# *THE DOWNTOWN WINDSOR WATERFRONT:*

## *Reconnecting with the Core*

*by*
*Stefan James Fediuk*



This practicum is submitted to the Faculty of Graduate Studies of the
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# THE DOWNTOWN WINDSOR WATERFRONT:

# RECONNECTING WITH THE CORE

BY

STEFAN JAMES FEDIUK

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

MASTER OF LANDSCAPE ARCHITECTURE

## *ABSTRACT*

This practicum provides a demonstration plan for the rehabilitation of the downtown waterfront of Windsor, Ontario. Strategically positioned adjacent to the urban core, and immediately opposite the downtown of Detroit, Michigan, the site invites the establishment of an active centre to be appreciated by both cities. As in other industrialized cities, the downtown waterfront has been isolated from the urban environment and, sadly, has been left abandoned following the exodus of barge operations which transported railway boxcars across the Detroit River. Research into historic and contemporary waterfront planning strategies, together with an examination of the evolution of the site were undertaken to prepare guidelines for the rehabilitation of the site. Rehabilitation of the study area will provide an opportunity for the residents to once again access the river from the urban core. The proposed guideline offers direction for development, acknowledging the rich heritage of the site, and addressing a number of important waterfront issues.

## *ACKNOWLEDGEMENTS*

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For taking the time out of their busy schedules to make comments and provide direction over the course of the work, I express deep appreciation to my practicum advisory team: Mr. Doug Clark, Professor Basil Rotoff, and especially Professor Alexander Rattray for offering to chair the committee.

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Special thanks are due to the Riverfront Land Task Force Advisory Committee and EDAW for sharing their research findings.

Finally, I express my heartfelt appreciation to my family for their patience and financial assistance through the extent of the project. For this I will always be grateful.

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*All illustrations are by the author unless otherwise indicated . Illustrations supplied by other sources are gratefully acknowledged within the body of the text.*

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*" The loss of the extremes of concentration at the harbour site has led to changes at the waterfront. . . . The old harbours are becoming visibly empty, use interests foreign to the site are taking over. Undisciplined, because uncommitted, they inflict deep wounds on the old ports. Now the city has to protect itself on a third front: after the self-assertation against tidal wave and military expeditions, it now has to exert all its power to defend itself against degeneration, despoliation, and loss of identity. A new battle at the waterfront! "*

(Conrads, 1986)

# 1.0: INTRODUCTION

In this century, the decline of urban centres can be partially attributed to changes in modes of transportation. The shift from water transportation has left endless miles of abandoned waterfront property adjacent to urban centres. In some situations, barriers created by major traffic arteries restrict physical interaction between the urban centre and the waterfront. Unlike revitalization efforts for downtown core areas, which concentrate on the improvement of the environment from both a physical planning perspective, and the quality of activities generated within them, waterfront rehabilitation has all too often focused solely on landscape beautification.

> *". . . Manicured flower beds, clipped shrubs, expanses of mowed lawns and decoratively placed trees. Many people like and use such traditional city parks. They are pleasant places to relax in. They are the landscape expression of man's traditional obsession or preoccupation with dominating nature . . . some people find these parks bland and unexciting mainly because the landscape is so contrived and the scene lacking in spontaneity."*[1]

This form of rehabilitation, however, only masks the problem of integrating the waterfront with the urban environment. Segregation of the waterfront from the revitalized urban centre has, all too commonly, resulted in failure to provide appropriate urban waterfront space.[2]

The intent of the study is, in part, to prepare design guidelines which might provide direction to a rehabilitation program for the vacant portion of the Downtown Windsor Waterfront (DWW). In order to enrich human interaction with the waterfront and the adjacent urban environment, the rehabilitation of the site requires the development of a stronger relationship with the core. The study site includes those waterfront properties immediately north of Windsor's core (see Map 1.1). The study area is some 40 acres in area, bordered by the Detroit River to the north, Riverside Drive to the south, the Hiram Walker's Distillery Complex to the east, and the Holiday Inn Hotel to the west. To establish the connection between the waterfront and the urban core, the study site also includes the transitional development immediately to the south of Riverside Drive.

During the urban renewal period of the 1960's and 1970's, Windsor acquired much of the vacant waterfront lands east and west of the Central Business District (CBD), and developed a series of linear parks located between Riverside Drive and the Detroit River (see Map 1.1). Historically, urban parks have proven to be instrumental in providing retreat from hectic urban environments. The existing parks within the riverfront parkway system are passive in nature and accommodate, for the most part, summer leisure activities. Concern has been raised regarding a more active waterfront associated with the urban core. Thus, Sergio Grando, General Manager of the Windsor-Essex County Convention and Visitors Bureau, when asked about the perceived image of Windsor's waterfront and its future rehabilitation, responded with the following observation:

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1 Roy Merrens , "Waterfront Wilds: Keeping them Natural", Urban Waterfronts '85, p. 53.

2 Roy Mann, as found in Thompson W.J., "The Poetry is in the Water's Edge", Landscape Architecture, 1991, pp.54-57.

*"Visitors don't come to Windsor to view our parks... we're not a destination. . . . Right now people don't come in droves, ... to visit this area for any appreciable stay."*[3]

The existing passive parks along Windsor's waterfront do not, on their own, provide the necessary connection with activities occurring in the downtown. A number of contemporary urban waterfronts, including Baltimore and Vancouver, have successfully carried out rehabilitation programs which reflect the active and civic nature of the urban environment. Though there is no formula to creating a successful waterfront, there is value in understanding the common elements for the success of historic and contemporary waterfront examples, and secondly, identifying the contemporary issues which must be addressed in the preparation of a waterfront rehabilitation plan.

## 1.1: PROBLEM DEFINITION

The DWW was historically a transfer point for goods and people aross the river to Detroit. The activities which occurred on the site were vitally connected to the downtown. Changes, including the expansion of the railway marshalling yards for freight, combined with the increase of vehicular traffic along Riverside Drive, served to weaken the connection between the waterfront and the City; resulting in the waterfront being perceived as an independant entity. This situation can only be worsened with the proposed expansion of passive riverfront parks within the study area, which may best be characterized as an exercise in waterfront beautification. Clearly, these proposals do nothing to re-establish vital connections with the core.

**This study sets out to prepare an alternative for the rehabilitation of the Downtown Windsor Waterfront; one which addresses the physical connection between the waterfront and the core. It is also recognizes that it will be necessary to again provide opportunities for the public use of the waterfront.**

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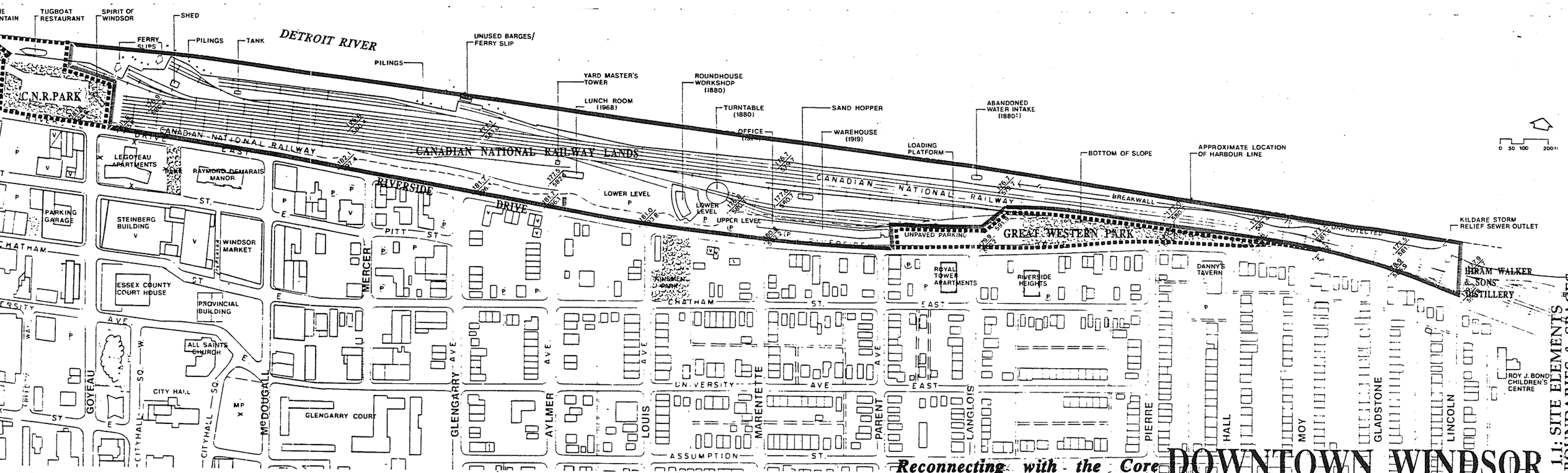
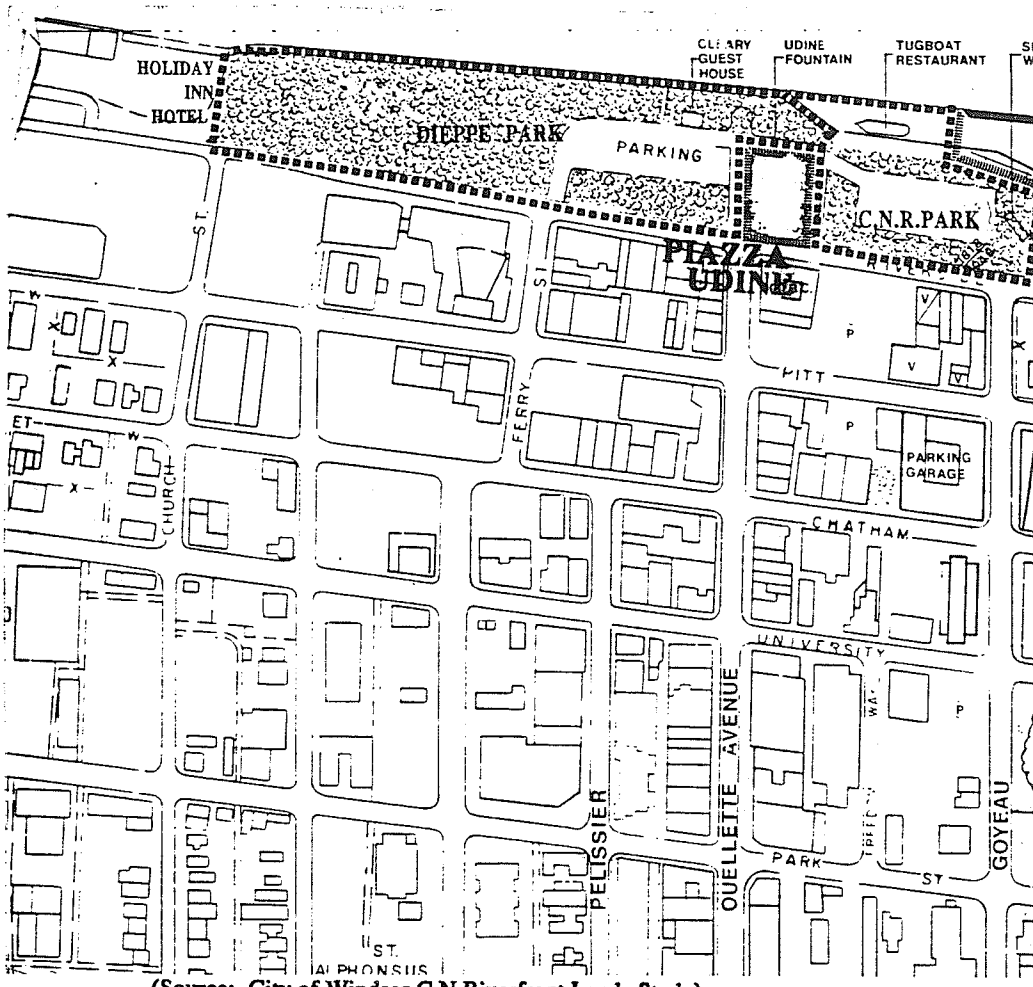
[3] Rob Miller, "WBL Interview: Sergio Grando, "Windsor Business Life, September- October 1990, p.10.




*Reconnecting with the Core*

# DOWNTOWN WINDSOR WATERFRONT

MAP 1.1: SITE ELEMENTS
SITE BOUNDARIES & SPACES




(Source: City of Windsor C.N.Riverfront Lands Study)

## 1.2: STUDY OBJECTIVES

This study sets out to achieve three objectives:

1) **To establish a series of design guidelines for waterfront rehabilitation, based on applicable historic and contemporary strategies.**

2) **To establish the general programmatic opportunities and requirements for a revitalized Downtown Windsor Waterfront, based on its unique qualities.**

3) **To prepare a demonstration plan, reflective of the design guidelines and programmatic requirements of the site.**

## 1.3: METHODOLOGY & LIMITATIONS OF THE STUDY

There are three phases associated with the preparation of the rehabilitation plan for the DWW; **Research and Analysis; Articulation of Programmatic Elements;** and finally a **Demontration Plan.** Figure 1.1 graphically illustrates, both the process and the inter-relationship of these three phases to the study.

### 1.3.1: Research and Analysis

Two stages of literature review are necessary for this study, as well as a site analysis. The first stage deals with the need to define the general issues pertaining to waterfront rehabilitation and establish appropriate precedents. This includes the identification of late twentieth century waterfront rehabilitation strategies, as a basis for formulating design guidelines. This stage of the research involves a literature review of historic and contemporary urban waterfronts, to identify how waterfront development has been influenced by urban planning and design.

The second stage of the literature review focusses on the evolution of the study area, identifying both opportunities and constraints, and establishes its role and importance in Windsor's development.

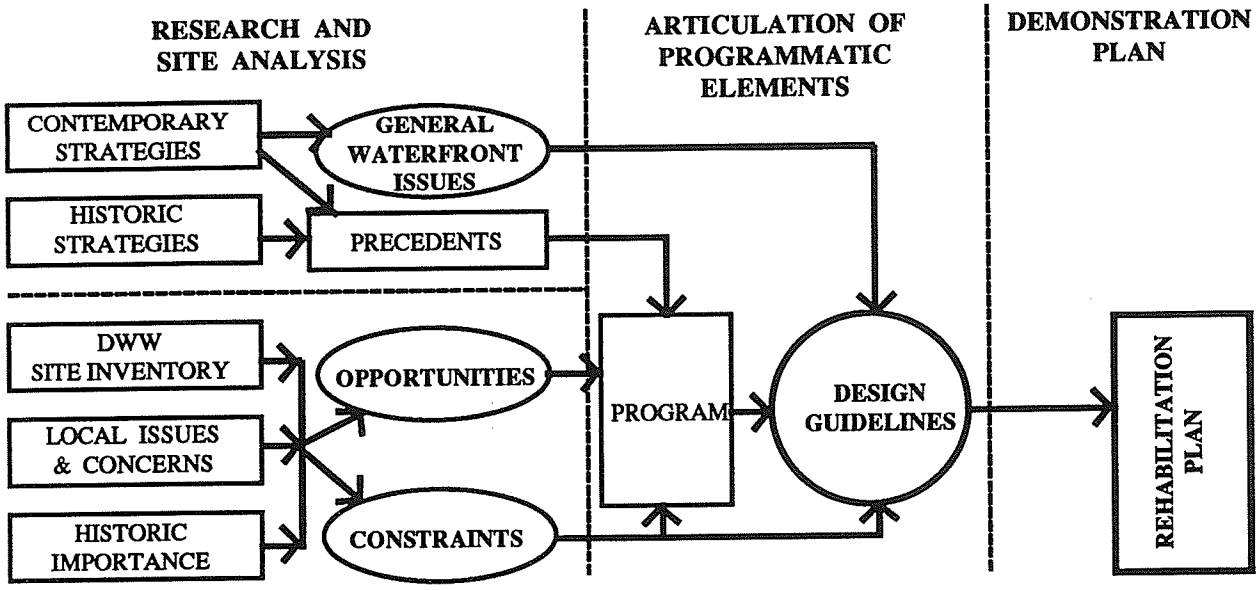



**Figure 1.1: Methodology**

A site analysis inventorying the urban context, existing land uses, and the physical characteristics of the site is conducted to further identify constraints and opportunities. This is supplemented by information gathered from additional readings addressing the local issues and concerns. Only the more recent documents, which have some bearing on the future of the waterfront, are reviewed in this study.

### 1.3.2: Articulation of Programmatic Elements and Design Guidelines

The second phase of the study incorporates the information gathered from the research and analysis phase, to establish an appropriate program for rehabilitation, both responsive to the existing conditions of the site and reflective of the needs of the local population. Programmatic elements are selected by responding to the issues addressed by contemporary waterfront developments and local input. Establishment of design guidelines directing the physical form for these programmatic elements is necessary to provide direction for the physical form of the redevelopment.

### 1.3.3: Demonstration Plan

The final phase of the study is the development of a demonstration plan, illustrating the form implications of the established program, and incorporated the design guidelines. This plan has been developed, in part, to illustrate a strengthened physical connection for the waterfront landscape with the core. It is also provided as an expression of the historical evolution of the site.

## 1.4 SUMMARY

Windsor has an opportunity to rehabilitate its waterfront in such a manner as to both respect its past and respond to its contemporary context. Like a number of other water-oriented cities, it has, in the past, undertaken watefront revitalization without addressing the importance of linking that rehabilitation with the core area. In Windsor this may be attributed, in part, to the fact that the urban core is physically and psychologically isolated from the waterfront by both Riverside Drive and the railway marshalling yards. It may also be the case that since Windsorites have not experienced an urban waterfront environment for decades, they are unaware of the importance of the waterfront in establishing a high standard of environmental quality for both residents and visitors.

This study uses a process which identifies the site's unique qualities, as well as applying the lessons to be gained from an assessment of other contemporary waterfront rehabilitation programs, as the bases for establishing design guidelines for the rehabilitation of the DWW. These guidelines provide direction in the preparation of a demonstration plan; a plan which clearly illustrates how the waterfront and the urban environment can be reconnected to provide an active public presence as a part of Windsor's core.

*Until the invention of the steam engine, rivers and sea-lanes were the highways of the world. They remain important transportation corridors . . . They are the dendrites of civilization, like the branches and roots of trees, like blood vessels and nerve systems, providing for the life giving exchanges that make cultural evolution possible.* (Greenbie, 1981)

# 2.0: WATERFRONT PRECEDENTS

Over the centuries, waterfronts have evolved from centres of religious ceremony and activity to ports for maritime trade and fishing. They also provided for defense, locations for waterside warehousing and industry, as well as for leisure and recreation. Though at least one of these former uses is no longer appropriate, the study of historical precedents may prove useful in providing direction for contemporary waterfront rehabilitation activities. This chapter sets out to establish the importance of re-associating the waterfront with the urban environment, as well as addressing general late 20th century waterfront issues. It is also the intent of this chapter to identify the need to establish design guidelines for waterfront rehabilitation as a basis for form-making.

## 2.1: WATERFRONT STRATEGIES

The practical reasons for the establishment of early settlements along rivers and lakes are well known. The need for fresh water and food was easily satisfied at the water's edge. Waterways provided an effective means of transportation between settlements; in effect, water highways. As well, belief in the life-giving qualities of water was evident in the spiritual symbolism of ancient cultures. Those rituals associated with seasonal flooding and spiritual purification, for example, guided the specific organization and location of monuments and temples along the waterfront. While these were effective ways of honouring the gods in ancient times, clearly the cultural and religious context has dramatically changed in contemporary waterfront cities. In western culture, the provision of specific spiritual gathering "places" is no longer seen to be inappropriate. What is important, none the less, is that the ancient waterfront was a place of congregation for the community, and contemporary waterfronts may capture that function to their advantage.

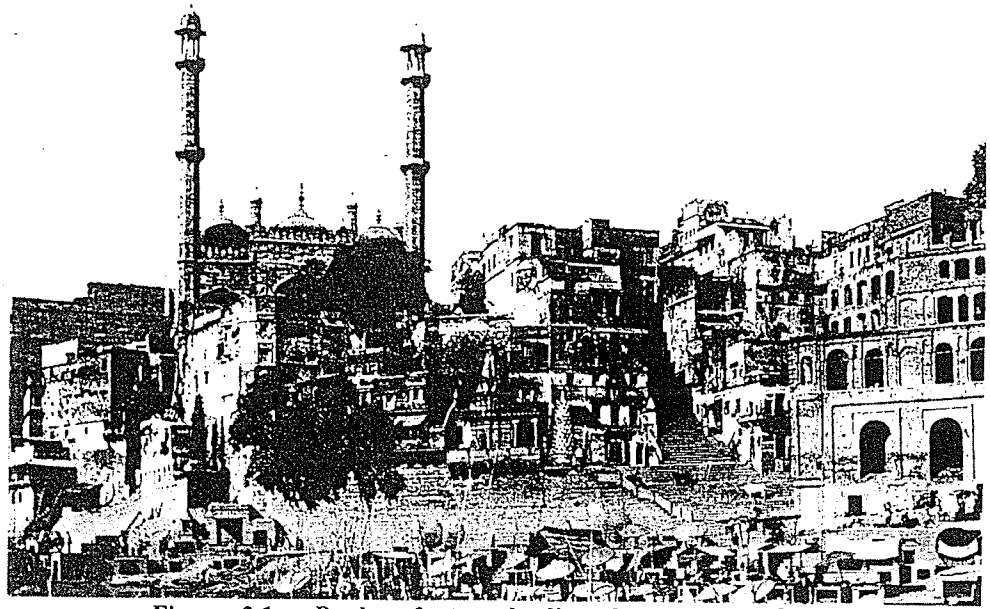


**Figure 2.1: Banks of steps leading down to the Ganges for purification rituals at Benares, India**
(Wylson , 1986)

In the historical literature reviewed, there appeared two main planning strategies for waterfront development. In the first, the waterfront was a public gathering space and in the second, the waterfront was a 'gateway' or transitional environment between the land and the water. Both of these strategies helped identify the waterfront and the city as interdependent parts of a larger whole. Both historic and contemporary examples of these strategies have been provided to help describe their significance and application in 20th century waterfront rehabilitation.

### 2.1.1: Waterfront as a Public Gathering Space

The spiritual beliefs bestowed on water by the ancients is a basis for the origins of this strategy. The waterfront was the central place of worship and congregation. The best examples of this strategy were the agoras, or central open spaces, of seaside Grecian cities. Agoras were more than simply religious centres; they provided places of leisure, social interaction and commerce. As civilization evolved the demands on the agoras increased and the variey of activities influenced division of spaces. Over the centuries, each space evolved for its specific function. The research identified waterfront open space evolving in three separate, but not totally dissimilar ways.

The first model is a traditional concept, with only one central public outdoor space at the waterfront. This model is rare and somewhat inappropriate in larger waterfront developments. With the larger populations of most urban centres, and a greater variety of activities, a single public space cannot always operate effectively.

In the second model, promenades establish connections along the waterfront between different use and space. Characteristic of the canal systems of Venice, and the Dutch canal cities, such as Amsterdam, Bruges, and Utrecht, smaller spaces along the waterfront provided intimate neighborhood centres linked by bridges. While providing for individual neighborhood recreational and leisure needs, they did not detract from the importance of the main cultural centre at the core.

In a contemporary application, the San Antonio Riverwalk reflects well the character of the Dutch canal cities. The river acts as the City's main transportation access, and is flanked on both sides by promenades, connecting outdoor plazas and cafés. Because of the narrowness and meander of the river, no one public space can be identified as the most significant. Instead, each node has public access to the water, with docks for private and scenic tour boats.

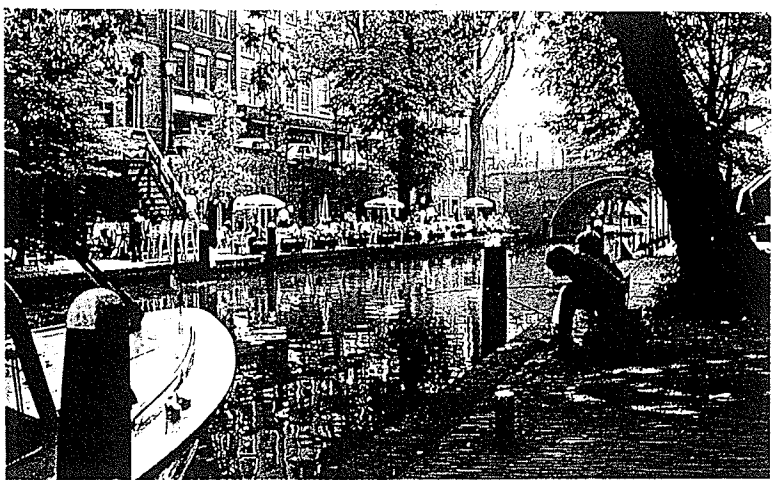


**Figure 2.2: Canals in Utrecht**
(Wylson , 1986)

**Figure 2.3: Promenade along the Grand Canal in Venice**
(Wylson , 1986)

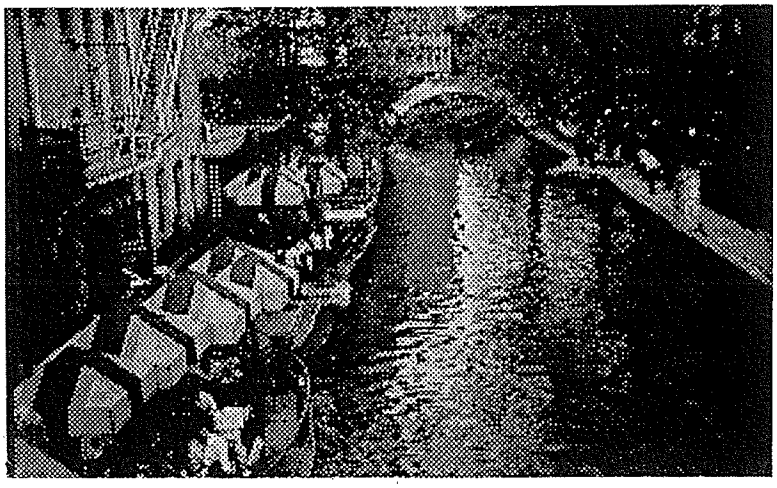


**Figure 2.4: San Antonio's Riverwalk**
(Wylson , 1986)

Nineteenth century naturalistic urban parks, which provided escape from the grim realities of industrialized urban life, serve as examples of the third model of public open space at the waterfront. The wilderness waterside retreats of the Victorian Era provided suburban-like pleasure parks, but did nothing to alleviate the problem of integrating the waterfront with the urban environment. Instead, they masked the real issue of revitalization and further isolated the waterfront from the core. Green space in the urban environment is an option for waterfront rehabilitation, however, it should be considered in conjunction with an existing wilderness environment, or in a hybrid form with one of the other two models previously mentioned.

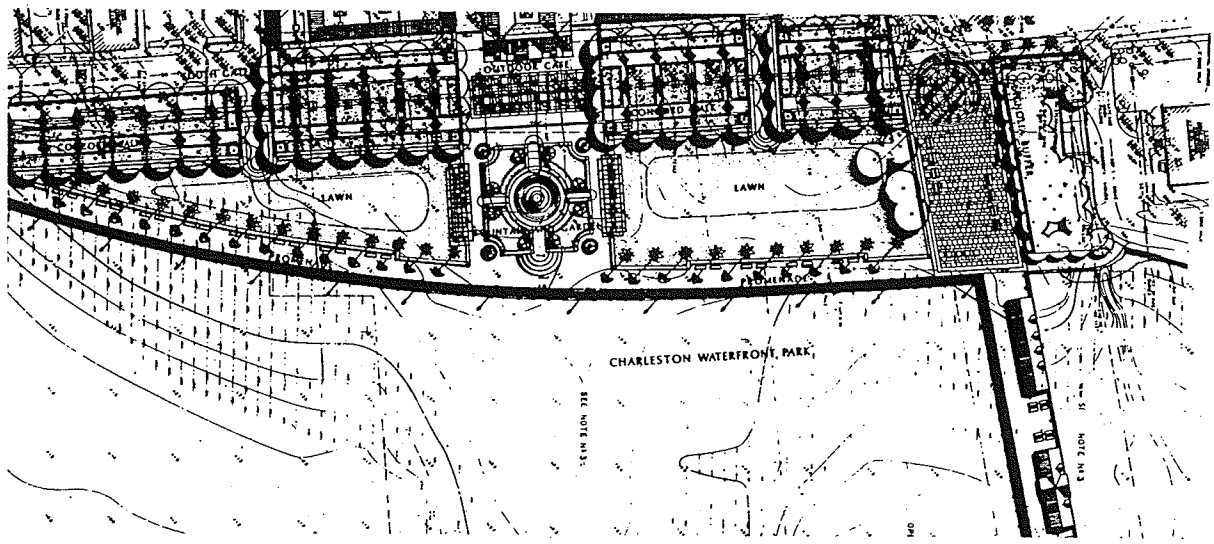



**Figure 2.5: Charleston Waterfront Park - plan**
(Landscape Architect, 1991)

Successful applications of this 'wilderness' model effectively serve as "bridges" between the natural waterfront and the urban environment. Charleston, North Carolina's waterfront park provides a leisurely atmosphere between the sea and the core by integrating the man-made forms of the downtown with the natural expression of the salt marsh. It is, however, important to note that the design of the Charleston Waterfront Park is a hybrid of the three models outlined above. A promenade protects the green space from the sea and the marsh from man, while a plaza connects the downtown with the park.

**From this phase of the investigation, it is apparent that the traditional strategy of the waterfront as a public gathering space is one which was historically significant, and continues to be so in the 20th century. In addressing the rehabilitation of a waterfront it is, therefore, important to consider the application of open space for public gatherings. The nature and form of the space should, however, be responsive to the urban environment with which it is associated.**

### 2.1.2: Waterfront as 'Gateway'

In the opening quotation of this chapter, the river is metaphorically described as a 'tree', in which urban development can be seen as the stem and branches of the tree and the waterfront as its roots. One of the problems facing contemporary waterfronts is that many are not conected with the adjacent urban environments. Waterfronts depicted as the 'gateway' to the city illustrate this metaphor most effectively.

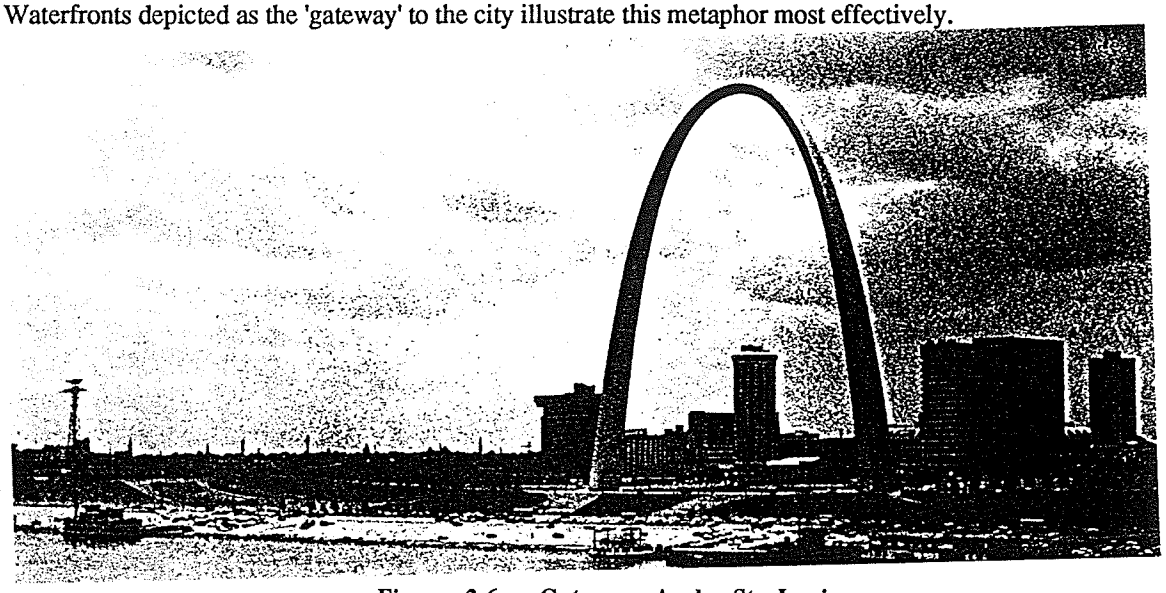


**Figure 2.6: Gateway Arch, St. Louis**
(Greenbie, 1981)

Waterfronts have long been viewed as 'gateways' to the city. Bridges and monuments, as examples, serve as landmarks in many historical waterfronts. The use of landmarks have been effectively used in many contemporary situations, as well. The CN Tower in Toronto, for example, acts not only as a landmark for passing lake traffic, but also provides a focal point to and from the city.

Historic application of this strategy is clearly illustrated in Marseilles. The harbour acted as the arrival point to the core. Broad quays dominated a central architectural focus at the harbourfront, which provided a symbolic expression of the interaction between land and sea. Rue Cannebière, the central street of commerce and social activity, while extending deep into the suburbs provided direct connection to the harbor.

Due to the scale of contemporary cities, it is not always possible to have a single arrival point at the waterfront. Because of the diversity of uses along the waterfront, a hierarchy of focal points may be necessary to identify important nodes from those of a lesser and/or more private nature. Large urban waterfronts have, as a result, often become linked foci leading to the "main gateway" or point of arrival.

**Figure 2.7: Plan of the Marseilles: the old city**
(Engraving by B.R. Davies as found in Kossak, 1986)

Boston and Baltimore are examples of contemporary applications of this strategy. Like most North American port cities, both cities developed as a result of the commercial freight and shipping industries. Piers provided linkage between shipping and railway connections. With the reduction of waterside activities many piers were left abandoned, especially in the core areas. Some piers, however, did remain active, while others have been rehabilitated to accommodate public markets, parks and other pedestrian leisure uses. Still others have been redeveloped as private office and residential environments. In both cities, rehabilitation of the waterfront has been integrated with the existing inland infrastructure; providing the necessary connection between water and land.

In Boston, the main point of arrival to the city is Rowe's Wharf. The adjacent piers have been restored to accommodate public commuter vessels, as well as privately owned boats. The "gateway" is expressed through a building at the arrival terminal, erected in the form of a monumental archway. A plaza at the foot of the arch acts as a point of orientation, as well as a public gathering space within the downtown commercial district. As in Baltimore, public transit augments the existing urban network of roads and walkways.

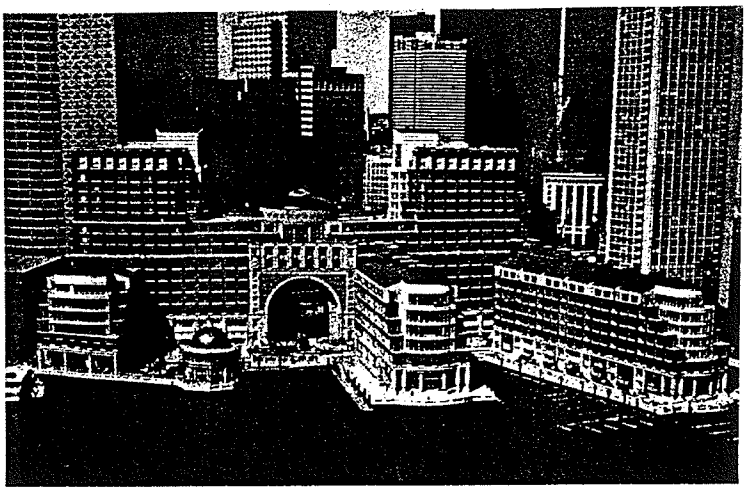


**Figure 2.8: Rowe's Wharf - Boston**
(Urban Waterfront Center, 1990)

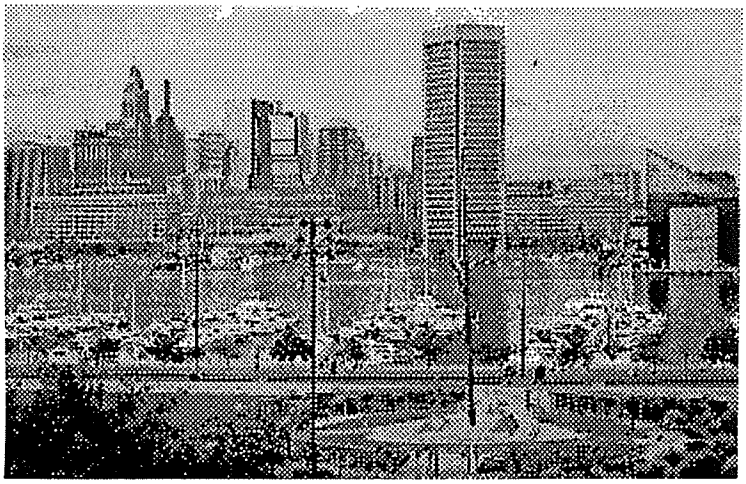


**Figure 2.9: Baltimore Inner Harbor**

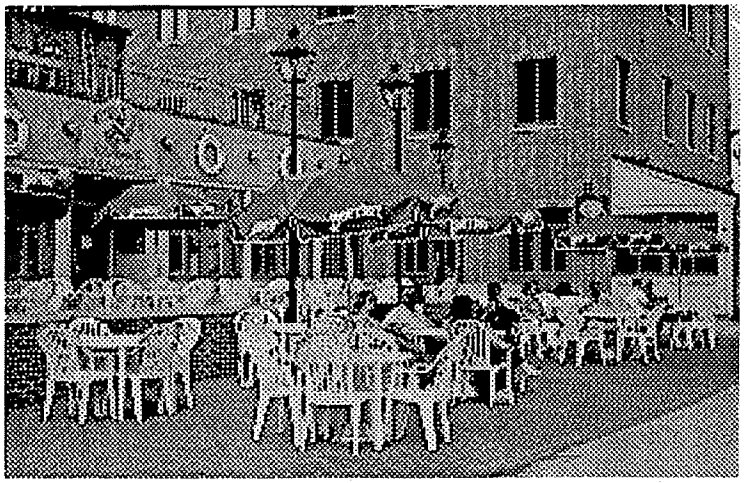


**Figure 2.10: Brown's Wharf - Baltimore**

In Baltimore, the main point of arrival to the core is located at Inner Harbor. This site not only provides the commercial linkage to the core, through the use of shops associated with a festival market, but also provides significant outdoor space where a variety of waterside activities occur. Inner Harbor is complimented by a series of rehabilitated piers in a neighborhood-like manner, such as Brown's Wharf, and Fell's Point, not unlike the situation in Dutch canal cities. Linkage between the various public spaces is provided by a pedestrian route along the waterfront, as well as by water taxi service. Though not a promenade, as in Venice or Utretch, Inner Harbor provides linkage between Baltimore's central waterfront and the adjacent neighborhoods.

**Contemporary waterfront rehabilitation presents an opportunity for reconnecting the waterfront and core areas. In cities where the waterfront has been an important part of the evolution of the core, interaction between the built environment and the water is required to assure a strong identity; one which is truly responsive to human needs.** Re-establishing a 'gateway' or transitional environment between the two has proven, both in historical and contemporary applications, to be a successful strategy. It is important to realize, however, that this strategy requires more than the placement of landmarks at or adjacent to the water's edge. Therefore, successful waterfront development requires a point, or place, where the physical transition between water and land may be easily identified.

Within a contemporary setting, it is possible to implement either of the above mentioned strategies, however, the complexity of contemporary cities requires an urban waterfront which combines parts of both strategies, to achieve an appropriate urban design. When developing an approach to rehabilitate urban waterfronts, it is important to consider this particular issue among others.

## 2.2: CONTEMPORARY WATERFRONT PLANNING ISSUES

There are a number of issues regarding waterfront rehabilitation which have only been identified within the last 30 years. These issues, as established through the literature reviewed, are the result of changes in technology, preservation and environmental ethics, increased tourism and recreation leisure time, as well as increased social awareness and concern forof the quality of life in the urban core. An understanding of these issues is necessary to establish design guidelines for waterfront rehabilitation in the 20th century.

> *" Successful urban waterfront projects of all kinds reflect the basic human instincts for safe, interesting urban experiences, of being able to walk about, to see and be seen, to explore commercial and educational venues side-by-side, in a 'real' setting.'*[4]

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4 Anne Breen & Dick Rigby , "The Urban Waterfront Phenomenon: Cities Reclaim Their Edge", Waterfront World, Vol.10, No.3, p. 10.

The redevelopment of San Francisco's waterfront, including the Embarcadero, Ghirardelli Square, Fisherman's Wharf and Pier 39 serve as appropriate examples of this position. It was the result of public interest and a strong appreciation for conservation and the preservation of existing waterfront structures for reuse. *"Enhancing waterfronts can involve a community local industrial history and heritage as well as more contemporary, tourist oriented projects."*[5] The waterfront projects in San Francisco, among others, have identified the need to address public concerns in the initial stages of waterfront rehabilitation.

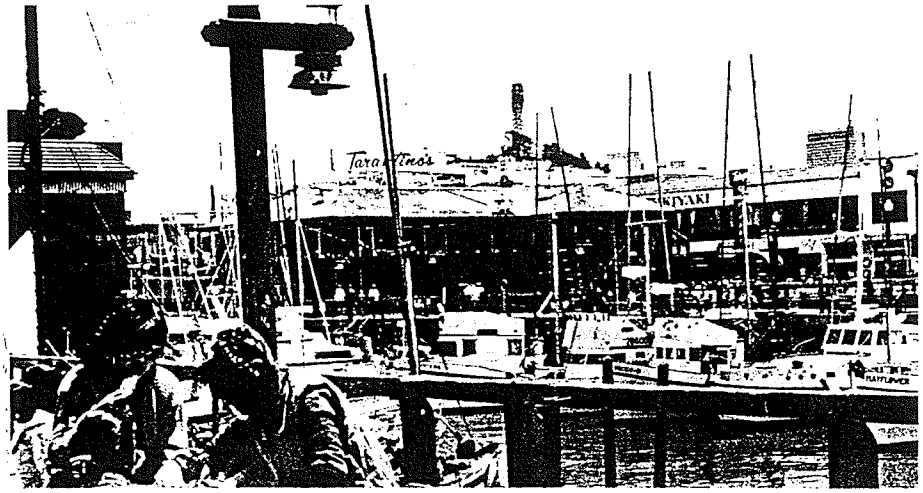

**Figure 2.11: Fisherman's Wharf - San Francisco**
(Urban Waterfronts, 1986)

In San Antonio, Texas, the riverwalk concept was developed in the 1920's, when a citizens group organized to stop a proposal to pave over the San Antonio River, which flowed through the downtown area. This concept was supported by architect Robert Hugman, who prepared a plan for the Riverwalk similar to its present form. However, the 1930's development did not include any of the commercial or cultural activities proposed by Hugman. The development consisted of natural plantings and the placement of benches along the walkways. Due to its combined physical isolation from the adjacent street, and without any continuous public presence, the area became unsafe and thus required continual policing. *"The 'Quick Fix' legacy results in projects that are not thought through carefully."*[6] By the mid-1960's the necessity for a public presence along the Riverwalk was identified and, as a result, shops and restaurants were opened.

> *"Restaurants have long been an important drawing card for urban waterfronts, bringing the locals, workers and tourists. . . .Certain restaurants and watering holes are as strong a draw for boaters and would - be boaters as the waters themselves."* [7]

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5 Erik Norgaard, "Waterfront Authenticity - No Fishneylands!", Urban Waterfronts '87, p. 71.

6 Dorn C. McGrath , "The Value of Hindsight", Urban Waterfronts '87, p. 76.

7 Ruth E. Thaler, "Restaurants as Pioneers on Urban Waterfronts", Waterfront World, Vol., No. p. 7.

The establishment of the San Antonio Riverwalk provides a 'real' setting, where food and drink, cultural attractions, and shopping are utilized to attract both residents and visitors, and reflect the basic human need for experience within a safe and interesting environment.

The success of commercial attractions along the San Antonio Riverwalk brought interest from many east coast American cities that were considering the rehabilitation of derelict waterfront areas. For example, Boston, in 1976, combined the Bicentennial pageantry and the new commercial activity in its Faneuil Hall / Quincy Market complex, to help reverse the earlier situation, characterized by a dying and unsafe downtown, to that of a public area which was fun, safe and accommodated many activities. The Boston initiative has been said to mark the beginning of the post-war waterfront redevelopment phenomenon in North America.

Public acceptance of this rehabilitation created the misconception that its implementation rested solely on the establishment of a festival market atmosphere. As a result, many waterfront projects which followed in the 1980's embraced this limiting concept. To date only one, Harborplace in Baltimore's Inner Harbor, has been able to provide a successful festival market environment (see Appendix A).

> *" A festival market alone does not magically guarantee a successful waterfront redevelopment. It is rather the mixture of uses - the diversity of attractions and things going on, the uniqueness and dynanism of a place - that draw people and keep them coming."*[8]

In an article in Urban Land, (Atkinson, Williams, 1990) the issue of core area revitalization addressed tourism as a major economic factor for many American cities. Although tourism is an important aspect of redevelopment, the article observes, it should not become its focus. Programming for development should reflect local character and interests. Thus, San Antonio's Riverwalk, while serving as a major tourist attraction in the downtown area, also provides recreational and leisure activity for local residents. **Waterfront rehabilitation should include primarily those activities which are responsive to community needs, while offering opportunities for visitors.**

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8 Anne Breen , "Beyond the Festival Market", Urban Waterfronts '86, p. 72.

**Figure 2.12: Quincy Market - Boston**
(Greenbie, 1981)

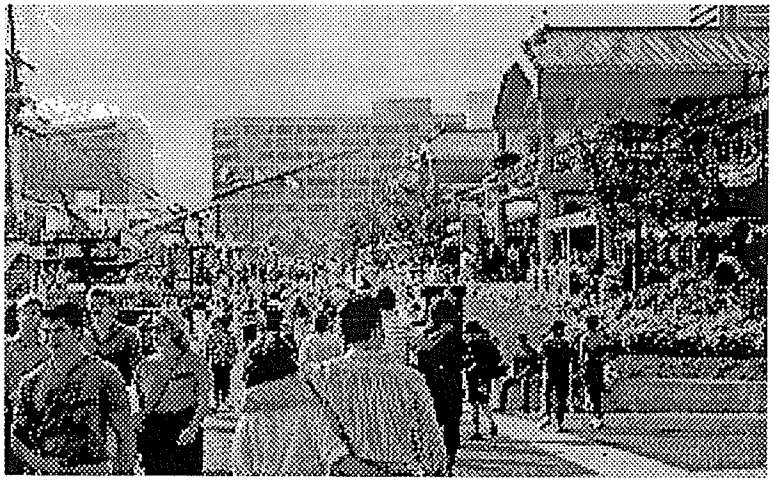

**Figure 2.13: Harborplace - Baltimore's Inner Harbor**

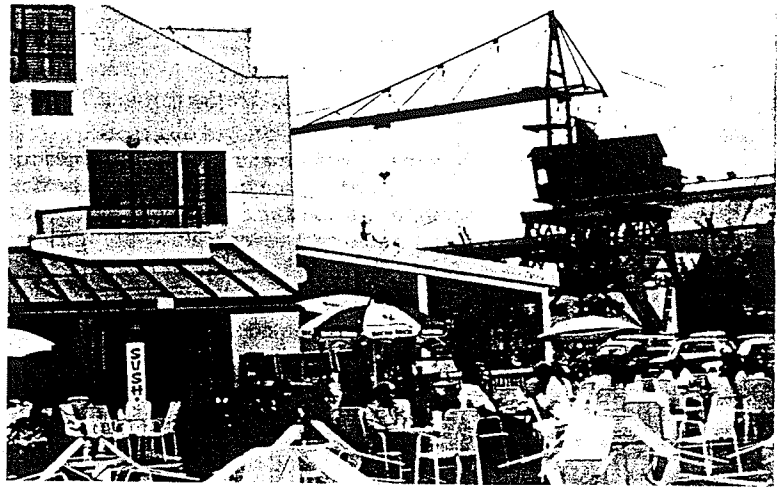

**Figure 2.14: Granville Island - Vancouver**
(Urban Waterfronts, 1988)

The Granville Island project in Vancouver, British Columbia, is an example of how programming for public use was complemented by tourism. The project incorporated a farmer's market which served city residents, but also became a significant tourist attraction. Other commercial and maritime facilities in the area have also benefited from tourism. What is important about the Granville Island project is that the design expressed, well, the working nature of the waterfront, without 'sterilizing' the environment from its 'real' industrial character. This was achieved by maintaining as many of the existing industrial site features as possible for reuse. For example, the existing infrastructure of the former railway lines and shipping piers were adapted for traffic (i.e. parking and streets). As well, all new structures and ancillary services introduced to the area were consistent in character with the earlier industrial environment. **The lesson learned from Granville Island was that the original character of the site be maintained through a design which incorporated the railway lines as traffic routes, as well as adopting the existing industrial architectural vocabulary in the development of new buildings.**

Maritime heritage has been maintained through the redevelopment of Granville Island, as is the case in Boston, Baltimore, and Philadelphia, through the use of marinas and docks. The inclusion of these waterfront elements offers an educational resource addressing the history of the site, for both boaters and the land-based public.

> *" One of the generalized principals that is beginning to emerge on waterfronts is that education, retail marketing, and recreation are complimentary partners in waterfront development and waterfront activity to which you could add of course the traditional waterfront uses such as fishing and seafood processing . "*[9]

Boats and boating have played an important role in waterfront development throughout history. Although tall sailing ships are no longer a common sight on modern waterfronts, the presence of boats is as significant an attraction to the waterfront as were their larger predecessors. Marinas have been misconceived as tourist attractions while they are simply 'parking lots' for boats. However, this is not their sole function. They provide a form of water-based recreation for both residents and tourists alike, as well as offer a land-based point from which continuously changing activity within the marina can be seen.

The success of waterfront rehabilitation cannot be achieved by beautification and/or entertainment; it must address the real issues of the waterfront, and access to the water itself. **It is important, therefore, that the program for rehabilitation give preference to water-dependant and water-related uses to establish an appropriate solution which enhances, as well as interacts with the water.**

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9 Gerald Blessey , "Integrating Public and Private Resources", Urban Waterfronts '84, p. 25.

## 2.3: SUMMARY

If urban waterfronts are to provide gathering space they once did, it will be necessary to promote a 'sense of place' and attraction. The first part of this investigation establishes that there is no one specific form which is better than any other in providing a solution for waterfront rehabilitation. However, it is evident that contemporary cities should address the combined issues of bringing people to the waterfront and creating a transitional zones between water and the urban environments.

The second part of this investigation illustrates how this had been accomplished in waterfront rehabilitation programs of the last three decades. It also establishes that an understanding of the physical charcter and contemporary issues associated with a particular urban waterfront are important in providing a solution which achieves good interaction between the water and the urban environment. It is therefore necessary to understand the historical evolution of a waterfront, as well as its existing conditions, to identify the opportunities and constraints which may influence its rehabilitation.

" *Regardless of its focus, waterfront development should not lose track of an area's character.*"[10]

In order to create such an environment, design guidelines should be established to give direction to waterfront redevelopment. It is important that these guidelines fully communicate the design intent, in order to ensure consistency in, architectural typology, site improvements, and the form and placement of special features and elements.

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10 Andrew B. Lynch, "Waterfront Authenticity - No Fishneylands!", Urban Waterfronts '87, p. 73.

*" . . . every river has its own history, . . . riverfront history is transitory; the cultural resources that represent that history fade as quickly as newsprint.* (Enzler, Urban Waterfronts, 1989)

# 3.0: EVOLUTION OF THE DWW

In the preceding chapter, it was concluded that an understanding of the history of a waterfront is of importance in identifying its unique character, and utilizing this information to help establish guidelines for rehabilitation. This chapter addresses Windsor's historic evolution, including the DWW, and documents the activities which occurred along the Detroit River prior to its settlement as a French fur trading and agricultural colony, through to the establishment of the Riverfront Parkways System, in the 1960's. Since railway marshalling yards were the most significant use of the site, a portion of the research focusses on the impact of the railway, as well as its effect on the adjacent urban environment.

## 3.1: ESTABLISHMENT - (Pre-1700 to 1812)

Windsor is the oldest non-military European settlement west of Montreal, and its development is similar to that of other North American cities which were established as a result of European expansion and the fur trade. Logs and diarys of historians and explorers ( i.e. François Dollier in 1669, Jean Louis Hennepin and Robert Cavelier, Sieur de La Salle in 1679 ) described significant arboriginal settlements and places of worship along the Detroit River[11]. However, at the time of the establishment of Fort Ponchartrain at Detroit in 1701, no aboriginal settlements existed along the river until Cadillac[12] arrived with other tribes to establish permanent settlements.

The colony on the south side of the river, at what is now Windsor, followed the typical ribbon farm pattern utilized by New France colonists. Since the river was the only means of transportation and communication, lots were arranged perpendicular to the river to allow access by all colonists. An existing Indian trail along the top of a bluff which followed the river provided an already established road to connect the various functions of the colony and Indian settlements to the east and west of the site (see Figure 3.1). This road , now Riverside Drive, combined with the existing ribbon farm arrangement, provided the foundation for the present day network of roads adjacent to the DWW (see Figure 3.2). Due to the alliance between the French and the Aboriginals for trade of furs and goods, Fort Ponchartrain on the north side of the river, along with the French colony and Indian settlement on the south side of the river, established the area as a significant crossing point.

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11 It is estimated that the Detroit River area was home to 1600 tribes over the centuries. As a result, one of the most prominent Indian names for the Detroit River Area was the 'Great Village'. The lack of permanent settlements has been attributed to the great diversity of aboriginal cultures which settled along the banks of the Detroit River; a diversity which led to constant intertribal wars. Hence very little information is available except for that following the establishment of Fort Detroit. Arthur M. Woodford and Frank B. Woodford, All our Yesterdays: A brief History of Detroit, (Detroit: Wynae State Univ. Press) 1969.

12 Antoine Laumet, Sieur de Lamothe Cadillac (1658-1730) was Commandant at Michilimackinac 1694-7 and founder of Detroit in 1701. Ernest J. Lajeunesse, The Windsor Border Region., (Toronto: University of Toronto Press, )1960. p.12.


**Figure 3.1: Map showing the extended farmlots of the French settlement c.1790**
(Lajeunesse, 1960)

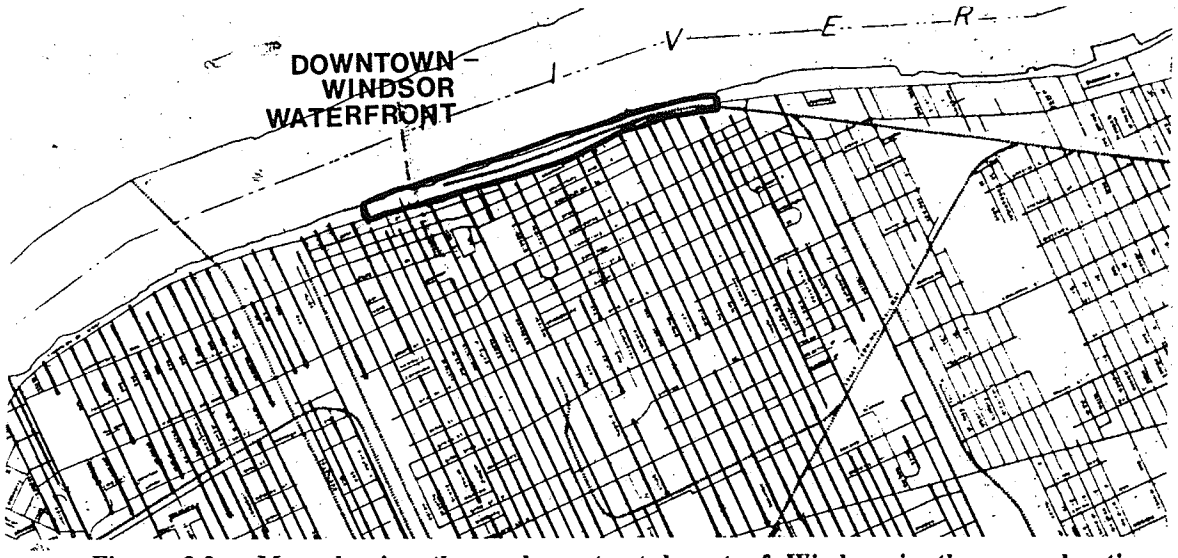


**Figure 3.2: Map showing the modern street layout of Windsor in the same location as the French Riverlot System in Figure 3.1.**
(Parks and Recreation, 1989)

Following the conquest of New France in 1760, the colony was ceded to the British . The conquering British saw the traditional activities of fur trading and subsistance farming give way to other forms of commerce. Because the Detroit River remained the most important means of transportation, ship-building and marketable agriculture redirected the waterfront character. The American Revolution of 1776-1781 saw the British lose possession of Detroit. British loyalists were forced to abandon Detroit and moved to the south side of the river. Many settled on the land previously occupied by the Ottawa tribe, who abandoned the site following disputes with the British. The Detroit River did not become the official boundary between Canada and the United States until the end of the War of 1812. Following the war, the existing crossing point between Canada and the United States provided an ideal terminus for the 'Underground Railway' by which fugitive slaves sought freedom.

Trade with America saw increased cross-border activity of goods and people about this time. Wharves along the downtown waterfront played a major role in the fur trade and shipbuilding for the North West Company until c.1821. Until 1912, the site was used as a transfer point for goods and people between the Montreal-to-Michilimackinac and -Grand Portage routes. During this period, the site's evolution was based on one major factor; its significnace as a crossing point between Detroit and Windsor.

## 3.2: IMPACT OF THE RAILROAD - (1854 to 1940)

The arrival of the Great Western Railway, in 1854, on the riverfront properties connecting the Detroit and Niagara Rivers, provided a new route and year-round access to the east. Windsor grew as a result of the railway, and experienced a period of major railroad construction which rapidly changed Windsor into a thriving urban community.

> *The results of the railway boom followed almost immediately. Daily trains brought in immigrants who often stayed overnight in the numerous hotels and purchased commodities from local merchants. Fortunately, there were many who came to stay. The railroad brought in labourers to maintain its line and depot, skilled tradesmen to build new homes and ambitious businessmen to invest capital."*[13]

After the American Grand Trunk Railway took control of the Great Western Railway Company, coordination between the two rail lines was established through a standard gauge of tracks, such that the direct transfer of freight and passenger cars could occur without the need to unload and reload before crossing the river. Soon after, Windsor and Detroit became important stops between the Chicago and New York. As a result the population increased significantly and, by 1892, Windsor was incorporated as a City (see Fig. 3.4).

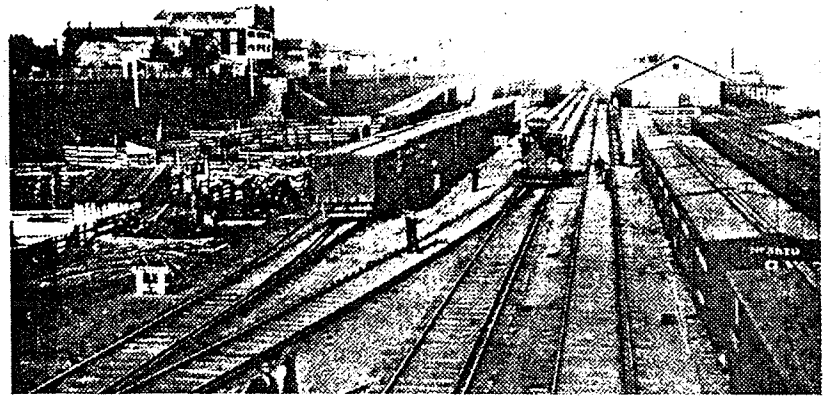

**Figure 3.3 : The railway yards along the riverfront properties c.1867**
(Municipal Archives, MS 3 III/6)

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13 Martin J. Havran, "Windsor - Its First Hundred Years, " Ontario History, XLVI (No. 3 1954), 184 - As found in Ronald G.Hoskins, C.N.Riverfront Lands: A Historical Survey 1749-1955.,(Windsor, Ont.: City of Windsor) September 1989.p.24-25.

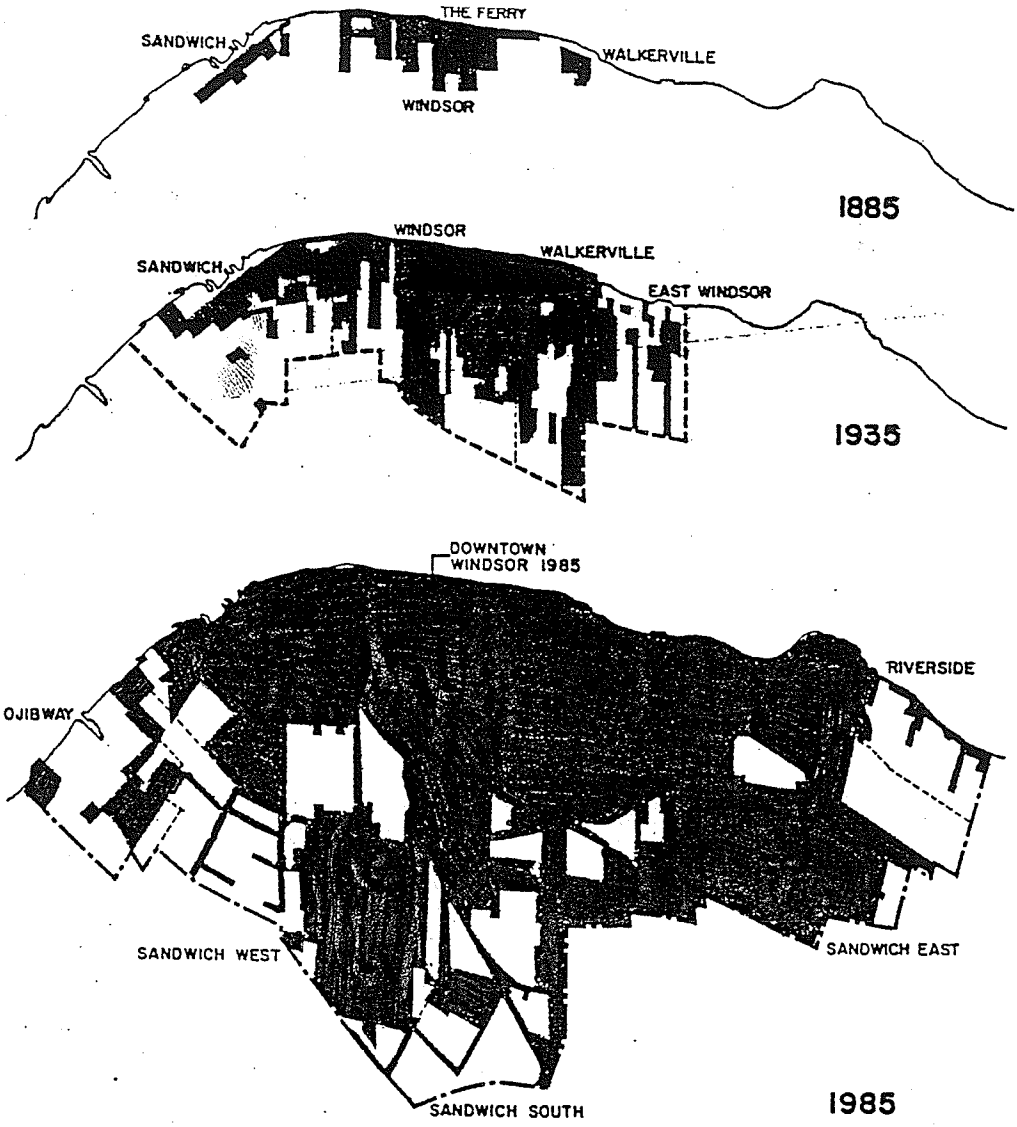


**Figure 3.4: Growth and Development 1885-1985**
(Corp. City of Windsor, 1985)

In conjunction with the establishment of the railway yards, five privately owned ferry services operated out of the docks to accommodate the railway passenger traffic crossing the river to Detroit. In 1883, the ferry docks were consolidated, and moved to the foot of Ouellette Avenue, where they continued to operate until other forms of transit were established.[14] Because Windsor was a terminus for the railway, and a departure point for passenger steamships which cruised the Great Lakes, the core area grew by providing accommodations, warehousing and services for the movement of people and goods (see Figures 3.5 and 3.6). As a result, Detroit and Windsor became strategic places in the commercial network of the Great Lakes.

14 The completion of the Ambassador Bridge in 1929 and the Detroit/Windsor Tunnel in 1930, made it easier for bus and passenger car service between the two cities.

**Figure 3.5: The warehouse district of downtown Windsor at Lower Ferry Street c. 1870's** (Morrison, 1954)

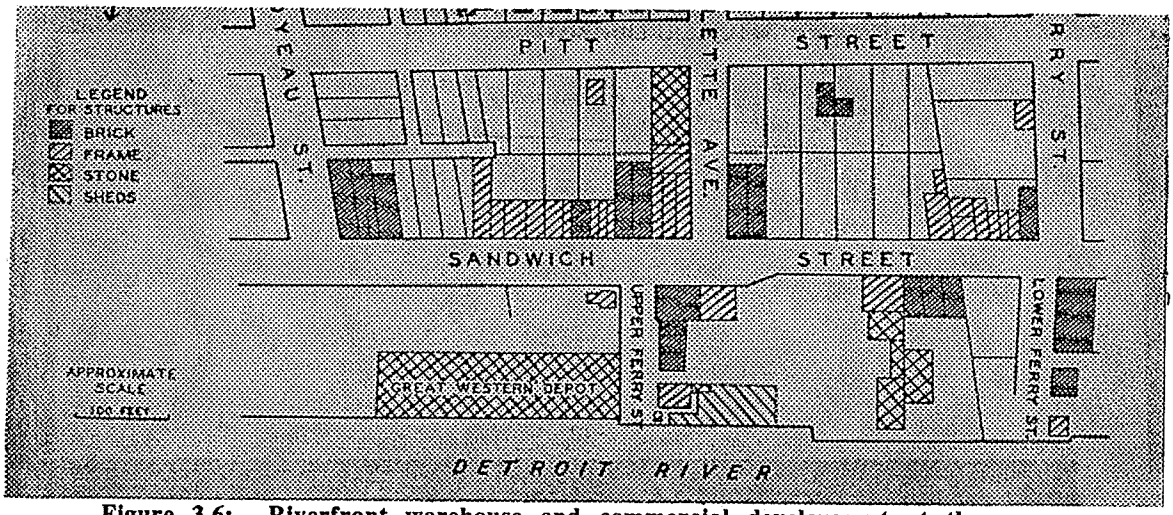


**Figure 3.6: Riverfront warehouse and commercial development at the foot of Ouellette Avenue 1871** (Municipal Archives, MS8/1)

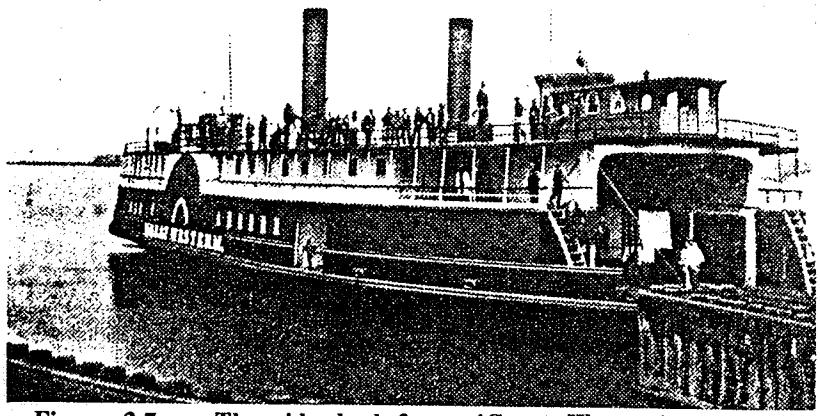

**Figure 3.7 : The sidewheel ferry, 'Great Western', connected Canadian and American railway service c.1867**
(Morrison, 1954)

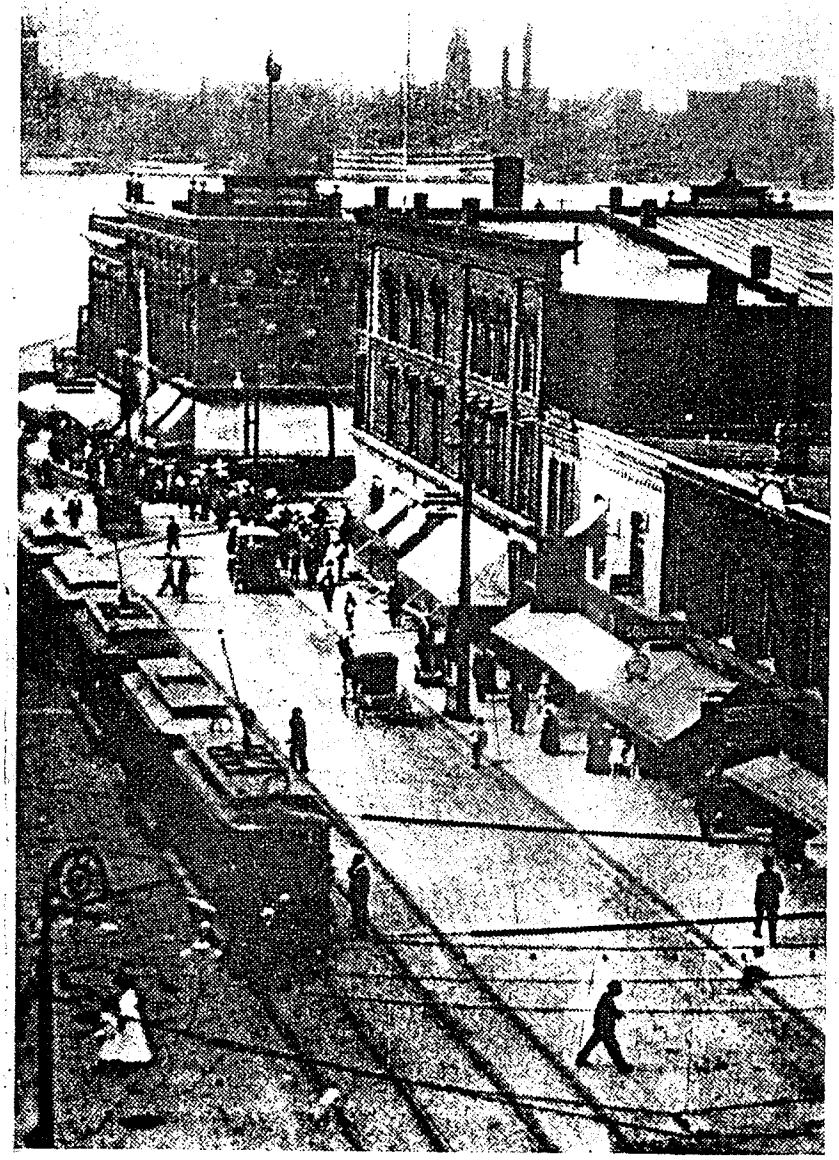

**Figure 3.8: Early electric streetcar operating along Ouellette Avenue near the river** (in background) **c. 1900**
(Morrison, 1954)

With the local population increasing, the need for reliable year-round public transportation was required. The invention of the dynamo, in 1886, provided for the introduction of the first electric streetcar lines in North America, which ran between Windsor and Walkerville[15] along Sandwich Street, now Riverside Drive (see Fig. 3.6). By the middle of 20th century, however, improved and flexible forms of public transportation replaced the streetcars.

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15 The suburb of Walkerville was constructed in 1880 to provide housing for Hiram Walker Distilleries which establishes the eastern limit of the DWW. Built near the river, it consists of a variety of Victorian homes and remains one of the City's most prestigious neighbourhoods.

During this time Detroit developed as the United States automobile capital. Companies anxious to sell to Canadian and British markets focussed on Windsor as the door to the British Empire, since railway and ferry services allowed for easy transfer of the raw materials and finished products between the two markets. Due to the increasing popularity of the automobile, the existing ferry shuttle service was overwhelmed by the volume of freight transferred across the river, and by 1910, a railway tunnel between Windsor and Detroit was constructed by the Michigan Central Railway, who maintained the 'sole right-of-access' until the tunnel was purchased by ConRail. A recent agreement between ConRail and the Canadian National Railway to share the tunnel, and pressure by local interest to remove the tracks from the downtown area to facilitate passive parklands, resulted in the abandonment of the site by the railways in 1990.

## 3.3: THE RIVERFRONT PARKWAY SYSTEM - (1940-1990)

As the barge ferries declined as a viable means of commercial and industrial transport, the Windsor waterfront buildings became obsolete. Many were vacated by the early 1950's. Similarly, the core began a gradual decline, attributed in part to a decline in the automobile industry, and the trend towards suburban development. As early as 1928, the concept of a chain of parks connected by a waterfront drive had been generated by a joint Windsor-Essex County committee. In the spring of 1963, the Federal Government transferred to the City the "Government Dock" property between Bruce Avenue and Church Street. After much local controversy concerning the design of commercial development on the north side of Riverside Drive, a major hotel opened on the site in 1967. Recognizing the value of the downtown waterfront, the City acquired and cleared the area to build a waterfront park, including Dieppe Gardens and the civic auditorium. In due course, the expropriation of adjacent industrial lands was undertaken consistent with Council's position (CR734/63):

> " *.... subject to the necessary financing being arranged by Council, all privately owned lands on the north side of Riverside Drive between the Ambassador Bridge and the Peabody Bridge be acquired for parks purposes and/or recreational and complimentary uses.*"

From this time, the general objective for Windsor's riverfront development has been solely to provide green space between Riverside Drive and the river. Developers, anticipating the continuation of this policy, are developing properties along the south side of Riverside Drive with hotels and high rise residential blocks. At the same time and following the development of Dieppe Gardens, numerous passive and floral parks have been developed along the Windsor waterfront.

## 3.4: SUMMARY

This study of the waterfront's historical evolution establishes that the City of Windsor owes its existence to the river and the railway. The Detroit River has long been a source of life, food, communication, and transportation. In the nearly 300 years of recorded occupation, the DWW evolved from a prairie river bank and agricultural settlement, to an important railway transfer point. Its present status though, as an abandoned industrial site, leaves a blank and empty reminder of its importance and active past.

It is evident that the strength and vitality of DWW as a crossing point has been an important factor in the development of the City. Though the physical connections expressed through the railway and ferries are no longer present, it is important that this unique quality of the site be emphasized within its rehabilitation. Since much of the railway infrastructure has been removed following the abandonment of the site, few opportunities for interpretting this historical function exist. However, the rehabilitation program must include an appropriate design response; compatible with the existing context of the site as part of the core area, as well as the Riverfront Parkway System.

*" Regardless of its focus, waterfront development should not lose track of the area's character"*

(Andrew B. Lynch, 1987)

# *4.0: SITE INVENTORY*

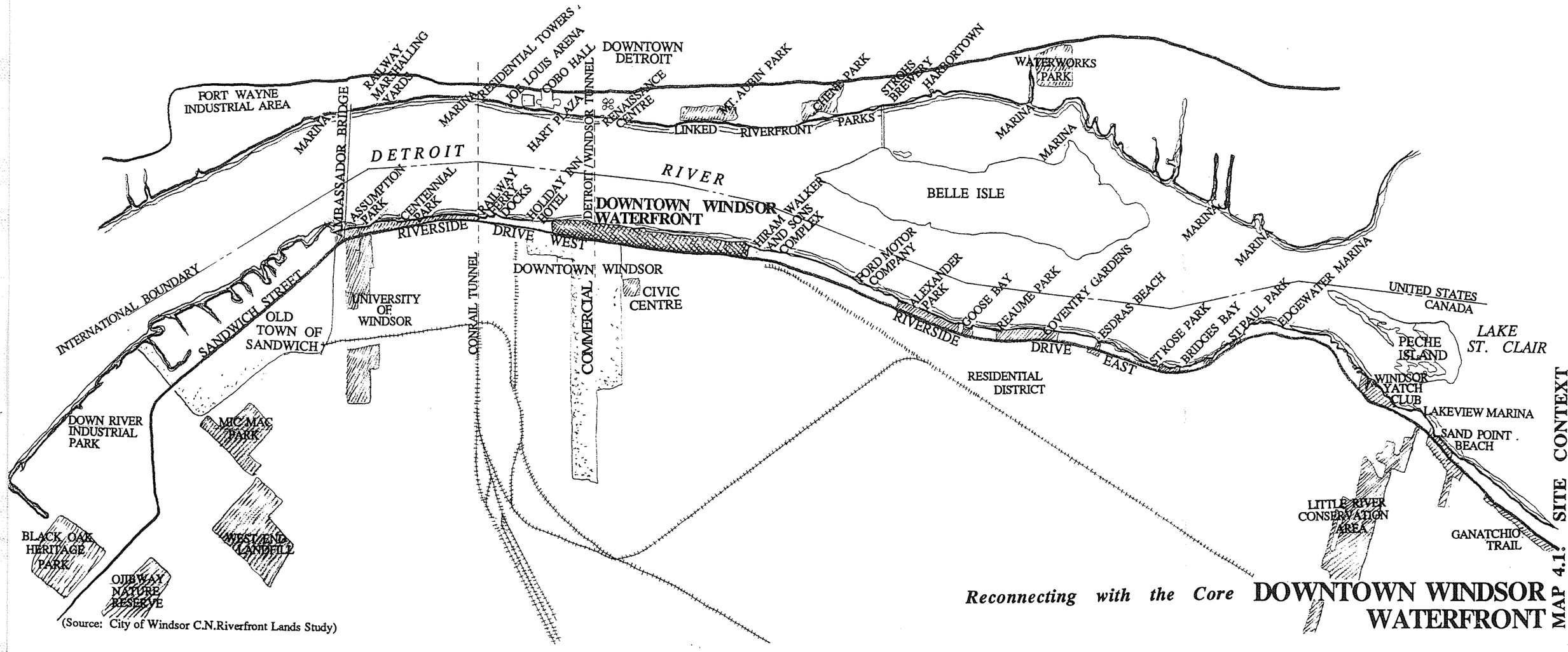
The previous Chapter established the historic context of the DWW. To compliment that research it is important to examine the existing conditions and qualities of the site. Thus, a site inventory has been undertaken to achieve a better understanding and the existing conditions, the local concerns and issues associated with the possible rehabilitation of the site are identified. The information gathered is then analyzed to identify opportunities and constraints, which are considered along with the data gathered from the study of contemporary waterfronts and the history of the study site in order to prepare design guidelines.

The first part of the inventory identifies the context of the site with the adjacent urban environs. The second part examines the existing uses of the site and determines their appropriateness for rehabilitation. An investigation into the physical character of the site is undertaken in the third part, in order to establish the limitations for rehabilitation, as well as to determine the constraints of the site. Finally, the fourth part identifies the core area user groups, and the necessity for interaction between the waterfront and the core.

## 4.1: THE URBAN CONTEXT

The DWW consists of an abandoned railway yard and passive parks situated on a narrow strip of land which lies between the Detroit River and Windsor's core (see Map 4.1). Because of its location within the urban context, the influence from adjacent uses will have an influence on the site's rehabilitation. In this part of the inventory, it is important to examine the site as a component of the core and the Riverfront Parkway System, as well as a part of the Detroit River corridor. This information is then used to identify the contextual opportunities and limitations.

**Figure 4.1: Aerial view looking east showing the linear character of the site**




(Source: City of Windsor C.N.Riverfront Lands Study)

*Reconnecting with the Core* **DOWNTOWN WINDSOR WATERFRONT**

**MAP 4.1: SITE CONTEXT RIVERFRONT PARKWAY**

### 4.1.1: The Core Area

Due to the original French ribbon farm system, which the present road network is derived from, the adjacent core area is divided into four districts stretching back from and perpendicular to the river (see Map 4.1). In the first district, the properties along Riverside Drive represent of diverse land uses, conditions and opportunities (see Fig.4.2). It is predominantly residential, with some derelict warehouses, which once were the life of the area.

The second district is the Civic Centre, consisting of City Hall and various municipal and provincial government buildings (see Fig.4.3). In 1965, a revitalization program by the architect, Murray Jones, proposed an esplanade be constructed to connect City Hall Square to the waterfront. The motive behind this proposed intervention was to ensure year-round access from the Civic Centre to the river.

The third and most active district includes the commercial area known as the Ouellette Avenue Mall (see Fig.4.4). Because of its unique character and ability to attract people, the expansion of street improvements within the core southward along the Ouellette Avenue corridor have influenced urban revitalization along Pelissier Street, and a number of intersecting streets, including Riverside Drive.

West of the Mall is the cultural district. It is comprised of the Windsor Art Gallery, the Hiram Walker Historical Museum and the Cleary Auditorium, as well as four of hotels and a proposed casino (see Fig.4.5). As well, further expropriation of land is now underway on which will be developed a multi-use sports arena and convention centre. Parking requirements for the activities of this area are accommodated by a parkade located at Pitt and Church Streets. This parkade also services three major existing hotels. The size of these hotels, combined with the present renovations to the Cleary Auditorium, has created a visually impenetrable wall which has destroyed the pedestrian scale along Riverside Drive.

Because of the range of activities which occur in the core, it will be important to consider each of the individual districts, in any rehabilitation program for the site. **The existing planning practice of establishing districts which run perpendicular to the river provides an interesting opportunity to program a variety of uses along the waterfront. This program, however, should be compatible with, and reflect the adjacent urban environment.**

Figure 4.2: Warehouse along the waterfront

Figure 4.3: City Hall Square

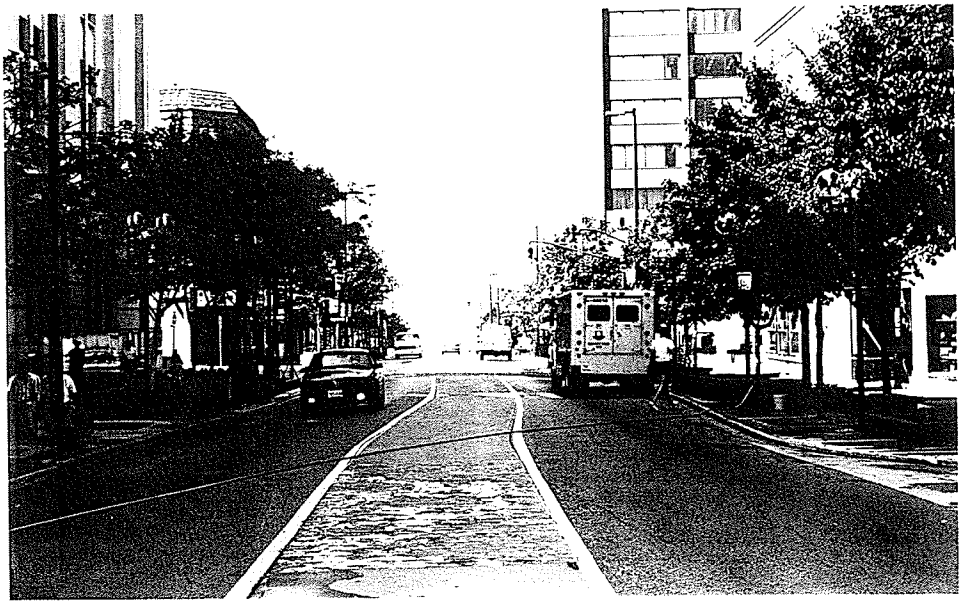


Figure 4.4: Ouellette Avenue Mall with Detroit skyline in the background


Figure 4.5: Renovated Cleary Auditorium and Convention Centre (left) and the two completed riverfront hotels (the Hilton and the Compri)

### 4.1.2: Riverfront Parkway System

The City of Windsor's, Department of Planning records illustrate that the existing riverfront land uses are as indicated in Figure 4.6. The DWW section consists of some 2 miles of shore line which has been categorized under the open space/vacant land designation. At present the total acreage of passive parkland along the river, including those of the study area, comprises 87 acres.

| Type of Use | Feet of Shoreline | In Miles | % of Total |
|---|---|---|---|
| Open space | 17,575 | 3.33 | 23.6% |
| Vacant | 12,250 | 2.32 | 16.4% |
| Transportation/Utilities | 10,400 | 1.97 | 13.9% |
| Residential | 17,600 | 3.33 | 23.6% |
| Industrial | 9,500 | 1.80 | 12.7% |
| Commercial | 6,300 | 1.19 | 8.4% |
| Institutional | 1,000 | 0.19 | 1.4% |
| **TOTAL** | **74,625** | **14.13** | **100.0%** |

Figure 4.6: Existing riverfront land uses
(Corp. City of Windsor, March 7, 1988)

The Riverfront Parkway properties immediately to the west of the site are passive in nature. Located adjacent to residential uses and University of Windsor properties, these parks facilitate some interaction between these environments and the waterfront (see Map 4.1). East of the study site the Parkway passes through the industrial sites of the Hiram Walker's Distillery and the abandoned Ford Motor Company truck plant. The Metro Windsor Sub-Region Waterfront Study-(Mc Laren, 1978), which established the presently used parameters for waterfront development along the riverfront corridor, contains a relatively detailed description of the existing waterfront properties within the Riverfront Parkway System (see Appendix B). **That document proposes the DWW establish a major activity node within the downtown area; a proposal which is adopted and developed further in this study.**

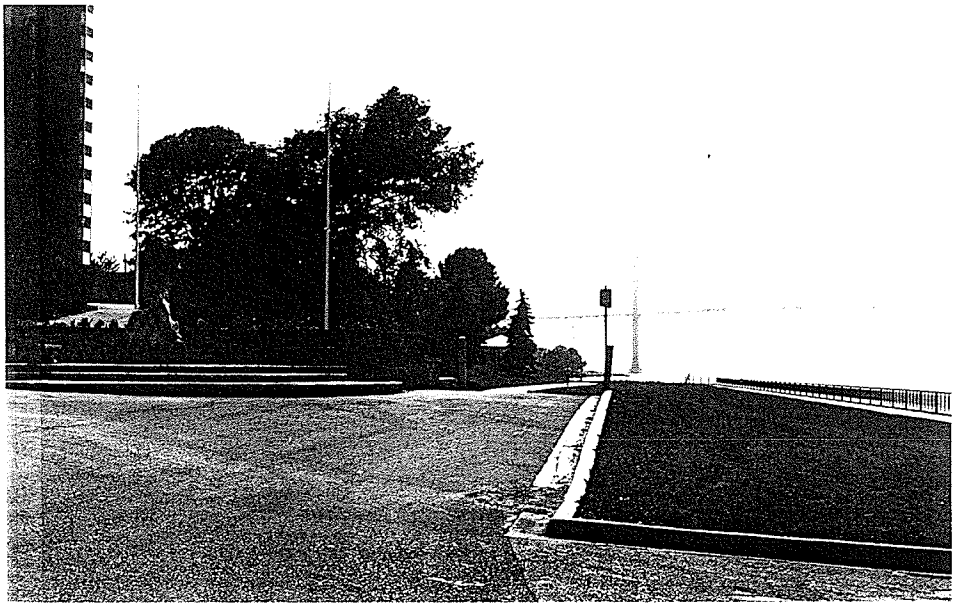
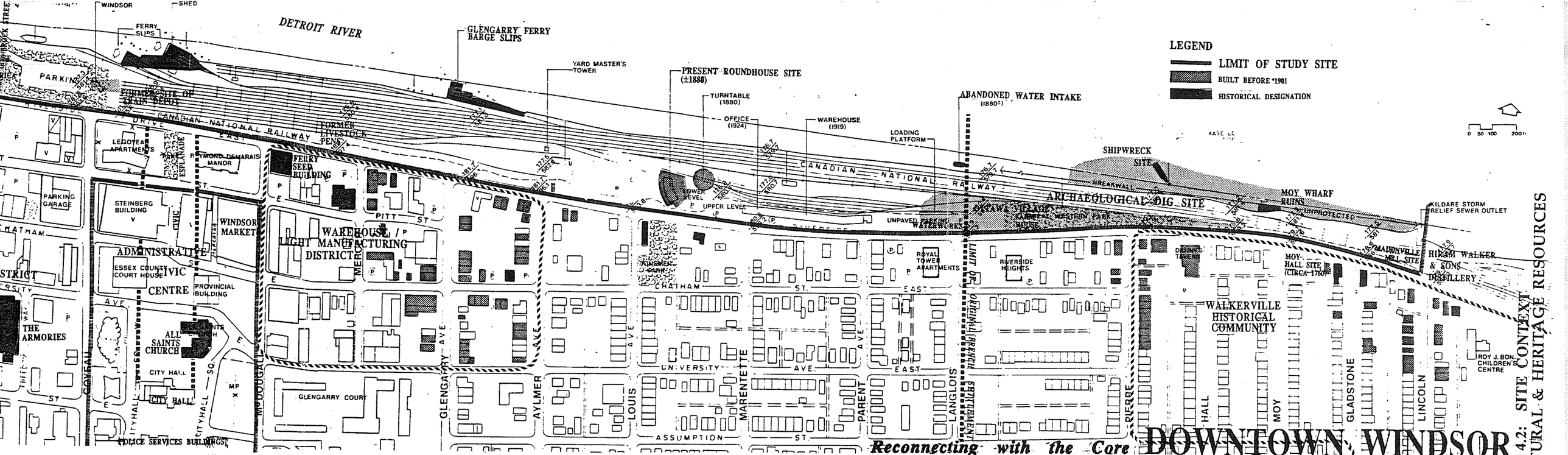


**Figure 4.7: Centennial Park located just west of the DWW**

### 4.1.3: Urban Character of the Detroit River Corridor

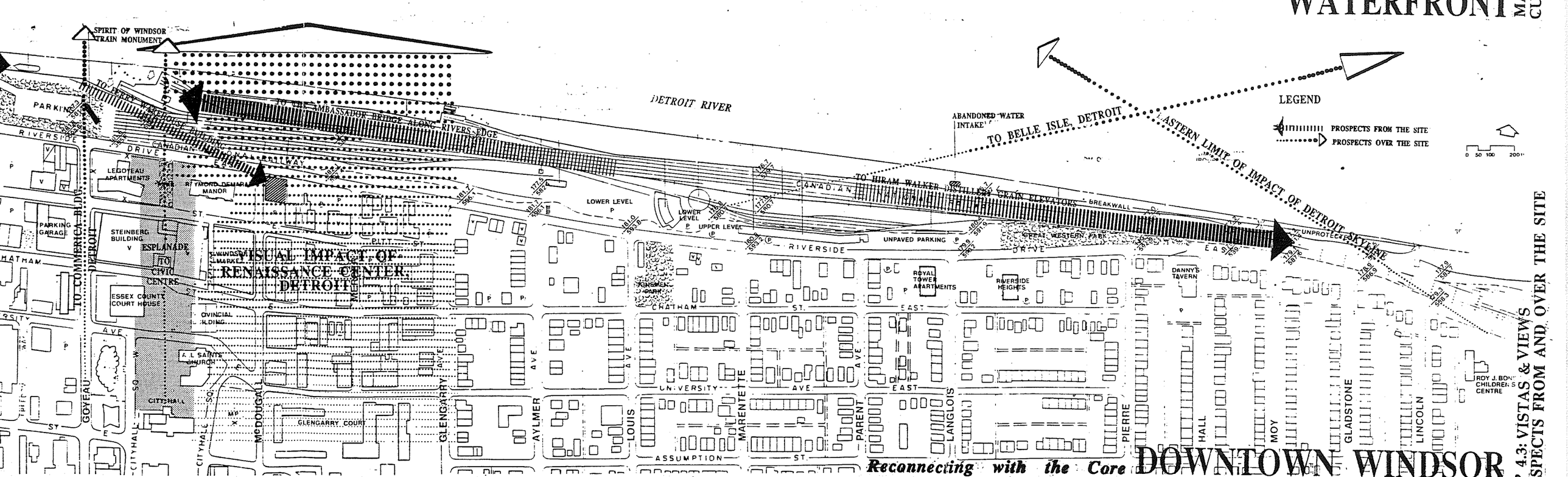
As explained in Chapter 3, the Windsor / Detroit crossing point has played an important role in western North American expansion. Its importance in foreign trade was linked to the development of a major shipping industry within the Great Lakes Region, as well as the establishment of a transfer point for rail operations to and from the United States. Due to the stronger American economy and the greater population of Detroit, much of the significance of the international port of Windsor was and is overshadowed by its American neighbor. This situation has led to a misunderstanding and lack of appreciation for the working nature of the DWW. This situation explains, in part, the abandonment of cross-river railway transfer.




# DOWNTOWN WINDSOR WATERFRONT

MAP 4.2: SITE CONTEXT
CULTURAL & HERITAGE RESOURCES

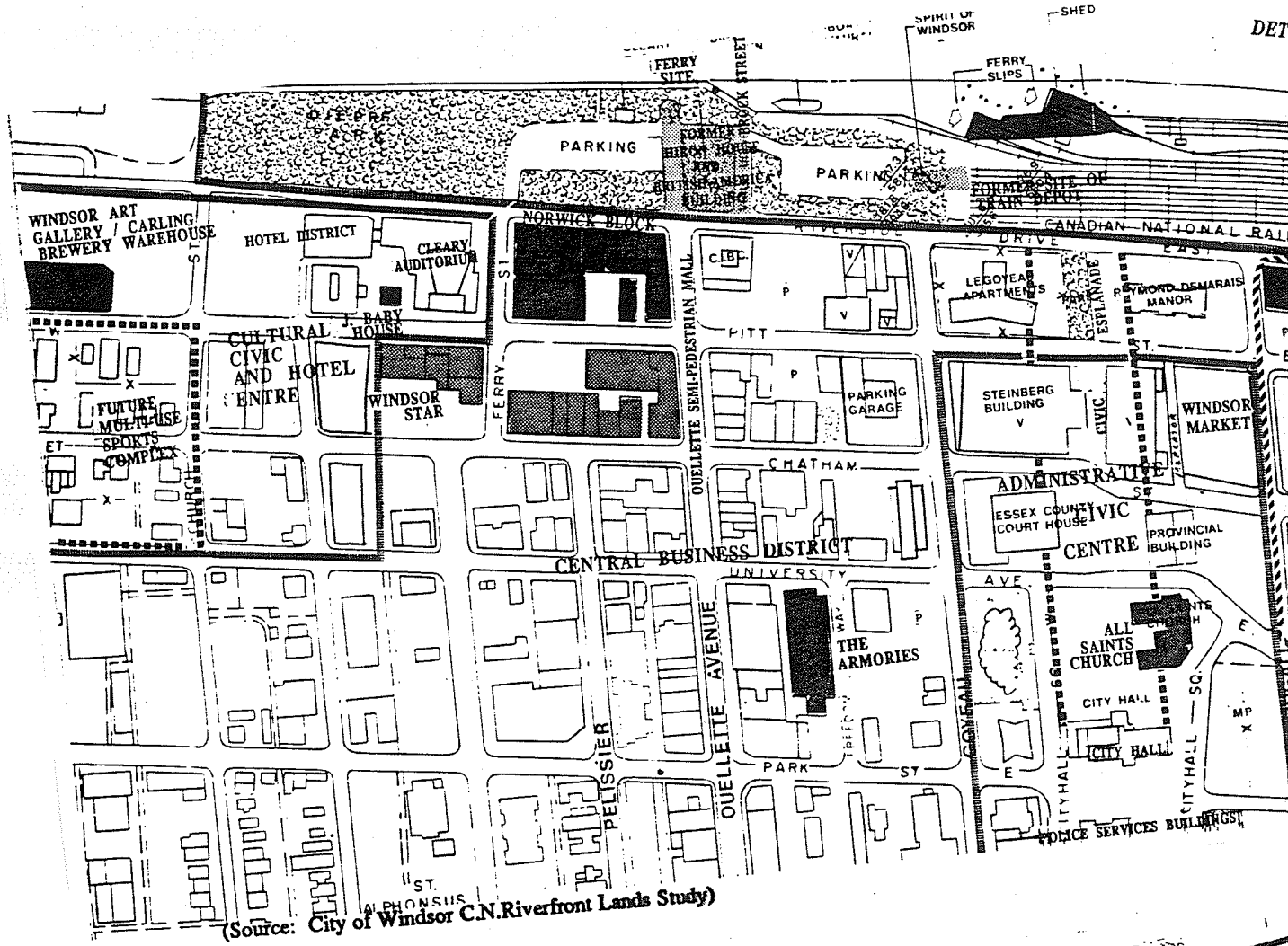
*Reconnecting with the Core*



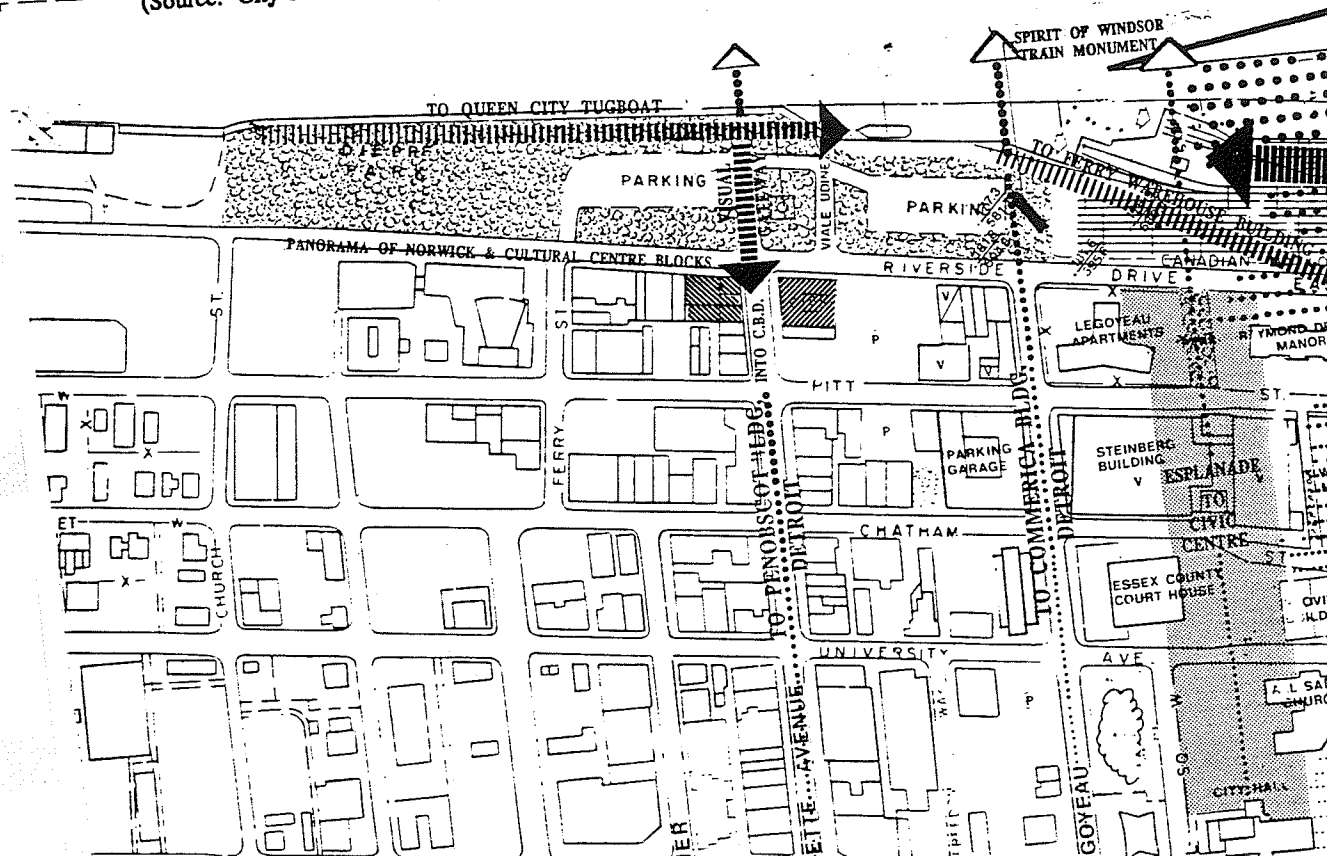

# DOWNTOWN WINDSOR WATERFRONT

MAP 4.3: VISTAS & VIEWS
PROSPECTS FROM AND OVER THE SITE

*Reconnecting with the Core*




(Source: City of Windsor C.N.Riverfront Lands Study)



During the two decades between 1970 and 1990, Detroit has, like the phoenix bird, re-emerged from its ashes and attracted to its core new development, including the Renaissance Centre, which became the catalyst for waterfront rehabilitation. Following a ten year study conducted by the Detroit Recreation Department, the Linked River Park System, which promoted inner-city revitalization, was developed. This included Chene and Mount Aubin Parks located immediately north of the DWW (see Map 4.2).

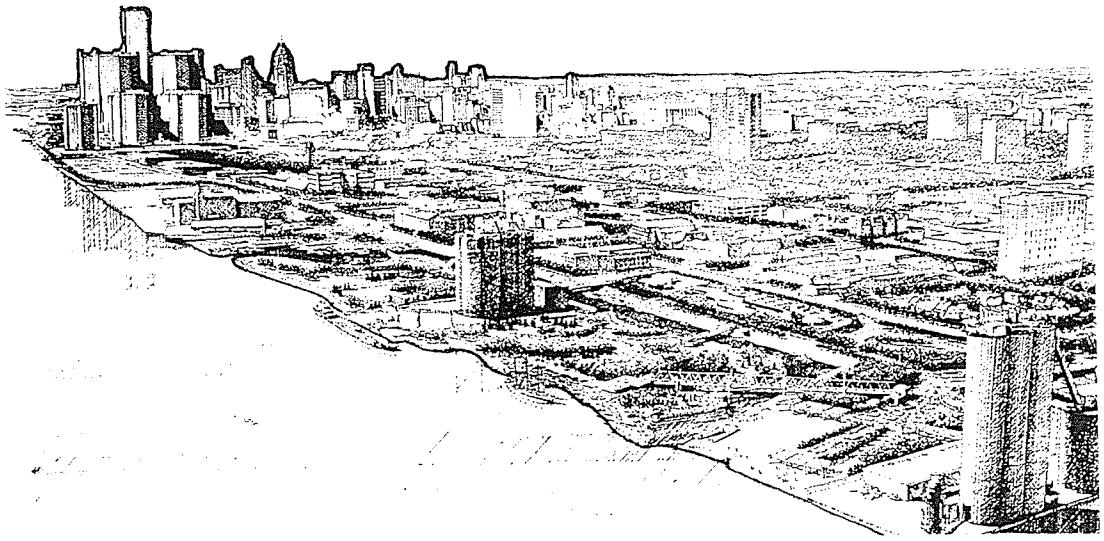


**Figure 4.8: Concept sketch of the 'Linked Riverfront Parks' of Detroit with the Renaissance Centre at upper left corner**
(Schervish et. al., 1979)

Through the development of Hart Plaza and the Dodge Memorial Fountain at the foot of the Renaissance Centre, Detroit has strengthened the urban character in its downtown waterfront. The development of the plaza has not only provides a place where people may meet for social and civic gatherings, but, in the past, it has also encouraged other urban development within the core. The visual prospects of the ever-changing Detroit skyline from downtown Windsor and the waterfront, provides spectacular panoramic views.

As a result of the smaller scale of development, the only significant views from Detroit towards Windsor are of the riverfront high rise complexes along Riverside Drive (see Maps 4.2 and 4.3). The lack of an overall ordering to these groupings results in a need for a central focus on the Windsor side of the river. **A central focus and unifying character along the Canadian side of the river is thus an important design objective.**

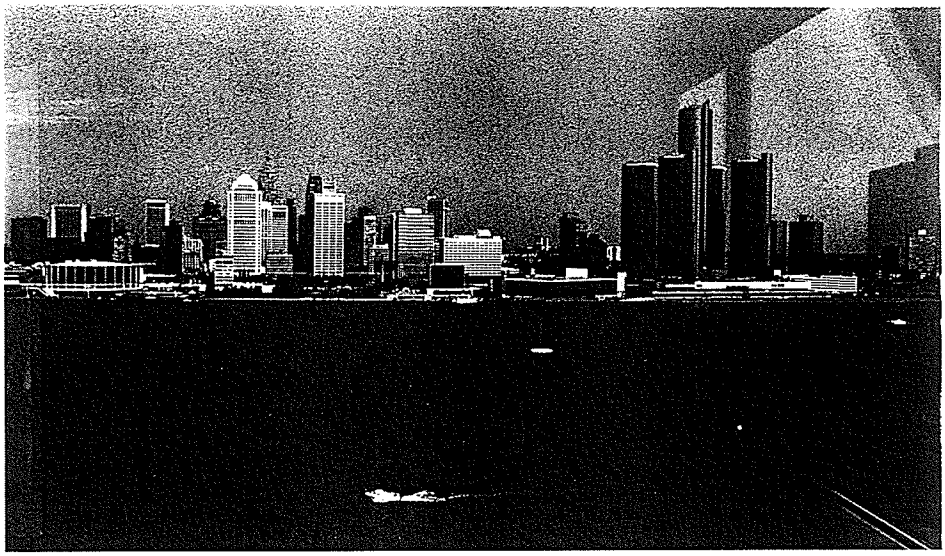


**Figure 4.9: The Detroit skyline as seen from the DWW**

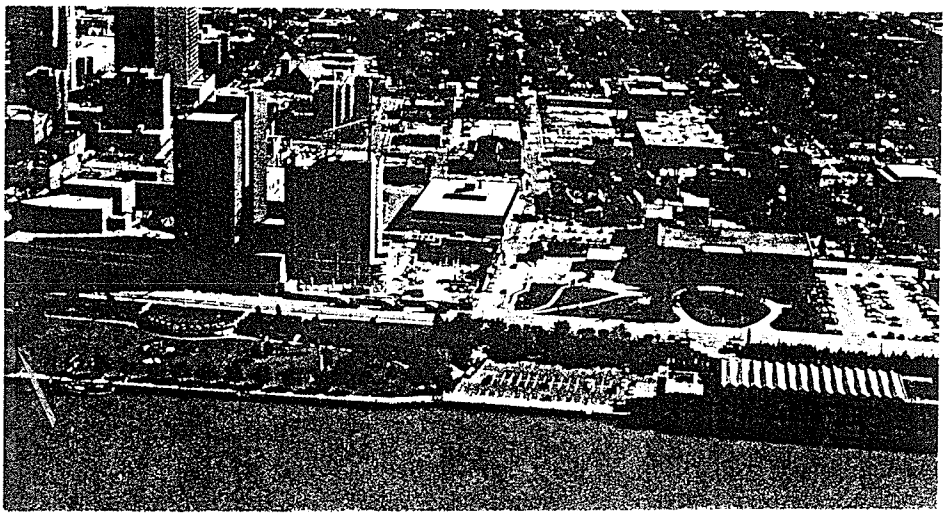


**Figure 4.10: The Windsor skyline as seen from Detroit**

## 4.2: EXISTING LAND USES

In the second phase of the site inventory, an assessment of the existing land uses has been conducted to identify opportunities associated with the site, as well as to define limitations. This phase also establishes the physical relationship between these uses and the adjacent urban context. Thus, during the early analysis of the site two general positions became clear. **The existing pattern is such that the site may be generally considered as separate areas, and at the abandonned railway site there are few exisitng activities deserving of inclusion with the program** (see Map 1.1).

### 4.2.1: Residential

Although the site historically had a substantial permanent population, no residential housing exists on the site today. There are, however, significant residential uses immediately to the south of the site which are in marginal condition (see Map 4.2). **It will be important to address the revitalization of this area as a part of the rehabilitation program.**

### 4.2.2: Commercial

Very little commercial activity exists within the Riverfront Parkway System, and that which does, may very well be relocated. The Cleary Guest House and Queen City tugboat restaurant (see Fig.4.11) comprise the only commercial entities within the study area (see Map 4.2). As previously mentioned there is, however, a substantial commercial district adjacent to the western end of the study area. **Connection of the commercial district will help the establishment of a public presence along the waterfront; an objective adopted by this study.**

### 4.2.3: Industrial

With the removal of the railway-barge ferrying operations from the Canadian National Riverfront lands, industrial activity no longer occurs on the site (see Fig.4.11). **The physical remnants may, however, serve as a reference for the interpretation of this former site use.**

### 4.2.4: Recreational

Land-based recreational activity is currently the most significant use within the study area. There are four designated parks, but these are generally restricted to walking, sitting, and seasonal sunbathing. Although there is some angling, the design of these parks does not encourage this activity.

*Great Western Park* - This park may be characterized as a small residential neighborhood park consisting of a grassed area and few large elm trees (see Fig.4.13). It is here that the archaeological test digs found the remnants of an Ottawa Village, a French farmhouse, and an Indian burial (Cataraqui, 1989). **Given the cultural significance of this site, the expression of its historical importance should be of primary importance in any rehabilitation program.**

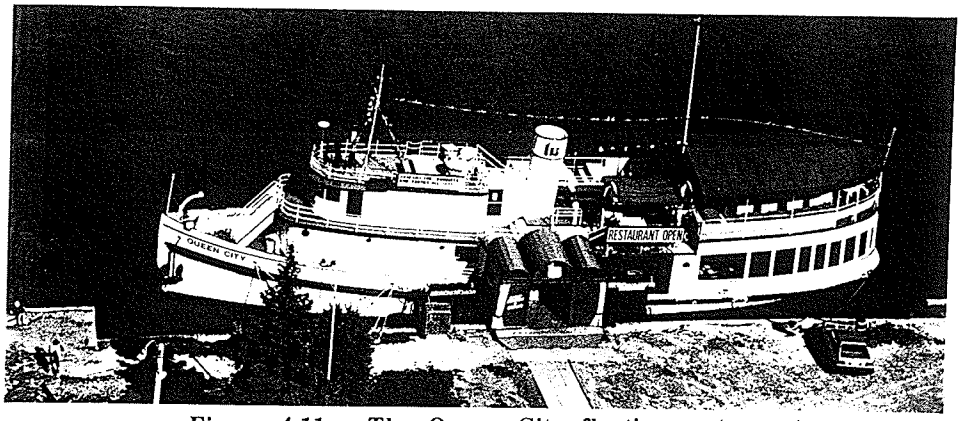



Figure 4.11: The Queen City floating restaurant

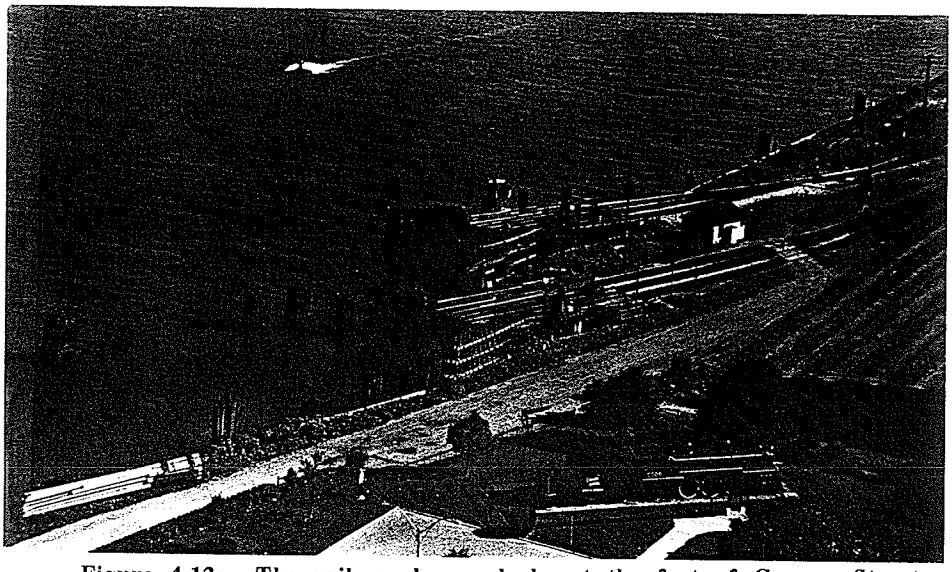


Figure 4.12: The railway barge docks at the foot of Goyeau Street

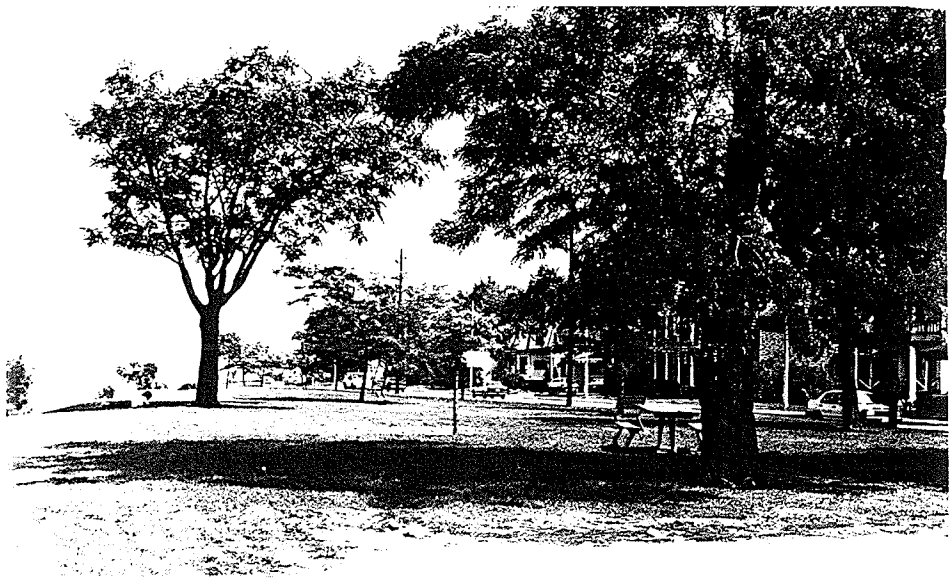


Figure 4.13: Great Western Park

*Dieppe Gardens* - Completed in 1965, it consists of a large open green space, a rose garden, and a war memorial at its western end. Activities include sun bathing, some angling, and viewing of the Detroit skyline and passing Great Lakes freighters. Until recently the gardens, which had adorned the embankment along Riverside Drive (removed for the Cleary Auditorium and convention Centre expansion), were attractions for leisurely strolls. In the winter, little activity occurs on the site with the exception of the civic Christmas tree trimming ceremonies, and the occasional photographing of the Detroit skyline. **Lying adjacent to the hotels and a proposed casino, Dieppe Gardens might be redesigned in such a manner as to establish a better physical connection between this site and the commercial activity within the core.**

*Piazza Udine* - Constructed as a demonstration of good will to the sister city of Udine, Italy, the piazza is the smallest recreation area within the site, and sits like an island between Riverside Drive and the former ferry access roads. The piazza's central feature is a marble fountain surrounded by a rose garden, benches and a path constructed in psuedo-Italianate fashion (see Fig.4.14). **Although it has meaning for Windsor's Italian community, a more appropriate location within, or beyond, the study area should be considered.**

*C.N.R. Park* - Primarily a parking lot, what is known as C.N.R Park is located at the former site of the railway depot, which was associated with the growth of the City following the arrival of the railway in 1854. On display at the eastern end of the Park is an original steam locomotive, 'The Spirit of Windsor', which commemorates this historic event (see Fig.4.15). Only a narrow strip of grass between the floating restaurant and the parking lot serves to give credence to it park function. **Since the 'Spirit of Windsor' lacks an appropriate setting, it is appropriate to relocate it to a new study area position, and in such a manner as to better contribute to the historical interpretation of the site's earlier rail functions.**

Figure 4.14: Dieppe Park looking east

Figure 4.15: Piazza Udine

Figure 4.16: C.N.R. Park with the Spirit of Windsor train monument in background

### 4.2.5: Cultural

Various festivals have been hosted within the developed portions of the site over the years. Only one, however, the two week long International Freedom Festival, held between Windsor and Detroit to celebrate the independence of the two countries, and featuring a variety of events including parades, a midway, tugboat and hydro-plane races, a tug-o-war across the river, and fireworks is significant. Attracting over 500,000 people to the waterfront daily, damage to the grass and flower beds in Dieppe Gardens and Piazza Udine has forced the City to consider the relocation of the festival until permanent facilities are constructed. Coordinators of the festival believe that without a riverfront site, the festival would lose its popularity. They have suggested that a fully serviced and hard surfaced open space be provided for the midway operations, as well as a 4,000-5,000 seat amphitheatre for the entertainment events and concerts. **The provision of a formal gathering space will accommodate this festival and other similar events, while promoting the year-round use of the site.**

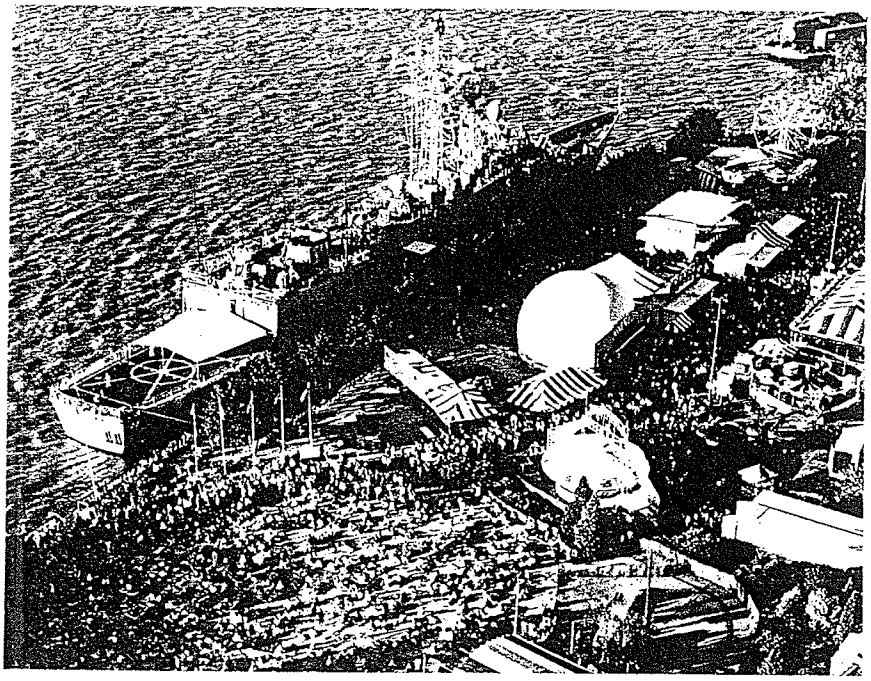


**Figure 4.17: The International Freedom Festival held in Dieppe Gardens and C.N.R. Park**
(Spike Bell, 1990)

### 4.2.6: Monuments

There are a number of monuments located within the site; some conspicuous and others not. Within the existing parks, six monuments are readily evident. In Dieppe Gardens, there is a monument to the soldiers who lost their lives at the Battle of Dieppe, a marker in the form of a cross commemorating the opening of the park by Queen Elizabeth II, and a bronze plaque identifying the site as the first European agricultural settlement west of Montreal.

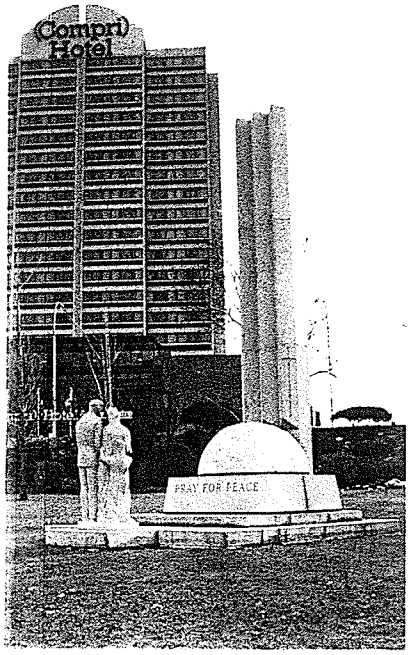



Figure 4.18: War monument


Figure 4.19: Commemorative plaque in Dieppe

In Piazza Udine there is a marble fountain donated by the City of Udine, Italy (see Fig.4.15). C.N.R.Park has the 'Spirit of Windsor' steam locomotive, which serves as a monument to former railway use (see Fig.4.16). Finally, a bronze plaque located in Great Western Park commemorates the significance of the railway in the development of the City of Windsor.

What may be only described as informal monuments, the structures left in the wake of the railway operations, also are in evidence of this site (see Map 4.2). These historical remnants include an offshore pump house located at the foot of Langlois Avenue, the railway roundhouse and turntable between Louis and Marentette Streets and, finally, the barge ferry docks located at the foot of McDougall and Goyeau Streets (see Figures 20 through 22). **The preservation and reuse of these structures can provide important references to the former use of the site.**

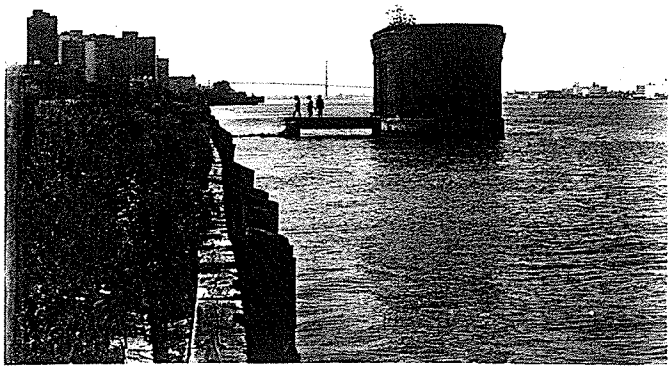


Figure 4.20: Railway offshore pump house

Figure 4.21: Railway turntable

Figure 4.22: Barge ferry dock and leveling apparatus

### 4.2.7: Maritime Activities

With the barge-ferry transfer operations now removed, there is at present no maritime activity occurring on the site. Though docking facilities are located at Dieppe Gardens, they are rarely used, except for special events usually associated with the International Freedom Festival. Waterfront developments should be based, on the main resource associated with the site; the Detroit River. The present uses of the site have no relationship to that resource, however, the Detroit River is still an active route for Great Lakes shipping. The Navigable Waters Protection Act limits the nature and amount of intervention within the active waterway. The major concern is that wakes, caused by the large ocean and lake freighters travelling roughly 600 feet from the shore must be considered when building out into the water.

At present, no marina facilities exist to service the downtown. An inventory of the existing marinas in the Windsor -Essex County Region indicates that there are presently 4200 berths in existing basins, with the potential of 1180 more proposed with expansion of these facilities.(see Appendix C). These figures do not include the marinas in Detroit, which accommodate significant numbers of transient recreational boaters interested in excursions to Windsor for shopping, dining and other short term activities. **An opportunity exists for the establishment of a marina in close proximity to the core.**

### 4.2.8: Vehicular Circulation

The primary arterial streets of the downtown area of Windsor are Riverside Drive (see Fig.4.23), Goyeau Street and Ouellette Avenue (see Map 4.5). The rest of the core area streets are considered to be local streets. Thus, there are only a few points at which public traffic may access the site at present. With the exception of Mercer Street, all north and south bound routes between Ouellette Avenue and Aylmer Street maintain, at a minimum, collector status and act as feeders to major highways including the Queens Highway #401. **Additional vehicular entry points to the site should be constructed using these existing routes, to take full advantage of the increased traffic volumes anticipated.**

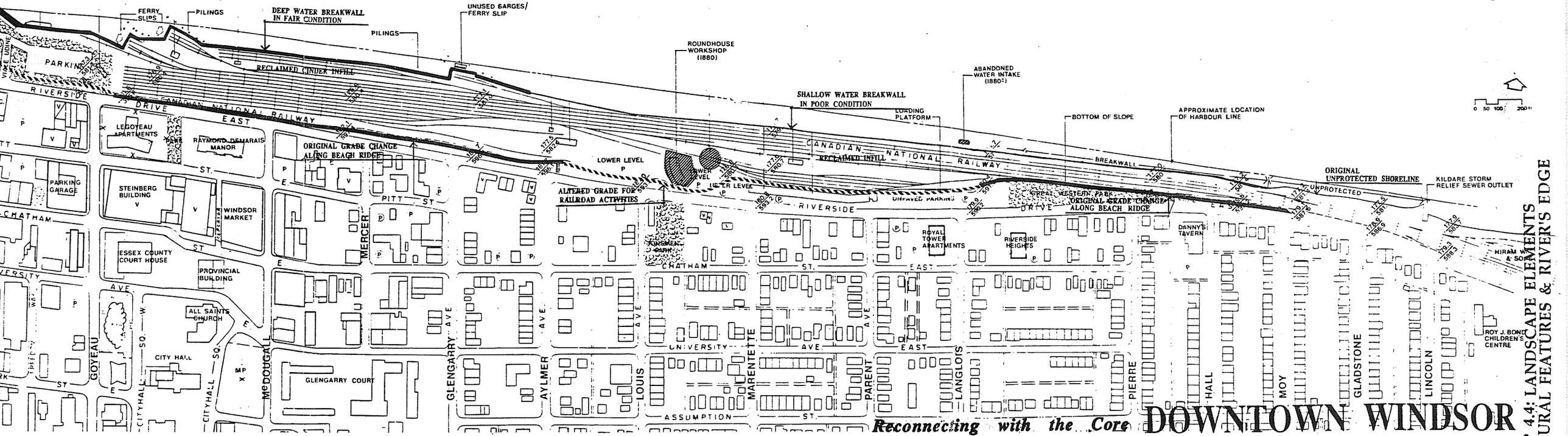
Two entrances exit at the foot of Ouellette Avenue. These roads access parking lots in Dieppe Gardens and C.N.R. Park. **Though required to help accommodate the demand for parking close to the Ouellette Avenue Mall, the existing parking facilities at the foot of Ouellette Avenue are not visually appealling and their location and design should be reconsidered within the rehabilitation**

Figure 4.23: Riverside Drive

### 4.2.9: Pedestrian Activity

Pedestrian movement is restricted to the western end of the site, where park development has already taken place. Currently, the primary reason for pedestrian access to the waterfront during the day is associated withg vehicular parking. Further, Riverside Drive acts as a barrier to interaction with the core activities and those of the waterfront properties. **It will be important to consider measures to ameliorate the barrier created by Riverside Drive, in order to increase pedestrian access to the site.**

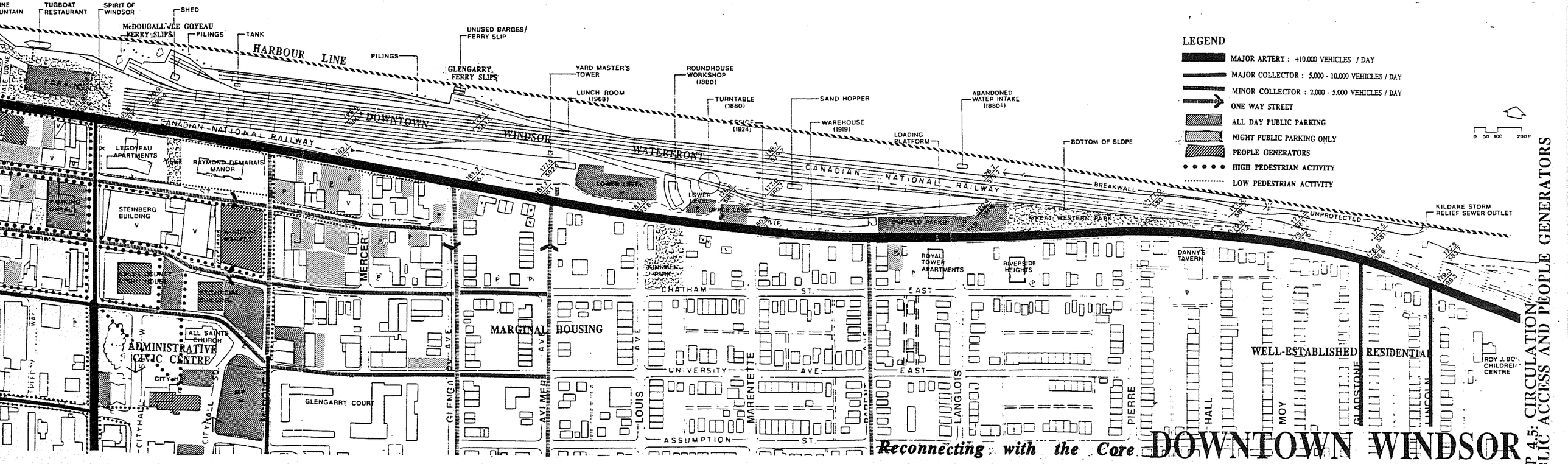
Figure 4.24: Dieppe Gardens on a sunny afternoon




# DOWNTOWN WINDSOR WATERFRONT

*Reconnecting with the Core*

MAP 4.4: LANDSCAPE ELEMENTS
NATURAL FEATURES & RIVER'S EDGE



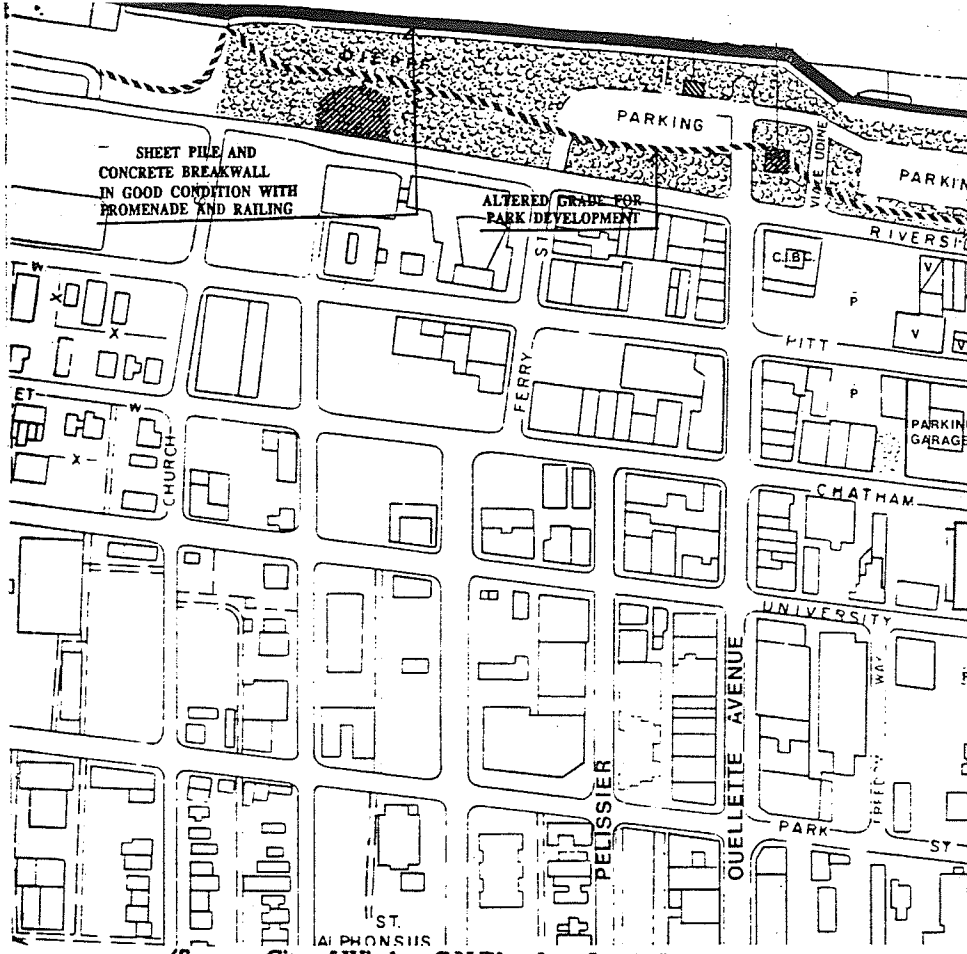

LEGEND

- MAJOR ARTERY : +10.000 VEHICLES / DAY
- MAJOR COLLECTOR : 5.000 - 10.000 VEHICLES / DAY
- MINOR COLLECTOR : 2.000 - 5.000 VEHICLES / DAY
- ONE WAY STREET
- ALL DAY PUBLIC PARKING
- NIGHT PUBLIC PARKING ONLY
- PEOPLE GENERATORS
- HIGH PEDESTRIAN ACTIVITY
- LOW PEDESTRIAN ACTIVITY

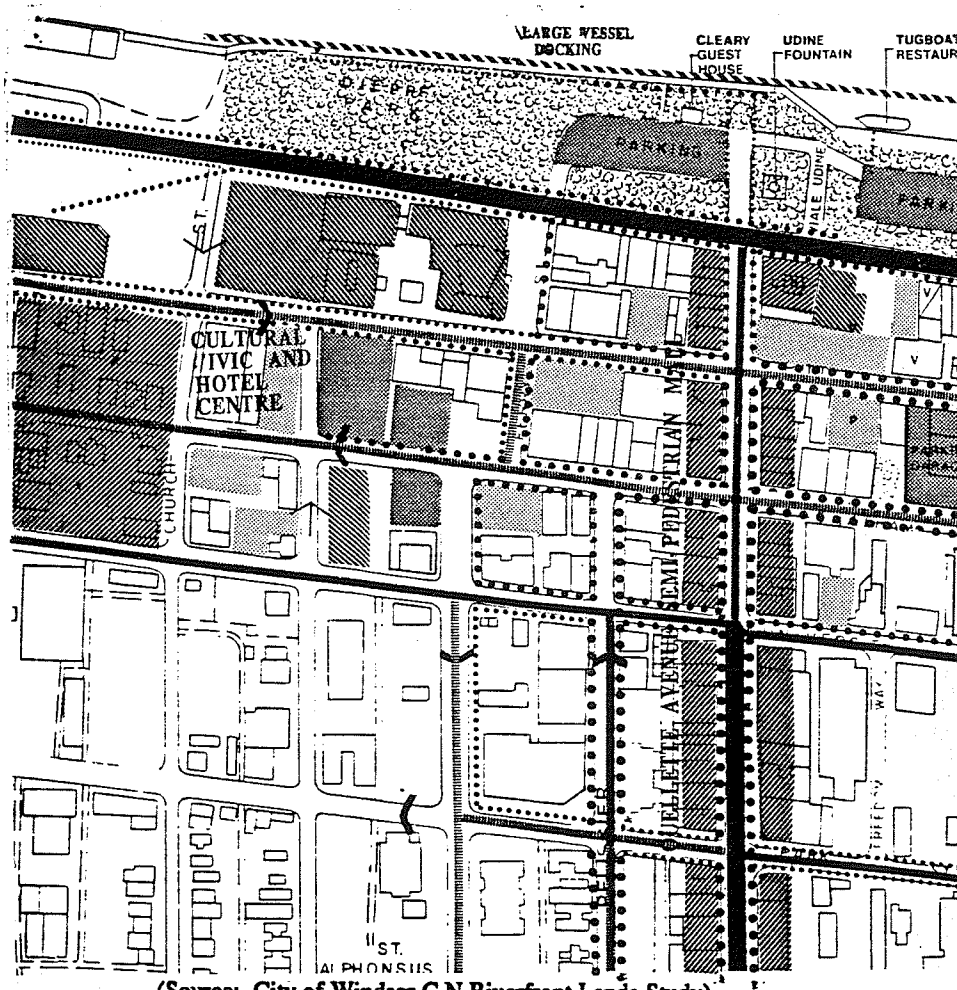

# DOWNTOWN WINDSOR WATERFRONT

*Reconnecting with the Core*


MAP 4.5: CIRCULATION
PUBLIC ACCESS AND PEOPLE GENERATORS




(Source: City of Windsor C.N.Riverfront Lands Study)




(Source: City of Windsor C.N.Riverfront Lands Study)

## 4.3: PHYSICAL CHARACTERISTICS AND FEATURES

This phase of the analysis looks at the natural characteristics of the site. Though extensively altered by human intervention, the physical morphology of the site has been influenced by natural forces, primarily hydrological and meteorological . The existing site features are examined and interpreted (see Map 4.4). The investigation focuses on topographical relief, existing vegetation, water quality, existing conditions of the river edge, and microclimate of the area. The analysis identifies opportunities and constraints related to the physical environment, and characteristics which will influence the nature of the rehabilitation.

### 4.3.1: Topographical Relief

Detroit and Windsor are established on an esker; the remains of an ancient glacial river bottom. Around 500 B.C., the esker collapsed, allowing for the formation of a very wide and deep channel. Further uplifting caused a drop in water elevation, leaving behind a large beach ridge which characterizes the predominant elevation of the site today along Riverside Drive (Ashworth, 1987). The greatest drop in elevation (20.3') along the embankment is located at approximately McDougall Avenue, and gradually falls to about five feet at the eastern limit of the site (see Fig. 4.25). **This landform contributes further to the barrier created by Riverside Drive.**

**Figure 4.25: View of original beach ridge at the eastern end of the site**

### 4.3.2: Vegetation

The study site is void of any significant indigenous vegetation. The abandonment and removal of the railway yards provides an environment where native grasses and flowers are reclaiming the land (see Fig.4.25). Most of the other vegetation on the site was planted within the last twenty-five years. Evergreen and deciduous plantings have been provided along the embankment by the City, in order to screen the view of the railway yards (see Fig.4.23).

Ornamental plantings are located in the three parks at the western end of the site (see Fig.4.26). In Dieppe Park, the trees and ornamental gardens have temporarily been rerlocatedasa result of the construction associated with the relocation of Riverside Drive, and to accommodate the expansion of the Cleary Auditorium. **If the present character of this park is to be maintained, then there is a need for new planting in the western end of the study area.**

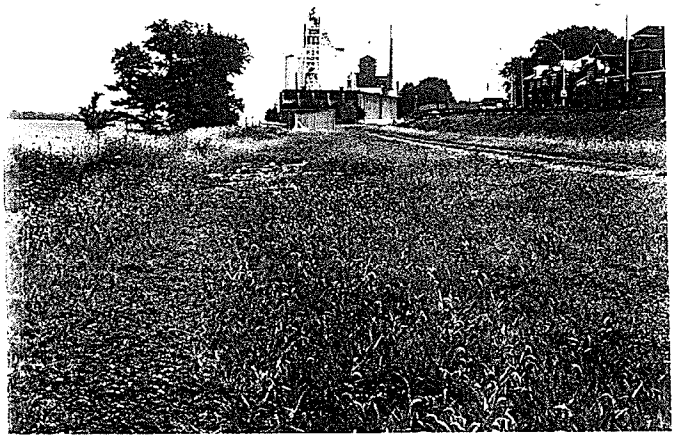


**Figure 4.26: Prairie and river bank vegetation reclaiming the vacant railway lands**

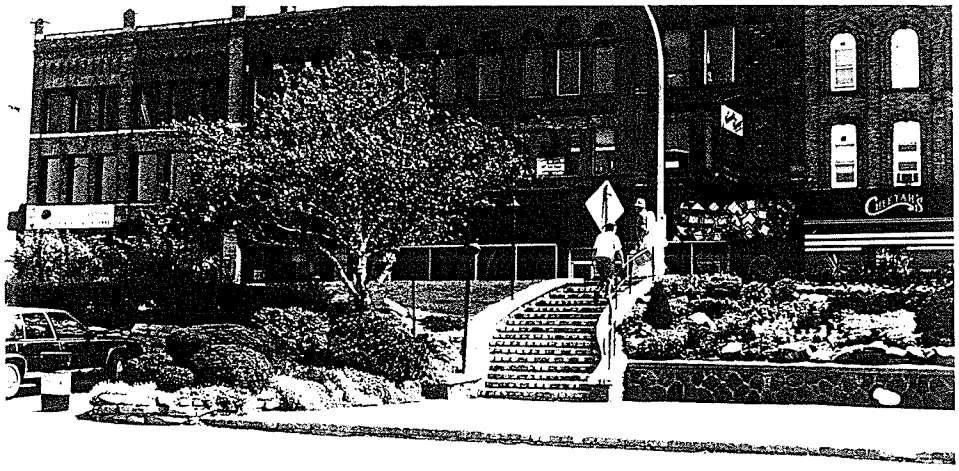


**Figure 4.27: Ornamental plantings in Dieppe Gardens**

### 4.3.3: Water Quality

The level of the Detroit River is controlled by the Great Lakes system, with the water level fluctuating approximately five feet. The speed of the river is approximately seven miles per hour, and the major concern is damage caused by ice in the winter. **While it is possible to build into the river, any new edge must be designed to withstand the impact of ice floats, as well as the heaving forces caused by ice buildup.**

The problem of water quality in the Detroit River has long been questioned. Industrial activity along the river has left the water at a quality level which no longer meets Government health standards for swimming. Ironically, however, since the introduction of zebra mussels into the Great Lakes, the water quality of the Detroit River has improved. With further improvement to the water quality, it is anticipated that the public demand to come in direct contact with the river will increase. **The rehabilitation of the site should include opportunities for direct physical contact with the water.**

### 4.3.4: The River's Edge

From the eastern-most end of the site, where the property meets the Hiram Walker Distillery, to approximately Moy Avenue, the river's edge is unprotected and is assumed to be the original shoreline. Due to the speed of the river, no beach exists, and all sand is washed further down-stream; resulting in a rocky shoreline. This part of the site is a duck nesting area (see Fig.4.28). **This part of the site should be maintained to provide an opportunity for interpretation of a natural shoreline.**

West of Moy Avenue to the barge ferry dock, the condition of the breakwater varies from decaying and collapsing pilings, to newer sheet piling and wood pile bundles in good condition (see Figures 4.29 and 4.30). **The good condition and unique character of the docks provides opportunities for the introduction of contemporary water-related activities.**

The shoreline at the western end of the site is stabilized by a sheet piling and concrete breakwater, which was built in the late 1960's to support the waterfront promenade along Dieppe Gardens. The entire edge of the breakwater is fenced with a pipe and wrought iron railing (see Fig.4.31). Though no longer used, there are three sets of stairs designed for access to excursion boats and ferries. Since the promenade does not lead anywhere, it acts solely as an barrier between the water and the land. **It is important to re-evaluate the appropriateness of the Dieppe promenade in its present form, in developing proposals for the reuse of this area.**

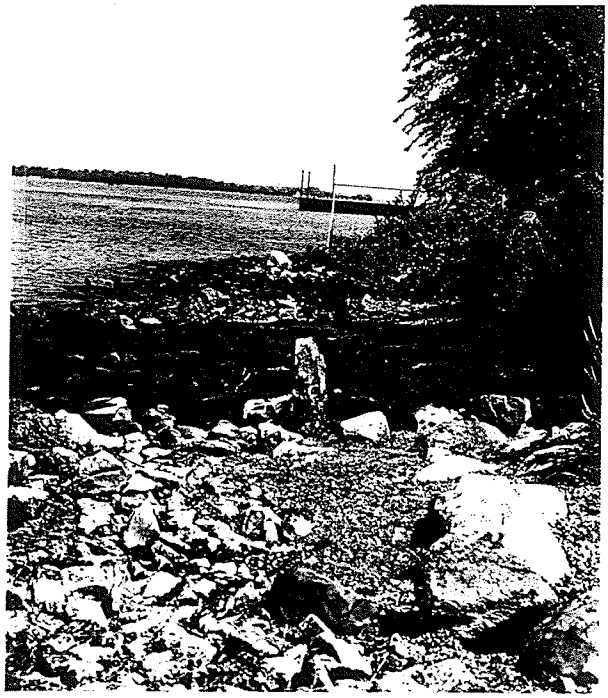


Figure 4.28: Remnant of the undisturbed river bank

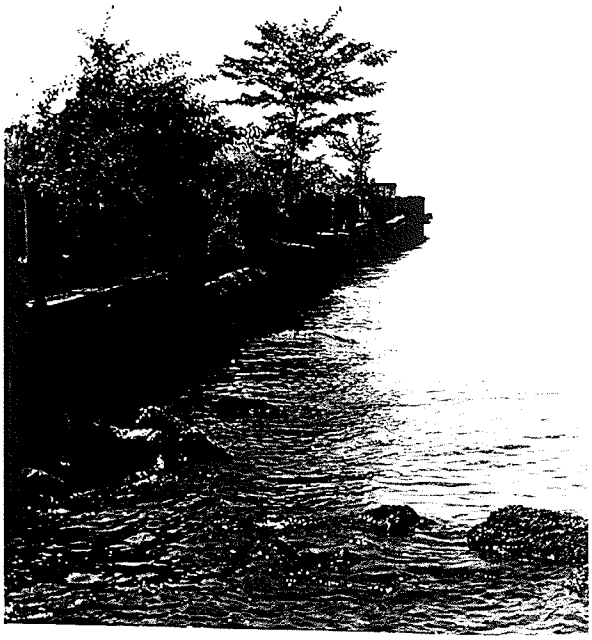


Figure 4.29: Decaying timber retention piles

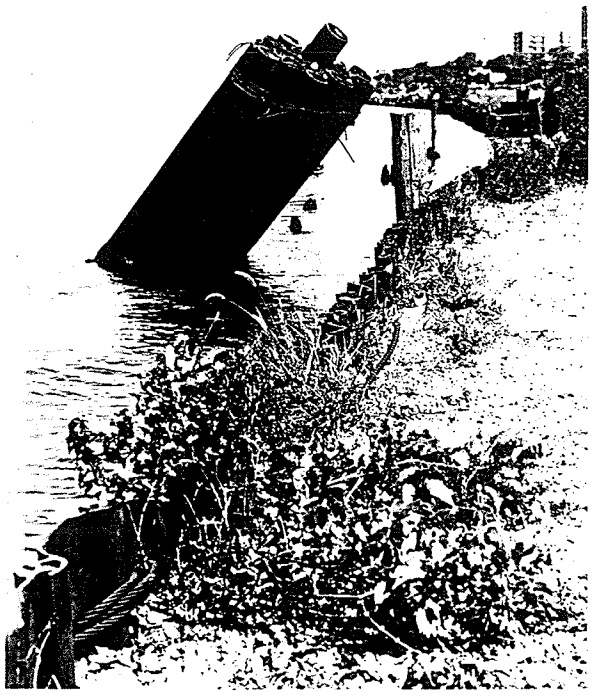


Figure 4.30: Collapsing steel and pile retaining wall

Figure 4.31: Railing along the promenade in Dieppe Gardens

### 4.3.5: Microclimate

Located in the southern-most city of mainland Canada, and lying at 42° North latitude, the study site is at the same latitude as northern California and Rome, Italy. The climate is moderate, with a daily mean temperature averaging 22°C in the summer, and only -4°C in the winter. These temperatures are affected by high humidity and dampness levels. High and low pressure systems from the south may cause sudden temperature fluctuations and adverse conditions. Precipitation in the area is light; approximately 4.25 inches monthly during the summer and 11.0 inches per month in the winter. Most of the precipitation during the winter is in the form of rain, due to the frequent number of days with temperatures above freezing. The moderate climate, combined with the presence of an urban heat island over the Detroit Metropolitan Area, results in a total annual snowfall of approximately 3 to 6 inches (Corp. City of Windsor, 1985). **Due to erratic and unstable winter weather conditions, there are limitations to the range of traditional outdoor winter recreational activities which might be introduced to the site.**

## 4.4: USER PROFILE

This final phase of the analysis examines the potential user profile of the site. The rehabilitation of the site must first provide for the public presence of local residents. Therefore, the analysis examines the issues which address the local and non-local populations separately. This information is used to provide direction for the programmatic requirements of the site's rehabilitation.

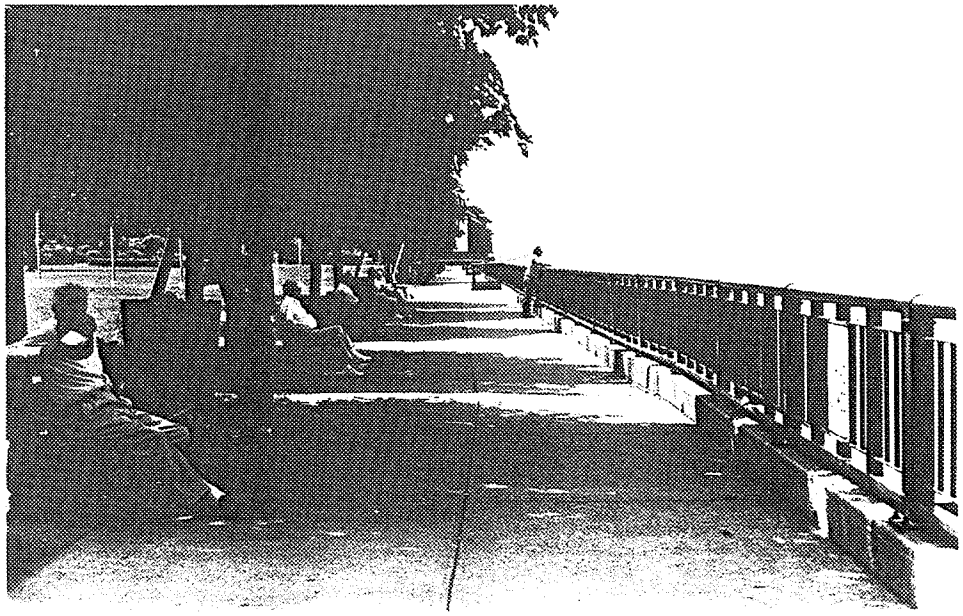


**Figure 4.32: Elderly gentlemen watching ships pass along the Detroit River**

### 4.4.1: Local

The population of Windsor has been stable for the past 30 years (see Appendix D). There is a significant older population in the core, as well as a large number of young families of which an estimated 50% of both groups are categorized as lower income (McLaren, 1978). Due to higher costs of available waterfront recreation in suburban locations, combined with the lack of suitable public transportation to rural sites, the majority of inner city residents cannot engage in outdoor waterfront recreational activities.

It has been established that existing passive parks in the study area are underused, with the exception of the elderly, and do not attract a significant portion of the urban population including the staff of professional offices, commercial businesses and government buildings located within the core. **It will thus be important to focus on new uses and functions responsive to the needs of these groups, while maintaining those facilities presently used by the elderly.**

### 4.4.2: Non-Local

The General Manager of the Windsor-Essex County Convention and Visitors Bureau, Sergio Grando, in an interview with a local magazine (Miller, 1990) observed that the current tourism industry in Windsor brought in about 100 to 200 million dollars on an annual basis. It has been identified that the primary reason for visiting Windsor from Detroit is to shop, dine and participate in other forms of entertainment (see Appendix D). However, the primary activity for visitors on the waterfront site is viewing and photographing the Ambassador Bridge and the Detroit skyline. The existing policy of night closure of these parks, while economically understandable, obviously limits their use by visitors. **There is a need to provide for safe access to the waterfront on a 24 hour, year-round basis.**

Given the tourist attraction of large American cities in the Great Lakes Region, including Chicago, Detroit, and Milwaukee, and the close proximity of Toronto, it is not anticipated that Windsor will achieve the status of a tourist destination. At present the City anticipates that the expansion of the Cleary Auditorium, the proposed casino, and the newly renovated Cobo Hall Convention Centre in Detroit will provide revenue growth from tourism. In recognition of the perception of an unsafe environment and lack of hotel rooms in downtown Detroit, Windsor has constructed 6 major hotels along the south side of Riverside Drive to take advantage of the convention business. **In anticipation of a further increase in convention business, tourist-oriented facilities should be developed within Windsor's core area.**

## 4.5: OPPORTUNITIES AND CONSTRAINTS

Chapter Two established a desire to bring people to the waterfront and illustrated that through the creation of a transitional zone between water and land, contemporary cities are revitalizing their core areas; both are practices which have been adopted by this study for further development. Analysis of the information from the site inventory, combined with supplementary research, identifies opportunities and constraints associated with the site's rehabilitation, and to establish how these two contemprary practices may be achieved.

***Opportunity 1) Physical connection*** - The relatively undeveloped nature of the site provides the opportunity for rehabilitation which incorporates the characteristics and functions of the adjacent districts within the core, and the river and riverfront parkway.

*Constraint* - Riverside Drive creates a barrier which isolates the site from the core.

*Constraint* - The existing passive parks and parking areas on the site are necessary functions, and thus must be accommodated within any rehabilitation program.

***Opportunity 2) Identifiable landmark*** - Proposed redevelopment of the site requires compatibility to the adjacent districts of the core area. Opportunities exist to establish a landmark which will contribute to the visual ordering of the Windsor skyline as seen from Detroit.

***Opportunity 3) Increased public presence*** - A multi-use approach, offering year-round programming to increase the public presence along the waterfront will contribute both to the area's safety and success.

*Constraint* - Facility programming should be developed to avoid conflict with the residential community adjacent to the eastern end of the site.

***Opportunity 4) Historic references*** - Preservation and/or reuse of the original shoreline, archaeological ruins and existing railroad structures provide opportunites to reference the site's rich history.

***Opportunity 5) Interaction with the water*** - The introduction of water-based activities will increase the variety of recreation and leisure activities for those working and residing in the core area.

*Constraint* - The unpredictability of winter weather will affect the nature of outdoor recreation.

## 4.6: SUMMARY

In the past, rehabilitation of Windsor's waterfront has, for the most part, taken the form of passive parks. While generally responding to the leisure needs of inner city residents, the parks within the study area have not been successful in serving the needs of others using the core area. Due to its proximity to the core, the study area is potentially an important nodal point in the Riverfront Parkway System providing connections between the existing parks to the east and west, and establishing a connection to the core . Furthermore, opportunities exist to connect the Detroit River with the core.

*" A festival market alone does not magically guarantee a successful waterfront redevelopment. It is rather the mixture of uses - the diversity of attractions and things going on, the uniqueness and dynanism of a place - that draws people and keeps them coming."*

(Anne Breen, 1986)

# *5.0: PROGRAMMATIC REQUIREMENTS*

The site inventory established that through rehabilitation, a major centre of activity for both the core and the Riverfront Parkway System might be provided. That exercise also led to the conclusion that the relationship between the existing developed portions of the site and the core is not as effective as it should be. In order to guide rehabilitation, it is necessary to establish a program responsive to the existing conditions of the site, and reflective of the needs of both the local population and visitors. The first part of this chapter summarizes the results of a compatibility study undertaken to establish a program for rehabilitation. The second part establishes design guidelines for the implementation of the program, by addressing the issues identifying the opportunities and constraints from the preceding chapter, as well as responding to general waterfront issues.

## 5.1: PROGRAM

The investigation of waterfront precedents concluded that successful rehabilitation address the combined opportunities of attraction to the waterfront using the waterfront, and the creation of a transitional zone between the water and the core. The relatively undeveloped condition of the study site provides the opportunity for a program addressing these issues. Programmatic requirements have been established by concentrating on the opportunities revealed through the site inventory, while examining the appropriateness of potential uses.

These uses require a level of compatibility with the core area adjacent to the site. The site has been divided into nodes associated with the six districts of the adjacent core (see Map 5.1), consisting of:

- ***Historic Residential - Walkerville***
- ***Railroad Roundhouse - Residential***
- ***Warehouse District Transitional Zone***
- ***Esplanade Anchor - Civic Centre***
- ***Symbolic Gateway - Commercial ;*** **and**
- ***Cultural - Commercial.***

A program for rehabilitation has been established for each of these nodes, which is intended to be compatible with the uses of the six adjacent districts. The compatibility study has thus been conducted to identify programmatic elements best suited for development at each node.

SYMBOLIC GATEWAY

ESPLANADE ANCHOR

TRANSITIONAL NODE

CIVIC ORIENTED AREA

COMMUNITY ORIENTED AREA

RAILROAD ROUNDHOUSE

PROMENADE TO CONNECT NODES

PROMENADE TO CONNECT NODES

ARCHAEOLOGICAL DIG OPERATIONS

LEGEND

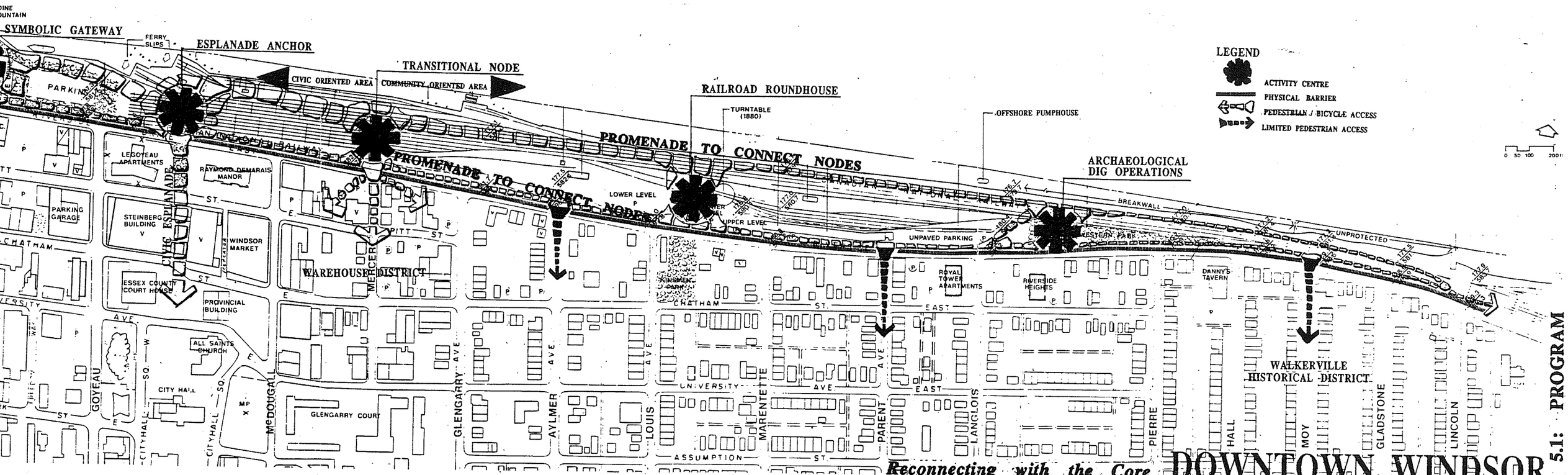
- ACTIVITY CENTRE
- PHYSICAL BARRIER
- PEDESTRIAN / BICYCLE ACCESS
- LIMITED PEDESTRIAN ACCESS

0 50 100 200ft

# DOWNTOWN WINDSOR WATERFRONT

MAP 5.1: PROGRAM DISTRICTS

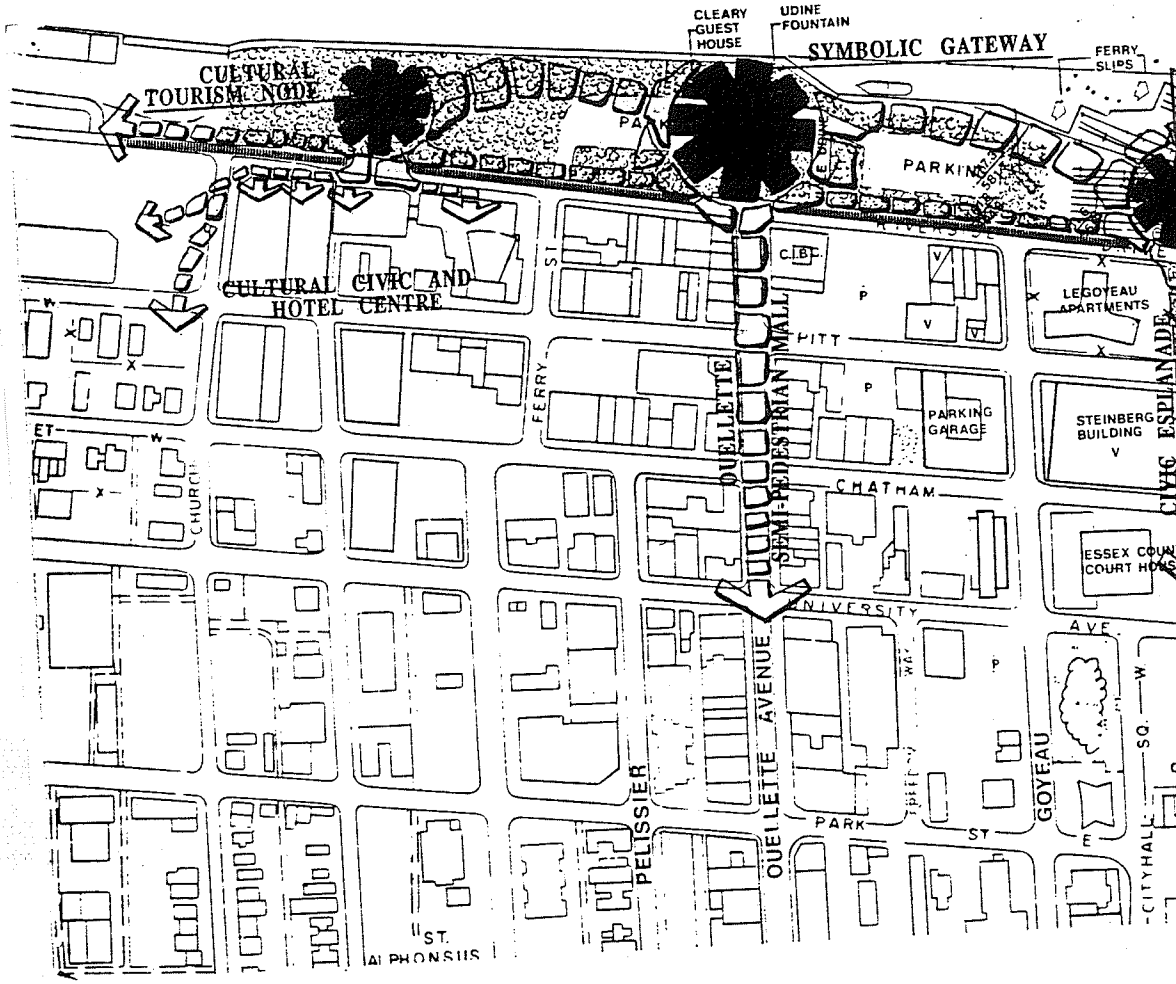
*Reconnecting with the Core*




*Reconnecting with the Core*

# DOWNTOWN WINDSOR WATERFRONT

**MAP 5.1: PROGRAM DISTRICTS**


CLEARY GUEST HOUSE
UDINE FOUNTAIN
SYMBOLIC GATEWAY
FERRY SLIPS
CULTURAL TOURISM NODE
PARKING
CULTURAL CIVIC AND HOTEL CENTRE
C.I.B.
LEGOYEAU APARTMENTS
PITT
FERRY
OUELLETTE SEMI-PEDESTRIAN MALL
PARKING GARAGE
STEINBERG BUILDING
CHATHAM
CHURCH
UNIVERSITY
AVE.
PELISSIER
OUELLETTE AVENUE
GOYEAU
PARK
ST.
CIVIC ESPLANADE

| | | A: HOTEL - TOURISM | B: SYMBOLIC GATEWAY | C: ESPLANDE ANCHOR | D: WAREHOUSE DISTRICT | E: ROUNDHOUSE /RESIDENTIAL | F: ARCHAEOLOGICAL DIG SITE |
|---|---|---|---|---|---|---|---|
| INDUSTRIAL | ALTERNATIVE ENERGY EXHIBITS | - | - | - | 1 | 1 | - |
| | BOAT MANUFACTURING | - | - | - | 3 | 1 | 1 |
| | GREEN HOUSES / RESEARCH | - | - | 1 | 1 | 1 | - |
| | INDUSTRIAL INTERPRETIVE CENTRE | - | - | - | - | 1 | 3 |
| | | | | | | | |
| RESIDENTIAL | SINGLE DETACHED | - | - | - | - | 1 | 1 |
| | TOWNHOUSES | - | - | - | 2 | 3 | 1 |
| | CONDOMINIUM APARTMENTS | - | - | 1 | 3 | 2 | - |
| | SENIORS APARTMENTS | - | - | 1 | 3 | 2 | - |
| | | | | | | | |
| COMMERCIAL OFFICES | CITY HALL | 2 | 2 | 3 | 1 | - | - |
| | CUSTOMS & IMMIGRATION | 2 | 1 | - | - | - | - |
| | FREEDOM FESTIVAL ORG. | 2 | - | 2 | 3 | - | - |
| | MULTICULATURAL COMMITTEE | 2 | - | 2 | 3 | - | - |
| | LOCAL POLICE SERVICES | 3 | 1 | 3 | 3 | 3 | - |
| | RCMP POLICE SERVICES | 3 | - | 2 | 1 | - | - |
| | PROFESSIONAL | 1 | 2 | 2 | 3 | 2 | - |
| | TRADE-CONFERENCE CENTRE | 3 | 2 | 3 | 1 | - | - |
| | CONVENTION - TOURISM BUREAU | 3 | 2 | 1 | 3 | - | - |
| | | | | | | | |
| RETAIL | BICYCLE RENTALS | - | - | - | 2 | 2 | - |
| | GIFT SHOPPES | 3 | 3 | 1 | 3 | 2 | - |
| | FAST FOOD RESTAURANT | 2 | 2 | 1 | 3 | - | - |
| | FULL SERVICE RESTAURANT | 3 | 2 | 2 | 3 | 3 | - |
| | OUTDOOR CAFE | 3 | 3 | 3 | 3 | 3 | - |
| | TAVERN / ENTERTAINMENT | 2 | 2 | 1 | 3 | 1 | - |
| | | | | | | | |
| SUMMER ORIENTED RECREATIONAL | ATHLETIC SPORTS COMPLEX | - | - | - | - | - | - |
| | BASEBALL DIAMOND | - | - | - | - | 2 | 1 |
| | BASKETBALL COURT | - | - | 1 | - | 2 | 1 |
| | BICYCLE PATH NODE | 1 | 1 | 2 | 3 | 3 | 3 |
| | STREET LEVEL BOARDWALK | 3 | 3 | 3 | 3 | 3 | 3 |
| | GIANT CHESS BOARD | - | - | 2 | 1 | 2 | 1 |
| | INFORMAL PARKLAND | - | - | - | 1 | 3 | 3 |
| | JOGGING PATH NODE | - | - | - | - | 3 | 3 |
| | MINIATURE GOLF | - | - | - | - | 2 | - |
| | OPEN GREENSPACE | 1 | 1 | 2 | 1 | 3 | 3 |
| | OPEN PICNIC AREA | - | - | 1 | - | 3 | 3 |
| | PICNIC PAVILLION | - | - | 2 | - | 3 | 3 |
| | ADULT PLAYGROUND | - | - | - | - | 2 | - |
| | ADVENTURE PLAYGROUND | - | - | 3 | 2 | 3 | 2 |
| | RECREATION CENTRE | - | - | - | - | 1 | - |
| | REFLECTING POND | 2 | 3 | 3 | 2 | - | - |
| | SKATEBOARD COURT | - | 1 | 1 | - | 2 | - |
| | LARGE SITTING AREA | 3 | 3 | 3 | 3 | 3 | 3 |
| | SWIMMING POOL | - | - | - | - | 3 | 1 |
| | TENNIS COURT | - | - | 1 | - | 2 | 1 |
| | WAVE POOL | - | - | - | - | 1 | - |
| | WILDLIFE HABITAT REFUGE | - | - | - | - | 1 | 2 |
| | | | | | | | |
| WINTER REC. | HOLIDAY LIGHT DISPLAY | 2 | 3 | 3 | 2 | - | - |
| | ICE FISHING | - | - | - | - | 2 | 2 |
| | ICE SKATING RINK | 2 | 3 | 3 | 2 | 3 | 3 |
| | WINTER NATURE EXHIBITS | - | - | - | - | 3 | 3 |
| | WINTER PLAYGROUND | 1 | 1 | 3 | 2 | 3 | 2 |
| | WINTER SCULPTURE | 3 | 3 | 3 | 3 | 2 | 1 |

| | | A: HOTEL - TOURISM | B: SYMBOLIC GATEWAY | C: ESPLANDE ANCHOR | D: WAREHOUSE DISTRICT | E: ROUNDHOUSE /RESIDENTIAL | F: ARCHAEOLOGICAL DIG SITE |
|---|---|---|---|---|---|---|---|
| WATER - BASED | LAGOON ANGLING | - | - | - | - | 2 | 1 |
| | PIER ANGLING | 3 | 3 | 3 | 3 | 3 | 2 |
| | SHORELINE ANGLING | 2 | 1 | 2 | 3 | 3 | 3 |
| | TROPICAL AQUARIUM | 2 | 2 | 3 | 2 | - | - |
| | UNDERWATER AQUARIUM | 3 | 1 | 2 | 2 | 1 | - |
| | BAIT / TACKLE SHOP | 1 | 2 | 1 | 3 | 3 | - |
| | BOAT CLUB | - | - | - | 3 | 2 | - |
| | BOATING SUPPLIES | 2 | 2 | - | 3 | - | - |
| | BOAT LAUNCH | - | - | - | 3 | 2 | - |
| | TOURING BOAT DOCK | 2 | 2 | 3 | 3 | - | - |
| | BOAT RENTALS | 3 | 2 | 2 | 3 | 1 | - |
| | BOAT STORAGE | - | - | - | 2 | - | - |
| | FERRY DOCK | 3 | 3 | 3 | 2 | - | - |
| | IN-WATER BOAT SHOWS | 3 | 3 | 2 | 3 | 1 | - |
| | FLOATING DANCE BARGE | 2 | 2 | 2 | 3 | - | - |
| | FLOATING HOTEL | 2 | 2 | 2 | 3 | - | - |
| | FLOATING MUSEUM | 2 | 1 | 2 | 3 | 2 | 3 |
| | FLOATING RESTAURANT | 2 | 2 | 3 | 3 | 2 | 1 |
| | FULL SERVICE MARINA | 2 | 2 | 2 | 3 | 1 | - |
| | TRANSIENT MARINA | 3 | 2 | 2 | 3 | 2 | - |
| | MODEL BOAT RACING | 1 | 1 | 3 | 2 | 3 | 1 |
| | PADDLE BOAT RENTALS | 3 | 2 | 2 | 1 | 1 | 3 |
| | RIVERFRONT EXCURSION DOCK | 3 | 3 | 2 | 2 | - | - |
| | RIVERWALK NODE | 3 | 3 | 3 | 3 | 3 | 3 |
| | SHIPPING INTERPRETIVES | 1 | 1 | 3 | 3 | 2 | 1 |
| | | | | | | | |
| CULTURAL | ART / SCULPTURE | 3 | 3 | 3 | 3 | 1 | 3 |
| | ARTS & CRAFTS FAIRS | 3 | 3 | 3 | 3 | - | - |
| | AMPHITHEATRE | 2 | 2 | 3 | 2 | - | - |
| | AMUSEMENT PARK | 1 | - | - | - | - | - |
| | CLOCK TOWER | 2 | 3 | 3 | 2 | - | - |
| | CONSERVATORY | 2 | - | 2 | 1 | 2 | 2 |
| | ELECTRIC STREETCAR NODE | 3 | 3 | 2 | 3 | 1 | 3 |
| | OUTDOOR EXHIBIT SPACE | 3 | 2 | 3 | 3 | - | 3 |
| | FARMERS' MARKET | 1 | 2 | 1 | 3 | 1 | - |
| | FOUNTAIN / WATER SCULPTURE | 3 | 3 | 3 | 2 | 1 | - |
| | FESTIVAL PLAZA | 2 | 1 | 3 | 2 | - | - |
| | FORMAL GARDENS | - | - | 3 | 1 | 1 | 3 |
| | INTERNATIONAL GARDENS | 1 | - | 3 | 1 | - | - |
| | HERITAGE PARKLAND | - | - | - | - | 3 | 3 |
| | HISTORIC DISPLAYS / EXHIBITS | 2 | 3 | 3 | 3 | 2 | 3 |
| | HISTORIC INTERPRETIVE TRAIL | - | - | 2 | 3 | 2 | 3 |
| | HISTORIC RECONSTRUCTION | - | - | 2 | 3 | 3 | 3 |
| | SPIRIT OF WINDSOR MONUMENT | - | - | 2 | 1 | 3 | 2 |
| | IMPROVISATIONAL STAGE | - | 3 | 3 | 3 | - | - |
| | COMMUNITY MUSEUM | 1 | - | 2 | 3 | 2 | 3 |
| | MARITIME MUSEUM | 1 | - | 2 | - | 1 | 2 |
| | TRANSPORTATION MUSEUM | 1 | - | 1 | - | 1 | 2 |
| | OBSERVATION TOWER | 3 | 3 | 3 | 1 | - | - |
| | OBSERVATION DECK | 3 | 3 | 3 | 3 | 1 | 2 |
| | OVERLOOK PARKING | 1 | - | - | - | 3 | 2 |
| | CONVEYOR TO DETROIT | 3 | 3 | 2 | 2 | - | - |
| | PLANETARIUM | 2 | 1 | 3 | 1 | - | - |
| | RICKSHAW RIDE NODE | 3 | 3 | 2 | 3 | - | - |
| | CARRIAGE RIDE NODE | 3 | 3 | 3 | 2 | - | - |
| | TOURIST INFORMATION | 3 | 3 | 3 | 3 | 2 | 3 |

**Figure 5.1: Compatibility Matrix**

For the compatibility study, potential uses have been derived from the study of precedents, as well as from the results of a public forum held by the City, to obtain ideas for the site[16]. Uses were classified under eight broad categories, as follows: 1) industrial; 2) residential; 3) commercial office; 4) commercial retail; 5) summer-oriented recreation; 6) winter-oriented recreation; 7) water-based activities; and 8) cultural amenities (see Fig. 5.1). The compatibility of these uses was evaluated on a three-point scale, to determine those most suitable for each node.

To identify the most suitable uses, a second series of matrices (see Appendix G) was created, evaluating the dependency on, and/or relatedness to:

1) ***the adjacent district in the core***
2) ***a waterfront location, and***
3) ***the site's historical importance.***

Those uses assessed to be in the range of seven out of a possible ten points or better, served as the basis of the program for rehabilitation. For the subsequent testing of this program, these uses have been adopted to serve as a basis for the development of a demonstration plan. If such a plan was proposed, the information provided by this compatability study should be used in support of conclusions which are being made. Before construction of such a plan, these conclusions should be retested, incorporating current data as factors in decision making.

This compatibility study supported the premise made in the preceding Chapter, that passive parks could play a role in the rehabilitation of the eastern half of the site, while more active development would be most appropriate in the commercial and cultural environments adjacent to the west. This approach was seen to assist in promoting a public presence along the waterfront, while establishing important connections between the site and the adjacent districts.

## 5.2: DESIGN GUIDELINES

Design guidelines for each of the nodes were prepared to provide direction to the rehabilitation of the site. They respond to the site opportunities and constraints established in the preceding Chapter, and address general waterfront issues established during the research (see Map 5.2). As well, the site has a significant history as a crossing point. This character provides a basis for the development and orientation of the site's design.

16 The Riverfront Development Task Force received 54 submissions proposing potential programming ranging from passive parkland to museums, marinas and commercial enterprises (see Appendices E and F).

DE

TAURANT

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TION

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K
CAR

## COMMERCIAL CENTRE / GATEWAY NODE

- GIFT SHOPPES
- OUTDOOR CAFE
- IMPROVISATIONAL STAGE
- OBSERVATION TOWER

'CROSSING POINT' THEME

- EXCURSION BOAT DOCK
- TOURIST INFORMATION

HISTORICAL RESOURCES

- OBSERVATION DECK
- ELECTRIC STREET CAR
- HISTORIC DISPLAYS

*PRIMARY FOCUS FROM DETROIT*

## CIVIC ESPLANADE NODE

- OUTDOOR CAFE
- FESTIVAL PLAZA
- OBSERVATION TOWER
- FLOATING RESTAURANT

'CROSSING POINT' THEME

- TOURING BOAT DOCK

HISTORICAL RESOURCES

- OBSERVATION DECK
- HISTORIC DISPLAYS
- FERRY DOCK

## HISTORICAL WAREHOUSE DISTRICT NODE

- GIFT SHOPPES
- OUTDOOR CAFE
- FARMERS' MARKET
- ANGLING PIER
- SHORELINE ANGLING
- FLOATING RESTAURANT

'CROSSING POINT' THEME

- FLOATING MUSEUM

HISTORICAL RESOURCES

- COMMUNITY MUSEUM
- ELECTRIC STREET CAR
- HISTORIC DISPLAYS
- BOAT MANUFACTURING
- CARRIAGE RIDE NODE

## R.R. ROUNDHOUSE / RESIDENTIAL NODE

- OUTDOOR CAFE
- OPEN GREEN SPACE
- ANGLING PIER
- SHORELINE ANGLING
- BICYCLE NODE

'CROSSING POINT' THEME

- TRANSIENT MARINA

HISTORICAL RESOURCES

- HISTORIC RECONSTRUCTIONS
- SPIRIT OF WINDSOR MONUMENT

FISHING EDGE
PLAZA / HARD SURFACE
RESTORED NATURAL RIVER BANK
PARKLAND
BUILDING / STRUCTURE
SIGNIFICANT ALLÉE
FESTIVAL CENTRE
PUBLIC PARK

UPPER TERRACE - BOARDWALK
LOWER TERRACE - RIVERWALK
STREETCAR LINE
MAJOR ENTRY
MAJOR PEDESTRIAN ENTRY
MINOR PEDESTRIAN ENTRY
INTERPRETIVE WALKING TOUR
INTERPRETIVE NODES
MAJOR FOCAL POINT
MINOR FOCAL POINT

SCALE 0 50 100 200 500 FEET

## ARCHAEOLOGICAL DIG / WALKERVILLE NODE

- INFORMAL PARKLAND
- BICYCLE NODE

'CROSSING POINT' THEME

- FLOATING MUSEUM

HISTORICAL RESOURCES

- HISTORIC DISPLAYS
- HISTORIC INTERPRETIVE TRAIL

LE GOYEAU APARTMENTS
RAYMOND DESMARAIS MANOR
GOYEAU
OUELLETTE SEMI-PEDESTRIAN MALL
MERCER
GLENGARRY
AYLMER
PARENT
LANGLOIS
HALL
MOY
WAREHOUSE DISTRICT REVITALIZATION PROJECT
REHABILITATED ROUNDHOUSE & TURNTABLE
REHABILITATED WATER-INTAKE
ARCHAEOLOGICAL SITE
WALKERVILLE HISTORICAL DISTRICT

*Reconnecting with the Core*

# DOWNTOWN WINDSOR WATERFRONT

MAP 5.2: PROGRAMMATIC ELEMENTS
DESIGN GUIDELINES

CULT

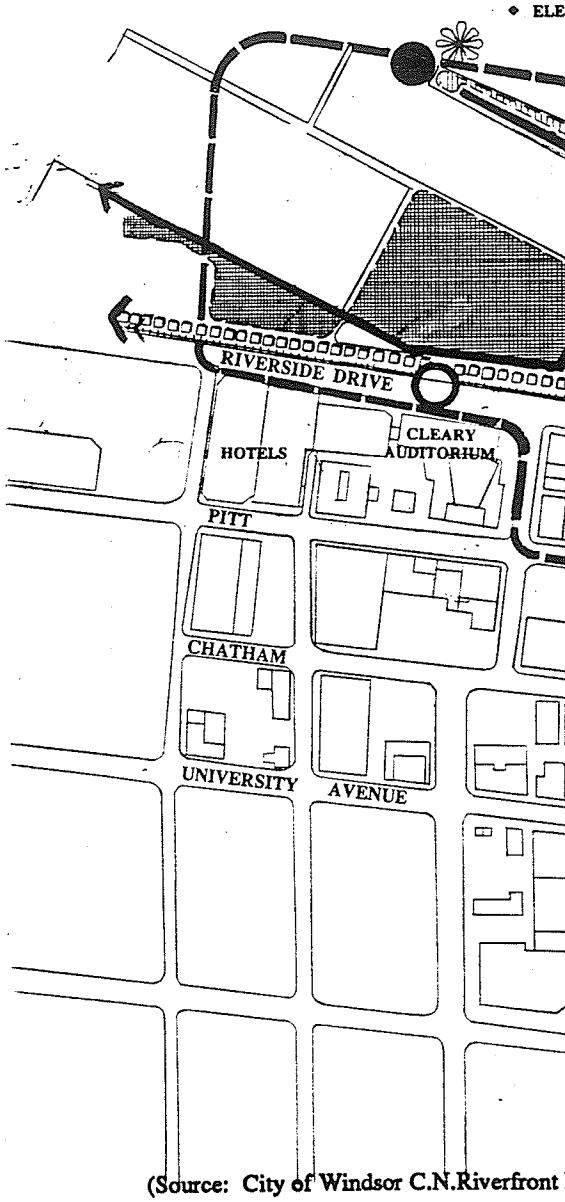
- GIFT
- FUL
- OUT
- ANG
- IN-W
- OBS

'CROSS

- BOA
- FER
- EXC
- TRA
- TOU
- AMP

HISTO

- OBS
- ELE




(Source: City of Windsor C.N.Riverfront

### 5.2.1: Archaeological Dig Site - Walkerville

As the eastern-most node within the study area, the archaeological dig site lies adjacent to the residential district of Walkerville (see Map 5.2), and provides a promising setting for the development of a passive park, not unlike those already established along the riverfront east and west of the core. The development of the dig site as a multi-phased archaeological investigation was recommended by the Cataraqui Archaeological Research Foundation (Cataraqui, 1990). In support of this proposal for continued archaeological operations, the following design guidelines are proposed:

- ***Provide interpretation of the site through the archaeological dig operation.***
- ***Maintain a natural riverbank expression, appropriate to the period within which the ruins would be associated.***
- ***Reuse the offshore pump house as a reference to the past, while providing a visual landmark for the area.***
- ***Provide pedestrian access in close proximity to the dig operations.***

### 5.2.2: Railroad Roundhouse

The existing railroad roundhouse also lies adjacent to an existing, yet marginal, residential district in the core. The future of this residential area will undoubtedly call for major revitalization and redevelopment. It is therefore proposed that the rehabilitation of the site include the redevelopment of this area to ensure that the necessary connection between the waterfront and this district is established.

Since the adjacent district is in poor condition, it was identified through the site analysis that this area be considered in the redevelopment of the study site. The compatibility study concluded that a passive riverfront park is an appropriate use in this area. Expansion of the park across Riverside Drive into this residential district will help to establish a centre where revitalization of the residences might occur.

Adaptive reuse of the roundhouse was proposed to provide interest at this portion of the site, and establish a place within the park for public gathering. The design guidelines established for this node are:

- ***Adopt an architectural vocabulary appropriate to both the time of the construction of the roundhouse, and also characteristic of the industrial nature associated with the railway.***
- ***Spatial ordering should reflect the railway yard.***

- *Maintain the roundhouse and turntable as the most significant point of interest within the park.*
- *Provide a connection from the roundhouse to the Glengarry dock, to reinforce the site's importance as a crossing point for railway traffic to Detroit.*
- *Incorporate outdoor facilities associated with the reuse of the roundhouse.*
- *Ensure that parking is not visually imposing.*

### 5.2.3: Transitional Node (Warehouse District)

At this point the adjacent district includes significant commercial activity, but is still generally perceived as residential. This node is defined as transitional, because it is here that the programmatic requirements suggest uses both characteristic of a passive park and a commercial environment.

The adjacent district may be characterized as a historic warehouse district associated with the railway. In order to highlight the remaining warehouse structures, a visual and physical link to the site should be established. Based on the program suggested by the compatibility study, the following design guidelines have been established:

- *Adopt an architectural vocabulary appropriate to both the period associated with the adjacent warehouse structures and the industrial character of the railway.*
- *Docking facilities for large sailing vessels should refect and be characteristic of the architectural vocabulary.*
- *Incorporate outdoor facilities associated with the development of a farmer's market.*
- *Spatial ordering should reflect the historical use as a railway yard.*
- *Provide a connection from the market structure to the McDougall dock, to reinforce the site's importance as a crossing point for railway traffic to Detroit.*
- *Relocate the 'Viale Udine' fountain to a courtyard environment, and provide a more appropriate setting for this feature.*

### 5.2.4: Civic Esplanade Anchor

Given the civic function of the core adjacent to this node, the programmatic requirements included an esplanade to connect City Hall Square and the site. The development of this civic element presents the opportunity for both a visual and physical access point between the river and the core, while providing an avenue for symbolic representation of Windsor as a 'waterfront' city. The design guidelines established for this node are:

- ***Open the space up to the waterfront in part, by removing the DesMarais Manor and Le Goyeau Towers.***
- ***Development of the esplanade should not be impeded by, or restrict traffic on Riverside Drive in any way.***
- ***Adopt an architectural vocabulary expressive of the institutional character of the adjacent Civic Centre.***
- ***Express the civic importance of the esplanade through its design along a symmetrical axis.***
- ***The gathering space should act as a pivot point between the esplanade and the waterfront.***
- ***Water features should be significant in scale to symbolically represent Windsor as a 'waterfront' city.***
- ***Reuse of the ferry docks to help interpret the importance of the site as a crossing point.***

### 5.2.5: Commercial Centre / Symbolic 'Gateway'

The compatibility study concluded that this node should be developed as a major point of access between the site and the commercial district. Given the commercial activity in the adjacent district, development of a landmark will create a necessary focal point. This landmark, the only significant vertical element on the site, together with the Renaissance Centre in Detroit, will help to establish a symbolic 'gateway' for ships passing along the river.

Development of this node in conjunction with the commercial centre will establish an environment similar in character to the festival markets of Boston and Baltimore, only on a smaller scale. This festival market should provide connections between this node and the transitional node located adjacent to the warehouse district, while using the gathering space at the esplanade to satisfy the requirements for a festival plaza. The following design guidelines are proposed for this node:

- *Adopt an architectural vocabulary appropriate to the contemporary development ocurring in the adjacent commercial district.*
- *The design of the amphitheatre should symbolically reflect and physically serve as a 'staircase' to the core.*
- *Extend the commercial character of the Ouellette Avenue Mall to this node.*
- *Provide access to shops and restaurants from the lower level of the site.*
- *Reduce the physical separation between the adjacent district and the waterfront through terracing.*
- *Design of the lower promenade should accommodate pedestrian access and outdoor cafes.*

### 5.2.6: Cultural - Marina Node

Based on the results of the compatibility study, this node should be developed as a marina supporting the festival market environement of the adjacent node, and the tourist-oriented facilities of the adjacent hotel and cultural district. The provision of a marina will re-establish the site as a crossing point, and also provide a greater public presence within the entire core area. Design guidelines established for the rehabilitation of this node are:

- *Remove Dieppe Gardens.*
- *Adopt an architectural vocabulary appropriate to the contemporary development ocurring in the adjacent cultural district.*
- *Provide physical connections between the commercial district, the hotels, and the proposed casino.*
- *Establish spatial orientation to provide focus on the Ambassador Bridge and the Renaissance Centre.*
- *Breakwaters for the marina should accommodate public leisure activities.*
- *The floating restaurant/hotel should provide connection between the waterfront's redevelopment and the adjacent Holiday Inn Hotel.*
- *Mooring and docking facilities within the marina should accommodate water taxis, excursion, and recreational boats.*

### 5.2.7: Promenades

While the nodes provide connections with the adjacent districts of the core, it is important that there are strong connections between them, contributing to the unity of the site. While defining the north and south boundaries of the site, promenades will also provide transitional zones between both the edge of the river and Riverside Drive. Design guidelines established for the implementation of these promenades are:

**Promenade along the river's edge**

- ***Provide different forms of interaction with the water.***
- ***Introduce areas for physical contact with the river through steps descending into the water.***
- ***Emphasize views of the Ambassador Bridge and the Detroit skyline***
- ***Provide interpretation of the waterfront's history and evolution along the promenade at significant points, through ordering and markers.***
- ***Reuse the existing docks to express the importance of the crossing point.***
- ***Special fishing points at piers and docks should be accommodated in a manner which reflects the character of the node adjacent to the promenade at those points.***
- ***Access to the lower terrace should be made for as many constituents in the community including the physically disabled.***

**Promenade along the north side of Riverside Drive**

- ***Establish the promenade as an urban 'oasis' by providing site amenities such as benches, pedestrian scale lighting, kiosks, and trees.***
- ***Tree planting and vegetation should not increase the existing barrier created by Riverside Drive and the embankment.***
- ***Accommodate pedestrian, bicycle and trolley traffic where necessary.***

## 5.3: SUMMARY

Through rehabilitation, the DWW has an opportunity to become a most interesting and diverse development in the City. This opportunity must not be lost with a 'quick fix' solution. Development should incorporate a multi-use program, addressing the historical and physical character of the site, while remaining sensitive to general waterfront issues. It has been concluded that the creation of nodes within the site will establish points which provide effective connections to the adjacent core area districts.

Guidelines have been established which provide direction for the form expressive of the programmatic requirements. It is intended that these guidelines ensure the site's waterfront character and urban location are respected, and the importance of the crossing point is reflected in the proposed redevelopment of the study area.

*" Man should be able to sit passively and look at the water itself, to observe the myriad of ships passing over it, to watch the activity surrounding the automobile barges both on the water and as they discharge their loads . . . , and to stare at the exciting skyline beyond. He should be able to actively play, run, jump, and meet people by the water's calm influence."*

(CAUSE, Downtown Windsor, 1980)

# 6.0: DEMONSTRATION PLAN

Based on the design guidelines established in the preceding chapter, the following demonstration plan has been prepared as an illustration of one possible form of rehabilitation. This demonstration plan incorporates the idea of the history and evolution of the site as a crossing point, as well as a design using a multi-use concept, and providing important connections to the adjacent core.

## 6.1: CONCEPT

**The study area's historical importance as a crossing point, and its significance in the development of the City, serve as the basis for the development of the site. Through the design of a riverfront promenade, reuse of existing ferry docks and introduction of a new downtown marina, emphasize the site as a crossing point. The physical character of the site provides a framework, which incorporates both the exsiting linearity of the site, as well as provide connections to the adjacent core using the presently employed planning system of zones.**

## 6.2: SITE ORDERING

The existing form of the docks provides the foundation for the design expression. Construction of linear paths extending from the docks establish the main circulation routes both through the site, and to the adjacent core, while physically defining the boundaries of each area of development. The creation of nodes, suggested by the programmatic requirements, establish points of historical interest, as well as transition zones between each area, and facilitate an interpretation of the site's relationship to the waterfront (see Map 6.1).

The proposed site ordering can be seen to metaphorically reach out to the other side of the river, and can be best perceived when walking along the promenade, while focussing on the Ambassador Bridge. The development at the eastern end of the site expresses its historical importance as a crossing point, while the focus at the western end of the site is redirected towards the Renaissance Centre in Detroit, acting as the symbol of a continued relationship between the two cities; and provides a new focus for future development west of the site.

D E

MUNICIPAL TRANSIENT MARINA

FLOATING PIER

FISHING PIER

SYMBOLIC AMPHITHEATRE

TUGBOATS

WATER TAXI DOCK

TOWER

CIVIC CENTRE - ESPLANADE

EXISTING HOLIDAY INN HOTEL

PARKING

STREET CAR TERMINAL

CENTRAL PLAZA

CHINE FOUNTAIN

PROMENADE

FARMERS MARKET

WINDSOR ART GALLERY

CASINO HOTELS

CLEARY AUDITORIUM

NORWICH BLOCK

PITT

STREET LEVEL OUTDOOR MARKET AND CAFES

ESPLANADE AXIS

FOUNTAINS AND POOLS ALONG

STREET CAR TERMINAL

WAREHOUSE DISTRICT

RIVERSIDE

DRIVE

PARK EX RESIDEN

CHATHAM

UNIVERSITY AVENUE

PELISSIER

OUELLETTE SEMI-PEDESTRIAN MALL

GOYEAU

CITY HALL SQUARE

MERCER

GLENGARRY

AYLMER

DETROIT RIVER

NORTH

SCALE 0 50 100 200 500 1000 FEET

FARMERS MARKET

RAILROAD HOUSE

PROMENADE

PARKING

FIRST LEVEL OUTDOOR MARKET AND CAFES

OUTDOOR RAILWAY MUSEUM

RIVERSIDE DRIVE

PARK EXPANDED INTO RESIDENTIAL DISTRICT

STREET CAR TERMINAL

WAREHOUSE DISTRICT

MERCER

GLENGARRY

AYLMER

RESTORED NATURAL RIVERBANK

ARCHAEOLOGICAL DIG SITE - WALKERVILLE

RELOCATED DIEPPE GARDENS

RECONSTRUCTED TALL SHIP

EXISTING RESIDENTIAL DISTRICT

PARENT

LANGLOIS

HALL

MOY

*Reconnecting with the Core*

# DOWNTOWN WINDSOR WATERFRONT

SJP 92-93

MAP 6.1: DEMONSTRATION PLAN

## 6.3: NODES

This demonstration plan includes a series of nodes established by the program,which provide points of activity and/or interpretation. Each node is associated with its adjacent district, while providing connection in both use and structure to the core, and increasing the public presence along the waterfront.

### 6.3.1: Riverbank Wilderness Restoration

Located at the foot of Langlois Street is an archaeological dig. This dig unearths an era previous to European settlement, and is a part of a proposed passive park. A program of reclamation within this park, using plant species indigenous to the area is proposed, to establish an appropriate natural setting for the archaeological dig, and illustrating the site as it appeared prior to settlement. To extend the reclamation into the river, it is recommended that the decaying wood breakwater be removed and replaced with a series of terraced breakwaters. It is proposed that these terraced breakwaters be planted with native riverbank vegetation, to provide an environment appropriate for wildlife, including waterfowl and fish (see Fig. 6.1).

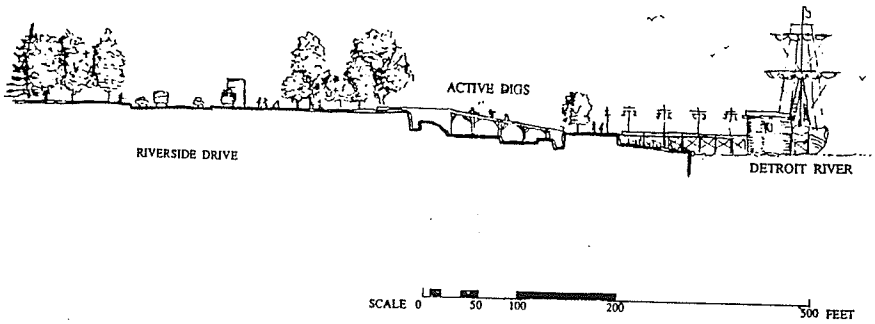



**Figure 6.1: Section through the archaeological dig and terraced riverbank**

The permanent mooring of a tall ship at the offshore pump house provides an identifiable landmark of historic significance. This landmark will provide a reference for an interpretation of the first European settlement on the site. Using the original French settlement pattern as basic ordering system, the transition from wilderness to agricultural settlement is illustrated in this section of the park.

### 6.3.2: Roundhouse, Community Museum and Cultural Centre

The roundhouse, a major node adjacent to a residential district, is rehabilitated to serve as a railway museum. To the west of this new element, trains will be displayed on restored railway lines. The rail lines will be parallel to the walkway which connects the roundhouse to the Glengarry dock. Rehabilitation of the dock will provide access for barges, necessary for changing train displays. When not in use, the dock will serve as a fishing pier. Extension of the pier into the river will reinforce the 'reaching out' character of the proposal.

The ordering of this node expresses of the railway lines. Though the rail lines are linear, and set the geometric structure for this space, the roundhouse is circular; establishing it as an identifiable landmark. Redesign of the adjacent district will reflect the geometry of the roundhouse, and interpret the influence and importance of the railroad on the city. It is proposed that streetcars be reintroduced on the original lines, and further expanded to access the new facilities within the waterfront redevelopment.(see Fig. 6.2).

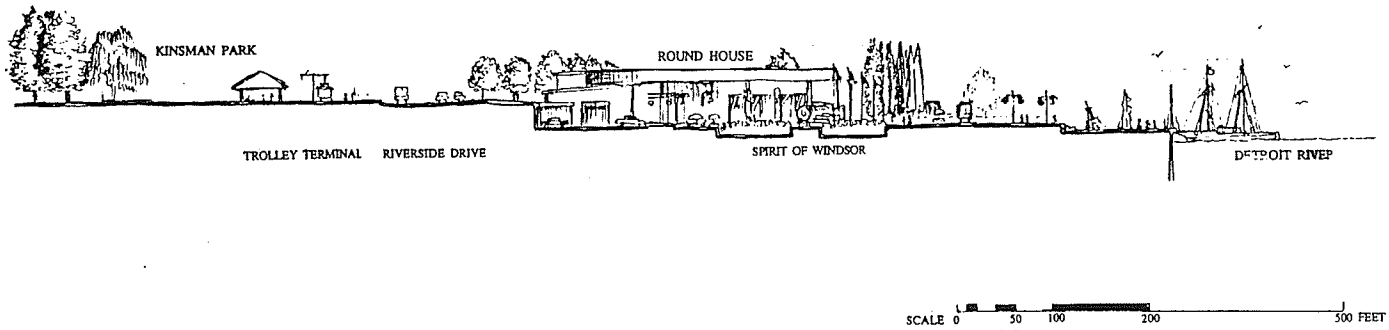



**Figure 6.2: Section through plaza around railroad turn table**

### 6.3.3: Farmers Market

A farmer's market has been located adjacent to the warehouse district. This new structure will offer an appropriate atmosphere for local farm produce, as well as other related stores and restaurants. The market serves as a transition between the passive eastern half of the site and the more active, commercial-oriented environment to the west. The geometric placement of this structure is reflective of the pattern of the rail lines, located at the railway node. Access roads and parking lots are also constructed to reflect this geometric rail line placement, in order to maintain continuity with the linear elements.

While providing local area farmers with a place to sell their produce, the development of an indoor - outdoor market will also take advantage of visitors crossing at this point. Although the market is primarily established in response to local needs, the reintroduction of ferry operations for vehicular traffic at the McDougall docks will introduce a tourists component, contributing further to the success of the market.

### 6.3.4: Civic Centre - Esplanade Anchor

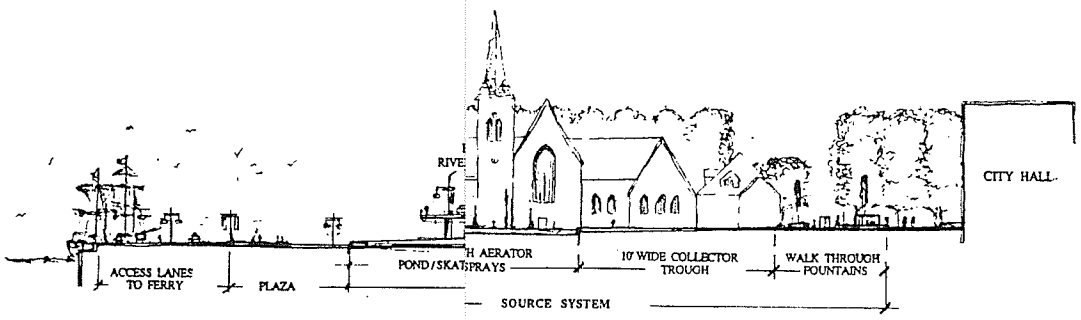
Extension of the esplanade from City Hall Square to the waterfront creates the greatest impact on the adjacent urban environment. In order to establish the esplanade, it was determined that the existing Desmarais Manor and LeGoyeau apartment towers should be removed, along with the abandoned Steinberg Building and the present farmers' market. Opening up the first two blocks from the river, between Goyeau and McDougall, provides a stronger focus into the City from the American side of the river. Also, it is proposed that Riverside Drive be relocated northward to allow for the unimpeded connection of the waterfront and City Hall. This design for a direct and unimpeded connection establishes a Civic Centre to symbolically identify Windsor as a waterfront city. The geometric ordering of the esplanade is based on the existing urban forms, providing a contextual response to the adjacent core.

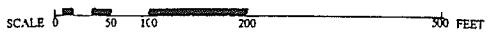
A linear series of pools and water features will act as focal points along the esplanade. These pools will appear to create a natural watercourse with the source located in the vicinity of City Hall. A large pool located at the intersection of the esplanade and the site, provides a point where the watercourse will appear to empty into the river. During the winter months, this pool can be refrigerated to provide an ice skating rink. A plaza with descending steps, providing access to and around this pool, establishes a node where the esplanade intersects the waterfront. This plaza - esplanade complex will accommodate civic functions and City festivals.

Dense plantings of sycamores, framing the watercourse, reinforce the linear expression of the esplanade, while providing green space within the core. These bosks of sycamores are interrupted by rows of smaller ornamental trees to provide visual access into the esplanade. Water features, including fountains, sprays, falls, and water ladders, along the esplanade provide points of interest for people passing by on adjacent streets.

### 6.3.5: Amphitheatre

Located at the foot of the Ouellette Avenue Mall is an amphitheatre. This amphitheater creates an identifiable landmark for passing river traffic and pedestrians, and provides an important connection between the water and the commercial centre. When not in use, the amphitheatre can be used as a symbolic 'stairway' to Windsor (see Fig. 6.4). Housing for the stage and equipment is located within a tower, which also supports a retractable tent for the amphitheatre. A beacon is also housed within the tower, in order to identify the site to passing river traffic, as well as from other points along the Detroit River. Three observation platforms are incorporated with this tower: one at the base of the tower along the promenade, the second surrounding the tower at street-level, and the third housed at the top of the tower.




**on through esplanade**

Commercial entities, such as outdoor cafes, shops, and beverage establishments located around the amphitheatre will take advantage of the views across the river to Detroit.

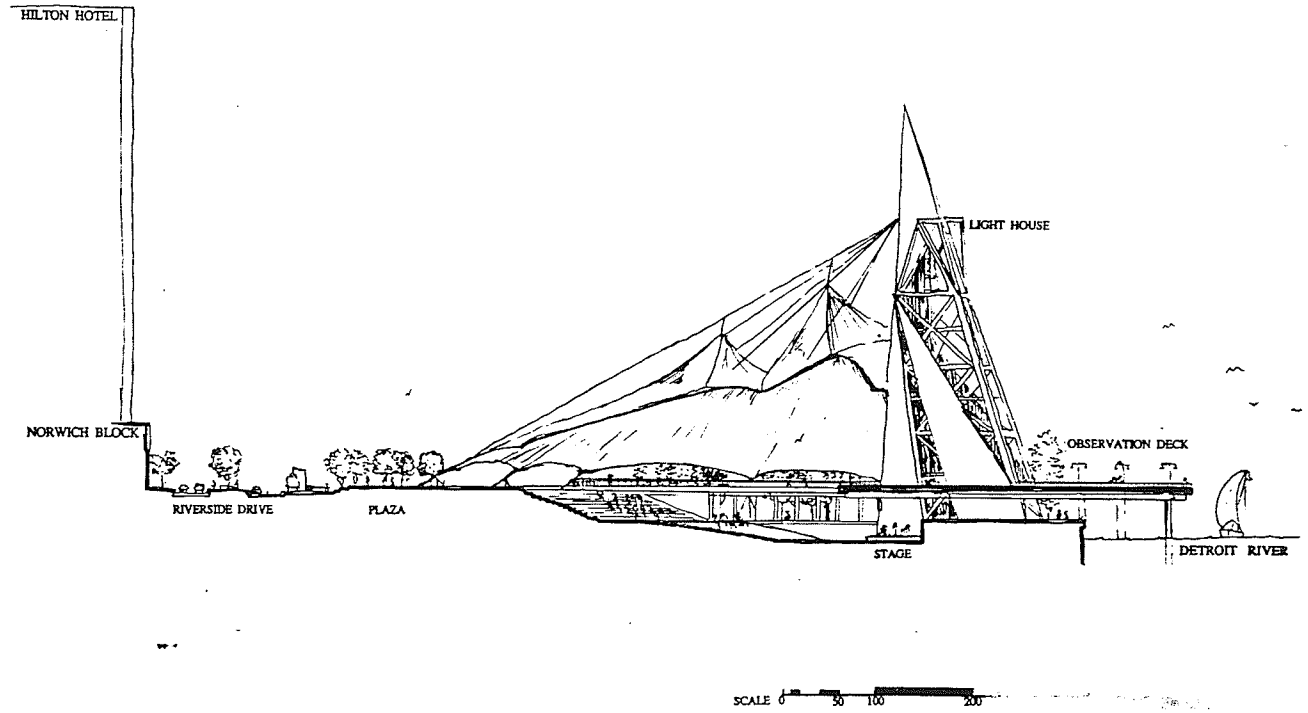



**Figure 6.4: Section through amphitheatre**

The geometric ordering of this node appears to pivot about the amphitheatre. The relationship between Windsor and Detroit is based on commerce and trade. This symbolic connection is represented by using the shifting of the focus of the tower toward the Renaissance Centre in Detroit.

### 6.3.6: Downtown Transient Marina

A marina is located near the hotels and the commercial district, to accommodate both the needs of boaters and to establish a source of interaction with the water. The marina provides transient docking facilities to reduce parking requirements which are generally associated with all-season marinas. The ordering of the marina reflects the geometry of the adjacent core. Larger berths are located near the commercial end, to provide attraction for non-boaters. Although the marina acts as a single unit, it can be segregated to allow for an in-water boat show or similar programming in one area, while continuing to provide regular mooring facilities for transient boaters in other areas.

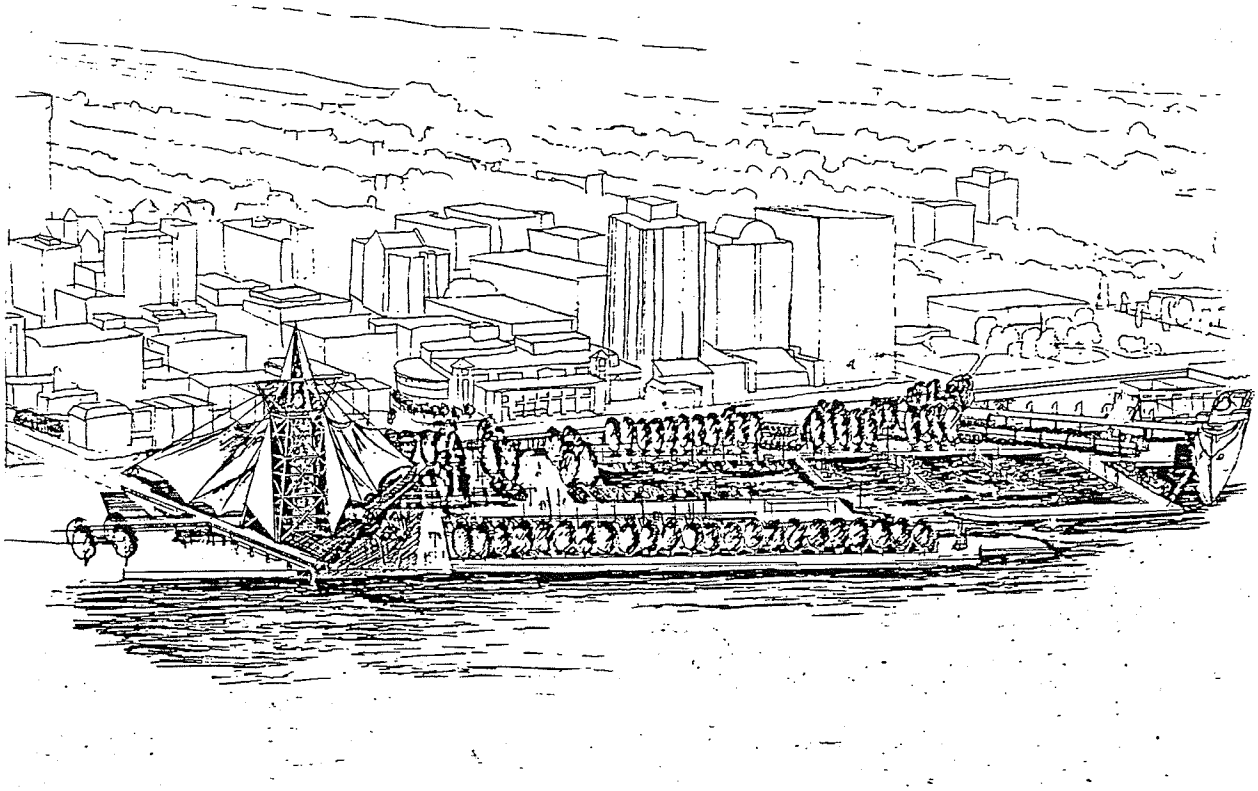


**Figure 6.5: Aerial perspective of the western end of the Downtown Windsor Waterfront**

The marina breakwater will include a promenade out into the river, to allow for the observation of visiting and passing ships. The river's edge is constructed with descending steps into the river in order to facilitate casual angling. The second breakwater, located at the western end of the marina, establishes both a physical connection to the hotel, and a permanent mooring facility for a floating hotel and restaurant, achieved by the restoration of a former Great Lakes luxury cruise liner. Overhead walks allow access to the vessel from street level, while connecting the hotels and proposed casino adjacent to the site.

## 6.4: SUMMARY

*"... the landscape architect should - argue forcefully for designs that reflect the historic values and distinctive character of each waterfront site."*[17]

This demonstration plan illustrates how rehabilitation of the site may provide connection of the waterfront to the core, while referencing its significance as a crossing point. The design is expressive of the waterfront location, while responding to general waterfront issues and local opportunities and constraints. Division of the site into nodes, complementing the adjacent core area districts, creates a variety of public spaces connected by promenades. The linear character of the site provides a means by which the nodes can be linked to establish a unifying expression of the site.

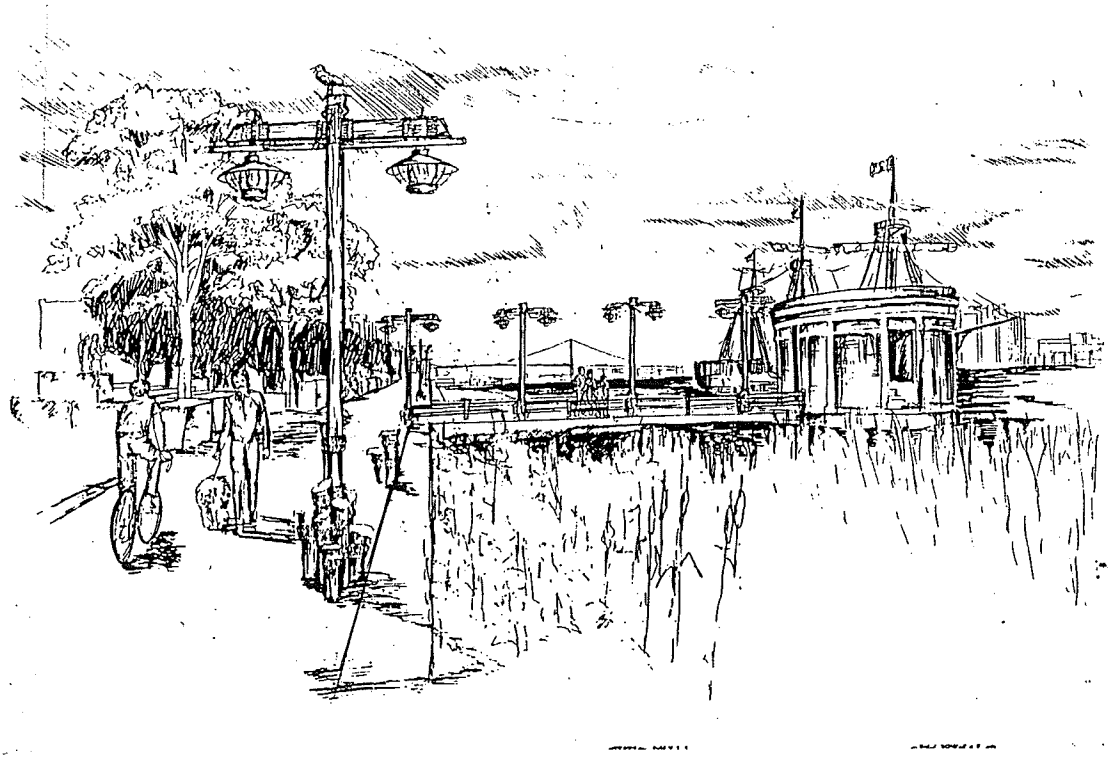


**Figure 6.6: Perspective from the eastern end of the site, looking along the promenade**

17 Ann Breen and Dick Rigby, Urban Waterfronts '86, p.12.

*" .. . . .The rivers and oceans have, . . . always suggested escape, adventure and travel into the unknown. They are kind of innerspace on which our ancestors have voyaged. Whenever we set out on the water - whether it be in a canoe, an ocean liner or even on an inner tube- we are, on some level, sharing in and partaking of the almost primeval experience of the water, which both rocks us in its arms, and yet, always threatens to overwhelm us and bring us deep into its timeless bosom."*

*(Jon Rubin, 1988)*

# 7.0: CONCLUSIONS

Historically, waterfronts developed as vital centres for cities. They provided traditional waterfront activities which accommodated recreational, commercial and transportation needs. This study has illustrated how historic and contemporary centres, adjacent to waterfronts, have been developed to establish both assembly spaces within core areas, and points of transition between water and urban environments. In the last 30 years, some contemporary North American cities have rediscovered the importance of waterfronts as active centres. These contemporary precedents demonstrate the importance in this century, of gathering spaces adjacent to the waterfront, and the need for their physical connection with the core.

This particular study was conducted to prepare a redevelopment plan for the DWW. This site has unique physical qualities deserving of, and potentially giving direction to, a late 20th century expression for waterfront redevelopment. The context of this study site, located within a small city adjacent to a large metropolis, and its evolution which contributed directly to the development of these two cities, establishes a unique opportunity for an expression which acknowledges the site as an importance crossing point, and a significant place of transition between the water and the City's core.

The assessment of recent Windsor surveys identified a range of uses which might be appropriate for development of a rehabilitation program for DWW. For this study, these surveys were included to test the site's potential for development, while responding to both the need for connection between the waterfront and the urban environment, and expressing the site's historical significance. The programmatic elements which were selected for the rehabilitation of this study area were chosen to reinforce the waterfront location of the site. Though this expression limits the site's development to that of an urban park and festival market, it also provides for a greater diversity in waterfront and water-based activity to ocurr in the core area.

Design guidelines, which are important in providing direction for physical form, were developed to reinforce the site's unique physical and historical qualities. These guidelines suggest redevelopment of the site through an architectural vocabulary, expressive of the site's transition from a prairie riverbank to an industrial site. While creating an active centre within the core, the redevelopment also provides direction for reconnection of the adjacent urban environment withthe water through a series of nodes within the study site.

To illustrate how these design guidelines and programmatic elements may be developed, a demonstration plan has been included as a graphic representation of the rehabilitation proposal for the DWW. This plan is expressive of the site's unique character as a crossing point, and clearly presents a concept to 'reconnect the waterfront with the core'.

# *APPENDICES*

## *APPENDIX A: FESTIVAL MARKETS ANALYSIS BY URBAN EDGES*

I. General Background

A. Recent History of Festival Centres

1. Winners
   a. Faneuil Hall (Boston)
      1) $90-100 Million in sales
      2) Opened 1976
   b. Harborplace (Baltimore)
      1) $70-80 millio in sales
      2) Aquarium, Hotel , Convention Centre
      3) $1 Billion related investment
      4) Built on Boston Harbor

2. Losers
   a. South Street Seaport (NYC)
      1. Opened 1983
      2. Lost money every year
      3. $20.4 million UDAG
      4. $351 million total cost
      5. Museum, shops, offices, apartments
      6. 125,000 S.F. of retail
   b. Bayside Market Place (Miami)
      1. Built 1987
      2. 15 acre development site
      3. 200,000 S.F.
   c. WaterstreetPavilion (Flint, Michigan)
      1. 43,000 S.F.
      2.$16 million cost
      3. 1985 opening date
      4.Empty on weekends and nights
      5. Built by Enterprise Development Co.
   d. Waterside (Norfolk, Virginia)
      1. 80,000 S.F.
      2. Built on the Elizabeth River
      3. Generated 1200 jobs
      4. Nautical History Museum and adjacent marketplace
      5. $1 million in new taxes
      6. $13.5 million cost
      7. Small profit in 1989
      8. Has not met scheduled debt payment
   e. Portside (Toledo, Ohio)
      1. $14.5 million cost
      2. Drew 4.5 million vistors first year; now 2.2 million
      3. Built in 1984
      4. Empty after 5 p.m.
   f. 6th Street Marketplace (Richmond, Virginia)
      1. Built by Enterprise Development Co.
      2. Operating loss three years after being built
      3. Anticipated 4 million visitors; 2.2 million in 1988
      4. Anticipted sales $18 million; $ 10 in 1988
      5. Plans to have more conventional retail
      6. Nine merchants have sued EDC; 8 settled

B. Success Fctors
   1. At least 60% visitors-out of town market area
   2. Easily accessible
   3. 1 million trade are
   4. Minimum 200,000 S.F.
   5. 70% come for experience
      25% come to eat
      10% come to shop
   6. Needs to be in "right" neighborhood, good image

C. Failure Factors
   1. Bad tenant mix
   2. Thin market area
   3. Poor local economy
   4. High rents and maintenance fees
   5. Seasonal lulls

D. Comments
   1. Some are moving toward entertainment with sports complexes
   2. Some are becoming unstructured flea markets
   3. The move is toward chains and away from locals
   4.Tourism lowers quality of goods (lunch and pushcarts)
   5. When you get below the size of a Baltimore, the concept doesn"t work
   6. Enterprise development is associated with many of the failures
   7. Tourists and visitors are a festival marketplace's lifeblood
   8. Stores at a festival marketplace offer nothing a consumer really needs
   9. Merchandise and services are not what was wanted/ needed or affordable by consumer
   10. In smaller cities, the City must subsidize
   11. People spend 2/3 less than in a mall, need higher volume of traffic

## *APPENDIX B: DESCRIPTION OF RIVERFRONT PARKWAY SYSTEM*

The municipal holdings of the Ojibway Park and Nature Centre and Black Oak Heritage Park along with the Ojibway Prairie Provincial Nature Reserve are not on the riverfront directly, yet are important nodes within the Riverfront Parkway System. They comprise the largest tract of natural property within the city's limits. They offer a dramatically pleasing view while their background facing toward the river is disturbed by the industrial development associated with the Windsor Rock Salt Mines and Morton Terminal which separate the parks from the riverfront. Some of the industrial properties north of the Parkland have responded to the situation of establishing in close proximity to the parks by planting their turfed areas with wildflower seed to retain the tall grass prairie image.

The Old Town of Sandwich which comprises the second major component along the Parkway, possesses a variety of activities much like any other townsite project. A few historic sites have been rehabilitated and the area has in the past seen a great deal of revival due to local citizen groups' interest and involvement in the development of the community. It has initiated on its own the establishment of a unique village as described in the CAUSE[1] Study. Although, some small developments have been attempted at the riverfront (ie. Brock Street Barge; a marina and restaurant,facility) much of the true waterfront property lies ignored.

East of the Ambassador Bridge following Riverside Drive (from this point on the Parkway route) to the presently active Canadian Pacific Railway barge ferry crossing right-of-way are the two most publicly accessible and passive parkland west of the Central Business District of Windsor. These strips of riverfront greenspace known as Assumption and Centennial Parks are part of the early development in the 1960's to create the Riverfront Parkway System. As well there is the potential for development along the abandoned railway access which lead into Centennial Park from within the urban environment. The accessway holds a great more promise for the success of the proposed development of an authentic Japanese garden presently being considered by the City of Windsor and the sister city of Fujisawa, Japan.

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[1] Ontario Association of Architects, CAUSE: Community Assist for an Urban Study Effort, completed for the Windsor Chamber of commerce, City of Windsor, Downtown Business Association, (Windsor, Ontario: Standard Printing) February 4, 1980.

The Parkway is broken at this point due to the continuing barge ferrying operations at the foot of Caron Street and the imposition of the Holiday Inn. Lying directly east of the Holiday is the Downtown Windsor Waterfront site.

Similar to the situation which lies directly to the west of the Downtown Windsor Riverfront so exists to the east. The development at Hiram Walker Distillery, forming the eastern edge of the Downtown Windsor Waterfront, is a landmark in both the history and architectural heritage of Windsor. Though the development blocks excellent views of the river and Belle Isle, the well landscaped property along Riverside Drive decreases the negative impact of its function. Conversely, the relatively abandoned property of the Ford Motor Company immediately adjacent to the distillery not only blocks excellent views to the Belle Isle skyline, but its state of disuse is a visual disturbance. At present the Mayor's office has been negotiating to develop the property for a marina and nautical museum as a Windsor Branch of the Henry Ford Automotive Museum located in Dearborn (suburb of Detroit), Michigan.

The next section of the Riverfront Parkway System consists of four parks; Alexander, Goose Bay, Reaume and Coventry Gardens. Due to the appeal of these open riverfront properties and botanical gardens the south side of the Drive has seen the development of a number luxury condominium towers. Further east are three smaller riverfront parks; St.Rose, Bridges Bay, and St.Paul which act more like neighborhood parks nestled within private residential developments on the both sides of Riverside Drive.

At the eastern end of the Parkway, the north side of the drive opens up at the only public beach and municipal owned marina located within the city limits. On the south side of the drive is located the Ganatcho Fitness Trail running between agricultural lands and the drive from the east where the city meets the Town of Tecumseh.

# APPENDIX C: LIST OF MARINAS IN ESSEX COUNTY

## MARINA GUIDE

## WINDSOR
ESSEX COUNTY
& PELEE ISLAND

| | Marina | OPEN: Y - YEAR ROUND S - SEASONAL | NUMBER OF WELLS | NUMBER OF TRANSIENT WELLS | LONGEST BERTH (FEET) | MARINA WATER* DEPTH (FEET) | S - SAIL P - POWER | R - RAMP L - LIFT | ENGINE REPAIRS | PUMP OUT STATION | FUEL: G - GAS D - DIESEL B - BOTH | ELECTRICITY: 110V 220V | M - MARINE SUPPLY G - GROCERIES I - ICE | R - RESTAURANT S - SNACK BAR | SH - SHOWER L - LAUNDROMAT | V - VISA M - MASTERCARD AE - AMER. EXPRESS | P - PADDLEBOATS B - CANOES E - BOATS | OBSTRUCTIONS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | Luken Marina<br>Tilbury, Ontario<br>(519) 682-2868 | Y | 300 | 50 | 60' | 9' | S P | L R | ✓ | ✓ | B | — | M | — | SH | MC V | — | — |
| (1) | Radlin's Marina<br>Lighthouse Cove, Tilbury, Ontario<br>(519) 682-2706 | S | 100 | 25 | 40' | 10' | S P | R | ✓ | ✓ | B | 220V | G I | R | SH | MC V | — | — |
| (2) | Fisherman's Wharf<br>6988 St. Clair, Stoney Point, Ontario<br>(519) 798-5757 | S | 70 | 5 | 25' | N/A | S P | R | — | — | G | 110V | M I | S | SH | — | B | — |
| (3) | Belle River Marina<br>Lake View Dr., Belle River, Ontario<br>(519) 728-2245 | S | 190 | 42 | 75' | 8.5' | S P | — | — | ✓ | G | 110V | G I | — | SH L | MC V AE | — | — |
| (3) | Deerbrook Marina<br>R.R. #2, Belle River, Ontario<br>(519) 728-1123 | S | 100 | 10 | 35' | 6' | P | R | ✓ | ✓ | G | 110V | M G I | R S | — | MC V | — | 11' Bridge |
| (4) | Moose's Baits<br>193 West River Rd., Belle River, Ont.<br>(519) 728-1021 | Y | 18 | 2 | 25' | 6' | P | R | — | — | G | — | — | S | — | — | — | 7' Bridge |
| (4) | Rochester Place<br>Box 8, Belle River, Ontario<br>(519) 728-2693 | S | 208 | 40 | 24' | 16' | P | R | — | — | — | — | I | R | SH | MC V AE | — | 7' Bridge |
| (5) | Bell's Puce Marina<br>930 Old Tecumseh Rd., Puce, Ontario<br>(519) 979-8080 | S | 100 | 20 | 75' | 5' | S P | L R | ✓ | ✓ | G | 110V | M G I | R | SH | MC V | P C B | — |
| (6) | Pud's Place Marina<br>14346 Tecumseh Rd. E., St. Clair Beach<br>(519) 979-8115 | S | 80 | 3 | 35' | 2' - 7' | P | L | — | ✓ | B | 110V | I | S | — | MC V AE | B | — |
| (7) | Dudley's Marina<br>55 East Pike Creek, Tecumseh, Ont.<br>(519) 979-8100 | Y | 25 | — | 25' | N/A | S P | L R | — | — | — | 110V | — | — | — | — | — | — |
| (8) | Lakeview Park Marina<br>9200 Riverside Dr. E., Windsor, Ont.<br>(519) 948-3383 | S | 350 | 50 | 75' | 5' | S P | R | — | ✓ | B | 110V | I | R | SH L | MC V | — | — |
| (8) | Anchor In Marina<br>9150 Riverside Dr. E., Windsor, Ont.<br>(519) 948-4141 | Y | — | — | — | 6' | S P | R | ✓ | — | G | 110V | M I | — | — | MC | — | — |
| (8) | Riverside Marina<br>9150 Riverside Dr. E., Windsor, Ont.<br>(519) 948-3006 | S | 140 | — | 40' x 13' | 6' | P | R | — | — | G | 110V | — | — | — | — | — | — |
| (8) | Edgewater Marine (service only)<br>7910 Riverside Dr. E., Windsor, Ont.<br>(519) 948-2921 | Y | — | — | — | 5' | P | R | ✓ | — | G | — | M I | — | — | V | — | — |
| (9) | Mill Cove Marina<br>90 Mill St., Windsor, Ontario<br>(519) 252-7289 | S | 26 | 4 | 50' | 7' | P | L | ✓ | — | G | 110V | M G I | R S | SH L | MC V | — | — |
| (10) | Acali Place Marina<br>Highway 18, LaSalle, Ontario<br>(519) 734-8342 | S | 105 | 8 | 40' | 7' | S P | L | ✓ | ✓ | — | 110V | — | — | SH | — | — | — |
| (10) | Bayview Marina<br>Box 30, 2796 Front Rd., LaSalle, Ont.<br>(519) 734-6999 | Y | 200 | 10 | 63' | 9' | S P | L R | ✓ | ✓ | — | 110V | — | — | SH | MC V | — | — |
| (10) | Bingo Bay Marina<br>196 Front Rd., LaSalle, Ontario<br>(519) 978-0301 | S | — | — | — | — | — | — | — | — | — | — | — | — | — | — | P C B | — |
| (10) | Island View Marina<br>2448 Front Rd., LaSalle, Ontario<br>(519) 734-7058 | S | 100 | 5 | 100' | N/A | S P | R | ✓ | ✓ | G | 110V | M G I | S | SH | MC V | C Jet skis | — |
| (11) | K. Walter Ranta Marina<br>Highway 18, LaSalle, Ontario<br>(519) 736-7997 | S | 104 | 5 | 35' | 6' | S P | R | — | ✓ | — | 110V | I | — | SH | — | — | 5' deep entry |
| (11) | Holiday Harbour<br>2406 Front Rd., LaSalle, Ontario<br>(519) 734-6679 | S | 150 | 20 | 50' | 8' | S P | R | — | — | — | 110V | I | — | SH | — | — | — |
| (11) | LaSalle Marina<br>30 Laurier Dr., LaSalle, Ontario<br>(519) 734-1345 | Y | 115 | 5 | 50' | 9' | S P | L R | ✓ | ✓ | B | 110V | M G I | R S | SH | MC V | — | — |
| (11) | Mueller's Marina<br>2770 Front Rd., LaSalle, Ontario<br>(519) 734-8049 | S | 108 | — | 30' | 7' | S P | R | — | — | — | 110V | — | R S | — | — | — | — |
| (12) | Park Haven Marina<br>29 Riverview Ave., LaSalle, Ontario<br>(519) 734-6265 | S | 100 | 10 | 50' | 6' | P | L | ✓ | ✓ | G | 110V 220V | M I | SH | MC V | — | — | |
| (12) | Sunset Marina<br>4 Wahnetu, LaSalle, Ontario<br>(519) 734-8011 | S | — | — | — | 4' | S P | — | — | ✓ | B | 220V | M I | S | — | MC V AE | — | — |
| (12) | Westport Marina<br>970 Front Rd., LaSalle, Ontario<br>(519) 734-6260 | S | 151 | 151 | 50' | 12' | S P | L R | ✓ | — | — | 110V 220V | M | — | SH | — | — | — |
| (12) | St. Clair Marine (service only)<br>2560 Front Rd., LaSalle, Ontario<br>(519) 734-1602 | Y | — | — | — | 7' | S P | — | — | — | G | — | — | — | — | — | — | — |
| (12) | Pilot House Marina<br>Hwy. 18, LaSalle, Ontario<br>(519) 734-1019 | Y | 161 | 30 | 50' | 7' | S P | L R | ✓ | ✓ | B | 110V 220V | M I | R S | SH L | MC V AE | — | — |
| (13) | Duff's Marina<br>198 Sandwich St., Amherstburg, Ont.<br>(519) 736-9868 | S | 31 | — | 24' | 5' | S P | — | — | — | G | — | I | S | — | MC V | B | — |
| (14) | Duffy's Marina<br>306 Dalhousie, Amherstburg, Ontario<br>(519) 736-4301 | Y | 50 | 50 | 30' | 20' | S P | R | — | — | G | 110V | — | R | — | MC V AE | — | — |
| (15) | Port-O-Call Marina<br>Boblo Island, Amherstburg, Ontario<br>(519) 736-5473 | S | 200 | — | no limit | 5½ - 7' east shore | S P | — | — | — | — | 110V | I | R S | SH L | MC V | — | 12' entrance |
| (16) | Melton Brothers Marina<br>R.R.#3, Kingsville, Ontario<br>(519) 733-2525 | Y | 100 | 5 | 37-40' | 5 - 6' | S P | R | ✓ | ✓ | G | 110V | I | — | SH | MC V | — | sandbar at mouth |
| (17) | A-K Marina<br>R.R.#1, Leamington, Ontario<br>(519) 326-0232 | Y | 180 | 30 | 40' | 6' | P | R | ✓ | — | — | 110V | M I | — | — | MC V | B | bridge |
| (17) | Casper's Landing Marina<br>609 Point Pelee Dr., Leamington, Ont.<br>(519) 322-2288 | Y | 250 | 100 | 40' | 6' | P | R | — | ✓ | G | 110V | I | R S | SH | MC V AE | — | 15'6" bridge |
| (17) | Leamington Municipal Marina<br>Robson Rd., Leamington, Ontario<br>(519) 326-0834 | S | 270 | 140 | 100' | 8' | S P | R | — | ✓ | B | 110V | I | — | SH L | MC V | — | — |
| (18) | Dick's Marina<br>South Bay, Pelee Island<br>(519) 724-2024 | S | 70 | 15 | 100' | 5' | S P | R | — | — | G | 220V | I | S | SH | — | B | — |
| (19) | Scudder Wharf<br>Scudder, Pelee Island | S | 36 | 17 | 38' | 8' | S P | — | — | — | G | — | I | R | L | — | — | — |

*Water levels as of Fall 1988

# APPENDIX D: E.R.A. MARKETING ANALYSIS

PROJECTED POPULATION OF THE PRIMARY AND SECONDARY MARKET AREAS
IN WINDSOR, ONTARIO
1980-2000

| | 1980 | 1990 | 1995 | 2000 | Change 1990-1995 | Annual % Change 1990-1995 | Change 1995-2000 | Annual % Change 1995-2000 |
|---|---|---|---|---|---|---|---|---|
| PRIMARY MARKET AREA | | | | | | | | |
| Windsor | 192,817 | 194,568 | 196,271 | 197,786 | 1,703 | 0.16% | 1,515 | 0.15% |
| Detroit City | 1,203,339 | 1,003,743 | 917,550 | 838,759 | (86,193) | -1.72% | (78,791) | -1.72% |
| Total Market | 1,396,156 | 1,198,311 | 1,113,821 | 1,036,544 | (84,490) | -1.41% | (77,277) | -1.39% |
| SECONADRY MARKET AREA | | | | | | | | |
| Essex County | 119,384 | 129,518 | 135,265 | 139,732 | 5,747 | 0.89% | 4,468 | 0.66% |
| Suburban Detroit | 3,284,733 | 3,355,430 | 3,428,338 | 3,493,885 | 72,908 | 0.43% | 65,547 | 0.38% |
| Total Market | 3,404,117 | 3,484,948 | 3,563,603 | 3,633,617 | 78,655 | 0.45% | 70,014 | 0.39% |
| TOTAL MARKET AREA | 4,800,273 | 4,683,259 | 4,677,424 | 4,670,161 | (5,835) | -0.02% | (7,262) | -0.03% |

Note: Suburban Detroit includes the counties of Lapeer, Livingston, Macomb, Monroe, Oakland, St. Clair, and those portions of Wayne County lying outside of the Detroit city limits.

Source: Statistics Canada; United States Bureau of the Census; LaPointe Consulting; National Planning Data Corp.; and Economics Research Associates.

US AND CANADIAN NATIONALS
USING WINDSOR AS A POINT OF ENTRY/RE-ENTRY
(All Traffic)
1986-1988

| | 1986 | 1987 | 1988 |
|---|---|---|---|
| United States Residents | | | |
| Automobile | | | |
| Same Day | 5,506,329 | 5,481,682 | 5,249,455 |
| One Night | 376,729 | 389,376 | 367,970 |
| Two or More Nights | 879,805 | 906,313 | 829,848 |
| Total | 6,762,863 | 6,777,371 | 6,447,273 |
| Other Transportaion | 674,012 | 673,348 | 693,600 |
| Total | 7,436,875 | 7,450,719 | 7,140,873 |
| Canadian Residents | | | |
| Automobile | | | |
| Same Day | 3,029,079 | 3,256,922 | 3,524,181 |
| One Night | 177,687 | 203,407 | 197,469 |
| Two or More Nights | 623,540 | 660,456 | 785,255 |
| Total | 3,830,306 | 4,120,785 | 4,506,905 |
| Other Transportaion | 1,023,839 | 985,204 | 1,059,251 |
| Total | 4,854,145 | 5,105,989 | 5,566,156 |

Note: Other transportaion includes: buses, airplanes, boats, trains, and commercial vehicles.

Source: Statistics Canada: Summary of International Journeys;
and Economics Research Associates.

**PAST AND PROJECTED CONVENTION BUSINESS AT THE CLEARY INTERNATIONAL CENTER**

| Year | Conventions | Total Delegates | Delegate Nights | Total Spending |
|---|---|---|---|---|
| 1981 | 39 | 12,615 | 37,860 | 3,977,670 |
| 1982 | 43 | 13,362 | 41,936 | 4,476,510 |
| 1983 | 67 | 23,369 | 60,713 | 6,319,350 |
| 1984 | 98 | 22,207 | 71,846 | 7,486,340 |
| 1985 | 125 | 29,912 | 73,389 | 7,699,716 |
| 1986 | 149 | 27,742 | 83,319 | 8,845,560 |
| 1987 | 123 | 25,489 | 75,003 | 7,772,250 |
| 1988 | 105 | 25,587 | 67,732 | 6,985,720 |
| 1989 | 138 | 29,643 | 86,950 | 6,307,250 |
| 1992 1/ | | | 138,000 | 20,000,000 |
| 1994 | | | 213,000 | 33,000,000 |
| 1996 | | | 260,000 | 43,000,000 |

1/ Period between 1989 and 1992 accounts for period during which the Cleary will be closed for renovation/expansion.

Source: Windsor, Essex County, Pelee Island Convention and Visitors Bureau.

**PAST CONVENTION ACTIVITY IN THE DETROIT METROPOLITAN AREA**

| Year | Conventions | Total Delegates | Room Nights | Total Spending |
|---|---|---|---|---|
| 1981 | 614 | 681,939 | N/A | 106,101,138 |
| 1982 | 604 | 679,466 | 271,395 | 113,400,000 |
| 1983 | 602 | 839,590 | 325,315 | 133,100,000 |
| 1984 | 538 | 732,757 | 290,026 | 129,200,000 |
| 1985 | 475 | 631,336 | 224,360 | 168,300,000 |
| 1986 | 381 | 587,187 | 210,067 | 214,820,000 |
| 1987 | 514 | 653,357 | 210,952 | 244,650,000 |
| 1988 | 737 | 703,000 | 260,561 | 284,000,000 |
| 1989 | 869 | 787,000 | 295,836 | 317,000,000 |

Note: Includes conventions in Wayne, Oakland and Macomb Counties, as well as, downtown Detroit.
Dollar figures are expressed in US dollars.

Source: Metropolitan Detroit CVB; and Economics Research Associates.

**PAST CONVENTION ACTIVITY AT COBO HALL**

| Year | Conventions | Total Delegates | Average Size |
|---|---|---|---|
| 1981 | 50 | 289,987 | 5,800 |
| 1982 | 44 | 293,574 | 6,672 |
| 1983 | 40 | 402,396 | 10,060 |
| 1984 | 32 | 332,327 | 10,385 |
| 1985 | 42 | 257,247 | 6,125 |
| 1986 | 41 | 237,987 | 5,805 |
| 1987 | 51 | 281,959 | 5,529 |
| 1988 | 60 | 282,253 | 4,704 |
| 1989 | 64 | 303,440 | 4,741 |

Source: Metropolitan Detroit CVB; and Economics Research Associates.

CHARACTERISTICS OF SELECTED ATTRACTIONS/EVENTS
IN THE WINDSOR - ESSEX COUNTY AREA

| Attration/Event | Type of Attraction | 1989 Attendance | Primary Market Draw | Market Orientation | Admisssion Price | Length of Season |
|---|---|---|---|---|---|---|
| Art Gallery of Windsor | Museum | 87,500 | Local | Families, Individuals Bus & School Groups | No fee | Year round |
| Bobio Island | Amusement Park | 600,000 | Regional, and Tourists | Families, Bus Groups Individuals | $15.95, 7+ yrs | May - Sept. |
| Colasanti's | Gardens/ Greenhouses | 494,361 | Local, Some Regional | Families, Clubs Bus & School Groups | No fee | Year round |
| Colio Wines | Winery | 1,764 | Local | Individuals, Bus Groups | No fee | Wed. & Sat. Year round |
| Fort Malden | Historic Park | 77,344 | Local | Families, Individuals Bus & School Groups | No fee | Year round |
| Hiram Walker Distillery | Factory Tours | 9,000 | Local, Regional | Individuals, Bus Groups | No fee | June - Aug. |
| Hiram Walker Historical Museum | Museum | 14,371 | Local | Families, Individuals Bus & School Groups | No fee | Year round |
| Holiday Beach | Provincial Park | 22,000 | Local | Families, School Groups | $4/Vehicle in summer, Free after Sept. | Year round |
| International Freedom Festival 1/ | Outdoor Festival | 3,750,000 | Local, Regional | Families, Individuals | Free, Fees for special events | 2 Weeks June-July |
| Jack Miner's Bird Sanctuary | Wildlife Refuge | 67,000 | Local | Families, Individuals Bus & School Groups | No fee | Year round |

CHARACTERISTICS OF SELECTED ATTRACTIONS/EVENTS
IN THE WINDSOR - ESSEX COUNTY AREA
(Con't)

| Attration/Event | Type of Attraction | 1989 Attendance | Primary Market Draw | Market Orientation | Admisssion Price | Length of Season |
|---|---|---|---|---|---|---|
| Park House Museum | Museum | 5,314 | Local | Families, School Groups | $1.00 | Year round |
| Point Pelee National Park | National Park | 513,685 | Local, Regional Tourist | Families, Individuals Bus & School Groups Birders | $5.00/Vehicle | Year round |
| Southwestern Ontario Heritage Village | Historic Site | 17,386 | Local, Regional | Families, Individuals Bus & School Groups | $3 Adult $2 Student $1.50 Children | April-Nov. |
| Willistead Manor | Historic Museum | 7,341 | Local | Families, Individuals Bus & School Groups | $2 Adult $0.75 Children | Year round |
| Windsor Raceway | Horse Racing | 345,556 | Local, Regional | Individuals | $2.50-$4.00 | Oct. - June |

1/ Includes both Windsor and Detroit events.

Source: Attraction Directors; Economic Planning Group of Canada; Prosperity 2000; and Economics Research Associates.

WINDSOR WATERFRONT DEVELOPMENT
CONCEPT DEVELOPMENT AND STANDARD MARKET AND OPERATING CHARACTERISTICS
OF SELECTED ATTRACTIONS

| | | Market and Operating Characteristics | | | | |
|---|---|---|---|---|---|---|
| Concept | Development Characteristics | Market Orientation | Attraction Type | Market Draw | Length of Season | Length of Stay |
| Amphitheater | Small: 3-5,000 fixed seats; optional lawn seats<br>Large: 12-15,000 fixed seats; optional lawn seats | Dependant upon choice of program content | Complimentary<br>Destination | Local<br>Regional | June - September | 3 to 4 hours |
| Marina | Minimum of 150 - 200 slips necessary to support cost of development | Boaters | Destination | Seasonal: local<br>Transient: regional or tourist | May - October | 1 to 2 night avg. length of stay for transient |
| Museum | Small: up to 30,000 s.f.<br>Mid-size: 30,000 - 100,000 s.f.<br>Showcase: over 100,000 s.f. | Families, school groups tour bus, individuals | Complimentary<br>Complimentary<br>Destination | Local<br>Local, some regional<br>Regional, tourist | Year round | 30 mins - 1.5 hrs<br>1.5 - 3 hours<br>3 - 5 hours |
| Cultural Center | Traditional Native Ctr<br>Native Attraction<br>Showcase Attraction | Families, school groups tour bus | Complimentary<br>Complimentary<br>Destination | Local<br>Local, some regional<br>Regional, tourist | Year round | 30 mins - 1 hour<br>1 - 3 hours<br>3 - 4 hours |
| IMAX Theater | 500 to 1,000 seats, an 800 seat facility requires 10-12,000 s.f. | Families, individuals, school groups | Complimentary | Regional | Year round | 30 mins - 1 hour |
| Ferry Service | 1 ferry with capacity of 50 persons, making two round trips per hour. | Individuals, Families, Conventions | Complimentary | Local, tourist | May - September | 15 mins each direction |
| Festival Site | Large open area; stage facilities 50,000 - 100,000 s.f. | Dependant on type and duration of festivals | Complimentary | Regional | May - October | 6 to 8 hours |
| Children's Play Area | Mixture of outdoor activities and indoor educational games. | Families with young children, school groups | Destination | Local, regional | Year round | 2 to 4 hours |
| Bike/Jogging Trails | Paved surface running along the waterfront to be used for public recreation purposes | Families, individuals | Complimentary | Local | Year round, mostly warm weather mos. | 1 to 2 hours |
| Ice Rink | 8,000 s.f., with a capacity of roughly 100 skaters per day, plus special groups and teams | Families, individuals | Complimentary | Local | Indoor: year round<br>Outdoor: during winter months | 1 - 3 hours |
| Botanical Gardens | 40 to 100 acres; usually include components such as Japanese gardens, conservatory, floral clock | School groups, tour bus, individuals, garden clubs | Complimentary | Local, regional | Year round for indoor exhibits | 0.5 to 2 hours |
| Trolley | Trackless trolley serving downtown area, peripheral parking lots, selected attractions and the waterfront | Families, individuals, downtown employees, conventions | Complimentary | Local, regional, tourist | Year round | Varries according to departure/ destination |
| Observation Tower | 800 - 1,000 foot tower with eating/ drinking facilities, retail, elevators; also potential communications use | Families, school groups, tour bus, individuals convention | Destination | Local, regional, tourist | Year round | 0.5 to 1 hour for observation only |
| Festival Retail | Minimum of 40-50,000 s.f. up to 200,000 s.f. of mixed retaurant and retail | Families, tour bus, convention, individuals | Destination | Local, regional, tourist, downtown workers | Year round | 4 to 6 hours |
| Aquarium | Small: up to 40,000 s.f.<br>Mid-size: 40,000 - 75,000 s.f.<br>Showcase: 75,000 - 300,000 s.f. | Families, school groups tour bus, individuals | Complimentary<br>Destination<br>Destination | Local<br>Local, regional<br>Regional, tourist | Year round | up to 30 mins.<br>30 mins - 1.5 hrs<br>1.5 - 3 hrs |
| Entertainment Center | 30,000 - 100,000 s.f. of mixed nightclubs, restaurants, and entertainment elements, may have either family or adult orientation | Individuals, tour bus, convention, families | Destination | Local, regional, tourist | Year round | 4 to 6 hours |
| Sound and Light Show | Light show projected upon backdrop with music, may use either fixed or lawn seating, should have provisions to restrict view/access | Individuals, tour bus, convention, families | Complimentary | Local, regional, tourist | May - September | 1.5 - 3 hours |
| Multi-media Presentation | Multi-media film/slide/sound presentation on Canada and/or the Windsor area | Families, school groups tour bus, individuals, convention | Complimentary | Regional, tourist | Year round | 1-1.5 hours |

Source: Marshall Macklin Monaghan Ltd.; and Economics Research Associates.

WINDSOR WATERFRONT DEVELOPMENT
FINANCIAL CHARACTERISTICS OF SELECTED ATTRACTIONS

| Concept | User Fee | Visitation | Operational Self-Sufficiency | Order of Magnitude of Capital Costs | Capital Funding |
|---|---|---|---|---|---|
| Amphitheater | $9-$14 for lawn seating; $20-$23 fixed seating depending on program | 2,000-35,000 per event | Small: Break even or subsidized<br>Larger: Profit | $4.5-$5.7 million for 3,000 fixed seats<br>$13.5-$17m for 12,000 - 15,000 fixed seats 1/ | Public: local<br>Private |
| Marina | Seasonal: $28-$32/ft.<br>Transient: $0.60-0.90/ft. | Seasonal: 80% - 100% occupancy;<br>Transient: 100% weekend occupancy, 15% weekday | Profit | $1.14-$2 million minimum<br>$8 - $10,000/slip for full - scale commercial marina | Public: local<br>Private |
| Museum | Optional donation up to $5-$8 adult admission | 40,000 - 100,000<br>100,000 - 500,000<br>up to 9 million | Break even, small profit possible | Average cost ranges from $150-$450/s.f. depending upon exhibit type and configuration | Public: local, federal<br>Private grants |
| Cultural Center | $2.50 - $3 on average | 15,000 - 20,000<br>80 - 120,000<br>400,000 - 500,000 | Break even or slight deficit | Average cost ranges from $150-$450/s.f. depending upon exhibit type and configuration | Public: local, federal<br>Private grants |
| IMAX Theater | Up to $7 adult admission<br>$4 median child, $5.50 median adult admission | up to 1 - 2 million | Profit; highly dependant upon attendance levels | $1.5 - $9.5 million | Private/public |
| Ferry Service | $2.50 each way | 50 person capacity | Break even; profit contingent upon gov't assisstance | | Private; public trans. assisstance from local/ provincial government |
| Festival Site | Subsidized; no fee | Major Festival: 100,000 - 300,000 | Subsidized | | Public: local |
| Children's Play Area | $3 - $7 with 25% group discount | 100,000 - 500,000 avg<br>Up to 1 million for a showcase attraction | Profit | $900,000-$1.4m for small park | Private |
| Bike/Jogging Trails | No fee | | Subsidized | | Public: local |
| Ice Rink | $2 - $3 for a 1-2 hr session plus skate rentals | 35,000 - 40,000 for year round facility | Profit | $900,000-$1m for 8,000 s.f. rink, approx. $114 - $230 per s.f. | Private/public |
| Botanical Gardens | Up to $4.50 - $8 for adults; avg: $2 adult, $1 child | 40,000 - 100,000 | Deficit or break even | $700,000 avg. per acre depending upon scope and content | Public: local, federal, Private grants |
| Trolley | $0.50 - $1.50 per ride | Avg. capacity of 22 - 34 passengers | Subsidized | $76,000 - $90,000/trolley | Public: local, federal |
| Observation Tower | $4 - $6.50 avgs. adult | 350,000 - 1.5 million | Deficit or break even | $90 - $110 million total development, excluding land acquisition cost | Private/public |
| Festival Retail | No fee; per capita expenditures in the range of $9-$17 | 1+ million; dependant upon size and offering | Profit | $17 - $36m depending upon size and scope | Private |
| Aquarium | Adult: $4.00-$7.00<br>Child: $2.00-$4.00 | up to 100,000<br>100,000 - 700,000<br>700,000 - 1.6 million | Break even, slight deficit | $14 - $57m depending upon size, configuration, and content | Public: local<br>Private grants |
| Entertainment Center (family or adult orientation) | $8.00 - $17.00 evening for adult oriented facility, free or nominal admission fee for family oriented facility with $2.50-$6 user fees for indiv. components | 500,000 - 1 million (nightime attendance) | Profit | $1 - $6m depending upon size and scope | Private |
| Sound and Light Show | $2.50 - $4 per person | Highly dependant upon location and program | Small profit | $1 million, 1/3 of which are programming costs | Public: local, federal |
| Multimedia Presentation | Avg admission: $5 adult $2.50 child | Dependant upon location, presentation, and success of advertising | Profit | $950,000 - $1.3 million | Private |

1/ Capital costs represented are for facilities with lawn seating.
Note: Dollar figures listed are in Canadian dollars and have been calculated at a rate of $1.14 CDN to $1 US
Attendance figures are annual totals unless otherwise noted.

Source: Marshall Macklin Monaghan, Ltd.; and Economics Research Associates.

MATRIX EVALUATION OF CANDIDATE USES FOR THE WINDSOR WATERFRONT

| Use | Non-Site Specific Characteristics: Destination Attraction Primary | Destination Attraction Secondary | Resident Use | Year Round Operation | Economic Impact | Development Funding Potential: Commercial | Private | Public | Site Specific: Competitive w/ Existing Facilities | Self-Sufficient Operation |
|---|---|---|---|---|---|---|---|---|---|---|
| Amphitheater 1/ | | | | | | | | | | |
| -Commercial | O | | O | X | X | O | X | X | X | S |
| -Public Non-Profit | S | O | O | X | X | X | O | O | X | X |
| Marina | O | | O | X | O | O | X | X | O | O |
| Museum | | | | | | | | | | |
| -Small/Mid Size | X | O | O | O | S | X | O | O | 2/ | X |
| -Showcase | O | | O | O | O | X | O | O | 2/ | X |
| Indian Cultural Ctr | | | | | | | | | | |
| -Small/Mid Size | X | O | O | O | S | X | O | O | O | X |
| -Showcase | O | | O | O | O | X | O | O | O | X |
| IMAX Theater | X | O | O | O | S | X | O | O | O | O |
| Ferry Service | X | O | O | X | 3/ | O | X | X | O | 4/ |
| Festival Site | O | | O | X | O | X | O | O | X | X |
| Children's Play Area (small) | X | O | O | X | X | X | S | O | O | X |
| Bike/Jogging Trails | X | X | O | S | X | X | X | O | X | X |
| Ice Rink | X | O | O | S | X | X | O | O | 2/ | O |
| Botanical Gardens | X | O | O | S | X | X | O | O | X | X |
| Trolley | X | X | O | O | 3/ | X | X | O | O | S |
| Observation Tower | X | O | O | O | X | X | S | O | O | |

MATRIX EVALUATION
(Con't)

| Use | Non-Site Specific Characteristics: Destination Attraction Primary | Destination Attraction Secondary | Resident Use | Year Round Operation | Economic Impact | Development Funding Potential: Commercial | Private | Public | Site Specific: Competitive w/ Existing Facilities | Self-Sufficient Operation |
|---|---|---|---|---|---|---|---|---|---|---|
| Festival Retail | O | | O | O | O | O | X | X | X | 5/ |
| Aquarium | O | | O | O | O | X | O | O | O | O |
| Urban Entertainment Center | O | | O | O | O | O | X | X | O | O |
| Sound and Light Show | X | O | O | X | X | X | O | O | O | O |
| Multimedia Presentation | X | O | O | O | X | O | O | O | O | O |

Key:
X = Unsuitable based upon this criterion.
O = Suitable based upon this criterion.
S = Mixed potential for fulfilling this criterion.

1/ A commercial amphitheater is defined as one with seating for 10,000 or more persons.
A Public, non-profit amphitheater is defined as one with seating for fewer than 10,000 persons.
2/ Depends upon the scope and orientation of the facility.
3/ Indeterminant economic impact; direct benefits may be small, but spin-off effect of binging people into the city/ increasing circulation once in the city will be large.
4/ Based upon current situation with Canadian Customs Service, ferry is not operationally self-sufficient, however, there is a high probability for such provided an agreement can be reached with customs officials.
5/ Individual stores in the downtown area may be self sufficient, however, a festival mall generally will not be in this market.

Note: For the purposes of this evaluation, economic impact is assessed only on an attractions' ability to bring positive economic benefits from outside of the local community.

Source: Economics Research Associates.

**SUMMARY OF DETROIT RESIDENT SURVEY**

- HAVE VISITED WINDSOR

| | |
|---|---|
| Past 12 months | 46% |
| Past 3 years | 74 |

- FREQUENCY OF VISITATION (past 12 months only)

| | |
|---|---|
| 1 Time | 19% |
| 2 Times | 26 |
| 3-6 Times | 35 |
| More than 6 times | 20 |

- TRIP PURPOSE

| | |
|---|---|
| Pleasure | 92% |
| En route elsewhere | 5 |
| Business | 3 |

- PRINCIPAL ACTIVITIES OF PLEASURE VISITORS

| | |
|---|---|
| Dining | 57% |
| Shopping | 40 |
| Sightseeing | 34 |
| Visit Friends and Relatives | 22 |
| Evening Entertainment | 20 |
| Sports/Recreation | 13 |
| Special Event | 10 |
| Other | 9 |

LIKED MOST ABOUT VISITING WINDSOR

| | |
|---|---|
| Cleanliness | 35% |
| Friendly People | 34 |
| Good Food | 24 |
| Shopping Variety | 14 |
| Great Atmosphere | 12 |
| Peaceful | 12 |
| Scenery | 10 |
| Entertainment | 9 |
| Beautiful-Unspecified | 6 |
| Safe | 6 |
| Beautiful Riverfront | 5 |
| Reasonable Price | 5 |
| Something New and Different | 5 |

| | |
|---|---|
| Physical | 83% |
| Specific Attraction | 57 |
| Cultural | 34 |
| Security | 6 |

LIKED LEAST ABOUT VISITING WINDSOR

| | |
|---|---|
| Nothing | 54% |
| Traffic | 14 |
| The Bridge | 12 |
| The Tunnel | 7 |
| Customs | 6 |
| High Prices | 5 |
| Currency Exchange | 4 |
| The Border | 3 |
| Parking | 2 |

| | |
|---|---|
| Access | 33% |
| Border | 18 |
| Place | 2 |

SUMMARY OF DETROIT RESIDENT SURVEY
(Continued)

- INTEREST IN VISITING VARIOUS ATTRACTIONS IN A WINDSOR WATERFRONT PARK

| Extremely Interested[1] | | Very Interested[2] | |
|---|---|---|---|
| Special Events | 52% | Restaurants | 73% |
| Restaurants | 51 | Special Events | 72 |
| Attraction for Children | 48 | Theater | 66 |
| Amphitheater | 47 | Theme Park | 63 |
| Theater | 42 | Attraction for Children | 63 |
| Theme Park | 39 | Retail | 62 |
| Picnic Areas | 39 | Amphitheater | 62 |
| Retail | 38 | Picnic Areas | 60 |
| Open Space | 37 | Open Space | 52 |
| Major Aquarium | 32 | Major Aquarium | 50 |
| Night Clubs | 32 | Historic Shops | 50 |
| Indian Cultural Center | 30 | Conservatory | 50 |
| History Museum | 29 | Observation Tower | 49 |
| Art Gallery | 27 | Art Gallery | 48 |
| Historic Shops | 27 | Indian Cultural Center | 47 |
| Conservatory | 25 | History Museum | 46 |
| Observation Tower | 25 | Night Clubs | 46 |
| Bike Trails | 25 | Arts & Crafts Center | 44 |
| Arts & Crafts Center | 25 | Formal Gardens | 43 |
| Jogging Trails | 22 | Bike Trails | 41 |
| Ice Rink | 17 | Jogging Trails | 35 |
| Miniature Golf | 16 | Miniature Golf | 29 |
| | | Ice Rink | 29 |

1/ Top responses on a scale of 1 to 5.
2/ Top two responses on a scale of 1 to 5.

# APPENDIX E: TOURISM RECOMMENDATIONS FOR THE DWW

REPORT

TO: Riverfront Lands Development Advisory Task Force

DATE: January 5, 1990

FROM: Chairman
Board of Directors
Convention & Visitors Bureau of Windsor, Essex County & Pelee Island

RE: Tourism Recommendations

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At the Board of Directors Meeting of the Convention & Visitors Bureau of Windsor, Essex County and Pelee Island held on December 13, 1989, it was resolved to forward to the Riverfront Lands Development Advisory Task Force a mandate of developments, that, from a tourism perceptive would enhance the experience enjoyed by visitors as well as improve the quality of life in our community.

The following recommendations are submitted to the Task Force as a means of focusing the needs of the local tourism industry.

1) The development must provide opportunities for a varied mix of year-round activities.

2) The majority of the development must be active in nature.

3) The development must have the capability of attracting private-sector investments.

4) The overall development must be viewed as a potential source for generating revenues.

5) The development must be of sufficient depth and scope to attract provincial, national and international visitors.

6) The development must enhance the experience of the tourist as well as improve the quality of life in our community.

7) The development must have components that are both unique and interesting for residents and visitors alike.

8) The development must provide an opportunity to showcase the significant contributions this area has made to Canada as a nation. This should include components that express; for example, culture, history, geography, technology, marine, agriculture; etc.

9) The development must provide for pedestrian and transportation links to integrate areas south of Riverside Drive including the downtown core.

10) A transient marina should be incorporated as part of the development.

11) The development and its various components must not obstruct the river view.

I am hopeful these recommendations will provide some guidance for the Task Force. Thank you for your time and consideration in this very important tourism matter.

Jim Evans
Chairman
Board of Directors



/ks

## APPENDIX F: IDENTIFIED USES AND ACTIVITIES FROM A PUBLIC FORUM HELD BY THE RIVERFRONT LANDS TASK FORCE ADVISORY COMMITTEE

| | IDENTIFIED USES AND ACTIVITIES | HISTORICAL A. | CULTURAL B. | COMMERCIAL C. | PASSIVE RECREATION D. | ACTIVE RECREATION E. | TRANSPORTATION F. |
|---|---|---|---|---|---|---|---|
| 1 | Amphitheatre/bandshell | | ● | | ● | | |
| 2 | Aquarium | | | ● | ● | | |
| 3 | Arena | | | ● | ● | ● | |
| 4 | Automotive Museum | ● | ● | | ● | | |
| 5 | Boat Rentals (off site) | | | ● | ● | | ● |
| 6 | Boat Rentals (on site) | | | ● | ● | | |
| 7 | Boat Show (in-water) | | | ● | ● | | |
| 8 | Boat Tours | | | ● | ● | | ● |
| 9 | Boutiques | | | ● | | | |
| 10 | Children's Theme Park | | | | ● | | |
| 11 | Chinese Gardens | | ● | | ● | | |
| 12 | Community Museum | | ● | | ● | | |
| 13 | Compass Display (decorative) | | | | ● | | |
| 14 | Conservatory | | | | ● | | |
| 15 | Ecological Waterfront Restoration | ● | | | | | |
| 16 | Electric Street Car/Trolley line | ● | | | | | ● |
| 17 | Ferry Service | | | ● | | | ● |
| 18 | Flag Display | | ● | | | | |
| 19 | Freedom Festival | | ● | | ● | | |
| 20 | Freedom Tower | | | ● | | | |
| 21 | Garden Gallery | | | | ● | | ● |
| 22 | Hard Surface Plaza (serviced) | | | | ● | | |
| 23 | Heritage Parkland East of Marentette | ● | | | ● | | |
| 24 | Historical Displays/Re-enactments | ● | ● | | ● | | |
| 25 | Japanese Gardens | | ● | | ● | | |
| 26 | Jogging & Bike Paths | | | | | ● | ● |
| 27 | Langlois Water Intake Building (retain) | ● | | | | | |
| 28 | Marina | | | ● | ● | | ● |
| 29 | Marina (transient only) | | | ● | ● | | ● |
| 30 | Marine Museum | ● | ● | | ● | | |
| 31 | Offices | | | ● | | | |
| 32 | Ornamental Gardens | | ● | | ● | | |
| 33 | Parking Garage south of Riverside Drive | | | | | | ● |
| 34 | Pavilions | | | ● | | | |
| 35 | Pedestrian Conveyor | | | ● | | | ● |
| 36 | Pedestrian Linkage (boutique-lined) | | | ● | | | ● |
| 37 | Picnic Areas | | | | ● | | |
| 38 | Railway Museum | ● | ● | | ● | | |
| 39 | Reflecting Pond | | | | ● | | |
| 40 | Restaurants/Taverns | | | ● | | | |
| 41 | Shuttlebus Service | | | | | | ● |
| 42 | Skating Rink | | | | | ● | |
| 43 | Spirit of Windsor - turntable | ● | | | | | |
| 44 | Sports Complex | | | | | ● | |
| 45 | Steam Train Excursions | ● | | | ● | | ● |
| 46 | Swimming Pool | | | | | ● | |
| 47 | Tourist Information/Display Centre | | ● | | | | |
| 48 | Trade/Exhibition/Conference Centre | | | ● | | | |
| 49 | Train Depot Reconstruction | ● | | | | | |
| 50 | Watersculptures | | | | ● | | |
| 51 | Wave Pool | | | ● | | ● | |

## APPENDIX G: PROGRAMMING MATRICES

In the second phase of matrices the compatible programming for each of the six precincts established in the Terms of Reference were examined on the basis of:

*1) Sub-theme relationship to the given node* - in which fully inter-dependant resources were given 3 points, theme-related resources received 2 points, theme-enhancing resources were assessed 1 point and non-essential resources to that particular sub-theme were not awarded any points.

*2) Necessity to a waterfront location* - was equally assessed points.

*3) Significant as a heritage resource to that particular node* - was awarded on the criteria of establishing or re-establishing heritage objectives (People generator, Crossing Point and historical former use) in which if only one objective was met by the resource it was assessed 1 point, 2 points if two objectives were able to be met and 4 points if all three objectives were able to be achieved by that resource.

A bias on heritage significance was implemented to ensure that the culture and history of the DWW is retained and emphasized throughout the development in order to establish a foundation for a quality environment which prepares the site for a healthy community response.

This prioritization allowed for each of the resources to achieve a total mark of 10. If a resource was assessed a prioritization mark of 8 points or higher it was considered to be pertinent to the development of that node.

| HOTEL - TOURISM CONTEXTUAL RESOURCES | LOCAL POLICE SERVICES | TRADE-CONFERENCE CENTRE | CONVENTION / TOURISM BUREAU | GIFT SHOPPES | FULL SERVICE RESTAURANT | OUTDOOR CAFE | BOARDWALK NODE | LARGE SITTING AREA | WINTER SCULPTURE | ANGLING PIER | UNDERWATER AQUARIUM | BOAT RENTALS | FERRY DOCK | IN-WATER BOAT SHOWS | TRANSIENT MARINA | PADDLE BOAT RENTALS | RIVERFRONT EXCURSION DOCK | RIVERWALK | ART / SCULPTURE | ARTS & CRAFTS FAIRS | ELECTRIC STREET CAR STOP | OUTDOOR EXHIBIT SPACE | FOUNTAIN / WATER SCULPTURE | OBSERVATION TOWER | OBSERVATION DECK | PEDESTRIAN CONVEYOR | RICKSHAW RIDE NODE | CARRIAGE RIDE NODE | TOURIST INFORMATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HOTEL SUB-THEME | 1 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 1 | 2 | 2 | 1 | 0 | 2 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 3 |
| WATERFRONT RELATIONSHIP | 2 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 3 | 2 | 1 | 2 |
| HERITAGE RESOURCE | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 4 | 0 | 2 | 4 | 2 | 2 | 1 | 4 | 2 | 2 | 2 | 4 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 2 |
| TOTAL POINTS | 3 | 5 | 5 | 7 | 6 | 8 | 7 | 5 | 4 | 8 | 4 | 7 | 9 | 8 | 8 | 5 | 9 | 7 | 4 | 3 | 7 | 3 | 7 | 7 | 7 | 8 | 4 | 5 | 7 |

**Hotel Tourism Precinct Resource Matrix**

| GATEWAY/ COMMERCIAL CONTEXTUAL RESOURCES | GIFT SHOPPES | OUTDOOR CAFE | BOARDWALK NODE | REFLECTING POND | LARGE SITTING AREA | HOLIDAY LIGHT DISPLAY | ICE SKATING RINK | WINTER SCULPTURE | ANGLING PIER | FERRY DOCK | IN-WATER BOAT SHOWS | RIVERFRONT EXCURSION DOCK | RIVERWALK | ART / SCULPTURE | ARTS & CRAFTS FAIRS | CLOCK TOWER | ELECTRIC STREET CAR STOP | FOUNTAIN / WATER SCULPTURE | HISTORIC EXHIBIT SPACE | OBSERVATION TOWER | OBSERVATION DECK | PEDESTRIAN CONVEYOR | RICKSHAW RIDE NODE | CARRIAGE RIDE NODE | TOURIST INFORMATION | IMPROVISATIONAL STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GATEWAY SUB-THEME | 2 | 2 | 3 | 1 | 1 | 2 | 1 | 2 | 0 | 3 | 1 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 3 |
| WATERFRONT RELATIONSHIP | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 3 | 2 | 3 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 2 | 2 |
| HERITAGE RESOURCE | 4 | 4 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 4 | 2 | 4 | 2 | 1 | 2 | 4 | 4 | 0 | 4 | 2 | 4 | 4 | 1 | 2 | 2 | 2 |
| TOTAL POINTS | 8 | 8 | 7 | 3 | 3 | 4 | 4 | 3 | 3 | 10 | 5 | 10 | 8 | 3 | 4 | 8 | 8 | 3 | 8 | 7 | 7 | 10 | 4 | 5 | 7 | 7 |

**Commercial Centre and Gateway Precinct Matrix**

| CIVIC ESPLANADE CONTEXTUAL RESOURCES | CITY HALL | LOCAL POLICE SERVICES | TRADE CONFERENCE CENTRE | OUTDOOR CAFE | BOARDWALK NODE | ADVENTURE PLAYGROUND | LARGE SITTING AREA | HOLIDAY LIGHT DISPLAY | WINTER PLAYGROUND | WINTER SCULPTURE | ANGLING PIER | TROPICAL AQUARIUM | TOURING BOATS DOCK | FERRY DOCK | FLOATING RESTAURANT | MODEL BOAT RACING | RIVERWALK | SHIPPING INTERPRETIVES | ART / SCULPTURE | ARTS & CRAFTS FAIRS | AMPHITHEATRE | CLOCK TOWER | OUTDOOR EXHIBIT SPACE | FOUNTAIN / WATER SCULPTURE | FESTIVAL PLAZA | FORMAL GARDENS | INTERNATIONAL GARDENS | HISTORIC DISPLAYS / EXHIBITS | IMPROVISATIONAL STAGE | OBSERVATION TOWER | OBSERVATION DECK | PLANETARIUM | CARRIAGE RIDE NODE | TOURIST INFORMATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CIVIC SUB-THEME | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 1 | 2 | 3 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 |
| WATERFRONT RELATIONSHIP | 2 | 2 | 1 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 2 |
| HERITAGE RESOURCE | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 4 | 1 | 4 | 4 | 4 | 1 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 4 | 1 | 2 | 2 | 1 | 2 | 2 |
| TOTAL POINTS | 7 | 7 | 4 | 5 | 7 | 3 | 5 | 6 | 5 | 6 | 8 | 4 | 8 | 8 | 9 | 5 | 10 | 6 | 4 | 5 | 7 | 6 | 5 | 5 | 7 | 3 | 5 | 9 | 6 | 7 | 7 | 5 | 6 | 6 |

**Civic Esplanade Precinct Matrix**

| HISTORICAL WAREHOUSE DISTRICT CONTEXTUAL RESOURCES | BOAT MANUFACTURING | FREEDOM FESTIVAL ORGN. | MULTI-CULTURAL COMM. | LOCAL POLICE SERVICES | PROFESSIONAL OFFICES | CONVENTION / TOURISM BUREAU | CONDOMINIUM APARTMENTS | SENIOR APARTMENTS | GIFT SHOPPES | FAST FOOD RESTAURANT | FULL SERVICE RESTAURANT | OUTDOOR CAFE | TAVERNS / ENTERTAINMENT | BOARDWALK NODE | BICYCLE PATH NODE | LARGE SITTING AREA | WINTER SCULPTURE | ANGLING PIER | SHORELINE ANGLING | BOAT LAUNCH | TOURING BOAT DOCKS | BOAT RENTALS | IN-WATER BOAT SHOWS | FLOATING DANCE BARGE | FLOATING HOTEL | FLOATING MUSEUM | FLOATING RESTAURANT | FULL SERVICE MARINA | TRANSIENT MARINA | BAIT / TACKLE SHOP | BOAT CLUB | BOATING SUPPLIES | RIVERWALK | SHIPPING INTERPRETIVES | ART / SCULPTURE | ARTS & CRAFTS FAIRS | ELECTRIC STREET CAR STOP | OUTDOOR EXHIBIT SPACE | FARMERS' MARKET | HISTORIC DISPLAYS / EXHIBITS | HISTROIC INTERPRETIVE TRAIL | HISTORIC RECONSTRUCTIONS | IMPROVISATIONAL STAGE | COMMUNITY MUSEUM | OBSERVATION DECK | RICKSHAW RIDE NODE | CARRIAGE RIDE NODE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WAREHOUSE SUB-THEME | 2 | 1 | 0 | 1 | 3 | 2 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 3 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 2 | 1 | 3 | 2 | 2 | 3 |
| WATERFRONT RELATIONSHIP | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 |
| HERITAGE RESOURCE | 4 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 1 | 2 | 2 | 2 | 4 |
| TOTAL POINTS | 8 | 5 | 2 | 5 | 6 | 6 | 4 | 6 | 7 | 5 | 6 | 6 | 6 | 7 | 3 | 5 | 4 | 9 | 7 | 6 | 6 | 5 | 6 | 4 | 6 | 9 | 7 | 7 | 7 | 5 | 4 | 6 | 8 | 6 | 5 | 7 | 7 | 6 | 8 | 9 | 9 | 9 | 3 | 7 | 6 | 5 | 8 |

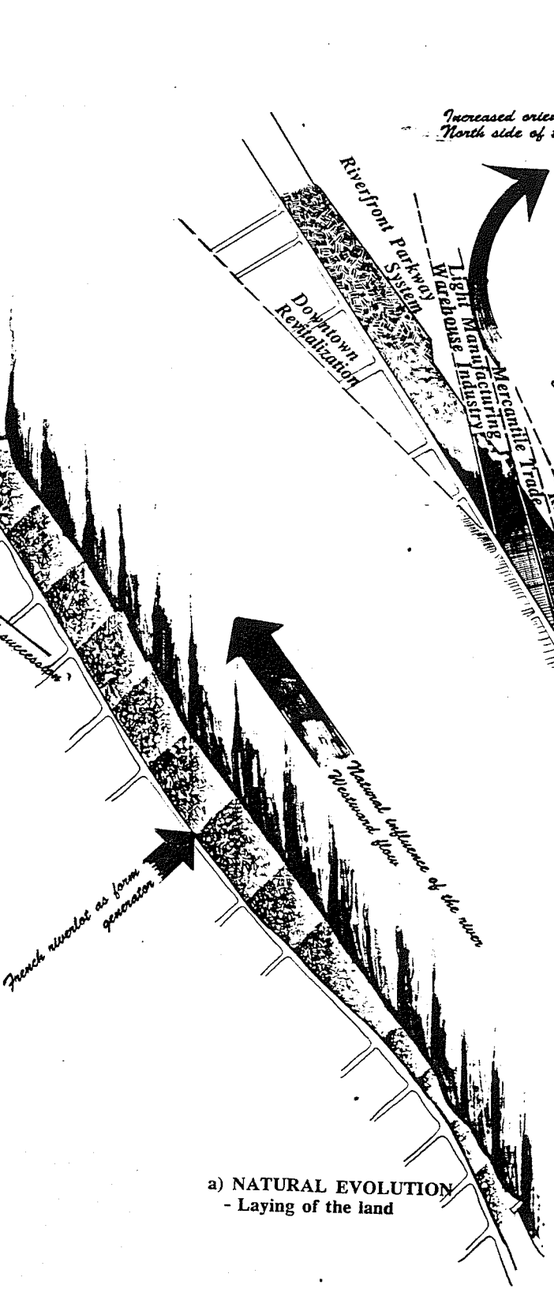
**Warehouse District Precinct Matrix**

| ROUNDHOUSE-RESIDENTIAL CONTEXTUAL RESOURCES | LOCAL POLICE SERVICES | TOWNHOUSES | FULL SERVICE RESTAURANT | OUTDOOR CAFE | BICYCLE PATH NODE | BOARDWALK NODE | INFORMAL PARKLAND | JOGGING PATH NODE | OPEN GREEN SPACE | OPEN PICNIC AREA | ADULT PLAYGROUND | ADVENTURE PLAYGROUND | LARGE SITTING AREA | SWIMMING POOL | ICE SKATING RINK | WINTER NATURE EXHIBITS | WINTER PLAYGROUND | ANGLING PIER | SHORELINE ANGLING | MODEL BOAT RACING | BAIT / TACKLE SHOP | RIVERWALK | HERITAGE PARKLAND | HISTORICAL RECONSTRUCTIONS | SPIRIT OF WINDSOR MONUMENT | OVERLOOK PARKING |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RESIDENTIAL SUB-THEME | 1 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 3 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 |
| WATERFRONT RELATIONSHIP | 2 | 1 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 |
| HERITAGE RESOURCE | 0 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 4 | 2 | 1 | 2 | 3 | 4 | 4 | 4 | 1 |
| TOTAL POINTS | 3 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 7 | 3 | 6 | 6 | 5 | 6 | 6 | 3 | 5 | 8 | 7 | 4 | 5 | 8 | 7 | 8 | 8 | 5 |

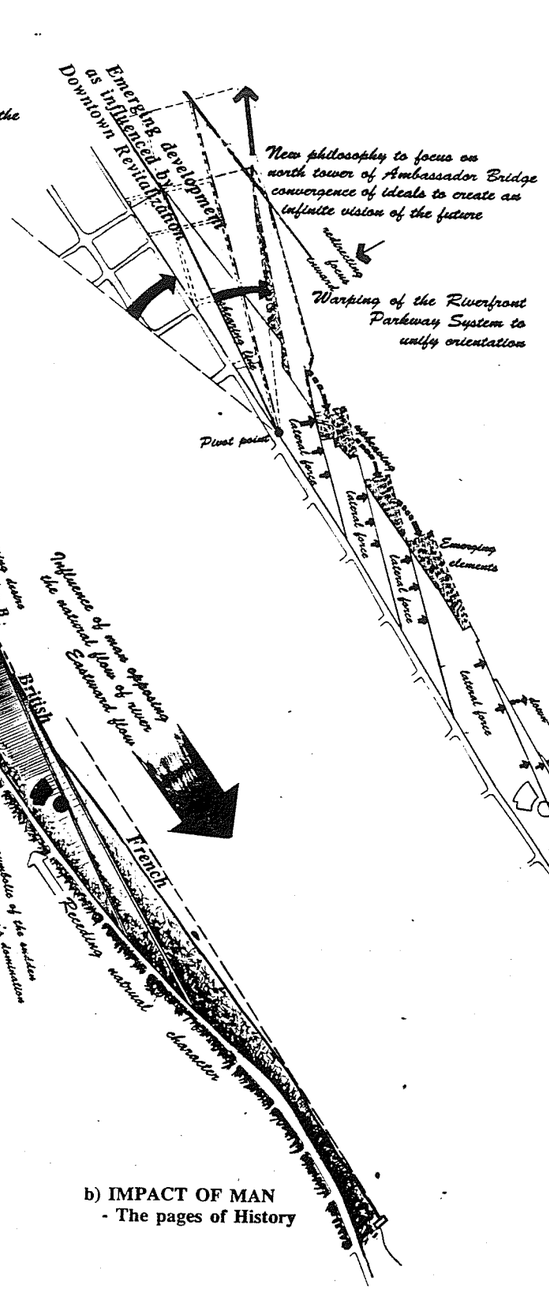
**Roundhouse - Residential Precinct Matrix**

| ARCHAEOLOGICAL DIG SITE - WALKERVILLE CONTEXTUAL RESOURCES | BOARDWALK NODE | BICYCLE PATH NODE | INDL. INTERPRETIVE CENTRE | INFORMAL PARKLAND | JOGGING PATH NODE | OPEN GREEN SPACE | OPEN PICNIC AREA | PICNIC PAVILLION | LARGE SITTING AREA | ICE SKATING RINK | WINTER NATURE EXHIBITS | SHORELINE ANGLING | FLOATING MUSEUM | PADDLE BOAT RENTALS | RIVERWALK | ART / SCULPTURE | ELECTRIC STREET CAR STOP | OUTDOOR EXHIBIT SPACE | FORMAL GARDENS | HERITAGE PARKLAND | HISTORIC DISPALYS / EXHIBITS | HISTORIC INTERPRETIVE TRAIL | HISTORIC RECONSTRUCTIONS | COMMUNITY MUSEUM | CARRIAGE RIDE NODE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HISTORICAL SUB-THEME | 3 | 3 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| WATERFRONT RELATIONSHIP | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| HERITAGE RESOURCE | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 4 |
| TOTAL POINTS | 7 | 7 | 6 | 7 | 5 | 6 | 4 | 6 | 6 | 5 | 4 | 6 | 9 | 6 | 8 | 5 | 8 | 6 | 5 | 7 | 7 | 7 | 7 | 9 | 7 | 8 |

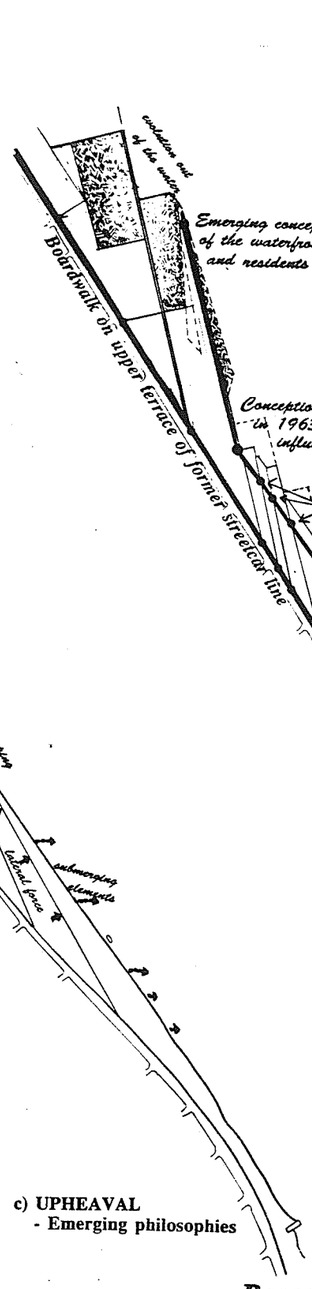
**Archaeological Dig Site - Historic Walkerville Precinct**



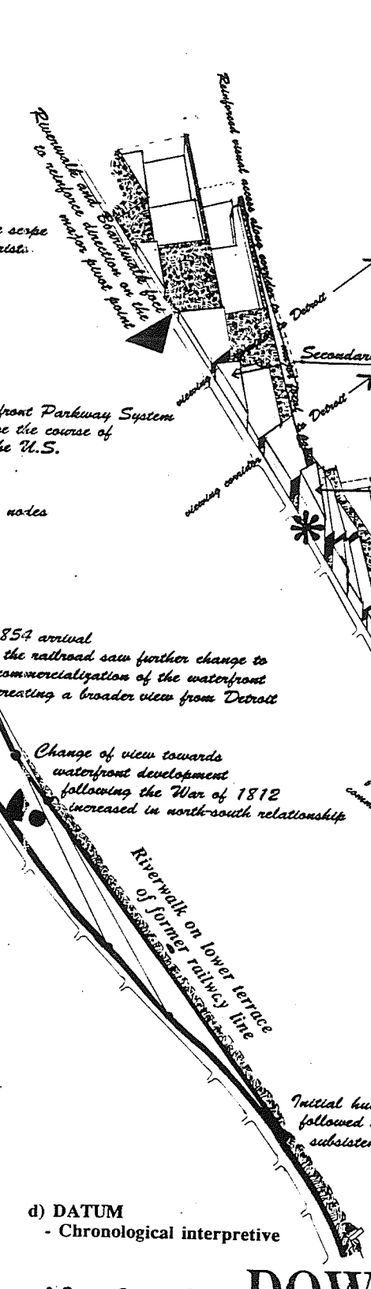

a) NATURAL EVOLUTION
- Laying of the land



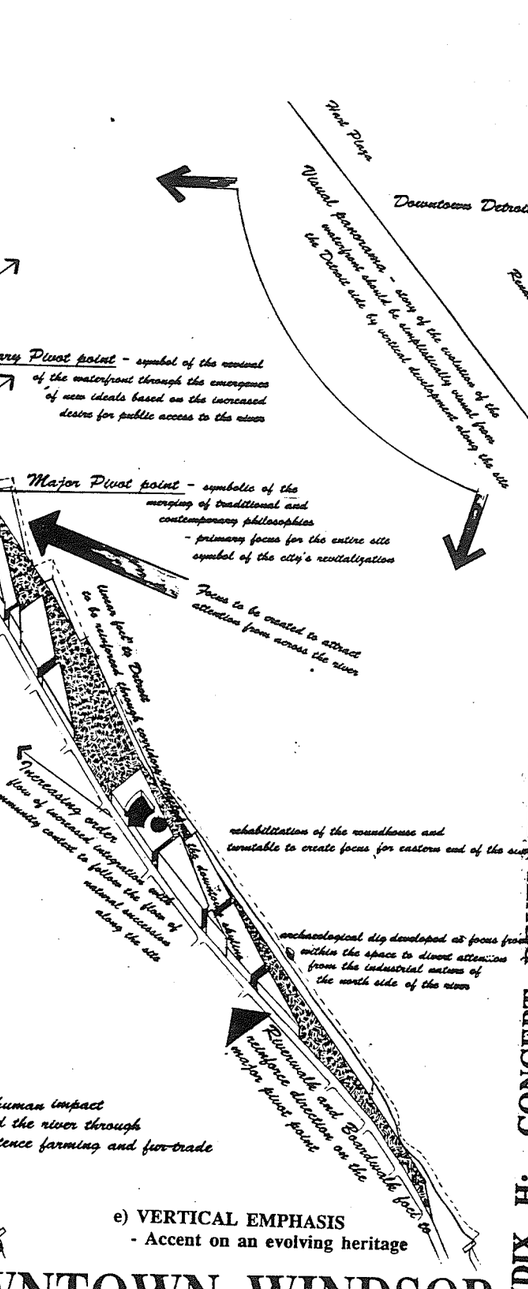

b) IMPACT OF MAN
- The pages of History




c) UPHEAVAL
- Emerging philosophies




d) DATUM
- Chronological interpretive

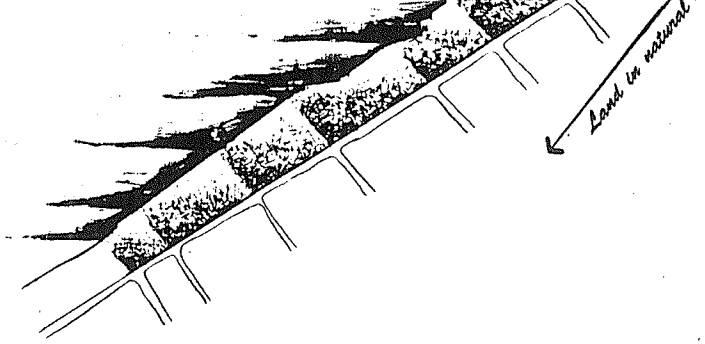



e) VERTICAL EMPHASIS
- Accent on an evolving heritage

*Reconnecting with the Core*

# DOWNTOWN WINDSOR WATERFRONT

APPENDIX H: CONCEPT DEVELOPMENT
A CROSSING POINT


Land in natural

# *BIBLIOGRAPHY*

## CHAPTER 1.0: INTRODUCTION

Ashton, Dr.John. Healthy Cities: Concepts & Visions. Liverpool: University of Liverpool for the Department of Health. 1988.

Atkinson, Maureen, and Williams, John. "Managing Downtown Revitalization." Urban Land, Vol.49, No.9, September 1990, pp.2-6.

Baltimore City Planning Department. The Baltimore Harbor. 1985.

Billing John C. "Baltimore's Past Harbors its Future." Landscape Architecture Vol.77:5, September/October 1987.pp.68-73.

Breen, A. and Rigby, D. eds. Keeping Waterfronts Distinctive: Choosing the Right Mix. Washington D.C.: Waterfront Press for The Waterfront Center, 1990.

_____and _____. Urban Waterfront, Accent on Access. Washington D.C.: Waterfront Press for The Waterfront Center, 1989.

_____and _____. Urban Waterfront '84, Toward New Horizons. Washington D.C.: Waterfront Press for The Waterfront Center, 1985.

_____and _____. Urban Waterfront '85, Water Makes a Difference. Washington D.C.: Waterfront Press for The Waterfront Center, 1986.

_____and _____. Urban Waterfront '86, Developing Diversity. Washington D.C.: Waterfront Press for The Waterfront Center, 1987.

_____and _____. Urban Waterfront '87, Water: The Ultimate Amenity. Washington D.C.: Waterfront Press for The Waterfront Center, 1988.

_____and _____. Waterfront Reference Book I. Washington D.C.: Waterfront Press Publications, 1990.

_____and _____. Waterfront Reference Book II. Washington D.C.: Waterfront Press Publications, 1991.

_____and _____. "Waterfronts Yesterday." Waterfront World, Summer 1991, pp.26-43.

_____and _____. "The Urban Waterfront Phenomenon." Waterfront World, Summer 1991, pp.7-14.

Brown, T.H.; Daniel, G.; and Thurow, C. Impact of the Great Lakes on the Region's\ Economy. Chicago: The Center for the Great Lakes. August, 1984.

Center for the Great Lakes. Water Works!. Chicago: by Author. June 1986.

Ford, Victor. et.al. Bicycle Use Development Study. For the City of Windsor. Toronto, Ont.: December, 1990, p.18.

Greenbie, Barrie B. Spaces: Dimensions of the Human Landscape. New Haven: Yale University Press, 1981.

Holtz Kay, Jane. "New Life for Public Spaces." Landscape Architecture, Vol.79, No.6, August 1989, pp.33-35.

Hough, Michael, and Barrett, Suzanne./ People and the City Landscapes. Toronto: Conservation Council of Ontario, 1987.

Kossak, Egbert. "Town by the Harbour." Daidalos (Berlin Architectural Journal), 1986, pp.14-31.

Krier, Rob. Urban Space. Foreword by Colin Rowe. London: Academy Editions, 1979; reprint ed., New York: Rizzoli International Publications Inc., 1979.

Laventhol and Horwath / Rethink Inc. Culture and Recreation Master Plan : Background Summary Report. For the City of Windsor. Windsor, Ont.: November 16, 1988.

Maclaren, James F, Ltd. Metro-Windsor Waterfront Study: Research Report. Vol.I, Part I. Essex, Ont.: Essex Region Conservation Authority.

_____. Metro-Windsor Waterfront Study: Research Report. Vol.I, Part II. Essex, Ont.: Essex Region Conservation Authority., December 1976.

_____. Metro-Windsor Waterfront Study: Waterfront Plan. Vol.II. Essex, Ont.: Essex Region Conservation Authority., May 1978.

McKenna, William. "Windsor Waterfront Presentation." Windsor: for the Canadian National Riverfront Lands Development Advisory Task Force, June 8, 1988.

Miller, Rob. "WBL Interview: Sergio Grando - Generalk Manager of the Convention and Visitors Bureau." Windsor Business Life, Vol.1, No 6, September/October 1990. pp.6-12.

Munro, Neil. "Canadian National Waterfront Development: Windsor, Ontario." Landscape Architectural Review, Vol.9; No.4, September 1988. pp.15-17.

Ontario Association of Architects. CAUSE (Community Assist for an Urban Study Effort): Downtown Windsor. Windsor, Ont.: Ontario Association of Architects, February 4, 1980.

Price Trevor. "The Riverfront: Do We Have the Necessary Resources for the Develpment." Windsor Business Life, Vol.1, No 3, March/April 1990. p.22.

_____. "Downtown: New Directions for the Core Area." Windsor Business Life, Vol.1, No 6, September/October 1990. p.14.

Province of Ontario. Ministry of Municipal Affairs, Community Planning Wing, Research and Special Projects Branch. Community Improvement Series. Vol. 4: Urban Waterfronts, Planning and Development. Toronto: Queens Printer for Ontario. April 1987

"The Canadian Healthy Communities Project." Challenge Change: The Newsletter of the Canadian Healthy Communities Project, Vol.1, No 1, January 1989. pp.1-4.

Whyte, William H. City: Rediscovering the Center. New York: Doubleday, 1988. reprint ed. Anchor Books, 1990.

Wylson, Anthony. Aquatecture: Architecture and Water. London: Architectural Press. 1986; reprint ed., New York: Van Nostrand Reinhold Co., 1986.

## CHAPTER 2.0: WATERFRONT PRECEDENTS

Breen, Ann, and Rigby, Dick, eds. "Waterfronts Yesterday." Waterfront World, Summer 1991, pp.26-43.

_____, and _____ eds. "The Urban Waterfront Phenomenon." Waterfront World, Summer 1991, pp.7-14.

Conrads, Ulrich. "Editorial." Daidalos (Berlin Architectural Journal), 1986, pp.13.

Kossak, Egbert. "Town by the Harbour." Daidalos (Berlin Architectural Journal), 1986, pp.14-31.

Lloyd, Seton, and Müller, Hans Wolfgang. Ancient Architecture. Milan: Electa Editrice, 1980; paperback ed., New York: Rizzoli International Publications Inc., 1986.

Moore, Charles W.; Mitchell, William J.; and Turnbull, William Jr. The Poetics of Gardens. Cambridge, Mass.: MIT Press. 1988.

Whyte, William H. City: Rediscovering the Center. New York: Doubleday, 1988. reprint ed. Anchor Books, 1990.

Wylson, Anthony. Aquatecture: Architecture and Water. London: Architectural Press. 1986; reprint ed., New York: Van Nostrand Reinhold Co., 1986.

## CHAPTER 3.0: EVOLUTION OF THE DWW

Cataraqui Archaeological research Foundation. "An Archaeological Assessment of the Windsor Riverfront Railway Lands." Vol.1 : Executive Summary. Kingston, Ont.: for the City of Windsor, August 10, 1990.

Cataraqui Archaeological research Foundation. "An Archaeological Assessment of the Windsor Riverfront Railway Lands." Vol.2 : Descriptive Report. Kingston, Ont.: for the City of Windsor, August 10, 1990.

Corporation of the City of Windsor. City Administrator's Office. Removal of the Railway Operations from the Canadian National Riverfront Lands. Council Minutes: May 24, 1988.

_____. City Administrator's Office. Waterfront Project 1990, Progress Report. January 18, 1991.

_____. City Clerk's Office. By-Law 8600; Bill No. 165/88, Council Minutes: June 6, 1988.

_____. City Clerk's Office. "C.N. Riverfront Lands Study." June 1983.

_____. City Clerk's Office. Resolution 1351/79, Council Minutes: December 10, 1979.

_____. City Clerk's Office. Resolution 290/80, Council Minutes: March, 1980.

_____. City Clerk's Office. Resolution 428/80, Council Minutes: December 13, 1980.

_____. City Clerk's Office. Resolution 1450/82, Council Minutes: December 13, 1982.

_____. City Clerk's Office. Resolution 883/83, Council Minutes: October 13, 1983.

_____. City Clerk's Office. Resolution M112-87, Council Minutes: October 13, 1987.

Essex County Tourist Association. Essex County Sketches. reprint ed. Introduction by H.J.Lassaline. Windsor, Ont.: Herald Press Ltd., 1954.

Gillham, Skip. Ten Tales of the Great Lakes. St. Catherines, Ont.: Stonehouse Publications, 1989.

Hoskins, Ronald G. C.N.Riverfront Lands: A Historical Survey 1749-1955. Windsor, Ont.: University of Windsor Press, September 1989.

Lajeunesse, Ernest J. The Windsor Border Region. Toronto: University of Toronto Press, 1960.

Morrison, Neil F. Garden Gateway to Canada. Foreword by Fred Landon. Windsor, Ont.: Herald Press Ltd. for the Essex County Historical Association, 1954.

Ontario Association of Architects. CAUSE (Community Assist for an Urban Study Effort): Downtown Windsor. Windsor, Ont.: Ontario Association of Architects, February 4, 1980.

Pegg, Arthur P. Fur Trade to Farmstead: A History of Renewable Resources in the Essex Region 1750-1900. Essex, Ontario: Essex Region Conservation Authority, 1986.

Plant , Al. The Story of the Great Lakes Prehistoric Sites and Their People. Foreword by E. Leonard Kroon. 2nd ed. Windsor Ontario: Standard Printing, 1983.

Riverfront Lands Development Advisory Task Force (Windsor, Ont.). Minutes of Meetings, 1988 - 1990.

Vandall, Paul E. ed. Atlas of Essex County. Windsor, Ont.: University of Windsor Press for Essex County Historical Association, 1965.

Woodford, Arthur M. and Woodford, Frank B. All Our Yesterdays: A brief History of Detroit. Detroit: Wayne State University Press. 1969; Canadian ed., Toronto: Copp Clarke Publishing Co., 1969.

Windsor Star. A subsidiary of Southam Press. Duration of April 20, 1988 to present.

## CHAPTER 4.0: SITE INVENTORY

Ashworth, William. The Late Great Lakes: An Environmental History. New York: Alfred A. Knopf, Inc. 1986; reprint ed., Detroit: Wayne State University Press, 1987.

Bell, Spike. Picture Windsor. St. Clair Beach, Ontario: Profile Publishing Corp. 1989.

Benson , Robert. "Motor City Banks on the River." Inland Architect, September/October 1986.pp.40-46.

Brotto, Monica and Halberstadt, Alan. "Hot Beds, Cold Market." In Business: Windsor, Vol.1, No 8, January 1990. pp.8-18.

City of Detroit. Planning Department. "City of Detroit Planning Policy - Article 403, Detroit Riverfront Area." 1989.

_____. Recreation Department. "Detroit's Riverfront Recreation Planning Kit." August 1982.

Corporation of the City of Windsor. City Clerk's Office. Resolution 1012/88, Council Minutes: July 18, 1988.

_____. City Clerk's Office. Resolution M78-88, Council Minutes: August 2, 1988.

_____. Commissioner of Planning. "Riverfront Land Use." March 7, 1988.

_____. Department of Parks and Recreation. "Inventory of Marinas - Windsor and Essex County." Essex Region Conservation Authority, 1986.

_____. "Amendment No.82 to the Official Plan of the City of Windsor Planning Area (Central Planning District) secondary Plan." June 1985.

_____. Department of Planning. "City Owned Properties on the South Side of Riverside Drive - McDougall to Pierre." Interdepartmental memo, Fall 1987.

_____. Department of Planning. "Riverside Drive Study: McDougall to Chilver." May 1988.

_____. Department of Planning. "Riverside Drive Study McDougall to Chilver." Map Appendix, May 1988.

EDAW. Windsor Waterfront Park. May 24, 1991.

Government of Canada, Laws, Statutes, etc. Canada Water Act. R.S., c. 5 (1st Supp.), s.1., ch.C-11.

_____. Navigable Waters Protection Act. R.S., c.193, s.1., ch.N-19.

Halberstadt, Alan. "Downtown Fights Back." In Business: Windsor, Vol.1, No 11, April 1990. pp.18-23 and 46-47.

Heweston, Alan. "Let's Talk About Downtown's Future." Windsor Business Life, Vol.1, No 3, March/April 1990. pp.16-20.

Higuchi, Tadahiko. The Visual and Spatial Structure of Landscape. Translated by Charles S. Terry. Tokyo: Ginodo Publishing Co. Ltd., 1975; paperback ed., cambridge Mass.: MIT Press, 1988.

Jakle, John A. The Visual Elements of the Landscape. Amherst: University of Massachusettes Press. 1987.

Lockhart, Robert S., Luthanen, Ethel M., and Wilkinson, Paul F. The Joy of Winter: Winter in Ontario's Urban Parks. for the Province of Ontario. Ministry of Culture and Recreation, Special Services Branch.Toronto: Queens Printer for Ontario. 1981

Maclaren, James F, Ltd. Metro-Windsor Waterfront Study: Waterfront Plan. Vol.II. Essex, Ont.: Essex Region Conservation Authority., May 1978

Ontario Association of Architects. CAUSE: Downtown Windsor. For the Chamber of Commerce, Windsor, February 1980.

Province of Ontario. Ministry of Municipal Affairs, Community Planning Wing, Research and Special Projects Branch. Community Improvement Series. Vol. 4: Urban Waterfronts, Planning and Development. Toronto: Queens Printer for Ontario. April 1987

_____. Ministry of Tourism and Recreation, Tourism Research Section. U.S. Pleasure Travel Market: Ontario Potential. Toronto: Queens Printer for Ontario. May 1986.

Schervish, Vogel , Merz PC, Architects and Landscape Architects. Linked Riverfront Parks Project. prepared for the City of Detroit, Recreation Department. Detroit: August, 1982.

United States, Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service. Detroit River, Lake St. Clair, St. Clair River. 9th ed., Washington D.C.: by Author March, 1985.

## CHAPTER 5.0: PROGRAMMATIC REQUIREMENTS

Brown, Lauren. The Audubon Society Nature Guides. Grasslands. New York: Alfred A Knopf, Inc., 1985.

Burden, Ernest. Entourage , A Tracing File. New York: McGraw-Hill Book Co., 1981.

Byrd, Warren T.Jr. "Re-Creation to Recreation." Landscape Architecture, Vol.79, No.1, January 1989, pp.42-51.

Chamberlain, W. Clinton J. Marinas: recommendations for Design, Construction and Management. Chicago: 3rd. ed. National Marine Manufacturers Association. 1983.

Cohn, Roger. "Square Deals, The Public is Invited." Landscape Architecture, Vol.79, No.6, August 1989, pp.55-60.

Corporation of the City of Windsor. City Clerk's Office. Public Submissions. Riverfront Lands Development Task Force Forum, September 28, 1988.

_____. Commissioner of Parks and Recreation. "Idea for the waterfront Development." May 2, 1988.

Flemming, Ronald Lee; and Van Tscharner, Renata. Place Makers. Cambridge, Mass.: The Townscape Institute, 1981. reprint ed. Orlando: Harcourt Brace Jovanovich, Pub., 1987.

Government of Ontario, Laws, Statutes, etc. Historical Parks Act, 1982. 335/81, ch. 199, Regulation 498, 1980, reg.334/81.

Harris, Cyril M., and Knudsen, Vern O. Acoustical Designing in Architecture. American Institute of Physics for the Acoustical Society of America, 1978.

Higuchi, Tadahiko. The Visual and Spatial Structure of Landscape. Translated by Charles S. Terry. Tokyo: Ginodo Publishing Co. Ltd., 1975; paperback ed., cambridge Mass.: MIT Press, 1988.

Jakle, John A. The Visual Elements of the Landscape. Amherst: University of Massachusettes Press. 1987.

LAForum. "Botanical Basics." Landscape Architecture, Vol.79, No.1, January 1989, pp.69-74.

_____. "Duplicators or Deceivers." Landscape Architecture, Vol.80, No.5, May 1990, pp.54-56.

_____. "Plaza Puzzle." Landscape Architecture, Vol.79, No.6, August 1989, pp.63-67.

_____. "The Poetry is in the Water's Edge." Landscape Architecture, ed. by J. William Thompson. Vol.81, No.2, February 1991, pp.54-57.

Nightingale, Geoff. "The Case for a Downtown Windsor Transient Marina." Waterline. August 1991, 10-11.

Province of Ontario. Ministry of Municipal Affairs, Community Planning Wing, Research and Special Projects Branch. Community Improvement Series. Vol. 4: Urban Waterfronts, Planning and Development. Toronto: Queens Printer for Ontario. April 1987.

_____. Community Improvement Series. Vol. 5: Design Guidelines, Highway Commercial Areas. Toronto: Queens Printer for Ontario. April 1988.

Searns, Robert. " Festival Centres Overview." Denver: Urban Edges. 1989.

Sutton, Ann, and Sutton Myron. The Audubon Society Nature Guides. Eastern Forests. New York: Alfred A Knopf, Inc., 1986.

J. William Thompson. "Waterfront Park." Landscape Architecture, Vol.81, No.2, February 1991, pp.44-47.

The Waterfront Center. Caution: Working Waterfront - The Impact of Change on Marine Enterprises. Washington D.C.: Waterfront Press Publications, 1985.

_____. Fishing Piers: What Cities can Do. Washington D.C.: Waterfront Press Publications, 1986.

Walters, Judy. " Stanley Park, Emerald Oasis." Landmark, March 1989, pp.4-10 & 46.

## GENERAL RESOURCES

Bergquist, Sidney R., Ph.D. New Webster's Dictioonary of the English Language. Melrose Park, IL: Delair Publishing Co., 1975; modern desk ed., Delair Publishing Co., 1988.

Jellicoe, G.; Jellicoe, S.; Goode, P.; and Landcaster, M. The Oxford Companion to Gardens. New York: Oxford Press, 1986.

Laird, Charlton. Webster's New World Thesaurus. New York: Warner Books, 1974.

Longyear, Marie M., ed.. The McGraw-Hill Style Manual. New York: McGraw-Hill Book Company, 1989.

Morrow, Baker H. A Dictionary of Landscape Architecture. Albuquerque: University of New Mexico Press, 1987.

Turabian, Kate L. A Manual for Writers of Term Papers, Theses, and Dissertaions. 4th ed. Chicago: University of Chicago Press, 1973.