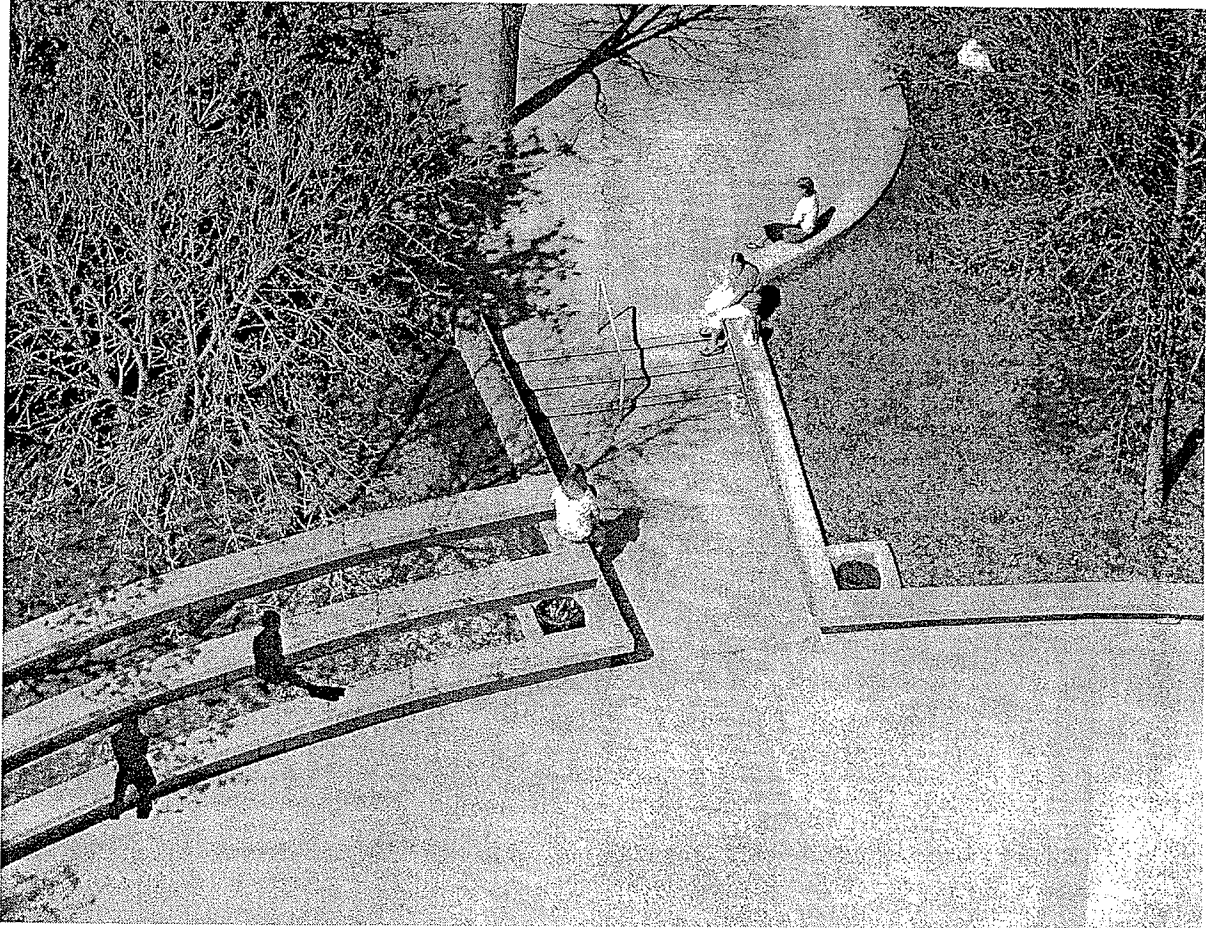
**Fig. 3.1 - Recommendation: Sittable Space
Air Canada Window Park**



Principle Applied: Sittable Space

Recommendation: A wide range of convenient seating arrangements would promote use by a variety of populations (male/female, young/old, strong/weak, etc.).

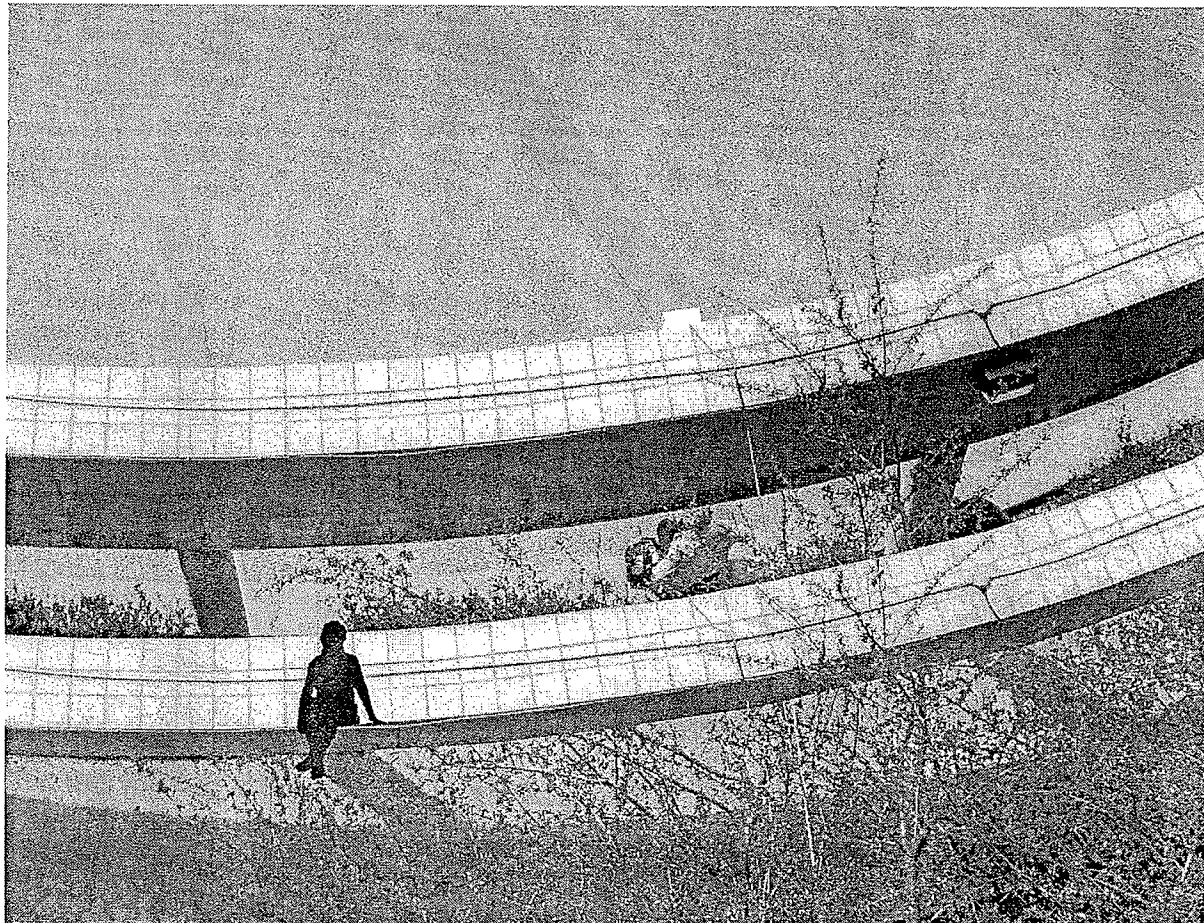
**Fig. 3.2 - Recommendation: Sittable Space
Air Canada Window Park**



Principle Applied: Sittable Space

Recommendation: A combination of different seating heights and widths offer numerous sitting options.

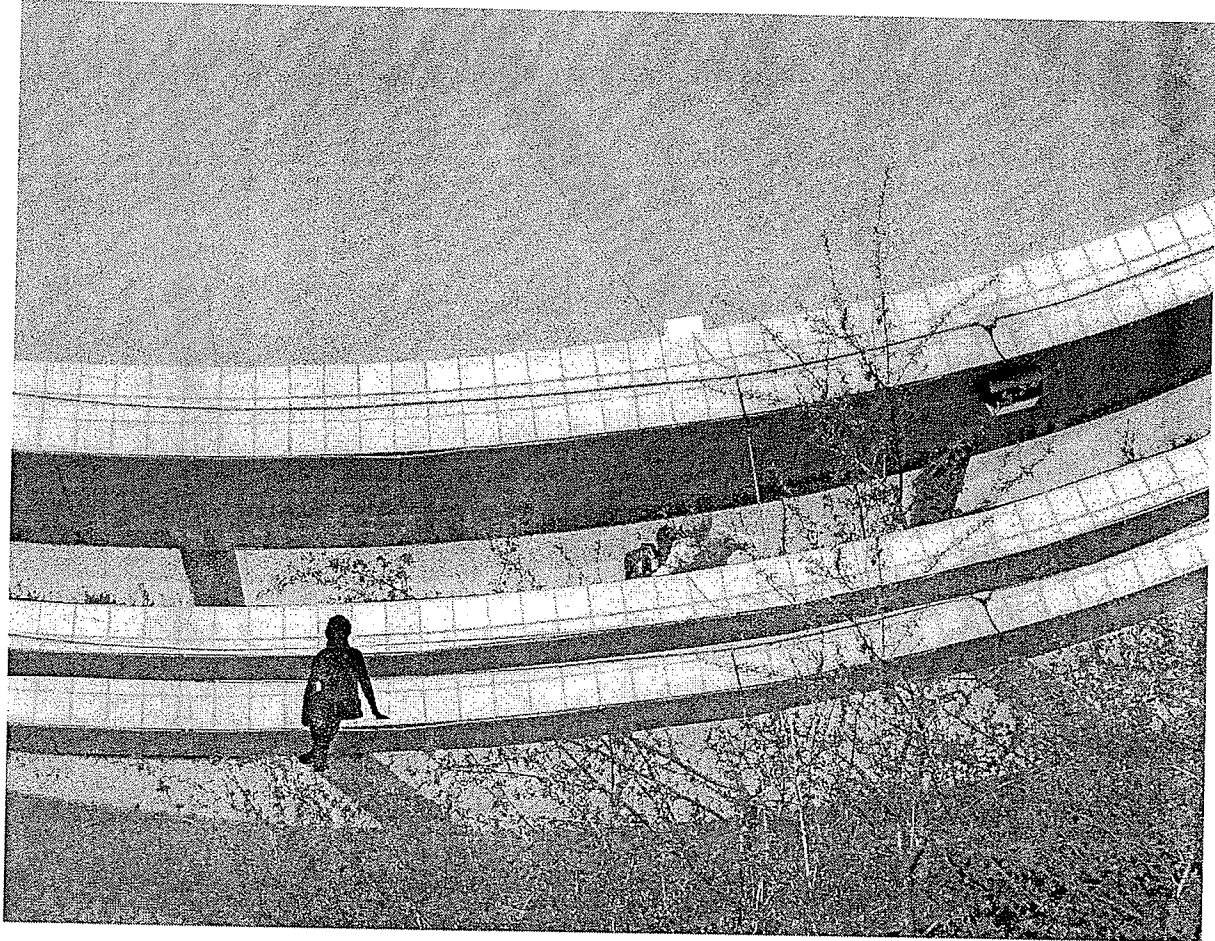
**Fig. 3.3 - Recommendation: Sittable Space
Air Canada Window Park**



Principle Applied: Sittable Space

Recommendation: Seating provided for smokers on the back side of the circular wall.

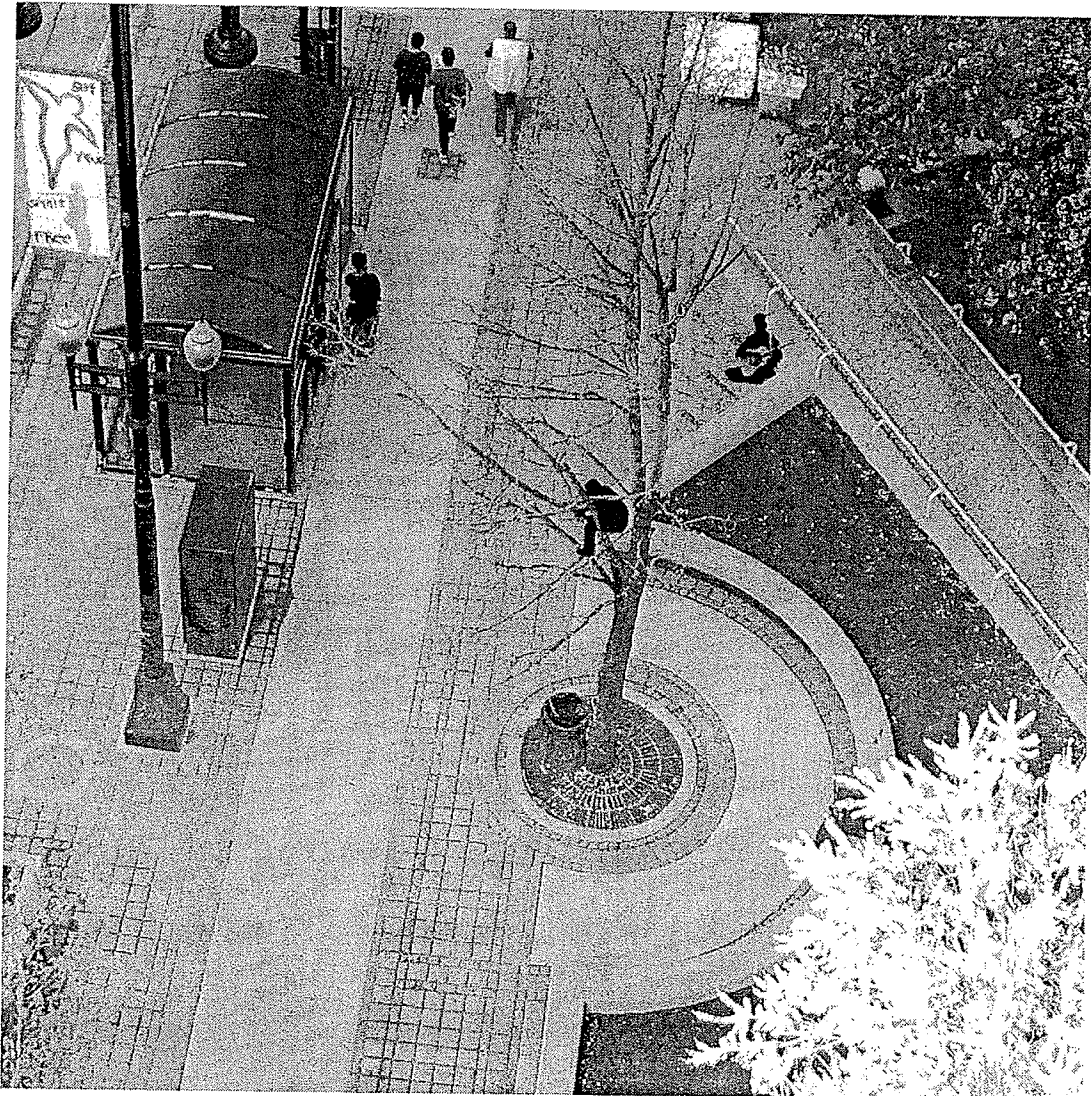
**Fig. 3.4 - Recommendation: Sittable Space
Air Canada Window Park**



Principle Applied: Sittable Space

Recommendation: Stepped seating would present a backrest for its users.

**Fig. 3.5 - Recommendation: Sittable Space
Air Canada Window Park**



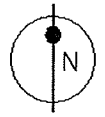
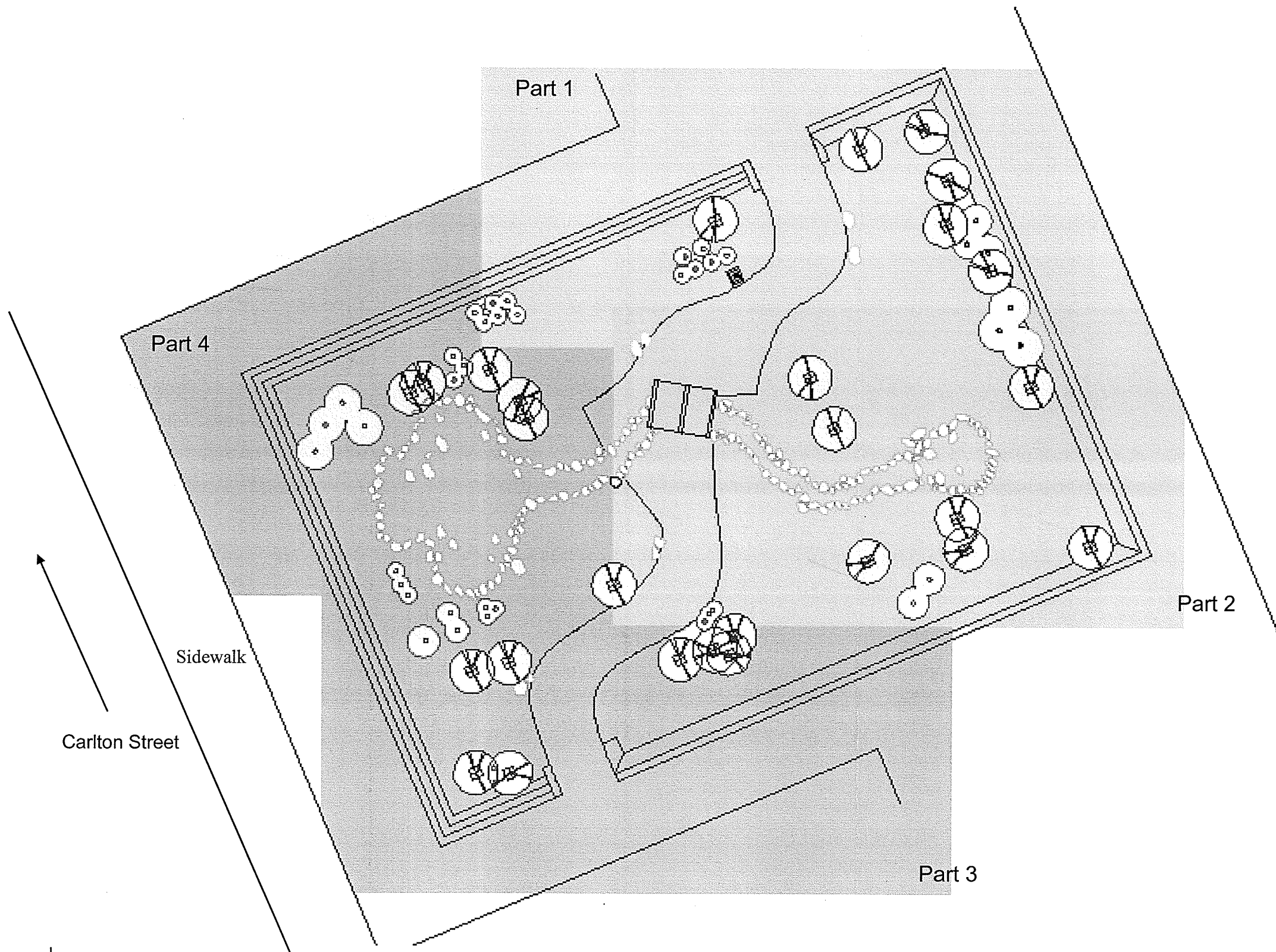
Principle Applied: Activities

Recommendation: A small niche along the edge of the park would encourage the street performer, guitarist to sit comfortably and play guitar, without disturbing the ongoing function of the sidewalk.

**Fig. 3.6 - Recommendation: Activities
Air Canada Window Park**

Design Recommendations

Carlton Square Park



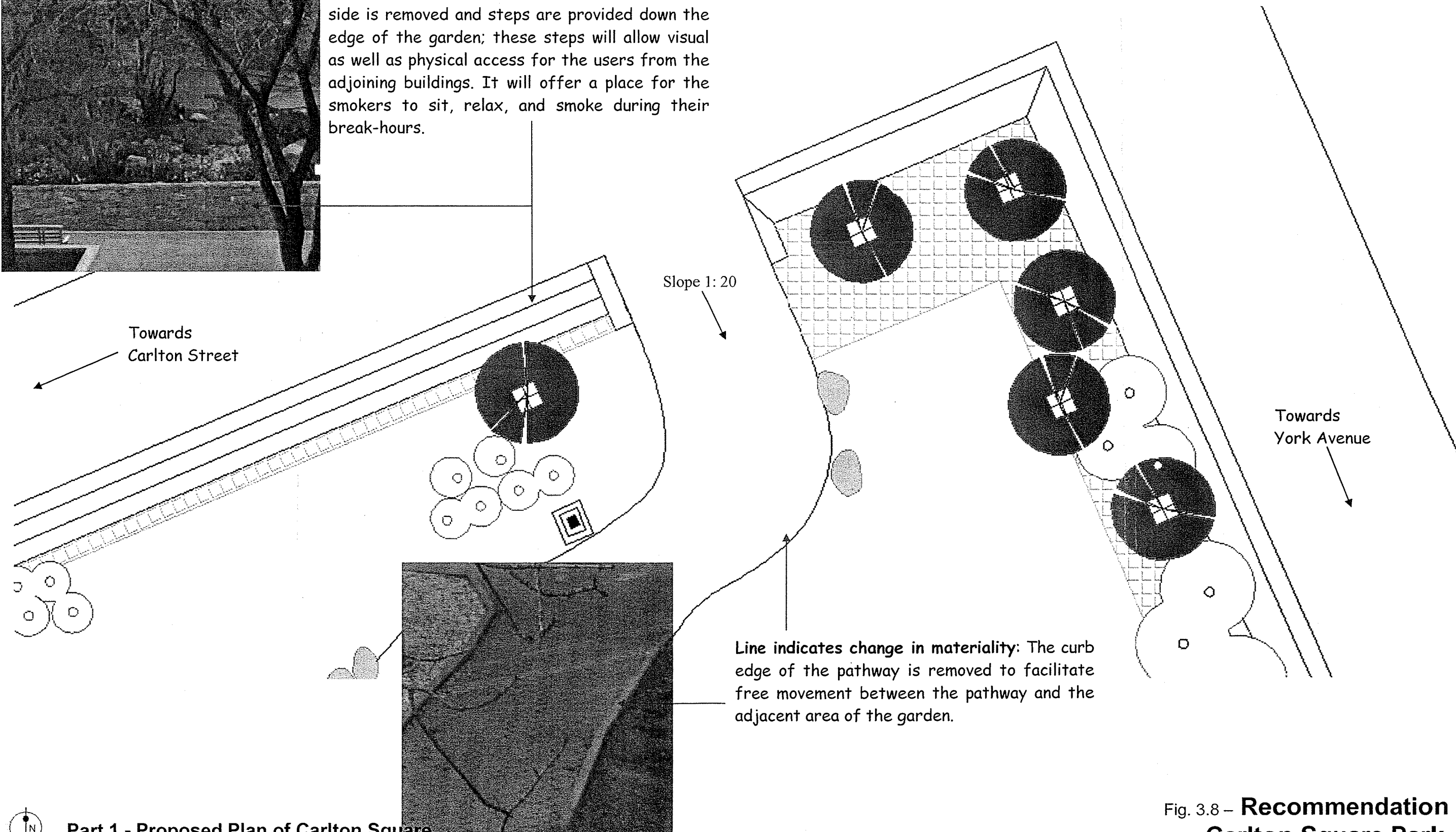
Proposed Plan of Carlton Square

The design of Carlton Square Park is based on the conclusions drawn from the analysis. The proposed design is explained in detail in four separate parts as shown in the figure to the left. The design is further communicated through digitized sketches developed using PhotoShop. Black shadows illustrate the intended use of the space.

**Fig. 3.7 – Recommendations
Carlton Square Park**



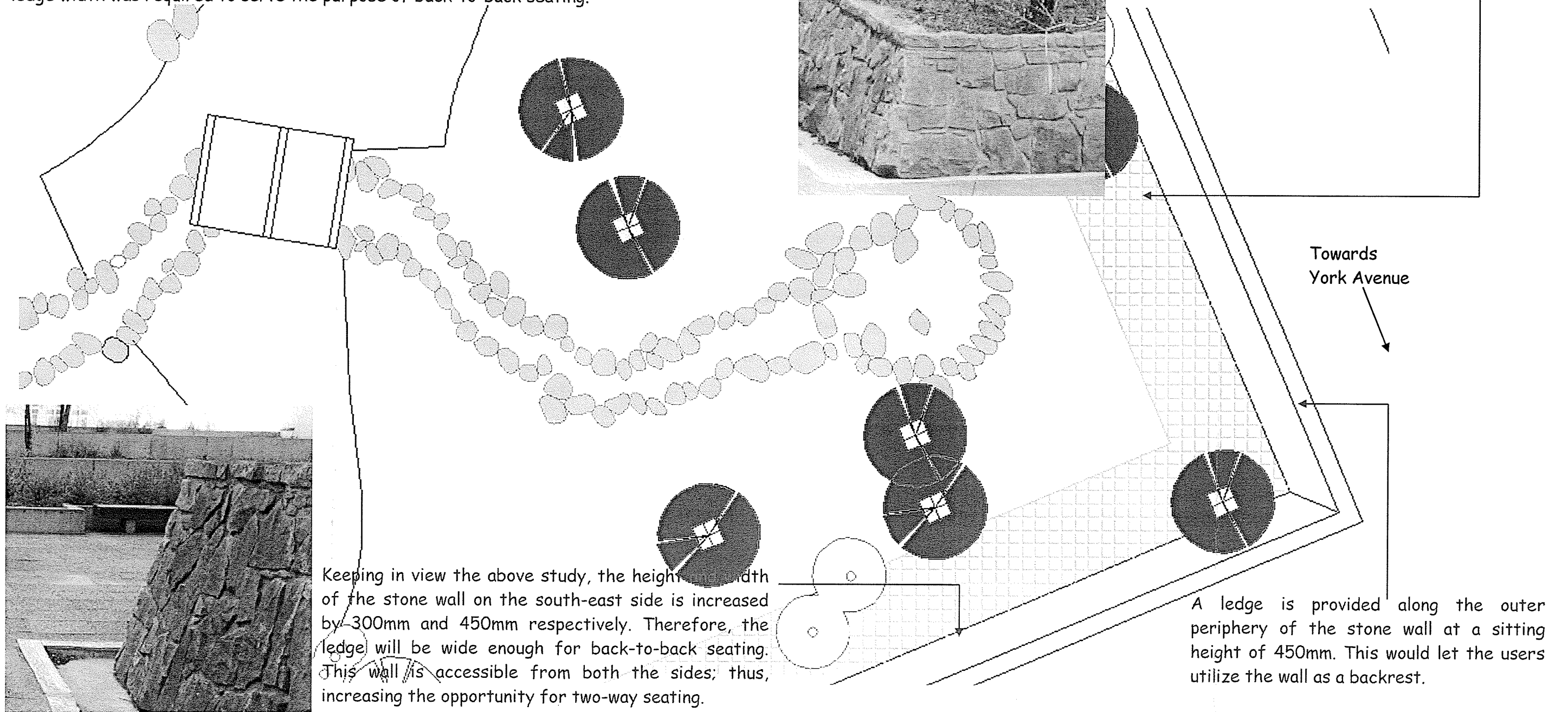
Recommendations: If the wall on the north-west side is removed and steps are provided down the edge of the garden; these steps will allow visual as well as physical access for the users from the adjoining buildings. It will offer a place for the smokers to sit, relax, and smoke during their break-hours.



Part 1 - Proposed Plan of Carlton Square

Fig. 3.8 – Recommendation
Carlton Square Park

Recommendations: Whyte (1980) concluded that people will sit almost anywhere between a height of 1ft (300mm) and 3ft (900mm). He also suggested that a foot (300mm) of ledge counts for as much as a foot (300mm) of comfortable bench space and a minimum of 2.5ft (750mm) of ledge width was required to serve the purpose of back-to-back seating.



The area next to the wall is paved to make it universally accessible. Wheelchair users can park their chair along the wall and rest like everyone else.

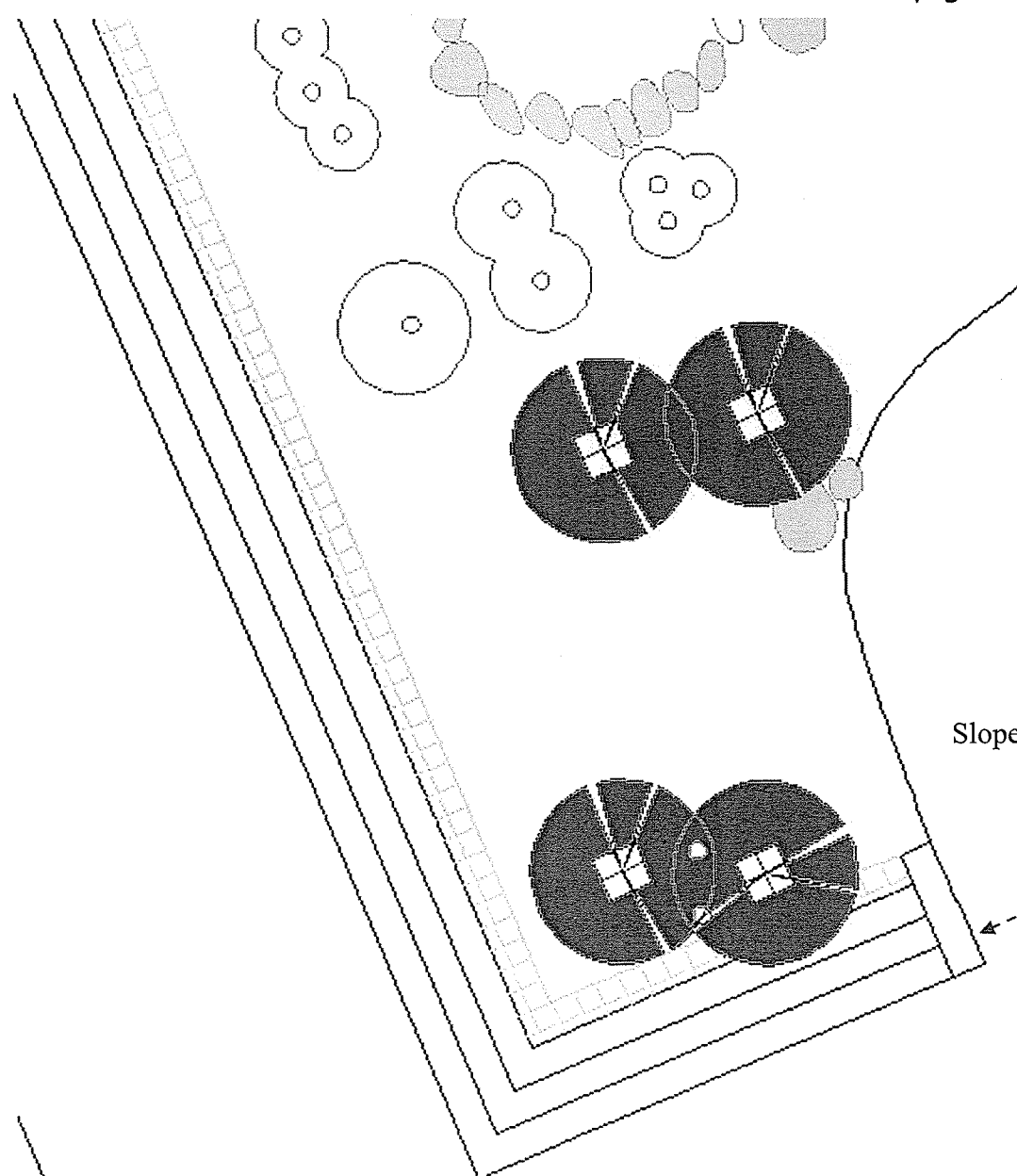
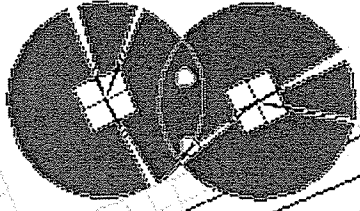
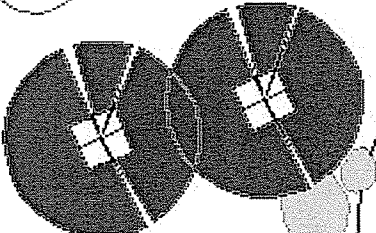
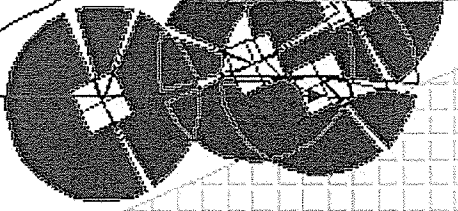
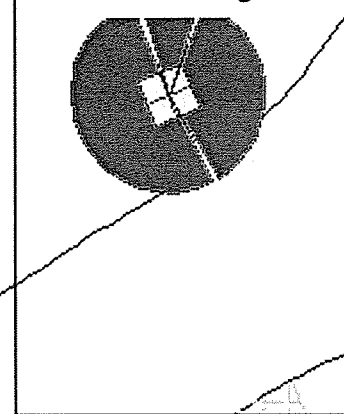
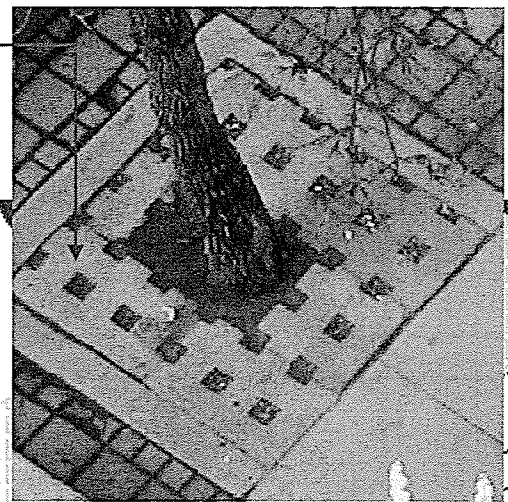
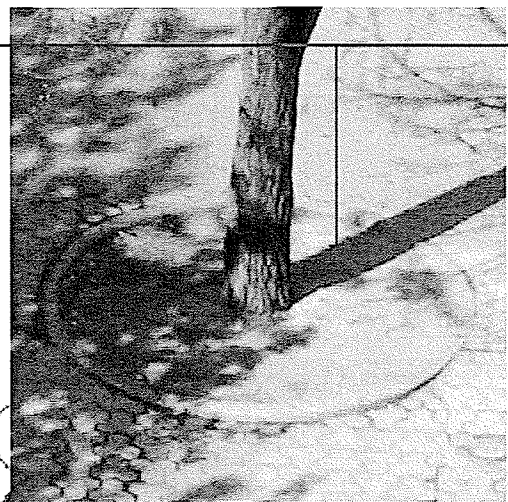
Towards York Avenue

Keeping in view the above study, the height and width of the stone wall on the south-east side is increased by 300mm and 450mm respectively. Therefore, the ledge will be wide enough for back-to-back seating. This wall is accessible from both the sides; thus, increasing the opportunity for two-way seating.

A ledge is provided along the outer periphery of the stone wall at a sitting height of 450mm. This would let the users utilize the wall as a backrest.

Fig. 3.9 – Recommendation Carlton Square Park

Most of the existing trees and shrubs are retained. Trees planted near paved areas are provided with grating to allow aeration of the roots and water seepage into the surrounding soil.

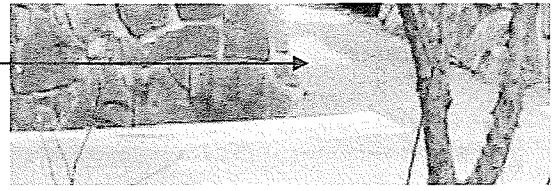


Towards
Carlton Street

Slope 1: 20

2m

Recommendations: The pathway is widened by 1.00m so that a wheelchair user can easily pass through. This would also encourage two-way pedestrian traffic through the garden.



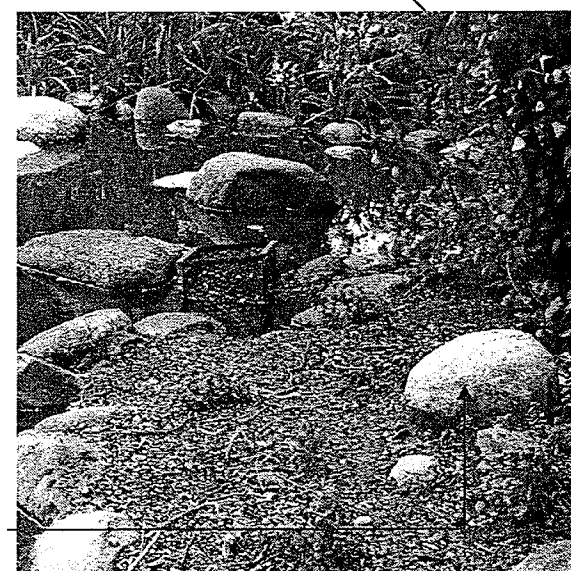
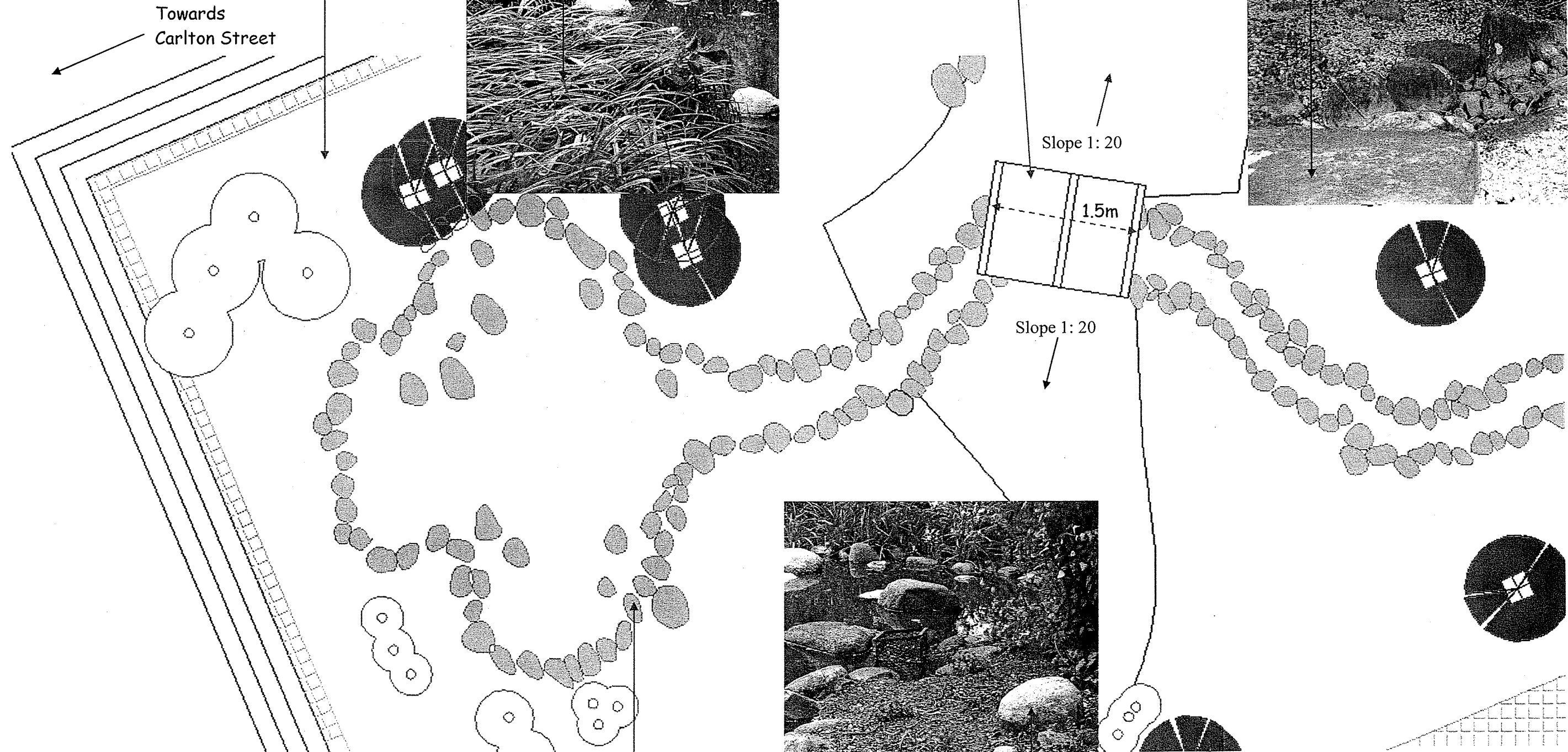
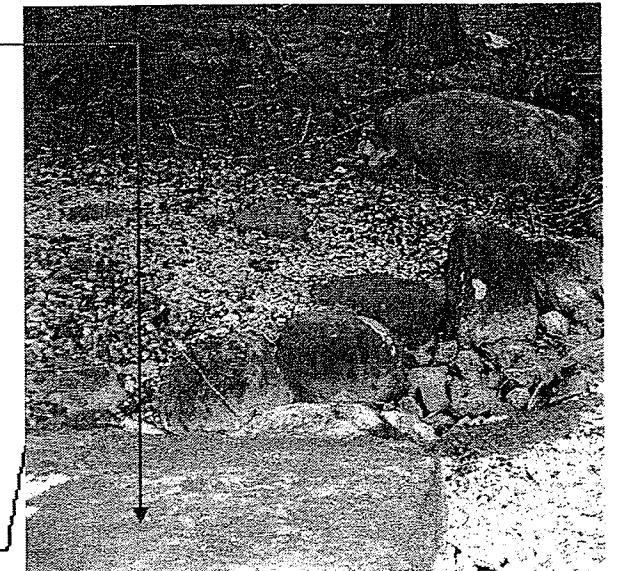
Part 3 - Proposed Plan of Carlton Square

**Fig. 3.10 – Recommendation
Carlton Square Park**

Recommendations: The pond is easily accessible from the steps. The thick ground cover is replaced by lush green lawn to attract people towards the pond, in order to use the lawn area for resting and relaxing.



The width of the footbridge is increased by 750mm and its edge is sloped into the pathway to make it wheelchair and perambulator friendly.



The stones can also be used for seating and enjoying the water.



Part 4 - Proposed Plan of Carlton Square

Fig. 3.11 – Recommendation Carlton Square Park



Principle Applied: Visibility, Comfort, Safety and Security, Sittable Space

This Sketch shows the overall view of Carlton Square Park from Carlton Street.

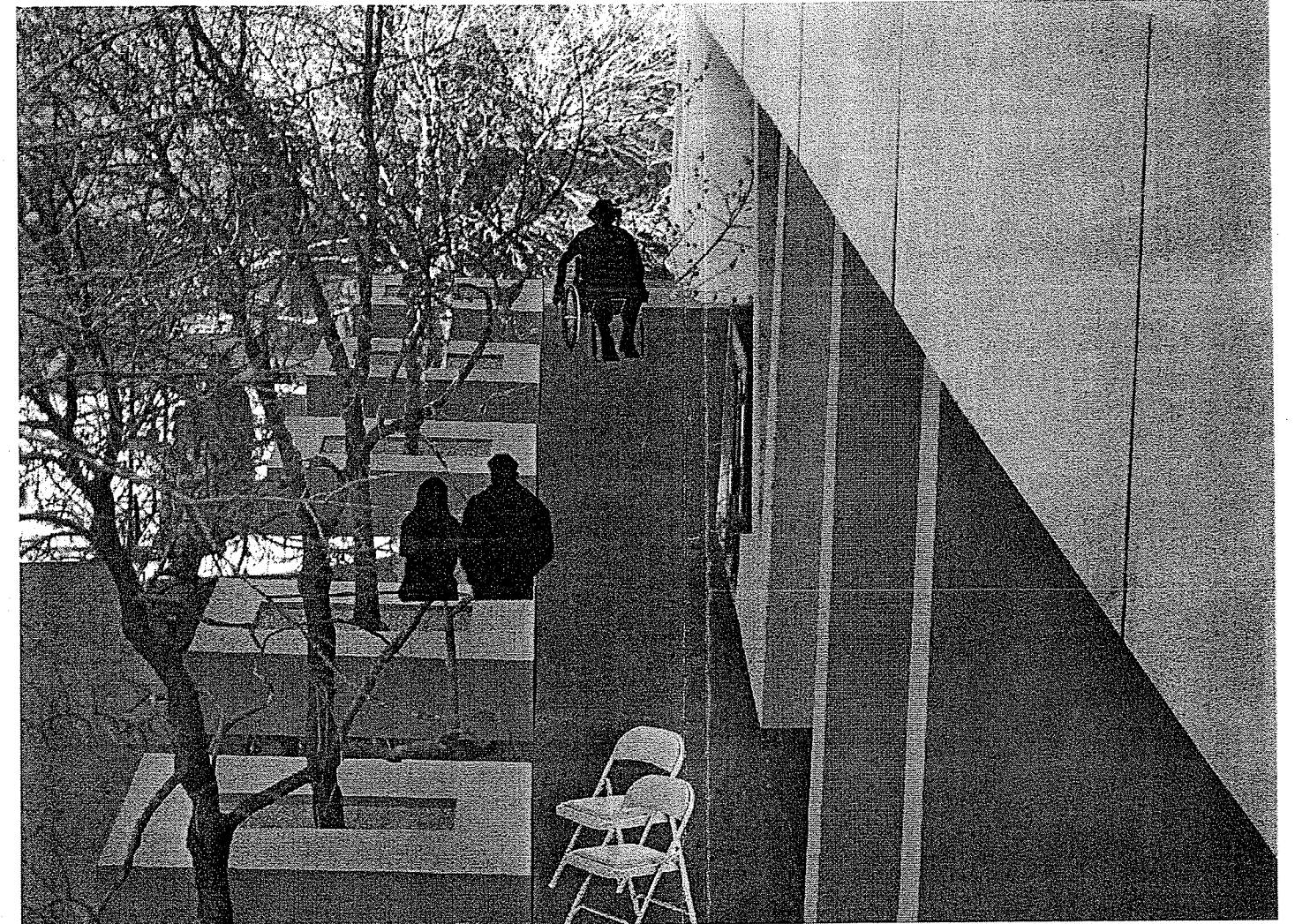
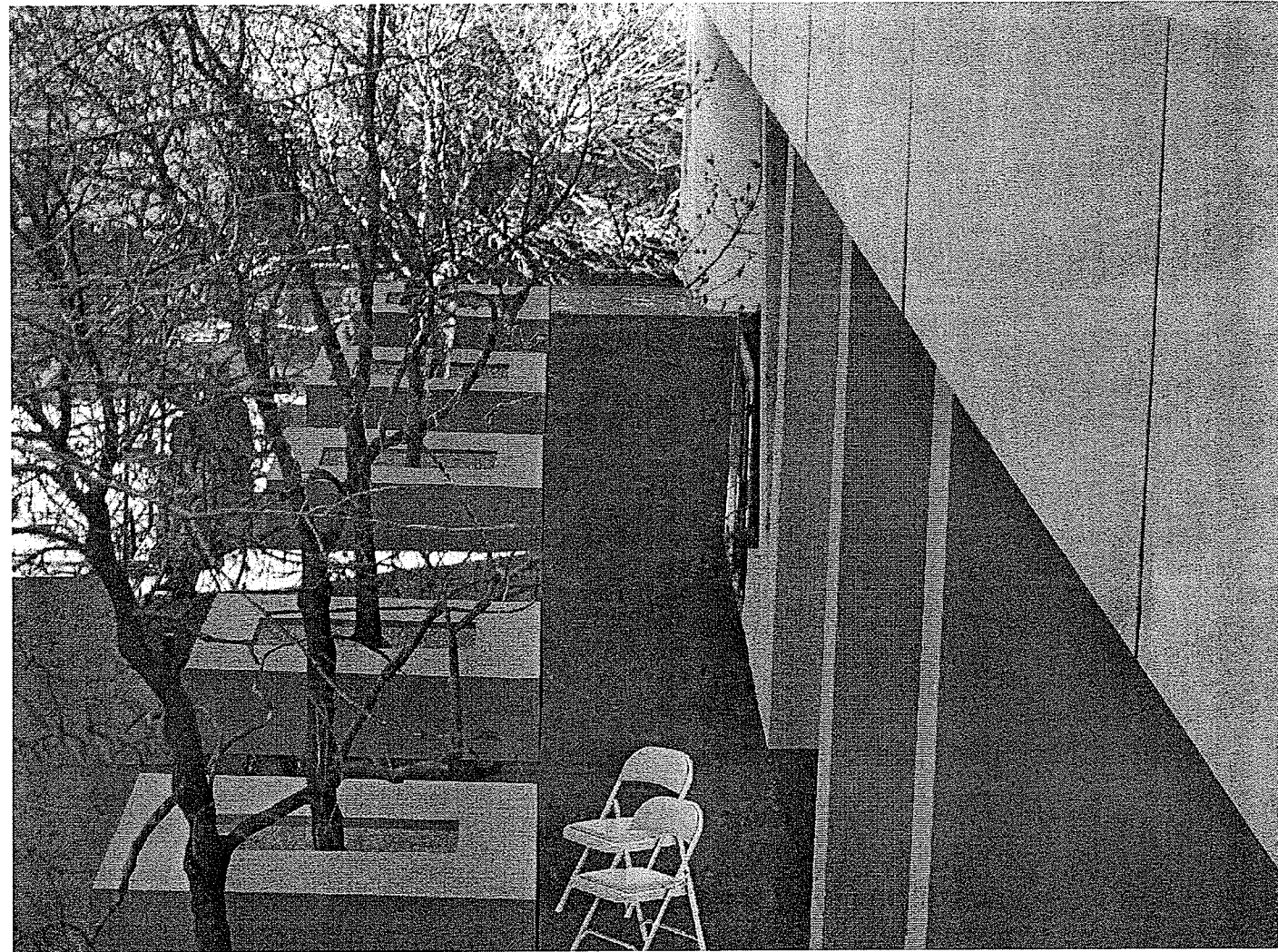
Fig. 3.12 – Recommendations
Overall View
Carlton Square Park



Principles Applied: Sittable Space

The seating provided along the wall of the building and the steps leading to the Japanese Garden allows smokers to sit comfortably and smoke.

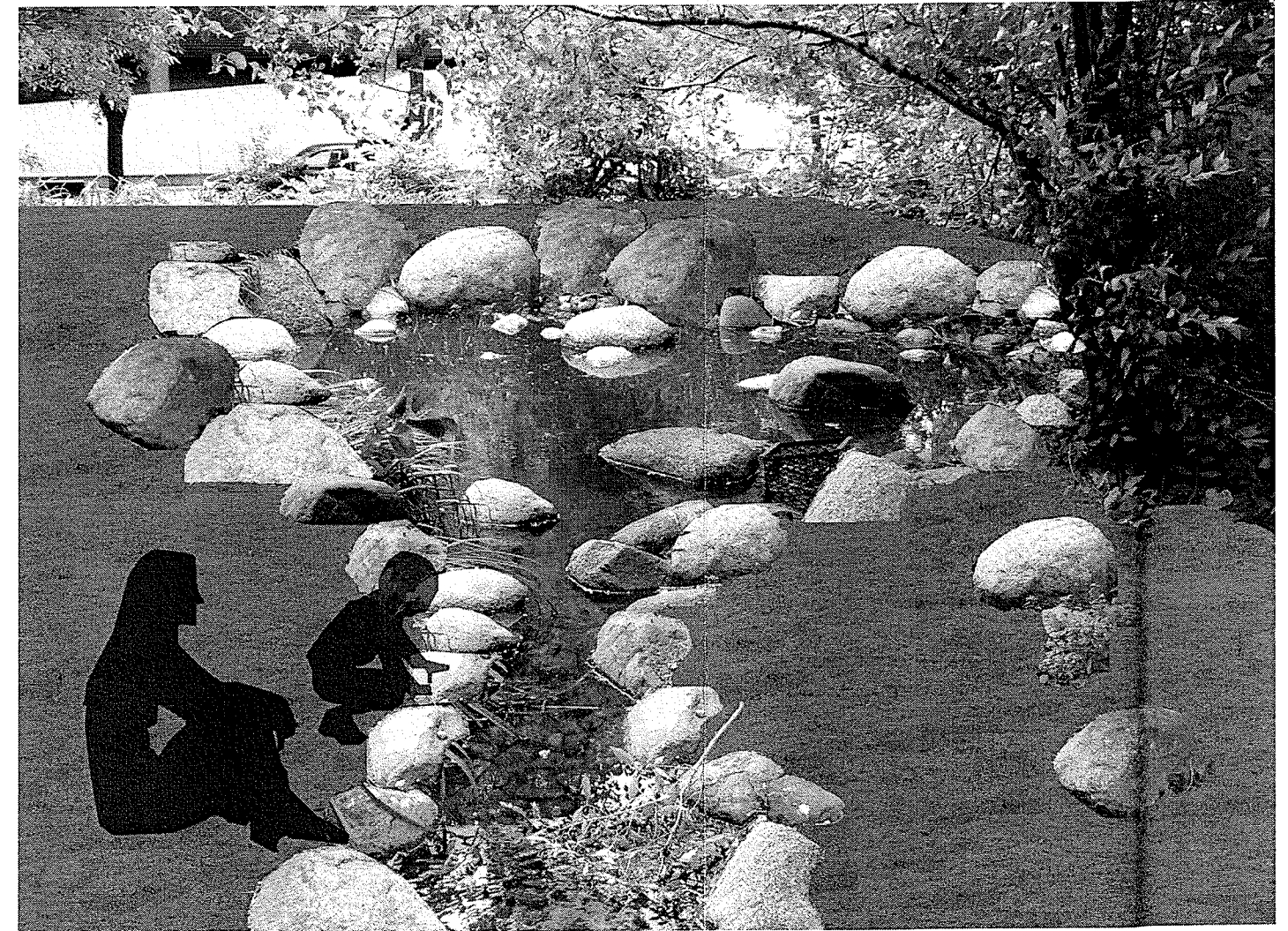
**Fig. 3.13 – Recommendations - Sittable Space
Carlton Square Park**



Principle Applied: Sittable Space, Adjacent Property Owners

The fence along the restaurant should be removed. The restaurant should be merged with the park and should have an entrance from the park. The ledge along the planter beds is widened and can be used for seating as well as tabletops.

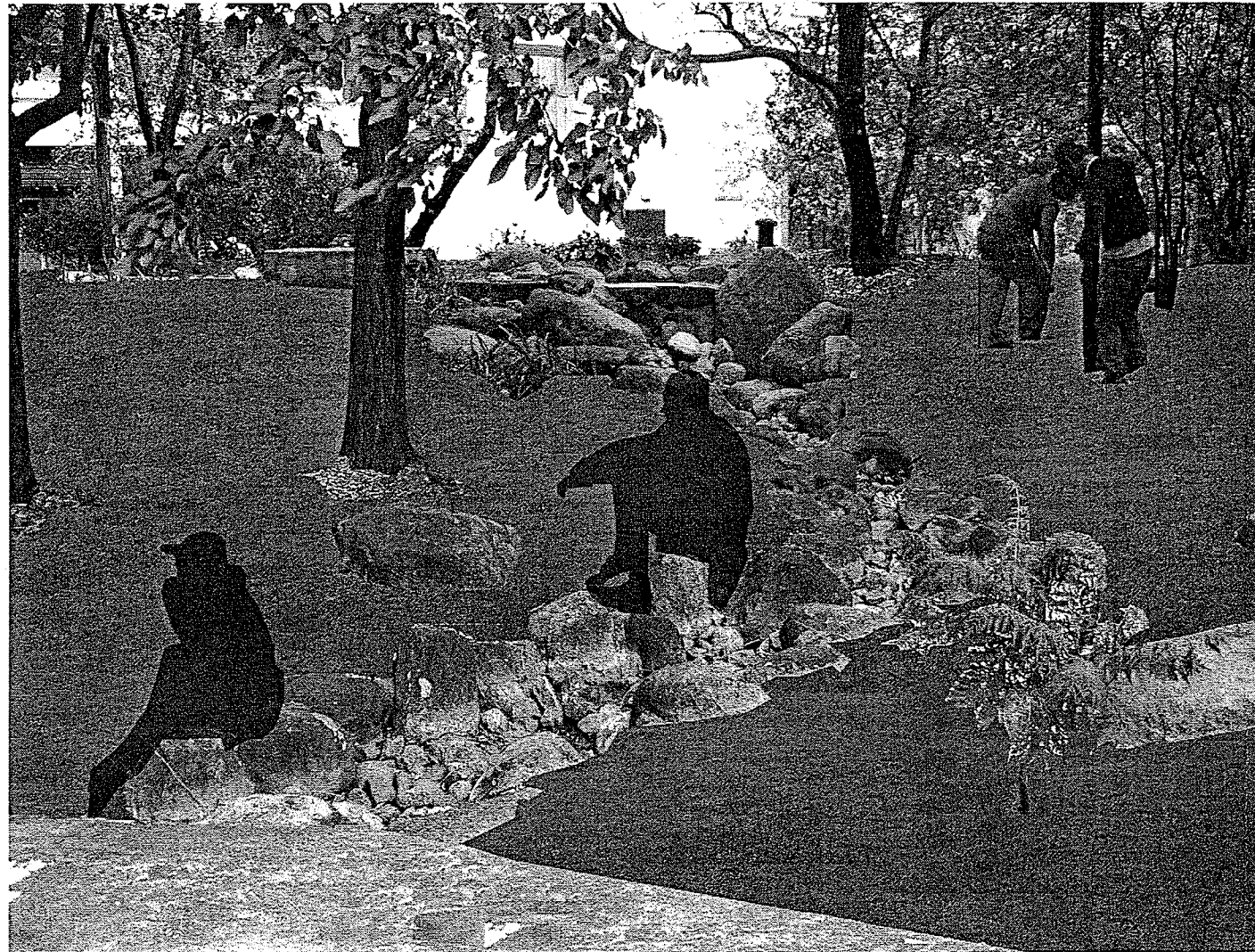
**Fig. 3.14 – Recommendations
Adjacent Property Owners
Carlton Square Park**



Principle Applied: Visibility, Sittable Space, Access to Water

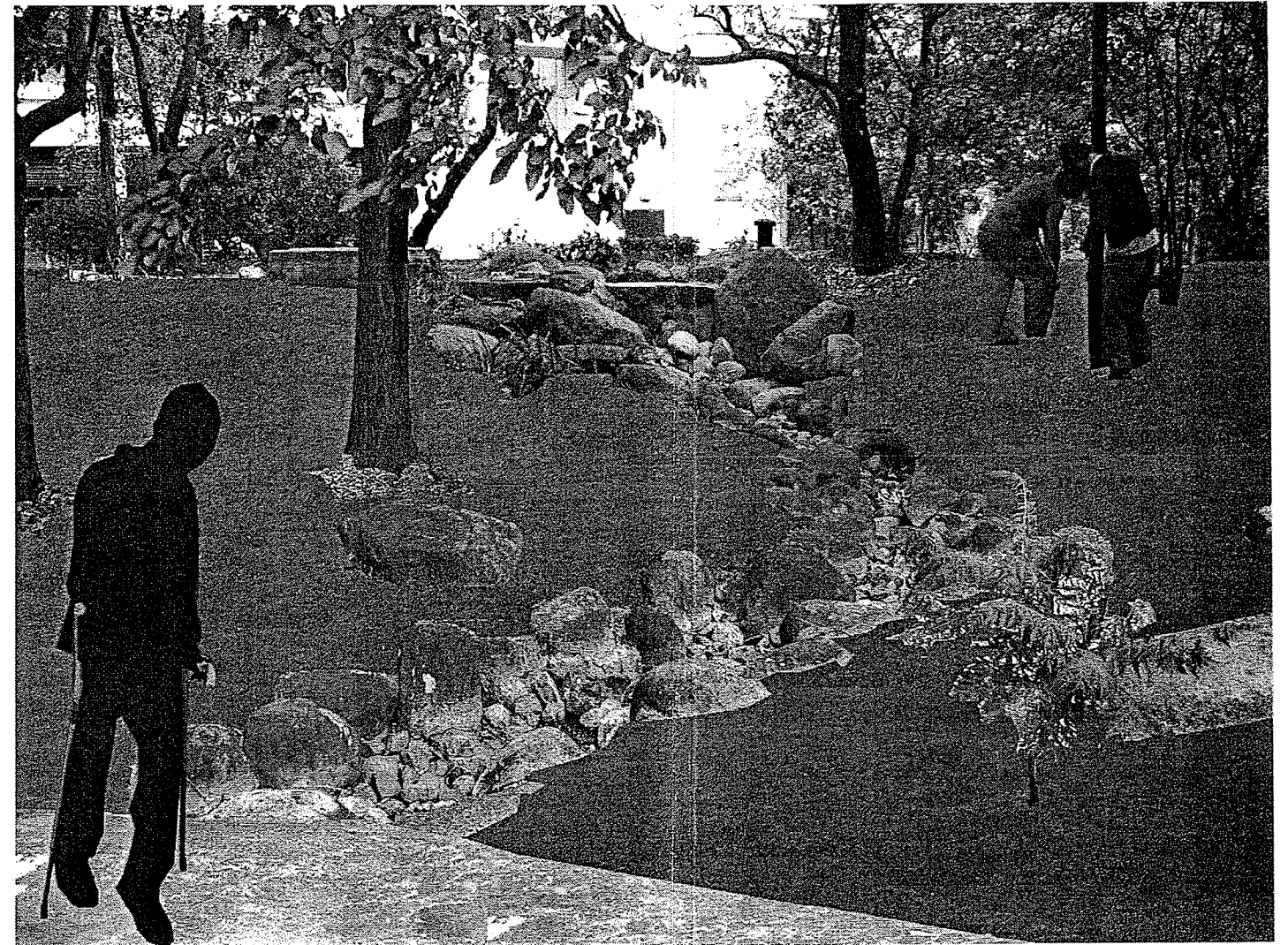
Area around the pond in the Japanese garden is replaced by a lawn. It is made accessible to all by removing thick shrubbery and ground cover around it.

Fig. 3.15 – Recommendations
Access to Water
Carlton Square Park

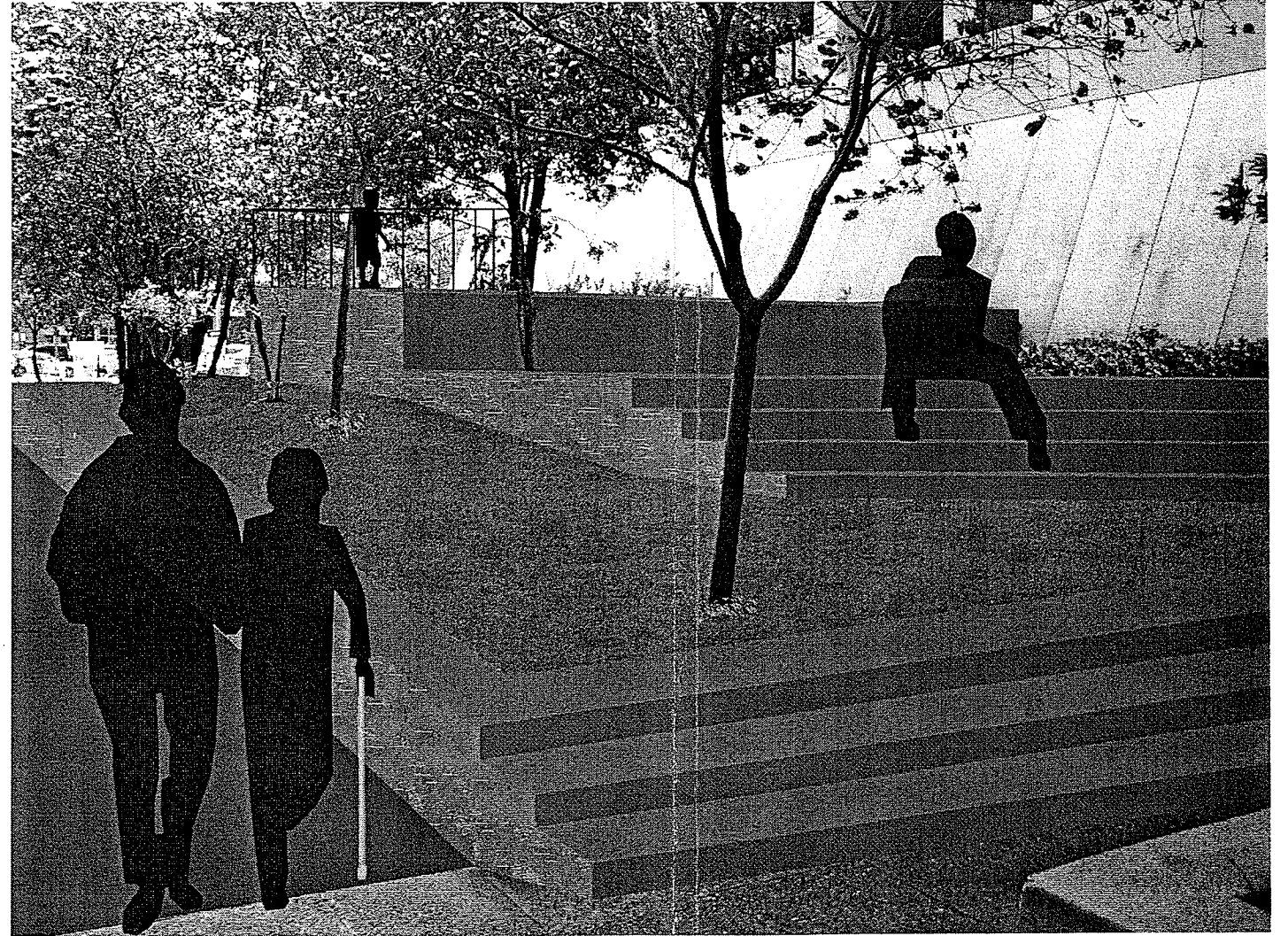


Principle Applied: Sittable Space, Universal Accessibility

Here one can see the footbridge over the pond, sloped into the pathway and made universally accessible.



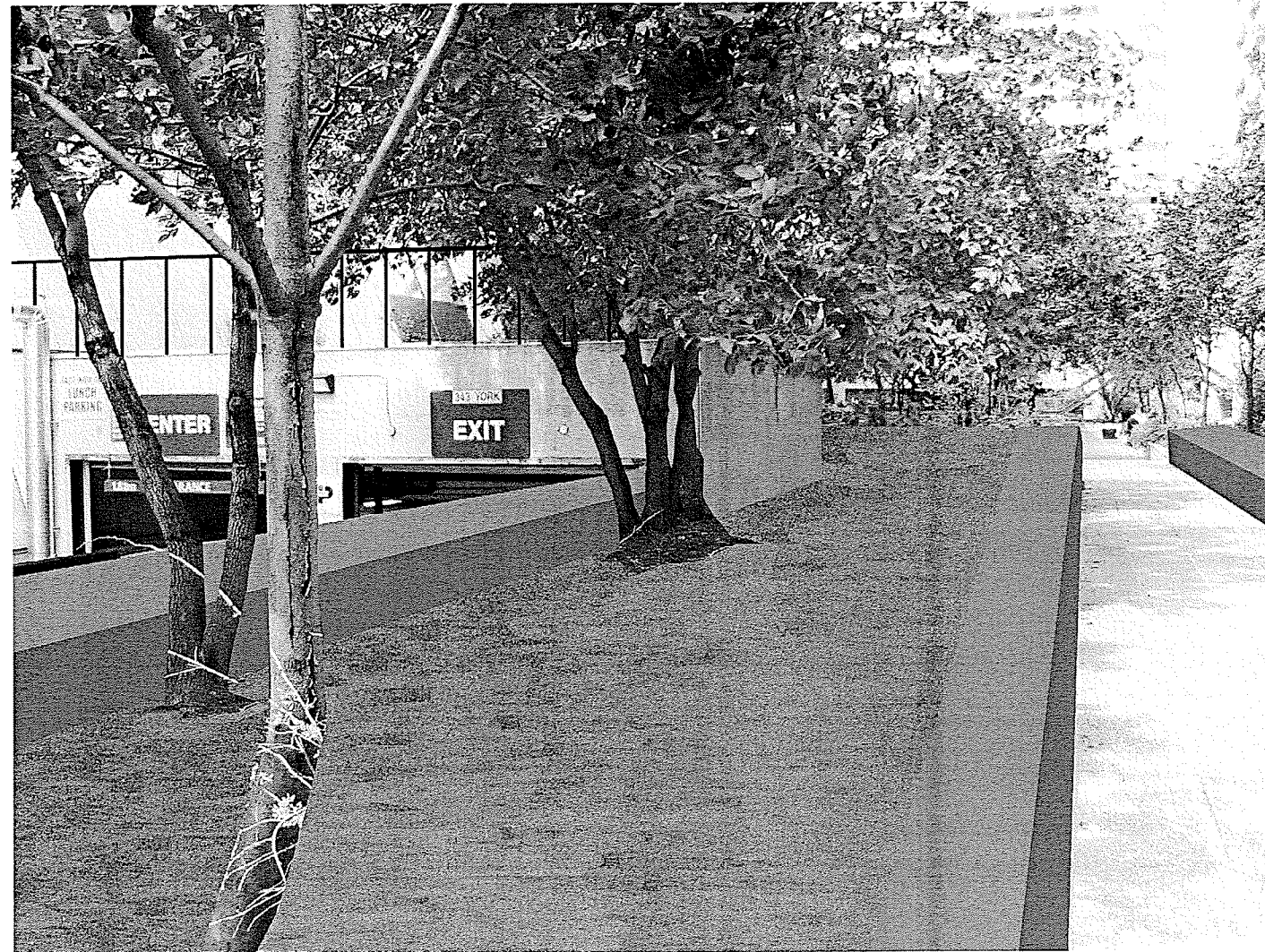
**Fig. 3.16 – Recommendations
Universal Accessibility
Carlton Square Park**



Principle Applied: Sittable Space, Adjacent Property Owners

The area next to the restaurant is developed for outdoor seating. The steps along the pathway leading from York Avenue are replaced by a paved ramp, accessible to wheelchair users.

**Fig. 3.17 – Recommendations
Sittable Space
Carlton Square Park**



Principle Applied: Sittable Space, Adjacent Property Owners

We are looking at the entrance to the basement parking. The railing on top of the entrance door offers people an opportunity to lean on the railing and view the surrounding area.

**Fig. 3.18 – Recommendations
Adjacent Property Owners
Carlton Square Park**

5. Summary

5. Summary

The literature review and analysis of precedent case studies led to determination what works in small urban open spaces in Downtown Winnipeg.

Two small urban open spaces - Air Canada Window Park and Carlton Square Park in Downtown Winnipeg - were analyzed using density calculations, qualitative data analysis, and interviews against the common lessons learned from those precedent case studies and the literature review.

Finally, design principles were developed and successfully applied to redesign the above selected small urban open spaces.

6. Appendix

A. Ethics Approval Certificate

B. Questionnaire

C. Consent Form

D. Copyright

Appendix A: Ethics Approval Certificate

This research has received an approval from the Joint-Faculty Research Ethics Board of University of Manitoba, Winnipeg.



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APPROVAL CERTIFICATE

20 September 2004

TO: Prachi Pramod Rajguru (Advisor A. Tate)
Principal Investigator

FROM: Wayne Taylor, Chair
Joint-Faculty Research Ethics Board (JFREB)

Re: Protocol #J2004:142
"Urban Open Space in Winnipeg, "What Works What Doesn't"

Please be advised that your above-referenced protocol has received human ethics approval by the **Joint-Faculty Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note that, if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

Get to know Research ...at your University.

Appendix B: Questionnaire

Site: _____

Subject No: _____

Time: _____

Date: _____ (mm/dd/yyyy)

1. Gender?

2. Age?

3. Why are you here? What is your purpose?

4. Why here rather than another space/place?

5. How often do you come here?

6. Why did you choose to be in this part of the space than any other part?

7. Do you work here?

*** Thank you very much for your participation in this study ***

Appendix C: Consent Form

Urban Open Spaces in Winnipeg, What works?

Purpose

Urban open spaces through history served three main social purposes communication, trade, and movement routes. Communication and exchange of information takes place electronically, trade is confined to glass enclosed spaces, and automobiles are commonly used form of transportation. The social life of urban open spaces is changing its value through time. This changed the way that urban open spaces are used. Bylaws and zoning regulations make it necessary to have certain amount of open space along with built spaces. These open spaces are poorly designed and maintained for public use. They do not address the user needs. User needs may vary from place to place, but the basic remains the same.

More case studies should be done to find out what works for a particular place. The user needs undergo change with time. Therefore, an ongoing evaluation and consideration for redesigning through time is the main purpose of this research.

Methodology

The research consists of two components: observations and interviews. Observations will be carried out using annotated diagrams, maps, manual notes, still photography, time-lapse photography and video camera. Geographical Information System will be used as a tool for mapping people. The location of people (standing, sitting, and engaged in an activity) in the study area will be recorded with a dot on a map. The location will then be digitized into a map with the aid of GIS.

Interviews will be carried out followed by observations. Your answers will be jotted down in the field itself. Please answer the questions to the best of your ability. Information will not be analyzed on an individual basis. The data collected will be grouped together for further analysis.

Risk

No risk is involved in this project.

Recording devices

You might or might not be video recorded or photographed during the course of study.

Confidentiality

Your names will never be used with reference to this study. You will be identified using numbering system during the data analysis to maintain confidentiality. Only demographics that will be collected from you will be your age and gender. The photographs and video recording done during the course of study will not be of high quality and will be taken at a distance so as not to identify your faces in the photos or the video camera. The information collected through these interviews, photos and video recording will be stored in a locked file cabinet in the department of Landscape Architecture. This information will be kept completely confidential. It will be available only to the researchers mentioned below.

Data collected will be grouped together. It will not be analyzed on an individual basis. All this data collected during the course of study will be destroyed after completion of researcher's thesis and publication of research results.

Feedback

Preliminary findings will be available in the form of a summary sheet by the end of 2004.

- Check the box to the left if you would like to receive a summary of the research. Please provide your e-mail address so that I can contact you when it is ready. If you do not have an email address or access to the computer, please provide your mailing address to receive the summary of the research.
-

Voluntary Participation

Your participation in this study is voluntary. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence.

Ethics Approval

This research has received approval from the Joint Faculty Research Ethics Board of University of Manitoba. If you have any concerns or complaints about this project you may contact either the Human Ethics Secretariat, Maggie Bowman at 204-474-7122 or Head of Landscape Architecture department, Professor Alan Tate at 204-474-7173

This consent form, a copy of which is left with you for your reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you have any further questions or concerns, please feel free to contact the primary investigator, Miss Prachi Rajguru, or the advisor, Professor Alan Tate.

Primary researcher
Prachi Rajguru
Department of Landscape Architecture,
University of Manitoba,
Winnipeg, MB R3T 5V6
Phone: 204-478-7815
Email: prachirajguru@yahoo.com

Research Advisor
Professor Alan Tate
Department of Landscape Architecture,
University of Manitoba,
Winnipeg, MB R3T 5V6
Phone: 204-474-7173
Email: tatea@cc.umanitoba.ca

My signature here indicates that I have read and understood the conditions of this project. I hereby give my consent for, and agree to participate in, this research project.

Participant's Signature _____

Date _____

Witnessed by _____

Date _____

Copyright

Prachi: I am pleased to confirm that you have my consent to use any of the illustrations from *Great City Parks* (Spon Press, London and New York, 2001) that you might wish to use for the purposes of your Practicum as part of the requirements for completion of the Master of Landscape Architecture program at the University of Manitoba.

I trust that this e-mail will be sufficient for these purposes.

Please let me know if you need anything further in this connection.

Best regards, Alan

--

Alan Tate, Associate Professor
Department of Landscape Architecture
Russell Building, University of Manitoba
WINNIPEG, Manitoba, R3T 2N2, Canada

Telephone: (1) 204 474 7173 Facsimile: (1) 204 474 7532

End Notes

End Notes

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