Portage Avenue: A Case Study of Downtown Commercial District Redevelopment in Winnipeg

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 City Planning

THE UNIVERSITY OF MANITOBA

FACULTY OF GRADUATE STUDIES

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CHAPTER ONE: INTRODUCTION

1.1 Preamble

Downtown revitalization is a challenge faced by many urban planners, economists, politicians and citizens. Portage Avenue, the best-known commercial street in Winnipeg's downtown, has lost its position as the city's primary commercial centre, and yet is one of the city's greatest streets historically.

The city has made many efforts, such as the "Portagescape" project in 1998, to change the current situation of Portage Avenue, but a number of problems continue. In this practicum, I consider different strategies and approaches for improving Portage Avenue. The focus of this project is on urban design issues, that is, the physical design and development of the downtown portion of this street (between Memorial/Colony Blvd. and Main Street). The research objectives are to understand:

- How can a great downtown commercial street be built?
- What strategies have been previously undertaken and why?
- What other initiatives could be undertaken to improve the current situation?

The tasks of this practicum are to analyze critically the current physical conditions of Portage Avenue as a downtown commercial street, to evaluate the "Portagescape" project, and to make recommendations for the further development of the street. Both sustainable development concepts and urban design principles provide the framework for this case study of Portage Avenue. As well, precedents from other cities also inform the study. A literature review of the relevant books, articles and

government documents, interviews with key informants, and case studies of other cities' downtown streets development are the principal research methods employed. Recommendations and suggestions are presented in the conclusion.

This study is both important and timely for the future development of Portage Avenue, particularly given current debates over the redevelopment of the Eaton's site. Findings from this research have been shared with the several departments and agencies working on Portage Avenue and/or downtown Winnipeg development. These include the Planning and Land Use Department, Downtown Business Development Zone (BIZ), and the Portage Avenue Property Owners Association (PAPA). The study is also relevant vis-à-vis the downtown development of other North American cities experiencing similar conditions.

1.2 The nature of the problem

Many developers in North America have promoted the suburban shopping mall, and have assumed that the mall is the place for most urban residents to shop rather than downtown. Suburban malls emerged in the late 1950s and the early 1960s along with the rapid development and extension of freeway and urban sprawl. The shopping centre form has captured the market from the downtown over the last two to three decades. Downtowns have declined, losing their position as retail centres in urban life. This is a common situation in many North American cities, including Winnipeg. In the meantime, many urbanites have become increasingly dependent on private automobiles for transportation.

Of the three main urban functions—working, living, and services—the

functions of living and services have decreased significantly. As Roger Kemble (1989: xi) suggested perceptively in his book, "The Canadian City," "it seems our cities are not places in which to ponder, but rather places to rush through and get away from." In my opinion, the shift from an integrated living centre to primarily a work place is the main reason for the downtown's decline.

In most cities across Canada, downtown commercial districts have many perceived weak points compared with suburban shopping malls—no unique goods, congested traffic, not enough parking space, lack of protection from inclement weather, safety concerns, etc. How can we hope for downtowns to compete with malls, if current conditions prevail? In addition, the current decentralization of urban form appears to be inconsistent with urban sustainability.

Using planning and urban design tools to rebuild the downtown commercial district can contribute to attracting people to stay downtown, help them to regain confidence in the downtown, and finally convince people to return to the city core. All these will help to achieve a more compact and sustainable urban form.

If we look at Winnipeg, we can find the same issues at work: downtown is designed as a business centre, not a residential-retail-commercial centre; new developments of both commercial centers and residential neighborhoods are happening at the fringe of the city. One of the solutions to address this crisis is to redesign and rebuild downtown, so that it will be more attractive and convenient for the public. Without at least a comfortable and safe environment, how can we attract people back to shopping and living in a place, no matter whether it is downtown or elsewhere? An underlying premise of this practicum is that creating better physical conditions is one of the first steps to successful downtown revitalization.

Portage Avenue is the main commercial street in downtown Winnipeg. Despite the construction of Portage Place and other projects in 1980s, and the Portage Avenue Streetscaping Project in 1998, present street conditions remain not satisfactory—vacant storefronts, not enough people, and lack of dynamic interactions. Municipal government has invested millions of dollars into the development of this street, but it is still not yet an ideal place for people to relax, meet with friends, and shop, as it was in the past and should be still. The revitalization of Portage Avenue can play a crucial role in the revitalization of downtown Winnipeg. The further development of Portage could inject some fresh ideas and energy for encouraging the revitalization of Winnipeg downtown as a whole, attract more people back to city centre from the suburbs, help reduce urban sprawl, and help Winnipeg develop in a more sustainable way.

1.3 Purpose of the practicum

The objective of the rejuvenation of Portage Avenue is not intended to bring it back to its former glory—as the primary commercial centre in Winnipeg—but to improve its present condition, and as an attractive downtown site, to encourage more urban life. Physical improvement is one of the most important aspects in this process, including design and maintenance of parks, lights and street furniture, and efficient and convenient transportation systems for auto transit, public transit, cyclists and pedestrians.

The initial objectives for developing a set of recommendations, guidelines, and design alternatives may make Portage Avenue:

- beautiful, attractive, and safe for both visitors and residents
- thriving for both business owners and customers

- convenient and safe for private cars, public transit, cyclists and pedestrians
- an attractive place for living
- a good example to convince people of the future potential for this downtown area
- part of sustainable urban development initiatives.

1.4 Research objectives and key research questions

From talking informally with some Winnipeg residents, I found some considered the condition of Portage Avenue as "hopeless." Was this true? How could the situation seem to remain the same when such a big investment in the "Portagescape" project was made only two years ago?

The objectives of my research in Portage Avenue are to:

- understand the area's historic conditions
- evaluate and consider Portage Avenue improvements over the past two decades, particularly the "Portagescape" project
- identify the shortcomings and successes of the former projects
- analyze and outline the current conditions and problems
- make recommendations for further improvements.

Some of the key questions in the research process include:

1. How can we make a "great urban place" in Winnipeg's downtown commercial district?
2. What did the City do on Portage? What were the goals, and were they achieved?
3. What are the strengths and weaknesses of Portage Avenue at present?
4. What will assist in improving street conditions?
5. What kinds of planning and design tools (e.g., traffic management, streetscape design, architecture design) can be used to redevelop Portage Avenue and improve street conditions?
6. How can we achieve sustainability in downtown Winnipeg and Portage Avenue?

(For a list of specific interview questions, please see Appendix B.)

1.5 Research methods

Three research methods are involved in this practicum: literature review, interviews, and case studies.

Literature review: This first stage in the research serves to familiarize the researcher with the existing government reports, studies, books and articles dealing with the historic background, urban centre development, and the relevant planning approaches in this process. The literature review helps to identify problem issues and principles, and guides the research questions and analysis of the avenue. The relationship between transportation systems and land use planning, streetscaping and urban life are addressed. Examples from other cities are also employed, to find "successful" precedents or "unsuccessful" examples from practice. Resources from various disciplines, including engineering, architecture, economics, ecological, landscape and urban planning, are explored.

Interviews: Semi-structured interviews with city planners, city officials and designers who are familiar with the historic and current conditions, and/or who were involved in projects on Portage Avenue, provide practitioners' insights for the practicum. The interviews were divided into two phases. The main purpose of the first phase was to understand the situation and get familiar with historic efforts both on the part of individuals and government departments over the last two to three decades. The second phase of interviews gathered suggestions from interviewees, and tested recommendations and suggestions garnered from the literature review, first stage of the research, and experiences from other cities.

Case study: Case studies are combined with a literature review. Internet

research and photo comparison are also employed. Internet research on other city governments' websites offered practical lessons from other contexts. The photos of street conditions before and after the "Portagescape" project are also compared to show the differences.

This practicum applies urban and street design theories to a real site and real project. The purposes of the research are to obtain theoretical and practical supports from the literature review, and gather information from the interviewees, who are responsible for or are familiar with urban design in Winnipeg's downtown revitalization, particularly Portage Avenue.

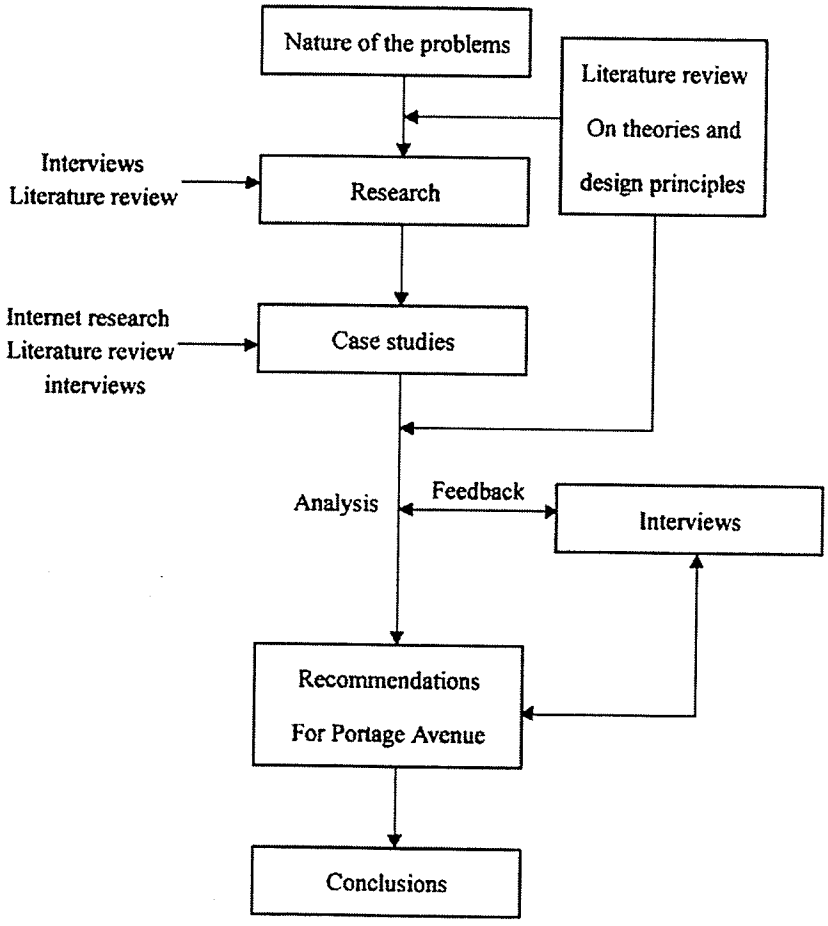


Figure 1. Flowchart of research process.

1.6 Assumptions, limitations and dissemination

This project is based on the assumption that physical changes in the downtown area will affect people's attitudes and lifestyles. An improved physical environment, such as beautiful streetscaping, convenient accessibility, safe driving and pedestrian environment, comfortable and interesting urban spaces, etc. will attract more people back to this place.

To achieve downtown revitalization, political, economic, social, and ecological factors all should be considered. The attitudes and actions from three levels of government, organizations and the non-profit sector, professionals from design fields such as architecture, landscape, engineering, planning, and the general public all influence the result of downtown development. This practicum, however, focuses particularly on urban design interventions, such as physical design barriers and principles. Issues related to urban design and important in the development process of Portage, such as funding, government support, and multiculturalism, are not addressed in this practicum. Inner city problems such as crime prevention and homelessness also have impacts on downtown redevelopment. These issues require further study, but are also beyond the bounds of this practicum.

The results of this study have been shared with several departments and agencies, for the further development of Portage Avenue and the project design and implementation of other streets in downtown Winnipeg. These include:

- Planning and Land Use Department
- Downtown Business Improvement Zone (BIZ)
- Portage Avenue Property Owners Association (PAPA)

- CentreVenture

1.7 Outline and organization of chapters

The practicum document is organized into five chapters. Chapter One provides a general introduction, including the nature of the issues, the importance of the study, research methods and key research questions. It also demonstrates the author's knowledge and interest in downtown revitalization. Additionally, the author explains the objectives of the study, and how the research has been organized and conducted.

Chapter Two features a literature review. It is divided into three sections, exploring relevant literature, including the historic background and current issues. The first section of the literature review outlines the historic background of the area: How did the problems develop? Why and when? The second section focuses on the concept of sustainable development and its relationships with urban form and transportation development. The last section studies some general design principles and guidelines, e.g., street design, transportation system design, and climate protection design in the city core. This chapter forms the theoretical framework and practical basis for the study. Examples from other cities also provide a context for understanding the theories and design principles.

Chapter Three focuses on the current situation and historic context of downtown Winnipeg, Portage Avenue, and the study area. The development of Portage Avenue and a number of developments in the area during the last thirty years are traced, to help to understand the street's development history. This chapter provides a site analysis of the historic and physical conditions of the case study site.

Chapter Four is divided into three parts. The first part focuses on research. The survey results are reviewed and analyzed in order to provide a foundation for evaluation and recommendations. The second part compares the study area before and after the "Portagescape" project, and provides an evaluation of the project at the end. The third part discusses a "new" development within study area—the proposed arena. Both architectural design and social impact are discussed, and design problems are listed.

Chapter Five then makes recommendations for implementation strategies for the future development of Portage Avenue and the arena. This chapter builds on Chapters Two, Three and Four, and features relevant theories, principles, and findings from the research. Chapter Five should be valuable for the future development of Portage Avenue, and offers a convenient reference for developments in other downtown commercial districts.

CHAPTER TWO: LITERATURE REVIEW

------URBAN REVITALIZATION, INCREASING DENSITY, ENHANCING PUBLIC TRANSIT AND CREATING PLACES

Chapter Two features a literature review. It is divided into three sections, exploring the relevant literature, including the historic background and current issues. The first section of the literature review outlines the historic background of the area: How did the problems develop? Why and when? The second section focuses on the concept of sustainable development and its relationship with urban form and transportation development. The last section studies some general design principles and guidelines, e.g., street design, transportation system design, and climate protection design in the city core. This chapter forms the theoretical framework and practical basis of the study. Examples from other cities also provide a context for understanding the theories and design principles, and help to place Winnipeg in a larger context.

2.1 Historic background

If we want to talk about downtown and urban life, there are two things we must be familiar with: What is a "downtown" and what are its functions? Simultaneously, if we want to make plans for the future development of a commercial district downtown, we must know its current problems and the reasons for those problems. Tracing the historic development of the downtown can help us to answer these questions.

2.1.1 History of downtown

When cities first emerged and during their long existence, there was no "downtown" within cities. The city as a whole, acting as the center of people's lives, was a complex and changing matrix of human activities and built environments. The city in history has been a meeting place where people gathered to create wealth, and to share their lives together. One of the main reasons for people to choose to live in or near cities is the number and variety of jobs available. Cities also offer many cultural and recreational activities. The city has been an attractive place for many people for thousands of years. (Girardet, 1993: 38-41)

The population explosion has played an important role in the development process of cities. Within the industrial cities of the nineteenth century, people suffered from overcrowding, poverty, ill health and poor living conditions. It was precisely these hazards and basic inequities that led planners like Ebenezer Howard in 1898 to design and plan for their ideal city form—Garden Cities. Howard proposed separating populations into less dense and greener surroundings for a more livable urban environment. Another attempt from Le Corbusier's Radiant City gave the city another form—a "great metropolis"—a city with an array of high density skyscrapers of glass and steel. The plan of Frank Lloyd Wright was at the other end of the spectrum—"extreme decentralization," in which each home was a basic element of society as a whole (Fishman, 1996: 25). By this time, cities had become central gathering places for their residents—the precursor to today's downtown.

2.1.2 Urban sprawl and suburban malls

The development of the modern city synchronizes with the development of the transportation industry. The history of the city in the last one hundred years correlates with the history of shifts in people's modes of travel.

Before the appearance of automobile and the extension of electric streetcar lines to the suburbs, North America's urban centers were very dense, with factories, shops, and households tightly packed together. Residents had to live and work in a small area—downtown—because the only way to get around was by foot, bicycle, or wagon. The compact settlement patterns at that time are a reflection of the need to minimize travel (Bernick, 1996: 38). Big cities had basically the same form with the railroad, hotels, and a concentration of stores and businesses. "The railroad brought travelers, who in turn sustained the hotels, which offered civic amenities. The stores and other businesses brought more people downtown, both shoppers and employees" (Rybczynski, 1995: 201).

Cars, however, changed the way people traveled, and resulted in increasing decentralization. Private car ownership began in the large cities, but spread quickly to smaller towns. A 1928's report in the Plattsburgh Daily Press of traffic congestion on Margaret Street represented one example of the first appearance of car problems (Rybczynski, 1995: 201).

Historic shifts took place after the Second World War, with the development of mobility and road industry, and the subsequent degeneration of many downtowns. Reliance on the private automobile was responsible for the shift of people's shopping behaviors from downtown retail stores to the strip centres and suburban malls, and

molded cities in a way as it shows today. As Macgovern explained in "The Politics of Downtown Development,"

> "Broad societal forces were exerting a powerfully decentralizing influence over life in the metropolis. Changes in lifestyle preferences made millions yearn for single-family homes with spacious yards and two-car garages in tranquil suburbs far from the congested city. Changes in transportation technology enabled first the upper class and then the middle class to act on those yearnings" (1998: 3).

Especially in the United States, Australia and Canada, low land costs and a cultural preference for low-density, single-family housing lead the middle class to improve its standard of living while making home ownership more accessible. The moving out of the middle class from the city center left the downtown to poverty. The exodus has also led many of the problems within present-day city centers. These kinds of shifts have made downtowns and inner cities unsuitable places for living.

This process has been termed urban sprawl, and includes deteriorated downtown conditions with postwar suburbanization, decentralization, and the development of the automobile industry and road system. Urban sprawl—low-density, extensive land consumption, automobile-oriented development—has resulted in cities moving beyond their existing urban boundaries and city centers, and has caused the degradation of urban spaces.

The biggest factor affecting the development of downtown businesses is the development of suburban shopping centres, which began to flourish in the 1950s and 1960s. Suburban shopping malls have five main identifiable features:

- a number of stores are built and leased by a single developer
- free off-street parking
- located near the center of a planned suburb

- highways or proximity to the main intersections, with lots of bus routes passing through makes it easily accessible and
- a safe and comfortable interior environment protects people from poor weather and traffic dangers (Rybczynski, 1995: 204).

People living in the suburb have become accustomed to these kind of malls, and prefer not to go to downtown for shopping. Compared with some of the characteristics of suburban malls, downtown commercial districts appear "weak" regarding their traffic/parking and shopping environments. Because of space limitations, there are insufficient free parking lots, open spaces, and people suffer from traffic jams and not well protected shopping environments (including both weather protection and safety issues). I think through design interventions, however, many of the problems could partly be solved. We can draw inspiration from other cities' examples, as described below.

Studies of the history of downtowns, the reasons for their demise, and the increasing prevalence of malls may help to understand the strengths and shortcomings of downtown commercial districts, which will in turn help to identify the solutions. The declining of downtown Winnipeg and the Portage Avenue study area is following North American trends, with similar phenomena and similar reasons and. The understanding of general historic reasons and problems of downtown commercial districts could help to explore identified problems in downtown Winnipeg and the Portage Avenue study area, from broader perspectives.

2.2 Sustainable development

Achieving sustainable development is a requirement for the healthy development of this planet and all species living on it. This is also one of the targets for the development of downtown Winnipeg and the Portage Avenue study area. The understanding of the concept of sustainability and key issues relevant to the development of urban centres could help to explore existing problems, generate possible solutions, and draw up the future development policy for downtown Winnipeg and the Portage Avenue study area.

2.2.1 Sustainable development

Throughout the world, scientists, philosophers, economists, politicians, planners, artists and citizens are increasingly demanding that a global perspective should be integrated into strategies for the future. The United Nations' report, "Our Common Future", put forward the concept of "sustainable development" as the foundation for global development policy: "to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 8). Because of limited natural resources and a growing understanding of how humans have damaged the environment, many people have recognized that we are consuming future generations' wealth today. It is the time to stop it, and try to cure the damages towards natural world.

When the concept was first brought forward, sustainable development was an ecological issue, rather than a comprehensive one relative to all the aspects of modern world, e.g., ecological, economic, social, cultural and political development. Today, the

concept of sustainable development is widely accepted by countries and peoples all over the world, conducing successful planning and development of our earth for today and the future. For achieving this goal, environmental sustainability should become the guiding principle of modern urban design.

Sustainable development is a very complicated concept. Building a more sustainable city requires a holistic approach to planning that consider all the factors which make up the physical, social and economic needs of a community and relates them to the greater environment. The comparative analysis and understanding of population, energy, water, transportation, topography, employment and, most importantly, local technology and culture is an indispensable part in this process (Rogers 1997: 53). How to balance the relationship among all the factors in today's society is one of the largest problems for planners.

> "Zoning, building and fire codes, traffic, parking, signage standards, market strategies, financial formulas, and economic development strategies tend to discourage or prevent the right things from happening and guarantee that wrong things will. Doing it right today and tomorrow means shattering the rules of yesterday--especially the rules of city planning and transportation—which persist today" (Gratz, 1998: 1).

Among many issues related to sustainable development, urban form and transportation are two very important ones directly affecting the sustainability of cities and the city centres.

2.2.2 Sustainable development and urban form

In the studies of sustainable development within city, one of the most significant things we should pay attention to is the urban form—how the city is

organized. It is clear that a major strategic factor determining sustainability is urban form; that is the shape of settlement patterns in cities, towns and villages.

Urban form is the concept related to zoning, land use, traffic, buildings, and spaces. It plays a critical role in the development of cities. Different urban forms can lead to totally different results. How should decisions be made for zoning and different land uses? How should decisions be made about forms of transportation and their layout? How should differentiation be made between public and private space?...These are questions we must face while studying urban form. The reforming of city also involves rebuilding of the social, economic and political structures.

Urban areas take up just 2 percent of the world's surface but consume the bulk of vital resources. After the Second World War, The greatest population growth happened in cities. In 1900, one tenth of the world's population, only 160 million people, lived in cities. In 1950, 29 per cent of the world's population were city dwellers. In 1965, it increased to 36 per cent, in 2000, half the world (3.2 billion people) lives in urban areas, and by 2025, it could be at least 60 per cent. The world annual growth rate of urban population between 1965 and 1980 was 2.6 per cent; but between 1980 and 1990, it was as high as 4.5 per cent (O'Meara, 1999: 5; Rogers, 1997: vii). Because of the dramatic increasing of urban population and its crucial functions in the economic and cultural developments, cities are in the key position of achieving a sustainable balance between the earth's natural resources and its human consumption.

The downtown is a very special place within cities. It is the central, oldest, historic part of a city, and plays a critical role in urban activities and development process. The size of the downtown/city is not large compared with rural or suburb

areas, however the energy it consumes and the pollution it produces are much more than other places, and its infrastructure is much more complex than others parts of the city. The downtown is usually surrounded by well-developed areas, thereby constraining any future expansion. All of these factors make downtowns the most important candidates for sustainable development and the most difficult candidates for achieving successful sustainable development. The form and activities of a downtown have a vital influence on the development of the city. For the downtown area, because of the need to support particular functions and characteristics, its form must be different compared with other parts of a city.

The city is the place for market competition. Trade and industry are the life-blood of cities. To encourage urban economic development, one of the greatest priorities is to create attractive places, where people like to meet, and exchange goods and services. We have two choices for doing this: we can build new pleasant centers, or we can rebuild and redevelop the old ones—city centers/downtowns. It is obvious that to renovate the current neighborhoods and downtown is much more economical and acceptable than to build new centers in suburbs on the same principles. Repair and rejuvenation of existing places is the most efficient means to resist urban sprawl (Gratz, 1998: 109). Downtowns offer existing compact centres within cities. "The downtown location has a number of clear advantages. It is centralized. It is positioned as the hub of the regional transit network. It has a wide circumferential trade area and sphere of influence" (Simonds, 1994: 105). By building on the strengths of its current form, renovating the downtown using sound modern design principles can result in the best solution to a sustainable city. A compact and thriving downtown will in turn affect the loose urban form, and stop the sprawl.

In modern urban areas, the concept of sustainability is often applied to "urban renewal" and "re-development" projects. These redevelopment sites represent important opportunities for achieving urban sustainability.

2.2.3 Sustainable development and transportation

Transportation has been the major factor affecting the form of settlement in the history of human society. "Transportation is the way cities are structured and organized" (IALF, 1976: 17). The more transportation developed, the more movement and settlement choices people will have.

What is transportation for originally?

> "The purpose of transportation is to bring people or goods to places where they are needed, and to concentrate the greatest variety of goods and people within a limited area, in order to widen the possibility of choice without making it necessary to travel" (Mumford, 1958: 236).

If we follow the historic development of twentieth century cities, we can find that urban areas developed in parallel with the advent of cars. The development of transportation routes and the production of automobile made it possible for people to live in the suburbs while still working in city centers. Today, it is cars not people that dominate the city. For decades, automobiles in North America have been taking a greater share of urban space. Cars and the spaces relative to cars—parking lots, roads—have occupied huge amounts of urban space. A study shows that an efficient parking standard requires 20 square meters for a single car. The street, once the local playground and general meeting place, has been taken over by parked cars. Road

construction is ever increasing. The more roads are built, the more they will fill up with cars (Gratz, 1998: 33-7).

Research shows that nearly one-third of land in cities is devoted to car related land use. For example, Midtown Manhattan: 41% of the ground area is given over to streets (IALF, 1976: 79)! It is such a big problem. Cities have been developed as the vehicle-friendly environments, but not pedestrian-friendly areas.

In addition to space requirements, other serious problems with cars are the energy consumption and air pollution. Today's motor vehicles cause massive air pollution. This affects human health and also causes significant damage to trees and wildlife.

We are used to suburban traffic design style. Speeding traffic, the absence of buffer between fast vehicles and pedestrian walkways, and the elimination of sidewalk furniture and plantings—all traffic engineering solutions—have degraded urban streets from a "place" to only a passing corridor. Suburban traffic design style is not suitable for urban centres. Excessive numbers of automobiles are being recognized as the major root of urban problems. If we want to leave a sustainable and livable city for our next generations, urban design should be a helpful tool to shape and lead the future transportation development.

Many experts, such as Jacobs (1961) and Gratz (1998), are asking the same question: is it the time to rethink the standards associated with traffic, particularly the traffic in urban centres? The answer is so simple: "Think of living first, leave the traffic for later---for the roads have taken up the most desirable sites" (Kemble,1989: 12). There are three facets in the rethinking of transportation: 1) How can we take more space from traffic and bring it back to people? 2) How can we create more comfortable

spaces for people living in cities? and 3) How can we separate vehicle traffic and the pedestrians?

One hundred people in a bus need only 40 square meters of road space. In contrast, 100 people in single occupancy cars need approximately 2,000 square meters. Fifty times more! This comparison illustrates a stark reality: cars and their demand for roads have shaped modern cities (Girardet, 1992: 146). To encourage residents to use public transit or bicycles and take more walks, and the efficient energy consumption and land use will leave more space and resources for the future, and make the city more sustainable and would be helpful for the first question.

For the second and third questions, the approaches are more about physical design in urban areas, which can be achieved in the short term and produce the most immediate results. Rethinking the downtown transportation system is crucial for its revitalization. Calming traffic, narrowing streets, widening sidewalks, and adding curbside parking and sidewalk furniture are all helpful for making downtown streetscapes more attractive for shoppers, workers, diners, and visitors (Gratz, 1998: 89). Another opposite issue we also need to think about is how to avoid people who would like to drive never come to the downtown again for the inconvenience of the vehicle traffic.

Because of space limitation, the reform of transportation systems in downtown is crucial for downtown's livability, comfort, and sustainability. "The more people who come to the city by car, the more who decided to stay out because of the congestion" (Simonds, 1994: 96). Therefore, this reform can not only be limited to the core area but also should include the city as a whole. Including sustainability, and holistic analysis in urban design processes can help to sustain the downtown and the city.

Sustainable development is also the critical requirement for Winnipeg's future development. The Portage Avenue study area is located in the centre of downtown Winnipeg. The purpose of revitalizing the study area to be a "people place" is not just for the development of this specific street with rich history and memories. It also plays a significant role on the sustainable development of the City of Winnipeg as a whole.

How to achieve revitalization within the study area is the challenge for us. There are many design principles and precedents that can help us to develop a set of recommendations, guidelines, and design alternatives suitable for the Winnipeg context and the Portage Avenue study area.

2.3 Creating "places" in urban centre commercial areas

Creating urban public places to be shared by people living in cities is important. Making these spaces more pedestrian friendly is also an imperative component. There are several factors involved, e.g., reviving street-oriented activities, creating attractive and comfortable spaces, taming of cars and calming of traffic.

Creating more socializing places in the urban center could help to attract people back to the city centre and build more vibrant urban spaces, which will in turn contribute to sustainable development beyond the central area. In addition, because of space limitations, a well-designed urban centre will reduce required commuting and over-reliance on the use of the automobile, is crucial to achieving urban sustainability.

Today, many people are feeling hopeless and skeptical about the future of city centres. Some think it is important to have a headline-grabbing project for the downtown to enhance the image of public spaces in a short time and attract broad

public attention. But image change does not have to be a big investment and short-term one. Some people believe that small-scale continuing efforts are more crucial for downtown development. Small steps invariably lead to big ones. Quickly achieved small changes might help to convince people about the merits of long-term development.

For the revitalization of downtown commercial streets, one of the most important parts of downtown, in order to convert them into interesting gathering places, many approaches are involved and many design guidelines and strategies are applied in this process.

2.3.1 Place-making downtown

Streets as public spaces manifest the social and economic characters of cities. There have been many projects in North American cities to redevelop downtown streets as socializing places, e.g., Whyte Avenue in Edmonton's downtown and 16th Street in Denver downtown.

Making more "places" downtown is the requirement for almost every city.

> "Place makers help us to restore a feeling of belong, and with it perhaps a sort of inner harmony...They gain us a certain grace, both intangible and yet profound, which has gone out of the lives of a generation whose sense of place was eclipsed by the automobile and whose feeling for community has registered in no more palpable image than the shopping mall" (Fleming and Tscharner, 1981: 8).

This does not mean that the work of place-makers will become a panacea for urban ills.

For downtown revitalization there are some common principles and standards. One of the key success principles is to create a "24 hour place". The retail district is the most feasible site for this goal, as compared with downtown business district (only busy at daytime) and entertainment district (only busy at night). A 24-hour place needs a total revival of "a morning, noon, and night culture" (Weiss, 1998: 62). A downtown commercial area is supported by people. Attracting people and keeping them there is not only relevant to physical urban design, but also concerns people's feeling about a place, economic conditions and other factors affecting human behaviors. Regarding its location and characteristics, a downtown commercial district should have its unique development form, different from suburban shopping malls.

Based on unique conditions, each street should also have their own innovations based on local environment and history. Otherwise there are some common design tools and principles to enhance a street; i.e. building parks, calming traffic, widening sidewalks, maintaining streetscapes, adding street furniture, and decorating storefronts. Through urban design, a pleasant public environment can be created, and a street can be transformed from a traffic thoroughfare to a public gathering place, as Fred Kent said, from "nothing to something" (Gratz 1998: 95-96). For downtown commercial streets, such requirements are basic requirements.

Many successful examples of applying urban design approaches to make "places" in downtowns are described in Gratz's (1998) book *Cities Back from the Edge*. For example, the urban revitalization of Mansfield, Ohio began with a new playground in 1984. The North Main Street in Mansfield was the entryway into the city from the highway, which used to be stagnant in 1980s. The idea of a carousel came from a meeting of the Chamber of Commerce to think of new ways to bring people back

downtown. The carousel opened on Labor Day weekend in 1991, and worked well. It became a great place for residents and encouraged commercial development in vicinity (Gratz, 1998: 9-19).

The current urban revitalization plans should not be separated with the past. "There is nothing more relevant than the past as a building block for that future. The past offers lessons on which future alternatives can be based, alternatives to Project Planning" (Gratz, 1998: 3). Each city's innovations should be clearly tied to local conditions and histories. For Mansfield, the carousel was the small step necessary to lead the city to future possibilities. But carousels are not the answer and resolution for every city and downtown. In other words, what works in one place may not work in another context. Each city must "seek to discover how objects in the environment can create value for places in the future" (Fleming and Tscharner, 1981: 8).

For downtown Winnipeg and the Portage Avenue study area, their revitalization must be based on the history and current conditions of the city and the street. The studies of historic development and current conditions in Chapter Three and Chapter Four will help to develop the recommendations for the study area.

2.3.2 Street Design

Portage Avenue is a very important street in Winnipeg. The studies of street elements and design principles and the comparison with the current situations of the study area will help identify the existing problems and contribute to the recommendations for the redevelopment of this area.

A street is not only a linear pathway, but also one form of public space. Good street design involves consideration of each street element, e.g., beginnings and ends, street furniture, plants, buildings, spaces, street furniture and arts, maintenance, etc. Economic and social development can not be successful without the support of appropriate physical environment. A well-designed street should also be a public place. By encouraging pride of a place, it helps to stimulate a "connection between objects in the environment and the layers of association that environment often contains in the memories of its inhabitants" (Fleming and Tscharner, 1981: 8).

Definition

Vernez-Moudon and Laconte (1983: 4) defined the word street as "an adequate descriptive category or whether it should be defined in terms of a public-private continuum or in terms of activities and uses". This practicum focuses on the functional definition. The main functions and activities associated with a commercial street should be relevant to pedestrians. The design of commercial streets then should be focused on the needs of pedestrians. Such design is different from highway design, in which priority is given to wheeled vehicles.

Physical requirements for successful streets

There are many great and successful streets all over the world. Most are famous for pedestrian activities on the street. The most important feature for a good downtown street is that it should be a public place for people to walk, to stay, and to enjoy. It should be more than just a pathway, it should "bring people together, help build community, cause people to act and interact, to achieve together what they might

not alone" (Jacobs, 1993: 312).

Certain physical characteristics are required for a good street. Many of them are directly related to social and economic criteria. It can be difficult to isolate physical features from interrelated social and economic activities. It can also be impossible to distinguish clearly whether it is social elements or physical setting that make a street memorable in a positive way (Jacobs, 1993: 270). While recognizing these issues, this practicum focuses on the physical factors affecting streets' comfort, safety, and attractiveness.

Design elements

A street is a public place for people to walk in a leisurely fashion. It must also be physically comfortable and safe. Bricks, pavement, walls, benches, trees, sculptures and many other things can help to express the distinctive features of a socializing place. There are six factors directly affecting human feeling and behaviors in streets: plantings, beginnings and ends of the streets, buildings along the streets, spaces, street furniture and art, and maintenance. (The safety problems related to cars will be discussed in the transportation section.)

1. Trees:

If we look at the great streets all over the world, there is one element that makes them comfortable and attractive that we cannot ignore—trees. Trees, as environmental art, "always serve as place makers. Their growth provides a perspective on humankind, and, in more recent times, their protection has occasionally resulted in the designation of space for public use" (Fleming, 1982: 80). Independent of whether it

is a residential or a commercial street, trees and other plantings could give the street a natural looking and comfortable feeling. For example, River Heights in Winnipeg has many tall and old trees along the streets to enrich the street space and keep visual continuity.

Figure 2. River Heights: trees enrich the street space and keep visual continuity.

Trees provide oxygen. Their green color help people feel relaxed, and leaves give people shade for comfort. In addition, given a limited budget, the most effective expenditure of funds to improve a street would probably be on trees. Moreover, for many people trees are the most important single characteristic of a good street (Jacobs, 1993: 293).

In terms of helping streets to work functionally, placement, planting and maintenance are key elements for street trees. Streets are linear and narrow. Trees linear planted along a curb or even in the driveway are effectively used to separate pedestrians from vehicles. To be effective, street trees need to be planted reasonably close together.

In practice, the most effective tree spacing is from 15 to 25 feet (4.5 to 7.6 meters) apart. Tree location should avoid street corners by 40 or 50 feet (12 to 15 meters), for reasons of sight lines and therefore of auto safety (Jacobs, 1993: 294). To keep visual continuity along a street, the spacing of trees, once started, should not be stopped.

The choice of tree species is another important consideration for the street tree plan. Deciduous trees, such as maple and ash, are often more appropriate than evergreens, such as cedar and spruce. Deciduous trees are overwhelmingly found on streets for reasons based on their characteristics. Their benefits shift with the weather and human needs. Deciduous trees provide shade in summer while people want cool, and permit sunlight to reach the street in winter when sunlight is desired (Jacobs, 1993: 294). The selection of trees also depends on weather conditions. For cities like Winnipeg, street trees must be able to survive extremely cold weather.

Moreover, the maintenance of trees is much cheaper compared with that of buildings and street furniture. "Street trees are a high-priority item on which to spend funds that could have a major environmental impact" (Jacobs, 1993: 295).

2. Beginnings and ends

Every street has a beginning and an end. Some streets have clear physical marks to mark their endpoints, and some do not. These marks often act as public markers or nodes, such as squares, plazas, or signs, to remind people of the name of the place. For example, Cours Mirabeau's start is marked by a grand circle, and it is end at Place de la Rotonde, with the much more modest and more compelling Fountain du Roi Rene (Jacobs, 1993: 298). Another example from Winnipeg is Osborne Village, which is a popular street for its bars, restaurants and youthful themes. At "Confusion Corner",

the entrance to Osborne Village (so named for the convergence of several streets at odd angles), there is a big sign, which says: "Welcome to Osborne Village."

It does not seem reasonable that every great street has to have something special to mark its beginning or end, but this concept is important to make a street different from others and should be considered. The examples of many streets show that when beginnings and ends are well done, they contribute in significant ways to the street (Jacobs, 1993: 295-7). In downtown Winnipeg, Portage and Main, which is the most famous intersection in the city and well-known in Canada, should have some kind of special feature that attracts people and shows its glory.

3. Buildings

Buildings along the street are another important element for street design. Buildings define the boundary of a street, significant affect the visual qualities of streets. The design of building's edge includes two parts—one is the building's actual facade, and the other is the buffer space between building and the street. (The buffer space will be discussed in Space section.)

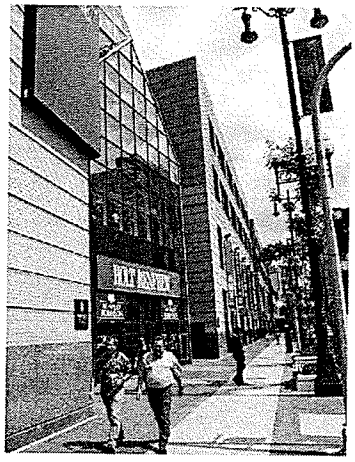
As with trees, buildings should be continued along the street. There are two kinds of diversity, physical and social. Both are very important for the diversity of the street development, and they are interrelated. Physical diversity shows in windows, maintenance, landscape, color changes, spaces and minor changes of buildings over time. Meantime, social diversity manifests in the various uses of buildings that attract mixes of people from all over a city or neighborhood, which in turn helps build community (Jacobs, 1993: 297).

Buildings are the stable elements along the street, and they are one of the main factors in attracting people. Firstly, buildings use their well-decorated windows and doors to attract eyes. Jacobs emphasizes the importance of windows and door on the street as well as acting as entrances or natural lighting and ventilation facilities. For a building on a downtown commercial street, unlike a building on a residential street, the most important function for windows along the street is not just lighting, but attracting people's attention and inducing people to come in. Windows invite you, show you what is there to sell or buy, and entice you. One of the major functions of well-decorated and maintained windows and doors is to encourage consumption (Jacobs, 1993: 285-6).

Secondly, buildings themselves also attract attention. The details of a beautiful building's facade, with frames, trims, columns and other architectural elements, can be amazing. They work with the magic of light to act as static but ever-shifting elements. Light moves over them, and the surfaces change in lightness, darkness , shadow and density, and therefore in color. The changes may be slow but they are continuous. Complex building facades over which light can pass or change make a far better environment for a commercial street than do more simple ones, which are more suitable for streets carrying fast drive vehicles (Jacobs, 1993: 283).

Facades reflect the historic and cultural stories of the street and the area. Comparing the two facades of the Bay and Portage Place in downtown Winnipeg, which are separated by only Portage Avenue, we can clearly see traditional and modern building styles (See Figure 3). The diversity of street facades attracts people to come to the street.

Figure 3. The Bay (left) and Portage Place (right) in downtown Winnipeg.



Moreover, facades, as a sort of streetside advertising, are directly related with improving sales on a commercial street. Fasade renovation is frequently chosen as the solution to visual problems or to give a sense of freshness to an old building. There are three approaches to renovate a facade: the patch-up approach, the new image approach, and the enhancement approach (Fleming, 1982: 97-102).

The redevelopment of the Old Santa Cruz County Courthouse in California offers a good example of a combination of physical and social redevelopment: facade renewal and mixed-uses. The survival of Courthouse was expressed by its facade change: "from a single, somewhat stern entrance to a terraced, landscaped space opening onto an open garden mall around the corner from the original entrance" (Fleming, 1982: 50). The old Courthouse was redeveloped to a mix of about 20 shops, galleries, and restaurants. A new entrance for improving street access and better internal circulation, a patio for an outdoor cafe with wooden planter boxes and wrought

iron lights and trellis work, a new painted sign and a mural help the old building to tie itself with the surroundings commercial circumstance (Fleming, 1982: 51-52).

Buildings along the street affect the street by their functions, facades, decorations, entrances, and windows. Every new building and new storefront decoration will give the commercial street a different look and feeling. This requires that we should be very careful on the new buildings and facades along Portage Avenue, such as the A & B Sound and Mountain Equipment Co-op, particularly the design of the Arena on the site of the Eaton's.

4. Spaces

Public spaces in streets differ from spaces in squares and plazas, as they are organized linearly, and tightly combined with other street elements: buildings, plantings, fountains, and etc.

Buildings provide a boundary for the street. They function to create interesting spaces along their edges. In "Great Streets," Jacobs points out a concept of "transparency" (p.285), which expresses "where the public realm of the street and the less public, often private realm of property and buildings meet". The transparency of the edge provides the possibility of seeing or having a sense of what is behind the wall. Usually it is windows and doors that give transparency. The transparency can invite inside spaces to outside, and vice versa, to create complex and interactive spaces.

This transparency not only welcomes and entices people, but also gives them a safe feeling when they walk on the street. A very important part of feeling safe comes from being with people and being watched by others. For both inside and outside people, transparent windows and doors can help them watch each other.

In addition, there exists another special zone at buildings' edge to build comfortable public spaces for pedestrians. The facade of buildings on a commercial street, particularly at ground level should be more complicated and include more details to meet human scale and the requirement of attracting commercial attention. The design of the building frontage on a commercial street also differs from highway design. With small spaces along buildings for people to sit or for vegetation, the street will look more interesting than a straight pathway (See figure 4. and 5.). Both figures provide good examples of how to create interesting human friendly sidewalk spaces. One issue needs special consideration for this design is to make sure these small spaces are going to be well used and won't turn into unsafe corners.

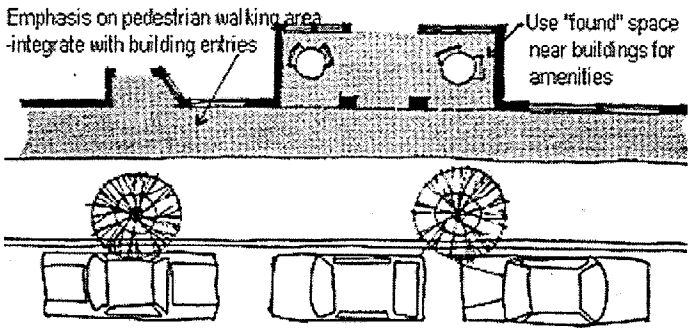


Figure 4. Concept – building/sidewalk integration
(Vernez-Moudon and Laconte, 1983: 306)

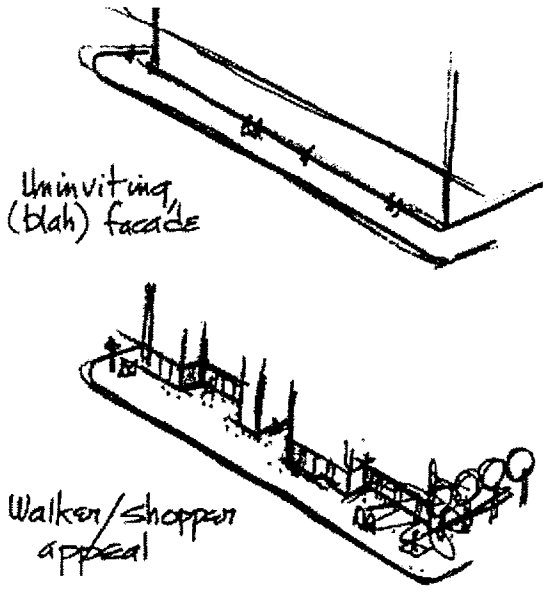


Figure 5. Pedestrian level building frontage.
(Simonds, 1994: 97)

However, a great street is not characterized by outstanding, individual architectural wonders. Complementary appearance is very a key point for street design. All buildings should fit with each other and the street environment (Jacobs, 1993: 287-9). Harmonious relationships between buildings, buildings and sidewalks, and buildings and other street elements work together to create a "great street".

This section helps us to re-evaluate the spaces along Portage Avenue and gives us some suggestions on how to organize urban spaces, such as bus waiting areas, pedestrian pathways, rest zones, and parking spaces. It also helps to evaluate the "Portagescape" project.

5. Street furniture and arts

When people visit a street, they will easily remember some of the details and design features on streets that are special. We can often overhear this kind of remark: "The street lights are so beautiful." "I love the fountain in the corner—it is so great." Small street elements can elicit significant human emotion. Details contribute a lot to a great street and can add fun to the street: gates, fountains, benches, kiosks, paving, lights, signs, and canopies can all be important, sometimes crucial (Jacobs, 1993: 298). In addition, if the design is relevant to local history or culture, it also makes people be proud of their community.

Seating

A great street, as a socializing place, should attract people to stay in and enjoy the space it creates. Vibrant human activities are key for making a commercial street successful and vivid. Certainly people can stand on the corner and talk to each other, but seating can induce people to stay on the street and provide for a more active street life. Seating helps to support human activities: permitting rest, inviting conversation, waiting for friends, passing the time and watching the street. "People tend to sit most where there are places to sit... Whatever the attractions of a space, it cannot induce people to come and sit if there is no place to sit" (Whyte, 1988: 110-2). The design of seating is very important for making successful street spaces. If well-designed, seating can act as sculpture to decorate the street, and encourage people to stay on the street. (See Figure 6.) Most of the best streets have benches, such as Paseo de Gracia and Cours Mirabeau (Jacobs, 1993: 6). In downtown Winnipeg, many streets have seating facilities, including Portage Avenue. (See Figure 7.) A problem often combining with

seating is the possibility of these seats becoming sleeping places for some homeless people.

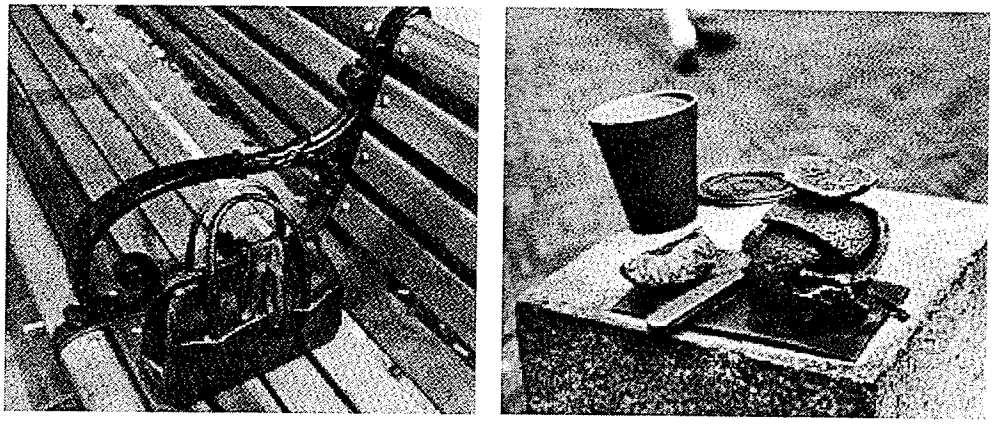


Figure 6. Chelsea Handbag and Luncheon Items in bronze, Chelsea, Massachusetts (Fleming and Tscharner. Place Makers: Public Arts. 1981: 69)

There are many kinds of seating on streets. The two most common are benches and integral seating. Benches integrating public art are most often designed with a modular or symmetrical form, which is pleasing in plan view (Whyte, 1988: 116). Benches can be separated from each other to create a feeling of private and space for users. Depending on how benches are placed, they create the different type of spaces—quiet or busy, single or group.

Integral seating is more flexible and informal compared to benches. Steps or ledges, which are wide enough for people to sit are considered integral seating. Integral seating can be built with planting, sculptures, fences, and almost anything with an edge. It won't be the most comfortable kind, but its flexibility and harmonization with environment make it a good choice in urban design (Whyte, 1988: 112). When the street is not busy and no one is sitting, integral seating is part of functional facilities and

the street won't look empty like the one with many empty benches. In busy hours, it can easily become a gathering and resting place for people. (See Figure 7.)

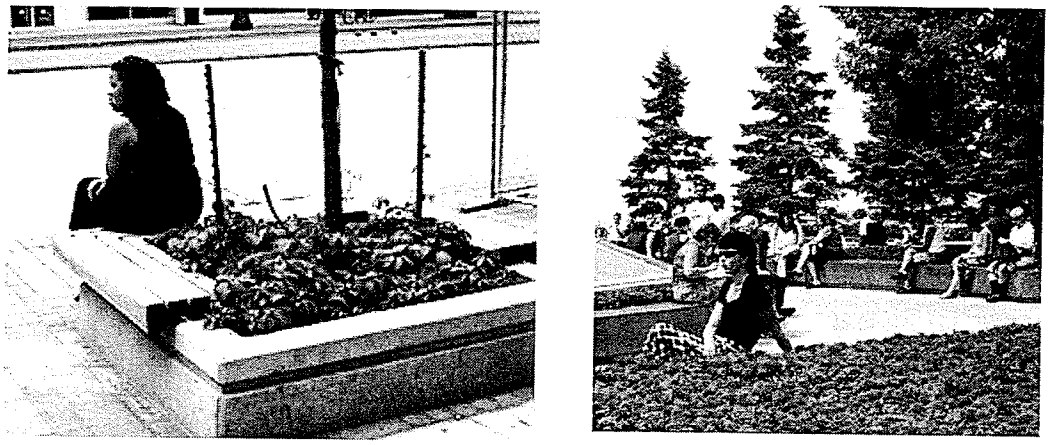


Figure 7. Seating facility on Portage Avenue:
Benches (left) and integral seating in TD Plaza (right)

Signs/bans and informative signages

Figure 8. Ad Signs in HongKong
(http://www.photoguide.to/hongkong)

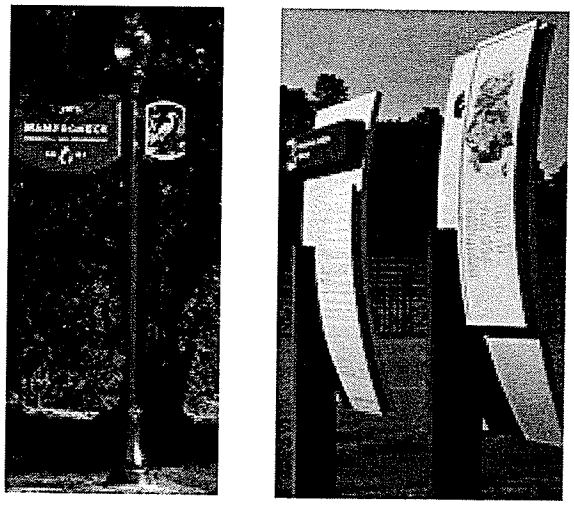


Figure 9. Signs and arts.
(Finke, Gail Deibler. 1998: 17,21.)

Signs are another crucial element of commercial streets. They help define a street and market businesses. "A sign is often the primary identifying feature of a business, the link between a building's exterior and the business inside. A good sign can help a business by making it distinctive. It pinpoints a store's location on the street and makes the business easy to find, creates an attractive image for the store, and encourages passers-by to venture inside" (Fleming, 1982: 106).

When thinking about great commercial streets, many people think first of neon signs, beautiful windows, and crowds of people. Signs not only decorate streets, but also have the magic to give people the desire to shop (Jacobs, 1993: 282). Street signs can be so demanding and insistent on encouraging shopping, however, that they can overwhelm the street entirely, and actually make the environment disorienting, as in Hong Kong (See Figure 8.).

Illumination is a commonly applied approach to highlight and decorate the sign and create visual attraction at night. Illumination can come from either inside or outside the sign. For example, neon is an internally-lit type of sign that can be very effective, and is suitable for smaller signs. On the other hand, spot lights and floodlights can be aimed as required, and can be used on a bigger area. They will balance the color of the buildings and window lights (Fleming, 1982: 108).

Downtown Philadelphia offers a very good example for making special "places" part of the renewal of downtown and downtown retail streets. Downtown Philadelphia tackled the same problems as downtown Winnipeg and many other North American downtowns after the Second World War. Fifteen thousand suburban shopping centers were built from 1955 to 1977. This resulted in the closing of most

downtown department stores and the decline of downtown retail business. The strategy a Philadelphia organization—CCD (the Centre City District)—used to promote evening shopping in the downtown did not invlove new techniques, but techniques borrowed from the suburban shopping centres—advertisement and entertainment. Radio, signs, cards were used as advertisement all along the street. Street entertainment was offered for families and children, just as the suburban shopping centres did, to draw crowds to downtown streets (Barnett, 2001: 187).

For people not very familiar with the city, information signs and kiosks can be helpful. They make the downtown and the streets friendly to tourists and people from the suburbs that haven't been downtown in a long time. Information kiosks can serve multi-purpose functions, such as public service, tourist information, ad posters, and map display (See Figure 9.).

Well-designed signage programs and information kiosks can only improve the downtown environment. Philadelphia designer Virginia Gehshan says:

> "Cities are so chaotic that signage is one of the ways you can help people find their way and make them feel they are not in a hostile place. It keeps people coming back to cities instead of retreating to a shopping mall. Cities have a wealth of culture and diversity that you don't find in the suburbs. Signs can make that richness and diversity visible to the inhabitant as well as the visitor" (Virginia Gehshan quoted in City of Winnipeg, 1997: 4).

Furthermore, signage is good for business. The International Downtown Association (IDA) feels signage invloves a low-cost investment which can generate priceless long-term dividends. Dee Doyle, IDA spokesman, says:

> "Clearly graphics and signage are part of the revitalization of an area. A mall that markets itself well with signage and graphics is a mall

> that will be well attended. The programs and services you find in a mall are also the ones that you have downtown. How are you going to share your city with people if you can't tell them how to get there or what to see or do" (Dee Doyle quoted in City of Winnipeg, 1997: 4)?

In downtown Philadelphia, a new comprehensive, graphics system with color-coded maps has been developed and installed on every block, showing people where they are and what is within a ten-minute walk. The map is designed to be very convenient and easy to use. People do not need to turn the body or map to orient themselves. North is not always at the top of the map; the direction you are facing is at the top (Barnett, 2001: 189).

It is obvious that signs cannot solve the deep-rooted cultural or social problems of a city, but they can improve its image, foster civic pride, increase tourism, improve business and spur new development. A well-designed signage system will enhance the integrality of downtown Winnipeg and provide people with a feeling of safety within this area. The provision of a integrated signage system would be a great asset for Winnipeg.

Other street details

In addition, paving patterns, streetlights, fountains, telephone booths, newspaper kiosks, mailboxes, waste receptacles, planters, awnings, and canopies are all good complementary elements to attract people to a commercial street. Well-organized public spaces will need to use many of these design factors and details. They can help make a particular street great, though a great street does not depend on them.

Street art should not only be viewed as the artists' creativity, but rather as a "mechanism for challenging that creativity to respond to the context of a given environment" (Fleming and Tscharner, 1981: 114). It should be encouraged by government support and regulations, and be included in the urban and landscape design process to ensure the quality of urban spaces. Every city should work towards developing a strong public art programme.

"Portagescape" is the project to beautify the street with the consideration of functions. The studies of "Portagescape" in Chapter Four can help us have a better understanding of what existed, what is needed, what is good, and what is not good from the landscape point of view.

6. Cleanliness, maintenance and safety

Cleanliness, maintenance and safety are three interrelated elements in downtown redevelopment process. In people's minds, a clean and well-maintained street is a much safer one than a dirty street with dilapidated facilities and graffiti. People would prefer to walk along a well-maintained than a poorly maintained street.

Physical maintenance is as important as any other requirement for great streets. Maintenance involves the use of materials that are relatively easy to clean and maintain, and street elements for which there is some history of caring (Jacobs, 1993: 291). Cleanliness is part of the maintenance. Cleaning the streets, emptying trashcans, and removing graffiti are all required basic maintenance for the downtown. In addition, maintenance is also relevant to maintaining utilities on the street, e.g., water and power. The physical appearance of the urban environment affects people's attitudes about a place.

Within Philadelphia's downtown redevelopment, safety and cleanliness were considered seriously, and appropriate strategies have been undertaken since 1991. These strategies supplement, but do not replace, city services. Both municipal employees and private-sector workers clean the streets, empty trashcans, clean each sidewalk from curb line to building line three to seven times a day, and remove the graffiti. These actions have really changed the image of downtown. The results of these works were tracked. The frequently conducted customer satisfaction surveys showed that the people felt downtown was much safer and attractive (Barnett, 2001: 185-186).

Streets serve as locations of public expression and identify, and should be physically comfort and safe. Well-designed and maintained street elements will help enhance the feeling of comfort and safety along a street. Though many streets share some of these characteristics, not all streets having them are great. The studies of each street element on Portage Avenue in Chapter Three will help to identify the problems, find the weaknesses associated with existing elements, and develop recommendations for improvement.

There are more factors, such as the transportation system, climate protection system, and the impact of surrounding areas, that affect the success of a street.

2.3.3 Transportation system design

The transportation system links all parts of a city. For a downtown commercial street, the issue of transportation is crucial for its success. It should be easy to find convenient parking which is safe for both pedestrians and cars. The transportation requirements, e.g., accessibility, traffic control, and parking, need careful consideration

and cooperation between planners and transportation engineers.

Accessibility

Accessibility is a very significant concern for most streets. Accordingly, streets that are accessible to all, easy to find and easy to get to, have a greater possibility of being successful. Accessibility is the first criterion Allan B. Jacobs defines for "great streets" (1993: 8). Accessibility has great importance for downtown commercial streets, whose purpose is to attract people to come, stay, live and shop.

There are three kinds of accessibility requirements that should be considered:

i. people must be able to get to the street from all parts of the city with ease

ii. people must have convenient choices on how to get to the street—e.g., by car, by bus, by foot, or by cycle

iii. people must be able to traverse all parts of the street with ease.

Commercial streets such as Portage Avenue, located in the old city center, normally have good accessibility of roads and transit for historic reasons. Besides being places one can walk/drive to, great streets also seem to be more accessible by public transit (Jacobs, 1993: 302). The placement of transit stations therefore is a big concern for city centres, particularly for commercial streets.

The third requirement for accessibility relevant to the street design, concerns public access at places along the street (Jacobs, 1993: 302). This is the main accessibility issue I am studying here—how to prevent cars and pedestrians from "interfering" with each other, and in particular, protecting pedestrians from the threat of vehicles. As discussed in a previous section, safety and physical comfort provide the basis for good street design. Pleasant paths for walking to and along the street are basic

requirements for any downtown commercial street (Vernez-Moudon and Laconte, 1983: 189).

Sidewalks, curb lane parking, and trees offer ways of protecting people from cars. Trees close together along the curb line create a buffer between driving and pedestrian zones that make people feel safe. A parking lane has the same function as trees, while still functioning as a place to park cars.

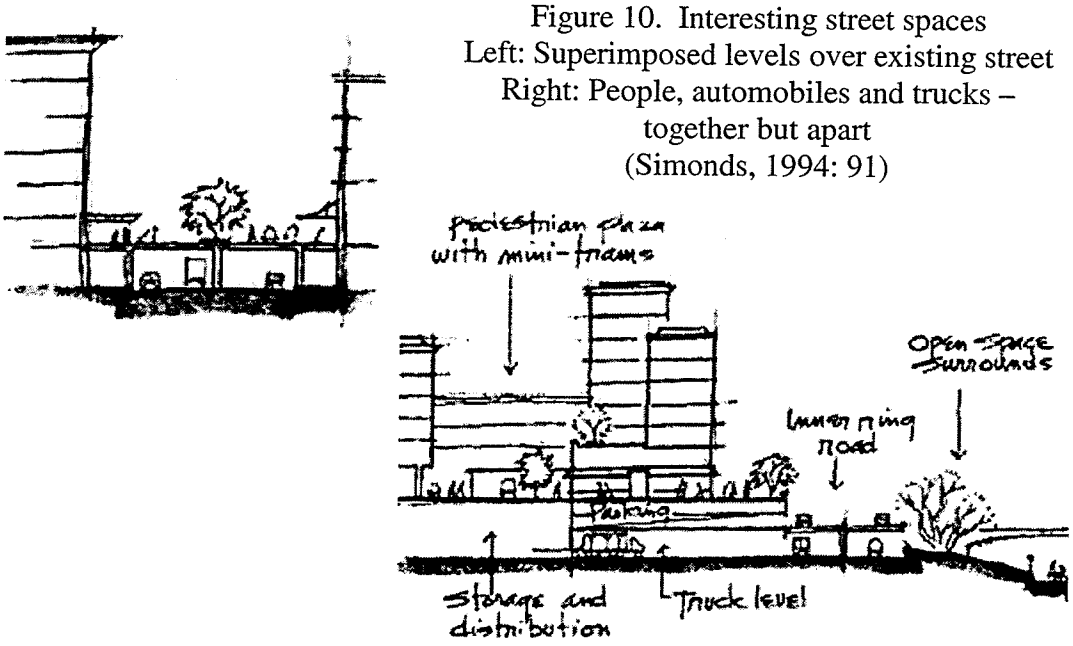


Figure 10. Interesting street spaces
Left: Superimposed levels over existing street
Right: People, automobiles and trucks –
together but apart
(Simonds, 1994: 91)

There are also some other design tools which may be applied to downtown. For example, the use of three-dimensional spaces (e.g., bridges, underground pathways, and skyways) can create interesting "woven" urban spaces, and meet the requirements of transportation and safety (See Figure 10.). For some cities, pedestrians are totally separated from vehicles. An extreme example of using bridges is the center of Osaka, Japan, where all pedestrians can only cross the downtown streets on high pedestrian

bridges (Vernez-Moudon and Laconte, 1983: 22). Whatever tools we use, the ones that invite leisurely, safe walking are always the best.

There is another aspect of accessibility—a clear wayfinding system. (This has been discussed already in the signage section.) From a transportation perspective, a wayfinding system helps people find their way in an area they are not familiar with. The system must be comprehensible, and have a consistent, cohesive, and standardized look. Signs should be placed in visible locations and easy to read. Throughout the walkway, users must be able to confirm they are within its network. Philadelphia downtown uses colors as symbols for each part of the city. People can easily follow the color on signage or maps to find their destination. A system map is key to wayfinding. Maps help users decide where to go, by first informing them where they are. Advertising can also be combined with the signage to decrease the costs.

The form of the wayfinding system will be more attractive if combined with art. In the Calgary +15 system, stylized geographic features are used to reinforce a sense of direction. e.g., Rocky Mountain indicating "West." This approach is relatively successful, understandable, and people-friendly. In addition, there is still a special requirement of accessibility to be considered in design process: universal access.

Portage Avenue is a main traffic artery in Winnipeg. How to increase the pedestrian accessibility to each doorways along the street is one of the major problems. This is not only about the convenience for pedestrians, but also for car drivers. As discussed in later chapters, although "Portagescape" has made some effort, (such as storefront access for cars), there are still many things needing improvements, e.g., separating pedestrians from vehicles, improving convenient crossing for pedestrians, and enhancing the accessibility of storefronts.

Traffic calming

There is no doubt that driving fast in city centres, where there are many pedestrians, is very dangerous. Figure 11. shows the relationship between driving speed and safety. As vehicle speed increases, the driver's angle of vision decreases making it more difficult to see pedestrians planning to cross the road and stopping distance increases exponentially (Bach and Pressman, 1992: 44). Fast vehicles scare pedestrians and reduce human traffic on streets.

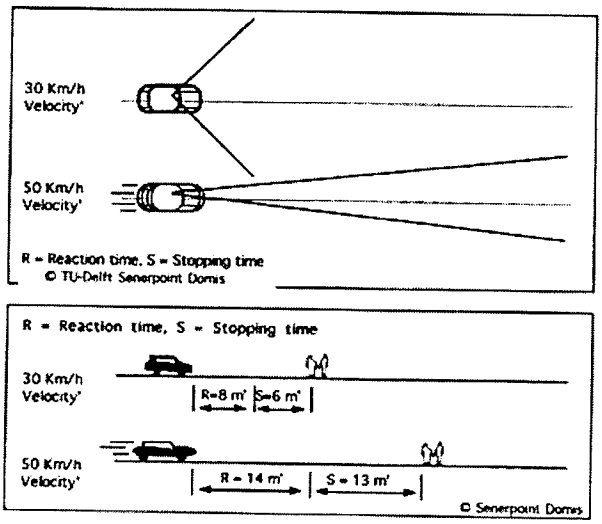


Figure 11. Speed and safety.
(Bach and Pressman, 1992: 44)

Speed limits can also negatively impact on traffic flow, and might keep some people away from the city core, resulting in lost business opportunities. How to balance the concern of calming traffic and at the same time not to cause drivers away from the downtown is a big challenge.

Parking

In today's cities, particular in North America, most people choose driving private cars as their referred means of transportation. As a result, parking is a big problem that must be considered in downtown commercial street design.

Parking is not treated as a completely separate function in modern cities. People with automobiles would like to park as close as possible to their destinations—directly in front is best, but most times this is impossible. Having street parking is important, but it is not a requirement for a "great street". People don't say that a street is great just because there is plenty of parking. Parking still has a big influence, however, on the success of the street and businesses along the street.

Many people like drive to downtown. The amount of available parking is very important for businesses, and this tends to limit the capacity of surrounding buildings and services. Different placement for the same amount of parking will lead to totally different results. To place parking in a location most convenient to people will increase the efficient use of parking lots. The placement of parking lots is dependent on the location of main destinations and the entrances. Street parking makes people feel that there is a lot of parking available. Street parking is very important or retailers. If people only want to grab something quickly and there is no quick parking available, many of them will not be there to shop. Street parking not only provides people more choices, but also acts as buffers between pedestrians and vehicles. Normally street parking occupies only a small percentage of the total parking available, but its ratio of use is higher than parkades, and is very important to downtown commercial streets. Adding street parking is one of the critical improvements "Portagescape" achieved in 1998 along Portage Avenue.

Traffic free street design

"Every urban transportation plan should, accordingly, put the pedestrian at the centre of all its proposals, if only to facilitate wheeled traffic" (IALF, 1976: 35). A traffic-free street offers another approach for building a good pedestrian environment on downtown commercial streets. It often happens in old city centres. Earlier pedestrian zones in Europe were intended to add new life to a street free from vehicles, and are characterized by many decorative elements (Vernez-Moudon and Laconte, 1983: 47).

Generally, pedestrian streets are one or more blocks of business streets which have been totally or partially closed to traffic, and are devoted primarily to pedestrian use (Vernez-Moudon and Laconte, 1983: 286). Traffic-free areas have often been implemented to strengthen the commercial appeal of downtown areas, and to compete with suburban shopping malls. Downtown "walking streets" are predominately commercial in intent. The design is to encourage walking and shopping, similar to the designs of suburban shopping malls (Vernez-Moudon and Laconte, 1983: 109). Proven by experience, traffic-free districts have significantly improved the pedestrian environment, making walking more pleasant and safe, thereby attracting an increasing number of shoppers and strollers. From the report of European cities' traffic-free districts, the increase in trade was reported from 10% to 50%, depending on the type of shops (IALF, 1976: 24).

Pedestrianization does not necessarily mean a total ban on motor vehicle movements. There are different options available depending on traffic conditions and other requirements. There are five categories of pedestrianization choices as follow: (IALF, 1976: 27)

i. Areas exclusively reserved for pedestrians

ii. Areas where emergency vehicles can occationally transit

iii. Areas crossed by surface public vehicles

iv. Areas where only local traffic is allowed

v. Areas where pedestrianization and automobile circulation can occur at different times.

Choices 2 to 5 are all partially traffic-free. In these cases, some vehicles will be allowed to drive through the streets at different hours or under certain conditions. The exclusion of all vehicles at all times is not always either desirable or necessary. In many cases, vans allowed during limited hours can be compatible with a safe pedestrian environment. For example, truck deliveries at non-peak hours, transit and minibus operation, and emergency vehicles. No solution is right or wrong for all situations; the right solution is developed depending on the context of each site. The common ground is widening of sidewalks and provision of pedestrian amenities (IALF, 1976: 77-8, 27).

There are some general principles for planning pedestrian streets. Considering the maximum walking distance of an average person, the length of pedestrian district should ideally not exceed 1,500 feet (IALF, 1976: 25). Pedestrian streets cannot be too long or isolated, but should be linked with the network of pedestrian systems within the area. Pedestrian streets have greater requirements for public transit, and consideration about the best location of transit stations and parking lots is important. The transit planning scope should therefore not be limited to just one street. The planning of surrounding and edge areas is one of the key points in the street plan (Vernez-Moudon and Laconte, 1983: 39).

The Wangfujing Street redevelopment in Beijing offers a good example of using traffic-free zone, streetscaping, and storefront redevelopment approaches to

improving a downtown retail street. The Wangfujing area is the most famous commercial district in Beijing with more than 700 years of history. It is located in the center of the city and near to the Forbidden City. The area is composed of several streets: Wangfujing Street, East Hua Gate Street, and Golden-fish Bystreet. It used to be one of the most busy, vibrant, and thriving commercial areas in this old capital city. But within the latest two decades, it had become a destination for tourists. Its role has changed and was no longer a successful commercial district, as it used to be.

There were several reasons for its downfall. The main one was the poor environment in that area. The storefronts were not well-maintained; streets were not sanitary; it was overcrowded without a good public space plan—no fountains, no sculptures, no benches, cars mixed with pedestrians and congestion... It was not a comfortable place for people to meet and talk with friends, and not even a good place to go and look around. It was crowded only because it was such a famous place.

The original plan was to rebuild some old buildings, but not to rebuild the streets, reorganize the traffic, and redo the landscape within the whole area. The whole project was organized by the Beijing WangFuJing Area Construction & Management Office, a government office dealing with all the aspects of this huge urban design project. During the first several years of development, some department stores were rebuilt, e.g., the New DongAn department store, and some others were redecorated, e.g., the Beijing Department Store. All of these approaches did not work very well and did not change the current stagnant situation of the area. This forced the Beijing government to review the development plan for the street. The Planning Incorporation, which was the sub-institution of the Beijing Planning Department, designed WangFuJing Street as a pedestrian street, open only to public transit.

The whole project was to be implemented in several phases. The streetscaping was the first phase in this project. The street was closed for a couple of months, and reopened in September 11th, 1999. A random survey of 380 people in the street on the National Day of 1999 (October, 1st) showed that more than ninety per cent of the visitors liked this shift—they appreciated the beautiful environment, safe pedestrian walkways, and convenient shopping. On the National Day vacation, 700,000 people visited the WangFuJing area and total retail sales reached a historic peak. This reinforced the government's plan to continue this project as a model for other Beijing commercial districts. The second phase—storefront renovation—began without delay. (BWACMO, 2000: 3-6)

There were 40 buildings involved in this renovation phase, sincluding retail shops, restaurants, medical buildings and residential buildings. Work began in March 2000. All storefront renovations were undertake according to certain criteria set by a committee to establish a visual continuity (BWACMO, 2000: 1-10).

The WangFuJing street redevelopment is a long-term project involving the government departments and storeowners. This is an obvious success of this redevelopment. It will take approximately 10 years, and includes many small projects. Even though there are many differences between Beijing and Winnipeg politically and economically, this example can still be a good reference for the rejuvenation of Portage Avenue. The lessons we can learn from this urban centre commercial street revitalization project are not limited to its approaches. It also implies that long-term efforts and consistent policies for at least ten years are required for achieving the success of a street level revitalization, such as what we are trying to do on Portage

Avenue. This long-term approach is confirmed by the examples from downtown Philadelphia and downtown Denver in the following sections.

2.3.4 Climate protection design in cold weather

Climate plays a large part in our daily life. Climate-related design is another design aspect to be considered in urban design process. There are two opposite approaches relevant to the issue of climate protection—"do not overprotect man from nature" and "offer maximum protection." Climate protection options offer choice (Pressman and Zepic, 1986: xiii). Their "intention is to provide improved thermal comfort while encouraging street vitality" (Bach and Pressman, 1992: 47). Climate-related comfort is one type of physical comfort, which should be the part of great street design, particular in cities like Winnipeg.

Streets in colder climates, are heavily used during the summer and tend to be infrequently used during the winter. Special attention must be given to street design, for a broad range of users. Because of the high building density and high utilization rate, downtown streets should be given the highest priority for climate-protection. "The economic revitalization of downtown cannot be achieved unless the city's livability itself is improved, for the success of firms operating in urban centres is directly related to work force satisfaction with living and working conditions in the community" (Barnett, Riley and Robin, 1980: 2). The highest priority for climate-protection clearly rests with pedestrians and cyclists.

Many Canadian downtowns have indoor walkway systems, skywalks and underground pathways, as the main winter protection for pedestrians, for example,

Rideau Mall in Ottawa, underground pedestrian systems in Montreal and Toronto, "+15" bridges in Calgary, and "roofed-over" public streets in Quebec City and Thunder Bay. These climate-protection system are often combined with providing for the benefit of downtown shoppers and workers, to encourage shopping, business transactions and human communication. For example, Montreal's Place Ville-Marie underground and Minneapolis' skyway system separate pedestrian from vehicular traffic while providing climate protection. The benefits of this separation to business are obvious. Therefore climate protection system is often developed within the downtown commercial area along "main street".

There are many means for providing street level protection, besides building skywalks and underground pathways, e.g., arcade, glazing-over and overhead canopy, to offering solar-warmth and wind-protection. The application of those tools depends on sunlight, the direction of wind, and other conditions. Physical comfort factors should also be considered, such as daylighting requirements, proper air circulation and sunlight access (Bach and Pressman, 1992: 75) (See figure 12.). A well-designed weather protection system should provide a full door-to-door protection from the environment, as is offered by the shelter at transit stop (See figure 13).

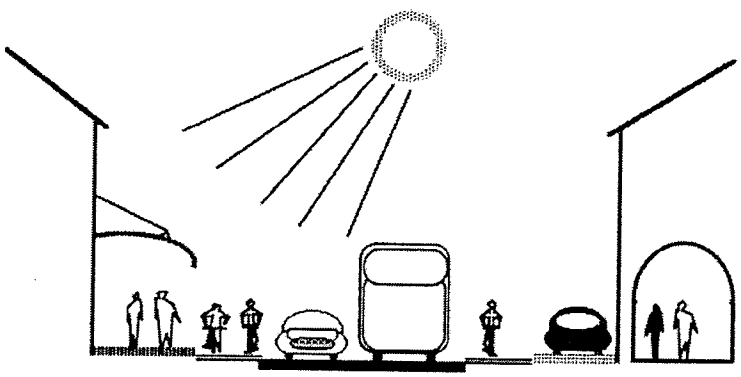


Figure 12. Concept of street level weather protection. Arcades on north-facing side for wind and rain protection, on south-facing side provides maximum solar exposure. (Bach and Pressman, 1992: 82)

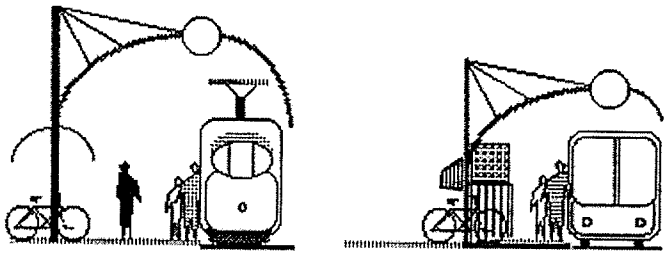


Figure 13. Transit stop weather protection. At transit stops, protective devices must provide much more shelter than is the current practice. (Bach and Pressman, 1992: 63)

Using landscape and architectural approaches—"manipulation of the natural environment" (Pressman and Zepic, 1986: 116)—is a cost-effective way of providing protection to pedestrians. For example, trees protect against wind in winter and sun in summer; dark colors such as red or brown (instead of gray) absorbs radiation; adjusting the orientation of buildings helps to gather solar energy.

It is too much to expect a street in Winnipeg to be warm in the winter, but applying climate protection design can make the street as warm as possible and cause people to feel better. Though the indoor weather protection system is significant in downtown Winnipeg, the carefully designed outdoor climate protection system is also important to provide people the comfort feeling they need in both summers and winters.

2.3.5 Impact of surrounding areas

A street cannot be separated from its surroundings. For a downtown commercial street, whose primary purpose is to support commercial activities, there must be consumers who regularly shop on the street. Having the support of many people, who live along the street or nearby, can help to ensure the success of the development. Nearby density is required for a commercial street (Jacobs, 1993: 304). This theory is also supported by the locations chosen by suburb shopping malls, which generally are close to residential areas and convenient for traffic.

There are some good streets which depend mainly on tourists, but Winnipeg does not have enough tourists to support this concept. Establishing a resident population close to the actual centre, and creating a unique and special centre to potentially draw users on a regional level is what this practicum proposes to do on Portage Avenue.

Reusing historic townhouses and keeping high downtown population has been the key strategy in reclaiming downtown Philadelphia since 1960s. Hundreds of dilapidated historic townhouses were restored and sold as middle class housing. Today, Philadelphia has the third largest downtown population in the United States, and the median household income in the downtown is equal to that of the region's most affluent suburbs (Barnett, 2001: 180). Its high downtown population is significant for the downtown as "an office centre, a retail and residential centre, a centre for arts and entertainment, and increasingly a destination for tourists" (Barnett, 2001: 181). Since 1996, the city has started to redevelop old office buildings with low occupancy for residential use.

The revitalization of downtown Denver offers another good example of using residential development to lead and support the downtown development, recognized by the Outstanding Achievement award in 1998 by the International Downtown Association (IDA). After Wellington E. Webb was elected as mayor in 1991, he changed the downtown emphasis from retail to housing, which began the real revitalization (Wellington, 2001). The adaptive re-use of old buildings for residential use and new housing development attracts people to live in downtown. Clean, safe, and easy access has given downtown Denver a new look. The downtown neighborhood development in turn has encouraged business and retail operations (Nancy, 1998: 54-58).

Among the numerous Canadian housing incentive programs aimed at the revitalization of central neighborhoods and the enhancement of housing opportunities, Edmonton is of particular interest. The City of Edmonton is a prairie city with a similar population and demographic profile to Winnipeg. In 1993, the City of Edmonton initiated a Downtown Housing Strategy report intended to encourage development of more housing in and near the downtown. The study suggested that the demand for downtown housing had been primarily supported by young singles working downtown and living in entry level rental units. Many programs, such as Artshab, Centennial Centre (Manulife Building), and Grant MacEwan College, have been developed to reuse under-utilized or vacant downtown spaces, such as existing office towers and warehouses. Many of the strategies recommended in the Edmonton Housing Strategy Report have already been undertaken in the Winnipeg context, e.g., the conversion of heritage buildings to residential uses, and streetscape improvements ("Portagescape") (ND LEA Engineers & Planners Inc., 2000: 18-20).

The development of housing within the city core promotes the city in three ways which are also significant for the sustainable development of the downtown and the city (ND LEA Engineers & Planners Inc., 2000: 18)

i. To contribute to the vitality and safety of the downtown

ii. To promote compact urban development and reduction of commuter traffic impact on the roadway system

iii. To improve the cost efficiencies associated with municipal infrastructure and services.

From the examples of Philadelphia, Denver and Edmonton, I found that all of the three downtowns and downtown retailers benefit from increased downtown populations. This is not something that can be achieved in a short time however. The three cities began their housing policies in early 1990s or even earlier (downtown Philadelphia in 1960s), and the policies persisted for ten years or more. None of these cities adopted one simple approach, but used a series of initiatives under a consistent policy to achieve their success.

The Portage Avenue study area cannot be treated as a ten-block area, but should be undertook as part of a larger context. It is important to analyze the interaction and influences within this whole area. Long-term policies, for at least ten years, and multiple approaches are needed to achieve some success.

The review of design principles for great downtown commercial streets and examples from other cities help to determine the weaknesses that need to be improved on Portage Avenue and its surroundings, to create a better physical environment for living, shopping, and entertaining. The proposed practices on Portage, in turn, test the principles reviewed in this section.

The literature review on historic issues, sustainable development, and the street and "place" design principles will work together as the base of the Case Study of Portage Avenue. The following chapter considers some of the history, demography, land use, transportation system, safety issues, retail figures, vacancy rate, and other physical conditions of the Portage Avenue study area and the downtown.

CHAPTER THREE:
PORTAGE AVENUE IN THE CITY OF WINNIPEG
--STUDY AREA AND ITS CONTEXT

Chapter Three focuses on the current situation and historic context of downtown Winnipeg, Portage Avenue, and the study area. The development of Portage Avenue and a number of specific developments in the area during the last thirty years are traced, to help understand the street's development history. This chapter provides a site analysis of the historic and physical conditions of the case study site.

3.1 Downtown Winnipeg

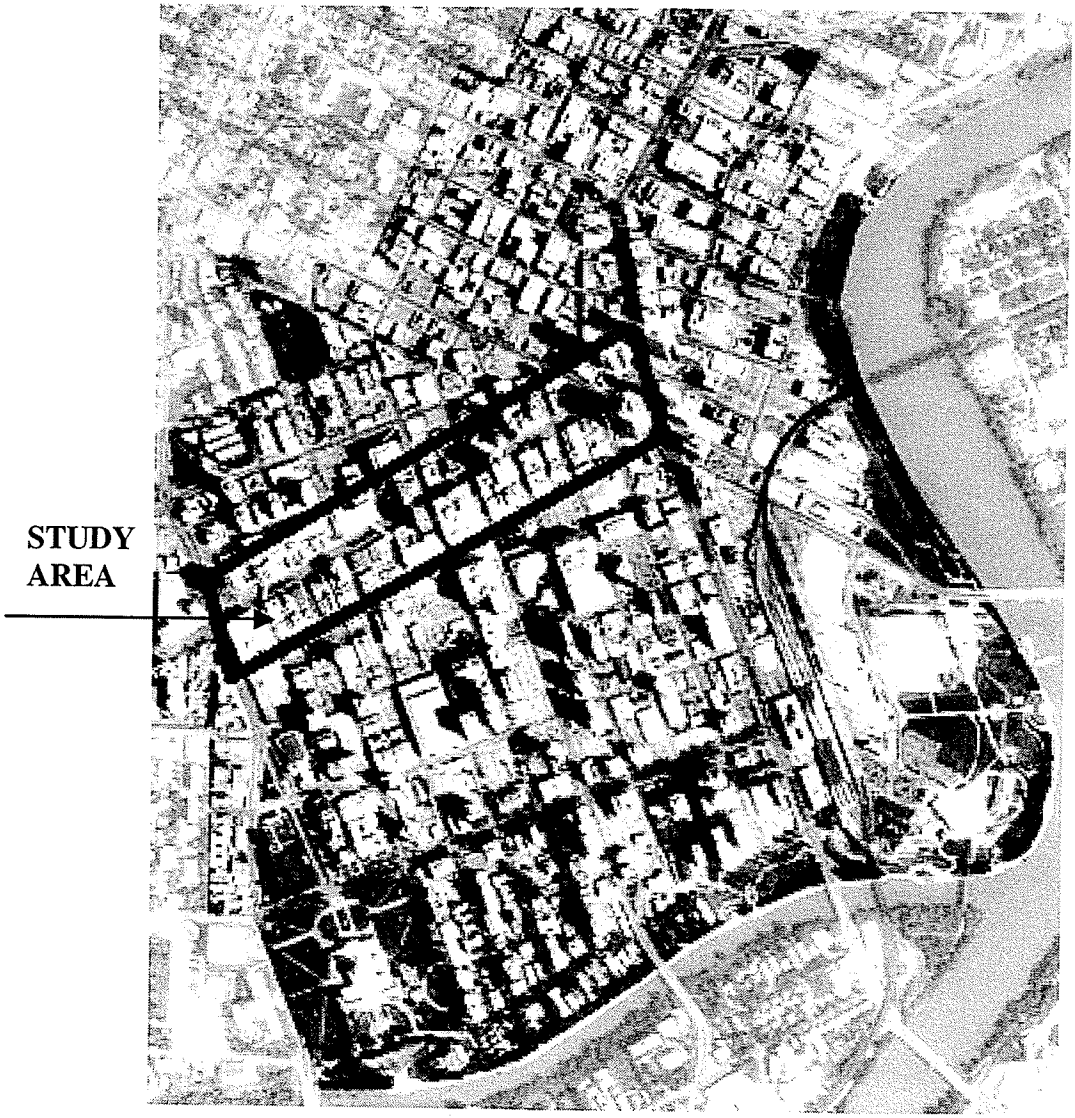
This section is divided into two parts, to provide a background introduction to the historic development of downtown Winnipeg and its current situation. This will help to provide a larger context for the development of the study area, and frame suggestions for the future.

3.1.1. The History, Character, and Importance

Winnipeg is the oldest city in Western Canada. Winnipeg's downtown is the heart of the oldest part of the city, and has a rich history. Since the first fort was built in 1738, Winnipeg has experienced many changes. The first location of central business district was known as The Forks. The centre of downtown moved from the Forks to the Portage and Main intersection as its heart. The decline of downtown has been substantial in the last 40 years, and accelerating in the last 20 years, for many economic and political reasons (Lyon and Fenton, 1984: 6, 86).

Compared with other Canadian cities, the size of downtown Winnipeg is fairly big for the population and size of the city. For example, downtown Edmonton is only eight blocks long. In contrast, Winnipeg's downtown has spread too large and the isolated facilities lack sufficient customer base. The downtown area encompasses 780 acres, 1.2 square miles, and more than twelve blocks, stretching from the Osborne Bridge in the south-west to the Disraeli Freeway in the north-east; from the Forks in the south-east to the Central Park community in the north-west.

Figure 14. Air photo of downtown Winnipeg indicating the study area.
(City of Winnipeg)



Downtown is the employment centre of Winnipeg. Downtown employment accounts for one-quarter of the city's total employment, having over 68,000 jobs in the mid-1990s. It is also the retail, recreational, and cultural centre of the city. In terms of its history, location, symbolic function, and its importance in economic development, "CentrePlan" states: "The future of the whole Winnipeg region hinges to a very great degree on what is going to become of the city's downtown in the future" (City of Winnipeg, 1995: 3).

Because of the slow-growth of downtown Winnipeg in the past ten years, opportunities to alter established land-use patterns are minimal. The recommendations for the next ten years are based on today's conditions in Winnipeg. This practicum and recommendations are based on present considerations and the possible future of the City and the downtown. The focus is on design details.

3.1.2 Current conditions

Demographic analysis

Winnipeg has been a low-growth city in recent decades. According to Statistics Canada, the City of Winnipeg had a population of approximately 618,475 in 1996. The population of downtown Winnipeg increased faster than the city as a whole before 1990. Since 1991, there has been a slight decrease in the downtown population, while the population of the city as a whole is still increasing. While the City of Winnipeg's population increased by 0.5% between 1991 and 1996, the downtown population changed from 13,320 in 1991 to 13,215 in 1996—a decrease of 0.8%. The

1996 census showed that the downtown had a much higher rate (36.8%) of the population between 20 and 35 years of age. For the same age range, the city's rate is only 23.4%.

Table 1. Population changes in the City of Winnipeg and the downtown (Statistics Canada)

Total population	Downtown		City of Winnipeg	
	Number	% change	Number	% change
1996 census	13,215	-0.8%	618,475	0.5%
1991 census	13,320	20.4%	615,215	3.5%
1986 census	11,060		594,555	5.3%

The change in the number of automobiles did not follow the change in population. The report "TransPlan 2010" shows that while the population of Winnipeg grew by only 36% between 1962 and 1992, automobile registrations more than doubled, from 128,000 in 1962 to 264,000 in 1992 (City of Winnipeg, 1998: 34).

Land use

The downtown is zoned into many different land uses. Many buildings have more than one use on different floors. Commercial land use is the primary use of downtown land. The Downtown Area By-law-1800, the land use has a very broad using range for almost every site. There is no simple map that can show the land use

downtown. Generally, it is the high density and diversity that makes a downtown so different from other parts of the city. Keeping its density and dynamic, while creating a sustainable development model with attractive places, will help make the downtown a unique and interesting place to go.

Transportation and parking

Transportation is one of the biggest issues facing many North American downtowns. Making the central areas of cities livable and accessible for everyone enhances their sustainability and historic legacy (Bach and Pressman, 1992: 10). As city planners, we have a professional responsibility to ensure this occurs.

Downtown Winnipeg has several major traffic arteries through its centre. Main Street is an eight-lane north-south street, while Portage Avenue and Broadway run east-west. The only continuous "ring" route currently serving the Winnipeg Region is the Perimeter Highway at a distance of over 10km from the downtown. A second route entirely within the City (comprising Route 90/Kenaston Blvd., Route 165/Bishop Grandin Blvd., Route 20/Lagimodiere Blvd.) lacks a direct east-west connection through northern Winnipeg (City of Winnipeg, 1998: 76).

As discussed, the number of Winnipeg automobiles is increasing at a faster than its population. The report "TransPlan 2010" notes that between 1976 and 1992, the largest increase in Winnipeg traffic was at 140% on the routes leading into and out of the City (City of Winnipeg, 1998: 34). This increase contributes significantly to the problems relevant to auto vehicle traffic in the downtown.

The downtown has very high traffic flows. The number of vehicles crossing the Red River and Assiniboine River per day in Winnipeg increased by almost 130%

between 1962 and 1992—from 259,000 to 590,000 (City of Winnipeg, 1998: 34). Studies have shown that almost half the traffic on the major streets in downtown Winnipeg is attributed to crosstown trips that originate from and are destined to suburban areas. It is difficult to relieve downtown congestion and make it more pedestrian-friendly without changing the current radial street system (City of Winnipeg, 1998: 75).

Transportation always attracts lots of public attention. Survey research in 1999 shows that the average traveling time for participants between home and downtown is 20.5 minutes, and 52% use a private motor vehicle to reach downtown. Two-thirds of the study's participants support having a rapid transit link to downtown. Improvement of downtown street system and reducing commuter travel time are noted as a valuable approaches for supporting the downtown revitalization (Dennis McKnight 2051 Inc., 1999: 6-8).

Parking is another big concern within downtown Winnipeg. There are four downtown parking issues considered by the public to be most important. They are ease of finding parking, safety and security in parkades and parking lots, availability of parking and the cost of parking (Dennis McKnight 2051 Inc., 1999: 11). These issues are related to a broad range of downtown improvement issues, such as the wayfinding system, parking lot design, and financial redevelopment strategies.

Retail stores and other services

The research by Dennis McKnight 2051 Inc. in 1997 noted that shopping was the single largest reason (40%) visitors gave for making a special visit downtown,

followed by dining (28%), and entertainment (28%). Arts and culture (15%) and medical (15%) reasons were mentioned as well.

Retail demand is closely related to population growth. Winnipeg is a city with slow-growing population; therefore its retail demand is also increasing slowly. New stores opening in suburb bring the retail market more competition. An over-saturated market requires retailers to be more unique to capture market share.

The average downtown retail expenditure is $70.32. One third (33%) of purchases are between $21 and $50, one quarter (24%) are between $50 and $100, and only one-in-ten purchases (12%) spend more than $100 per purchase. This represents a small (28%) increase compared to the average downtown retail expenditure in 1997, which was $54.72 (Dennis McKnight 2051 Inc., 1999: 6).

A broad survey of residents' attitudes and perceptions towards downtown Winnipeg shows that most people consider that retail stores in the downtown have nothing really special. Most respondents "appear to think there is little difference between downtown and suburban retail outlets" (Dennis McKnight 2051 Inc., 1999: 5). The same report points out that arts and craft stores, music stores, department stores and optical outlets were mentioned of being as better quality than that which could be found in other parts of the city, while furniture, electronics, and sporting goods outlets are thought to be of less quality.

The importance of attracting unique retailers to locate downtown has already been recognized in other Canadian cities such as Toronto, Montreal and Vancouver, since downtown retailers are perceived as offering basically the same merchandise, and are not unique or special compared with retailers from other parts of the city. Attracting more unique retailing downtown is perceived as a priority by three-quarters of people

(75%) (Dennis McKnight 2051 Inc., 1999: 18, 27). The City of Winnipeg has also recognized the importance of unique stores in downtown. A & B Sound and Mountain Equipment Co-op have decided to locate in the Portage Avenue study area, in the last two years.

Another big problem with downtown retail is the lack of stores that support daily living for local residents, such as grocery stores. Adding more diversified retailers relevant to downtown living, will make the city core more attractive and livable as a residential community.

Physical conditions

The issue of downtown physical conditions also attracts significant attention. In the downtown BIZ Member Survey 2000, members rated attracting and retaining business downtown (87%), safety (81%), improving the physical environment and image of downtown (75%), providing a supportive environment for entrepreneurs and business (72%), and marketing the downtown and attracting more people as high priorities for downtown revitalization strategies (Dennis McKnight 2051 Inc., 2000: 9). This means that downtown practitioners are placing creating high quality physical environment in a very significant position for downtown redevelopment. Public feedback in "CantrePlan" also indicates that the major priorities should be given to improving personal safety, enhancing the pedestrian and transit environment, and upgrading the physical appearance of the streetscape (City of Winnipeg, 1994: 3). The research results note that many people have recognized the equal importance of attracting more business investments downtown, and improving the safety and comfort of urban environment.

In the same BIZ member survey, many members had very positive responses towards the desirability of downtown cleanliness, which reached the highest rate (68%) since 1994 (p.7). On the question of how to improve the downtown, informational and directional signage (43%) and more planters and flowers (42%) were given the highest priorities as positive initiatives. (p.8)

The enhancement of the physical environment and economic development are mutually compatible; each improvement will encourage the other, and vice versa.

3.2 Portage Avenue study area

The study area, as defined in this practicum, is a 1.1 km long portion of Portage Avenue between Memorial/Colony Blvd and Main Street. It consists of ten contiguous city blocks and adjacent properties along the street. This area is the primary commercial area of downtown Winnipeg, with retailers as the predominant land use on the ground level. Figure 15, 16, and 17 are street views within the study area, which will help to understand the space, buildings, and circumstance of this area.

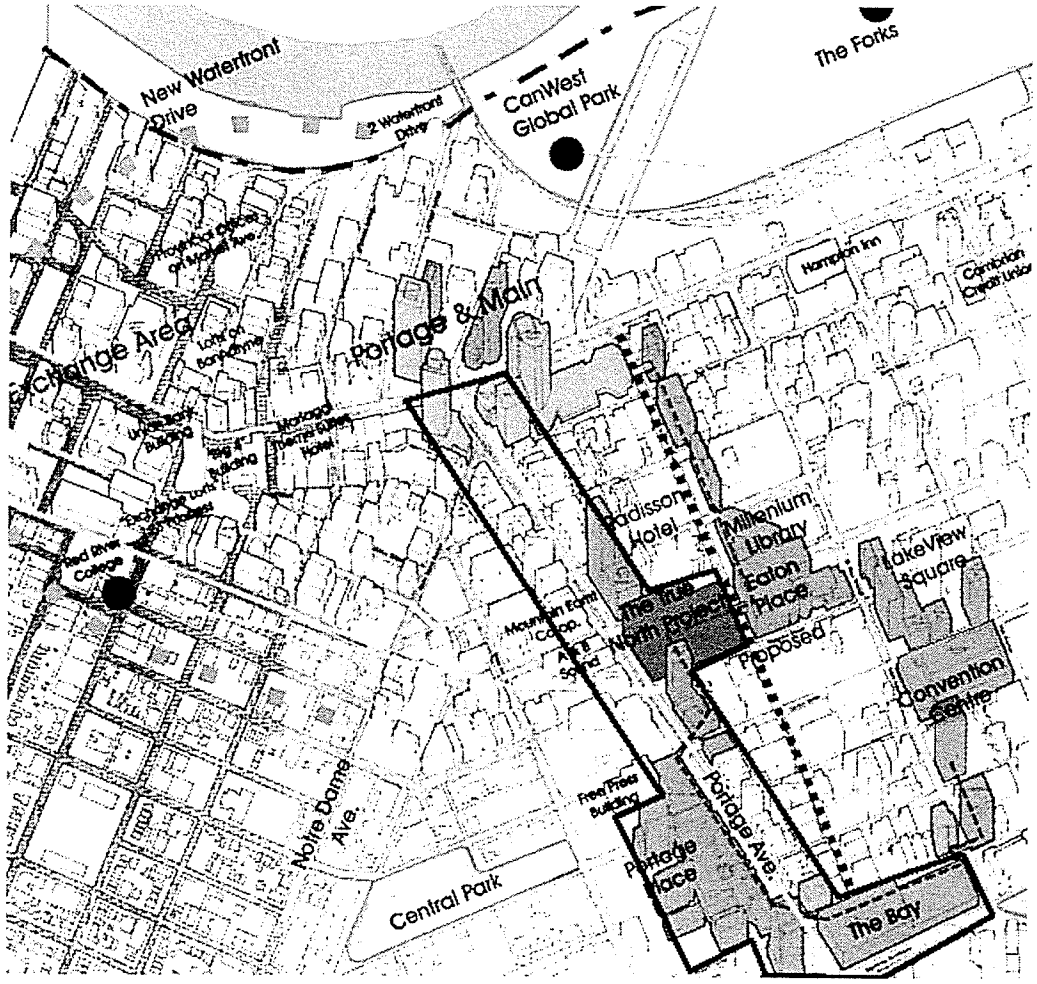
Figure 15.
Looking north on Portage Avenue to Portage & Main.

Figure 16.
South side of Portage Avenue includes the Eatons Building.

Figure 17.
Sidewalk of Portage Avenue in front of Portage Place.

(http://www.qeocities.com/kemzington1/winnipeg.html)

Figure 18. 3-D map of study area with new developments and walkway system (True North Entertainment Centre Inc., 2001: 2)



The study portion of Portage Avenue includes a major arterial roadway that accommodates a high level of through vehicular traffic, a very high level of transit service, local vehicular access and circulation, and large volumes of pedestrian activity during the business day. Figure 18. provides a 3D plan of the study area, which helps to understand the scale of the buildings, their relation with the street and the overall street space.

Portage Avenue consists of a 40.2 m right-of-way, with six driving lanes and two parking lanes. This is a two-way street (three lanes for each direction). Traffic from different directions is divided by a planted centre median, width from 0.61 m to 2.74 m. The public sidewalk is from 5.25 m to 7.65 m wide.

3.2.1 The History and importance

For many Winnipegers, Portage Avenue is the heart of the downtown and the City. "If Portage Avenue is not doing well, then Winnipeg is not doing well" (City of Winnipeg, 1997: i). A strong and thriving Portage Avenue represents a healthy Winnipeg, and a vibrant residential and business environment in the city core will in turn encourage the further development Portage Avenue.

Figure 19. Portage and Main in the 1910s.
(Winnipeg Archives)

Portage Avenue is one of Winnipeg's most famous thoroughfares. The study area concentrates on a key portion of the street and the centre of the downtown. It has

historically been the centre of business and retail in the downtown core. Figure 19, 20, and 21 can help understand the development of the street within the twenties century. The opening of the Eaton's, a five-story department store, in 1905 brought a dramatic change in the city's retail sector, which encouraged the retail business centre growth on Portage Avenue. The opening of the Hudson's Bay Company (HBC) department store along Portage between Memorial and Vaughan in 1926 made Portage the premier retail street in the metropolitan area, particular the anchor on south side of Portage Avenue from the Eaton's to the Bay. By the end of 1945, both sides of Portage Avenue were lined by various specialty and department stores. The south side was dominated by department stores, while the north side was characterized by a great variety of smaller shops as well as services (Lyon and Fenton 1984: 92-98).

Until the 1960s and 1970s, Portage Avenue was alive with pedestrians shopping and doing business. Portage Avenue and the downtown felt the effects as urban sprawl, when shopping malls (such as Polo Park and St. Vital) began to spring up in the suburbs of the city. The competition from the suburban shopping malls intensified in 1959 with the opening of the Polo Park, just three kilometres west of the downtown area, causing the decline of downtown commercial district. The opening of the other 4 suburb shopping malls, such as Garden City in 1970 and St. Vital Centre in 1979, accelerated the decline of downtown retail. The decentralization of the city and downtown retailers happened simultaneously. From 1961 to 1971, the share of downtown retailers within the City of Winnipeg dropped from 67.1 per cent to 39.4 per cent. In 1982, this number was 22.5 per cent (Lyon and Fenton, 1984: 101-5). Though downtown Winnipeg continues to be the employment centre of the city, it is no longer the prime retail area.

Figure 20. Portage and Main in the 1950s, before suburban development was a strong competitor to downtown.
(Winnipeg Archives)

Awareness of the importance of centralizing retail in the downtown again began in the 1960s. In recent decades, many efforts have been made to rejuvenate Portage Avenue. The concept of creating a major regional shopping facility in the downtown has been the recommendation of planners for at least four decades. A study by Reid Crowther on Winnipeg's downtown, *A Market Analysis for Metropolitan Winnipeg*, identified the decentralization of the downtown retail as a significant problem (Lyon and Fenton, 1984: 106-7).

From the 1970s to mid-1980s, the north side of Portage Avenue became a "trouble spot" because of the opening of the Eaton Place shopping mall. This attracted North Portage retailers to move in, and resulted in a higher vacancy rate on the north side of Portage. In the early 1980s, the north side of Portage had many empty buildings, and looked poor and shabby. This area was assessed as deteriorating and undesirable by

three levels of governments in 1983. Consultants from the Downtown Winnipeg Association suggested that a major attraction should be developed on Portage Avenue frontage, to help rejuvenate this area as a dynamic area, and to draw Winnipegers to the downtown. The North Portage Development Corporation (NPDC) was incorporated 13 December 1983, by the three levels governments, to redevelop the North Portage Site area bounded by Portage Avenue on the south, Notre Dame on the north, Colony-Balmoral on the west and Hargrave on the east (Lyon and Fenton, 1984: 110-14).

There used to be about 50 buildings and 100 tenants in this area. They were many different kinds of stores, residential buildings, and services. Figure 21 shows some of the old buildings along Portage Avenue before redevelopment. Figure 22 shows the old street lots on the current site of Portage Place. NPDC expropriated all buildings on the site and relocated them. Some of the businesses did relocate to other places all over the city, while some just closed and never opened again.

The approach NPDC used to rejuvenate this area was to tear down all the buildings within the North Portage Site, and to build a mixed-used area with new housing, offices, retail stores, and public services. The first building was torn down at the end of 1985. The new development was finished by the end of 1987, including a big weather-protected shopping mall (Portage Place), two weather-protected bridges connecting the mall with south Portage retail spaces, over 600 units of housing in 5 residential buildings, and 150,000 sq. ft. office space. Overall investment in this redevelopment totaled 250 million dollars, 74 million of which came from government offers.

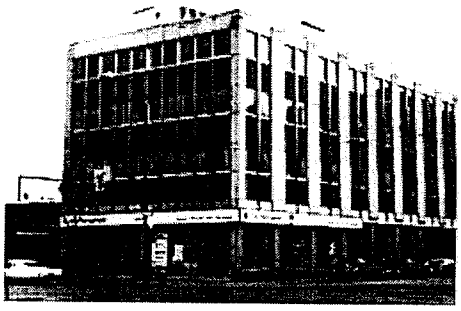


Figure 21. Old buildings on the site of Portage Place before it was built.
(Above left: TD bank, above right: an old commercial building, left: an old office building.)
(North Portage Development Corporation)

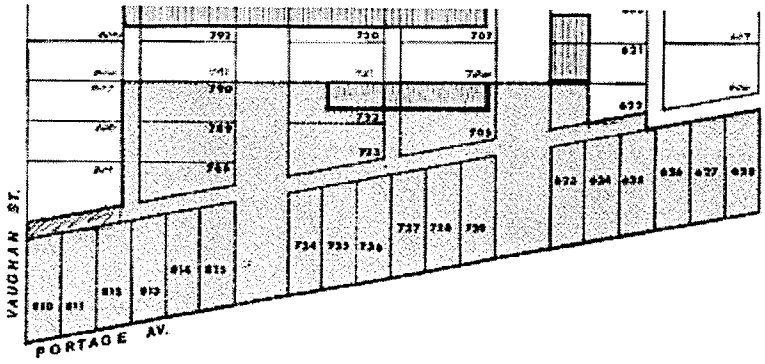


Figure 22. Old street lots on the site of Portage Place before it was built.
(North Portage Development Corporation)

Portage Place opened to the public 17 September 1987. When it firstly opened, Portage Place was an up-scale fashion mall, and operated successfully. In the early 1990s, however, this new shopping center began to decline, affected by the decline of

the whole economy, the unsuccessful operation of Eaton's, and the successful development of other suburban malls, particularly Polo Park. The original owner of Portage Place, Cadillac Fairview, sold the property to another company, Consolidated Properties (Alberta) Ltd. in the mid-1990s, because of its poor financial situation.

The opening of Portage Place affected the development of Portage Avenue. Since 1987, the development of north side of Portage and the construction of Portage Place connected by skywalk to the south side was undertaken to provide more retail space and entertainment facilities on the north side of Portage, and to stimulate the recovery of the rest of the street. The new mall attracted most retailers to the north side of Portage in late 1980s. This caused an inbalance in development, and the south side became the weak side. In 1990, the NPDC took action to improve the south side, launching a South Side Improvement Program to encourage property improvement, enhance the attractiveness of the street, and to recruit new tenants. Building owners could access funds from NPDC to improve their buildings. A number of owners took advantage of this program. Ten to twelve building facades were refurbished, and also interior spaces. For example, the old Bank of Montreal building was restructured and reused as professional office space (this is currently where the Downtown Winnipeg BIZ is located-426 Portage).

At the end of 1990s, there was another capital project, "Portagescape", along Portage Avenue to enhance the operation of pedestrian travelling and improve the streetscape. This project is discussed in section 4.2.

The historic studies of downtown Winnipeg and Portage Avenue show that the city's development has followed the national decentralization trend, and Portage Avenue is facing the same issues many other downtown main streets have. The

redevelopment efforts of this street have been undertaken without very clear guidelines and a thorough plan. Each project seems to have concentrated on some problems, and there has been a lack of a liaison, to organize all the efforts together towards one objective. The focus of every project is different, without a consistent policy. These are issues that need to be addressed in future development processes.

3.2.2 Current situation of the study area

This section is divided into five categories: land use, transportation systems, pedestrian walkway system, other physical environments and safety issues, in order to provide general background information of the study area. Social and economic issues are not included in this section other than some issues related to safety, because the emphasis of this practicum is on urban design. Current street conditions and changes related to the "Portagescape" project are discussed in Chapter Four.

Land use

The study area of Portage Avenue is at the centre of downtown Winnipeg with predominantly commercial land uses. Many buildings are indicated as office use with ground floors for retail use or restaurants. On the north side of the street, there are 18 buildings, including Portage Place and TD Bank, and another 33 buildings on the south side of the street, such as the Bay and Eaton's. There are in total 85 to 90 addresses, over 120 doorways, and up to 17 vacant ground level spaces along the Portage Avenue within the study area. The address numerals begin at 201 (TD Bank) and end at 450

(Portage Place). Over 15 doorways, about 10 of which are on the ground level of Portage Place, are not in use, while the stores behind the doors are still in service.

From west to east, the land use shifts from predominantly retail to office use. The main retail centre in the downtown used to be between the Bay to Eaton's on Portage Avenue. There are three big retail stores: the Bay and Eaton's (closed in 1999) on the south side, and Portage Place on the north side. At the east end of Portage, close to Portage and Main, there are more high rise office/financial buildings such as the TD Bank, Bank of Montreal, CIBC building, with an underground shopping centre and food concourse—Winnipeg Square.

Figure 23. Storefront vacancies and transportation system.
(http://www.downtown-wpg-biz.mb.ca)

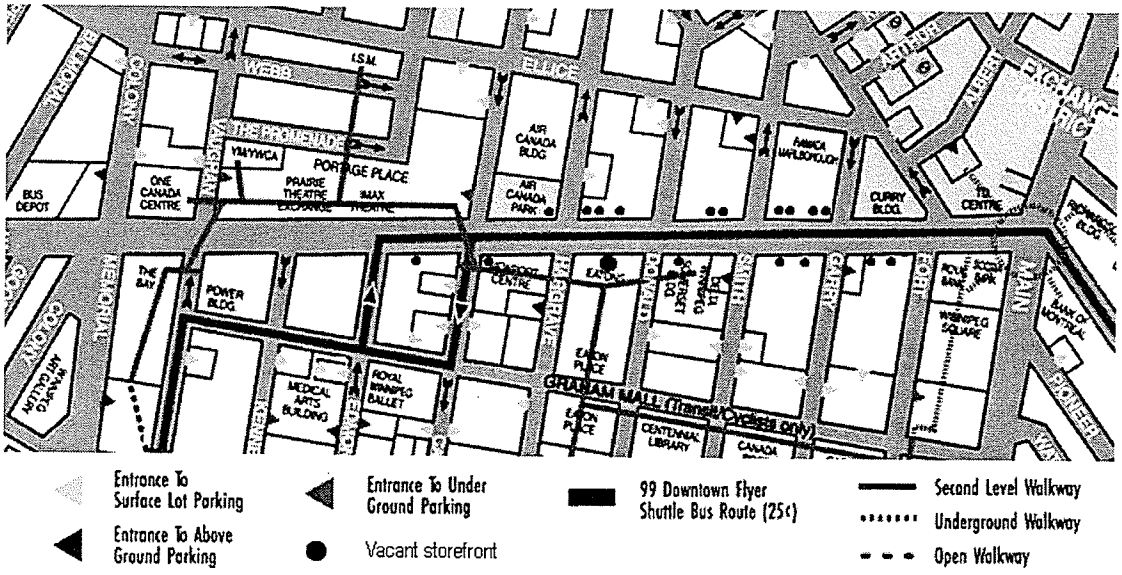


Figure 23. shows the ground floor vacancy, which is defined here as any empty ground floor space, facing Portage Avenue within a building. This vacancy rate was counted visually by myself at the end of June 2001. The vacant spaces give a

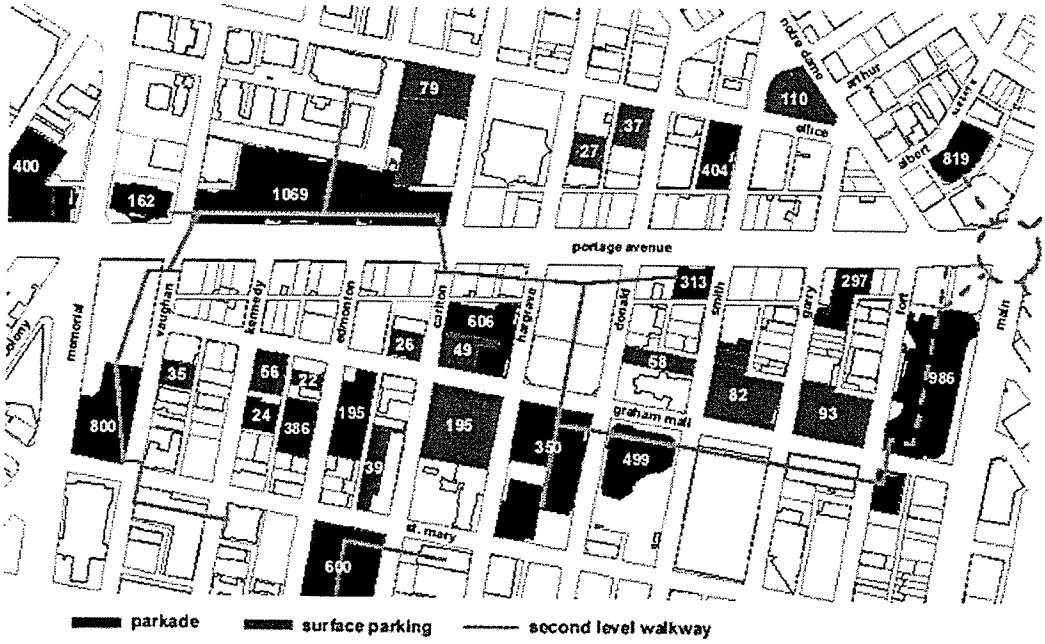
depressing feeling to the street, but also represent potential development opportunities and usable land for the future.

Transportation systems

Portage Avenue connects with Route 85 expressway from west to east directly through the downtown. It is a heavily used connection between downtown and suburban areas. Because Winnipeg has no highway system, Portage Avenue becomes the primary choice for driving to or through the downtown. The City's transportation planning policies and infrastructure have made Portage Avenue a major element in the city-wide road and transit system. "Portage Avenue's role as a major element in the whole city's transportation system has taken priority over Portage's role as a pedestrian shopping and business street. The street is not attractive or comfortable for pedestrians" (City of Winnipeg, 1997: 3). One powerful symbol of the clash between Portage Avenue as transportation route and as public commercial street is the closure of Portage-Main intersection to pedestrians in 1979. Improvements of the pedestrian environment will make it more comfortable for people to walk down the street.

Car use is directly related to parking issues (as previously discussed in section 2.3.3). If drivers are not convinced that there has parking in the downtown, Winnipegers will go to suburb. Surface parking makes up 17% of Winnipeg downtown. There was no ground level parking lots along the Portage Avenue before 1998. Portage Place is the biggest parkade parking provider (See Figure 24. for parking details). After "Portagescape", there are totally 46 parking meters along the study area on both sides of the street.

Figure 24. The study area parking map
(http://www.downtown-wpg-biz.mb.ca)



Public transit is another big concern for the redevelopment of Portage Avenue. Portage Avenue is one of the main public transit routes in downtown Winnipeg. Bus stops are located on both sides all along the street.

> "Among the various factors which assist in creating a higher quality of urban life, good public transport combined with well designed public spaces, cycle paths and pedestrian movement systems—which are at least partially climate-protected, close to transit stops—will have to be integrated in town planning" (Bach and Pressman, 1992: 9).

Public transit is a broadly used form of transportation for people to get downtown. A survey in 1999 of 1000 people in the downtown shows that half of them (49%) use Winnipeg Transit to reach downtown (Dennis McKnight 2051 Inc., 1999: 6). Table 2. also shows the importance of transit in the downtown area.

Transit development has not been very good in Winnipeg recently. Since the increase in automobile ownership, there has been a significant decrease in transit ridership over the past 30 years, from 28% in 1962 to 20% in 1992 (City of Winnipeg, 1998: 34). Increasing the public transit ridership will enhance the sustainable development of the City from ecological development and resource protection points of view.

Pedestrian walkway system

A street is not only a transportation channel/corridor. The key item that makes one street different with others or creates a "great street" is the numbers of people on the street. Portage Avenue is the downtown's main street. Safety and comfort for pedestrians is one of the key issues for determining the success or failure of a downtown commercial street. Attracting more people to the street is very important for the success of Portage Avenue. Therefore the design and development of the pedestrian environment along Portage Avenue should be a significant target for the street redevelopment and revitalization.

Selecting from opposing approaches—"Do not overprotect man from nature" and "offer maximum protection," climate protection is the provision of choice (Pressman and Zepic, 1986: xiii). For the weather Winnipeg, it should be a part of a great street design. It is unlikely that people will walk and shop in the winter wind in Winnipeg because of the bitterly cold winters if they have other choices.

The existing pedestrian walkway system links a considerable portion of downtown Winnipeg. Its importance is reinforced by the following statistics: (City of Winnipeg, 1997: 16). (See Appendix E for the map.)

- Length of system: 1.2 miles
- Climate-controlled access to 1,800,000 sq. ft. of retail space, and such amenities as City Hall, the Museum and Planetarium, Centennial Concert Hall, the library, the post office and more than 8,400 parking spaces
- Number of buildings: 38
- 14 pedestrian bridges and 7 underground connections
- 11,000,000 sq. ft. of building space and over 21,000 employees are brought together in the system

The walkway suffers significantly from the lack of a coordinated signage program. A comprehensive, cohesive and effective signage program will not only benefit the walkway user, but will in turn provide additional benefits for the downtown as a whole.

Other physical environments

The buildings along the street are a combination of historic buildings such as the Bay and Eaton's, and modern style new buildings, such as Air Canada and Portage Place. Every building has its own story. This mixture of different styles of buildings saves important elements of Winnipeg's history, while adding vitality to this historic street (See Figure 3.).

There are three public gathering spaces within the study area. They are Air Canada Park, TD Plaza, and a small garden between two buildings, in the middle of the block between Edmonton and Kennedy Street on south side of Portage Avenue. At lunch time, these are all busy places full of people, many of whome are talking with friends during the summer.

The second most important reason to cause people to take a trip to downtown is to visit restaurants and bars. Within the study area, food establishments are having

the same problems as retailers. Most of restaurants within study area are chain restaurants, including Tim Hortons, Subway, Muffin Oven, and etc. None of the restaurants is really special and attractive enough to draw people downtown. Presently, there is not even an outdoor patio along the Portage Avenue study area.

Safety issues

Safety is another big concern affecting public attitudes and behaviors in downtown Winnipeg. Table 9 shows that in 1999, only 19% of 1,000 interviewed people felt very safe in the downtown. Approximately half of respondents (54%) had safety concerns about Portage Avenue, and one-third (33%) have concerns with Portage Place. The Forks is perceived as one of the safest locations in downtown Winnipeg, with only 20% people having safety concern. Police foot patrols (94%) and improved street lighting (91%) were perceived as the highest rate as effective measures to improve safety in the downtown in the survey. Another physical improvement—graffiti removal—was perceived as an effective measure for reducing crime downtown (68%). Panhandling was a big reason to deter people from visiting certain areas of the downtown. Nearly all of the interviewees (92%)complained about panhandlers (Dennis McKnight 2051 Inc., 1999: 25).

Safety is a social problem, which cannot be solved through urban design approaches alone. This does not mean planners, urban designers and architects cannot help to mitigate this problem to a certain degree however. Increasing the transparency of buildings and reducing dark corners are all useful for helping people feel safer. People feel safe when they stay with others and watch others. Developing a more

attractive area and attracting more people on to the street are the best ways to increase feeling's of safety. This in turn enables an area to be more attractive.

A study by the Annenberg School for communication show that people's fear of crime relates more to media propaganda than to the actual amount of crime in their neighborhood. If more positive images convey the good things that are happening downtown, such as arts, entertainment and restaurants, residents will feel more confident about the downtown's future development and be attracted to go there (Barnett, 2001: 187-188).

This chapter describes the historic development of downtown Winnipeg, Portage Avenue and study area, and current conditions. Some problems needing to be addressed are listed in following chapters. Conditions relevant to the "Portagescape" project are discussed in Chapter Four.

CHAPTER FOUR:
THE EVALUATION OF THE "PORTAGESCAPE," ANALYSIS AND RECOMMENDATIONS FOR THE PORTAGE AVENUE STUDY AREA

Chapter Four is divided into three parts. The first part focuses on the survey results, their review and analysis, in order to provide a foundation for evaluation and recommendations. The second part compares the study area before and after the "Portagescape" project, and provides an evaluation of the project at the end. The third part discusses a "new" development within study area—the arena. Both architectural design and social impact are discussed, including a listing of design issues.

4.1. Methodology

Chapter Three provides considerable information related to current conditions along Portage Avenue and in downtown Winnipeg, as well as the historic context. For the future design and development of the study area, more information is needed from practitioners and experts. Interviews with practitioners and experts were undertaken to understand their insights about the street's present and future, from a professional point of view.

4.1.1. Research methods and preparation

Methods of the survey

This practicum uses a semi-structured interview process. The purpose of the interview was to explore the insights and perspectives of interviewees, who are

responsible for or familiar with urban design issues in Winnipeg's downtown revitalization, particularly along Portage Avenue.

The interview process focused on seeking information related to the following areas:

i. The interviewee's experience related to Winnipeg's downtown and Portage Avenue's development history.

ii. The interviewee's personal opinions about current physical situations in the Portage Avenue study area.

iii. The interviewee's personal opinions regarding urban space and street design of the "Portagescape" project in 1998.

iv. The interviewee's opinions and suggestions regarding the further physical improvement of Portage Avenue, which will enhance the condition of the street and downtown Winnipeg as a whole, to achieve sustainability in city core.

Interviews were divided into two phases. The first phase involved an informal interview, intended to gather information on Portage Avenue study area and to obtain a basic understanding of the historic and current conditions. This process was combined with the literature review. In October and November 2000, I interviewed five practitioners, including planners and engineers. Many reports from both government and private sectors were selected with the interviewees' help during the following several months.

The second phase of interviews was based on findings from the literature review, and analysis of findings gathered from the first stage interviews. A question list was developed to provide consistency and give focus the interview, rather than limit the

interview. All research questions were open-ended, and were directly relevant to urban design issues. All responses were based on personal experiences and knowledge. During the interviews, interviewees were strongly encouraged to express their feelings and ideas on each question, and discuss the aspects of Portage Avenue development that they were most interested in.

The qualitative analysis focused on the exploring interviewees' personal understandings of the study area. Their insights were all very valuable for contributing to my understanding of the Portage Avenue site, and helping me to develop recommendations for future development of the study area.

Research preparation

Interviewees were practitioners identified for their experience with Portage Avenue development, and were selected from among local landscape architects, planners and traffic engineers. They were either then currently involved in or were familiar with Portage Avenue and recent projects of the street. (See Appendix A for the interview list and key personal information.) All interviewees have professional backgrounds in the study area. They work for different consulting companies, government departments and private agencies. This selection of interviewees attempted to ensure that a broad range of opinions would be included in this study.

In the first informal phase of interviews, interviewees were asked general questions about the study area, in order to develop a basic understanding, and to assist in the creation of the survey questions in phase two. During the second phase, interviewees were asked more specific, open-ended questions, based on the phase one interviews and the literature review. (See Appendix B for detailed interview questions.)

Interview questions was derived from the literature review, including relevant theories, precedents from other cities and streets, and documents which referred to the context of downtown Winnipeg and Portage Avenue.

The questions in phases two can be divided into three categories. The first category concerns the historic context of Portage Avenue, e.g., the shift of the study area and projects on the street in the last three decades. The second concerns current conditions and weakness associated wih the street, including a broad range of elements that will affect the success of a downtown main street. The third focuses on suggestions and recommendations for the future development of Portage Avenue study area. The three categories of questions were crafted to provide a deeper and holistic understanding of the historic and current conditions of study area. The personal experiences, feelings and suggestions from these key informants have informed my conclusions and recommendations.

4.1.2 Issues arising from the survey

In the second phase of interviews, eight key informants were interviewed during the period from May to June 2001. Careful notes were taken during the interviews and identified by respondents. Notes were analyzed according to themes arising in the literature review, in an effort to determine what design elements could influence the future development of the Portage Avenue. This analysis forms the foundation of the recommendations at the end of the practicum.

Historic context

The first category of questions concerns the historic context of Portage Avenue, e.g., the shift of the study area, projects over the last three decades, and personal evaluation of those projects.

All interviewees affirmed Portage Avenue's position in Winnipeg's history as a retail centre and the centre of the downtown. Its historic position makes it special for Winnipegers. All interviewees agreed to the importance of successfully redeveloping Portage Avenue.

The construction of Portage Place and the "Portagescape" project were two of the biggest projects mentioned by each interviewee. (The "Portagescape" project is discussed in section 4.2)

Portage Place is leased to the North Portage Development Corporation, which also owns this land. It opened September 17th, 1987 with 200,000 sq.ft. of retail space. Portage Place includes skywalks integrated to South Side of Portage Avenue, Eaton's and The Bay. It is open from 7 am to midnight, 7 days a week. Part of the reason for the construction of Portage Place was the unbalanced development between the south and north sides of the street, in the end of 1970s and 1980s. Downtown traditional retailers used to be big department stores such as the Bay and Eaton's, and smaller stores along the street. The design of Portage Place does not follow the pattern of traditional downtown retail stores. It includes different stores in one big building. This form is more like the pattern of suburban shopping malls, but located on a downtown main street. The construction of Portage Place was an attempt to use the form of suburban malls in the downtown, to save the declining downtown street and retail businesses, and to provide more commercial attractions to the north side of Portage Avenue.

Portage Place works like a suburban shopping mall, providing most of the same stores and same products. There are not many specialty stores to differentiate Portage Place from those suburban shopping malls, and as a result, the development cannot attract people to shop there on evenings or weekends. Portage Place has its skywalk connections to the south side of the street and other buildings. The skywalk draws part of the ground pedestrians into indoor above grade pathways which then reduces at activities the street level. This does not mean the skywalk is not good for downtown Winnipeg. The extremely cold winter makes it very necessary to protect pedestrians through this kind of secondary pathway. Nevertheless, how to encourage people to use street level spaces is the major challenge that Portage Avenue developers continue to face.

In the meantime, Portage Place also has made some positive contributions to the street and downtown. The IMAX theatre in the third level has proven to be a significant tourist attraction. It attracts close to 200,000 people annually, half of whom are from outside of Winnipeg. Right in front of Portage Place, there is a big bus terminal and heated shelter. Also, many people have a cup of coffee, while waiting for their buses inside Portage Place instead of in the shelter. Benches and integral seating are located along the street in front of the building. On sunny days, many people sit there, talking to each other or enjoying the outdoors.

Generally, however, most of interviewees see Portage Place as an unsuccessful project. As a planner said, "too little, too late, in the wrong location." Two parks along the street—Air Canada Park and TD Plaza are both described as very successful 1980s projects by interviewees. As a planner commented that they "create green spaces on the street."

All interviewees recognize the historic importance of the street, but none of them think we can or should bring this "glory" back, considering larger social and economic shifts in Winnipeg. In my opinion, what we can and should do is to improve the physical conditions and economic development along the street so as to enable Portage to become a great Winnipeg street, and to create a more sustainable downtown.

Current conditions

The second category of questions relate to the current conditions, and weaknesses and strengths of the study area from an urban design perspective.

A great downtown street, as one of the interviewed planners explained, should be "vibrant, attractive," and where "people want to be there." Concerning Portage Avenue's position within downtown Winnipeg, all interviewees acknowledge that the study area continues to be "the most important downtown street," though it used to be a great retail street before the 1970s. Portage Avenue is not the retail centre of the city any more, and will perhaps never regain its primacy. The current street condition is far from that required to be a great street. Many on-going efforts are needed to enhance both the physical condition and economic realities of the street.

Because all interviewees work within the downtown area, they often walk along Portage Avenue. They are all fairly satisfied with the existing physical conditions of the street, but they agree that there are still some points that need to be improved, such as street trees and seating facilities. Though there are differing opinions on what is the biggest problem for the study area, there are some problems that most interviewees recognized in common.

The first problem is the lack of attractions to draw people downtown, particularly during evenings and weekends. All interviewees mentioned that they walk along the street on weekdays during the day, but not in the evening or weekends, unless there are festivals or special activities. One planner stated, that "big box stores take the dominant amount of retail money from the city. The only reason to come downtown is the specialty." The things that can attract people downtown must be something unique, not the products or services people can get easily in other parts of the city. Downtown itself and downtown streets should become destinations too. Arts have the magic ability to turn the downtown into a "great place." In general, the study area should be developed to provide various choices and destinations for different groups of people at different times of a day.

The second problem concerns the comfort of transit services and related public facilities. Bus shelters within study area have had some improvements through the "Portagescape" project. The shelters now are small glass and steel boxes on sidewalks, seemingly cold and lacking of human feeling. Only one or two benches are placed beside the shelter at some bus stops. There are no place for people to stay, and few services provided to people who are waiting for buses. The reason of this is to avoid panhandlers, but losing the physical comfort of public space should not be the proper solution.

Third, for the downtown to be as a centre of the city, there needs to be more visual attractions, such as advertising, lights, signage, banners and storefront decoration. To improve the attractiveness of the downtown, designers need to create a bright, vibrant, exciting and safe environment for the Portage Avenue study area. For

example, traditional downtown retailers and department stores always use their well-decorated window to attract, while also beautifying the street.

Fourth, the study area is the centre of the downtown Winnipeg, a city with rich history. Special street elements or details are needed to tell the story of this city and street, for example the old market park in exchange district. Portage and Main is the most famous intersection in Winnipeg, but there is nothing really special around the intersection to remind people about special place in Winnipeg's history. Public gathering places with historic elements and interesting urban spaces should be built at key locations within the study area, such as Portage and Main and Eaton's.

Fifth, people will feel safer when they know where they are, and where they are going. For many suburban residents and tourists not familiar with the roads and services in downtown, an effective wayfinding system would be helpful and comforting. This can include street signs, information signs, and information kiosks. For example, the skywalk system does not have a very clear indication to help people locate and orient themselves at every corner. Another example is at the corner of Portage and Main, there are no clear direction signs to tell people where they can cross the street, and there is no sign to direct people to the beautiful indoor pathway on the ground level of TD Building. Those people who do not often come downtown can easily find themselves lost and confused, and consequently feel unsafe and unsatisfied with their downtown experience.

Sixth, the study area still has problems with accessibility, both at the point of storefront access, and for commuters moving between different levels pedestrian systems. The skywalk does not have enough entrances for people to enter and exit close to their destinations at street corners or in the middle of blocks.

Finally, a "great street" needs good maintenance to keep it great. One planner commented during the interview that "weather conditions exist and man-made damages exist. Maintenance needs a budget every year to bring back and keep the street to what it is intended to be." The infrastructure and street amenities within the study area are fairly inviting and comfortable now. Weather damage, vandalism and normal wear-and-tear will totally change its fresh and healthy look without regular maintenance. Plantings should be watered frequently, and the dead ones should be replaced; benches and other street furniture need to be repaired; graffiti should be removed or covered; sidewalks should be cleaned... Street maintenance does not cost as much as capital projects, and will have big influence on the street's development.

The above-listed problems are not ranked in order of importance. Each of them affects the development of the study area.

Suggestions and recommentations

The third survey category focuses on the interviewees' suggestions and recommendations for the future development of the study area, and their opinions as to how to achieve more sustainable downtown and main streets. With consideration to the problems they identified in the study area listed in last section, all interviewees provided a number of suggestions for future development. Some of the research questions in this category asked for participants' opinions on specific solutions highlighted during the literature review for this practicum that might be valuable for study area.

Interviewees' insights were closely related to their Winnipeg experiences with economic development. According to several interviewees mentioned, sustainable

development in the urban core is different from that in rural and the suburbs. It is less relevant to environmental-friendly development, and more related to sustaining economic activity, because of the land use situation within the urban core. As one planner said, it concerns how "to attract more people and more businesses in downtown," to help "businesses and buildings to sustain themselves" and to "create a place people want to be." Many interviewees pointed out that to attract more people to the downtown, to reduce energy consumption for commuters between the city core and suburban areas, to use less energy and resources to travel or serve more people, are all practical sustainable solutions. Another level of sustainability is about using existing infrastructure, buildings, and urban facilities longer, instead of tearing them down and building new ones. All strategies and approaches that can help to reach the vibrancy of downtown are more sustainable actions both for the downtown and the city.

All the suggestions from interviewees have provided an important foundation for the recommendations at the end of this practicum. (Please see the last chapter for details.) The next section (Section 4.2) provides interviewees' opinions on the "Portagescape" project and the proposed arena.

4.2 Analysis and evaluation of the "Portagescape" project

In early 1998, there was a surge in Portage Avenue redevelopment. City Council approved $500,000 for a traffic study of possible impacts of roadway redesign and preliminary site design in Portage Avenue. In April 1998, The City of Winnipeg approved $2,500,000 for Portage Avenue redevelopment. In August 1998, the Province of Manitoba contributed another $3,000,000 to the "Portagescape" project. The fund

was devoted to the physical improvement of the street, in an attempt to make it attractive to pedestrians and result in more people and business on the Avenue. The project changed the image of the street, but the ultimate goal to attract pedestrians and encourage business has not been achieved. The closing of Eaton's in 1999 made the situation even more difficult for Portage to maintain its position as a downtown commercial/retail centre. More work needs to be done in the near future to revitalize Portage avenue.

The "Portagescape" project was the biggest downtown project in 1998. The plans for such a project had been discussed for many times by governments and practitioners before its construction. The study area is included within the project and was strongly affected by the project. The evaluation of the "Portagescape" project is significant for planning further development of the study area.

4.2.1 Background to the "Portagescape" project

Policy background

Plan Winnipeg—Toward 2010, is an important document prepared by the City of Winnipeg in 1993, for guiding Winnipeg into the twenty-first century by addressing the physical, social, economic, and environmental conditions affecting city development. The statement of principle for downtown development is "The city seeks to make the downtown an attractive, distinctive, and vibrant place for Winnipegers and visitors alike (1993: 86) ". It also emphasizes the need of preparing a specific plan for downtown development.

CentrePlan is a sub-set of Plan Winnipeg based on the "downtown" section of the Plan (CentrePlan, 1995: 2). It articulates a vision for downtown Winnipeg, a series of strategies intended to make that vision a reality, and a list of actions that will be implemented in the short term. One of the priorities established through CentrePlan is the revitalization of Winnipeg's two most important streets: Portage Avenue and Main Street.

Development background

By the 1990's, Portage Avenue was recognized by most people as having changed from a vibrant commercial centre of activity to an area of declining retail and commercial activities. Vacant storefronts, deteriorating buildings and a reduction in pedestrian volumes are some of the symptoms of this decline.

Before the "Portagescape" project was designed and constructed, the plan for the project was prepared and discussed in the city for a long time. Winnipeg 2000, the Downtown BIZ, the Forks North Portage Partnership and the City of Winnipeg agreed to prepare an action plan to improve Portage Avenue in the mid 1990s. In 1997, many studies were done by different groups of experts, such as transportation study and redevelopment study. All agreed with the necessity of improving the urban design of Portage Avenue.

A one-day design charette sponsored by MCIP was held in September 1997 to discuss the existing state of Portage Avenue, and to propose a series of initiatives aimed at revitalization of the study area. The main challenges identified during the design charette were follows (City of Winnipeg, 1997: 3):

- Zoning and code concerns
- Tax anomalies
- Safety concerns
- Vehicular bias
- Pedestrian amenities & comfort
- Empty and derelict buildings
- Lack of wayfinding signage
- Poor building / street interface
- Lack of identity and focus:
    - lack of unique services & uses
    - no sense of place or image
    - lack of entertainment opportunities
    - need for people spaces
- Lack of broad-based residential community
- Concerns regarding convenience of parking
- Need to integrate with other initiatives

Nine of these identify challenges relevant to physical street conditions. The improvement of the physical conditions of the street is clearly one of the most urgent requirements for developing Portage Avenue.

Another study in order to develop a strategy for the consideration of agencies, property owners, tenants, and the community was done by Coriolis Consulting Corp. at the same time. This company was hired by CentrePlan, Portage Avenue working group. The June 1997 report of Coriolis Consulting Corp., revitalizing the streetscape on Portage Avenue was the highest priority recommendation to enhance the development of Portage Avenue and downtown Winnipeg. Their recommendations were based on the following conditions found in the area at that time (Coriolis Consulting Corp., 1997: 2-3):

1. High ground floor and upper floor vacancy, especially between Hargrave and Fort.

2. Major problem with safety and comfort for pedestrians due to undesirable street activity, which was driving away customers and businesses and was making it difficult to attract tenants or investors.
3. Risk of increasing vacancy from relocation of existing tenants and the decline of Eaton's.
4. Portage Avenue's function as transportation corridor in the city-wide transportation system had taken priority over Portage's role as a pedestrian shopping and business street, while the street was not attractive or comfortable for pedestrians.
5. Portage Avenue between Donald and Fort was isolated from major downtown retail and employment concentration, and was not linked to the above/below grade pedestrian system.
6. There were not enough strong attractions to pull pedestrians to the section of Portage Avenue between Eaton's and Main.

CentrePlan's 1995-1996 Action Plan identified Portage Avenue as a unique area of the downtown that requires special treatment, subsequently a "Portagescape" plan was brought forward in 1998 based upon the results of the 1997 Coriolis study and previous studies, such as the traffic study.

4.2.2. Purpose of the project

Reasons for improving the pedestrian environment in the downtown are clearly stated in Plan Winnipeg Chapter Five: Urban Development Management and Chapter Six: Urban Image.

> "The intent is to provide a pedestrian environment in the downtown that is safe, efficient, and aesthetically pleasing, and to improve the integration of pedestrian needs into the design of urban transportation facilities. Using high standards of urban design, these improvements will provide for a greater public presence on the sidewalks, will provide for greater informal surveillance and personal safety, and will promote vitality in the heart of the city" (City of Winnipeg, 1994: 2).

This identifies one of the purpose of the "Portagescape" project was to provide an urban design vision and implementation strategy to recapture the lost grandeur of the Avenue.

4.2.3. Conditions Before the Project

A description of the study area of Portage Avenue can be summarized as follows: (City of Winnipeg, 1994: 3-4)

1. The right-of-way width is 40 metres.
2. The roadway contains an eight-lane divided cross-section with left turn storage lanes at those intersections where left turns are permitted.
3. The public sidewalk is 5.3 metres in width on both sides of the street.
4. There are no parking meters installed. On-street parking was permitted during evenings (after 19:00) on weekdays and Saturdays and all day on Sundays and Holidays.
5. A number of loading zones are provided at various locations on both sides of the street.
6. Stopping is prohibited between 7:00 and 9:00, and between 15:30 and 17:30 on weekdays.
7. Eastbound bus stops are located at near-side Vaughan, near-side Edmonton, near-side Donald, and near-side Fort. Small unheated shelters are located at the Edmonton and Fort bus stops only.
8. Westbound bus stops are located at near-side Garry, near-side Donald, near-side Carlton, near-side Edmonton, and near-side Memorial/Colony. Small unheated shelters are located at the Garry and Donald stops. Large heated shelters are located at the Edmonton and Memorial/Colony stops only.
9. All intersections between Memorial/Colony and Main are signalized.
10. There are no benches along the street in study area.

Average hourly vehicle volumes and the distribution of passenger volumes for automobiles and transit are summarized in Table 2. The table illustrates the importance of public transit in the movement of people along the study portion of Portage Avenue. Although buses only accounted for a small proportion of the total number of vehicles using Portage Avenue, about 60% of peak period person-movements and about 45% of off-peak person-movements in the study area were made by public transit.

Table 2. Average hourly vehicle volumes and passenger volumes (City of Winnipeg)

Time Period	Vehicles per Hour in either Direction		Passengers per Hour in either Direction	
	Autos	Transit	Autos	Transit
AM Peak (07:00-09:00)				
Vehicle Volume	1,700	128	2,210	3,200
% of Total	93%	7%	41%	59%
Midday (09:00-15:30)				
Vehicle Volume	900-1,300	54	1,320	1,080
% of Total	95%	5%	55%	45%
PM Peak (15:30-17:30)	1,700-			
Vehicle or Pgr Volume	1,800	137	2,275	3,425
% of Total	93%	7%	40%	60%

There were about 1,800 bus trips through the downtown every day. Before the roadway reconstruction, buses often dominated the curb lanes during peak periods. Travel time for buses within the study portion of Portage Avenue were generally in the order of 6 to 8 minutes in either direction at all times of the day, while the driving times

for cars were about 4 minutes. Buses operating in the curb lane were often delayed by vehicles turning right from Portage to the side street. In addition, vehicles stopped in the loading zones created delays by requiring buses to wait for a break in traffic, before moving into the second lane to get around stopped vehicles.

Problems in the study area before the project were summarized by the City as follows: (City of Winnipeg, 1994: 5-6)

1. It was perceived by many members of downtown business community and the Downtown BIZ that the transportation situation was not supportive of street-front retail businesses. To provide more convenient access for prospective customers through the provision of on-street parking during business day was seen as important to encourage street-front retail.
2. The existing situation created some operational problems for transit service as described above. In addition, vehicles stopped in the curb lane (legally or illegally) made it difficult to provide reliable service and a comfortable ride on the buses.
3. Sidewalks were too narrow to provide attractive and comfortable waiting environment at the bus stops within the study area. The narrow sidewalk widths made it difficult to separate waiting pedestrians from through-pedestrians at the bus stop areas.
4. The distance to cross the street made it difficult for many pedestrians, particular the elderly, to cross Portage Avenue. The time the crossing would take often resulted in a missed bus.
5. The Portage Avenue streetscape was considered by many people to be poor, which was difficult to attract activities to the street. This would definitely, in turn, impact personal safety and the viability of storefront retail businesses. The street's unfavorable image was the opposite of the image required and the programs that were applied to improve the appearance, aesthetics and image of the city.

Because of the high volume of traffic using Portage Avenue, I find that priority has always been placed on efficient traffic operations. Consideration of efficiency should be accorded pedestrians and auto vehicles alike. In addition, comfort and safety for pedestrians are also the key factors requiring solutions, if people are to be attracted back to the study area.

4.2.4 Improvements resulting from the project: before and after "Portagescape"

The improvements resulting from the project can be divided into two categories: the first is about enhancing the pedestrian environment, e.g., widening sidewalks, streetscaping and installing new facilities along sidewalks. The second part concerns the changes to the auto-vehicle transportation system, e.g., changing eight driving lanes to six and adding on-street parking.

Pedestrian-related improvements

Included in the scope of this project were Portage Avenue sidewalk areas between Spence and Fort/Notre Dame. The construction of pavement modifications, sidewalk widening including drainage; the construction of streetscaping elements in the sidewalks and the coordination with Winnipeg Hydro were involved in this implementation. Issues of accessibility, winter use, pedestrian comfort and urban safety, wayfinding systems, public art and interpretation and area maintenance were all addressed. The purpose of Portagescape was to upgrade the street in the areas of overall appearance and to create a pedestrian-friendly street supportive of adjacent uses (City of Winnipeg, 1998: 1).

The streetscaping project involved widening the sidewalks in several locations along Portage Avenue between the Spence Street/St. Mary Avenue intersection and Fort/Notre Dame Street. One driving lane on each direction was converted into sidewalks, or used as parking lanes at the blocks where there was no bus stop. This improvement made more room on sidewalks to place bus shelters. Four new transit pads, one at the Edmonton stop and three at the Donald stop were built on Eastbound

side. Five new transit pads, one at the Carlton stop, two at the Donald stop, and two at the Garry stop were built on Westbound side.

After the widening of the sidewalks, there is enough space for people waiting for the buses. This allows better separation of people waiting for buses from pedestrians. There is space to install benches near the shelter for people to rest while waiting for buses. This also helps people to feel safer if there are undesired people on sidewalks. In addition, the widening of sidewalks has shortened the distance to cross the street and therefore makes street crossing safer and more convenient for seniors, children and people with some disabilities.

Other planning approaches are also applied on sidewalks. Universal accessibility, custom benches, information signage, vendor kiosks, and "turn of the century" replica historic light fixtures are some of the amenities incorporated to enhance the appearance and add identity to the street. The color and layout of the paving stones of sidewalks define the pedestrian corridor, possibly inducing pedestrians to stay within its bounds, thereby separating pedestrians from people waiting for transit and sitting along the street. In addition, the pedestrian corridor makes the street look more orderly. The addition of planters add more vitality to the street and provide shade for people sitting under these trees. All the street elements tend to swing the pendulum away from Portage Avenue as a street mainly for traffic, towards it being a public place for pedestrians to enjoy.

Auto-vehicle transportation system changes

Portage Avenue used to be an eight-lane street (four lanes in each direction) before the "Portagescape" project. The project changed the street to six driving lanes

(three lanes in each direction). The missing lane is used for parking lane and sidewalks. There are 46 parking metres installed in the study area on both sides of the street. Reducing the number of driving lanes on Portage Avenue will influence the vehicle traffic in the downtown business district, if drivers alter their routes to avoid the possible congested areas to minimize their travel time. This possible consequence was considered very seriously before this decision was made. A transportation study was done by UMA Engineering Ltd. in May 1998 to predict the traffic consequences. Straight traffic and right/left turn traffic were counted for both eastbound and westbound directions on Portage Avenue. All information was used to generate computerized traffic models, the EMME/2 model (existing city's traffic model) and the CORSIM model (the model predicts the city's future transportation conditions), which addressed both link and intersection volumes. The models predict traffic volumes on a regional basis, and are based on the results of origin-destination surveys of City residents related to their travel activities, in the AM peak hour. This report predicts that reducing Portage Avenue from eight lanes to six lanes was predicted to divert up to 400 vehicles/hour (20%) in each direction, to other routes. This would have negative impacts upon the downtown transportation system (UMA, 1998: 43).

An actual measurement of traffic was done in March 1999 to test traffic impacts on the road. The comparison of transportation capacity before and after the "Portagescape" project is shown as Table 9 and Table 10. The vehicular traffic volumes table shows an obvious volumes decrease (about 26%) in the eastbound volumn. This means that changing from four lanes to three lanes in eastbound would affect people's traveling behaviors—some drivers would go to other routes, particularly St. Mary. The average traveling time from Spence to Main would only change from 4.1 min. to 3.9

min. in AM peak period and from 6.4 min. to 5.6 min. in PM peak period. Since it was forecast that a portion of cars would go to other downtown streets, there should be no additional traffic delay or traffic jams within the study area compared to the situation before the project. Since the implementation of the project, there is no report indicating that there are more traffic problems in the downtown related to the change in Portage Avenue.

The situation in the westbound direction is different from the eastbound direction. The vehicular traffic volumes has a small increase (4%), while the traveling time decreased from 3.8 min. to 3.0 min. in the AM and from 4.2 min. to 3.3 min. in the PM. The change from four lanes to three lanes in the westbound direction does not cause people to drive around to other streets, while reducing their travel time. It was seen to have a very positive influence on the downtown transportation system. Based on the research for both eastbound and westbound directions, there is no significant negative affect on traffic flow on Portage Avenue and other downtown streets after "Portagescape."

The project also impacts on the public transit system. The two main improvements relevant to public transit involve widening the sidewalks and the design of on-street parking. Widening the sidewalks allows space for the bus shelters, which was impossible for some street blocks before the project, because of the narrow space between the curb and buildings.

There used to be no on-street parking permitted along the Portage Avenue study area. The installation of parking meters on both sides of the street was strongly recommended by the Downtown BIZ since the early 1990s. In the "Portagescape" project, 46 parking metres were installed on both sides of the street within the study

area, 25 on north side of the street and other 21 on south side. All of the meters have two-hour time limits. As a result of the way metered parking spaces are placed on the roadway, buses can drive straight, instead of going around parked cars. This will speed buses in this area (See Figure 25.).

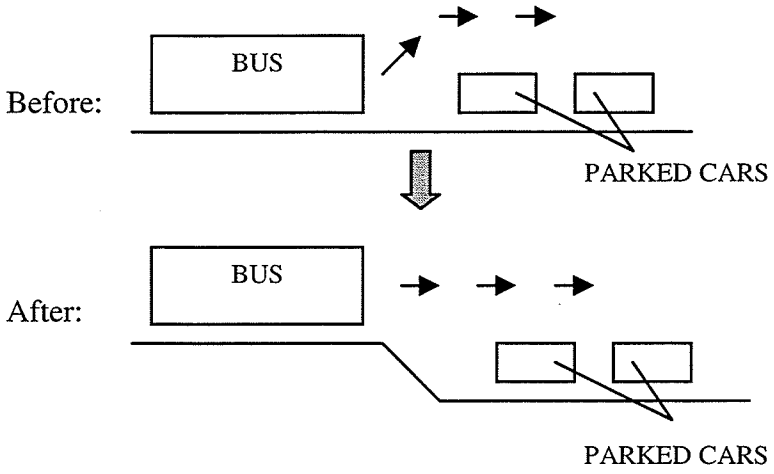


Figure 25. Buses can drive straight following the redesign of roadway system.

Theoretically, shortening the travel time of buses and providing a more comfortable environment for "waiting" transit users should encourage people to use public transit more often, increase the ridership of transit and reduce the reliance on private automobiles for travel to the downtown. In particular, measures to improve the speed, reliability, comfort, and convenience of the transit service is desirable, and was successful in the downtown with its radial transportation corridors and concentrated employment. The study area is the best place for beginning this enhancement.

There is already feedback from residents concerning the success of the "Portagescape" project. Research shows that three quarters (73%) of residents

recognize the positive affects of the "Portagescape" project for changing the physical condition of the street (Dennis McKnight 2051 Inc., 1999: 10).

4.2.5 Issues arising form the survey—"Portagescape"

Within the survey for this practicum, all interviewees were of the opinion that the "Portagescape" project was fairly successful. Changing the roadway structure, widening the sidewalks, adding bus shelters, providing street furniture and universal access were all very successful and make the street much more pedestrian-friendly. Most of interviewees are aware of more people on the street than before the project. The more comfortable pedestrian environment and the convenient on-street parking seem to have had a very positive effect on existing retail business and attracting new business along the street.

The landscape is seen by some interviewees as least successful element in the project, particularly the design of planters and selection of plants. Because of the project schedule, designers had only eight weeks to design this six million dollar project, which was unlikely to have been adequate time to consider the design details properly. The planters are very small compared to trees inside. As a planner said, "the choosing for plants should be done carefully. Consideration should be given to the weather conditions and ensuring the plants have the best chances to survive." Spruce, the main species of tree planted in the project area, is not very suitable for Winnipeg's weather. Every year some of the spruce trees are found dead after winter. Spruce trees have been replanted more than once in the last two years, and will undoubtedly require replanting in subsequent years. The improper selection of trees increases the annual

maintenance costs. The high maintenance cost in turn increases the difficulty of maintaining the intended look of the street.

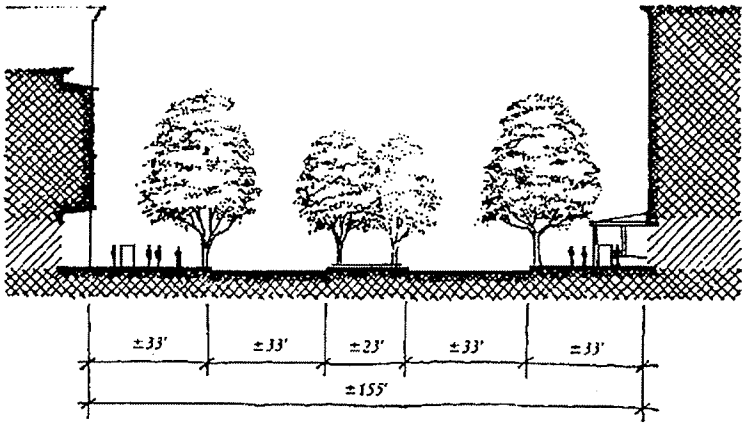
Another planner stated that "if a street looks good, people respect it more." A streetscape project can be done in short time. To bring the street back and keep the street looking good as intended is long-term on-going work. Aging from weather, normal wear and vandalism from people and other factors exist. Plants need to be taken care of every week and every year. A budget for maintenance should be allocated each year. The issue of ongoing maintenance needs to be considered within the design process. The maintenance of the street is also related to the sustainable development of the street. Using less money but keeping the intended look for a longer time are the right way to sustain the project.

The objective of "Portagescape" was not only for pursuing a beautiful street, but to improve economic development for the street and the downtown. The vacancy rate has not changed significantly compared to the rate before the project. Some businesses have moved out, and some have moved in. The evaluation of success of "Portagescape" should include evaluation of economic improvement.

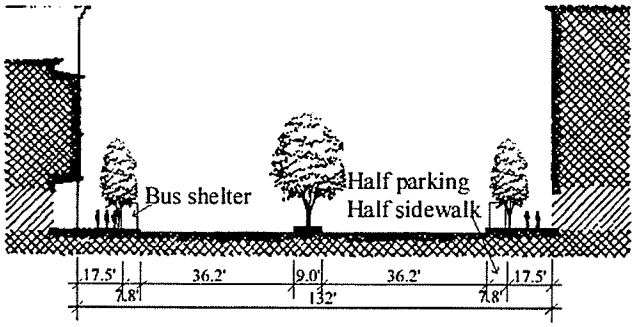
4.2.6 Conclusions

In my opinion, the "Portagescape" project achieved its objectives. It provides a fresh and healthy look to an old street, while still keeping some of the historic look to remind visitors of its history and glory. The restructuring of the roadway system, adding on-street parking, and enhancing the pedestrian environment are all considered as positive and successful improvements.

Figure 26 shows the street sections of Portage Avenue (B) and another street named Kurfurstendamm (A). Kurfurstendamm is a major central commercial street in Berlin, which is broadly recognized as a great downtown commercial street, and it is used as a good example in Jacob's book "great streets." This street has a similar scale, width, and function compared to Portage Avenue, but the roadway structure is different. Kurfurstendamm has narrower lanes (two driving lanes and one parking lane on each side), and broader sidewalks and medians, which provide more space for street life and street activities. The "temporary" cafes are the most notable aspects on sidewalks (Jacob, 1993: 158-161). Although Portage Avenue still has worse street conditions and less infrastructure for supporting vibrant street activities when compared to Kurfurstendamm, redevelopment strategies are at least moving in the right way. The "Portagespace" project widens the sidewalks, which make it more possible to encourage street activities than the conditions allowed before the project. The streetscaping approaches give the street better aesthetic quality and view. From the comparison of these two street sections, we can find that "Portagescape" is improving and helping the street approach the ideal of a "great street" direction. Creating a better infrastructure, which could work as a foundation and support for encouraging street life and business development, is a very important step in the overall street redevelopment process.



A: Section of Kurfurstendamm street, Berlin
(Jacob, 1993: 159)



B: Section of Portage Avenue, Winnipeg

Figure 26. Street section of Kurfurstendamm and Portage Avenue.

Some new businesses have moved into the study area, such as A & B Sound and Mountain Equipment Co-op. As some interviewee stated that these stores would have been unlikely to locate there before the "Portagescape" project. Though the project has had a positive influence to attract businesses to locate on the street and to enhance the future economic development of this area, it is still too early to make a final evaluation and judgement of its success. How this project will affect Portage Avenue's future depends not only on the "Portagescape" project itself, but also on the on-going efforts of the city after this headline-grabbing project is completed.

4.3 New developments on Portage Avenue—the Arena

The Eaton's building occupies a whole block on south side of Portage Avenue, and is located in the centre of the study area, between Hargrave and Donald. It used to be the downtown retail centre and anchor of Winnipeg. It is one of the historic buildings which people remember with pride, and represents for many a substantial part of the history of the City.

A survey of downtown BIZ members undertaken by the downtown BIZ in September 2000 of their personal opinions on current downtown situations and future development possibilities shows that the first two priorities for downtown redevelopment projects are the redevelopment of the Eaton's building (79%) and completing the redevelopment of Portage Avenue storefronts. Over half of BIZ members (55%) are very supportive of building a new sports and entertainment centre downtown. This is a significant 26% increase since the last survey, that 29% of members felt very supportive, while the percentage of members who are not at all supportive has decreased by 8%. Two-thirds of members think this should be a complex with food (69%) and retail (63%) services. As to the location of such an entertainment complex, when compared to the survey of 1998, the preferred location has changed from the site south of the Winnipeg Convention Centre (33%) to the vacated Eaton's building on Portage Avenue (47%), which wasn't an option in 1998 (Dennis McKnight 2051 Inc., 2000: 5).

4.3.1 The Arena (See Appendix G for the design plan.)

Since Eaton's closed in 1999, the site has become one of the highest priority site for redevelopment in downtown Winnipeg, as the closure of this historic symbol of Winnipeg commerce is a constant reminder of Winnipeg's downtown problems. Most Winnipegers want to know what will happen to this old building and what kind of changes will have the most positive influences for the future development downtown Winnipeg?

A new development on the site was proposed in 2001. A private-sector group came together with government to create a series of project including the True North Centre, a bridge, new 15,117-seat, entertainment, sports and performing-arts facility that will occupy the old Eaton's site. Its purpose is to "energize the city's centre while providing a new public and community amenity that meets the high standards our community deserves" (True North Entertainment Centre Inc., 2001: 1). In June 2001, City council voted to move ahead with plans to tear down Eaton's, and build the $125 million entertainment and arena complex.

The arena is designed as a mixed-use entertainment complex, occupying the full block. The four entries to the complex are located at four corners of the block. Features include: corporate suites, rental party suites, club seats, quality food outlets, a theme restaurant and sports bar. It will also include wide concourses, retail outlets, and ample washrooms. It is designed as a true entertainment centre, suitable for concerts and all kinds of sports—hockey, basketball, curling, arena football, lacrosse, and indoor soccer. The design capacity allows it to hold international and championship events, to accommodate up to 16,800 people or easily be curtained to create an intimate concert

setting for audiences as small as 4,000. (See Table 3. for design details.) No parking lots are included in this project as 8,400 parking spaces are available within a five minute walk.

There is currently a passionate city-wide discussion about the arena in the media coverage. Some people think it is a great idea. They think this plan is "Finally a reason to hope that Winnipeg will have a flourishing downtown and a reason for the young people of Winnipeg to stay around and watch it happen" (Kyle Morphy, 2001), and we should let the arena project proceed. Some people think there are better options for this site and suggest renovating the old Eaton's building as a mixed-use facility including housing that would "offer many spinoff benefits not accounted for in the arena proposal" (Ken A. Mackinnon, 2001). Some heritage activists have disagreed with the idea of tear the building down, and prefer to protect this 100 year old historic building.

Table 3. True North Centre
(True North Entertainment Centre Inc.)

BUILDING/SITE DIMENSIONS	
- Site dimension	300' X 490' (147,000 sq. ft.)
- Building footprint	131,000 sq. ft.
- Interior area (all level)	393,000 sq. ft.
FIXED SEATS	
- Club seats	1,500
- Lower bowl	7,956 seats (include club seats)
- Upper bowl	6,115 seats
- Corporate suites	841 seats in 41 suites
- Party suites	205 seats in 2 suites
SEATING CONFIGURATION	
- Centre-stage concert	16,800
- End-stage concert	16,487
- Hockey/Curling	15,117
- Ice shows	14,233
- Rodeo/Motocross	12,914
- Family shows	9,002
- Concert Bowl	8,610
RESTAURANTS/BARS	260 seats/190 seats (450 seats total)
FOOD CONCESSIONS	14 (both main and upper concourses)
MOBILE CARTS	14 (both main and upper concourses)
RETAIL OUTLETS	6 (total of 6,600 sq. Ft.)
SKYWALK LINKS	3 (Portage Place, Eaton Place, Somerset Building)
WASHROOMS	28 (241 total stalls)

(Data gathered in June 2001. Building design and specifications may be subject to change.)

4.3.2 Issues Arising from the Survey—the Arena

Since the arena is such a big and important new development for downtown Winnipeg, it is a significant issue for all design professionals and practitioners. All the interviewees agree that something should happen on the site as soon as possible, because the empty Eaton's building "is sending the massage to both Winnipegers and people from all over Canada that the City is slowly dying." After about two years of it being empty, all of interviewees are happy to see something happen on the site, but they have different opinions on what should happen. Only one interviewee was totally against the idea of tearing the old building down. This does not mean all the others think the arena is the best choice for the site and the downtown. Half of them think reusing the old Eaton's building for mixed-uses, including residential units, educational facilities and other service facilities at upper levels, while keeping retail at the street level would be better than tearing the building down to build a new one, from both urban design and sustainable development points of view.

All interviewees emphasize the importance of people and destinations in downtown's development. Bringing people downtown and encouraging them to stay are key. Considering Winnipeg's real estate market, it is not feasible to attract families to move back to the city core, when they can spend less money buying a single dwelling unit in suburban areas. Also, most families are looking for the space for children with playground that the suburbs and neighborhood parks offer. On the other hand, young singles and couples could have a significant influence for a vibrant downtown: they are the group who would like to stay in the downtown. Research by Dennis McKnight 2051 Inc. in 1997 shows those 18-34 years (84%) are the more likely

to visit downtown at least two to three times a month than those 35-54 years (65%), and those over the age of 55 years (55%). Locating an educational facility in city core, particular in the Eaton's building as one of the multi-uses, was strongly suggested by some interviewees. An education facility would draw large numbers of young people to utilize downtown retail and other services.

4.3.3 Design issues

There are two design issues for the new building worthy of discussing. First, the upper level is designed to be larger than the street level, which will also occupies the upper space of Hargrave Street. This will make a tunnel of the full block of Hargrave from Graham to Portage. Many interviewees thought the proposed design might cause safety issues, draw people away from the street and make this portion of the street dead. Using some design tools will avoid this undesired situation from happening.

Second, the facades of the new arena are designed in modern style: glass and steel, transparent and shining. Flood lights and spot lights will make it even more brilliant at night. The question is, will this style match the surrounding environment and buildings from an urban design point of view? Different people have different ideas on this. Some interviewees think it is not a bad idea to introduce something "fresh" to the city core instead of the traditional style of architecture. Some think that keeping the traditional style of facades will remind Winnipegers of the glory and history of Winnipeg, and the traditional one would match the surrounding buildings better.

I don't think there is a right answer for the issue of facade's style. Both options have their supporters and both style could be successful. The success of the arena is more relevant to its space organization and operation rather than the facade.

The construction of the arena has almost been approved. The decision of what to build bypassed planning concerns and was made by politicians. Maybe this is not the best use for the site, but it does not mean the idea of the arena is not feasible. The programs the project will provide, and the activities it will organize are more significant elements for the arena.

In addition, well-considered urban and architectural design are also very important. These will provide a better foundation and support for its success. The following factors will affect the future development and sustainability of the study area and the downtown: 1) the careful analysis of its functional and visual impacts on the surrounding areas and buildings 2) the consideration of design details of the building and public spaces around the building 3) the organization of the flow of pedestrians and auto vehicles 4) and street design factors discussed in the literature review, such as street furniture, parking, safety issues, and etc. Some suggestions for the development of the Arena are made in Chapter Five.

CHAPTER FIVE: RECOMMENDATIONS FOR STRATEGIES AND IMPLEMENTATIONS FOR PORTAGE AVENUE DEVELOPMENT

Chapter Five makes recommendations for implementation strategies for the development of Portage Avenue and the arena. This chapter builds on previous chapters, and features relevant theories, principles, and the findings from the research. The recommendations in Chapter Five should be valuable for the future development of Portage Avenue, and offer a convenient reference for development in other downtowns' commercial districts.

"It is the downtown that can be the heart and a vibrant, twenty-four-hour hub of the region" (Barnett, 2001: 193). Putting downtown renewal in perspective and making city administration friendly to investment are the approaches used by many cities to build the downtown competitive advantages for the downtown. If we want to redevelop the Portage Avenue study area as a vibrant retail and entertainment centre in downtown Winnipeg, we must utilize each urban design aspect. The followings are my suggestions for how to create a more unique Portage Avenue, which is attractive, physically comfort and safe from urban design perspective.

5.1 Land use

The study area occupies a large portion of downtown Portage Avenue, about 1.1 km long, including 10 blocks. Since downtown Winnipeg has a relatively large

downtown compared to other cities' downtowns and Winnipeg's size and population, it is less feasible to make such a long portion of the street become a successful commercial centre and the hub of the downtown. A Winnipeg example of a successful hub of restaurants and bars is Osborne Village, which is only four blocks long. In addition, the city's finances are limited and probably insufficient to ensure the successful redevelopment of the whole downtown, at the same time.

A portion of the study area should be given more political attention and financial support than other parts to build a real attractive downtown core. At the east end of the study area there exists many high-rise office buildings and less commercial and entertainment land use. At the west end is the Bay and Portage Place, which is already the main pedestrian activity hub. There will be a new entertainment building (the proposed Arena) to be constructed on the south side between of Hargrave and Donald.

Considering current conditions and projected opportunities, the blocks between Memorial/Colony and Donald would be the best location for this hub. It is only six blocks long and at the centre of the downtown. The site already has the Bay, Portage Place, the proposed arena, A & B Sound, Mountain Equipment Co-op, Air Canada Park, many optical stores, other retail shops and restaurants. If this part of Portage Avenue can be developed as the retail and entertainment centre of the downtown, it will change the downtown into a destination where people go to shop, entertain, to be seen and to see others. In addition, successful redevelopment in one small area will increase the public's confidence in the downtown. This area will encourage the development of surrounding areas and will probably become the base of a broader downtown redevelopment.

The downtown needs a large residential population to keep it to be a busy place. The downtown will never become a 24-hour "place" without the support of downtown residents. More residential land use contributes to a "total solution" on how to bring people downtown and keep them there. I don't think there is a big potential in Portage Avenue or the study area for residential opportunities. Residential redevelopment should be encouraged for the study area and areas within walking distance of the study area, and should involve the plans for an even bigger area.

5.2 Wayfinding system

People will feel safer in a place where they know where they are, and how to get to where they are going. There is no integrated wayfinding system in downtown Winnipeg. When I walk in the skywalk system from Portage Place to the south side, I don't know where the pathway will lead me. I know I am not the only person with these feelings and concerns. One way of reintroducing the public to the downtown is to make sure everyone knows where to find services that they are looking for, find services they didn't know existed, and perhaps try them while they are in the downtown. Therefore to have an attractive downtown, we should show them where those services are located through a wayfinding system.

The wayfinding system I propose for downtown Winnipeg does not just involve simple signs and maps posting along the street. It should be a comprehensive and integrated system linking each piece of the downtown to the whole community, using Portage Avenue as the beginning. Suggestions for design and implementation of wayfinding systems are as follows:

1. The wayfinding system should be planned to cover the downtown but not only within the study area.
2. Links should be used to connect the whole system, while keeping it distinguishable between different districts and areas. Using different colors as symbols for different areas, easy for people to recognize, might be a good way.
3. Direction indication signs should be big enough, simply designed, and easy to be understood.
4. North is not necessary to be always on the top of a map. The top direction should be the direction people are facing, which makes it visually, and easier to read.
5. Ads might be posted on the information kiosks or signs to decrease costs.
6. The implementation of the whole system might require a long period of time, while the holistic plan and design should be done at the beginning to ensure its consistency. The signage can be installed area by area, beginning with the study area.
7. A booklet introducing the whole system should be developed as an ad and tour guide for the downtown.

The system must be cohesive and comprehensive, and must have a consistent and standardized look, reinforcing the overall image. Throughout the walkway, users must be able to confirm that they are within its network.

5.3 Transit stops and weather-protection design

Bus stops are one of the important downtown public gathering places. Though transit service is its main function, a bus stop could be more than a functional facility. After the "Portagescape" project, the downtown's bus terminals have been improved considerably. More shelters have been built, and wider spaces have been provided for people waiting for buses.

Those shelters are small steel-and-glass boxes standing isolated from other buildings, and providing only basic climate protection. The shelters feel cold and lack architectural design or human feeling. There is nowhere that people can hang around or have a cup of drink while waiting for their buses. Rather than building new gathering places on the street, bus stops are the existing pedestrian gathering places, which should receive more attention and have better design.

Creating new gathering spaces adjacent to bus terminals depends on current conditions and spaces, which may not be possible for every stop. The new downtown arena is in design process. Public transit will be a significant mode of access to this major mixed-use building in the downtown. The new design and construction make the idea of combining the bus shelters, park and outdoor patio possible. In the design of the arena, there are two entrance lobbies and one pedestrian bar facing Portage Avenue. Since there is no outdoor patio along the Portage Avenue study area, and people need rest spaces and services around the bus terminal, those considerations should be included in the design of the arena. (See the section 5.8 for specific suggestions about the arena.)

The improvement of shelters should also include the weather-protection issues. The protection facility for people waiting for buses should be considered as part of the street level weather-protection design. A bigger canopy to provide cover from the shelter entrance to bus entrance is necessary to protect people from rain and snow (See Figure 2.12.). A well-designed canopy can be treated as street sculpture. In addition, the canopy can also be combined with ads on both sides to lower the budget and create a better commercial circumstance.

5.4 Accessibility of walkway system

Pedestrians in streets are fully exposed to the environment. If we want to encourage pedestrian activity, we must make sure pedestrians are well-protected from the climate. This does not mean pedestrians are "protected" all the time, but urban design should provide people with the choice of accessing the weather-protection system, whenever they need. If we want to encourage shopping, we must make sure people can get into the store easily and conveniently. There is another design issue involved—accessibility.

Downtown walkway system connects 38 buildings, but along Portage Avenue, it is not easy to access the entrances from both inside and outside. There are few entrances at street corners. If a person walking down the walkway system from Portage Place attempt to cross the street from the east side, he/she will find he/she can't get out of the system until Eaton's Place. The system needs more entrances and better signage for access to the skywalk from each street corner or the middle of the blocks. If it is not convenient for people to enter/exit the walkway system, they won't step out to the street

level or go to a store along the street, unless it is absolutely necessary. From an urban design point of view, having more entrances to the walkway system, and making sure people can access the system within every two blocks are necessary to encourage street level businesses on Portage Avenue.

5.5 Store front design, advertising and doorways

The design of downtown retail should not be the same as suburban shopping malls, because shoppers have different shopping behaviors on downtown main street and store owners need to differentiate themselves from suburban mall stores.

People go downtown mainly to work and find entertainment, not to shop. They need a reason to enter a store. To attract more people to step into stores is the first stage of success to increase retail businesses. The thing that really attracts people's attention while they are walking down the street is the decoration of the store windows. The importance of the display function of the windows and doors is recognized by downtown retailers and department stores. Enhancement of the display function of windows is necessary for retailers and other stores along Portage. For example, Portage Place occupies three blocks of streetfront. About a half block portion of the building has no entrance at all. Obviously, the probability of people entering such a storefront is lower than a store with an attractive window display. To encourage retail within the central downtown, the efforts from storeowners only are not enough. City bylaws should ensure that the storefronts are decorated to a certain quality.

Advertising functions in much the same way as the display as windows do. Art can add life to the street. The downtown commercial centre is a place that should be

different from other streets as a socializing place, which is exciting, vibrant, and inviting people to shop. Many suburban shopping malls post advertising at every corner, to encourage people to shop. Famous commercial streets around the world are doing the same thing, such as Fifth Street in New York and retail streets in Tokyo and HongKong. To develop Portage Avenue into a more attractive place for shopping and entertaining, showing people attractions through advertising and lights is a cost-effective approach. To create a vibrant street environment, effort is required from all property owners, in parallel with government regulations and bylaws.

Accessibility is another factor that influences whether people enter a store. When people see the window decoration, it may cause them to remember or accidentally want to purchase something. If the product or service is not easy to access, some people will give up the plan to purchase. In order to encourage retail businesses, and to encourage people to want to enter the store is the first step, making it easy to enter the store is the second step. Having more doorways opening along the Portage Avenue study area will increase the possibility of passing pedestrians making purchases.

5.6 Street art

The study area is an important portion of Portage Avenue and the downtown, and requires some dramatic approaches to heighten its special position. Public art can function in this capacity by providing a sense of place at key intersections and locations. The Portage Avenue study area, especially the Portage and Main node, is a high-priority location in downtown Winnipeg, needing special artistic treatment.

Portage and Main is the most famous intersection in Winnipeg. This is a place of which Winnipegers should be proud. The image of this intersection must remind people of its historical importance and old glory. Looking at the intersection now, there is almost nothing special that would allow people to recognize it as the famous historic centre of an old city. A well-designed fountain or sculpture with some benches, for instance, would give it a much different feeling and bring this intersection back to life.

Street art is not only needed at Portage and Main, but all along the street. Receptacles, information kiosks and bus shelters can all become attractions on the street. We can also add some fun to the street. As an example, the small bronze handbag, shopping bag, luncheon items and sweater, realistically rendered and dispersed around area of Bellingham Square, Chelsea in England, make it a special public space that everyone is proud of (See figure 6).

Colorful features such as banners, flags, sculpture and other art forms would enhance the environment particularly during the winter months. Bold colors are suggested to be applied in street signs and banners, which would also add vibrant visual elements to the street.

5.7 Maintenance

The "Portagescape" project gives a fresh look to this old street. To keep its clean and healthy look does not need more big investments and projects, but careful maintenance. If there is no budget to maintain the street, in two or three years Portage Avenue will look the same as before the beautification. A clean well-maintained street gives people a sense of order, and from that, a sense of safety which results in more

pedestrian traffic. People will respect a clean and healthy street, a dirty and poorly maintained street will only become even worse.

Both man-made damage and the damage caused by weather need to be repaired as soon as possible. Plants need to be replenished and watered frequently. Suggestions for maintenance follow:

1. Street furniture, such as benches and planters should be checked and repaired at least twice a year.
2. Plants should be checked every spring to ensure their health. Trees along the street should be carefully selected. If certain kinds of trees or shrubs cannot grow well with Winnipeg's cold weather (for example, spruce), they should be replaced and replanted as soon as possible.
3. Add water facilities along the street to water and wash plantings.
4. Future maintenance of the project should be included in the original request for proposal as an option so that the city can determine what on-going maintenance costs will be, and whether the responsibility should be awarded to the contractor or held by the city.

5.8. Suggestions for the Arena

The footprint of the arena is too big for the property available. As one the most significant new downtown developments, the design of the arena should be carefully considered from both architectural and urban design perspectives. The proposed design requires further refinement in order to meet the general public's requirements and

expectations. The following five suggestions are based on the proposed design and my research of urban design and street design.

- **Enlarge the first level plan to include the tunnel inside the building**

In the current design, there will be a block-long tunnel at street level on Hargrave Street from Portage to Graham. This tunnel will be dark and cold, and it is very possible that it would become a gathering place for undesirable people. It could drive pedestrians away from this street, and this would be undesirable. Because of functional considerations, we cannot set back the second level to prevent the building from overlapping Hargrave.

My suggestion is to include Hargrave in the building, stop the traffic, and make it an interior corridor. This corridor can be designed with a street appearance and would feel like a street, e.g., with an interior plaza at entry points, stores along the corridor with small scaled street lights, and other street furniture placed along the corridor. People can easily go through the building and do some shopping, while staying in a safe and weather-protected environment. This design would also involve more people in this new development, and would encourage retail businesses within the building along the corridor. The potential negative impact would arise from transportation considerations. This proposal would stop the traffic from reaching Portage Avenue from Graham. The city transportation development would have to test the feasibility of this proposal to determine whether the impact on transportation is significant.

- **Widening sidewalk to provide for the Arena pedestrian traffic**

The arena will be a huge building, which will almost fill the whole site. There are two reasons for widening the sidewalk on Donald Street. Firstly, the function affects the form of the building. There is no set-back on the upper level, which makes the building into a real box. This kind of design will make people feel uncomfortable while walking along it. Though the building has been designed as transparent, some people walking down the street will still feel this discomfort. Secondly, the arena will attract thousands of people and many of them will be gathering on the sidewalk, talking, waiting and walking. The existing sidewalk on Donald Street is only 3.55 metres wide and couldn't meet the future requirements.

Therefore the sidewalk needs to be widened. The way to widen it could be the same approach used on Portage Avenue: to change one driving lane to a combination of parking lane and sidewalks. In this way, street parking can be provided in front of this busy entertainment complex to assist arena retailers, and the sidewalk can be widened where no parking meters are placed. Street furniture, such as benches, planters, newspaper vendors and information kiosks, can also be placed along the street. The street furniture and parked cars will act as a buffer between cars and pedestrians to make the street more pedestrian friendly.

- **Better access and human-scaled design**

Currently, there are only four entrances designed for the arena. This design will make the management of the operation easier. Seventy percent of the investment for the arena is coming from the private sector, and thirty percent money from the three

levels of governments. The arena's function and the government investment suggest that this is a public building. A public building should be designed differently from a privately-used one. The arena should be more open to the public, with easy access for the maximum amount of people. The arena is located right in the centre of a downtown retail street, and retail functions exist within the building. These all require easier access and more doorways to enter the building.

Another reason to have more doors in the middle of the block is to avoid an empty block. Having people enter and exit the building at more points within a block will encourage street activity, and in turn make the block more lively and become a socializing place and destination in the downtown.

In addition, the street level should be designed for the human scale (See Figure 4. and 5.). This requires more visual attractions such as setting back doors, patios and balcony overhangs. A variety of architectural details attracts people's attention and satisfies more people's needs for change and exploration.

- **Roof garden**

The proposed arena is located in the middle of the downtown portion of Portage Avenue. A public gathering place is needed within or beside this big entertainment building. Due to the functions of the building and the floor plan requirements, there is no space available around the building.

The arena is to be connected to the skywalk system at its second level. The west end of second level, above Hargrave Street, is designed as a pedestrian corridor with retail spaces. Part of this area could be designed as a roof garden. This location

would provide solar exposure, along with interesting and interweaving spaces both on street level and the secondary level. It can be used as a rest area and as an outdoor patio, while still keeping its function as a pedestrian pathway (See Figure 10.).

- **Integrate the bus shelter with the building**

As described earlier, improving the bus-waiting environment will encourage ridership of public transit. For most of the existing buildings within the study area, the integration of bus stops within buildings, rather than using the small steel-and-glass boxes as bus shelters, would offer the best option. However, this improvement is less feasible for most bus shelters and buildings behind them. As the arena is still in the design stage, it would be fairly easy to integrate a bus terminal within the building. This improvement not only benefits the transit system, but will also make the arena a vibrant public gathering place—the primary goal of the City and the developer. Based on the proposed arena design, some detailed design suggestions are as follows:

1. Design the pedestrian bar close to the location of bus terminal.
2. Build a big canopy cover from the entrance of pedestrian bar to the edge of Portage Avenue.
3. To use the same style, color and materials as the arena to build the bus shelter. The shelter can also be integrated with the canopy and the arena to make the shelter a part of the building.
4. To keep an outdoor patio space in the middle of pedestrian bar and bus shelter, which is half protected by the big canopy.

5.9 Keep the issue of place-making at the forefront of the design processes

Portage Avenue itself should be built as a destination for downtown Winnipeg. Place-making is not only about beautification; it also involves the background history, social influence, public expectation and etc.. As well as applying design approaches, the issue of place-making should be included in the design process. The following steps should be followed from the beginning of design (Fleming and Tscharner, 1981: 114):

1. History-related research, including a review of old photographs showing how the place has changed over time (This review may reveal that the place not changed at all)
2. Site map and/or building plans illustrating potential opportunities for public art.
3. Research on community feelings about the site and its relative importance, and its connection to the surrounding area (possibly through a hearing process)
4. Study of climate and its impact.

5.10 Conclusion

Portage Avenue is a very important street in Winnipeg. It used to be much more vibrant, but the fact is that it is not a great street now. Through historic pictures and stories about the development of this old street, we can appreciate its glory in the old days. Portage Avenue (and especially Portage and Main) used to be such a busy place, enjoyed by many Winnipegers. Many Winnipegers wish to rebuild the glory of

this street and the city. That is why so many people are supporting the street redevelopment projects, such as "Portagescape" and the proposed Arena.

What is a "great" street? In the book "Great Streets", Jacobs provided several criteria for great streets. A great street should be "accessible to all", "physically comfortable and safe", and should "encourage participation" (Jacobs, 1993:8-9). The first and second criteria, accessibility and physical comfort and safety, are the requirements that can be most easily achieved through urban design. In my opinion, they are the requirements for "good" streets. The third criterion—public participation—is the core to making a street "great" and to be distinguish it from other good streets. This quality of "great" can be enhanced through good urban and environment design, but cannot be achieved through urban design approaches only. A "good" street is not always a "great" one, but a "great" street should start by being a "good" one. The target of Portage Avenue at present is to develop it to be a good street, which means we should use urban design approaches to enhance the quality of urban space, and to create a comfortable, safe, and easily accessible destination.

A great street should also be sustainable. The sustainability I want to achieve for Portage Avenue is not ecological, but economical sustainability, which means that businesses on the street can sustain their operation and development. This will in turn give vibrancy to the street. The urban environment I am trying to propose for Portage Avenue in this practicum is an environment that can attract people to come, stay, and shop, can help the development of businesses along the street, and then can achieve the economically sustainable development of this street.

There are many developments that enable a street to be great, including historic, cultural and economic development for both the city and the street. History,

culture and economy are all relevant to "encourage participation." A rich history and old prestige can help Portage Avenue to be great again, when compared to building a new street because of the good memories people associate with it. Culture and art are magical in that they can create a street environment, and distinguish it from others. Economic development provides capital support for high-quality infrastructure and maintenance, brings vibrant urban life to the street, and creates a positive street atmosphere. Successful economic development of businesses along the street works as foundation of the physical comfort and safety.

A great street cannot exist by itself. The development of Portage Avenue must always be strongly connected with the development of the city. There are some facts about the study area that we must accept:

1. Portage Avenue is not a great street now.
2. The behavior, habits and opinions people have are not easy to change.
3. The cold winter has a negative impact on economic development and street activity.
4. The lack of economic development is blocking the street from being a great one, or even a good one.
5. There are some social problems that present a barrier to the development of the street, such as panhandlers.
6. Portage Avenue and businesses on the street need strong support from governments, non-profit organizations, and citizens, particularly residents from the surrounding areas.

This practicum is focused on through urban design to create an attractive urban environment, to achieve better accessibility within the area, and to enhance

physical comfort and safety. Not all problems of the study area can be solved through urban design approaches. Efforts from governments, private sectors, and storeowners are imperative. To paraphrase one of the planners from the survey, good urban environment can be seen as a "plate," appropriate policies and programs are like "foods on the plate." Without both of them, there cannot be a great meal. How to create a comfortable environment is the main issue I am addressing in this practicum; this is also the first step and a necessary requirement in the process of making Portage Avenue a "great" street.

In the meantime, there are also some programs sponsored by many organizations, not addressed in this practicum, that are helping to make Portage Avenue a better street, for example, the programs from the Downtown BIZ. Different programs focus on different problems. The downtown patrol, downtown watch and graffiti-cleaning programs are intended to provide a safer downtown environment. The downtown free Flyer Bus and easy street "Blue Loonies" (coins for parking meters) are helping to make the street more convenient and accessible. Programs for a variety of sources which affect the physical, social, and economic aspects work together to result in a better Portage Avenue and a better downtown.

Every program or development will affect the future of the street and every decision should be made based on sufficient research and careful study. For example, how to reuse adaptively the Eaton's historic building or whether the proposed arena should be built on the Eaton's site, are important current issues for the area. Studies show that the percentage of Winnipegers who agree and disagree to tear down the old Eaton's building and to build the arena are 40 and 41 percent respectively. Such figures do not provide much constructive guidance for planners. In my opinion, the factors that

are really critical to the street development are 1) How to innovate the old building or design the new building with consideration for the comfort and convenience of users, and the convenience and cost-efficiency of operators, and 2) How to operate the building and implement programs encouraging public participation. I suggest that further research and study are needed before making such important decisions, which will significantly affect the future development of Portage Avenue and the downtown.

To revitalize the study area and downtown, Winnipeg improvements need to be made gradually. This cannot be achieved through several big projects. Many examples from other cities, such as Beijing, Denver, Philadelphia, and Edmonton, have proven that on-going efforts for at least ten years are needed. Portage Avenue has already had a good beginning. The "Portagescape" project is fairly successful, as some new businesses have come to the street. Another big project, the arena, is in the planning stages. It is expected that the arena will draw people downtown, and cause an increase in pedestrian traffic along Portage Avenue. The study area has attracted public attention because of recent redevelopment projects. Further big projects are not required in this area after completion of the arena project. However, day-to-day improvements and maintenance will be required to maintain the redevelopment momentum. Small improvements, step-by-step, will heighten the general public's confidence about the future of Portage Avenue, and attract Winnipegers back to this famous landmark.

Of course, Portage Avenue is not the only place that should be and needs to be redeveloped. This does not mean the city should allocate its investments and efforts to every area that has a development requirement. The City of Winnipeg does not have sufficient funds to support development everywhere. After the development of one area

has "heated up", if the development and funding support stop in that area and begin on another area, it will only let the first area "cool down". Reheating the interest in the first area will need more money and time. It is not an efficient way of development from both economic and sustainable perspectives.

The development of Portage Avenue has heated up. Government support and private investments should be continued until it becomes a great street for the city. One great street can act as a cornerstone to make the surrounding area a success as well. Success in the city core will affect the city's overall development and sustainability. This is synergistic and will create a city that every Winnipeger can be proud of.

However, the study area is a small portion of Portage Avenue and a small part of the downtown. Development of this area cannot be separated from its surroundings. Every part of the downtown interacts with each other. In the city development process, there are always a number of streets waiting for redevelopment. It is important to prioritize investments on the most important areas first, which in this case is Portage Avenue. Having different development emphases for different periods does not mean giving up the development in other parts of the city. Only by developing in a more holistic way can the downtown and the city achieve more sustainable development.

Other studies would be of value for the study area and downtown Winnipeg. For example, what is the population and how many residential units exist within a 5-minute walk from the study area and the downtown? Local residents and people working downtown provide stable support for businesses on Portage Avenue and the street development. What is the purchasing power of the residents and working people in this area? Their purchasing power directly affects retail development on Portage Avenue. Is there further development potential in the study area and the downtown? A

detailed ground level parking study and building study may help to ascertain future land use potential. What impact will the arena have on the area and the downtown if it is completed? Although the proposed arena has been perceived by many to promise rejuvenation of the area, more research needs to be done to examine the potential impacts of such a use in the area.

Winnipeg is my second hometown, since I have lived here for two and half years. "To Build Portage Avenue as a Great Street" is a dream of mine. The current conditions, problems and restricted development possibilities in the Portage Avenue study area preclude quick solutions. It is not easy to recreate a great street in a short time and it is impossible to predict its future. In my opinion, one thing is certain: if there is one street in Winnipeg's downtown that has the potential to be developed as a great street, it is Portage Avenue.

As the downtown is one of the most important economic generators, the City of Winnipeg needs to position Portage Avenue to compete more effectively with suburban malls, and to play a larger role in the area economy. Rebuilding Portage Avenue's glory and bringing it back to being a great street is my dream. I believe it is also a dream of many Winnipegers. To achieve this needs our passion and continuing efforts.

Three words summarize what I think is required for Portage Avenue to be a great street: infrastructure, innovation, and integration. In this practicum, I have mainly focused on infrastructure development, which concerns primarily physical facility improvements on the street. For example, "Portagescape" is a recent project, which enhances the infrastructure of the street. Innovation indicates programs and policies for supporting business development and creating better business environment on the

street. Some of the Downtown BIZ programs, such as Downtown Watch, and what NPDC has been doing over the last two decades, provide good examples of "innovation." Integration suggests that the three level of governments, non-profit organizations, and citizens should work together to achieve the same objectives. It also suggests that urban design and urban management should be an integrated system with the same policies and principles, and different government departments, such as transportation and planning departments, should cooperate more closely. "Innovation" and "integration" are the two themes not addressed directly in this practicum, and these would require further study in the future. Without all of them, the dream of Portage Avenue being a great street will never come true.

Appendix

A. Interview List

- Andrew Chimko: Transportation Engineer, Traffic analysis, Public Works Dept., Planning & Traffic Management
  November 2000 and June 19th, 2001

- Christine Knoll: Urban Planning Coordinator, Property and Development Services Department, Planning and Land Use Division, City of Winnipeg.
  June 5th, 2001

- Deron Millor: Landscape Architect, Scatliff & Associates (Designer of Portage Streetscaping Project)
  June 8th, 2001

- Donna Beaton: Planner, City of Winnipeg
  November, 2000

- Doug Clark: Executive Director, Downtown Winnipeg BIZ (Business Improvement Zone)
  November 2000 and June 26th, 2001

- Douglas Peever: Senior Urban Designer, City of Winnipeg
  November 2000 and June 27th, 2001

- Hart Mallin: Manager of Portage Avenue Property Association
  June 19th, 2001

- John Kiernan: Design & Project Implementation Coordinator, Planning and Land Use Division, Design and Project Implementation Branch, City of Winnipeg.
  October 2000 and June 18th, 2001

- Michael Scatliff: Landscape Architect, Scatliff & Associates (Designer of Portage Streetscaping Project)
  May 31st , 2001

Interviews: (other than those conducted for survey)

- Bill Menzies: Manager, Winnipeg Transit
  June, 2001

- Edd Echellenberg: Traffic analysis, Public Works Dept., Planning & Traffic Management
  June, 2001

- Paul Webster: Chief Financial Officer, The Forks North Portage Partnership
  November, 2001

- Jeff Palmer: Planning and research, The Forks North Portage Partnership
  November, 2001

B. Research Questions

History of Portage Avenue:

1. In the last thirty years, how would you describe the changes regarding Portage Avenue? Is it getting better or worse? Please describe the character of the street over different periods in time.

2. How many projects have happened along Portage Avenue over the last thirty years? What were those, what were their purposes, and were they successful?

3. What is your feeling about the "Portagescape" project? Has it been successful? Do you think there has been more pedestrian activity along the street after the project?

Current situations and suggestions

4. What do you think about Portage Avenue's position in downtown Winnipeg?

5. Do you think Portage Avenue is a "great" downtown shopping street?

6. When was the last time you walked along Portage Avenue? What are your feelings about the physical conditions of the street? Do you like to walk along the street?

7. Which physical changes do you think are most urgent for Portage? Transportation? Climate-protected system? Safety? Streetscape? Vegetation? Buildings? Other ideas?

8. Do you think it would be a good idea to keep part of Portage Avenue as a traffic-free area? Why? If yes, which part of the street would you suggest?

9. Do you think it would be a good idea to build another traffic corridor going through or around downtown to decrease the commute traffic on Portage? Why? If yes, which street would you suggest should be the new driveway?

10. Do you think there should be more public gathering places along Portage Avenue? Why? If yes, which locations would you suggest?

11. What do you think about the new project that will be built on the site of Eaton's? Do you like to see something happen there? Do you like the idea of an arena? Do you think the new design will match the current circumstance of Portage Avenue? Do you think this new development will revitalize Portage Avenue and downtown Winnipeg?

12. What are the current problems of downtown Portage Avenue? What pre-"Portagescape" problems continue? What problems have arisen post-"Portagescape"? And why?

13. Are there any examples of streets from other Canadian downtowns that you suggest would be good precedents for Winnipeg?

14. What are your suggestions for the future physical development of Portage Avenue to solve its current problems?

15. What do you think about the potential for achieving sustainability in downtown area?

C. Residents' Attitudes Towards Downtown Winnipeg

The following tables are drawn from "Perceptions and Attitudes Towards Downtown Winnipeg," based on a total of 1,000 interviews (Dennis McKnight 2051 Inc., 1999).

Table 4. Frequency of Visiting Downtown (p.3)

(Numbers indicated as percentages.)

Every week	Almost everyday	71%
	Once or twice a week	18%
Less than once a week		11%

Table 5. Time Periods of Visiting Downtown (p.3)

daytime	Arrive downtown in the morning	52%
	Arrive downtown in the afternoon	21%
	Arrive downtown at various times	23%
Arrive downtown after 5:30pm		4%

Table 6. **Frequency of Using Downtown Retails** (p.3)

<table>
<tr><td rowspan="3">Every month</td><td colspan="2">79%</td></tr>
<tr><td>Almost everyday</td><td rowspan="2">20%</td></tr>
<tr><td>Every week</td></tr>
<tr><td>Less than once a week</td><td colspan="2">10%</td></tr>
</table>

Table 7. **List of Frequency of Using Downtown Services in the Last Year (At Least Once a Year)** (p.3-5)

Retail	90%
Restaurant	89%
Nightclub or lounge	78%
Medical services	70%
Financial institution	69%
Government services	65%
Sporting event	51%
Educational institutions	43%
Professional services	42%

Table 8. Downtown Appearance Over the Past Five Years (p.9)

Improved	Remain the same	Declined	Don't know
59%	15%	20%	6%

Table 9. Downtown Safety (p.10)

Very safe	Somewhat safe	Not very safe	Not safe at all
19%	58%	17%	5%

Table 10. Downtown as a Work Environment

Excellent	Good	fair	poor
20%	55%	19%	4%

Table 11. Perceptions of Winnipeg's Image (p. 15)

Positive		Negative	
An affordable city	87%	A safe city to live in	40%
To raise a family	79%	To own a business	39%
To access to art and culture	78%	To have well- paying jobs	48%
Quality of life	77%		
Accepting of other cultures	76%		

Dennis McKnight 2051 Inc., Downtown BIZ Member's Tracking Study, 2000.

D: Transportation Comparison Before and After "Portagescape"

(City of Winnipeg)

Table 12. Traffic volumes on Portage Avenue at Memorial/Colony Street

Vehicular Traffic Volumes			
DESCRIPTION	BEFORE	AFTER	CHANGE
Eastbound through			
AM peak 15 min.	510	370	-140 / 27%
AM peak hour	1840	1430	-410 / 22%
AM peak period	3200	2490	-710 / 22%
PM peak 15 min.	405	265	-140 / 35%
PM peak hour	1470	980	-490 / 33%
PM peak period	2780	1910	-870 / 31%
8 hours	10,620	7,870	-2,750 / 26%
Westbound through			
AM peak 15 min.	385	365	-20 / 5%
AM peak hour	1390	1380	-10 / 1%
AM peak period	2460	2430	-30 / 1%
PM peak 15 min.	500	490	-10 / 2%
PM peak hour	1910	1910	0 / 0%
PM peak period	3480	3540	+60 / 2%
8 hours	10,530	10,900	+370 / 4%

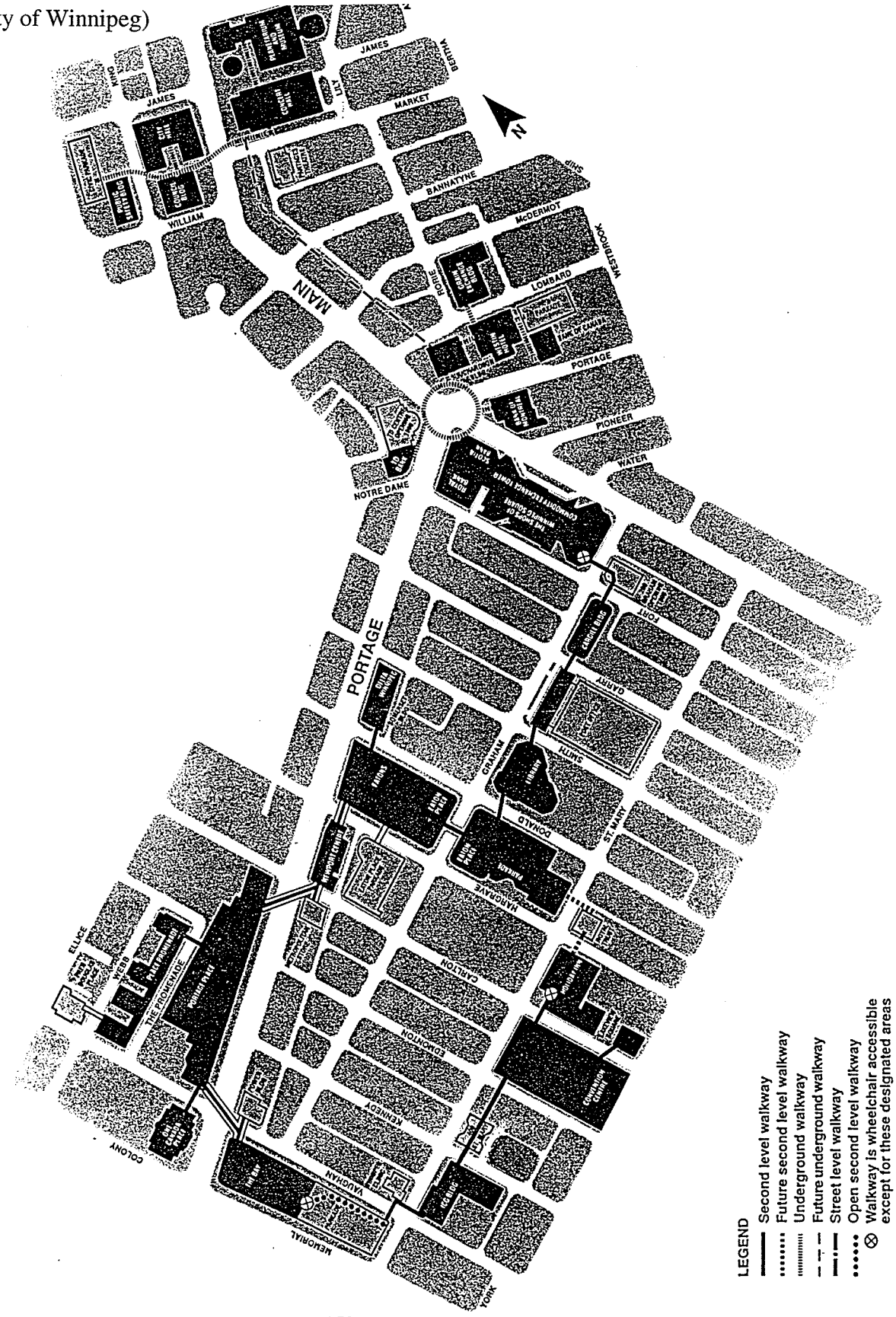
("Before Study" executed on October 20-22, 1997
"After Study" executed on March 19-22, 1999)

Table 13: Driving time comparison ("Before Study" done by consultant in early 1998; "After Study" done by Traffic Studies in March 1999. City of Winnipeg)

Traveling Time in minutes		
Time Period No. Of Runs	BEFORE	AFTER
Eastbound – Spence to Main		
AM peak period		
1.	3.3	2.7
2.	4.2	2.4
3.	3.8	3.8
4.	4.4	4.3
5.	3.9	3.6
6.	4.8	5.0
7.	na	6.0
8.	na	4.2
9.	na	2.7
Average	4.1	3.9
PM peak period		
1.	5.9	3.3
2.	7.4	4.4
3.	5.7	4.6
4.	7.6	4.5
5.	4.9	6.1
6.	6.9	7.2
7.	na	7.7
8.	na	7.2
Average	6.4	5.6
Westbound – Main to Spence		
AM peak period		
1.	3.7	3.0
2.	3.7	2.7
3.	3.6	2.5
4.	3.6	3.0
5.	4.1	3.0
6.	3.9	3.7
7.	3.8	3.0
8.	na	3.0
9.	na	2.9
10.	na	3.0
Average	3.8	3.0
PM peak period		
1.	4.2	2.6
2.	4.2	2.7
3.	3.5	2.8
4.	4.3	2.8
5.	4.3	2.9
6.	4.6	2.9
7.	na	4.5
8.	na	4.9
Average	4.2	3.3

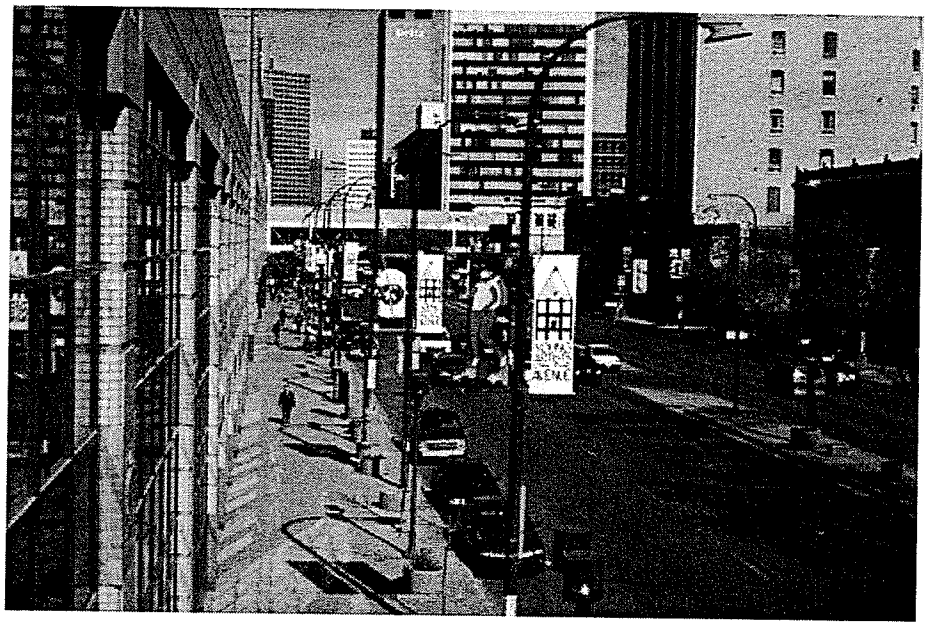
E. Winnipeg's Downtown Pedestrian Walkway System

(City of Winnipeg)

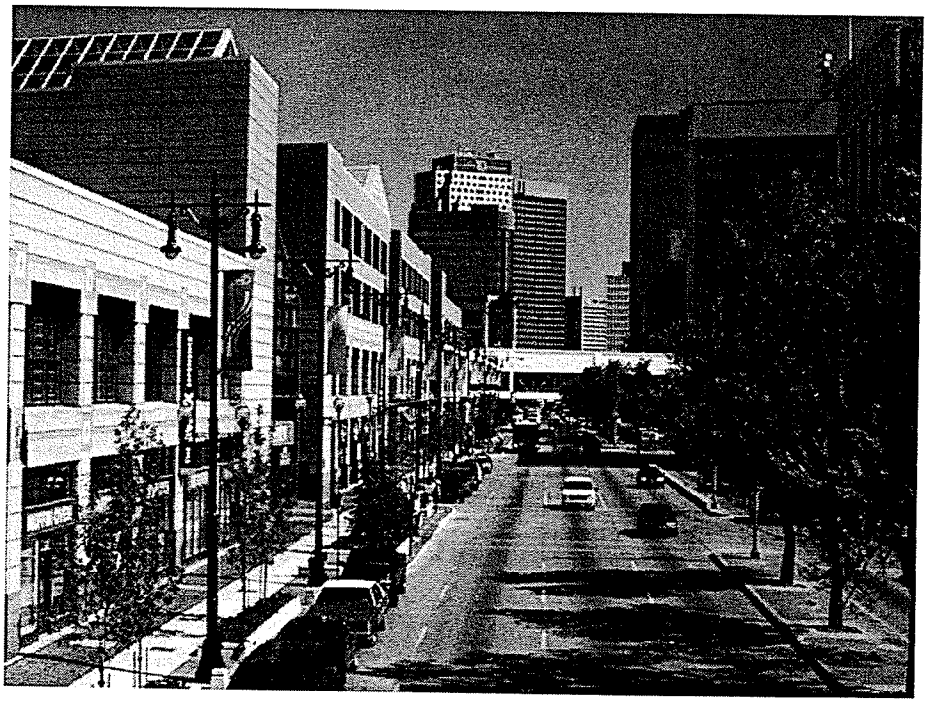


F. Images Before and After "Portagescape"
(Scatliff & Assosiates La Inc.)

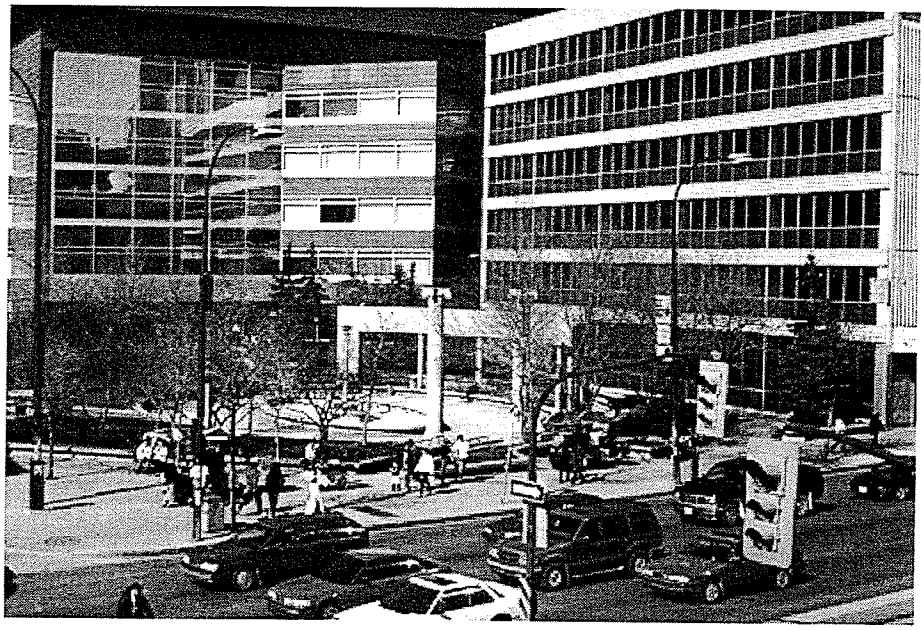
Before:



After:



Before:



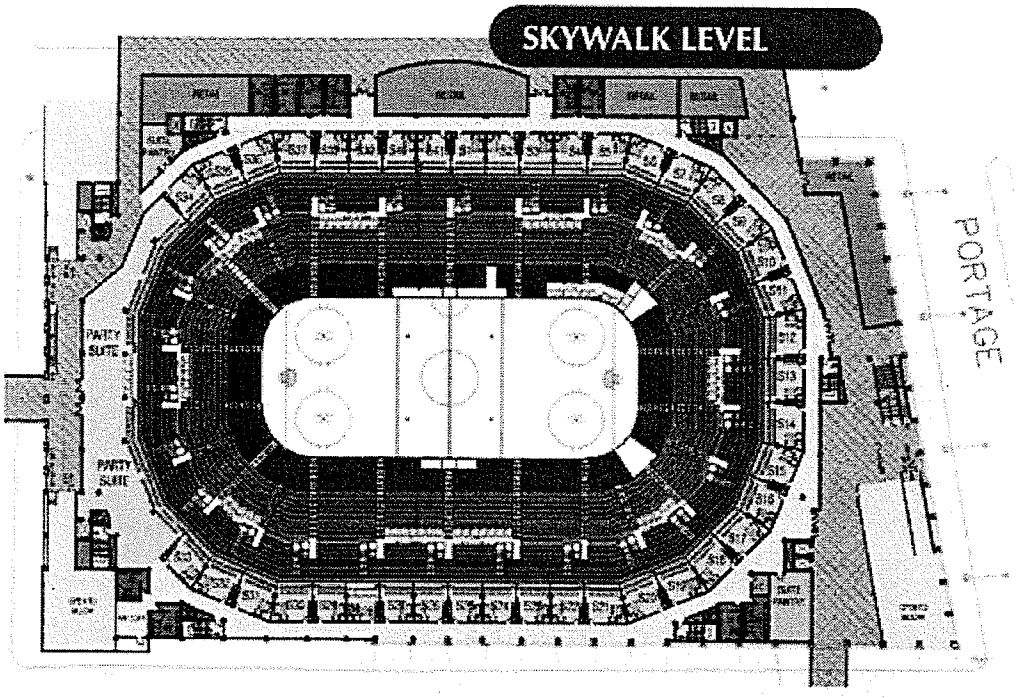
After:

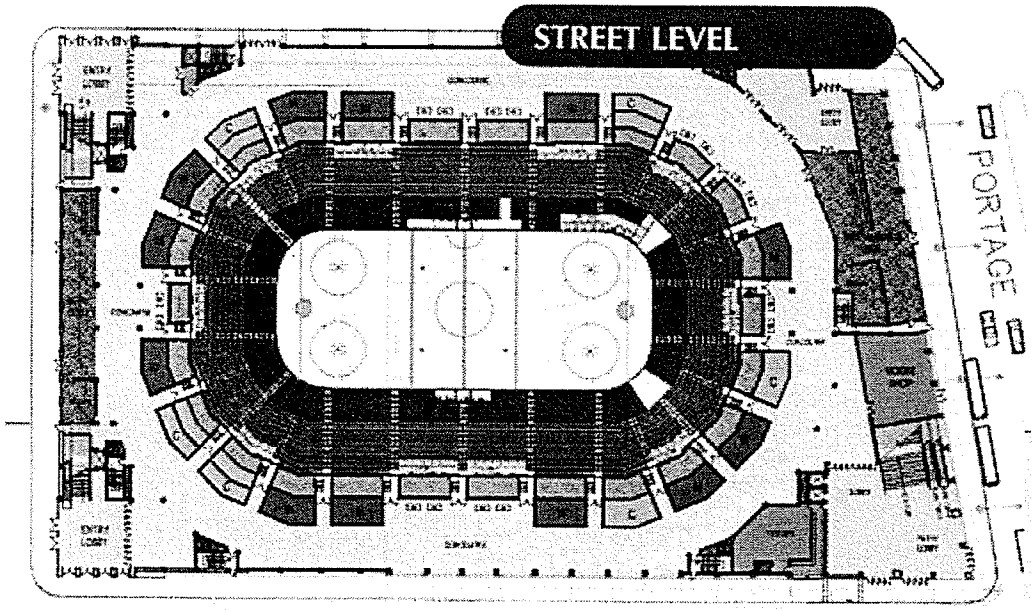
Improvements:

- Widening the sidewalks
- Adding plantings, planters, benches, food kiosks, new street lights, banners, and information signage on sidewalks
- New pavement to clarify the pedestrian corridor
- Shortening the distance crossing the street
- Improving universal accessibility on sidewalks
- Changing one lane from driving to parking lane for each direction and adding on-street parking

G. Design of the Arena

(True North Entertainment Centre Inc., 2001)





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