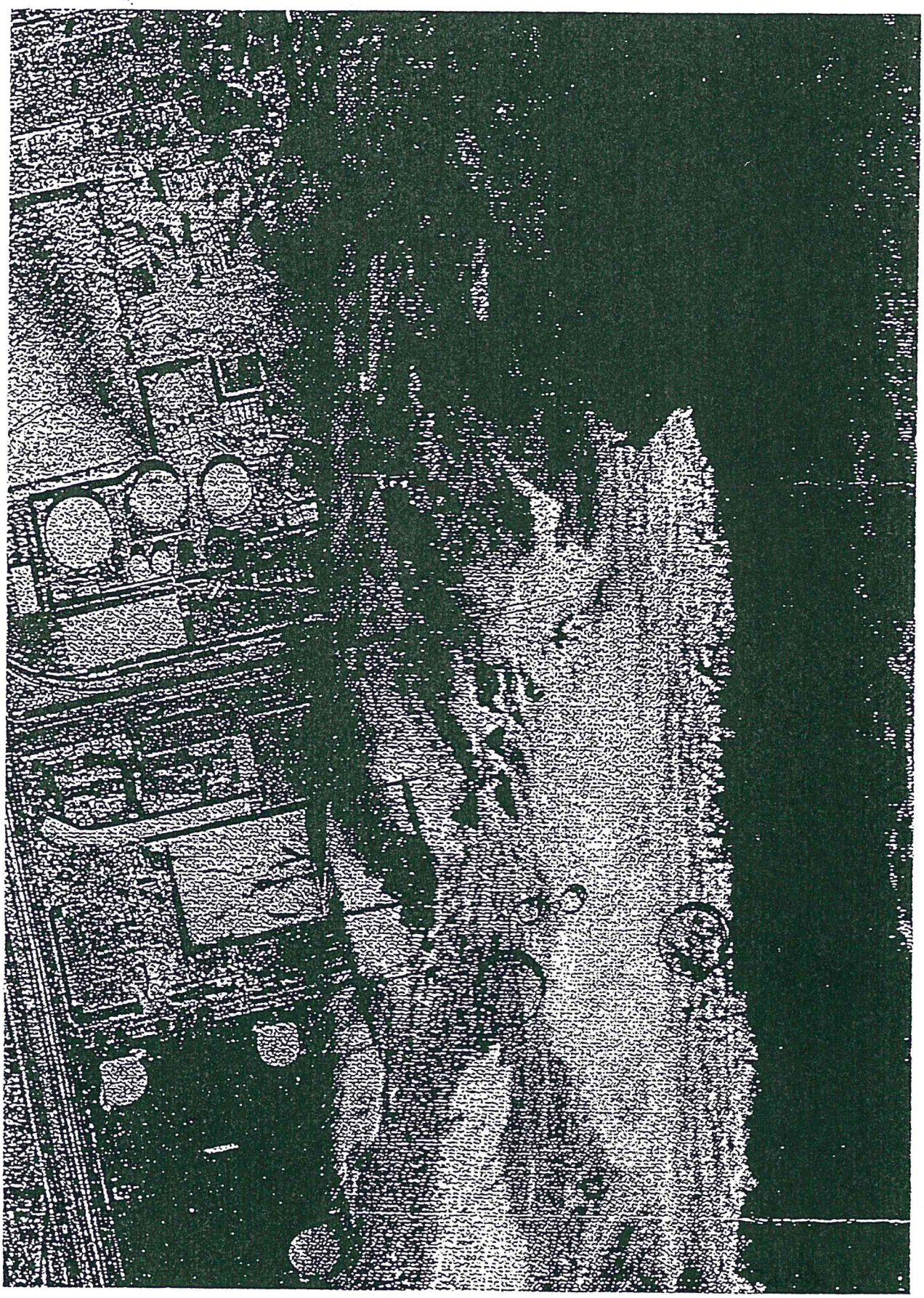


■ THE RAIC SYLLABUS ARCHITECTURAL DESIGN THESIS

This Thesis is for submission to the Royal Architectural Institute of Canada Syllabus Program **(R.A.I.C. Syllabus)** as the final prerequisite towards completion of the program and for reception of the Diploma in Architecture (Dipl. Arch).

The RAIC Syllabus Thesis, is described in the "Thesis Study Guide" as "the demonstration of a theoretical position in architectural terms. It involves the establishment of a philosophical argument concerning the nature of building and the development of a design solution which exemplifies and substantiates the proposition. The Thesis is not just the development of a competent design solution to a complex problem."

This thesis is concerned with celebrating the city and with the goal of making the city a qualitative force in our lives. I explore the thesis on two scales. Firstly, on a very general level, in an effort to learn about its general applications, followed by a site specific exploration which tests the thesis at a particular site.

■ ACKNOWLEDGMENTS

This project is the culmination of eight years of part time study while employed by the offices of Clarke Darling Downey Architects, Robin Clarke Architect and The Toronto Dominion Bank Architects Department. There have been many people who have supported and assisted me throughout the syllabus and this project.

I begin by thanking my wife Diane, and my children Alexander and Christopher. I would also like to thank Harry Behan, Walter Bettio, Harry Christakis, Robin Clarke, Bob Cliffe, Victor and Aldora DaCunha, Ian Dance, Armindo DeFreitas, Elene Ftohogiannis, Marcelo Graca, Micheal Grey, Allan Killin, Robert King, Jim MacEwan, Pauline Manousos, W.R. Milne, Laszlo Nemeth, Alex Nitsis, Marta Pawlowski, Eric Pederson, Gabriela Radulescu, Rod Rowbotham, Jack Weinburg, Ida Weinburg.

■ ORGANIZATION OF THIS BOOK

In this book I will:

1. State what I feel is important to architecture. This provides a context for the thesis.

2. State the thesis.

3. Provide examples which illustrate the thesis and which serve as inspiration for further site specific thesis exploration.

4. Study the city and the thesis site, in order to understand the dynamics of the city. This brief study may also inform the further site specific thesis exploration.

5. Explore the thesis at a particular site with a specific architectural program.

6. Draw conclusions about the thesis. The conclusion are both site specific and general in nature, indicating possible applications at other locations elsewhere.

1

THESIS

This chapter provides a personal, cultural and architectural context for the thesis. It defines the main terminology and concepts that are relevant to the thesis and used throughout this study.

This chapter also presents the thesis statement and the vehicle for the exploration of the thesis, which form the basis of the work in general and the site specific exploration in CHAPTER 4.

▪ CONTEXT FOR THE THESIS

This thesis is the result of many personal interests in architecture and urban design (From this point on, I will refer to architecture and urban design as architecture). However, it is primarily driven by my pursuit of architecture that is **meaningful**, **representational**, **experiential** and **tactile**. I believe that architecture must have **character** of detail and character of space derived from **craftsmanship** and a holistic view of architecture.

When architecture has these qualities it is a powerful and qualitative force in our lives which contributes to the **public spaces** and **rituals** of **public life** and the **architectural culture** of the city. I am also interested in **"edges"** and boundaries in architecture and what I will later refer to, and define as, the **"representational edges"**.

▪ Meaning And Representation

In our effort to understand our relationships to the things that we live with, we enter into dialogues with them. We engage nature, the landscape and the materials that come from the earth. Through art, science and religion we clarify and represent our relationships. Architecture is part of this continuum. It is representational of our relationships, it symbolizes and even mimics nature and the cosmos.

Architecture is **meaningful** to us when it is **representational** of our beliefs, hierarchies and relationships to mankind, our bodies, society, nature, the landscape, culture, institutions, myth, ritual, our work and history.

Since architecture is a representation of how we work and how we relate to the landscape, its meaning is related to craftsmanship and the character with which we endow architecture. The more we understand our relationships, the more our representations become celebrated and endowed with character. A character that only the craftsman can attain.

▪ Craftsmanship

I admire architecture that is well built and has a character derived from the care of the **artisan/craftsman** rather than the commercial profiteer. I see the acts of building and designing as **spiritual** and **poetic** acts. They are represention of our relationships, not merely slapping mortar and bricks together or drawing up plans. Building and construction are a sensitive dialogue between humanity and the landscape. Dr. Joseph Bronowski describes this tradition in his book "The Ascent of Man".

" From an early time man has made tools by working the stone. Sometimes the stone had a natural grain, sometimes the toolmaker created the lines of cleavage by learning how to strike the stone... and from that simple beginning man prise open into the nature of things and uncovers the laws that structure dictates and reveals...it becomes an instrument of discovery and pleasure together, in which the tool transcends its immediate use and enters into and reveals the qualities and forms that lie hidden within the material."[1]

Bronowski describes science as a result of the analytic action of man's hand searching for some inner truth or structure. However, man is also creating a tool, giving the stone shape, he is relating it to the size of his hand. He describes an artisan coming to know the stone, developing kinship with it, engaging the environment beyond exploitation for survival and profit. Here care, passion, and striving for beauty and harmony are the standards by which man creates this well crafted object.

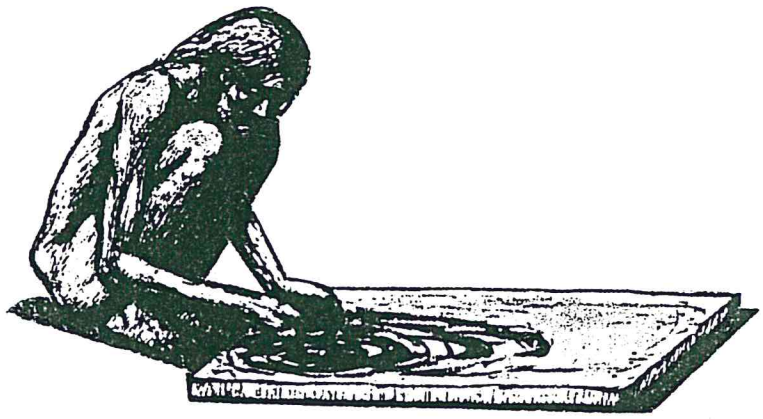


Fig. 1.1 – The artisan at work.

▪ Character

The character of architecture is derived from the dialogue between the natural character of a "place" informed by its topography, weather and vegetation – what Christian Norberg–Shultz calls "genius loci"/"spirit of a place",[2] and the character which we as "craftsmen" endow architecture – a character resulting from scale, proportion, detail, colour, spatial structure and texture.

Character of space, texture and detail is important in the city because it is what we remember about the city. There are some elements of the city however, which we remember more than others and which we remember as having more character than others. Kevin Lynch tells us that we particularly remember the character of elements such as edges, nodes, paths, landmarks and districts. These elements are points of interest or foci that stand out in the city. Our image of the city as a whole is made up of all of these memorable elements. They make it legible and meaningful in our lives. Lynch defines **nodes** as,

"...the strategic spots in a city into which an observer can enter and which are the intensive foci to which and from which he is travelling. They may be ... a crossing or convergence of paths, moments of shift from one structure to another. Or nodes may be simply concentrations, which gain their importance from being a condensation of some use or physical character, as a street corner hangout or an enclosed square." [3]

landmarks as,

"...another type of point reference, but in this case the observer does not enter them they are external. They are usually a rather simply defined physical object. building, sign, store, or mountain." [4]

and **edges** as,

" ...boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, walls. They are lateral references rather than coordinate axes. Such edges may be barriers, more or less penetrable, which close one region off from another; or they may be seams, lines along which two regions are related and joined together." [5]

▪ The Edges Of The City

"**Edges**" are interesting to me. Edges like Fifth Avenue (Fig. 1.2) are powerful and memorable elements in the city. We as observers, perceive them from amongst the greater context of the city. Edges are **boundaries, mediators** and **thresholds** which clarify and establish hierarchies such as public and private, city and country. They are an event which enable us to perceive when we cross from one place into another. Robert Venturi writes about the significance of the wall as an edge and as an event in architecture,

"Since the inside is different from the outside, the wall – the point of change–becomes an architectural event. Architecture occurs at the meeting of interior and exterior forces of use and space...Architecture as the wall between the inside and outside becomes the spatial record of this resolution and its drama. And by recognizing the difference between the inside and outside, architecture opens the door to a urbanistic point of view." [6]

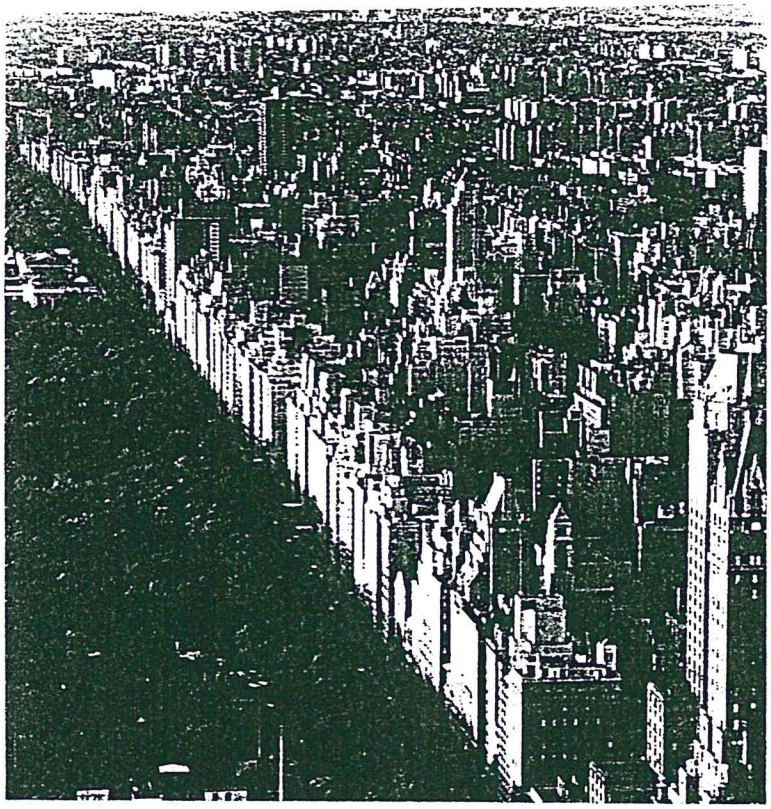


Fig. 1.2 – The powerful and memorable edge/facade of Fifth Avenue in New York.

Edges are also the **faces** or facades of the city. The walls that once encircled the city were the face of that city. They also form the streets and squares and give them their character. They are to the city what the **facade** is to an individual building, or what our faces are to our bodies – they are locations of communication, that figuratively speak to us. Roger Scruton writes about this notion in the "Aesthetics of Architecture",

"The facade is the face of the building: it is what 'stands' before us; it wears the 'expression' of the whole." [7]

Fig. 1.3 – City Wall, Island of Giglio. The wall strongly demarcates this settlement.

▪ Edges Today

Today city walls do not exist. Powerful edges like the facade of Fifth Avenue in New York, or Michigan Avenue in Chicago are rare and they rarely "characterize" or wear the face of the city. The concentration of building facades that create edges, has given way to empty lots and urban sprawl (Refer to "**The Contemporary City Of Functional Zoning**").

Can the benefits of edges be achieved in other ways, without relying totally on edges?

Can we have **representational edges** in the city ?

▪ The Representational Edges Of The City

Cities consist of urban fabric, made up of buildings, monuments and public open spaces such as squares, parks and streets. These elements exist as parts of the public and private realms, and at various scales. Some buildings and public open spaces of course are more important than others. There are elements of the city that we even remember more than others. For example, the palace, the church, the town hall, the court house and the market are obviously more important and memorable elements than the private house and its backyard.

Important **monuments** and **public open spaces** in a city are generally found and placed at **significant locations**, or they may become significant over time. These locations may be of historical importance or natural, ecological, cultural, institutional, and contextual significance. They may also exist where there are visible shifts in the structure or patterns of the city, at natural edges, at significant crossroads or paths, at perceptual gateways, at important view corridors and view terminations.

When we **mark** and **celebrate** these locations by enriching the architecture, with spatial, textural and material character, we create and enhance these locations as **locations of interest** or **focal points** in the city. These focal points punctuate the fabric of the city and become **perceived** and **engraved** in our **memory**. They can establish a structure for future urban infill. (Refer to L'Enfant's plan for Washington in CHAPTER 2) They particularly help make the city more legible, understandable and meaningful to us, because they have the potential to **represent** the city as a whole. I call these locations the **representational edges** of the city.

The representational edges may be edges, but are not necessarily edges. They may be a single monumental building with a cultural and contextual significance in the city, such as Union Station or Toronto City Hall. They may be an ensemble of buildings or a district such as the St. George Campus of The University of Toronto, or monuments such as The Princess Gates and the CN Tower, or a public open public space such as Nathan Phillips Square and Queens Park which are strong nodes in the fabric of the city. (I will list more examples in Chapter Two)

Whichever the type or form, I call them representational edges because like edges, they are objectifiable, whether we enter them or see them as objects, we perceive them amongst a more opaque and mundane context.

They capture our attention, orient us, define an event, and act as **thresholds** or **gateways**, giving us a sense of arriving someplace. Also, like edges, they have the qualities of a **face,** a face with a particular **character** which figuratively speaks to us wearing a meaningful expression in the context and culture of the city that we remember.

Together representational edges may imply an edge and form urban structure. But more importantly, they form a figurative **overall picture** of the city in our minds, even when a whole instantaneous picture does not exist. Because the vast contemporary city is divided into smaller more identifiable and memorable pieces, the spirit, character and structure of the city is understood and enjoyed.

A particularly memorable and potent image of the city is possible when we imbue the representational edges in the city with a repetitive architectural character or when we arrange a limited number of topological or thematic elements as representational edge throughout the city.

The historical city wall that I mentioned earlier, was an example of a real edge. But what also made it a representational edge was its meaning. It was like a landmark that symbolized a beacon of civilization in the vast landscape. It was a node which we could enter and find refuge in.

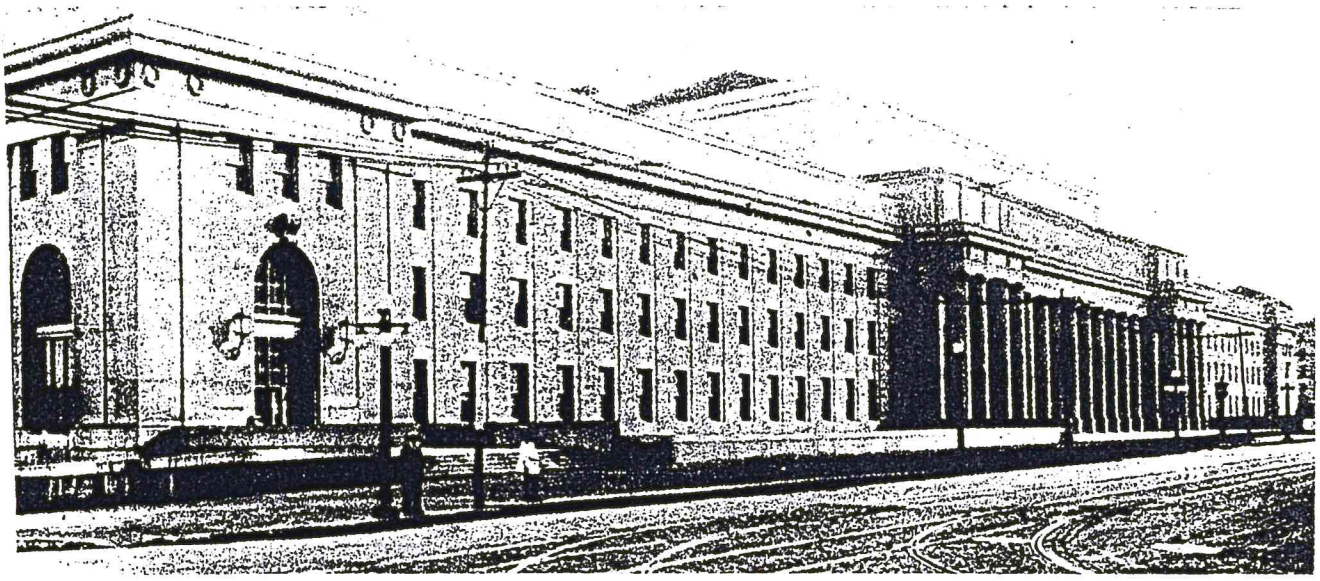


Fig. 1.4 – Union Station, Toronto. A gateway into the heart of the city.

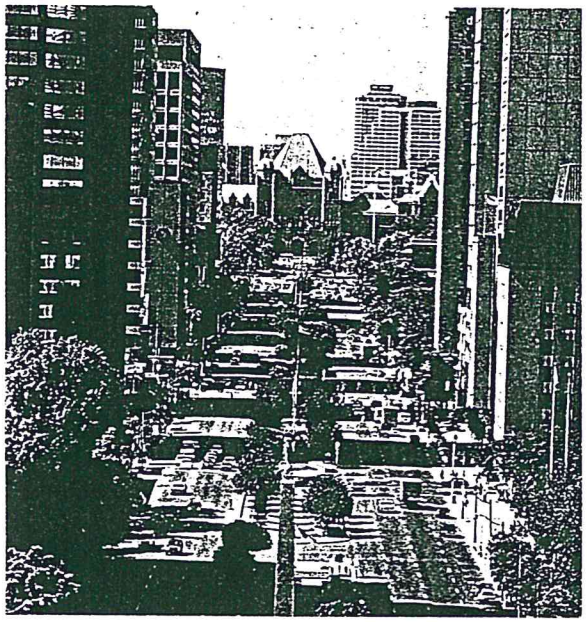


Fig. 1.5 – The vista to Queens Park, Toronto

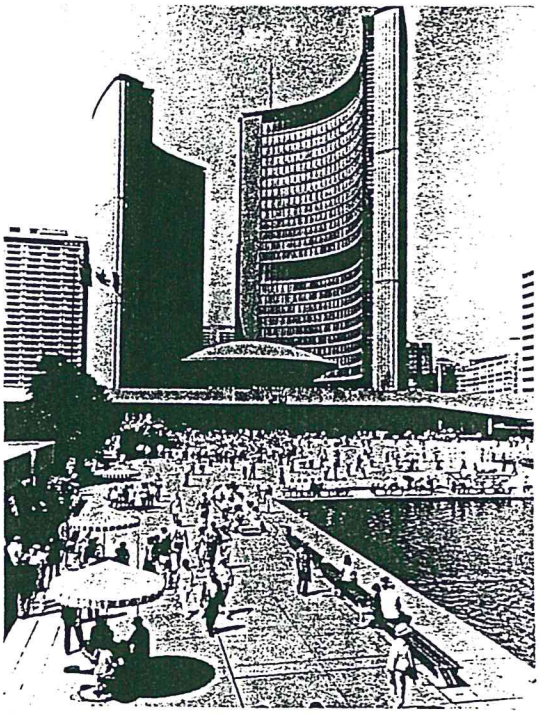


Fig. 1.6 – Nathan Phillips Square, Toronto

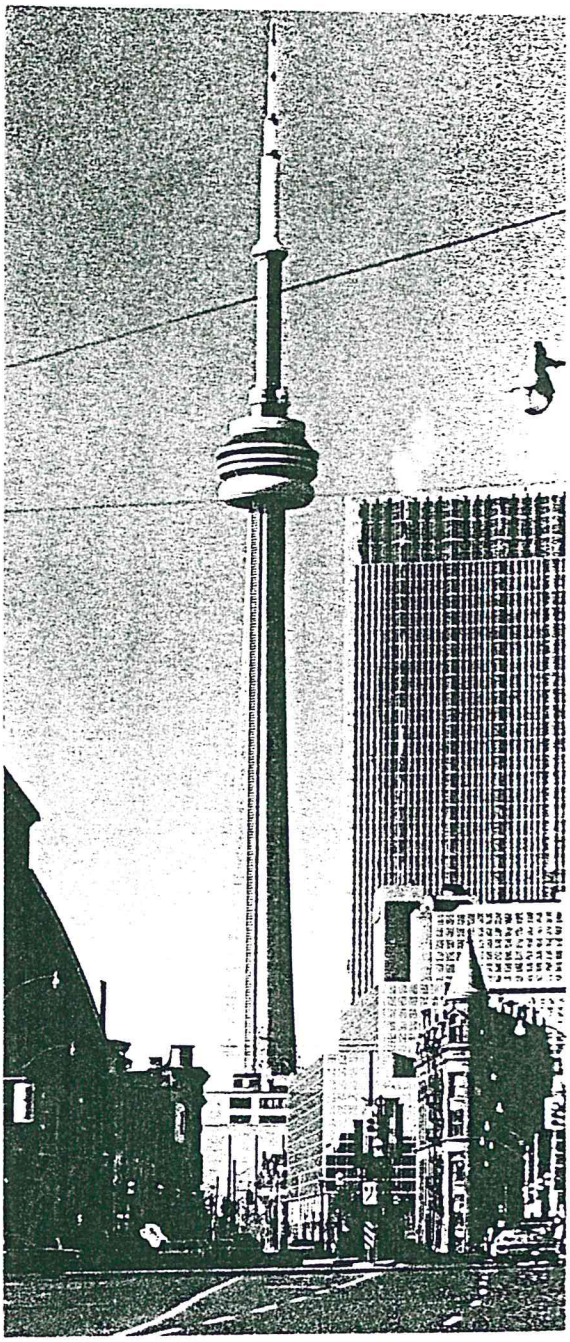
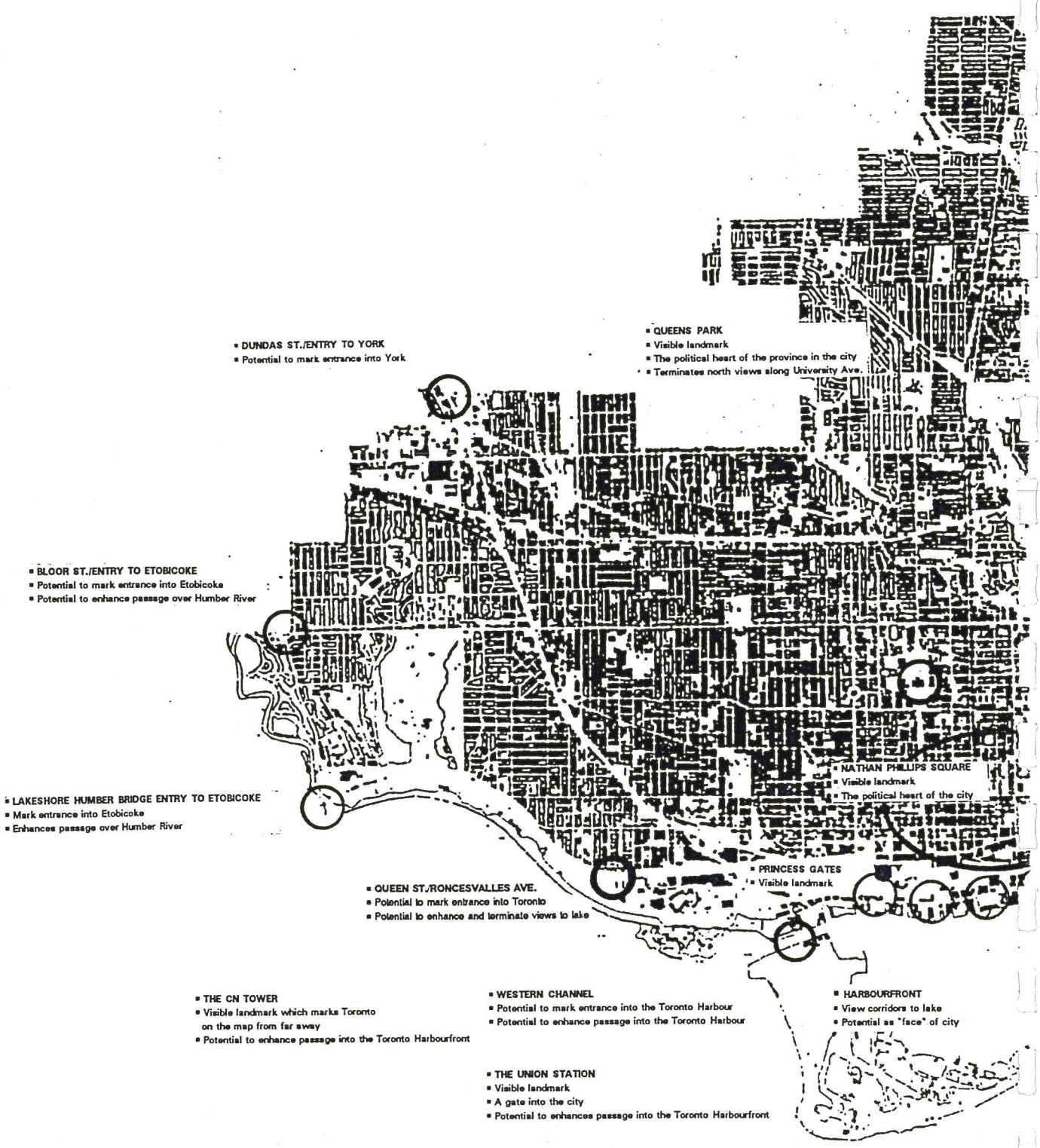


Fig. 1.7 – CN Tower, Toronto


▪ DUNDAS ST./ENTRY TO YORK
▪ Potential to mark entrance into York
▪ QUEENS PARK
▪ Visible landmark
▪ The political heart of the province in the city
▪ Terminates north views along University Ave.
▪ BLOOR ST./ENTRY TO ETOBICOKE
▪ Potential to mark entrance into Etobicoke
▪ Potential to enhance passage over Humber River
▪ LAKESHORE HUMBER BRIDGE ENTRY TO ETOBICOKE
▪ Mark entrance into Etobicoke
▪ Enhances passage over Humber River
▪ NATHAN PHILLIPS SQUARE
▪ Visible landmark
▪ The political heart of the city
▪ PRINCESS GATES
▪ Visible landmark
▪ QUEEN ST./RONCESVALLES AVE.
▪ Potential to mark entrance into Toronto
▪ Potential to enhance and terminate views to lake
▪ THE CN TOWER
▪ Visible landmark which marks Toronto on the map from far away
▪ Potential to enhance passage into the Toronto Harbourfront
▪ WESTERN CHANNEL
▪ Potential to mark entrance into the Toronto Harbour
▪ Potential to enhance passage into the Toronto Harbour
▪ HARBOURFRONT
▪ View corridors to lake
▪ Potential as "face" of city
▪ THE UNION STATION
▪ Visible landmark
▪ A gate into the city
▪ Potential to enhances passage into the Toronto Harbourfront

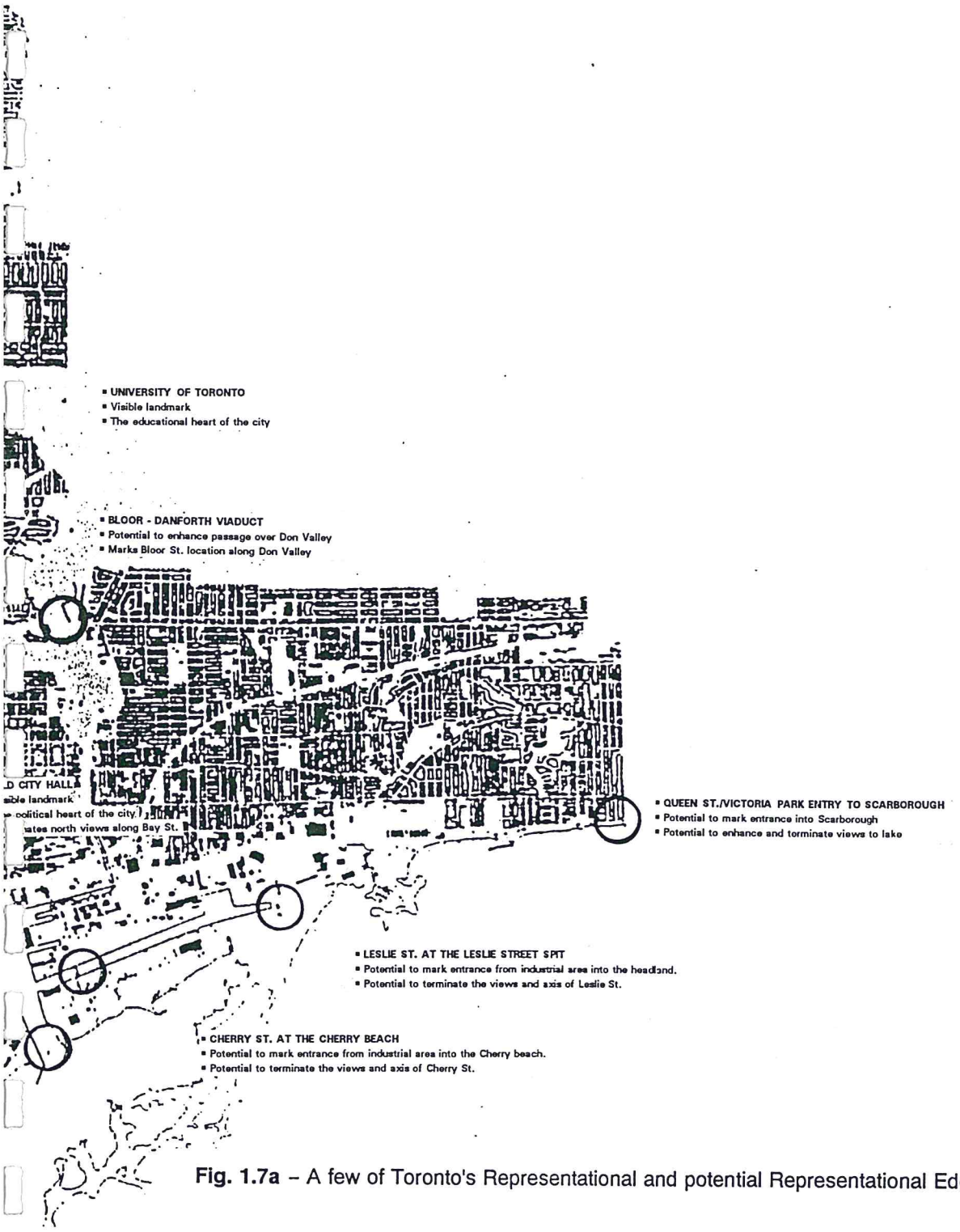


Fig. 1.7a – A few of Toronto's Representational and potential Representational Edges.

▪ Scale of the Representational Edges

The representational edge exists at many scales. The main concern of this study are those at the scale of the city, however, it is important to note that they occur at international, national, regional and metropolitan scales, as well as at the scale of the neighbourhood and even that of the individual building.

The Rock of Gibraltar and The Statue of Liberty are examples of representational edges at international scales. They **punctuate** specific important locations on the globe, marking them as gateways to very different worlds. They also **represent** the very different meaning and cultures of those worlds. The Statue of Liberty to many people represents the leaving an old world behind and entering a new one full of hope and optimism. Such examples act just like an edge or a boundary even if a real edge or a real boundary does not exist.

These two examples are part of a list which may include The Great Wall of China, St. Peter's Basilica, The Brandenbourg Gate and Checkpoint Charlie. In Toronto examples of representational edges might include The Bloor Danforth Viaduct, Queens Park, Nathan Phillips Square, and the Princess Gates. I shall list other examples later on in Chapter Two.

Fig. 1.8 – The Statue of Liberty in New York. It is a boundary between oppression and freedom.

▪ The Contemporary City of Functional Zoning (The City Which Lacks Representational Edges)

The contemporary city of functional zoning, is the antithesis of the architectural values or qualities that I have mentioned earlier. It is a sprawling conurbation of suburbs, highways and single use sites. It is deteriorating into a banal, scaleless, and illegible place. **It lacks representational edges.**

This has become particularly apparent at the many significant sites that were left as holes in the fabric of the city by the **industrial exploitation** of the nineteenth century, and the neglect of a greedy and expedient consumer society, primarily driven by market considerations.

Today the artisanal culture of building a city has all but disappeared. Today we build with profit in mind first. Our dependence upon mass produced goods as well as an ever–increasing interface with the technologies of mass production and mass communication has all but extinguished our will and ability to engage our surroundings and shape it in any meaningful way.

There are those that even suggest that the age of mass communications has made edges and representational edges obsolete because we live in an electronically interconnected world where boundaries really do not exist. Paul Virilio in his essay "The Overexposed City" describes this:

"Since men first began using enclosures, the notion of what an enclosure is has undergone transformations which concern both facade and what it faces, its vis–a–vis... The question of access to the city then should be asked in a new way: Does a greater metropolis still have a facade?... If the metropolis still Occupies a Geographical position, it no longer corresponds to the old division between city and country, nor the opposition between centre and periphery...The representation of the contemporary city is no longer determined by a ceremonial opening of gates , by a ritual of processions and parades, nor by a succession of streets and avenues. From now on, urban architecture must deal with the advent of technological "space time", the access protocol of telematics replaces that of the doorway" [8]

There is definitely a problem. The question is however, can something be done? **I believe that we can do something.**

▪ Toronto As A Contemporary City

Toronto, like many other North American cities and contemporary cities in general, finds itself facing many of the predicaments that I have just mentioned.

In Toronto, many places are the result of accidental fortune and misfortune rather than good urban design and city planning. Toronto according to Robert Fulford is an "Accidental City"[9]. He reminds us that many of the places that we have come to regard as important in the city, such as City Hall and Nathan Phillips Square, came about less through design than by political wrangling.

In Toronto we find many locations that could help make the city more memorable and legible. However, they are in a state of architectural confusion. The **Don** and the **Humber Rivers** are the two main rivers in the city. Yet unlike London, Paris or Rome, whose rivers play an important role in the architectural and cultural life of the city, these rivers are the backyards of Toronto and as such they do not have a great dialogue with the architectural and public life of the city. For instance, the architecture along these rivers has the potential to act as gateways, but seldom does.

Toronto is also a city that faces a lake. However does it really face the lake? Do we know where the city begins? Is it at the Lakeshore? Or is it at the Gardiner Expressway?

The Industrial sectors of Toronto are also problematic. They are the remnants of industrial expansion, treated in a utilitarian, non civic character. The railway yards/lines, for example, cut through the heart of the city interrupting street patterns and neighbourhoods, making no effort to repair or celebrate this juncture.

Toronto is also surrounded by suburbs. However, how many of us know when we have entered Scarborough or Etobicoke from Toronto? Similarly, is the trip to the Toronto Island celebrated by much more than a small ferry terminal which is hard to get to and locate in the first place?

▪ Can Something Be Done ?

I believe that something can and must be done. We have to **restore** the city. We still walk, drive, and experience our city. Regardless of the proponents of "World Wide Web", we do not sit with our virtual reality glasses, at our computers experiencing life. We are still participators in the life of the city. Though admittedly, the gateways may be changing, we must strive to give our cities **character**, **structure** and **meaning** and not to find ourselves the servants of our creations as Simone Weil describes:

> Human history is simply the history of the servitude that makes men – oppressors and oppressed alike – the plaything of the instruments of domination they themselves have manufactured, and thus reduces living humanity to being the chattel of inanimate chattels. [10]

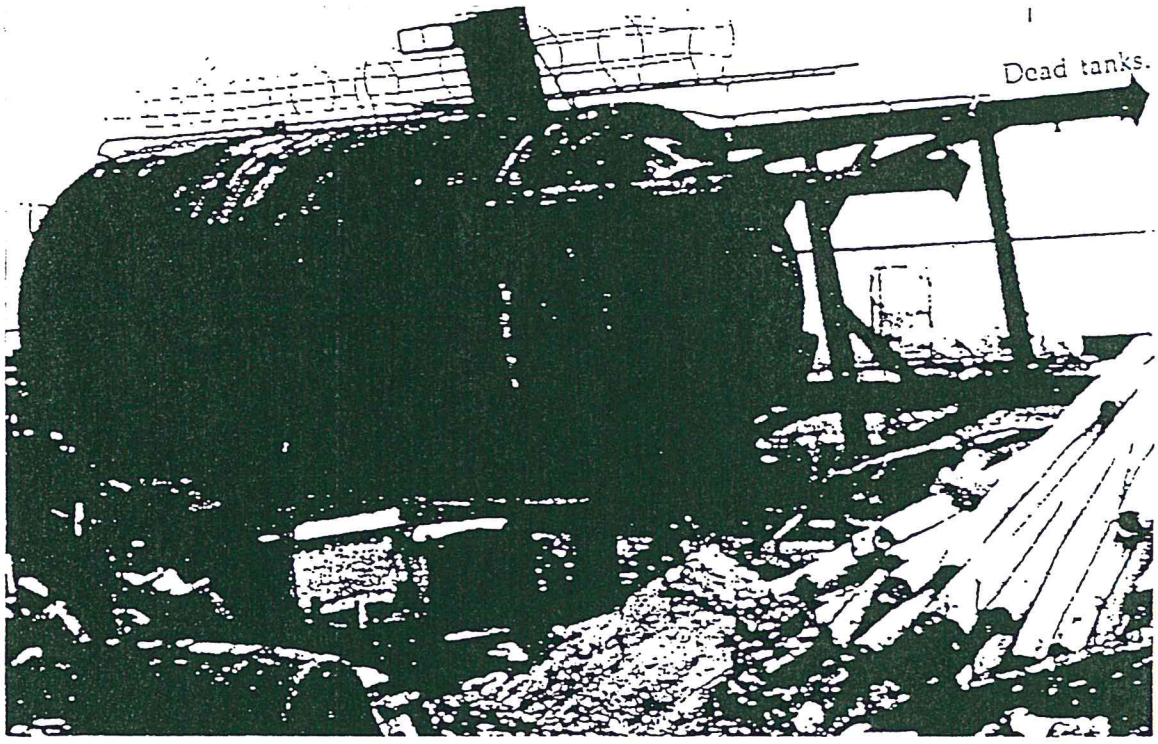


Fig. 1.9 – An industrial urban wasteland, Port of Toronto Industrial Area, near thesis site.

Observing that something must be done to guide the city away from its path to deterioration leads me to my thesis.

▪ THESIS STATEMENT

Representational edges of the city must be established and recaptured. The character of the city as a whole can be represented and enhanced by these individual focal points or loci of interest which punctuate and support the fabric of the city. The representational edges must be particularly recaptured at neglected and empty sites of historical, ecological, and contextual significance and at the places where the city changes character such as where the industrial meets the natural. By establishing identifiable boundaries, spatial hierarchies, and celebrating thresholds, which are informed by the context, spirit, materiality and texture of the landscape, the representational edges will help unify the urban fabric, and render the city more legible, memorable and meaningful.

Fig. 1.10 – Thesis site in the context of the city.

▪ VEHICLE FOR EXPLORATION OF THE THESIS

Where Toronto's Eastern Headland, also known as the "Leslie Street Spit", comes into contact with the Port of Toronto Industrial area, we encounter an area of metropolitan and regional significance. The headland, which at one time was intended for Port of Toronto use as part of an outer harbour, has become a park and a wildlife sanctuary. It is now a place of ecological and natural significance.

It is an area where we depart and enter the city. It is also disturbingly characteristic of the many places where industry's toxicity and nature collide and fuse into a vacant and derelict no-mans land. Here we do not observe clear hierarchies or threshold between the landscapes. At this location, like many others of a similar nature, we do not realize when we pass from on area into the other. Here one would ask, **Where am I? What is this place? What have we done here? Where do I go from here?** We see what Paul Virilio describes in his essay, "The Overexposed City".

"Thus, differences between positions begin to blur, resulting in unavoidable fusion and confusion. Deprived of objective limits the architectonic elements begin to drift, to float in an electronic ether devoid of spatial dimensions..." [11]

The thesis will be explored at this site. An "**interpretive centre**" will mark and **celebrate** the passage from city to the headland. It will become a representational edge. The interpretive centre will appropriately be informed by the industrial and ecological character of the area. It will be an informational and cultural centre providing leadership, and promoting environmental awareness of the fragile coexistence between city and nature.

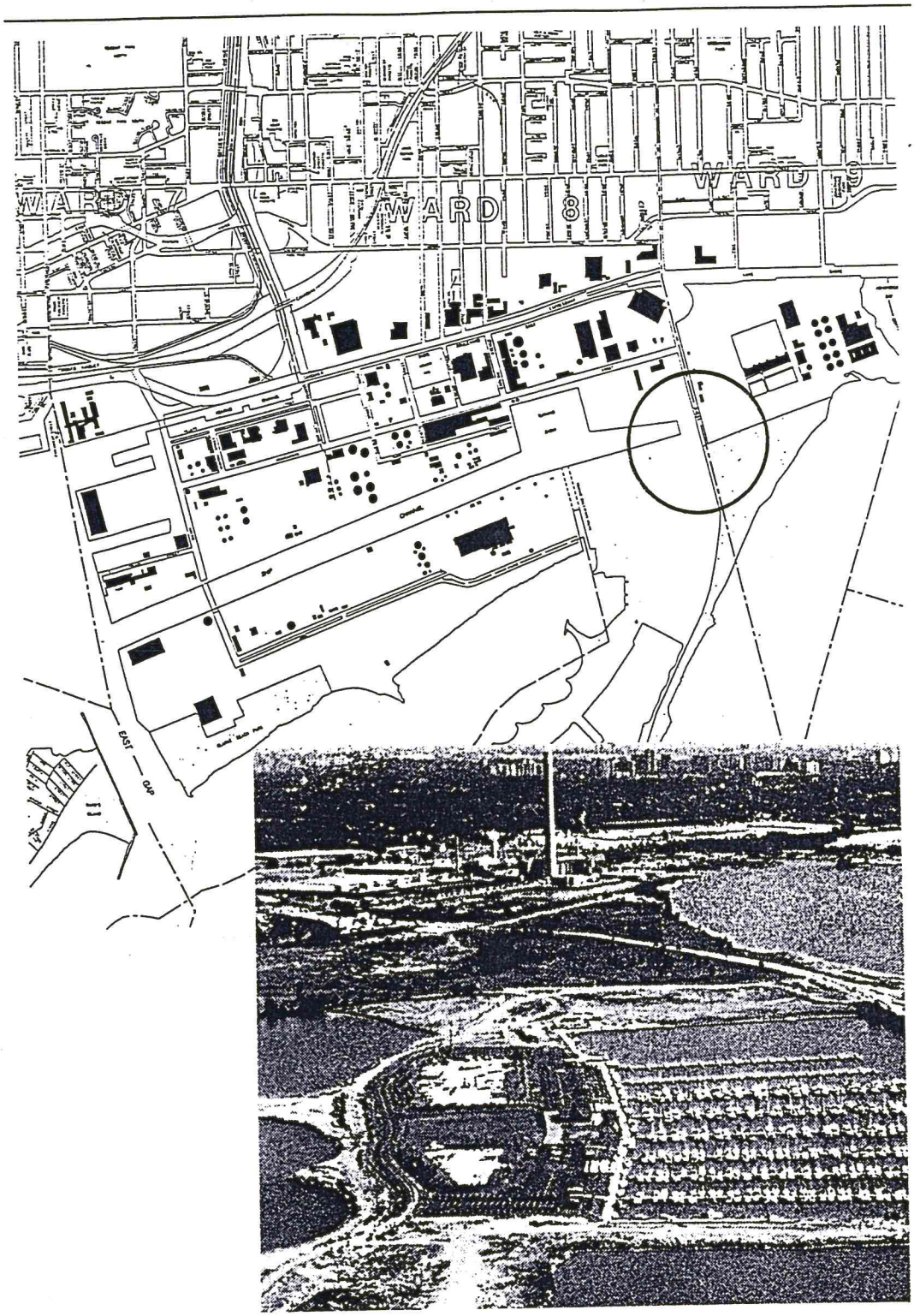


Fig. 1.11 – 1.12 – The thesis site, Port of Toronto Industrial Area.

2

THE REPRESENTATIONAL EDGE

This chapter provides examples and examines the elements that make the representational edge. The examples will inform and provide inspiration for the thesis exploration in CHAPTER 4.

▪ MONUMENTS AND PUBLIC OPEN SPACES AS REPRESENTATIONAL EDGES

Monuments and **public open spaces** can be representational edges. Monuments can be buildings, public art, signs and public works projects. Cities may also have natural monuments such as hills, mountains, and escarpments.

Public open spaces such as streets, squares, market places, and courts, parks and gardens can also be representational edges. Rem Koolhas suggests that the public open spaces will play a great role in the contemporary city. He says that,

" the built is uncontrollable. It is subjected to a maelstrom of political, financial, and cultural forces. The voids between buildings, however, are a subject for which architectural absolutes are still convincing... " [1]

Monuments and public open spaces can be representational edges because they can mark a significant location and enable us to perceive it against the rest of the city fabric. They can also symbolize or represent the spirit of the city as a whole. As such they are a unifying phenomena, culturally and architecturally.

▪ MONUMENTS

▪ Buildings

Examples of significant Buildings are: The Duomo – Florence, St. Peter's Basilica – Vatican, Lincoln Monument, Capitol Hill – Washington DC, Coliseum – Rome, The Louvre –Paris, Eiffel Tower – Paris, Checkpoint Charlie – Berlin, Toronto's Union Station, Toronto City Hall, Toronto Old City Hall, CN Tower, Upper Canada College, University of Toronto, St. Lawrence Hall, Queens Park.

■ Public Art

Examples of significant Public Art are: The Trevi Fountain – Rome, The Arch de Triomphe – Paris, The Statue of Liberty – New York City, The Washington Monument, St. Louis Arch, CCA Garden – Montreal, CNE Princess Gates – Toronto, CNE Dufferin Street Arch – Toronto.

Public art often celebrates a particular location, an important event, or important people, though however, public art can also be a folly. Public art can mark a location, act as a focal point, form a gateway, frame views or terminate important axes. Triumphal Arches, Garden Installations/Pavilions, Murals, Sculpture, and Reflecting Pools may be considered public art.

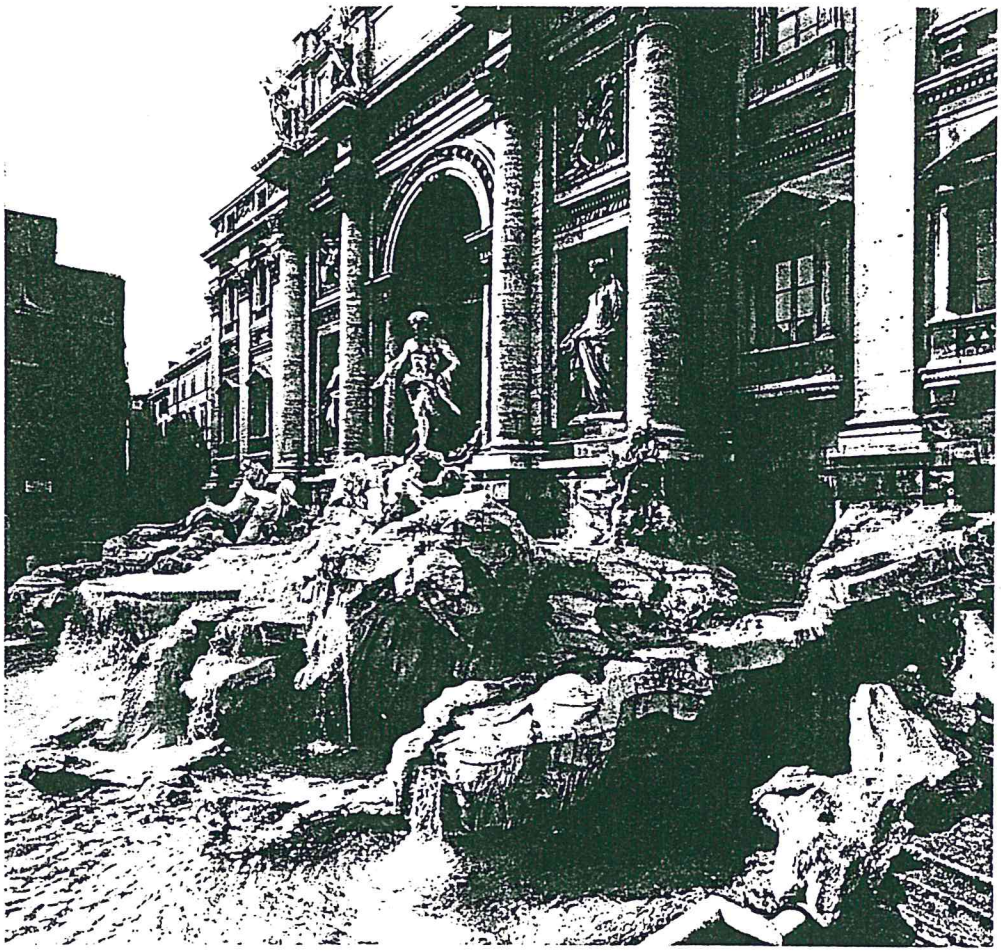


Fig. 2.1 – The Trevi Fountain, Rome.

▪ Other Examples of Public Art

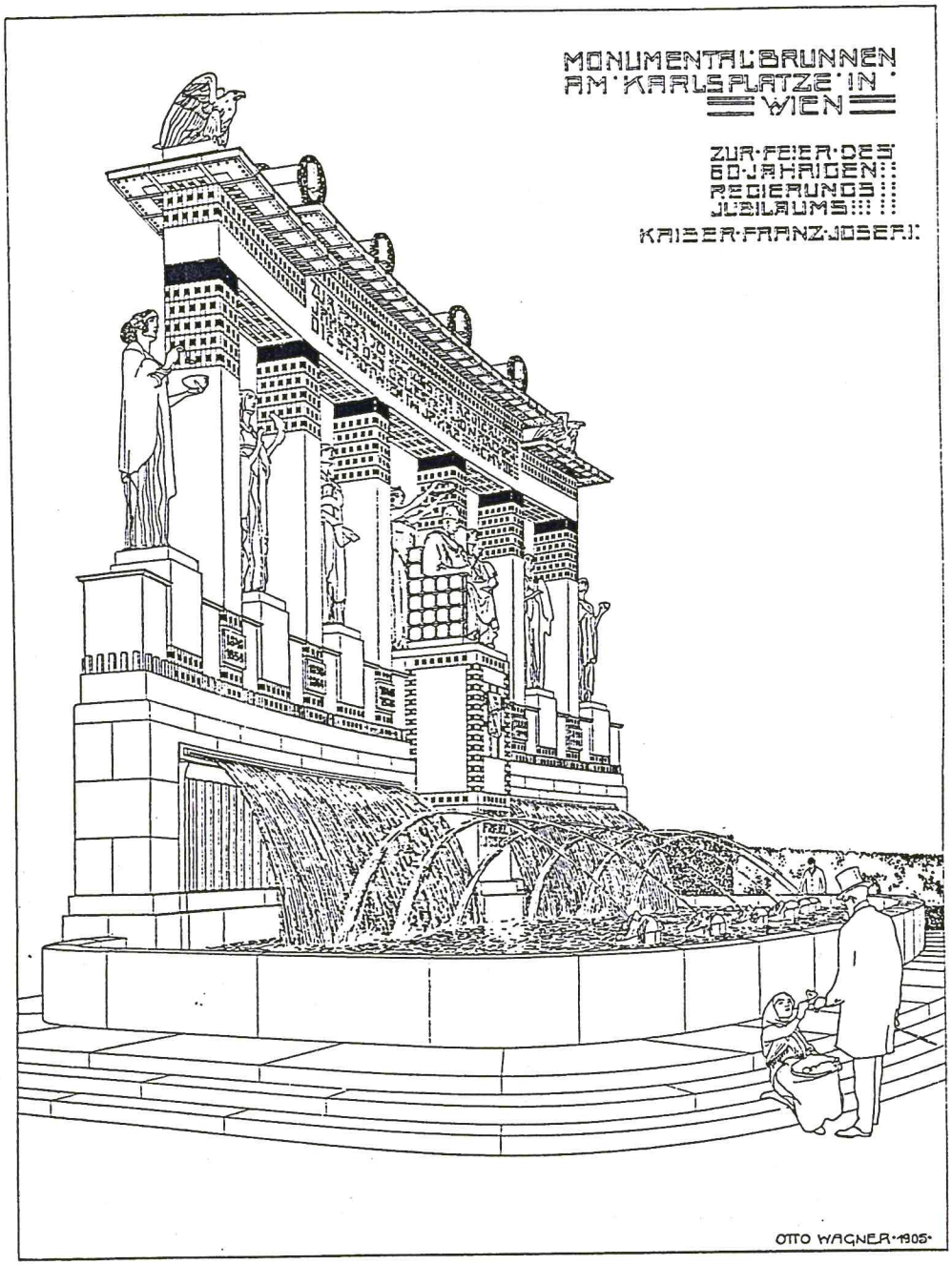


Fig. 2.2 – Monumental Fountain, Vienna – Otto Wagner. He validates the importance of this location with a sense of detail and formal authority.

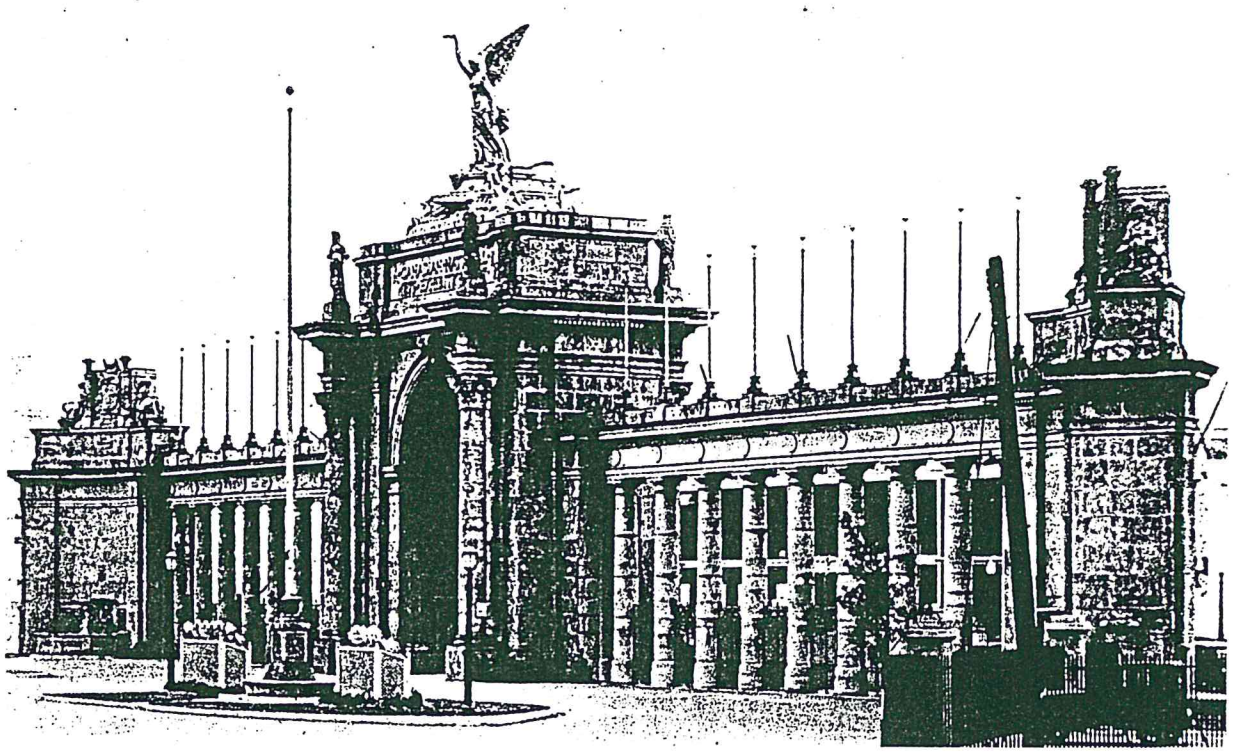


Fig. 2.3 – The Princess Gate, Toronto. A memorable entrance. An important "porta" and view termination.

▪ Signs

Examples of significant Signs are: Times Square sign, The "Hollywood" sign, Las Vegas signs, Mirvish Village.

Signs are primarily a phenomena of the twentieth century. Today signs are employed on buildings, on highways, and streets and squares. Often we remember the signage on a building more than we do the architecture. Times Square, for example, is surely remembered for its rolling sign, and now its large Sony TV, than for any significant architecture. Similarly, we all remember the **Honest Ed's** sign in Mirvish Village in Toronto, **(HOW COULD WE MISS IT!)**.

Signage is critical today for a few reasons. Firstly, the merchant is forced, as a result of severe competition, to "hard sell" to the public. Signage is also important because the contemporary city is vast in scale, and we travel through the city at high speeds.

The spire of the church or the tall tower of the pallazo, which at one time were indicators of importance and strength, have given way to large signs

Fig. 2.4 – Signs, Las Vegas

▪ Public Works

Examples of significant Public Works Projects are: The Brooklyn Bridge – New York City; Golden Gate Bridge – San Francisco, London Bridge – London, Rialto Bridge – Venice, Ponte Vecchio – Florence, Victoria Station – London, Harris Water Filtration Plant – Toronto.

Classified as public works projects are Bridges, City Walls, Towers, Sewage Treatment Plants, Tunnels, Electricity Plants, Railway Lands, Canals, Dams, Embankments, Earthworks, Military Installations, Highways, Aqueducts, Pipelines, and Grain Elevators.

"Public works are often taken for granted, noticed more for there absence than for the positive contributions they make to the image of the city. But there are situations where they loom large in shaping the perception of a given place, becoming symbols as well as servants of a metropolis".[2]

City Walls: The city wall is one of the most recognizable public works projects.

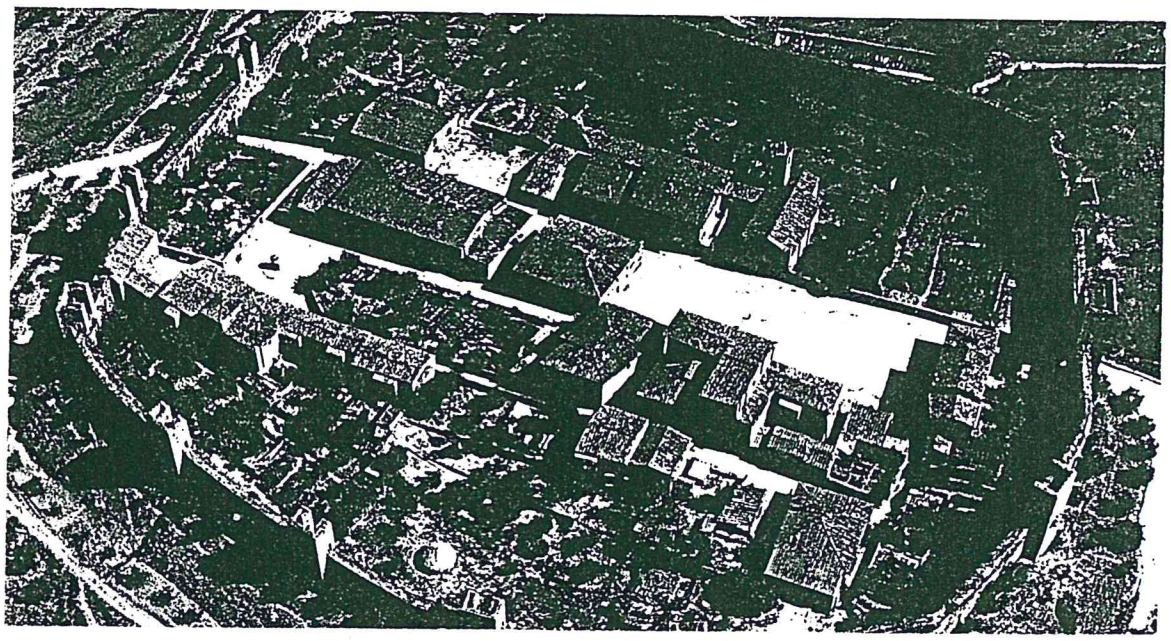


Fig. 2.5 – Once again, a city wall, Monteriggioni, Toscana.

Aqueducts, Sewers, Baths, and Pipelines: Aqueducts along with many other elements such as sewers and pipelines are primarily non visible elements in the city. However, the Roman aqueducts, sewers and baths were public works projects that were symbols of the sophisticated engineering capabilities of the Romans. Of these examples, the aqueduct is the most visible and memorable element which cut through the heart of the city. It was integrated and given the language of the architecture of the city.

Fig. 2.6 – Aqueduct forming an edge, Ancient Rome.

■ Other Examples

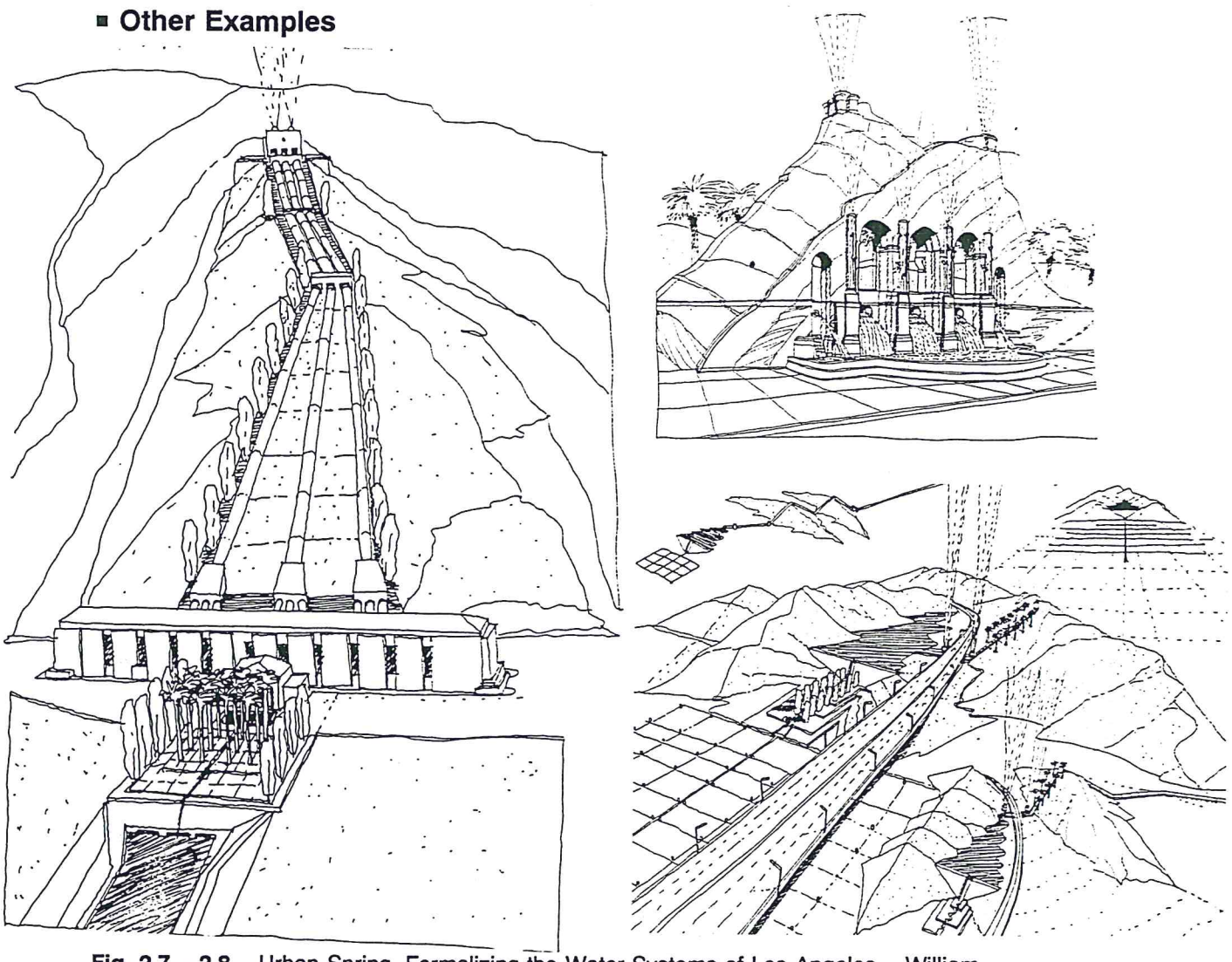


Fig. 2.7 – 2.8 – Urban Spring, Formalizing the Water Systems of Los Angeles – William Morrish

William Morrish's scheme for formalizing the water system of Los Angeles is based on the premise that Los Angeles like other North American cities in the south west does not effectively celebrate the water system that nurture their existence. He says that, "Most residents thoughtlessly assume that their garden paradise merely comes from "turning on the tap." In reality, a gigantic system of aqueducts, pumps, canals, and pipes delivers, water from 500 miles away. To the average persons perception of the city, this labyrinth remains hidden from view, except when he receives the monthly water bill." [3] Morrish's design proposal reintroduces the water system to public view, by " externalizing the water aqueduct system into a set of public spaces, activities, and monuments. This project is a clear example of the celebration of the public works and its potential dialogue with the city fabric and its potential as a rehabilitative force in the city.

Bridges: Bridges form part of many prominent streets in a city. Bridges are connectors that may also act as thresholds and form part of a gateway. If the architecture and scale of a bridge is monumental it also becomes a memorable element on the city. We all know the Brooklyn Bridge, The Golden gate Bridge, and The London Bridge. Bridges like these, are so memorable, that they evoke the spirit of their cities.

In nineteenth century Vienna, Otto Wagner designed bridges, and various water controlling devices along the river Danube. All these projects were monumental focal points in the fabric of the city. As a result of their civic character, detail and scale these projects were recognizable and memorable places in the city.

Toronto also has a few notable bridges. One of the most important in the city is the Bloor – Danforth Viaduct which connects the western and eastern banks of the Don Valley. This bridge utilizes an engineering and architectural detail characteristic of the period in which it was constructed. More recently, the Humber pedestrian bridge by Montgomery Sisam Architects, located at the mouth of the Humber River in Toronto also utilizes constructive detail which surpasses the utilitarian and makes crossing over, and standing on this bridge a worthy experience.

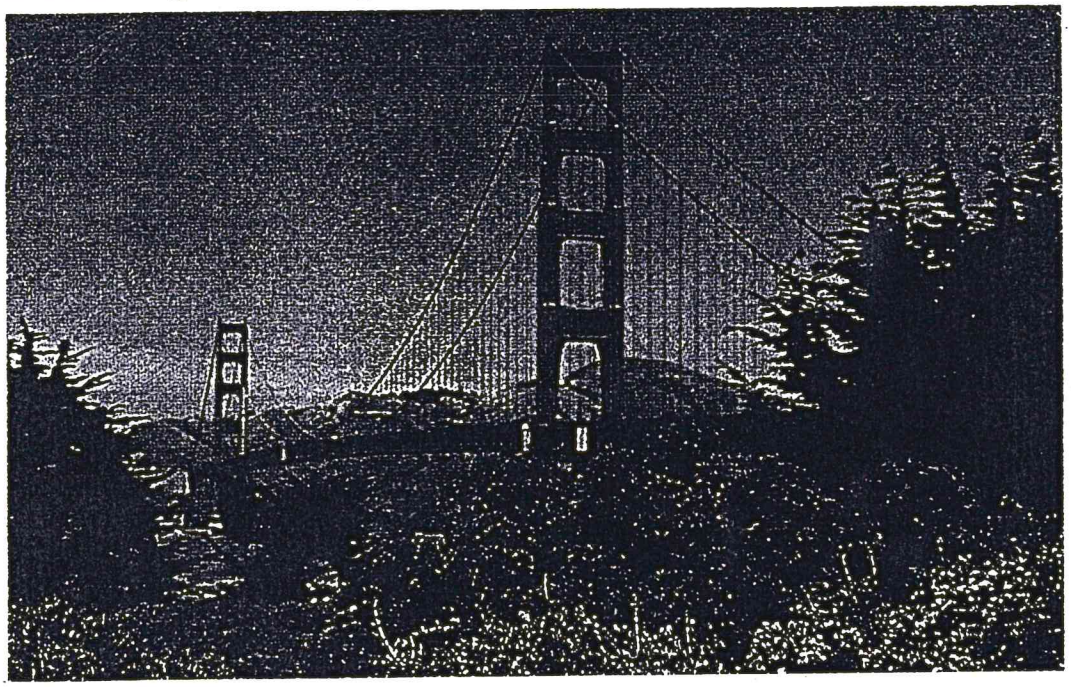


Fig. 2.9 – The Golden Gate Bridge, San Fransisco.

■ Other Examples of Bridges

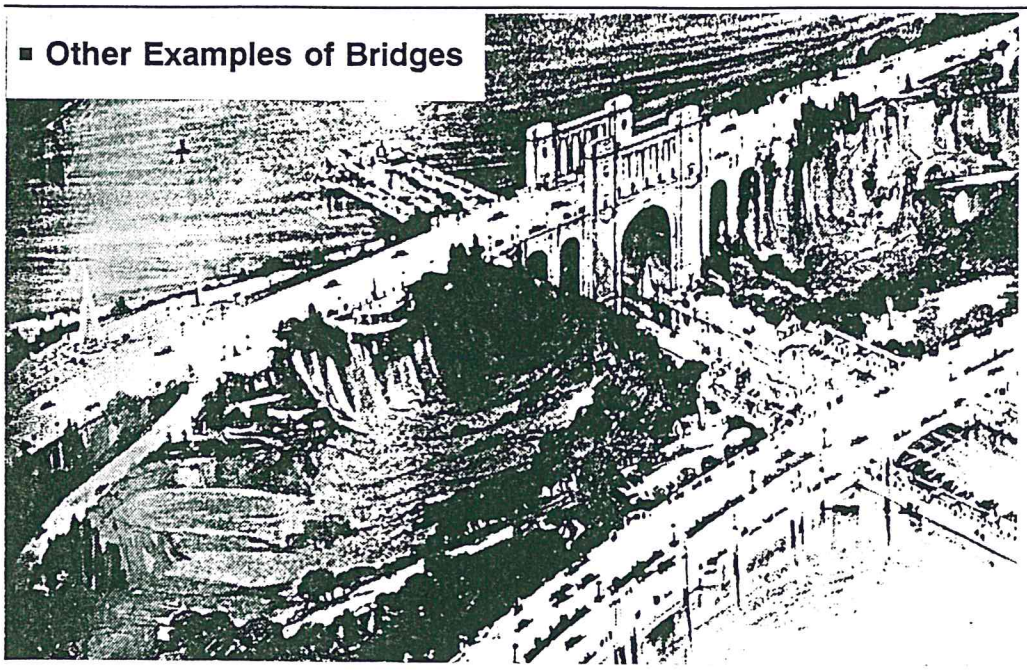


Fig. 2.9a – Hamilton Bridge proposal, John Lyle, Hamilton.

Lyle's proposal for a bridge marking the highway entrance into Hamilton integrated a restaurant and an observation terrace on the water. Is it a bridge, Is it a triumphal arch? or is it a building? Lyle treats this bridge in the architectural detail of his other buildings.

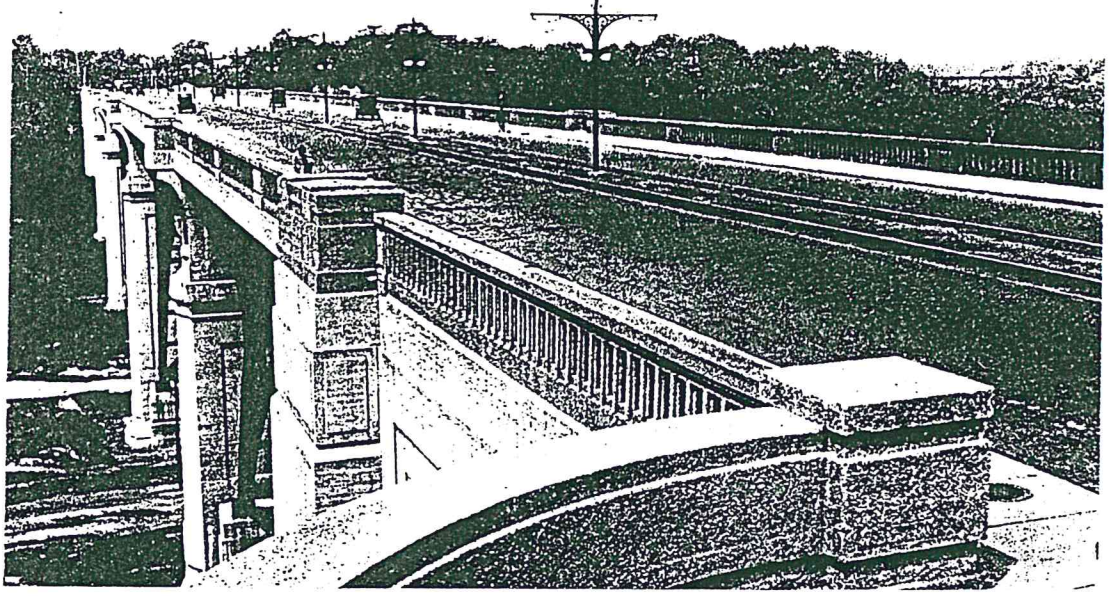


Fig. 2.10 – Bloor/Danforth Viaduct, Don Valley, Toronto. Once again, a sense of detail is applied to this structure, making it a part of the architecture of the city. It is primarily remembered as a reference point in the Don Valley rather than a gate.

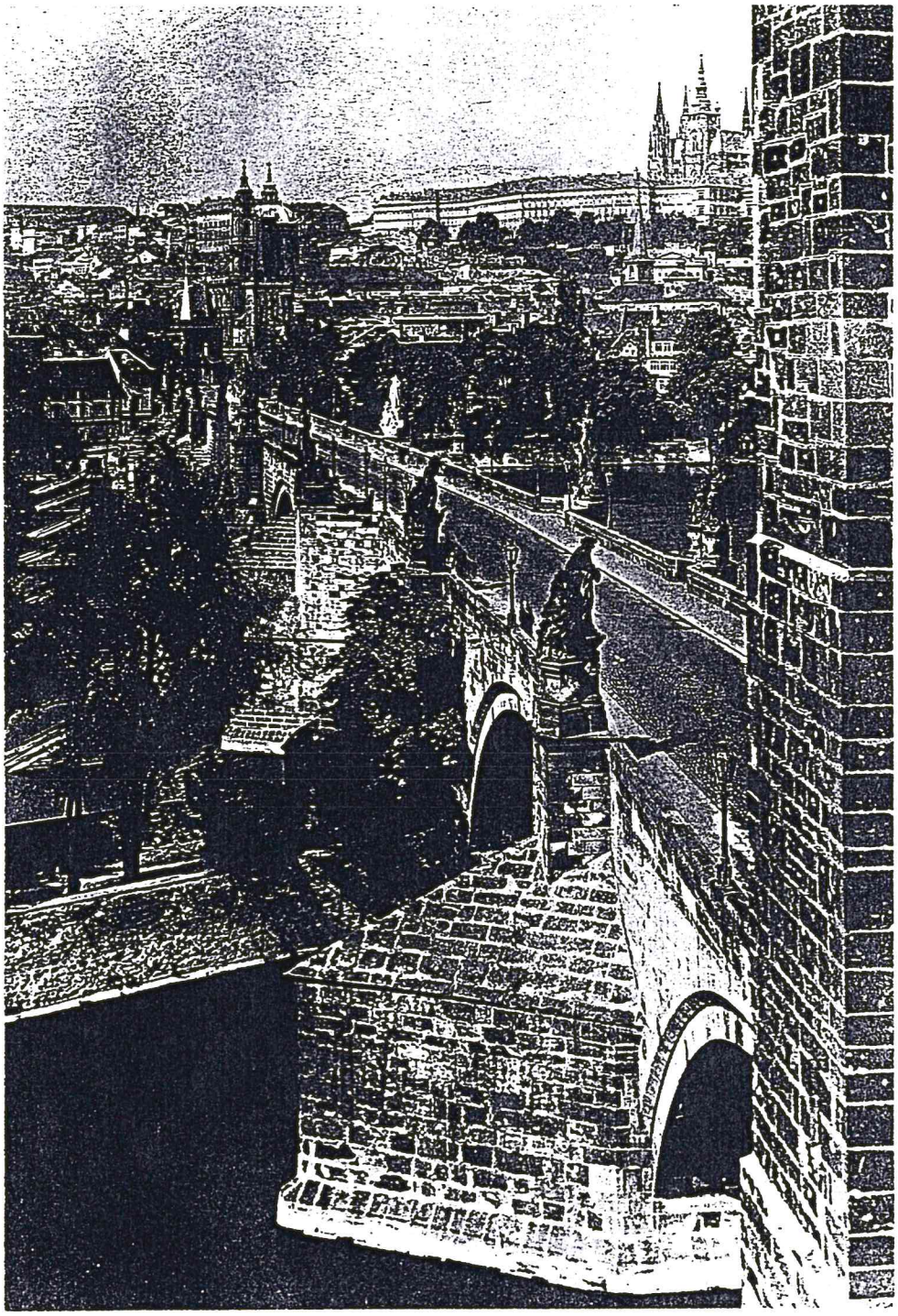


Fig. 2.11 – Charles Bridge, Prague.

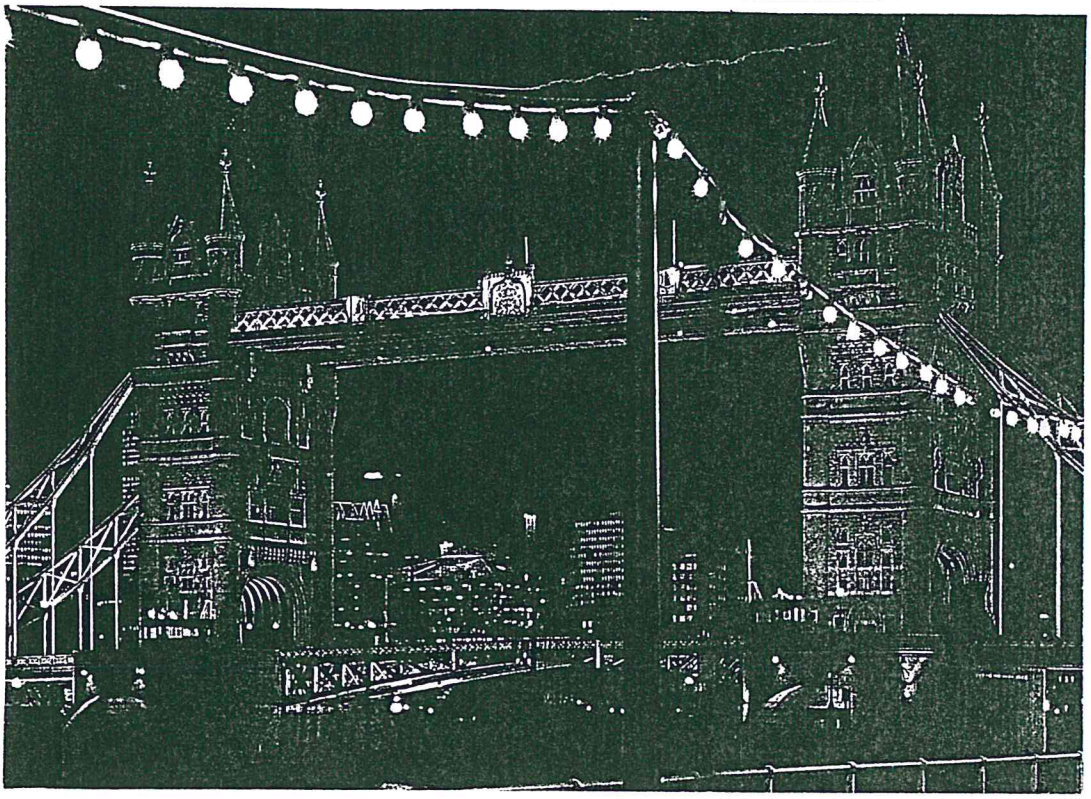


Fig. 2.12 – Tower Bridge, London.

Fig. 2.13 – Rialto Bridge, Venice

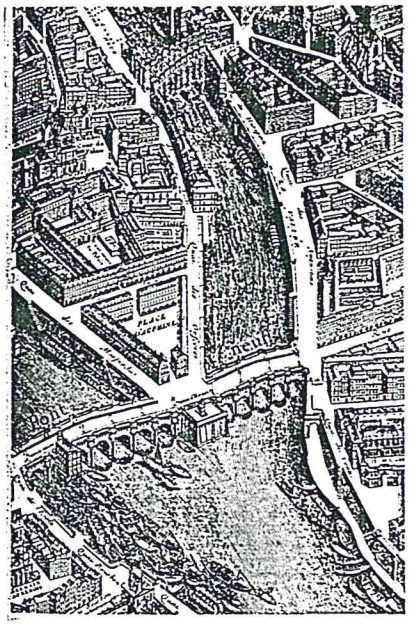


Fig. 2.14 – Ponte Neuf, Paris

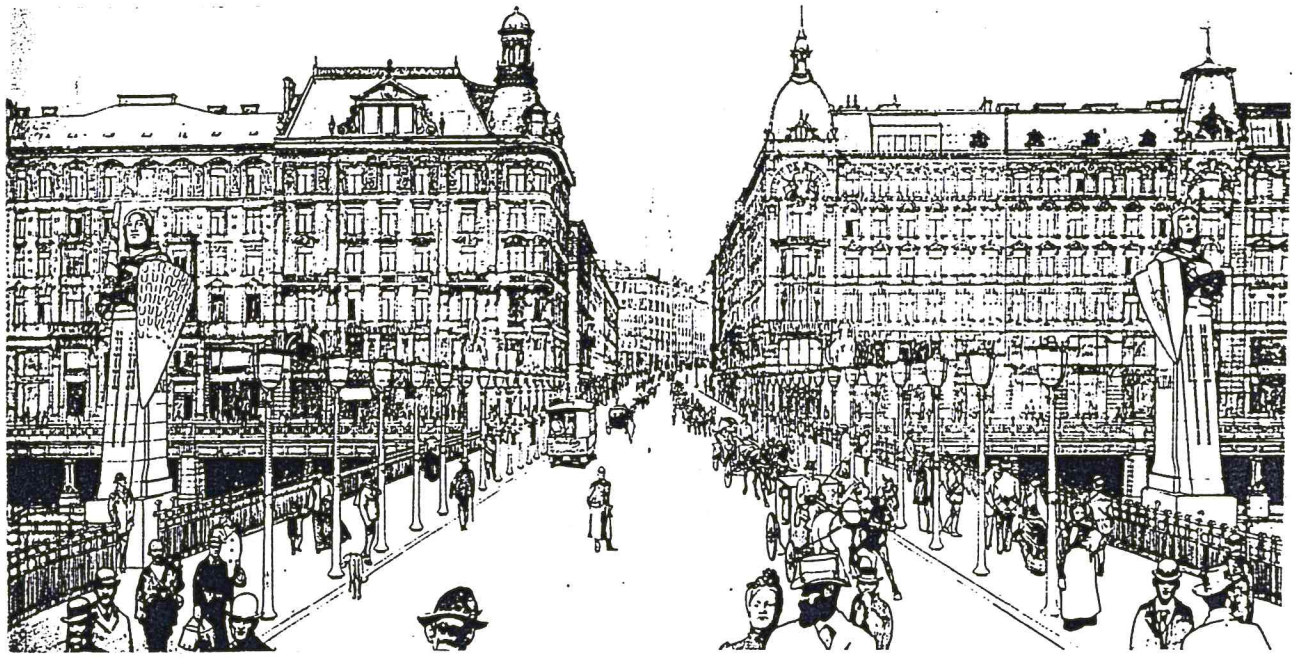


Fig. 2.15 – Vindobonabrucke bridge, 1904, Vienna – Otto Wagner

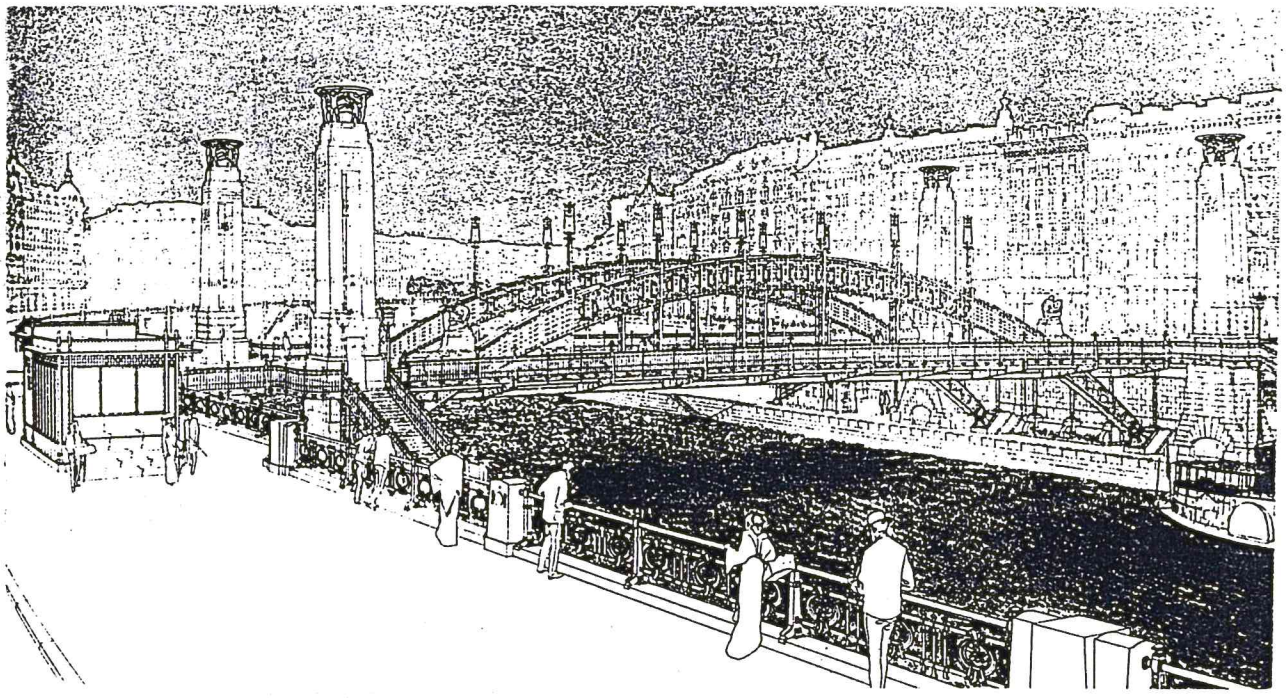
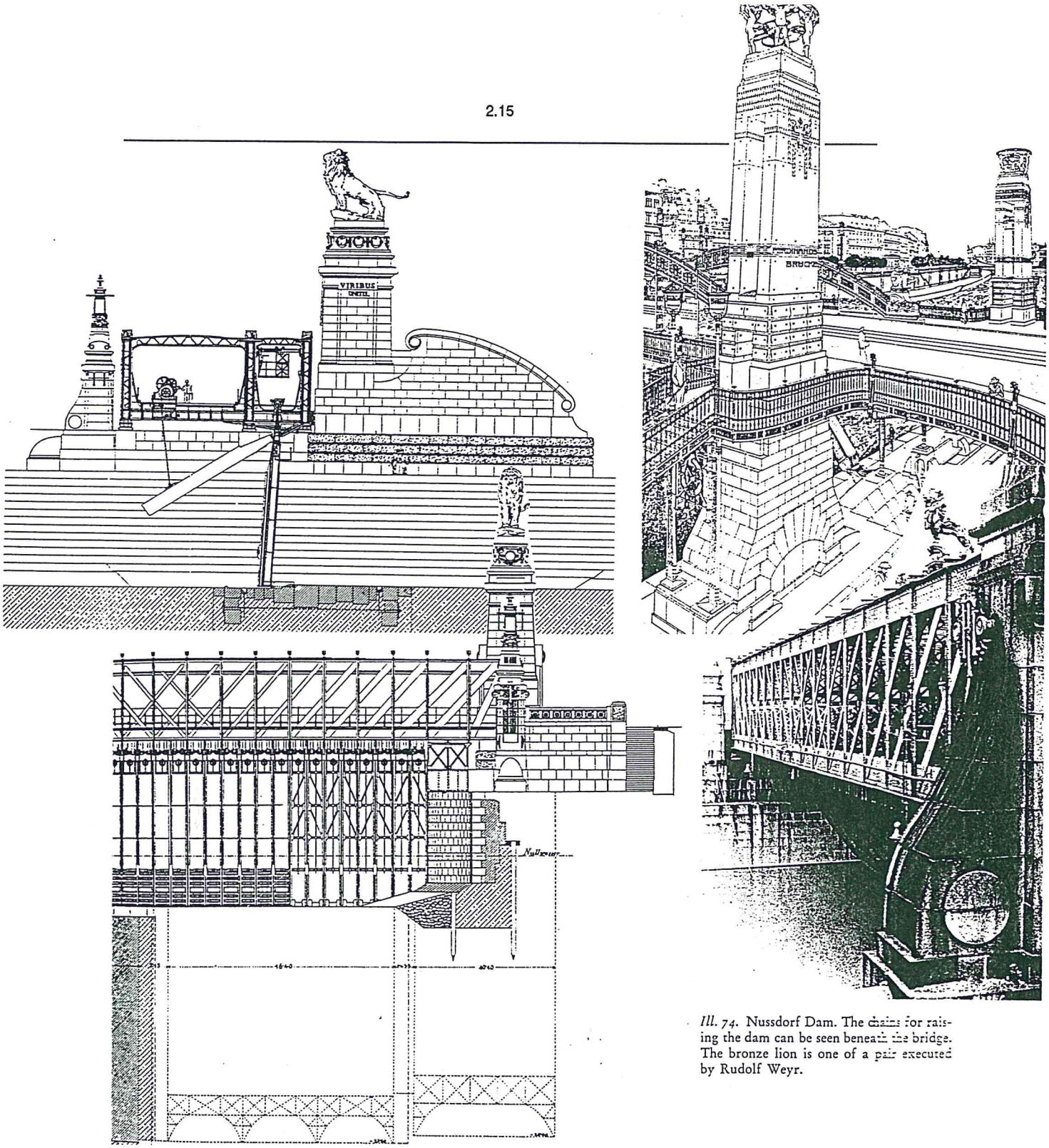
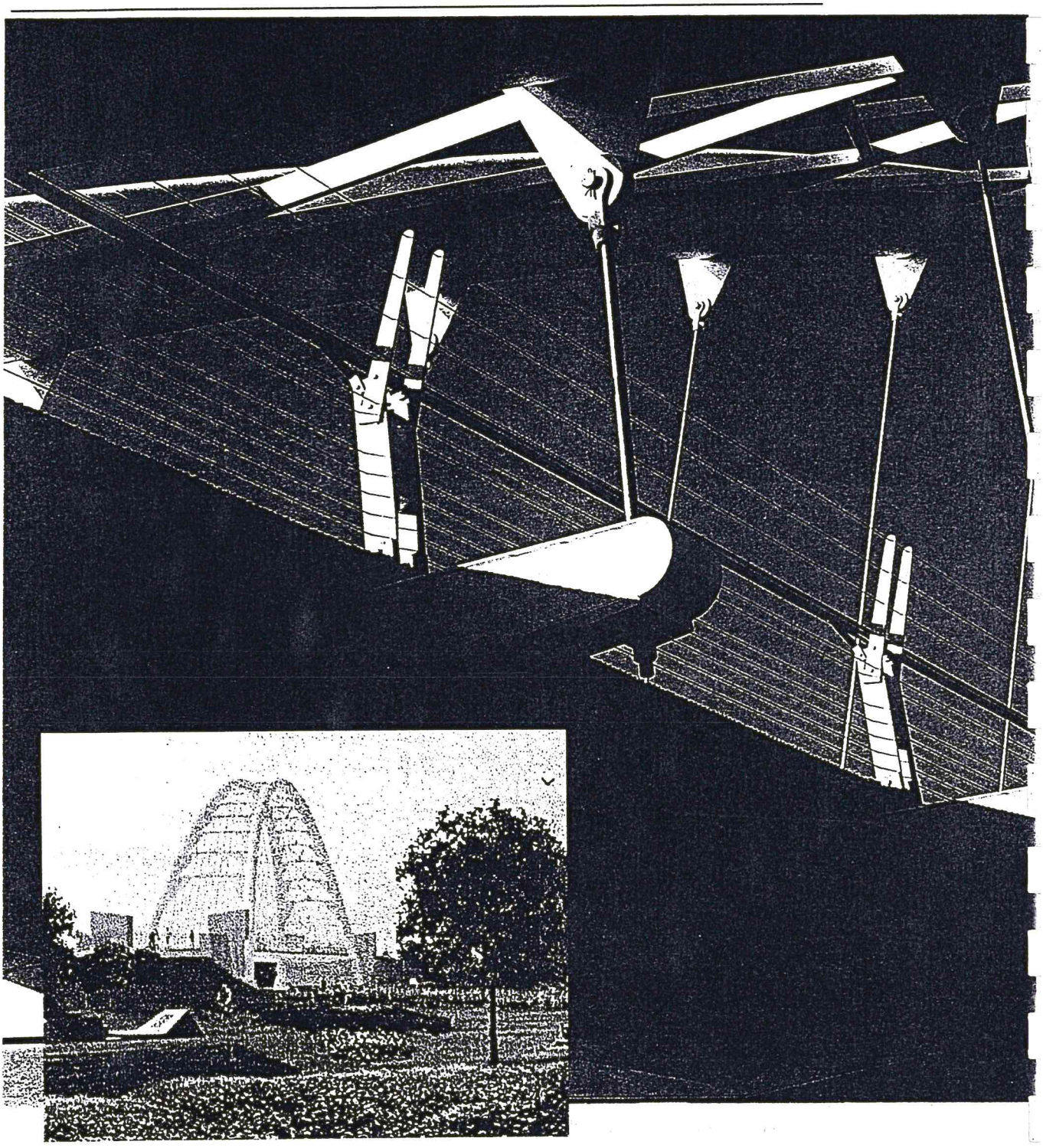


Fig. 2.16 – Ferdinandsbrucke bridge, 1905, Vienna – Otto Wagner



Ill. 74. Nussdorf Dam. The chains for raising the dam can be seen beneath the bridge. The bronze lion is one of a pair executed by Rudolf Weyr.

Fig. 2.17–19 – Entrance markers/pylons at the Ferdinandsbrucke bridge (above). Details of the Nussdorf dam, Vienna – Otto Wagner. In these projects the public works and public art are combined to give these bridges their civic character. Also note the attention to detail and material quality. Wagner designed these in the same manner of detail and material as the Postal Savings Bank (1903).



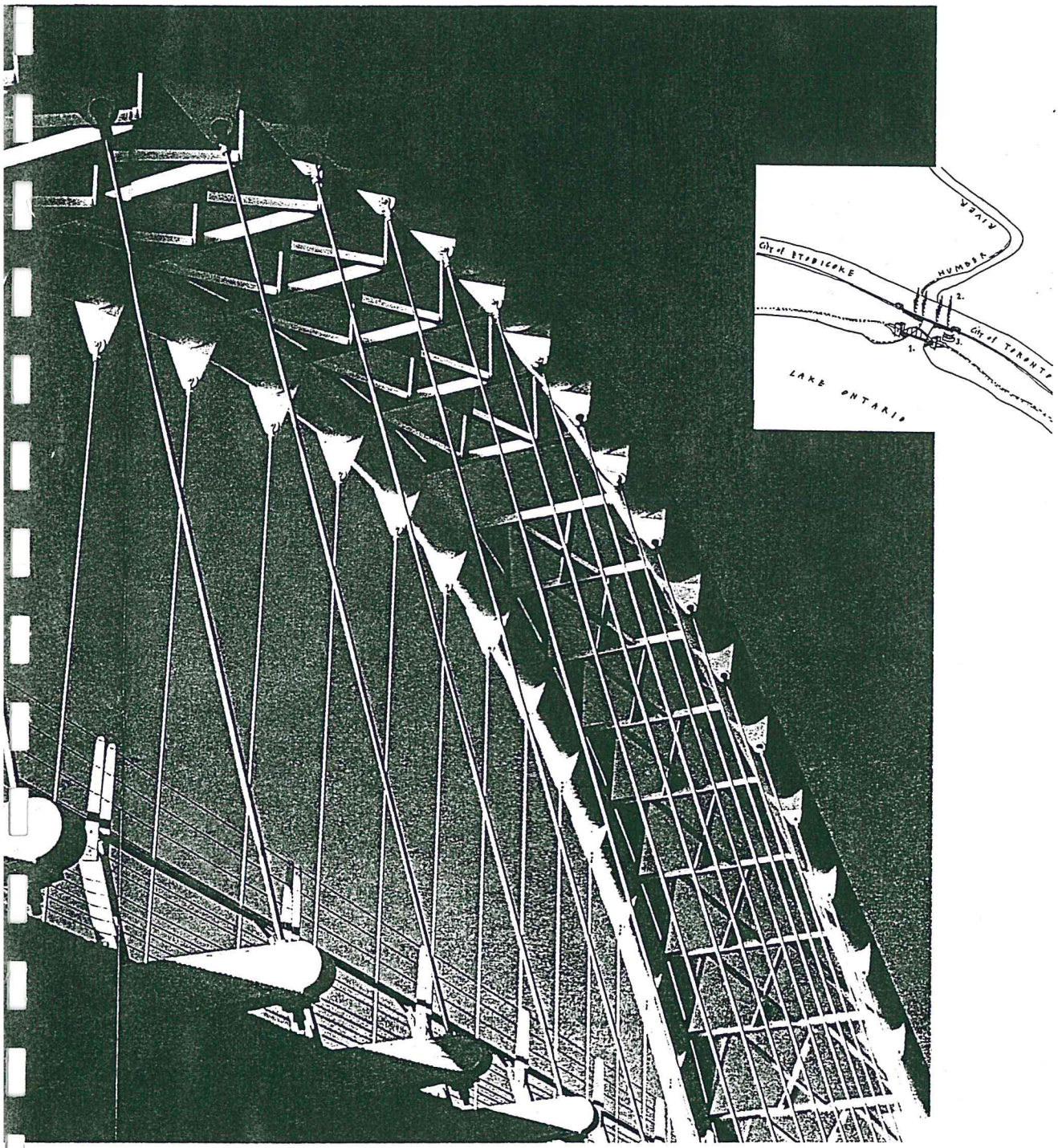


Fig. 2.20 – The Humber bridge, Toronto/Etobicoke – Montgomery Sisam Architects. This pedestrian bridge forms part of a path along the lakeshore. It marks the boundary between Toronto and Etobicoke. Its suspended structure, handrails, and lighting are all carefully integrated into the structure. ...

Subway and Train Entrances: With the arrival of the Industrial Revolution we begin to see public works projects which include railways, subway facilities integrated and forming significant parts of the city.

In Paris and Vienna for example, the entry points into the subway tunnels became celebrated with pavilions of exquisite character and quality. We see examples of this once again in the work of Otto Wagner in Vienna and Hector Guimard in Paris.

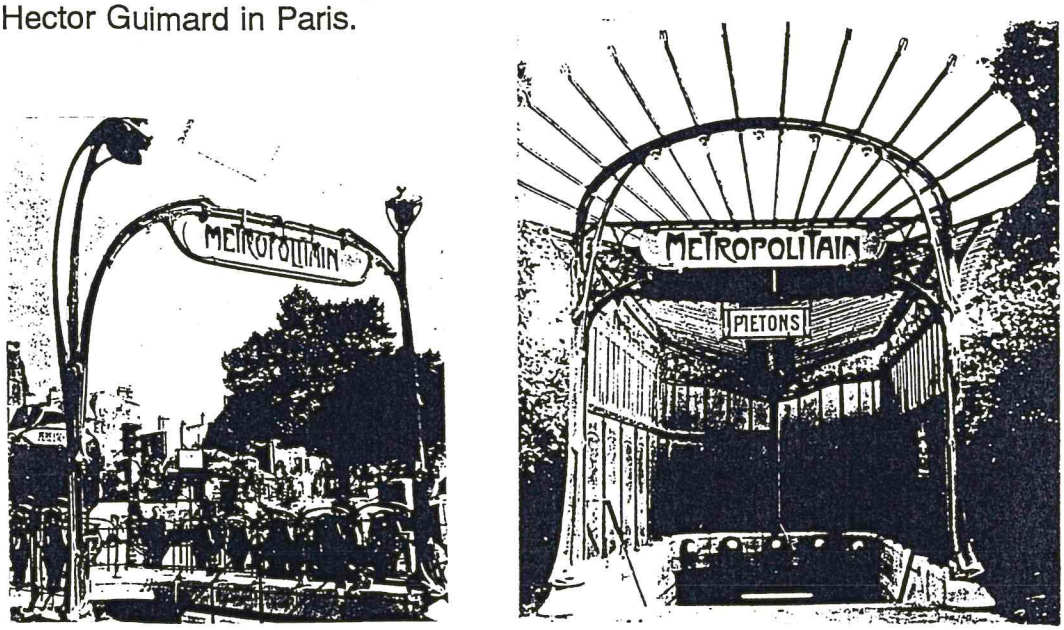


Fig. 2.21 – Subway Station Entrance, Paris – Hector Guimard

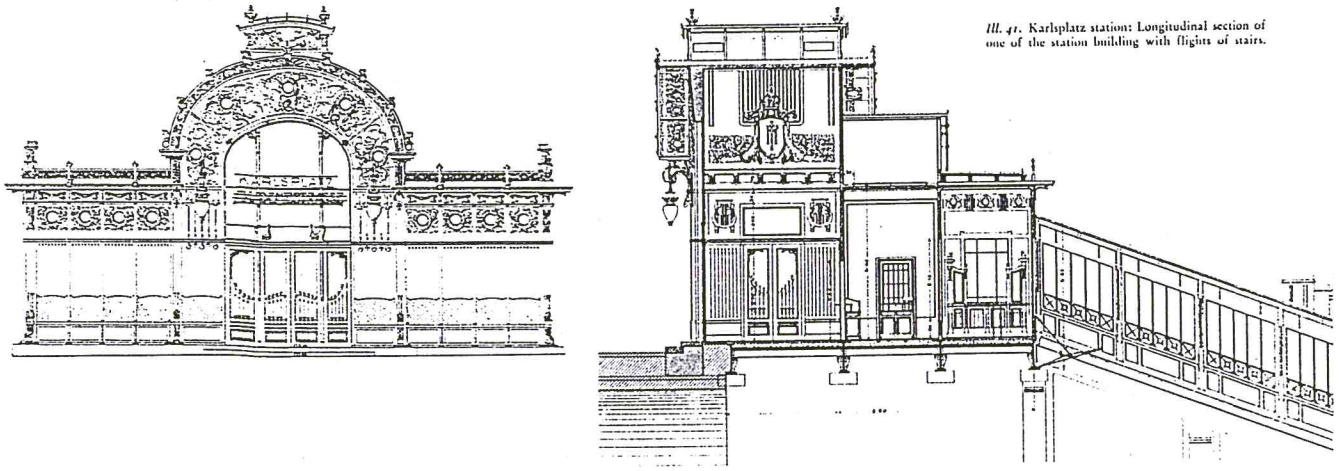


Fig. 2.22 – Train station, Vienna – Otto Wagner

■ PUBLIC OPEN SPACES

■ Streets And Squares

Examples of significant Streets and Squares are: Piazza del Popolo – Rome, Piazza San Marco – Venice, Piazza San Pietro – Rome, Campidoglio – Rome, Champs Elyees – Paris, The Mall – Washington DC, Times Square – New York, Fifth Avenue – New York, Lakeshore – Chicago, Nathan Phillips Square, Spadina Avenue, University Avenue, Yonge Street, King's College Circle.

Squares and streets form the public open spaces in the city. They are voids in the fabric of the city which you enter. Squares and streets contain and capture us. As such they are memorable elements of the city. They are lined by city fabric, monuments, and in some cases by natural elements such as trees, berms or hills.

Squares may be located in the heart of the city as with the Campidoglio, St Peter's square and Nathan Phillips square. They may also be near the perimeter of the city as with the Piazza San Marco and the Piazza del Popolo. Streets and squares and their degree of importance are often associated with a prominent institution such as a church or a place of government, important events and important people.

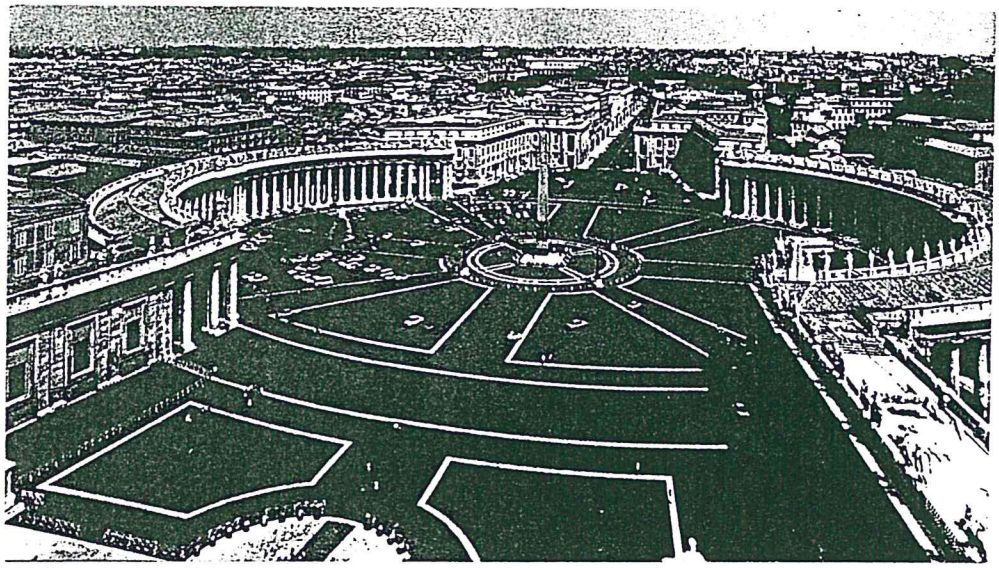


Fig. 2.23 – St. Peter's square, Rome.

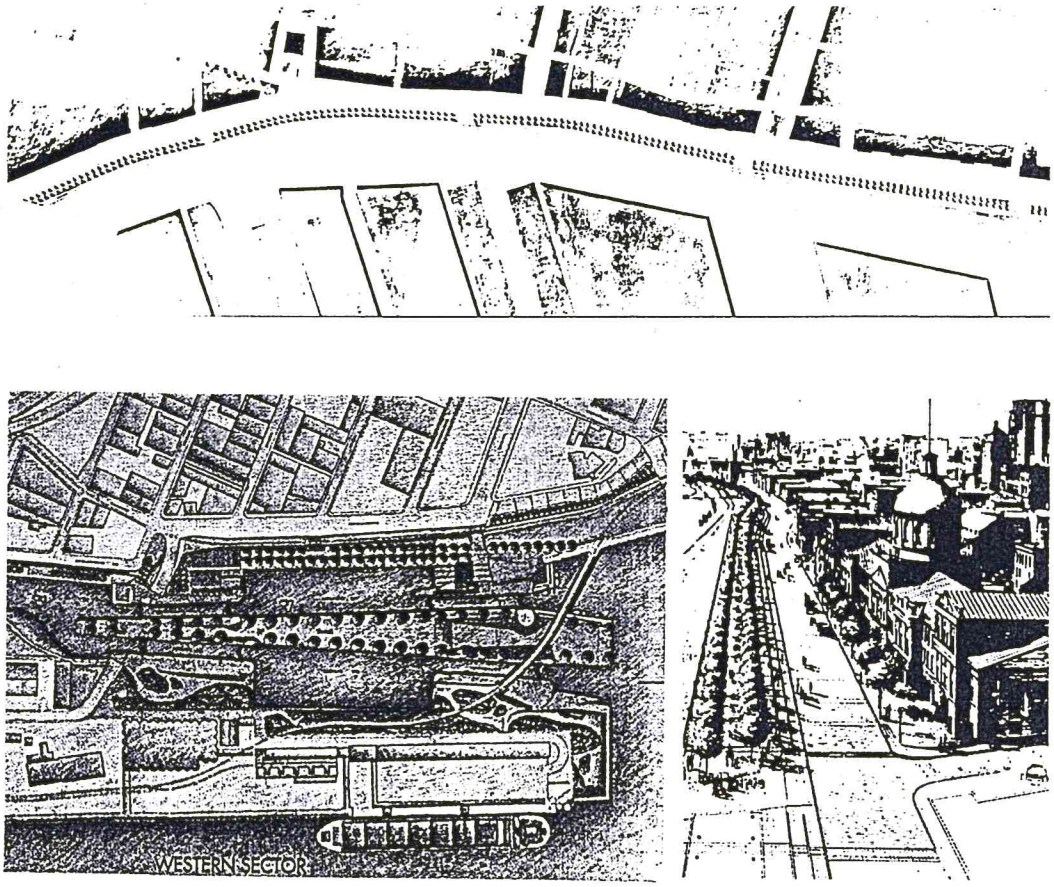


Fig. 2.24 – Harbourfront, Montreal – Peter Rose

Peter Rose's proposal for a tree lined boulevard along Montreal's historic waterfront uses simple double rows of trees to reinforce the strong edge of the historic facades. Rose's use of the railway in this scheme becomes critical further along where the strength of the historic facades is lost due to their demolition. Rose establishes an open space which is a strong edge embracing and capturing the industrial and commercial histories of Montreal.

■ Natural Features

Cities develop around natural features such as Hills, Escarpments, Mountains, Valleys, Sea and Lakeshores.

Natural features significantly affect the planning, structure and character of a city. The Hills of Rome of course, are famous. Other examples are the mountains in Rio de Janeiro, and the mountain of Montreal.

The Niagara Escarpment, The Don Valley, and The Scarborough Bluffs are natural features in Toronto and its vicinity. However, they do not contribute to Toronto's civic character.

Fig. 2.25 – The Don Valley, Toronto. A missed opportunity to form an important civic public space in the city.

▪ Parks and Gardens

Examples of significant Parks and Gardens are: Versailles – Paris, Lakeshore Park –Chicago, Villa Julia –Barcelona, Agt Plaza – Edmonton, Village of Yorkville Park – Toronto, Bay Adelaide Park –Toronto, High Park – Toronto, Grange Park – Toronto, Queens Park – Toronto, Mount Pleasant Cemetery – Toronto.

Parks and gardens may also be considered as nodes. Trees and garden elements such as hedges can most definitely form boundaries and help structure the city and become representational edges if they are designed as civic elements, particularly if they are intended to commemorate an event or significant person. The typology of park and garden pavilions and furniture also help structure the city and give it character.

The park at Versailles and Central park in New york are two familiar examples of significant parks that act much like a district. Walking through them is like penetrating a thick boundary. Parks and gardens are also much like cities because they are also made up of fabric and monuments.

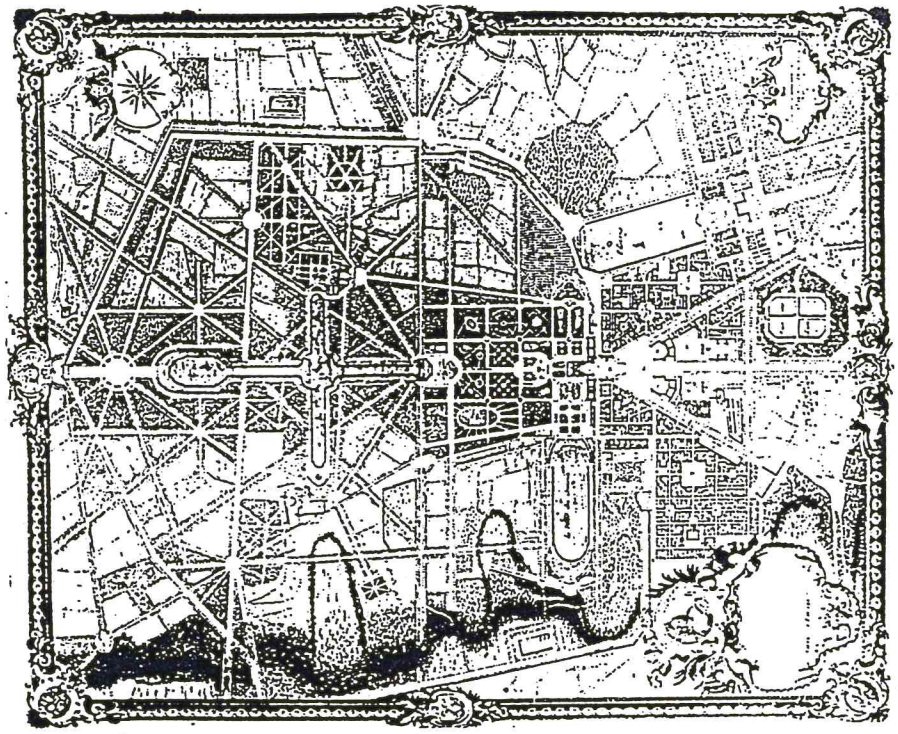
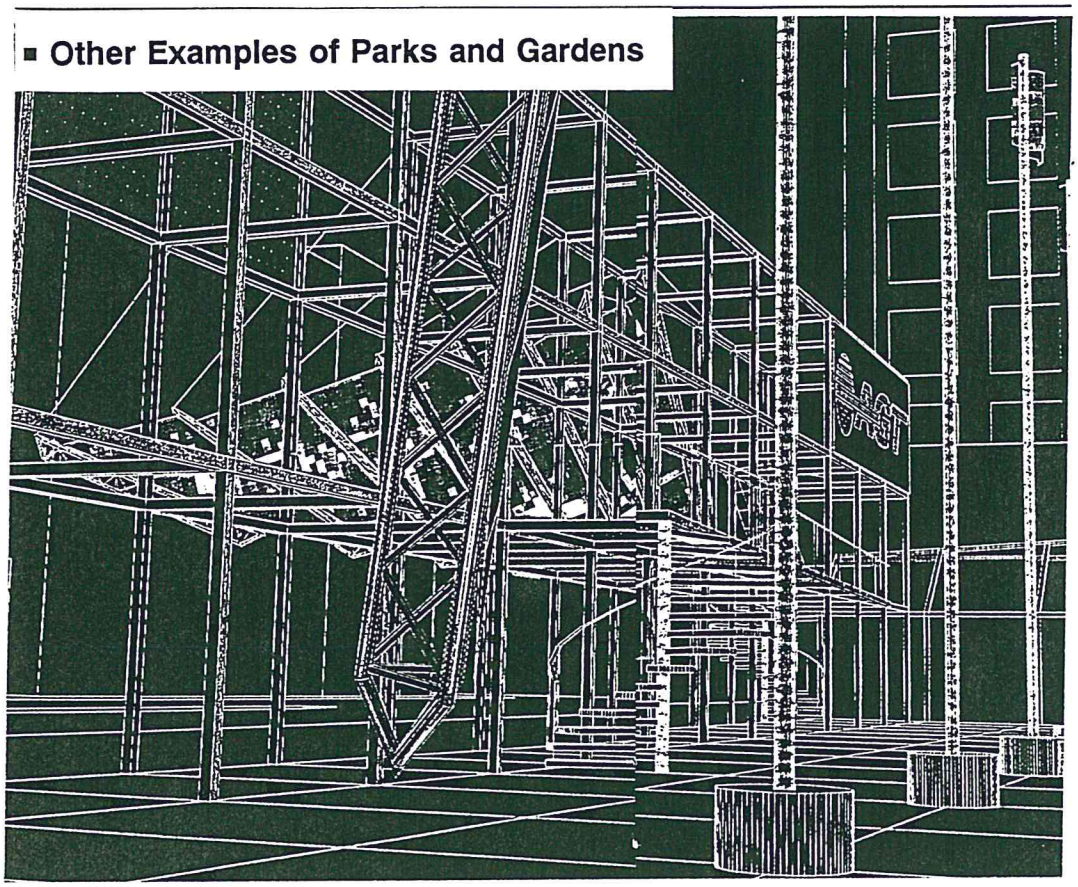
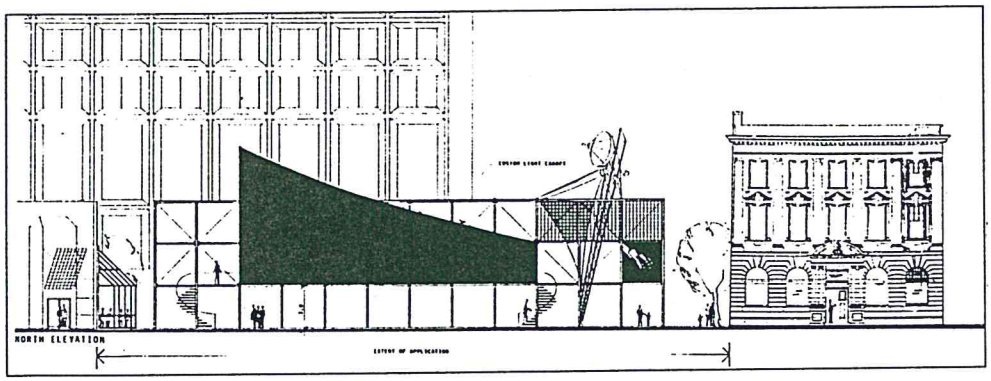
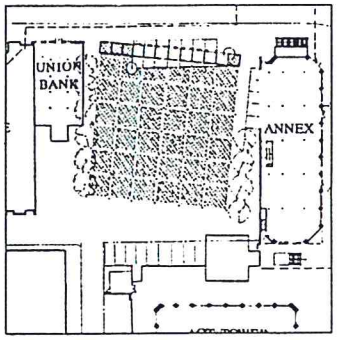


Fig. 2.26 – Plan of Versailles

■ Other Examples of Parks and Gardens







NORTH ELEVATION

Fig. 2.27 – AGT Plaza, Edmonton, Barry Johns

Barry Johns's urban park known as the AGT Plaza in Edmonton utilizes a three dimensional gridded steel structure supporting holographic banners and a "forest" of regularly spaced flagpoles. The steel structure and the flagpoles are substitutes for the more traditional use of trees and hedges as park and garden elements.

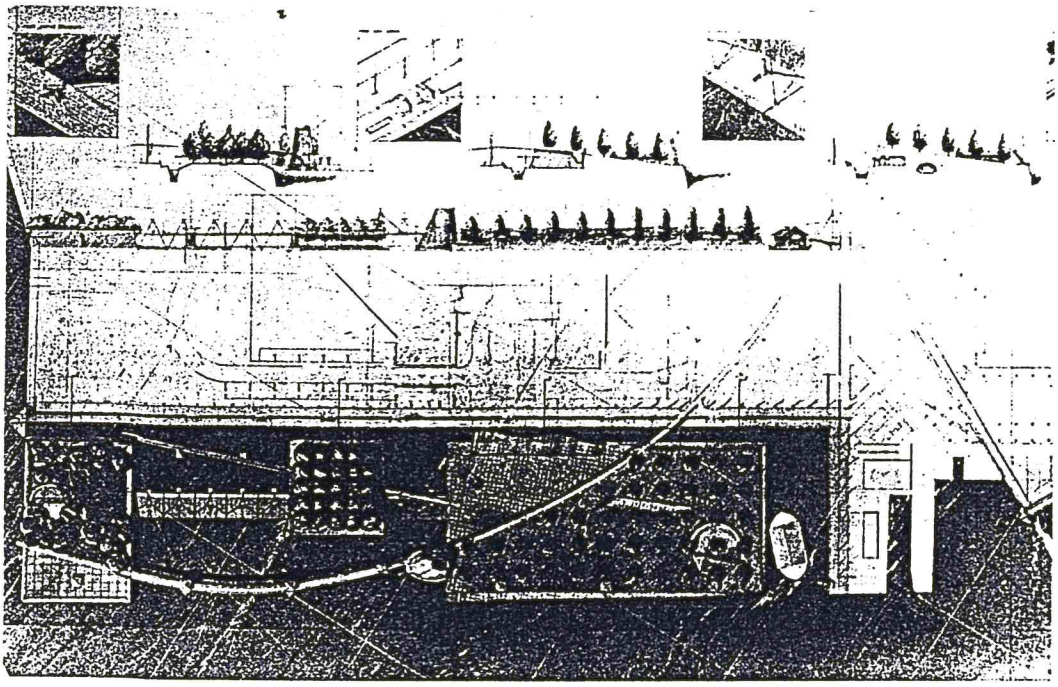


Fig. 2.28 – Public Park, Toronto Harbourfront – Natale Scott Brown Architects.

Natale Scott Browns' proposal for a waterfront park in Toronto, creates a threshold/gateway to the Toronto Island at an important ferry terminal in the city. Their proposal places garden elements such as trees, pavilions, pedestrian bridges and walkways in a park setting, on a plinth-like island. The composition exemplifies the use of building and landscape elements, together to form a composition which addresses and organizes the tensions of the site, which captures the spirit of the site as a site near water.

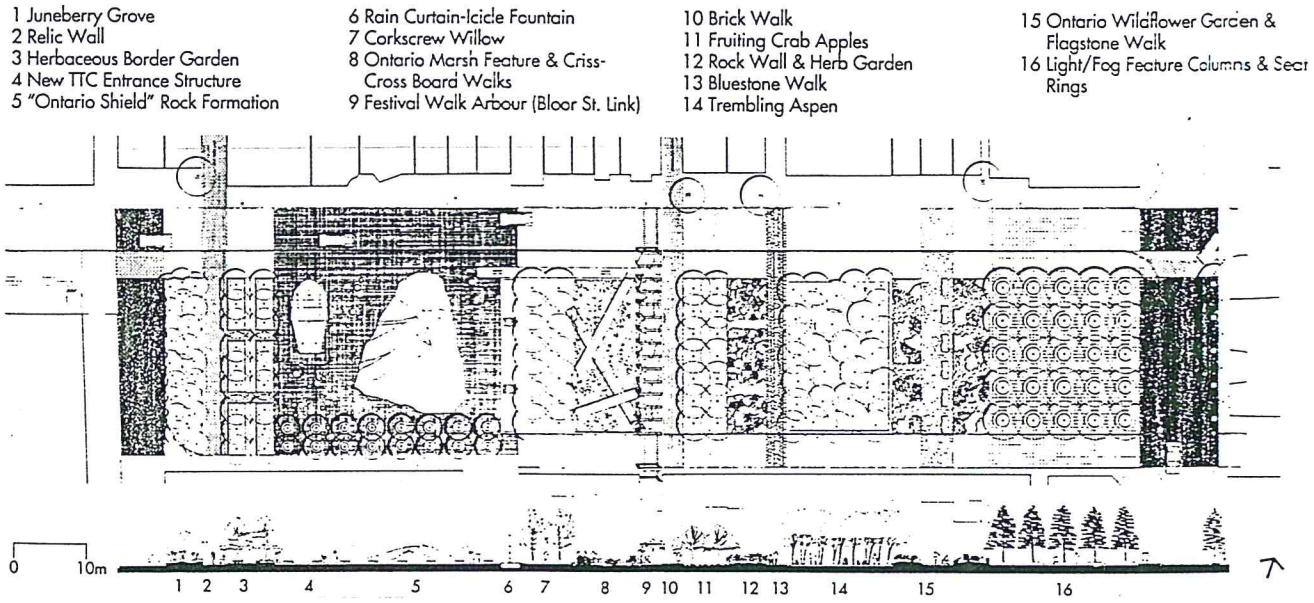


Fig. 2.29 – Cumberland Park, Toronto – Oleson Worland and Shwartz/Smith/Meyer

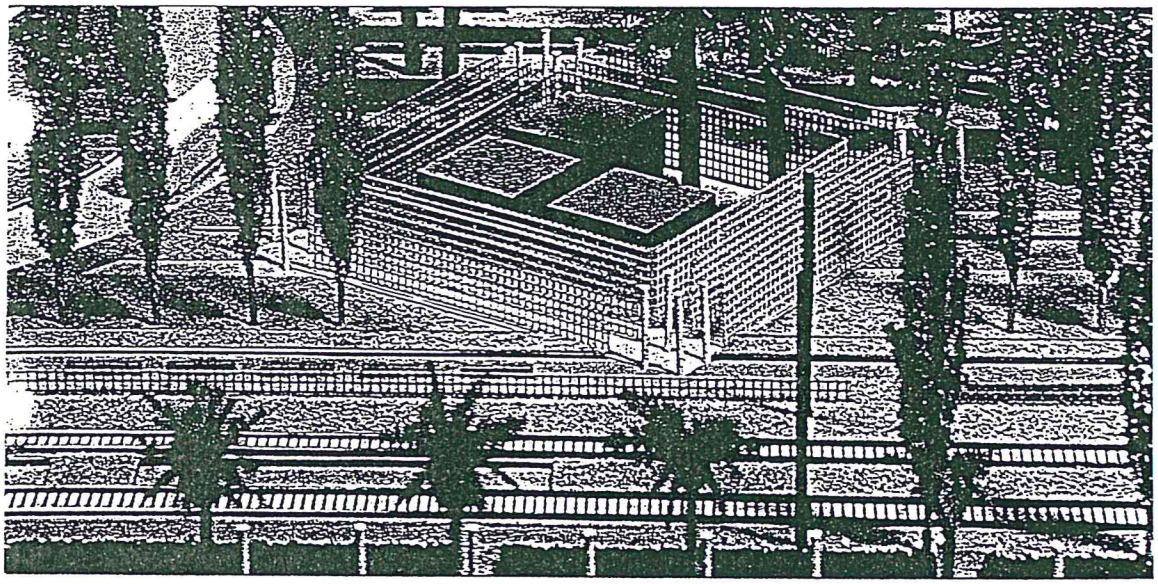


Fig. 2.30 – Marina Park, San Diego – Peter Walker/ Martha Shwartz

Martha Schwartz's park in San Diego employs landscape elements as architecture. Trees, hedges and paving patterns are interwoven in this design as in her recent collaboration with Oleson Worland Architects for the design of Cumberland park.

▪ COMBINING PUBLIC OPEN SPACES AND MONUMENTS

Pope Sixtus's plan for Rome, Hausmann's plan for Paris, and L'Enfant's plan for Washington are examples of urban design which are structured and given character by the use of monuments and public spaces.

Recently, projects by Leon Krier and Steven Holl have also utilized a combination of public open spaces and monuments. (Refer to **Fig. 2.34** and **Fig. 2.35**)

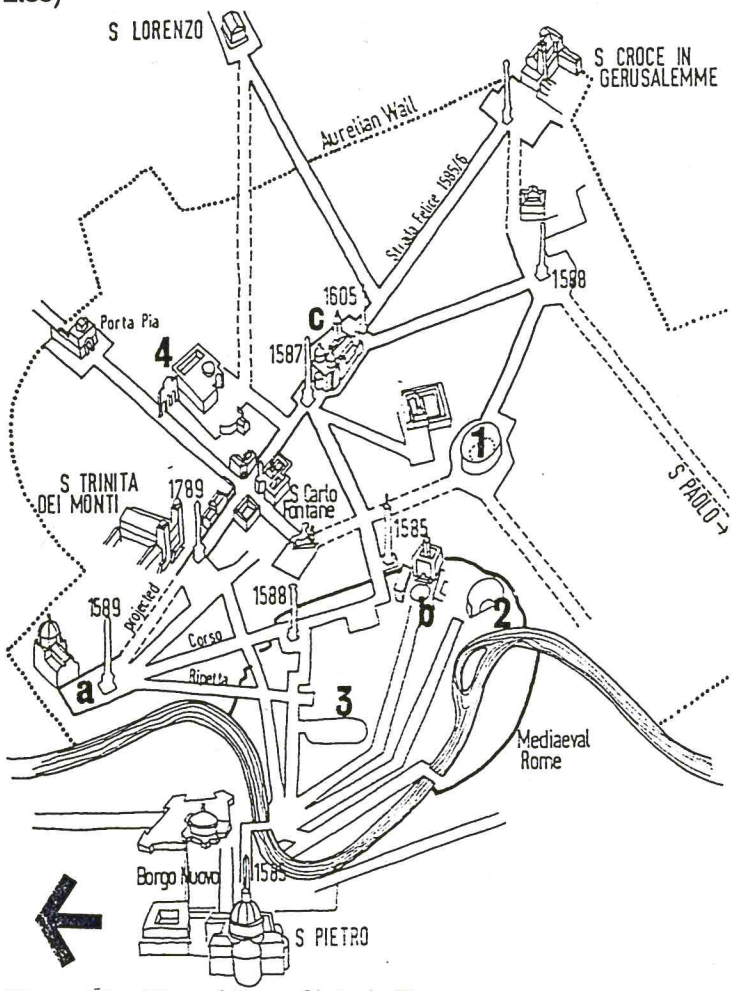
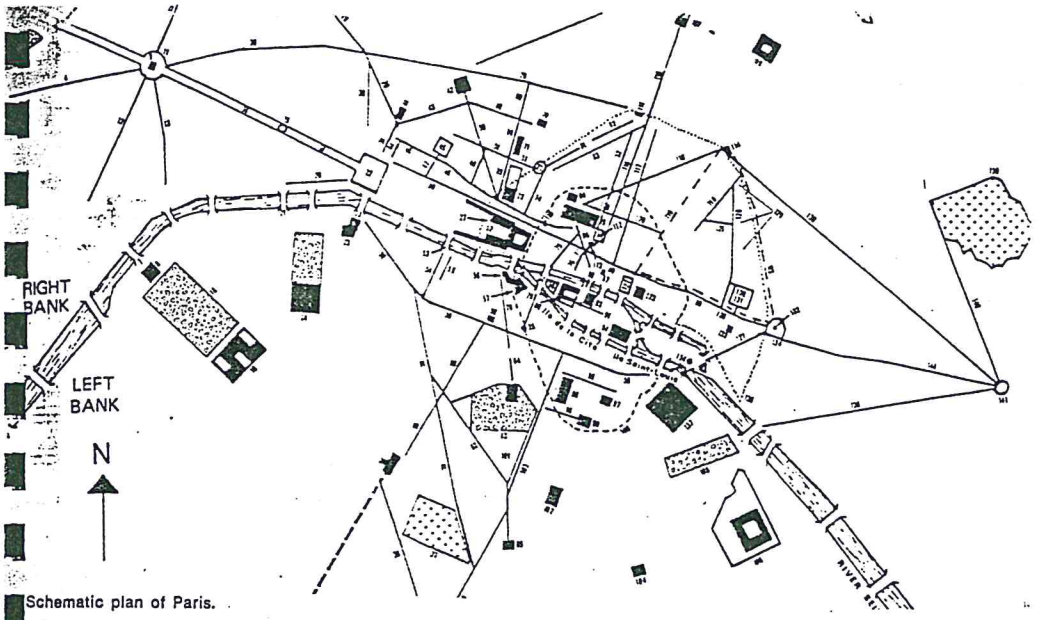


Fig. 2.31 – Plan of Pope Sixtus's Rome.

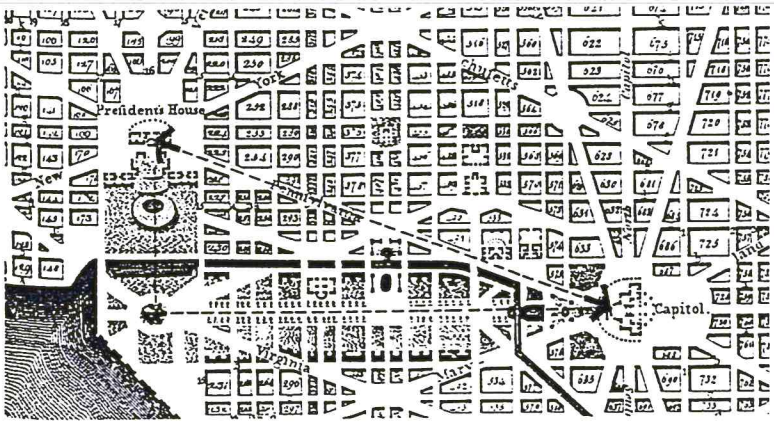
Avenues were cut through Rome in order to connect all of the significant monuments, churches and public squares. This was done for a variety of reasons. For instance, rapid military deployment of troops into the streets, but more importantly, it enabled the monuments and open spaces of Rome to be viewed from a distance, significantly strengthening their impact on the viewer and on the city.

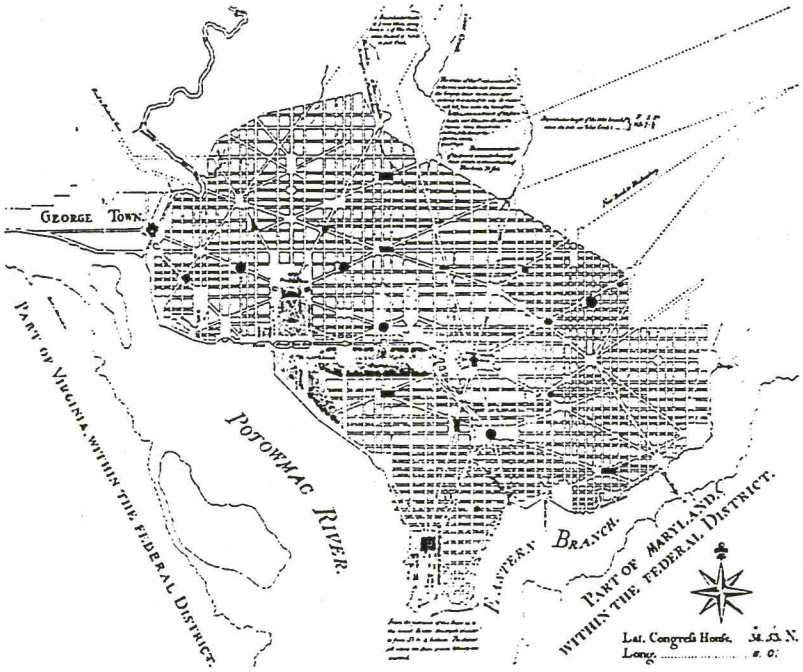


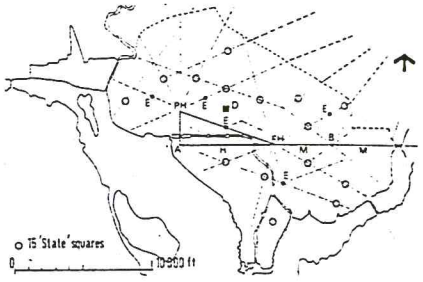
Schematic plan of Paris.

1. Neuilly
2. Av. de la Grand Armée
Bois de Boulogne
Av. Foch (formerly Av. de l'Imperatrice)
5. Blvd. Pereire
Pl. des Ternes
Pont d'Iéna
8. Eiffel Tower
9. Arc de Triomphe
Av. Wagram
Pl. de l'Étoile (Pl. de Charles de Gaulle)
12. Av. Kléber
Av. Marceau
Av. des Champs-Elysées
15. Rond Point
16. R. de Courcelles
Parc Monceau
Champ-de-Mars
19. École Militaire
20. Cours-la-Reine
Pont des Invalides
Pl. de la Concorde
23. Palais Bourbon (Nat. Assembly)
Hôtel des Invalides
Les Batignolles
25. Cim. Montmartre
27. Site: Hospice des Quinze-Vingts
Blvd. Malesherbes
Blvd. Haussmann
30. R. d'Anjou
R. Royale
R. St.-Denis
33. Pont de la Concorde
34. Site: Tour de Nesle
Site: Porte de Buci
36. Gare de Montparnasse
37. Cim. Montparnasse
38. Av. du Maine
39. Porte d'Orléans
40. Av. d'Orléans
41. La Madeleine
42. L'Opéra
43. Blvd. de la Madeleine
44. R. St.-Florentin
45. Pl. Vendôme
46. R. St.-Honoré
47. R. Castiglione
48. R. des Pyramides
49. R. du 4 Septembre
50. Av. de l'Opéra (formerly Av. Napoleon III)
51. R. des Petits-Champs
52. Louvre
53. Pont Royal
54. R. du Bac
55. R. de Beaune
56. Inst. de France
57. Hôtel des Monnaies
58. St.-Germain-des-Prés
59. Blvd. St.-Germain
60. R. de Rennes
61. Blvd. Raspail
62. R. d'Assas
63. Jardin & Palais du Luxembourg
64. R. Tournon
65. Observatoire
66. Parc de Montsouris
67. Gare du Nord
68. R. Lafayette
69. R. de Richelieu
70. Bourse
71. Bibl. Nat. (incorp. Palais Mazarin)
72. Pl. des Victoires
73. Palais-Royal
74. R. Croix des Petits-Champs
75. R. du Pont Neuf
76. R. des Lavandières
77. R. Ste. Opportune
78. R. de Seine
79. R. Dauphine
80. Rue de Rivoli
81. R. du Mail
82. Rue de Clery
83. R. d'Aboukir
84. St.-Eustache
85. Les Halles
86. R. des Halles
87. Tour St.-Jacques
88. Pont-au-Change
89. Palais de Justice
90. Pl. Dauphine
91. Ste.-Chapelle
92. Pont Neuf
93. Trib. de Commerce
94. Notre Dame
95. R. des Écoles
96. Sorbonne
97. École Polytécnnique
98. R. Soufflot
99. Panthéon (Ste.-Geneviève)
100. Site: Wall of Philip Augustus
101. Site: Couvent des Chartreux
102. Val-de-Grâce
103. Blvd. St.-Michel
104. Gobelins Factory
105. Jardin des Plantes
106. Hôspital Salpêtrière
107. Gare de l'Est
108. Hôpital Saint-Louis
109. Parc des Buttes Chaumont
110. Site of Porte Saint-Honoré
111. Porte Saint-Denis
112. Cimetière des Saints-Innocents
113. Site: Cloister of Saint Opportune
114. Site: Porte du Temple
115. Boundary: the Marais in 16 & 17th cents.
116. Blvd. Sébastopol
117. R. St.-Martin
118. R. de Turbigo
119. R. Charlot
120. R. de Rambuteau
121. R. de Poitou
122. Pl. de Grève
123. Hôtel de Ville
124. Site: Hôtel de Brétonvilliers
125. Pont Sully
126. R. St.-Antoine
127. Blvd. Henri IV
128. R. de Turenne
129. Site: Proposed Place de France
130. Place Royale (des Vosges)
131. Site: Hôtel de Tournelles
132. Colonne de la Bastille
133. Site: Hôtel St.-Pol
134. Site: Porte St.-Antoine
135. Site: Wall of Charles V
136. Blvd. Diderot
137. Halle aux Vins (site: Abbaye St.-Victor)
138. Blvd. Voltaire
139. Cimetière Père-Lachaise
140. Av. Philippe Auguste
141. Pl. de la Nation
142. Bois de Vincennes
143. Plateau de Gravelle
144. R. du Faubourg Saint-Antoi

Fig. 2.32 – Hausmann's plan of Paris.







References (see sketch plan above):

'A, The equestrian figure of George Washington, a monument voted in 1783 by the late Continental Congress.

B, An historic column ... from whose station (a mile from the Federal House) all distances of places through the Continent are to be calculated.

D, This Church is intended for national purposes ... and assigned to the special use of no particular sect or denomination ...

E, Five grand fountains intended with a constant spout of water NB: there are within the limits of the City above 25 good springs of excellent water abundantly supplied in the driest season of the year ...

Squares ... being fifteen in number are proposed to be divided among the various States in the Union, for each of them to improve, or subscribe a sum additional to the value of the land for that purpose, and the improvements around the Square to be completed in a limited time ...

Fig. 2.33 – L'Enfant's plan of Washington.

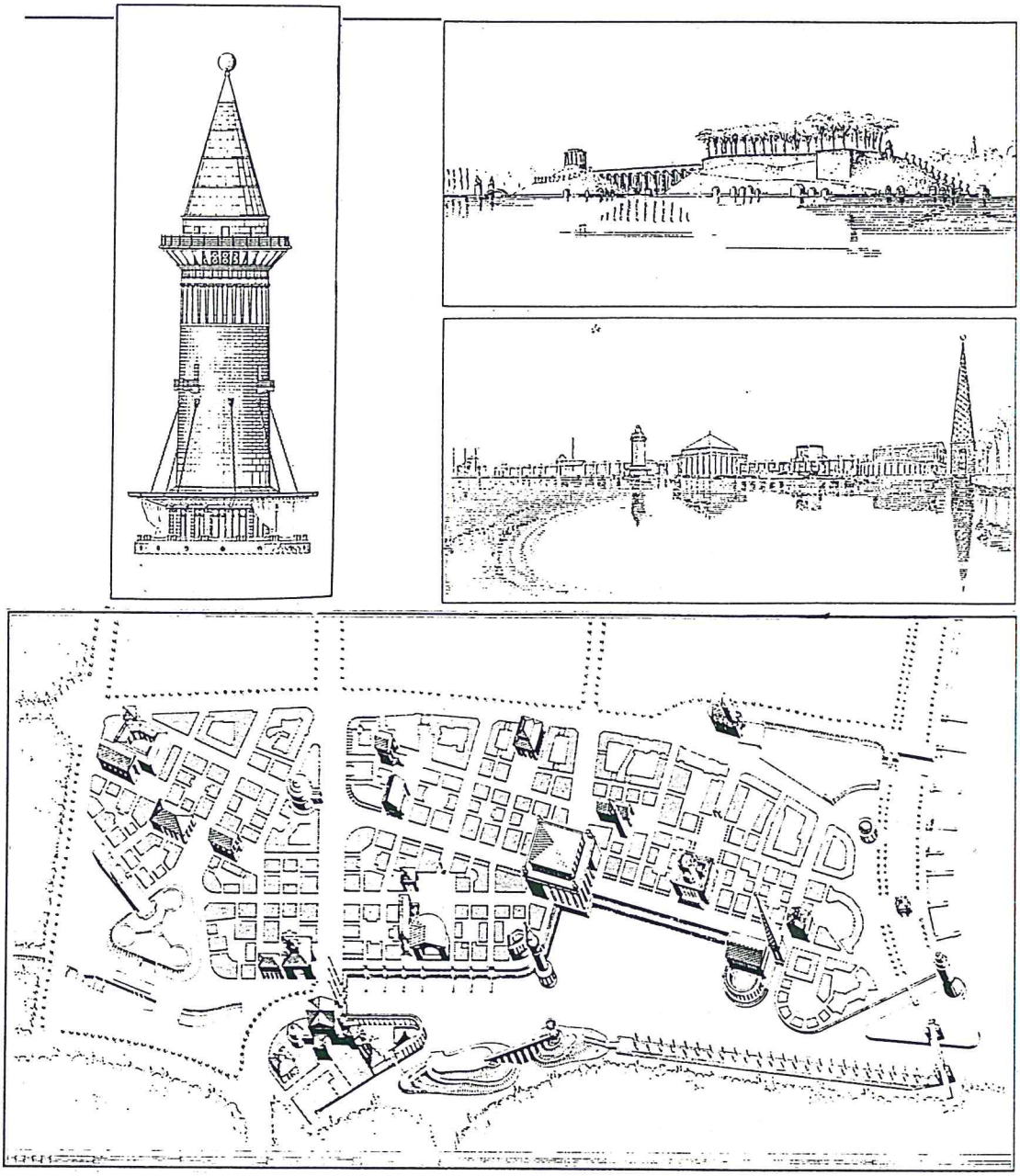


Fig. 2.34 – Project For Tagel Germany – Leon Krier

Leon Krier as a participant in the international competition for the reconstruction of the city of Tagel (a suburb of Berlin) demonstrates that the face of the city can be constructed of landscape and building elements.

In Krier's scheme, we encounter a sculpted earthworks, an elongated island punctuated by a colonnade of trees. These elements are connected by bridges, along with a collection of more conventional buildings and monuments describe and represent the face of this city.

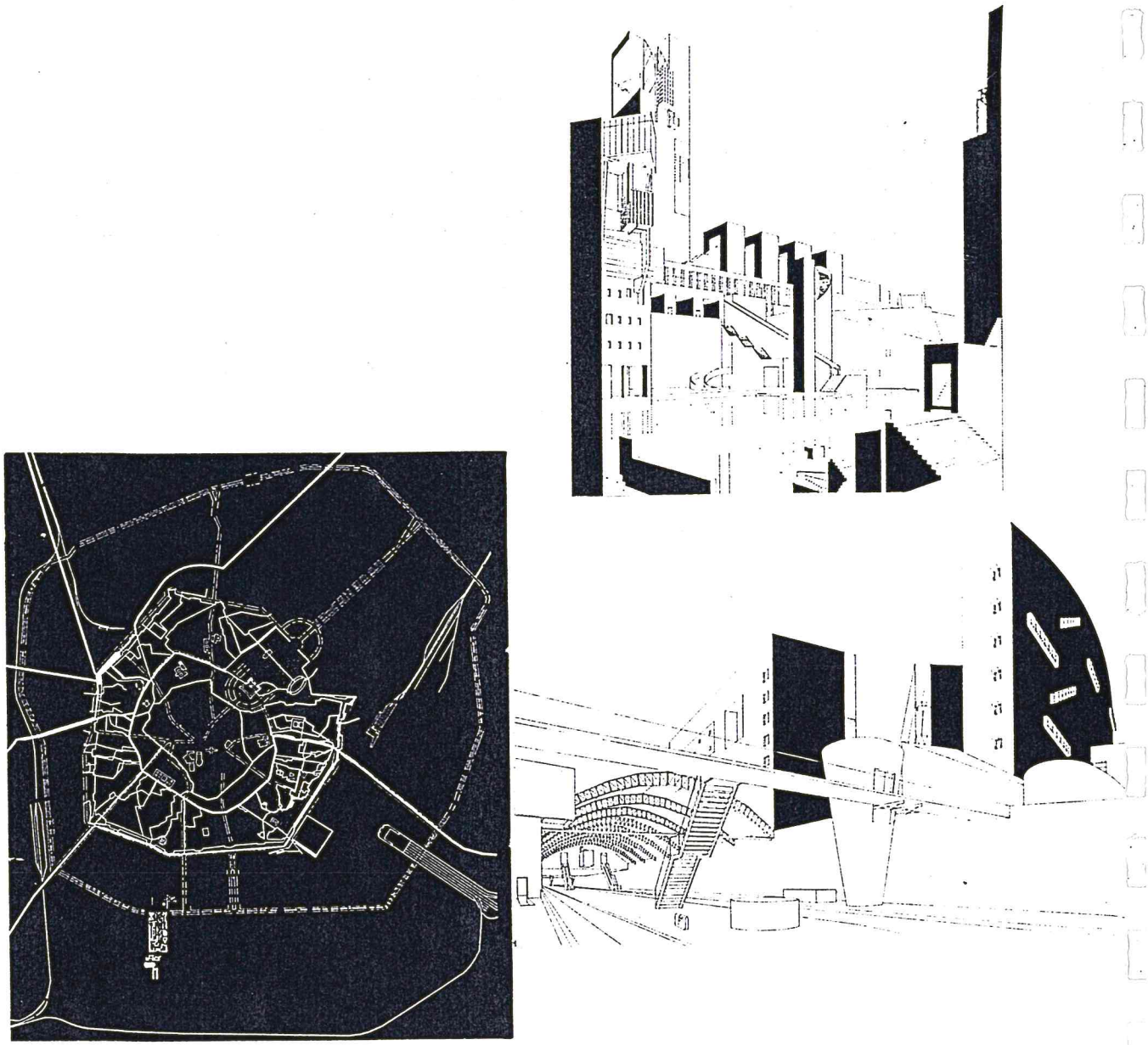


Fig. 2.35 – A Project For A Suburb of Milan – Steven Holl

Holl observes that Milan, like many other cities, has sprawled. It has lost clarity at its periphery which demarcate the city. His strategy is to create a small district, with a uniform character to define a suburban entrance into Milan. Holl proposes that his site, be one of many sites placed along the periphery of the city, creating a focus of energy, a modern "Porta". Holl uses the monumental programmatic elements, such as, train stations, bridges, and public open air theatres, to give the city a face. Taller buildings are placed around the perimeter of the site so that they become the most visible elements.

■ REPETITIVE ELEMENTS

We recognize and remember elements of a similar character in a vast and complicated city. In fact, a consistency of character in the elements dispersed through the city contributes to a powerful and memorable image of the city because they help unify the physiognomy and character of the city.

Elements of a thematic, topological character can be utilized to form and enhance the representational edges. Consider, for example a hydro–electric tower that is common in Toronto and its suburbs. These towers and the open spaces in which they are situated, when seen from the air cut through the fabric of the city. However why are they not used to delineate? to act as thresholds? and to become major public spaces? Why are they not integrated as part of major highways?

There are other elements which used independently or in combination. I have listed some of these below.

- Park pavilions
- Subway entrances
- Bridges
- Street furniture and landscaping
- Public stairs
- Signs
- Public squares
- Parks and "green belts"
- Lighting

■ HYBRID ELEMENTS

Similar repetitive elements in the city do have a draw back. They can be boring and mechanical. They may not, if inappropriately applied, respond to specific conditions or nuances of a site or its context.

In an ideal situation typologically "pure" elements would be fine. However, in a complex city comprised of complex urban situations and character, we must turn to hybrid elements. The elements that I referred to above are still applicable, however, they may become transformed, adjusted or combined into hybrids.

The combination of elements may be used to form hybrid architectural elements which represent more than one thing, have more than one function. They are useful and may act as mediators or thresholds when addressing different aspects, or character within the city. My thesis site, for example, is one of the type of sites which has very different characters and elements in close proximity. Though this approach is not as pure as the earlier one, it is in fact more meaningful and ecologically fulfilling to the city and its inhabitants.

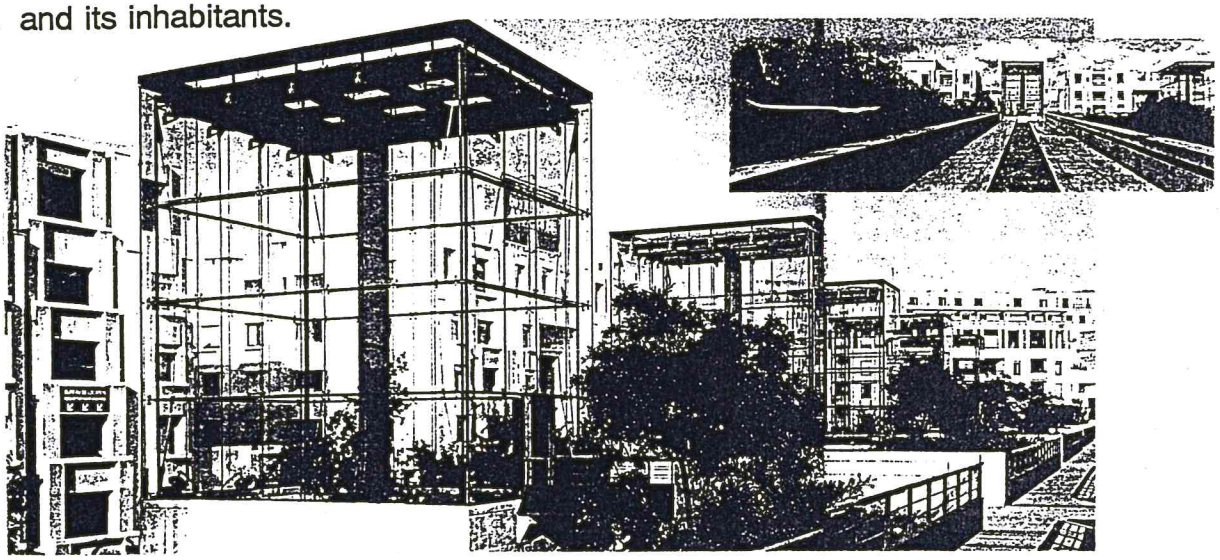


Fig. 2.36 – The Park Andre Citroen,

The edge of the park is defined with a moat, iron fences and greenhouses. The greenhouse pavilions are park elements, but they take on the rhythm and scale of the adjacent developments.

▪ Other Examples of Hybrid Elements

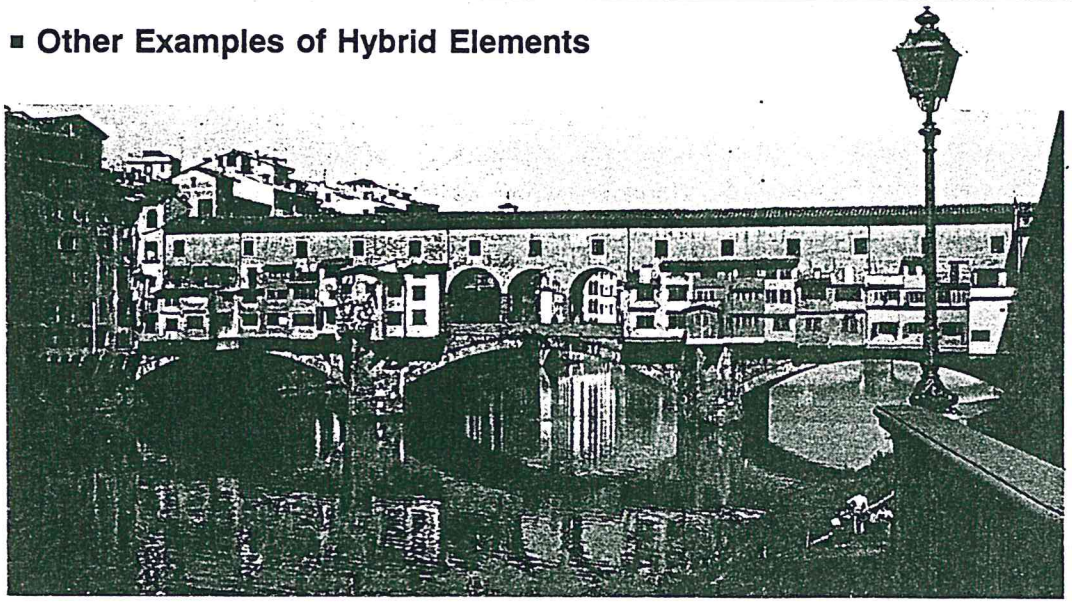


Fig. 2.37 – The Ponte Vecchio

The Ponte Vecchio in Florence is a good example of a hybrid. It is building and bridge at the same time. It connects both banks of the river Arno, but is also a major public place, and point of vista in the city.

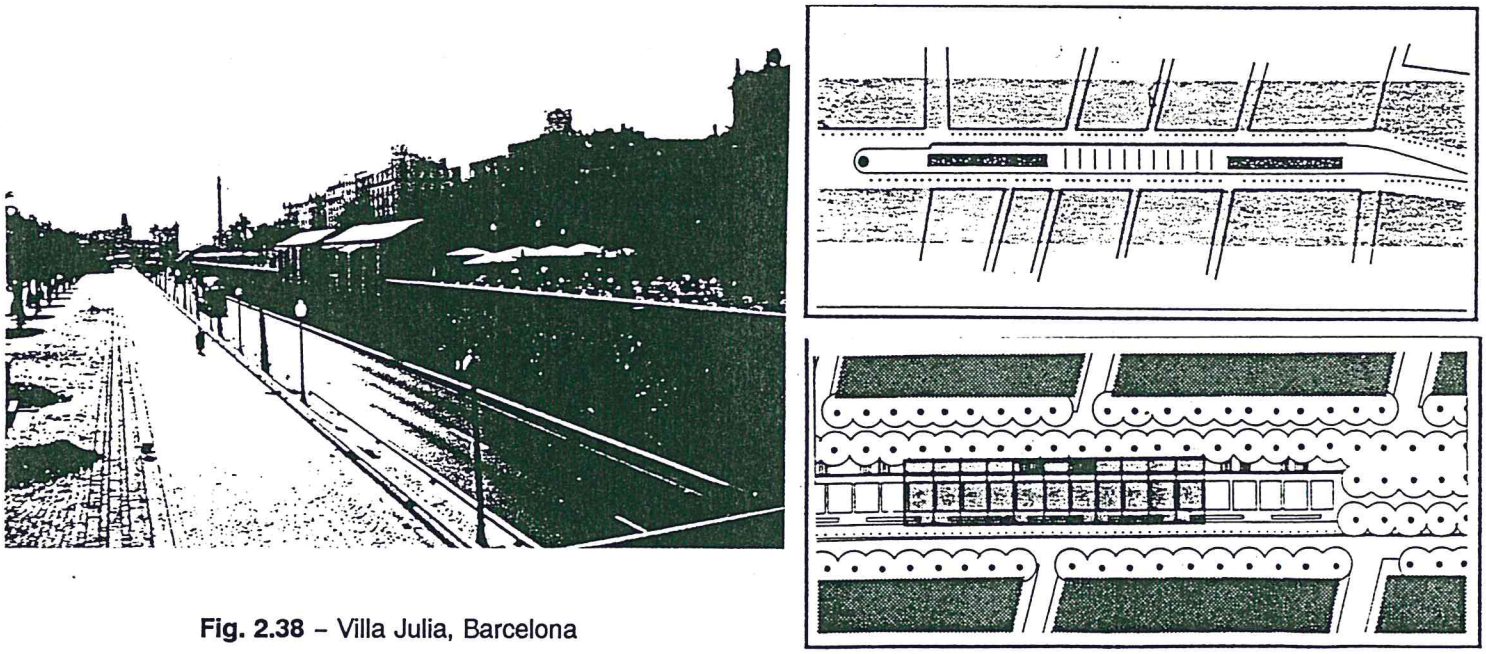


Fig. 2.38 – Villa Julia, Barcelona

The Villa Julia is another example of a hybrid type. It is park, garden, and building at once. Here we see how the integration of the various and diverse programmatic elements create not only a rich union of functions, but also an extended imprint in the fabric of the city.

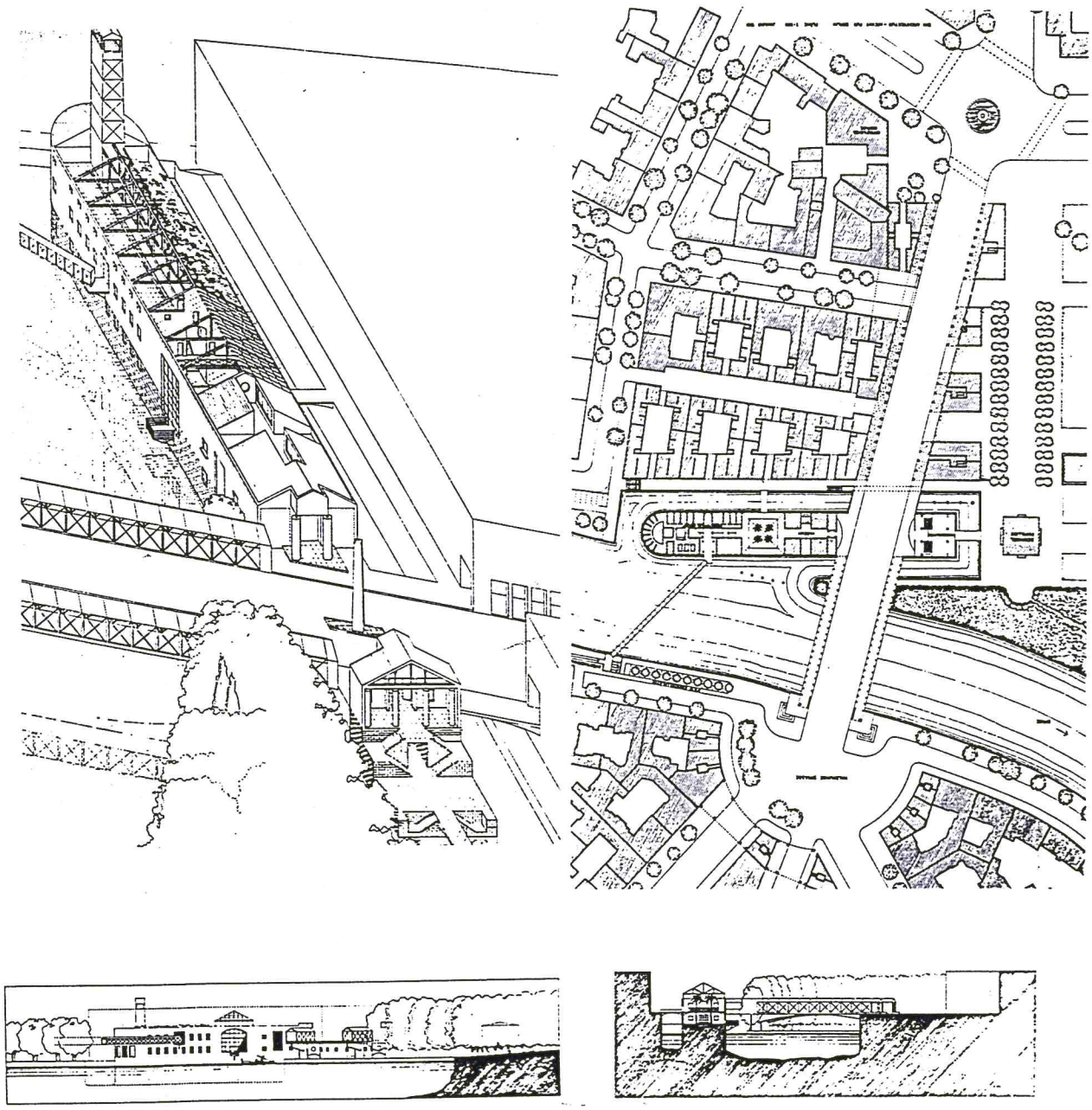


Fig. 2.39 – Schinkel Archives Building, Berlin – Edward Jones

Jones' scheme is building and river wall/edge at the same time. It is integrated into the fabric of the city, yet it distinguishes itself as a monument and gateway/entrance to the nineteenth century city. In this project we also see Jones integrate the buildings architectural vocabulary and the vocabulary of the bridge into one another.

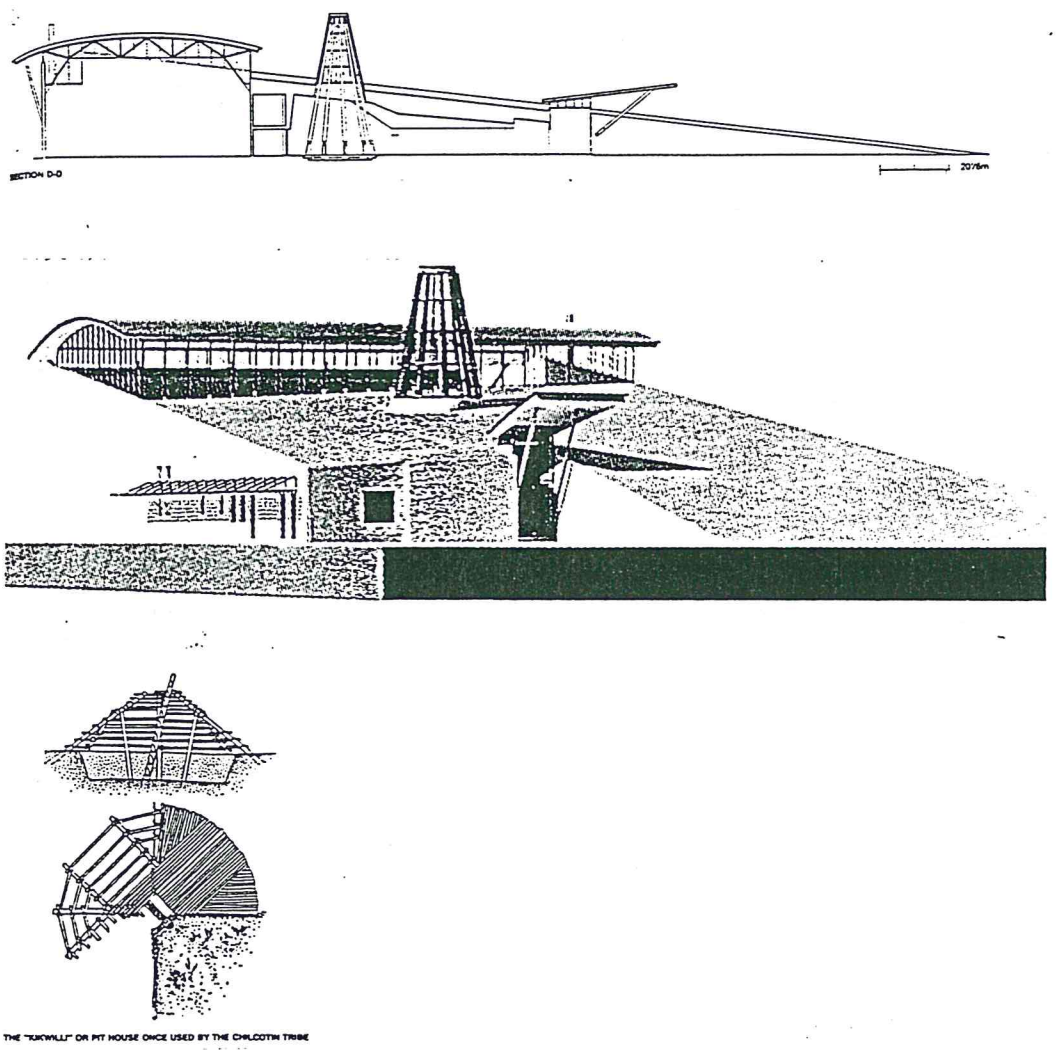


Fig. 2.40 – Stone Band School, B.C.

Peter Cardew's School for an Indian community in British Columbia is a building and berm at the same time. Located in a remote rural setting, this example of landscape elements engaged with building elements is very useful to my study. Here in this small school, Cardew carves an exquisite response to the Indian culture's roots and their interaction with Canadian education.

▪ TESTING THE THESIS AT OTHER SITES

The thesis and summary was explored at two sites around Toronto. The first site, is a typical railway bridge and underpass which marks the entrance from Toronto into The City of York, at Scarlett Road and Dundas Street West. The other site is a storm water run–off located in the middle of a neighbourhood in North York near Tretheway Drive and Eglinton Avenue.

Both sites are similar to the thesis site in various ways. They are all treated as utilitarian or industrial in character. Both sites are critical in their specific context and to the city as a whole because sites of this type exist throughout the city. The stormwater run–off is a significant void in the fabric of the residential neighbourhood.

Therefore it is possible to test the thesis a both sites as well as test the use of architecture of the public works and the notion of sites of similar character distributed throughout the city. The proposals for these sites are inspired by the examples that I have illustrated earlier. Particularly the public works projects such as bridges, and projects such as the villa Julia.

▪ Railway Bridge/Underpass Study

This proposal calls for the gateway characteristic of this bridge to be accentuated by tall flag/light standards, bus shelters, earthberms and trees which flank the underpass. This combination of the natural earthberm and concrete and steel structures embraces the utilitarian spirit and character of this urban type, yet creates a new monumental facade which addresses the street and becomes a memorable, perceivable representational edge.

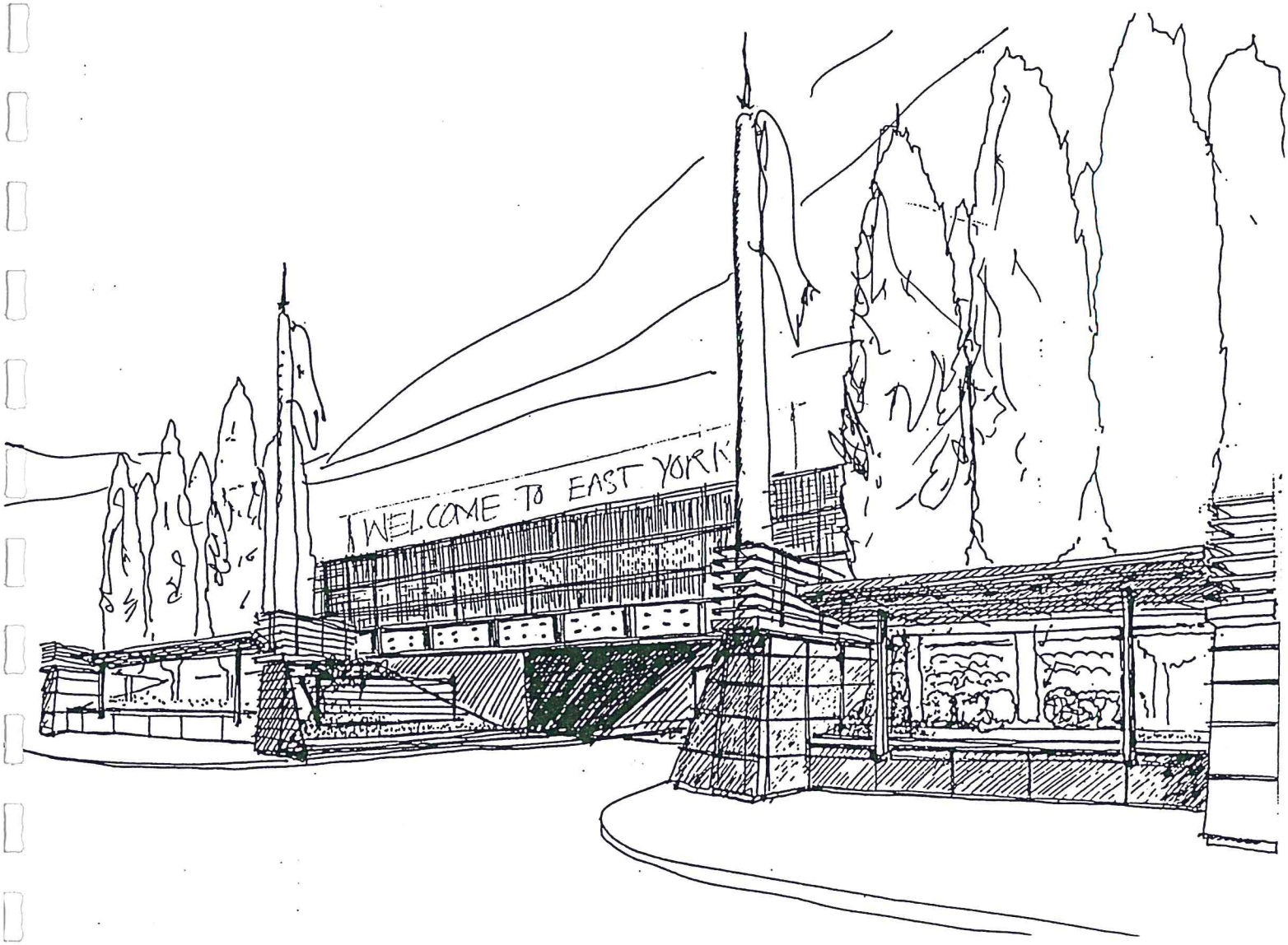


Fig. 2.41 – View From Dundas Street. This site is now an entrance into the City of York.

▪ Stormwater Runoff Pond

This site is a significant open space in the city, and its neighbourhood. In this proposal both natural and man made elements and open space and landmark have once again been used to compose a place where one really did not exist.

Firstly, by eliminating the chain link fence, I establish a row of trees on both sides of the pond and a dominant handrail and lighting which also get extended into the neighbourhood. A thin and long steel structure is then inserted into one end of the pond to become a focal point and a linear park which establishes a physical and dynamic connection between the pond and the neighbourhood.

In these sites, like in Moorish's scheme that I mentioned earlier, I have reintroduced the public works as a dominant and expressive element in the city fabric. I have unearthed the potential of these relatively small interventions in the city to celebrate, give character and structure a particular location and act as a representational edge.

This proposal like the AGT Plaza utilized man–made elements as park elements, and as in Peter Cardew's school, used earthberms as architecture. The present character of these sites exists elsewhere in the city. All we have to do is turn to our ravines. What is relevant about these studies is that we can begin to see how the spirit or approach can be utilized in general and more specifically, how the character can be transferred and transposed to other similar sites. **They will as we shall see, inform the thesis exploration further on.**

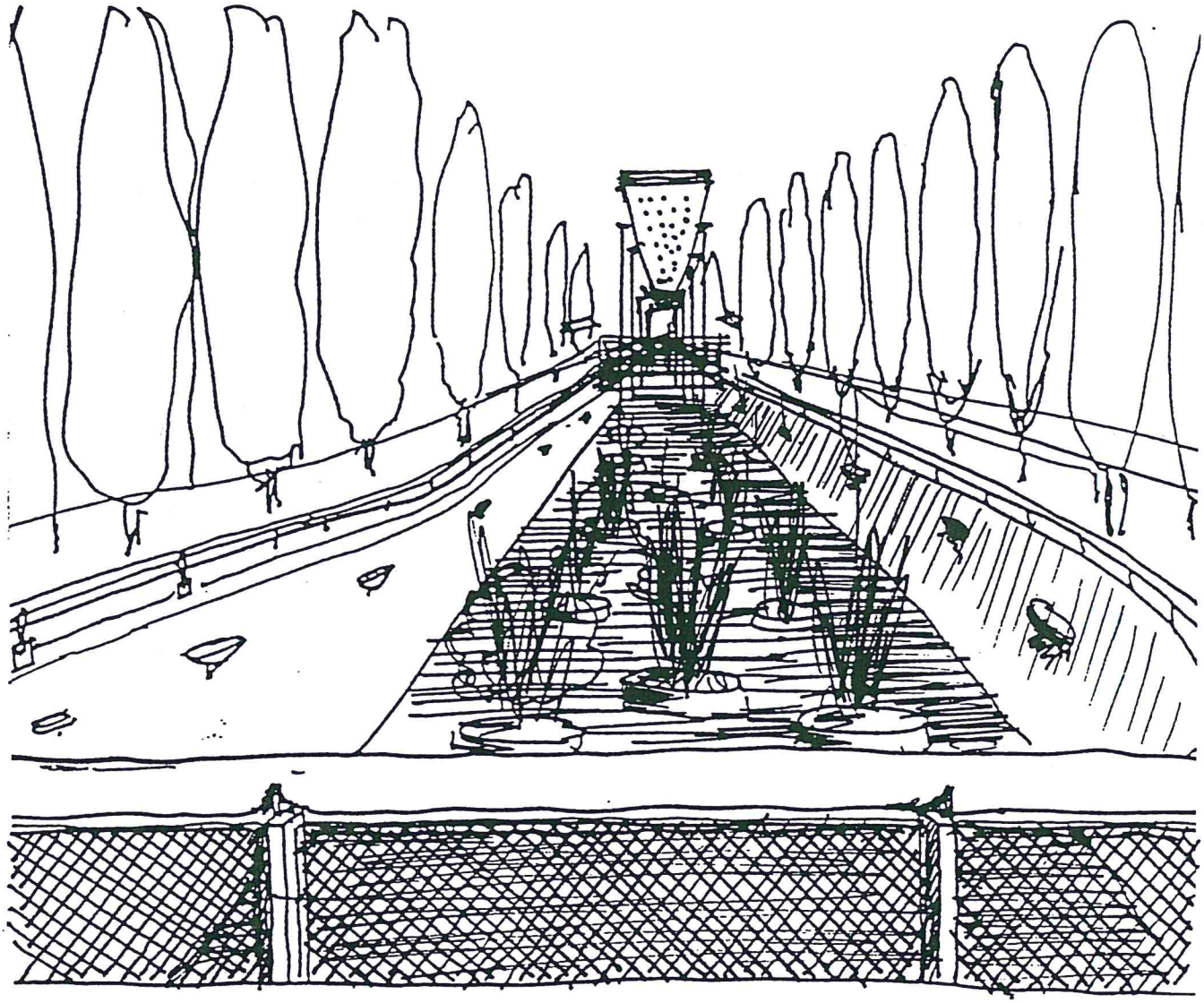
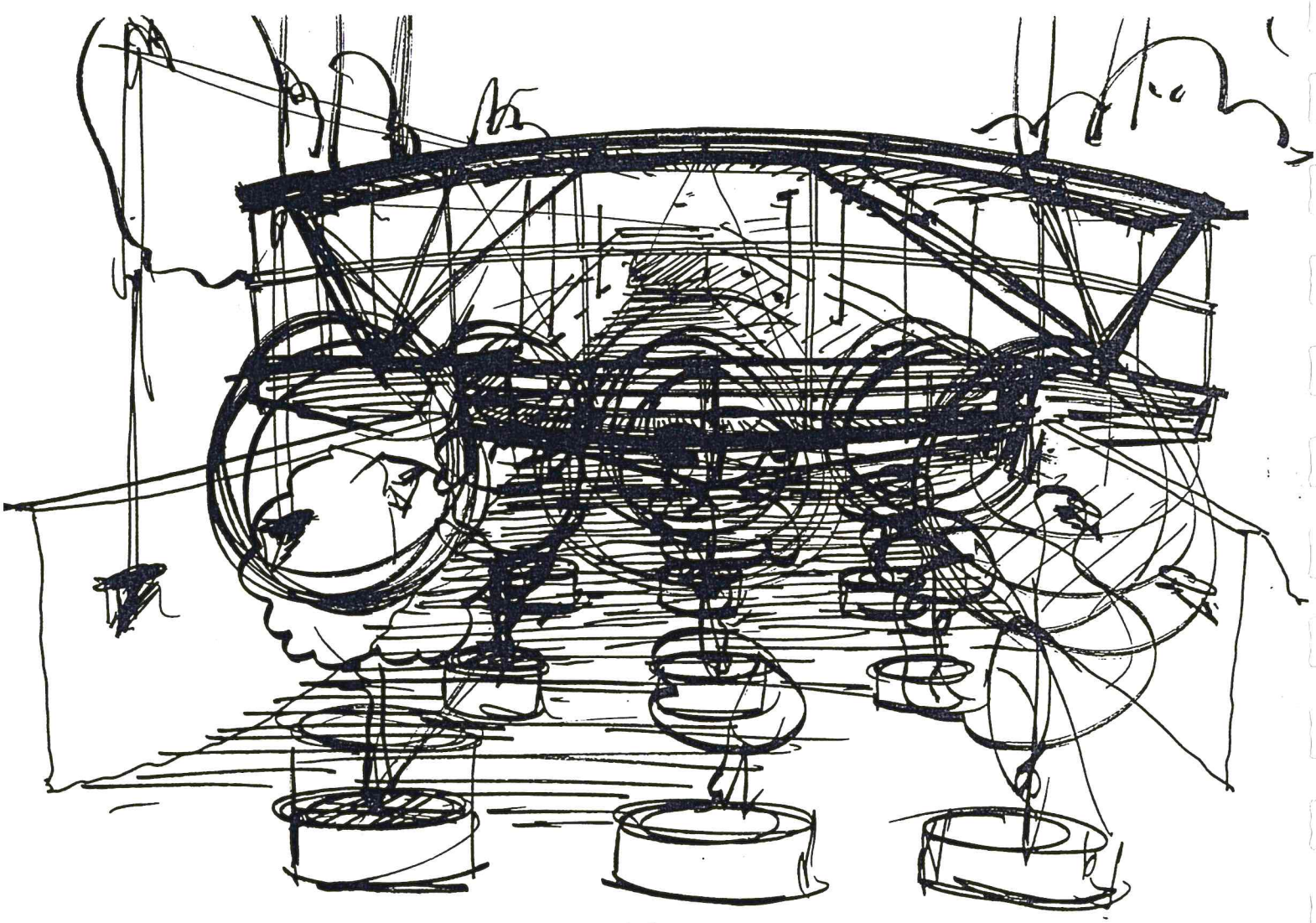


Fig. 2.42 – View Into Pond From Weston Road.



3

TORONTO AND SITE STUDY

This chapter provides a brief study of Toronto and an analysis of the thesis site. This study is used to inform the thesis exploration in CHAPTER 4.

▪ TORONTO

Toronto is a city on the natural edge of the Lake Ontario. Like many other North American cities such as Chicago, New York, Vancouver, and San Francisco, it faces water. This notion of facing the water is exactly where these cities and others like them have formed there character. It is on this edge that we find Toronto's main representational faces. However, many times they turn there backs on those moments of opportunity.

▪ FOUNDING

August 1, 1788 marked the purchase by the British of lands from the Mississauga Indians. The area was of much strategic value. As early as the French period of the fur trade the area was known as Toronto or "carrying place" due to its use as a short cut to the interior. Construction of the city began in 1793 and in 1794 Governor Dorchester made it the capital of Upper Canada.[1]

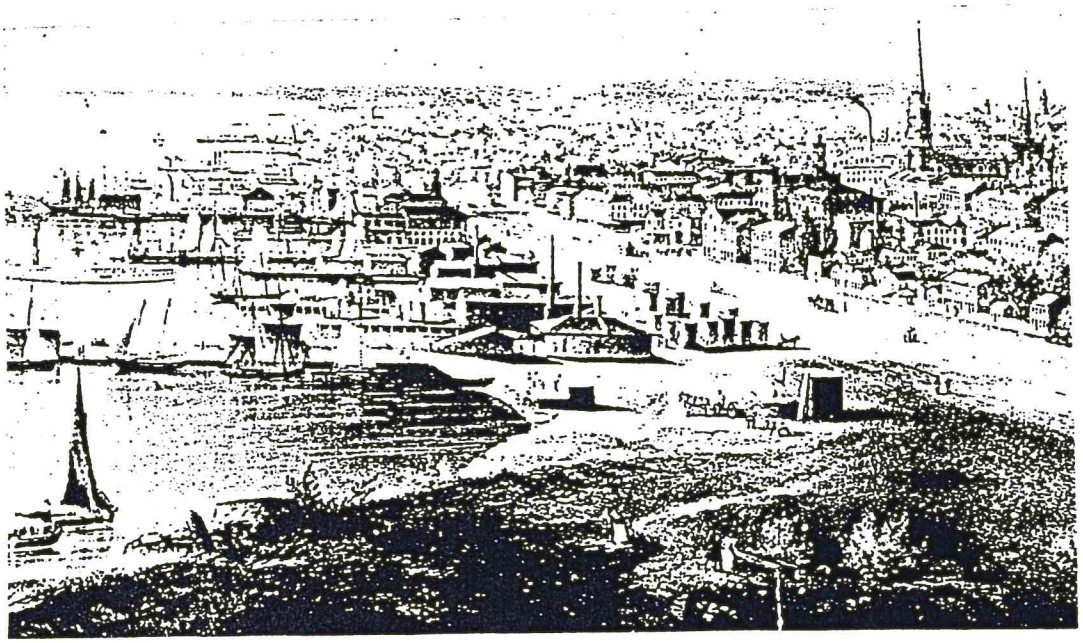


Fig. 3.1 – Toronto around 1700.

■ GEOGRAPHICAL FEATURES

Toronto is located on a sloping plateau stretching 5 kilometres north from the northern shoreline of Lake Ontario to a shallow escarpment – the shore of the ancient Lake Iroquois. Its position on the lake grants it an accessible shoreline with an abundance of river connections stemming north from Lake Ontario.

■ NATURAL BOUNDARIES

A naturally protected harbour defined by an enclosing peninsula (now island) forms the focal point and most southerly boundary of the city. The Don Valley and the Don River form what was for a long period the easterly extent of the city and the Humber river performs the same function to the western area of the city. The escarpment (the shore of ancient Lake Iroquois) as previously noted, forms the northern boundary, but its 25 metre rise has become a less prominent feature due to the rising scale of development surrounding it.

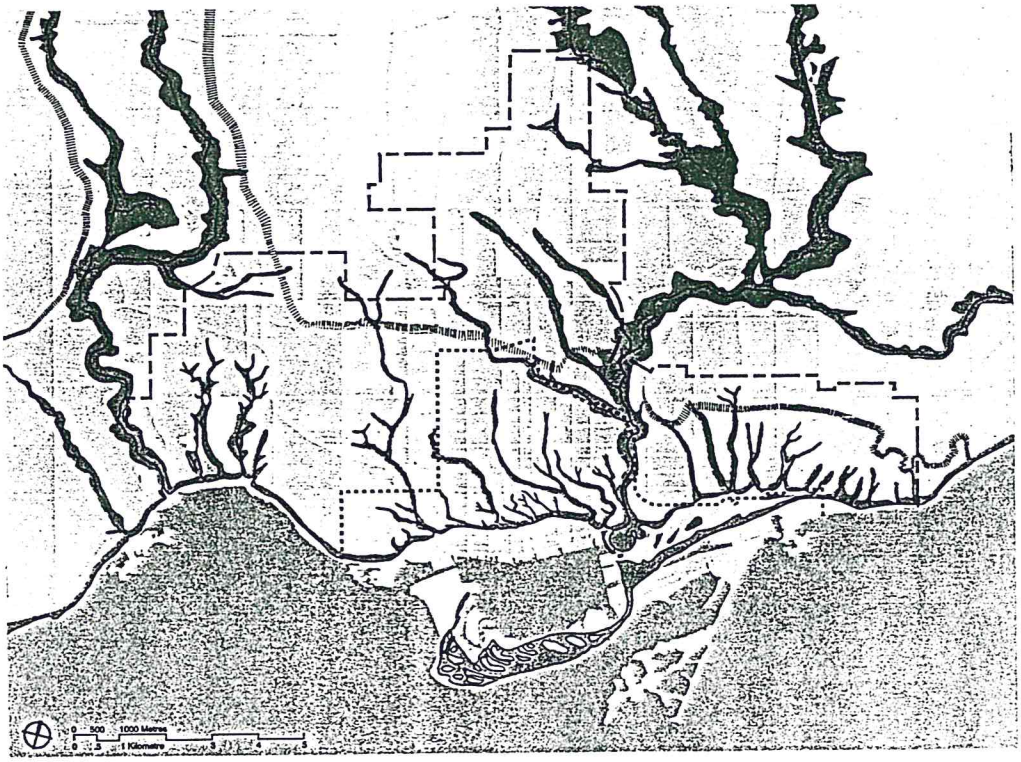


Fig. 3.2 – Toronto's original topography.

▪ ALTERATIONS TO THE TOPOGRAPHY

Toronto was and continues to be a city in topographical metamorphosis. Comparing the early city map of 1788 to the Transformation maps shown below, it can be seen just how much the city has changed. For example, the Island has becomes increasingly larger over the years. The Ashbridges Bay has been drained, filled in and turned into a industrial area, and of course the location of the original waterline has been relocated further south into the water almost 800 metres from its original position.[2]

In fact, Toronto's strong street relationship to the harbour and its close relationship to the water was physically broken as a result of the landfill projects that shifted the waterfront southwards and went hand in hand with the introduction of the railroad that penetrated the city centre and waterfront.[3]

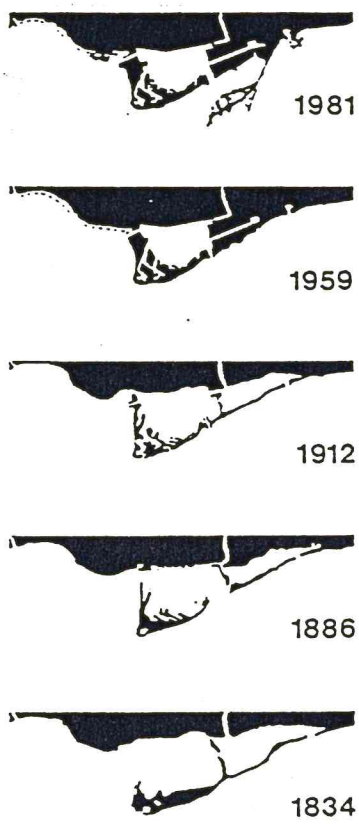


Fig. 3.3 – Alterations to Toronto's original topography from 1834 to 1981.

▪ EARLY PLANS FOR THE CITY

In 1788 on instructions from General Alexander Aiken, the Deputy Surveyor carried out a survey of the purchased land. The earliest plan for the city was drawn almost immediately following the purchase of the lands but was however, never built. This first plan showed clear intentions of structuring Toronto on an ideal grid. The grid was based on the square survey or concession grid laid out over the city site and southern Ontario. The plan for the city consisted of eleven by eleven squares, with the centre of the town located in one quadrant. The town was to be surrounded by a band of larger agricultural lots whose geometry was also based on that of the square.[4]

In 1793 Alexander Aiken was charged with drawing up the plan of the new town based on the military plan of Lt. Governor John Graves Simcoe who described the site as "the natural arsenal of Lake Ontario". With this in mind plans were drawn up to make Toronto a Garrison town. However, political opposition by Governor Dorchester to Simcoe's enthusiasm for a military town kept most of his plan from being realized.[5]

Aiken's plan was situated just west of the mouth of the Don River. He once again set a grid of streets parallel and perpendicular to the lake edge. This time however, much more modest in size from the first plan, (consisting of 10 square blocks with its band of larger lots).

In 1797 a new townsite was laid out to the west of the old one. The land between the old and new sites was reserved for public buildings as the hospital, school, jail, church, and market.

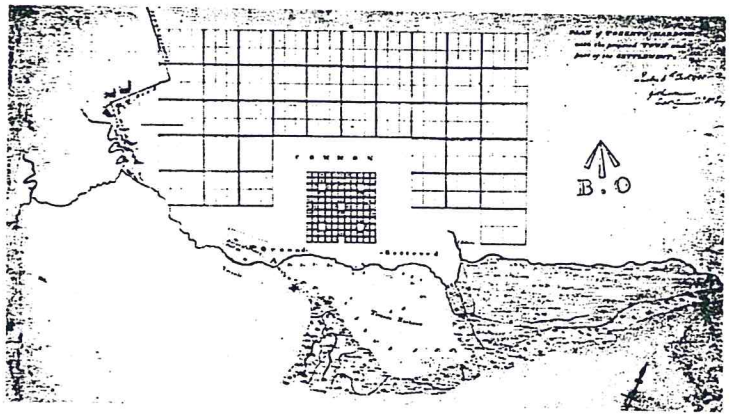


Fig. 3.4 – Toronto's first plan.

▪ STREET AND OPEN SPACE PATTERNS

As mentioned earlier, Toronto's streets were based on a square grid, fundamentally informed by the survey or concession grid and demonstrating little or no concern for the topography of the city site.

Further subdivision of the concession grid into smaller parcels of land and street was primarily an act carried out by private builders who owned the large parcels of land within the grid, and who in a utilitarian manner deviated little from the rectilinearity of the concession grid. This practice thus tied the street pattern further to the concession grid, and is still visible today in Toronto's street pattern, which is a rectilinear grid periodically irregular by some natural landmarks or by developers who were indifferent to , or uncertain of the adjacent street layout.

Toronto's open space patterns, like its streets began by, and in some cases are still tied to the concession grid. In Aiken's plan of 1788, five formal open spaces were positioned in relation to the grid. Following a period of indifference that was a result of private decision much like that of the street patterns they are today characteristically , sited on, related to , or adjacent to, major natural features.

Though the typology of Toronto's open spaces is primarily that of irregularly shaped parks that are strongly linked to the natural features and topography, physical and visual connection to Toronto's open spaces is to this day week. The examples are many, but one of the most obvious is the construction of the Gardiner Expressway at a point when the city was rediscovering its harbour and waterfront and reclaiming it as a place of recreation.

Toronto's ambivalent attitude towards natural features is even more pronounced as it relates to its ravines and parks. Toronto has a tendency to treat these areas as the city's back yard. Rarely do these ravines and parks get surrounded by streets, buildings or monuments. Instead they are hidden in the background, making them difficult to perceive in the totality of the city as well as difficult to reach.

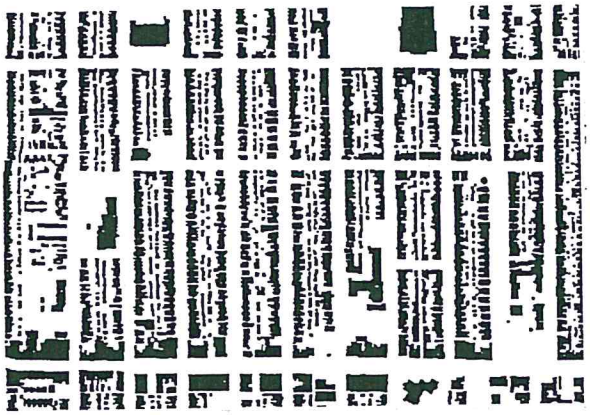


Fig. 3.5 – Toronto's residential fabric .

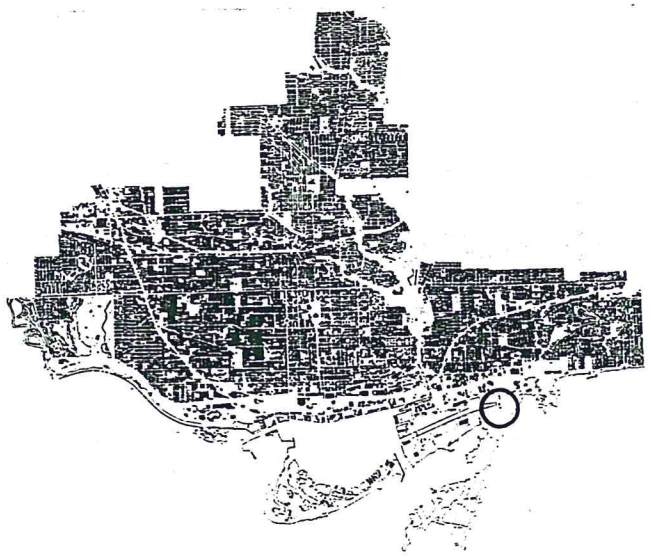


Fig. 3.6 – Toronto's urban fabric. Thesis site is highlighted.

■ INDUSTRY AND TRANSPORTATION

The industrial and transportation history of Toronto has significantly influenced its urban form. Toronto's industry has generally been planned into particular zones located near the railways and water transportation. Changes in industry and or means of transportation have affected one another and left the city with some very significant neglected and derelict industrial land.

Transportation alone has also had a significant impact on the city. Mass and public transportation schemes such as the subway, The Gardiner expressway and the railway have altered the face of the city in less than a positive way. Construction of some of these transportation corridors obliterated the archaeology, views, paths and general structure of the city. With the exception of the Bloor street viaduct and the Harris water filtration plant few of the city's industrial and transportation projects contributed desirable architectural character to the city.

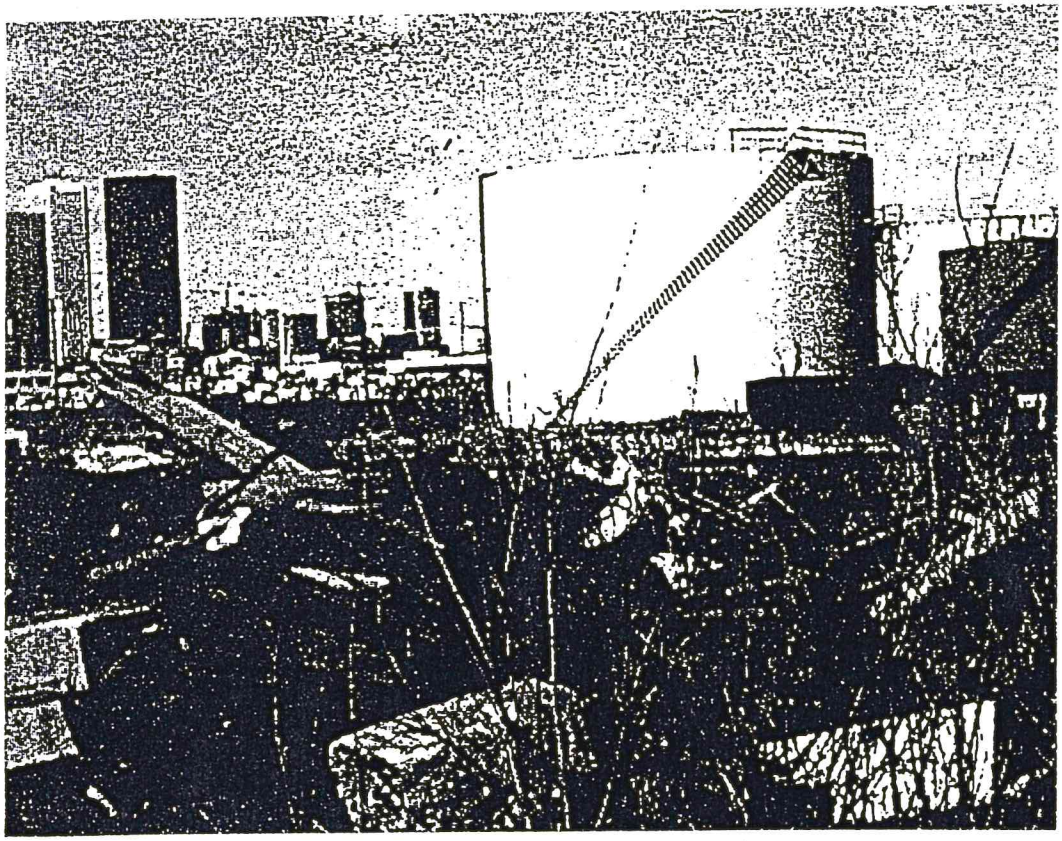


Fig. 3.7 – Oil drums in a wasteland at The Port of Toronto Industrial Area.

■ THESIS SITE

■ HISTORY

The Eastern Headland is just one of many of the City of Toronto's waterfront reclamation projects that has taken place throughout the city's history. Since the turn of the century approximately 2000 acres or 8% of its total area have been added to the City of Toronto.

Much of Toronto's now seemingly ever present harbour landscape, including the Port of Toronto, the harbourfront, and the Toronto Island, have been greatly altered by dredging, and other forms of waterfront engineering endeavours such as the large scale dumping of construction debris.

The construction of the Eastern Headland was Begun in 1959 by the Toronto Harbour Commission with the intention of creating a man made breakwater to protect the Toronto Island, and the Ashbridges Industrial Zone from Easterly storm waves. The continuing and increasing naval traffic passing through the Port of Toronto's facilities at the time, also brought the possibility of a new outer harbour embraced by the Headland.

It became fairly clear by 1972 that the decrease in Port traffic had discounted any of the T.H.C's hopes for an outer harbour and the use of the headland for Port development, and the eastern headland therefore continued to serve it's function as a breakwater as well as other functions unforeseen during its construction. The barren expanse of rock and gravel that characterized the headland in its infancy soon became a colony to various varieties of plant life and 185 birds, poplars, cottonwoods, and willows are present along with nesting gulls, terns, Canada geese, mallards and songbirds.[6] Today the Eastern Headland is home to a vibrant ecosystem. This has brought into question many of the recent propositions for the headland's development, ranging from airports to aquatic parks which would include waterskiing, picnicking, camping, fishing piers, hiking and biking trails alongside a 20 acre wildlife area at the southern end of the Headland. Planning committees and concerned citizen groups such as " Friends of the Spit" continue to debate about development proposals for the Eastern headland, hoping to find the proper balance of uses for the site.[7]

■ PERCEPTUAL GATEWAYS

Perceptual Gateways in the area of the thesis site are located at the southern end of Cherry street and the southern end of Leslie street (thesis site). These two locations form the Eastern Channel which forms a perceptual gateway into the inner harbour. Similarly the Shipping Channel forms a gateway into the Port Industrial Area. The intersection of Keating channel and the Don River also form a gateway into the Don River Valley.

Fig. 3.8 – Perceptual Gateways

■ PROMINENT VIEWS AND AXIS

Prominent views exist at many locations around the thesis site. Once again the southern extremes of Cherry and Leslie streets are significant in this respect. Both these locations act as visual anchor points along the cherry beach are.

The shore of the headland also offers significant views to the lake, to the beaches and the Scarborough Bluffs to the east.

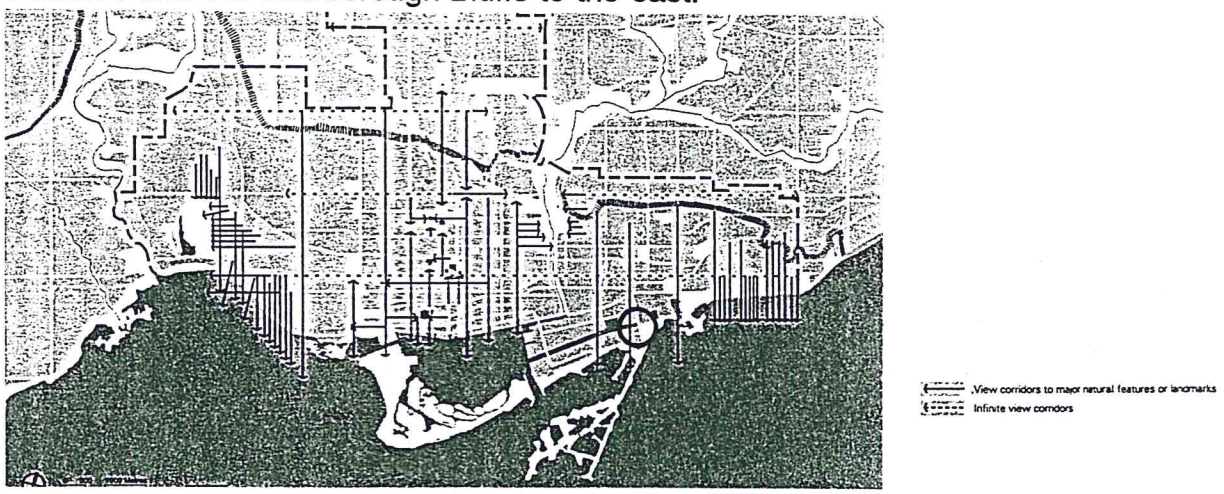


Fig. 3.9 – Toronto's View Corridors

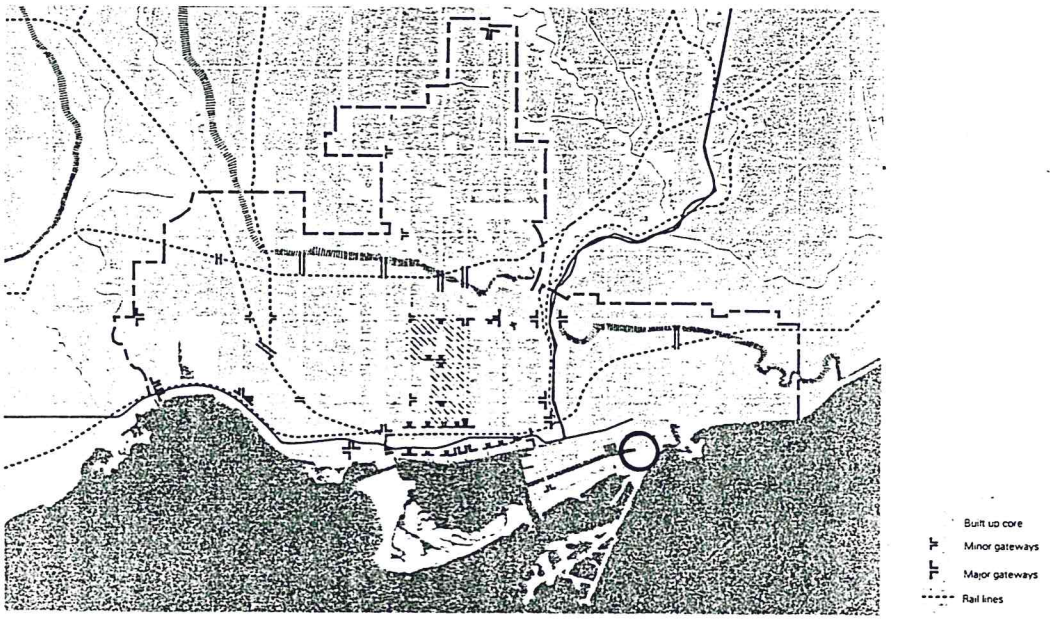


Fig. 3.10 – Toronto's Perceptual Gateways

▪ SIGNIFICANT BUILDINGS

Significant building in the area are primarily of an industrial and public works nature. The water treatment facility to the east of Leslie street, the electrical generating station and the various grain cylos in the area are significant. There exceptional size make them visually prominent and therefore, important monuments in the area. They do not however contribute to the open spaces around them in any way.

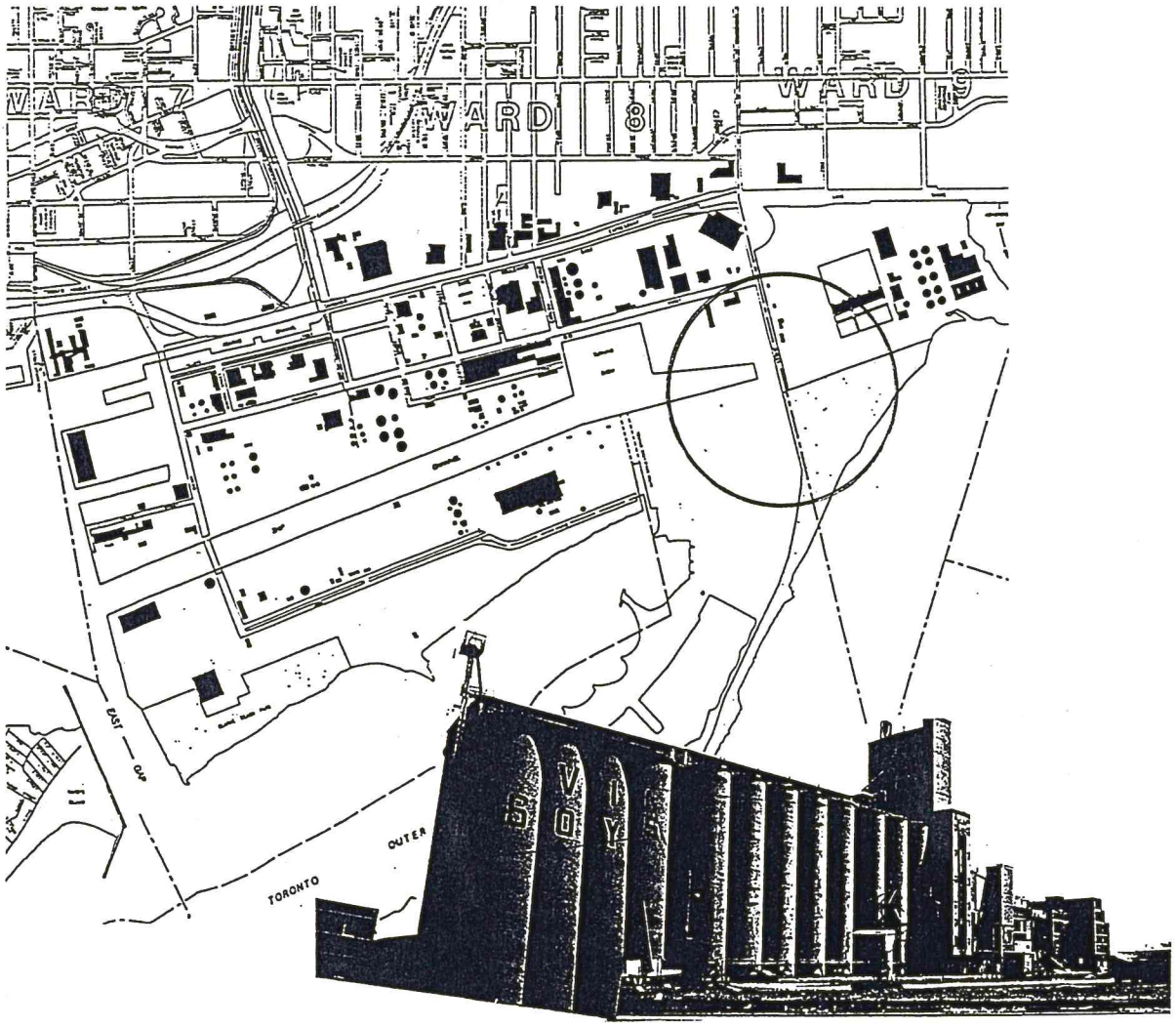


Fig. 3.11 – Figure ground, plan Port of Toronto Industrial Area.

■ STREETS AND OPEN SPACES

Cherry street and Leslie Street are the north/south streets in the area. Unwin Avenue is the significant east/west thoroughfare. All of the streets in the are bounded by very little open space of a civic character.

The major open spaces in the area are the Cherry Beach, the Shipping Channel, the turning basin, and the Leslie Street Spit. The character of these spaces ranges from the industrial to the natural.

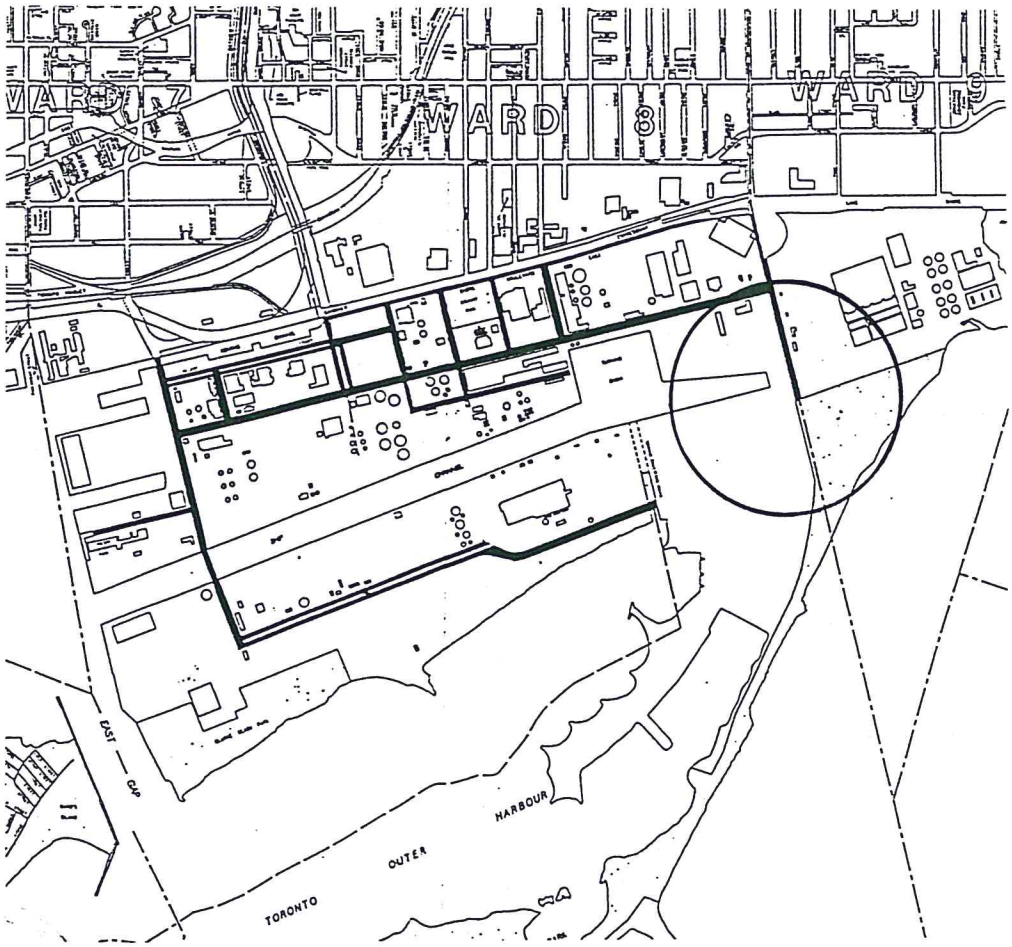


Fig. 3.12 – Main streets, Port of Toronto Industrial Area.

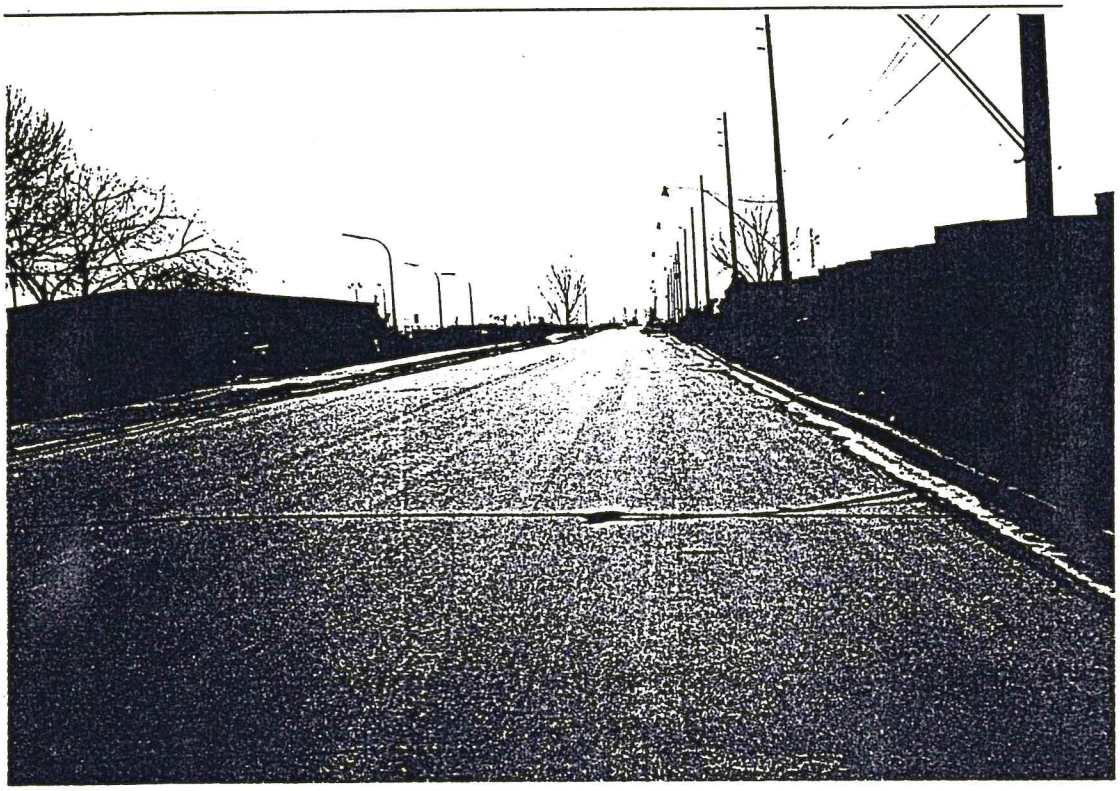


Fig. 3.13 – View looking south on Leslie street, Port of Toronto Industrial Area.

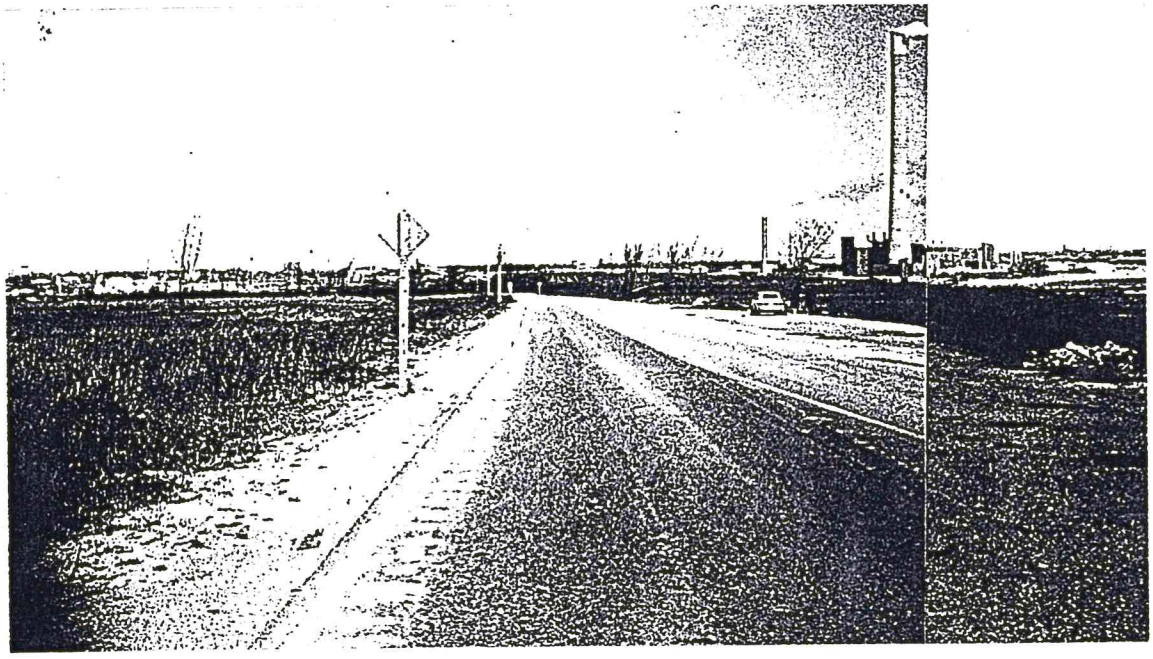


Fig. 3.14 – View looking north from the "Leslie Street Spit", Towards the thesis site and the Port of Toronto Industrial Area.

Fig. 3.15 – View looking south towards the lake.

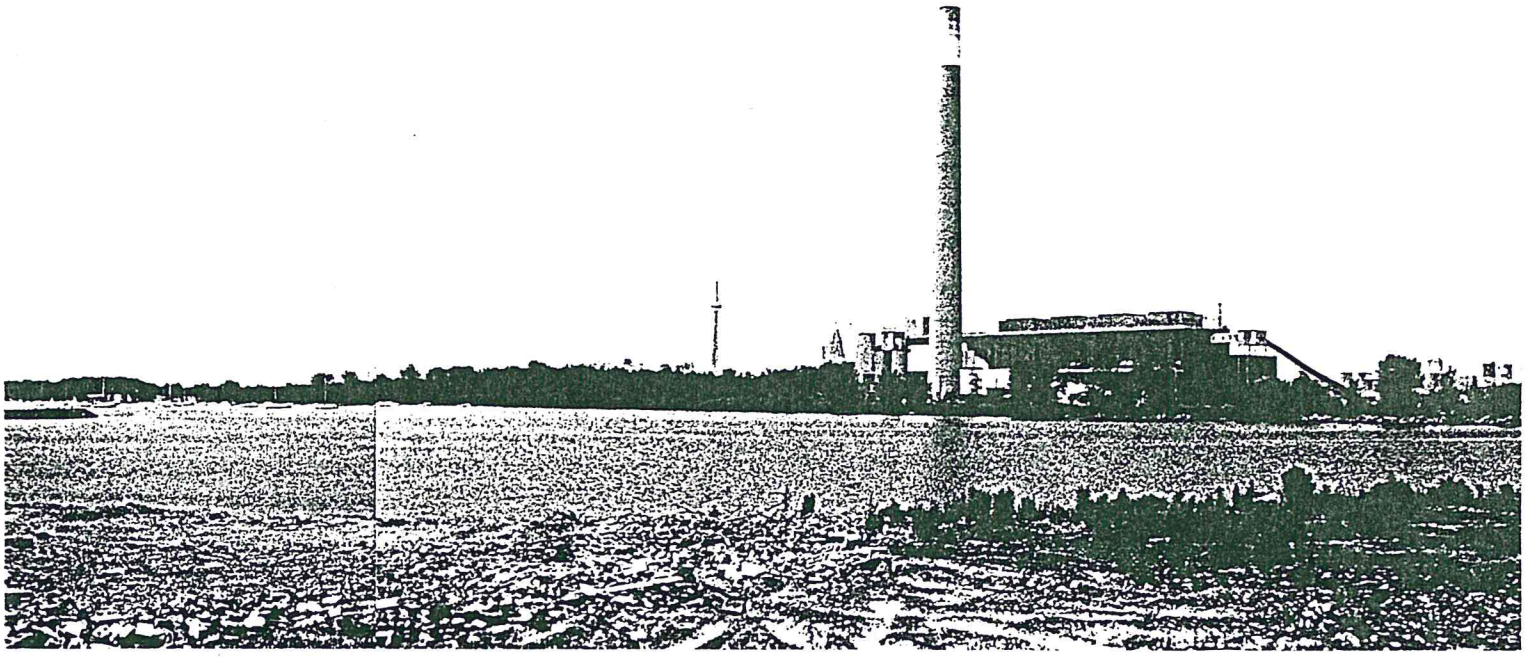


Fig. 3.16 – Looking west from the "Leslie Street Spit", Towards the Port of Toronto Industrial Area.

4

THESIS EXPLORATION

This chapter describes the architectural program, explores and illustrates the thesis in architectural terms at the thesis site.

The examples provided in CHAPTER 2 along with this site specific exploration are used to draw conclusions and general applications in CHAPTER 5.

▪ THESIS STATEMENT

Representational edges of the city must be established and recaptured. The character of the city as a whole can be represented and enhanced by these individual focal points or loci of interest which punctuate and support the fabric of the city. The representational edges must be particularly recaptured at neglected and empty sites of historical, ecological, and contextual significance and at the places where the city changes character such as where the industrial meets the natural. By establishing identifiable boundaries, spatial hierarchies, and celebrating thresholds, which are informed by the context, spirit, materiality and texture of the landscape, the representational edges will help unify the urban fabric, and render the city more legible, memorable and meaningful.

▪ VEHICLE FOR EXPLORATION OF THE THESIS

Where Toronto's Eastern Headland, also known as the "Leslie Street Spit", comes into contact with the Port of Toronto Industrial area, we encounter an area of metropolitan and regional significance. The headland, which at one time was intended for Port of Toronto use as part of an outer harbour, has become a park and a wildlife sanctuary. It is now a place of ecological and natural significance.

It is an area where we depart and enter the city. It is also disturbingly characteristic of the many places where industry's toxicity and nature collide and fuse into a vacant and derelict no–mans land. Here we do not observe clear hierarchies or threshold between the landscapes. At this location, like many others of a similar nature, we do not realize when we pass from one area into the other. Here one would ask, **Where am I? What is this place? What have we done here? Where do I go from here?** We see what Paul Virilio describes in his essay, "The Overexposed City".

"Thus, differences between positions begin to blur, resulting in unavoidable fusion and confusion. Deprived of objective limits the architectonic elements begin to drift, to float in an electronic ether devoid of spatial dimensions..." [1]

The thesis will be explored at this site. An "**interpretive centre**" will mark and **celebrate** the passage from city to the headland. It will become a representational edge. The interpretive centre will appropriately be informed by the industrial and ecological character of the area.

▪ PORT INDUSTRIAL DISTRICT INTERPRETIVE CENTRE

The Port Industrial District Interpretive Centre is intended to be the cultural, and information centre of the area. The mandate of the centre is to provide leadership in the areas of environmental awareness and research, and to promote a public greater awareness of the fragile co-existence between the city and nature. The Centre carries out its mandate through the programs that it offers to the public and to private school (Grade school to University) groups.

▪ PROGRAMS

There are three main programs at the centre. The three main programs rely on the facilities and services of one another

1. **Science School** (class rooms)
   Open to all schools for one day field trips.

2. **Research Facility** (laboratories and reading room)
   Open to the general public, the immediate community and the school.

3. **Display** (gallery)
   Open to the general public, and to the school.

■ SPACE REQUIREMENTS – ARCHITECTURAL PROGRAM

■ ROOM/AREA DESCRIPTION CODE

A. Room function.
B. Number of persons per room.
C. Time period of room use.
D. Frequency of room use.
E. Equipment or furniture requirements.
F. General/Miscellaneous items.
G. Area required (square metres).

■ CLASSROOM/THEATRE

A. Classroom for a total of 30 students.
B. 30 Students per classroom. (Total 1 classroom, 1 theatre)
C. 8:30am.–10:00am., 3:00pm.–5:30pm.
D. Daily, weekdays, all year round.
E. 2 lab tables desks, 2 computers, storage drawers under work tables.
F. N/A
G. 50 m/room (1 x 50 m + 1 x 100 = 150 m Total)

■ CLASSROOM STORAGE

A. 1 Classroom storage room Per classroom.
B. N/A
C. As per classrooms.
D. Daily, weekdays, all year round.
E. Shelves.
F. N/A
G. 10

■ CAFE

A. Cafe
B. 30
C. All day.
D. Daily, all year round.
E.
F. N/A
G. 50

■ KITCHEN

A. Food preparation space to serve 30,
B. Staff of 3 – 4 people
C. 6:30am. – 9:00pm.
D. Daily, all year round.
E.
F. N/A
G. 20

■ KITCHEN STORAGE

A. Storage space for Cafeteria Kitchen.
B. N/A
C. 6:30am. - 9:00pm.
D. Daily, all year round.
E.
F. N/A
G. 10

■ OUTDOOR EATING AREA

A. Outdoor eating area for 15 People (students, teachers),
B. 100
C. 7:30am. - 12:00pm.
D. Daily, all year round.
E. Seating and Tables for 100 people.
F. Food Serving area required.
G. 30

■ MUD ROOM

A. Coat and Boot cleaning/storage room for 30 students.
B. 30 students at any one time.
C. All day.
D. Daily, all year round.
E. Boot and coat storage/lockers for 30 people
F. N/A
G. 40

■ COMMON ROOM

A. Common gathering space for 30 students.
B. 30 students at any one time.
C. All day.
D. Daily, all year round.
E. Boot and coat storage/lockers for 250 people
F. N/A
G. 30

■ RESEARCH LABORATORY

A. Lab (2 Labs)
B. 2 - 3
C. All day.
D. Daily, all year round.
E.
F. N/A
G. 20m x 2 = 40m

■ GREENHOUSE

A. Growing area for exhibit plants.
B. 5
C. All day.
D. Daily, all year round.
E. Water sprinkler system.
F. N/A
G. 100

■ EXTERIOR PLANT EXHIBIT

■ READING ROOM

A. Reading Room
B. 10
C. All day.
D. Daily, all year round.
E. Book shelves, tables.
F. N/A
G. 40

■ GALLERY

A. Gallery
B. 250
C. All day.
D. Daily, all year round.
E.
F. N/A
G. 100

■ SHOP

A. Shop
B. 10
C. All day.
D. Daily, all year round.
E. Counter, display cabinet.
F. N/A
G. 10

■ ADMINISTRATIVE OFFICES

A. Office space.
B. 5
C. All day.
D. Daily, all year round.
E.
F. N/A
G. 20

■ BOAT STORAGE

A. Boat storage for 10 boats.
B. 2
C. All day.
D. Daily, all year round.
E. Crane, Winch.
F. N/A
G. 120

■ TOOL STORAGE

A. Tool Storage
B. 2
C. All day.
D. Daily, all year round.
E. Shelving.
F. N/A
G. 10

■ REPAIR SHOP

A. Shop for boat repair
B. 2
C. All day.
D. Daily, all year round.
E.
F. N/A
G. 30

■ PARKING 20 Cars ■ WASHROOMS ■ MECHANICAL ROOM ■ ELECTRICAL ROOM

Fig. 4.1 – An outdoor classroom at the "Leslie Street Spit".

▪ Examples of Interpretive Centres

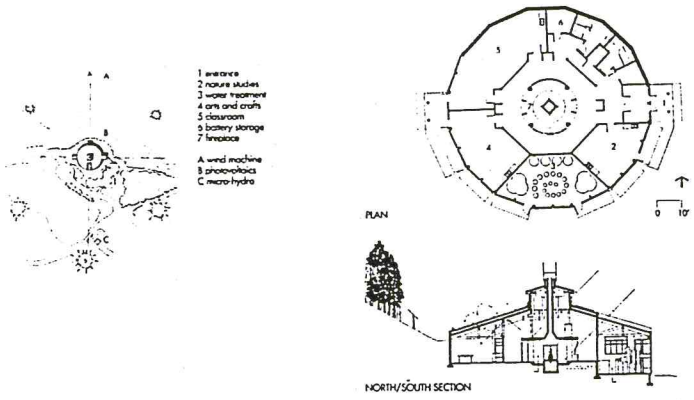


Fig. 4.2 – Boyne River Interpretive Centre – Doug Pollard Architect.

An energy efficient circular plan is half buried into the earth, unifying architecture and landscape.

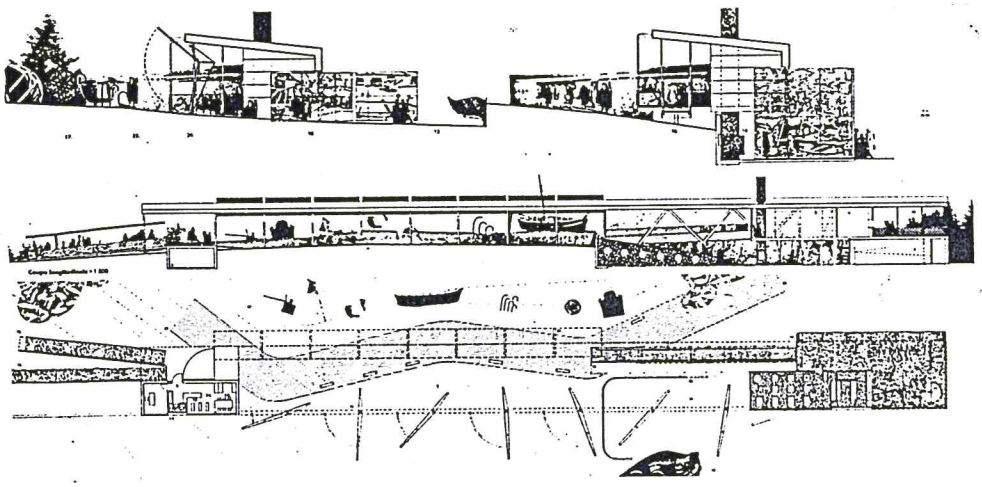


Fig. 4.3 – Le Centre D'Interpretation Du Bourg De Pabos, Quebec – Atelier Big City Architects.

A steel structure and canopy covers a series of galleries placed near an existing archeological find. The Centre is a threshold between the parking area and the artifacts.

▪ THESIS EXPLORATION

The representational edges can be formed as we have seen, by monuments, open spaces, and by monuments and open spaces composed in unison. Earlier, I demonstrated that to make a representational edge, we must firstly, mark and locate a significant site that requires attention. Then it must be celebrated by endowing the location with an architecture whose character is representational or symbolic of the spirit and the public life of the site. Having done this, the place becomes a symbolic element in the city. It captures our attention and captures us in much the same way if we were to pass through a wall or a real edge. The representational edge now contributes to the overall understanding and meaning of the city.

Earlier I explored the thesis at **other sites** in the city. The **Railway Underpass** study, and the **Stormwater Runoff Pond**. These studies were inspired by public works and utilized a combination of man made and natural elements to form the representational edge.

In this chapter I briefly document two other design studies, this time at the thesis site. The two schemes also derive their character from the interaction of landscape elements which I may call "natural elements" and public works inspired elements such as towers, retaining walls and bridges.

Both schemes propose identifiable landmarks which represent the character of the site. One scheme defines an open space. The second alternative incorporates a smaller grouping of structures which become perceived as a single monument, but nevertheless are an urban ensemble.

From these schemes I chose a thesis design proposal which I use as the vehicle to explore and illustrate the thesis.

▪ SCHEME ONE – THE REPRESENTATIONAL EDGE AS MONUMENT

This proposal establishes at the thesis site, a visual prominent monument intended to be a point of reference which marks and celebrates the threshold into the headland and city.

The monument, is an observation tower housing the interpretive centre gallery at its base. The tower is situated on an earthberm which acts much like a plinth. This scheme derives its character from the engaging of the tower (industrial element) and the earthberm (natural elements) as representations of the spirit of the site.

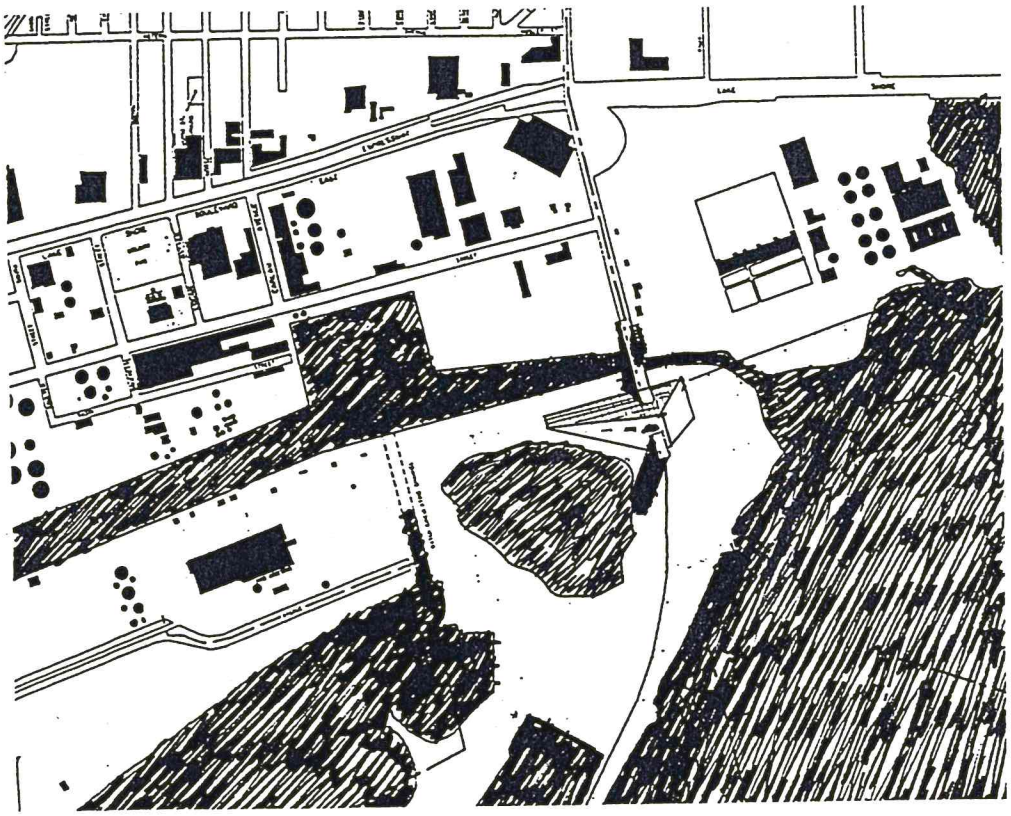


Fig. 4.4 – Plan, Scheme One.

▪ SCHEME TWO – THE REPRESENTATIONAL EDGE AS MONUMENTS AND PUBLIC OPEN SPACE

This proposal utilizes monuments and an open space to establish the representational edge. Buildings, structures, and earthberms are utilized as monuments that form the facades of the site and address the various aspects of the site. These structures enclose a pond/wetland which becomes the major open space and focal point in the site, capturing you as you enter and depart the headland.

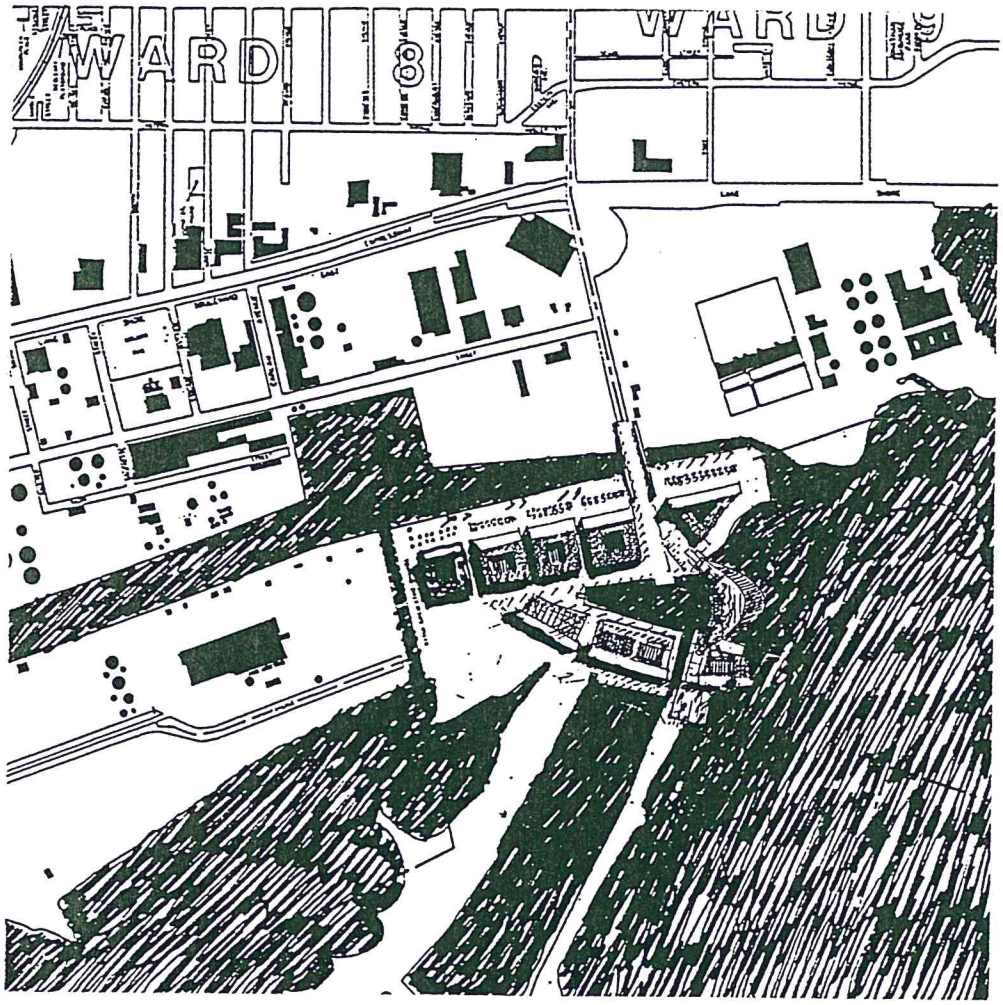


Fig. 4.5 – Plan, Scheme Two.

■ THESIS DESIGN PROPOSAL

To illustrate the thesis, the representational edge will be explored as a single monument and public open space "**marking**" and **celebrating** its significance in the city.

■ Urban design Objectives

1. Re-establish the city/wetlands relationship.
2. Place a strong visual landmark and open space at the site.
3. Utilize the character of the landscapes (ie: public works, nature) in the architecture and function of the landmark.
4. Utilize the landmark as a threshold and boundary between the industrial and natural landscapes.
5. Create an architectural promenade which celebrates the passage from one area to the other.

■ Re-establishing The Wetlands/City Relationship.

The thesis scheme connects the ship channel, which presently terminates west of Leslie street, to the lake. It introduces wetlands to the northern end of the headland, re-establishing a historical relationship which at on time occurred in the area, but was erased long ago. This strategy recreates a clear visual dialogue between the "natural" headland and the industrial area to the north.

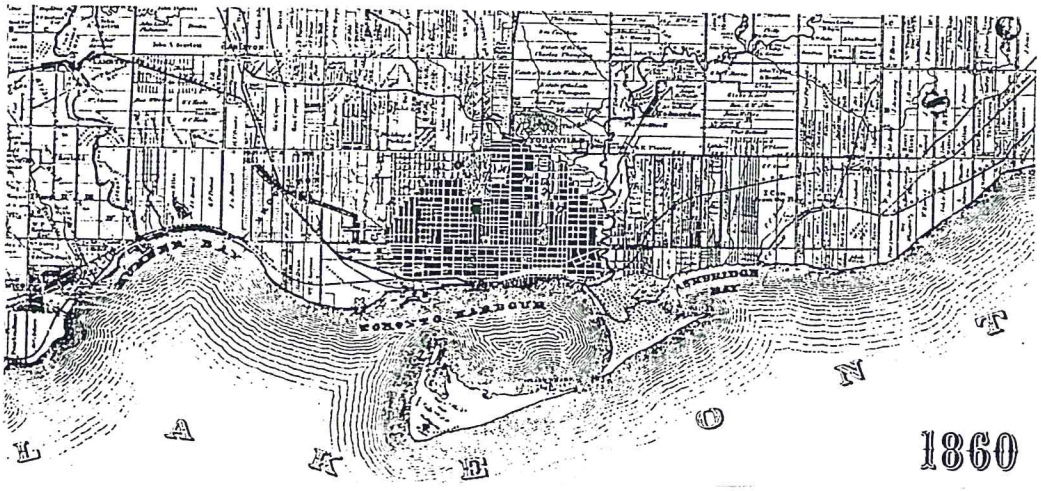


Fig. 4.6 – 1860 Plan of Toronto and the Ashbridges Bay wetlands.

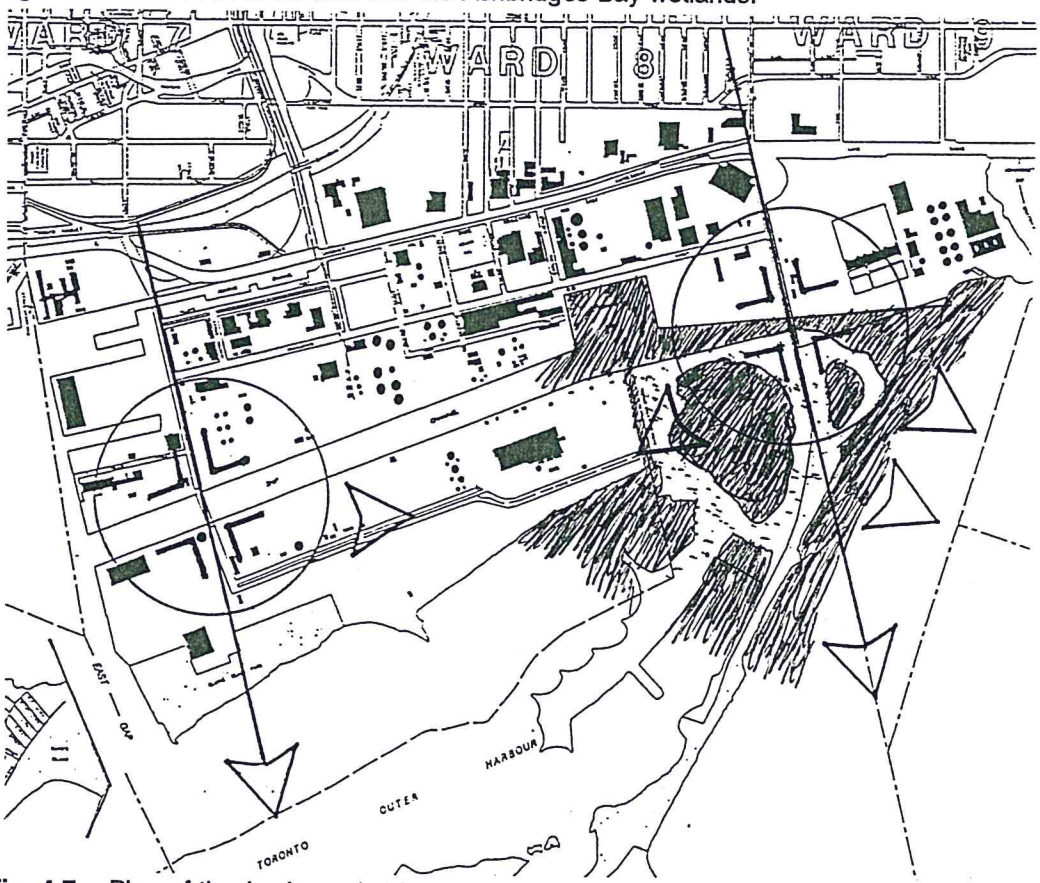


Fig. 4.7 – Plan of thesis site and ship channel connection to lake and introduction of wetlands to the headland.

▪ Utilizing The Public Works

Public works are one of the thematic or repetitive elements that do occur throughout the city. Public works exist at other significant neglected locations throughout the city similar to the thesis site. The thesis design proposal particularly embraces and is inspired by the public works because,

1. It attempts to respond to the industrial character of the area and site.

2. It re–establishes the tradition of public works elements as symbols and servants of the metropolis, rather than being relegated to the utilitarian and functional processes of planning.

3. Interpretive centres are galleries. What better opportunity than to use the public works as an ecologically sound and symbolic element of the city.

4. There are ecological and economic benefits in exploring the use of public works structures to house architectural programs. As I have said, they exist throughout the city and many times at significant neglected sites. Perhaps some of these structures can be reused?. In any event, it is particularly relevant at the thesis site, considering the ecological nature of the site.

   (I realize that the cost of a proposal of the magnitude of this thesis is almost unthinkable considering the shrinking governmental financial support for public projects of this type. However, where it does become economically feasible, is where existing public works may be reused or rehabilitated. Here, in fact we may find great ecological and economical advantages, in addition to the obvious architectural ones.)

■ Architectural Parti

The main architectural elements, informed by the character of the industrial and natural landscapes are, **bridge, ramp, gallery building, steel solar collection structure, observation tower,** and **earthberm.**

The **architectural parti** is,

1. A **linear ensemble** of the main architectural elements creating an eventful **architectural promenade** along Leslie Street where it intersects the extended shipping channel. This ensemble acts as a **boundary, threshold** and **gateway** between the industrial and the headland.

2. These elements engage and enter dialectic with one another forming a hybrid element that is a street, a bridge and a building at the same time.

3. The extended linear composition embodies a **symmetrical formalism** as well as a **more dynamic asymmetry,** embodying the symmetrical/asymmetrical orders found in both nature and industry.

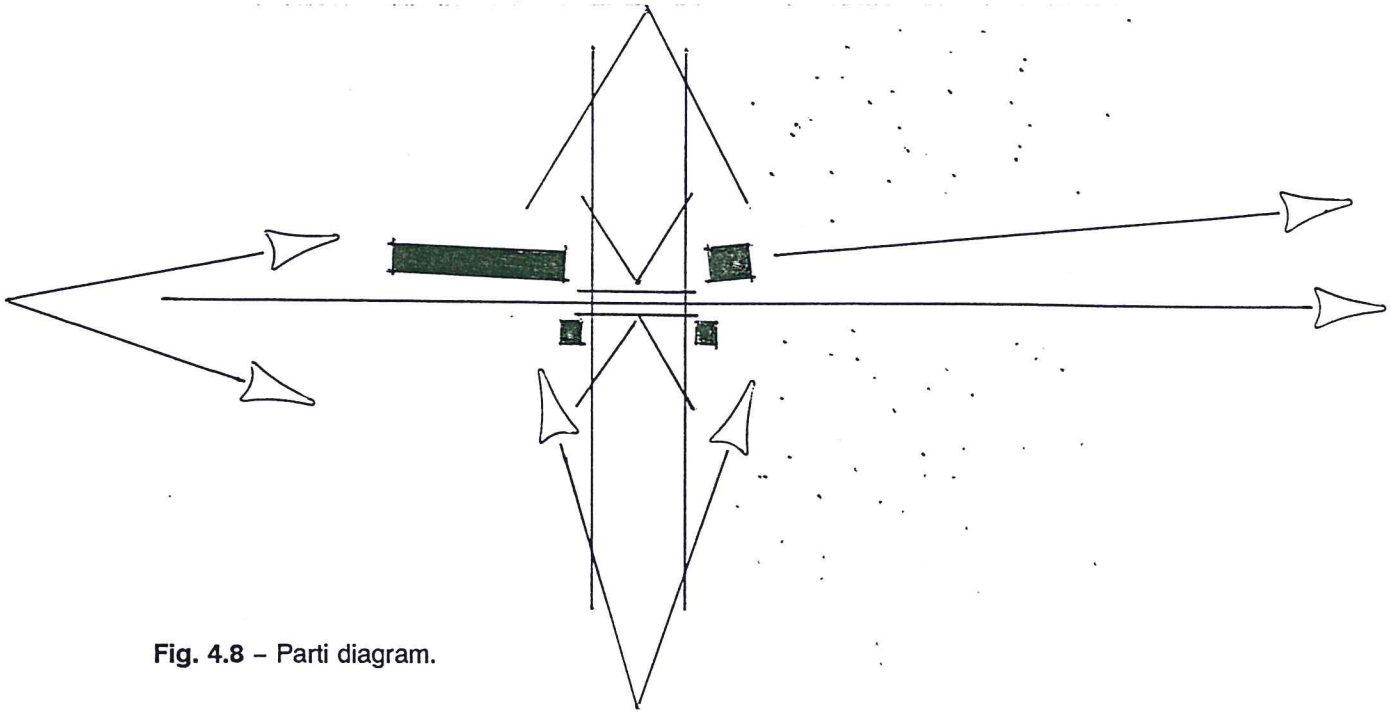


Fig. 4.8 – Parti diagram.

▪ Architectural Promenade – Passing Through The Representational Edge

The Architectural promenade is important to this scheme and how it relates to the thesis. The passage over this bridge is much like passing through as wall or an edge. A wall, that is in fact, very thick or that has many layers to it. Here, the passage through the wall is the a gradual and extended experience of passing over the bridge and experiencing the site from a changing vantage point.

1. **Arriving at the representational edge from the city**: The passage into the headland begins with arrival into a plant exhibit garden defined by a vehicular and pedestrian ramp and a garden wall. The ramp, which is occupied by **gallery space, administrative space** and **classroom functions** at its lower levels, is on axis with Leslie Street.

   It is engaged on one side by a long steel aqueduct–like structure, which is clearly the most visible element looking south on Leslie Street. It contains a **suspended walkway** and **suspended garden**, as well as supporting operable **solar collection devices** above. This element is part of the buildings "display" function.

   The **Boat House and Gallery Building** also engages the south east side of the ramp. It contains a **boat house** at grade level which addresses a tour boat slip to the south east side of the interpretive centre. It also contains **galleries**, a **shop**, and a **greenhouse**, complete with a water filtration system, at the upper levels.

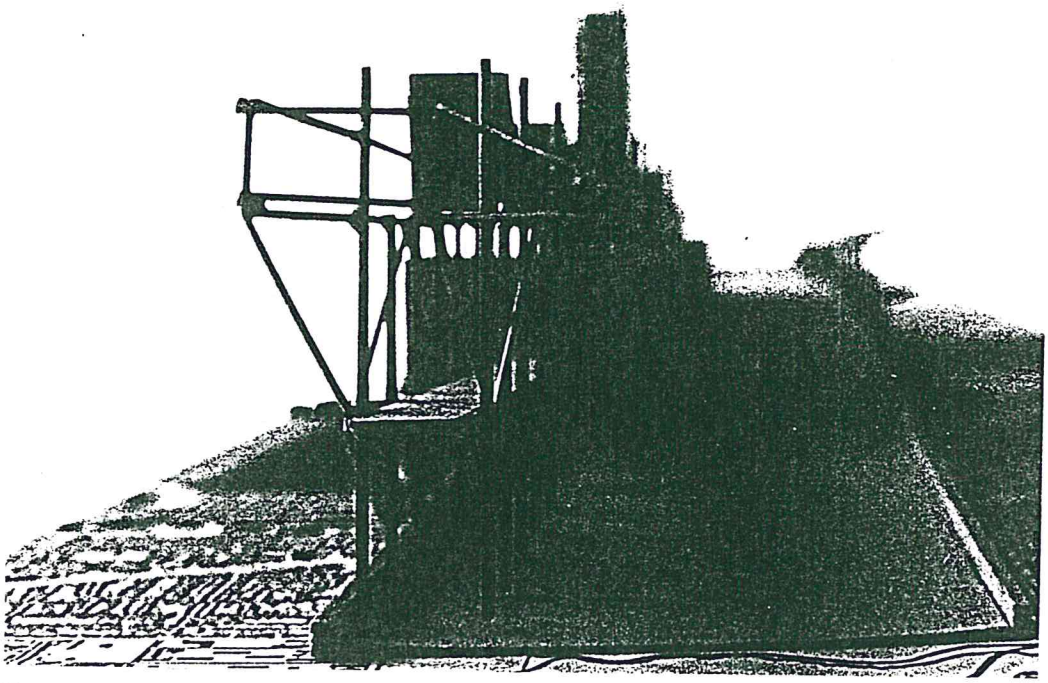


Fig. 4.9 – Looking south on Leslie Street towards Ramp and Solar Collection Structure.

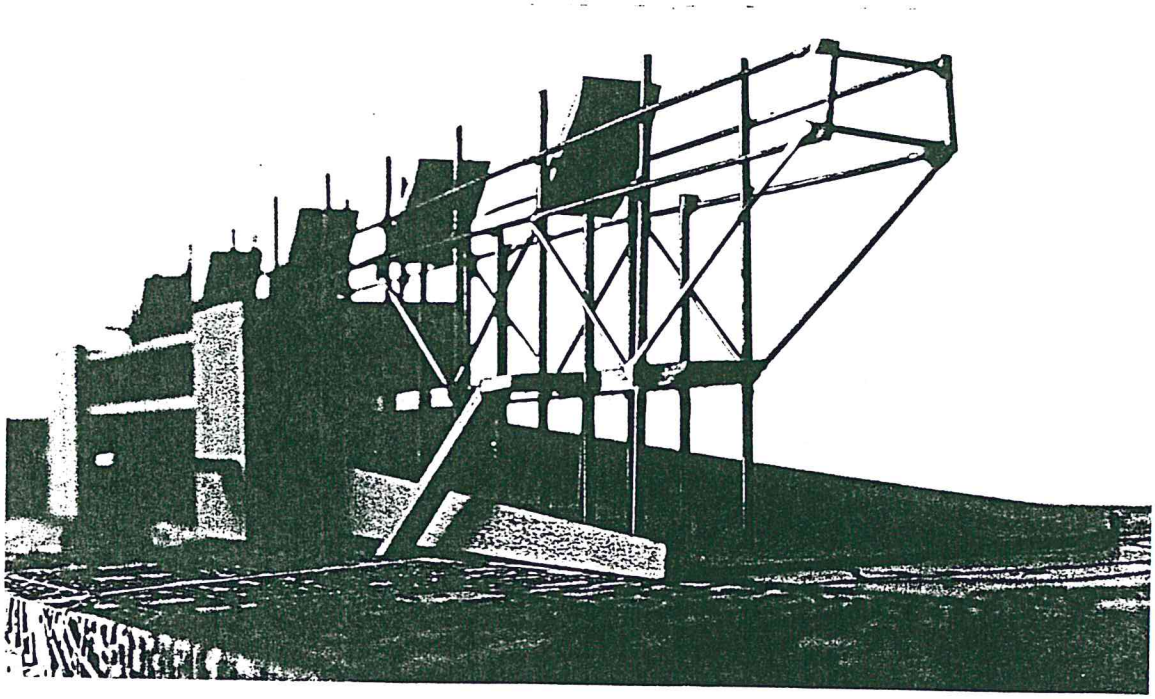


Fig. 4.10 – Looking towards Boathouse/Gallery Building.

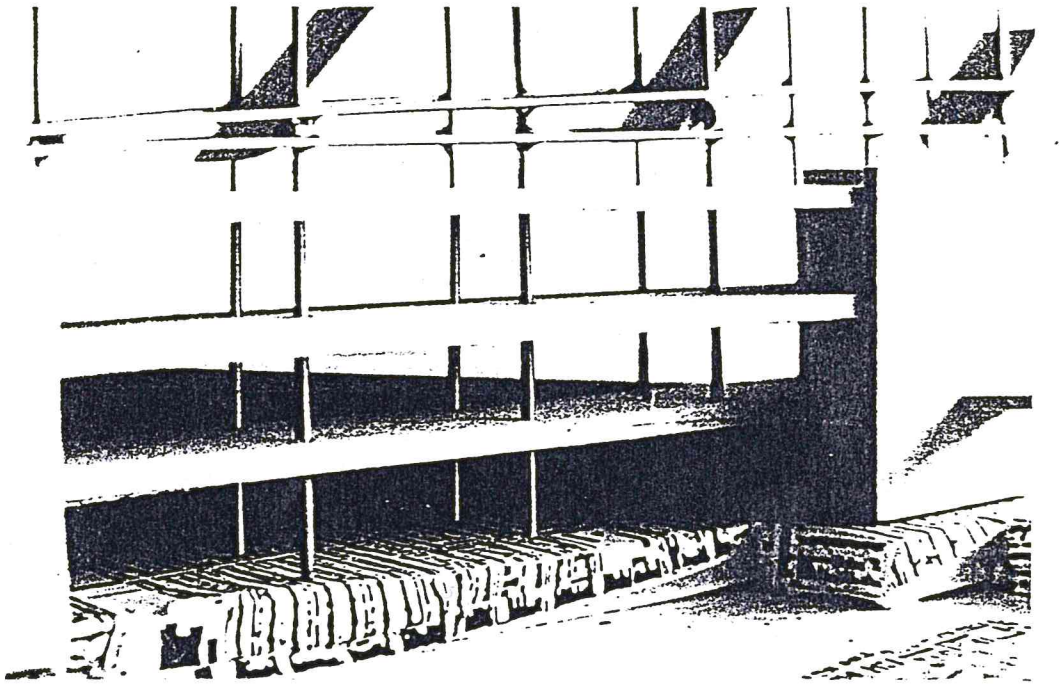


Fig. 4.11 – The Boathouse/Gallery Building engaging south east side of Ramp.

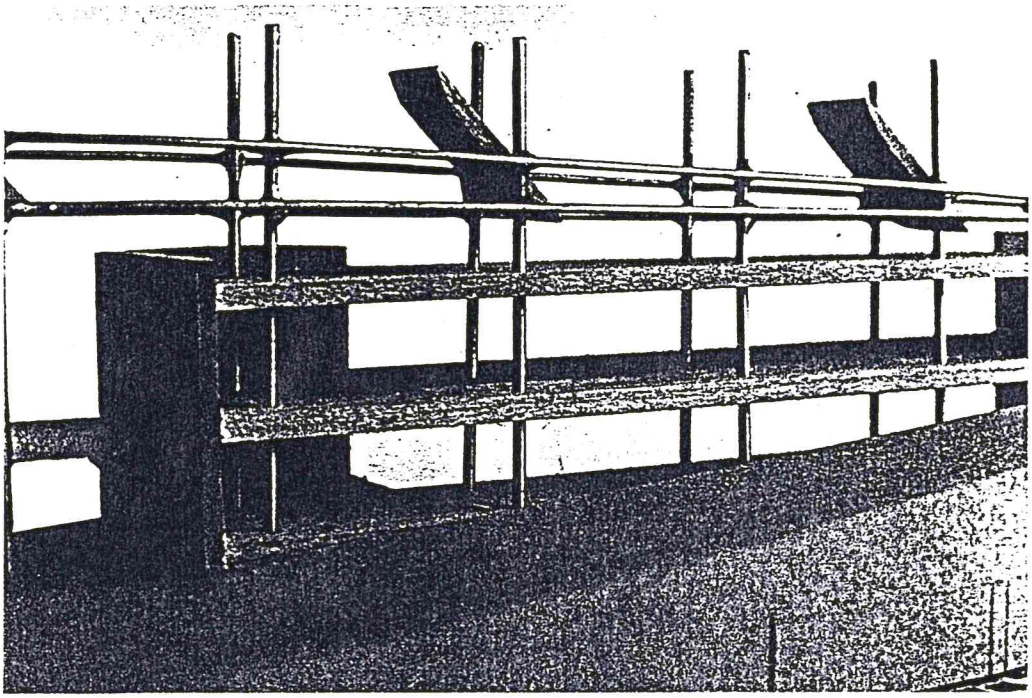


Fig. 4.12 – View towards Boathouse /Gallery Building from top of Ramp.

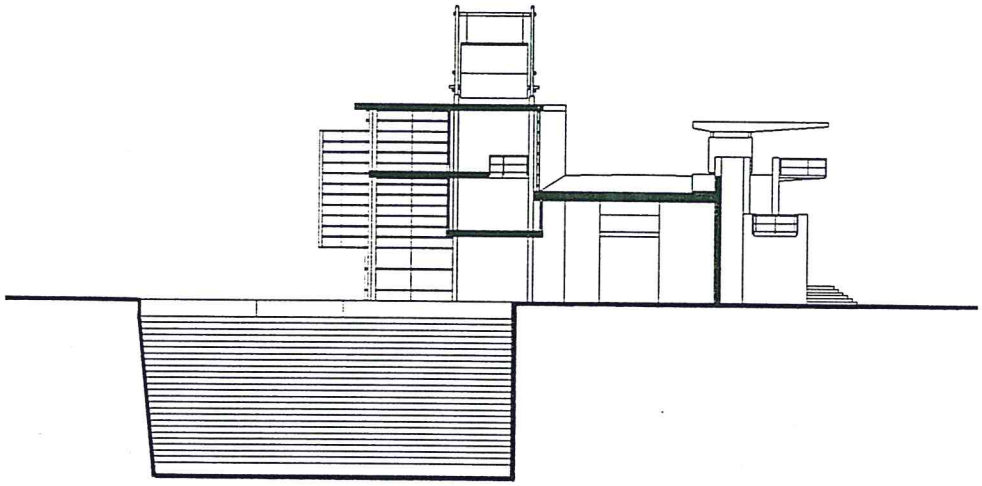


Fig. 4.13 – Cross Section, looking south, through Boathouse/Gallery Building and Ramp.

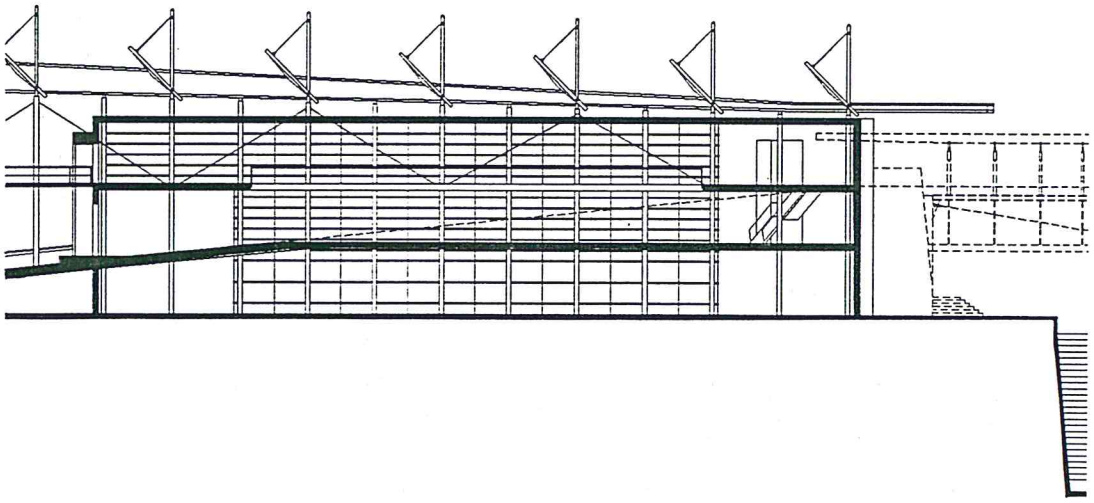


Fig. 4.14 – Cross section, looking east, through Boathouse/Gallery Building. Note that the Solar Collection Structure penetrates into the building.

2. **Crossing the bridge**: As the ramp continues rising, it offers dynamic views to the site below.

Upon intersecting the ship channel, the ramp becomes a bridge. The bridge is framed on the east side by a tower and the main gallery building, and on the west side by two buttressed stairs which support a canopy and an **outdoor observation/display area**. The underside of the bridge is occupied by a small **cafe** and **reading room** which offers views to the ship channel and the lake.

At this point the tower which contains a small display gallery and an observation tower, frames views toward the ship channel and acts as gateway beacon in the east–west direction.

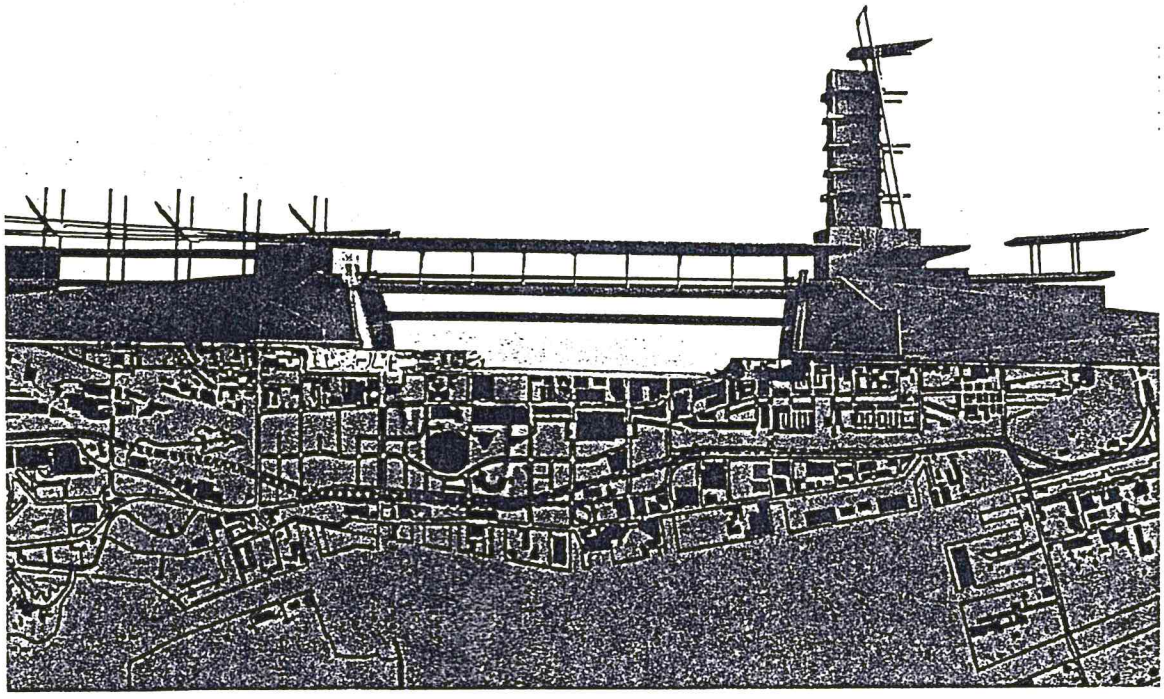


Fig. 4.15 – A view of the Bridge, from the ship channel.

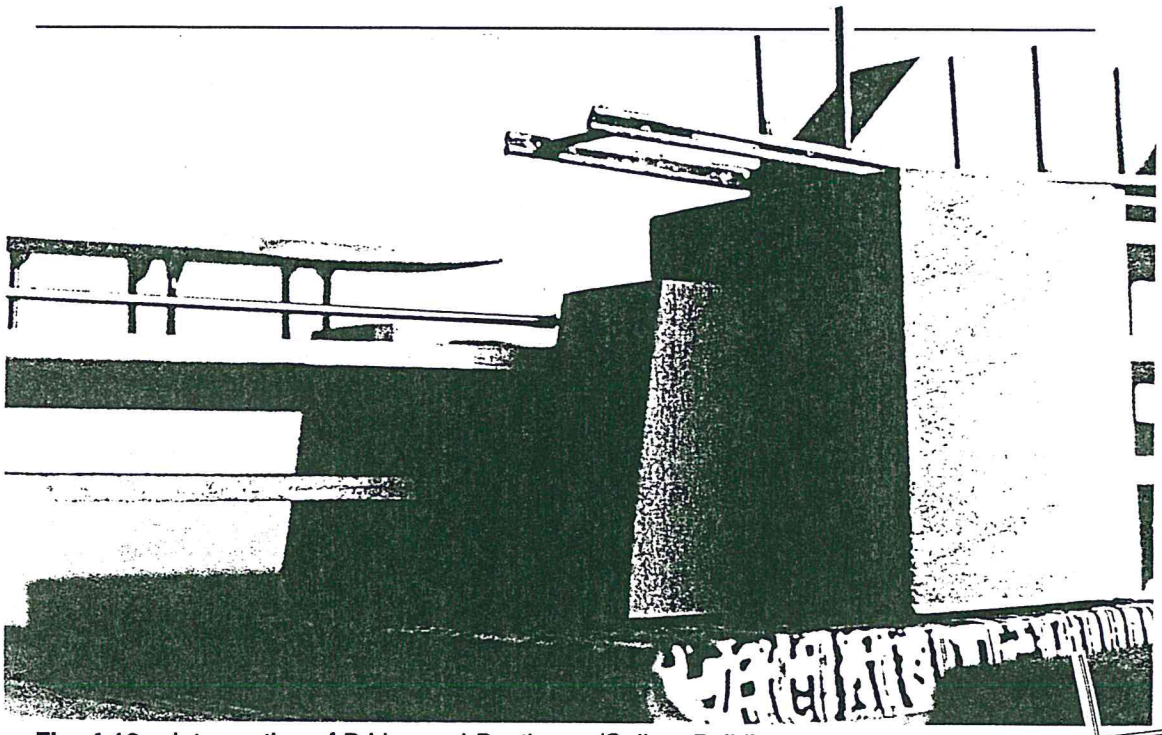


Fig. 4.16 – Intersection of Bridge and Boathouse/Gallery Building.

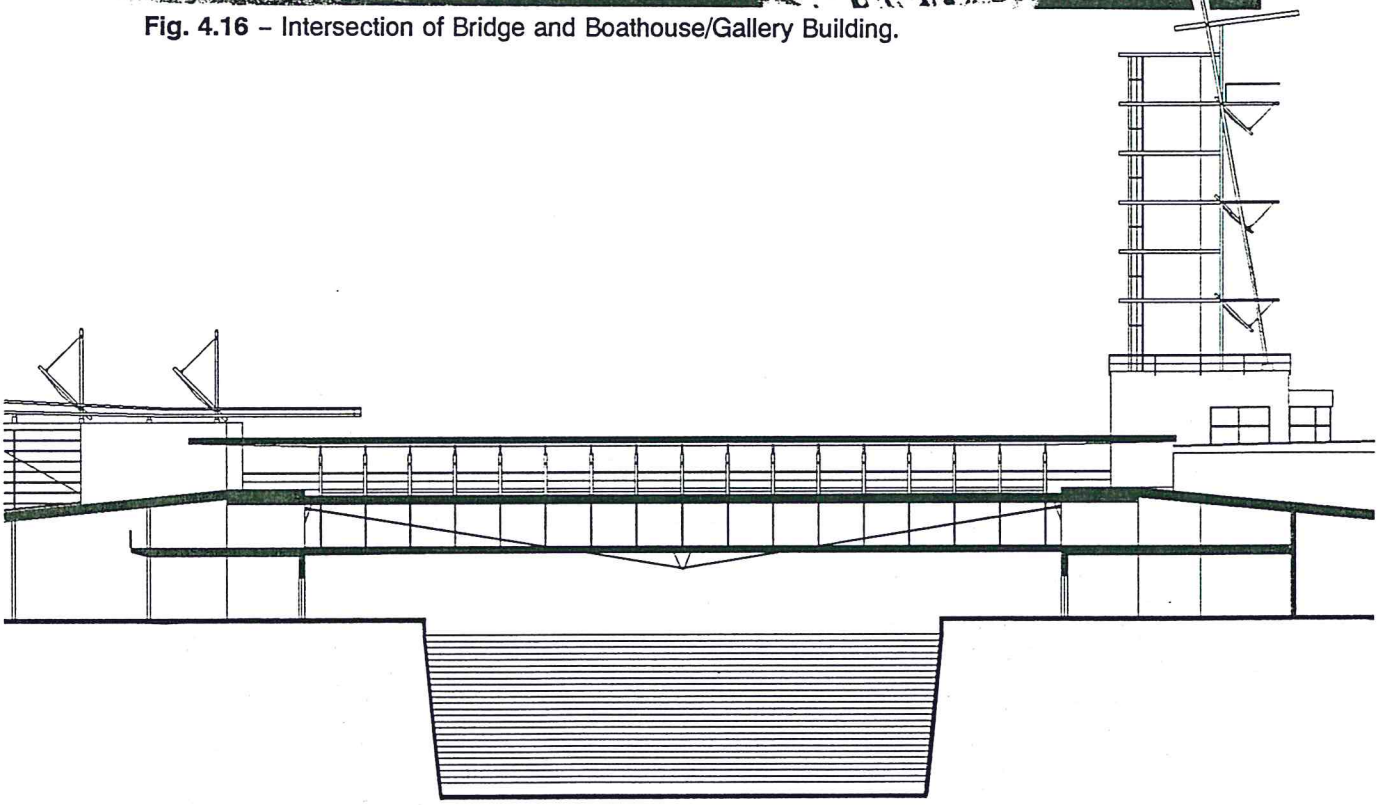


Fig. 4.17 – Cross Section, looking east, through Bridge and Outdoor Observation Area.

3. **Arriving at the headland**: Having spanned the channel, the bridge lands on a rectilinear sloping earthberm anchors the southern end of the composition. The earthberm, like the earlier garden elements, captures and represents the dual spirit of the site, because it is a landscape element used as architecture.

   The earthberm is flanked on the northeast side by a observation tower. The tower, like the solar collection structure to the north side, acts as the main visual anchor to the south and in the east/west direction. The tower rests on a massive plinth which houses a theatre below grade. The roof of the theatre is a plant display area and a covered picnic/observation terrace with views to the lake.

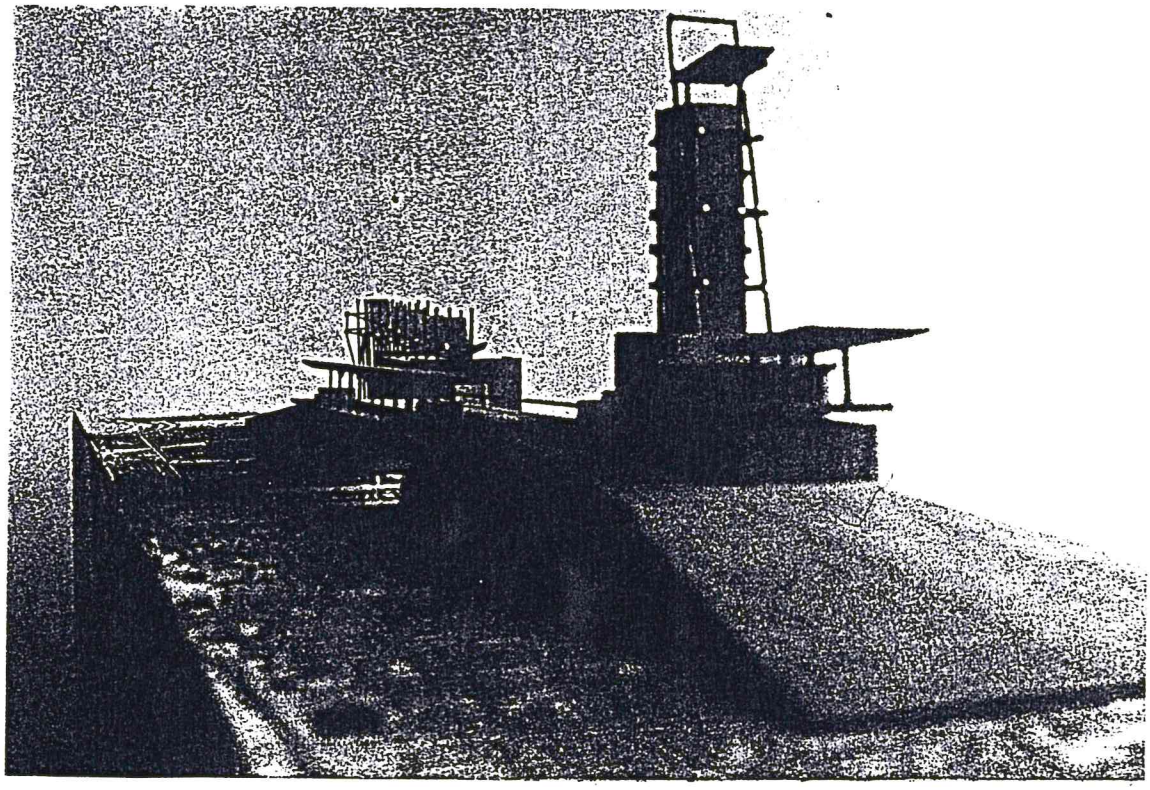


Fig. 4.18 – View towards the earthberm. (From Leslie Street Spit)

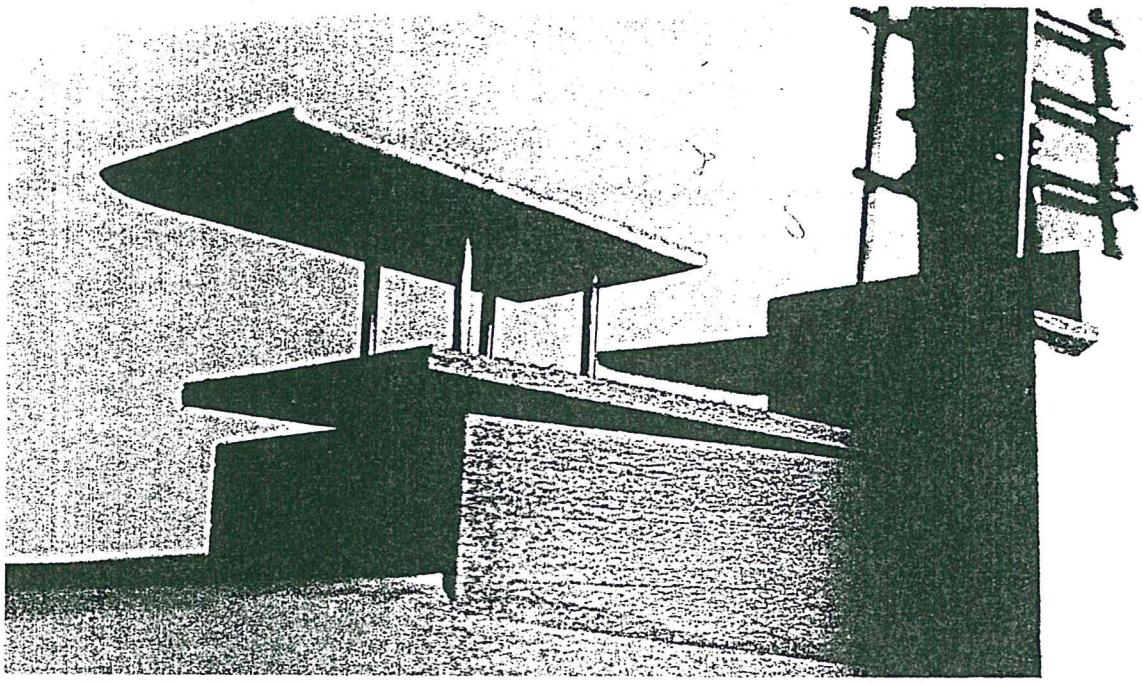


Fig. 4.19 – View of Oberservation Terrace. The Theatre is below the terrace.

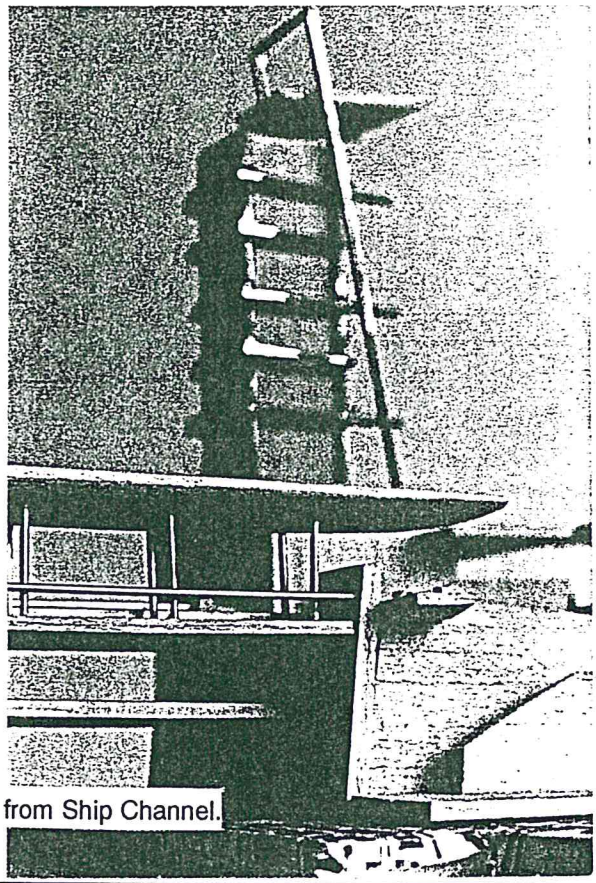


Fig. 4.20 – View of Observation Tower, from Ship Channel.

▪ Architectural Character and Material

The detail and palette of materials, like the architectural elements, is also inspired by the character of the public works. The major materials used in the project are: exposed concrete, glass, exposed steel, stainless steel and wood.

1. **Ramp (Exterior)**: The ramp's vertical exterior surfaces are constructed of exposed concrete. All construction joints are finished as revealed slots. A carefully arranged placement of formwork holes are plugged with semi spherical stainless steel inserts. These inserts are recessed from the face of the concrete by 25mm. In conjunction with the joints, they provide textural detail, particularly along the ramp's long facade.

   The base of the ramp is slightly canted at certain locations to achieve the character of a massive embankment. The 400mm thick concrete ramp wall is capped by a finely detailed stainless steel handrail attached to its sides.

   The ramp's horizontal surfaces are asphalt with concrete sidewalks. Expansion joints and concrete bands at the top of the ramp, mark the transition over the bridge, which is surfaced in asphalt.

1a. **Ramp (Interior)**: The interior vertical surfaces of the ramp's caverns, which are occupied by a gallery, administration and laboratory functions, are finished in exposed concrete (structure) and painted gypsum board. both of these finishes have wood accent bases and trims. The flooring material throughout the first floor is polished concrete. The second floor is wood and the underside of the bridge is also wood with carpet inlay.

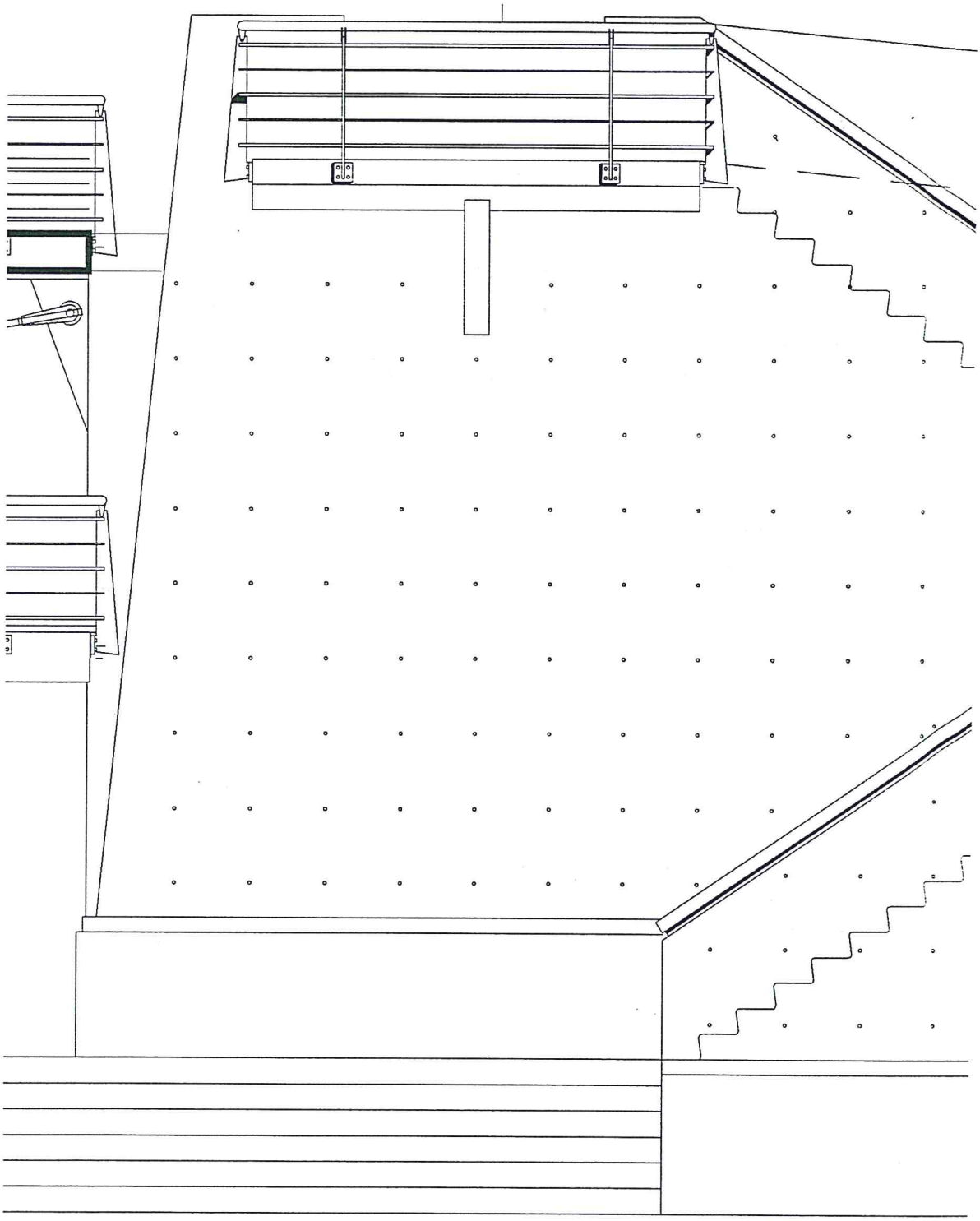


Fig. 4.21 – Detail of handrail at stairs.

2. **Gallery building (Exterior)**: The gallery buildings main horizontal surfaces are like the finishes utilized on the ramp. However, this structure also has an abundance of glazing. The tinted glazing is set within a stainless steel curtain wall, utilizing a combination of pressure caps as well as butt joint glazing.

2a. **Gallery building (Interior)**: The interior, non–glazed surfaces of the gallery building is finished in painted gypsum board. The green house in the upper level utilizes the same finishes as the exterior curtain wall. Similarly, Interior handrail around the interconnected floor spaces are also detailed and finished to match the exterior handrails.

3. **Steel Solar Collection Structure (Exterior and Interior)**: The Solar collection structure is fabricated from painted hollow structural steel sections. The handrail surrounding the suspended garden, as well as the trim and suspension supports for the solar panels, are fabricated in stainless steel to contrast with the painted steel.

   Where the solar collection structure penetrates the gallery building, the same materials and finishes as the exterior are used.

4. **Observation Tower (Exterior)**: The observation tower is constructed from a hollow structural steel frame with a glazed elevator and stair core. The glazing and steel structure borrow their finishes and detail from the gallery building and the solar collection structure, to the south.

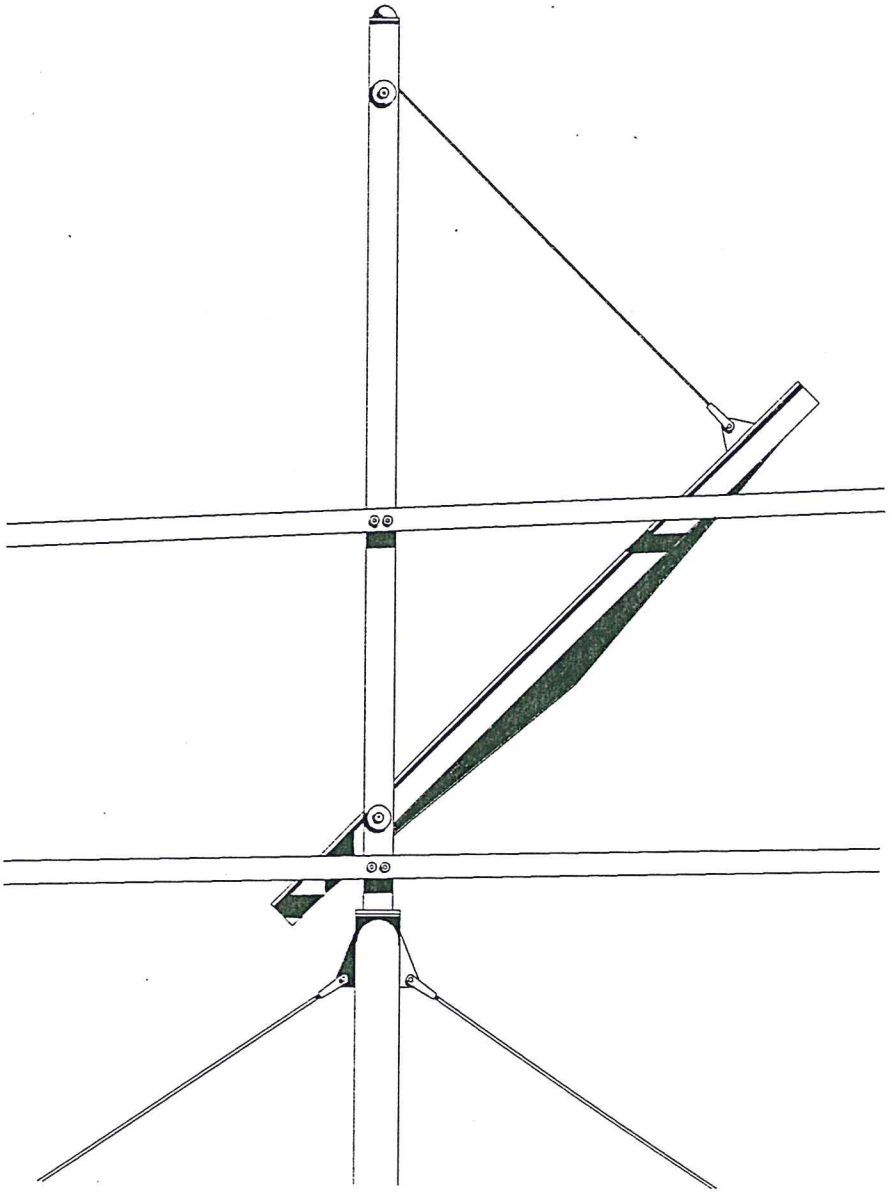


Fig. 4.21a – Detail of Solar Collection Structure.

■ Ecological Spirit Of The Thesis Design Proposal

There are various aspects of the proposal which capture the spirit of ecology and transmit a cooperation between the city, building, industry and nature. This is achieved by the choice of architectural elements and by the programmatic utilization of these elements. This is important to the thesis at this site because of the sites ecological significance.

1. The integration of public works elements and the natural elements suggests that the two can be combined together. They do not have to be separated. I have examined and expressed this in all of the proposals in this chapter, as well as the studies in CHAPTER 2.

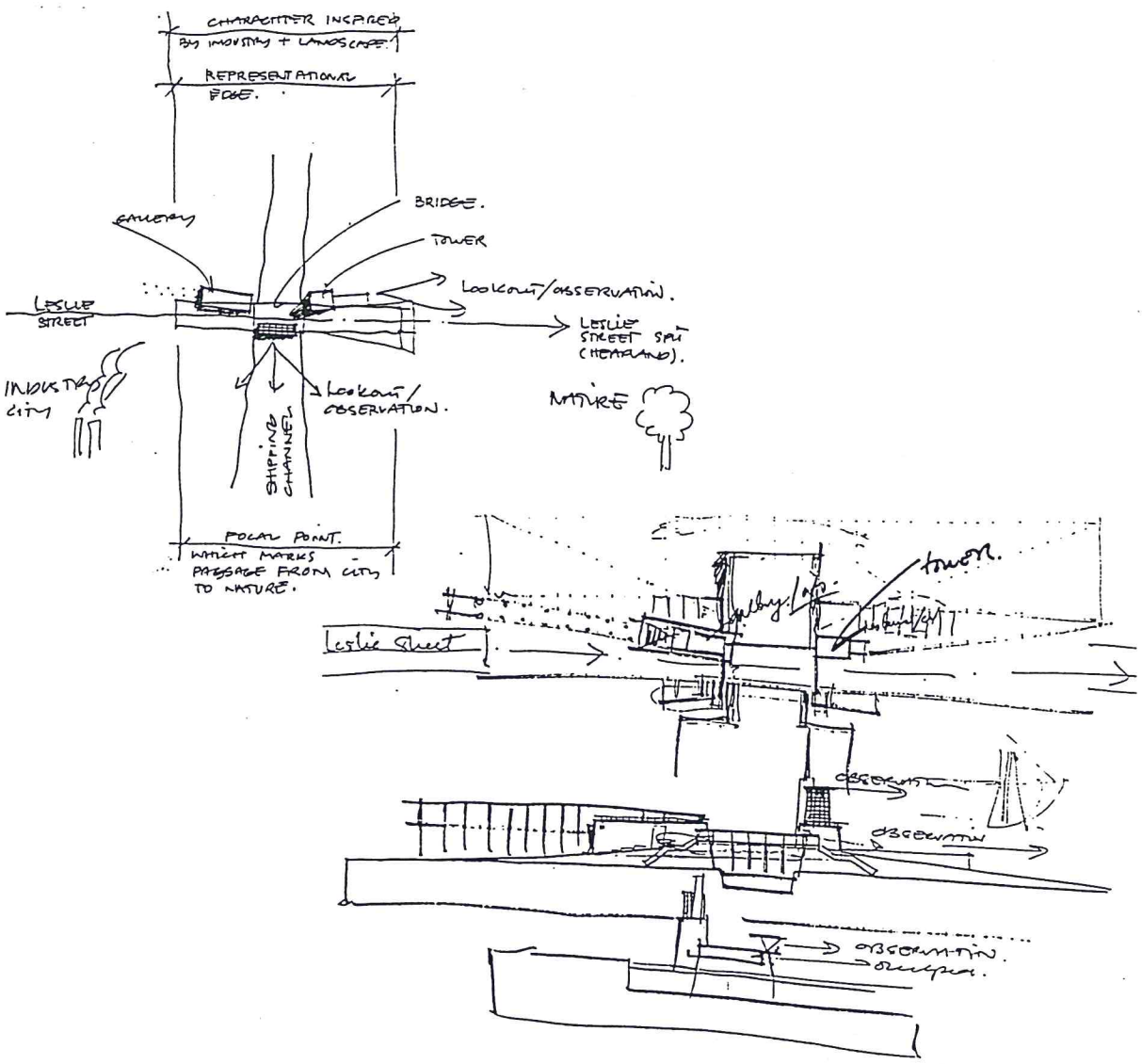
2. Public works elements and natural elements can be occupied or inhabited or occupied with some ingenuity. There can be an intense utilization of these elements in the same way that we occupy the city.

   I have achieved this in this proposal by occupying the interior caverns of the ramp, by occupying the surface and underside of the bridge, by employing the solar collection structure as a raised park, and by digging a structure into the side of the earthberm. By designing these elements with a sense of detail, they can be transposed elsewhere in the city to similar conditions.

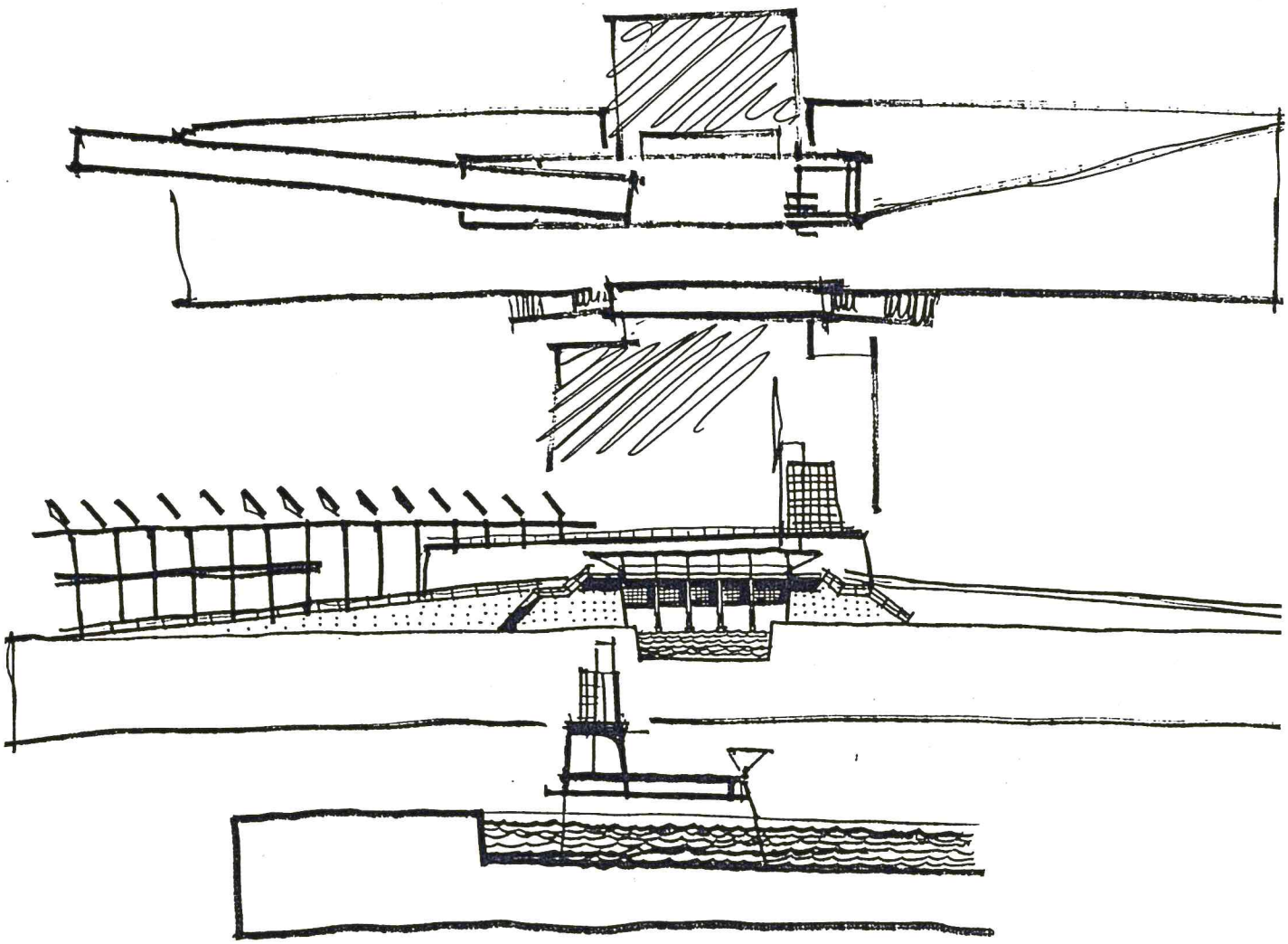
3. The building is used for many functions. Not only is it a street, a bridge, a place of passage, and a public open space. It is also a gallery, a school, and a place for research.

4. The building's displays are expressed in the architecture. Built in devices such as the solar collection panels and a solar waste water filtration located in the green house are visible to the public.

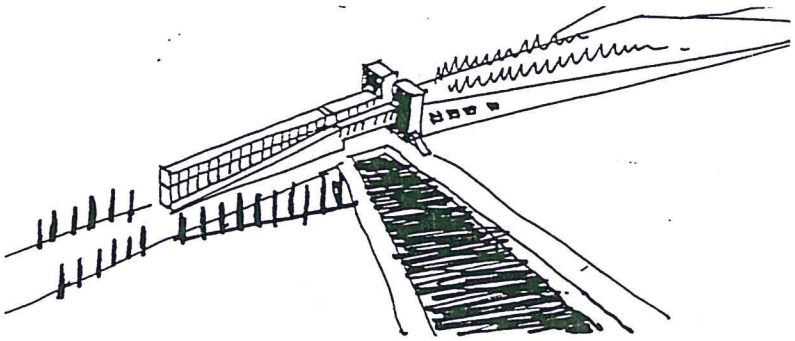
■ DESIGN STUDIES

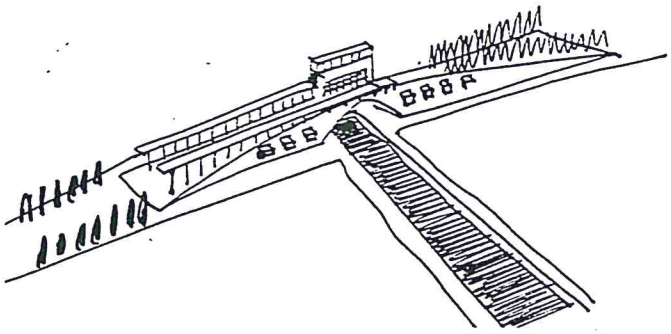


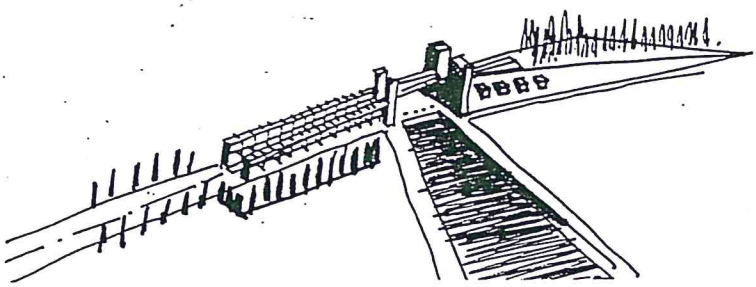
■ DESIGN STUDIES

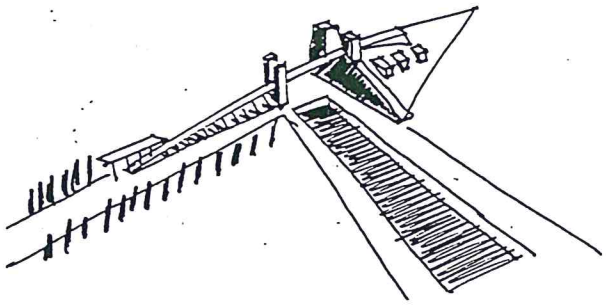


■ DESIGN STUDIES









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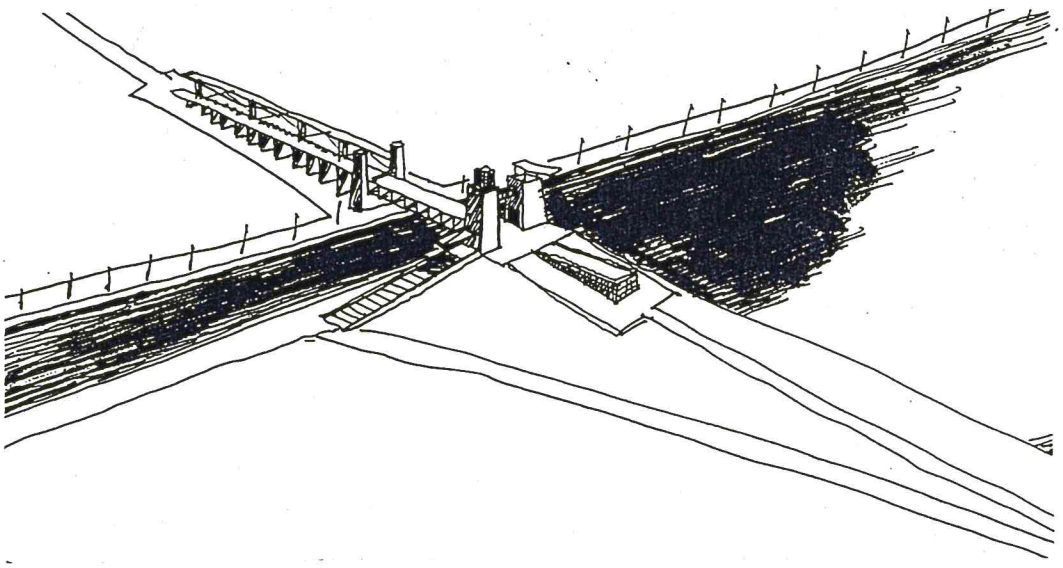
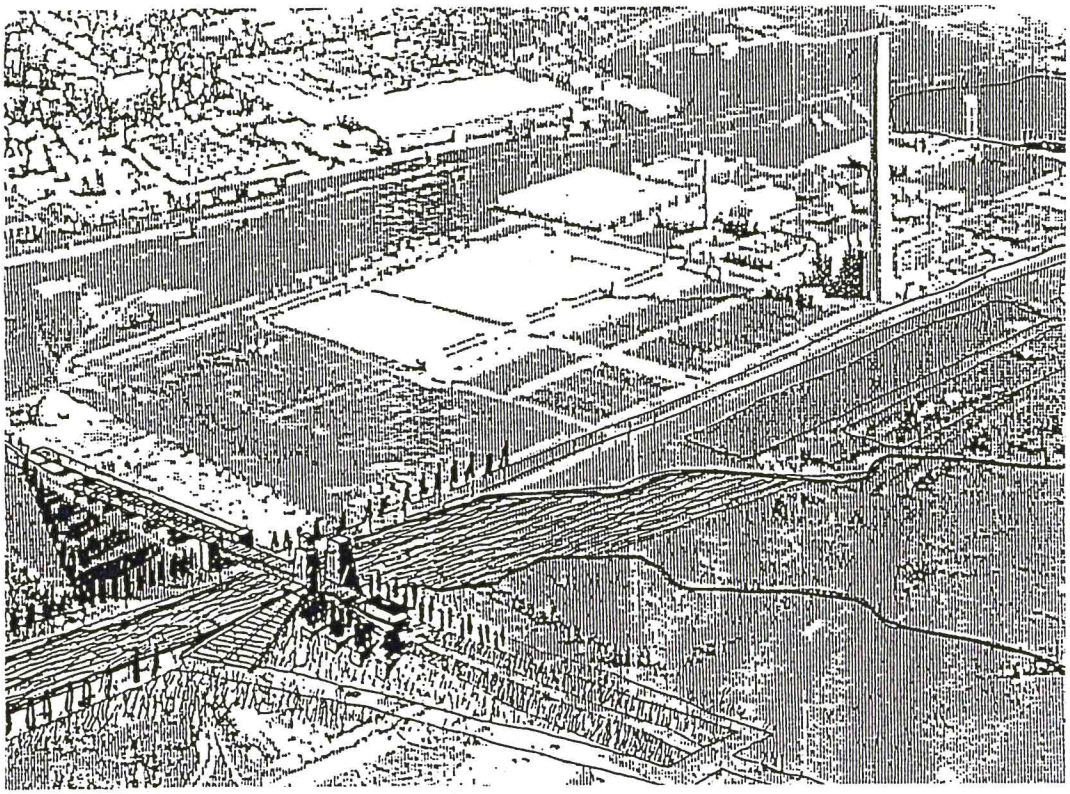
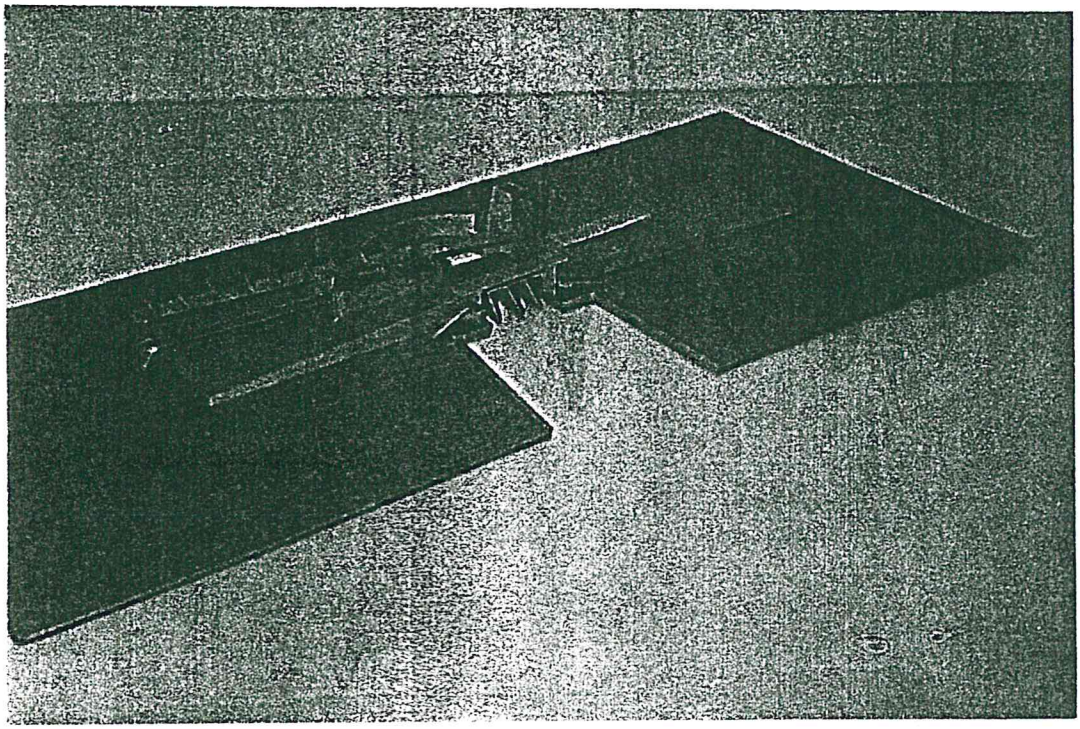
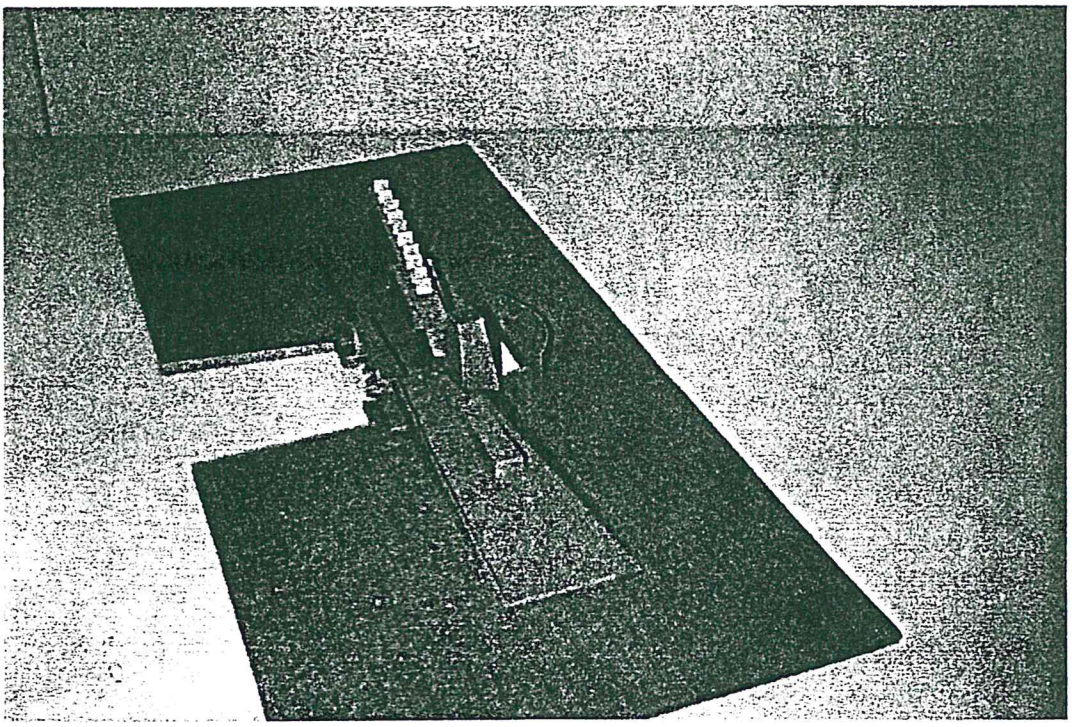


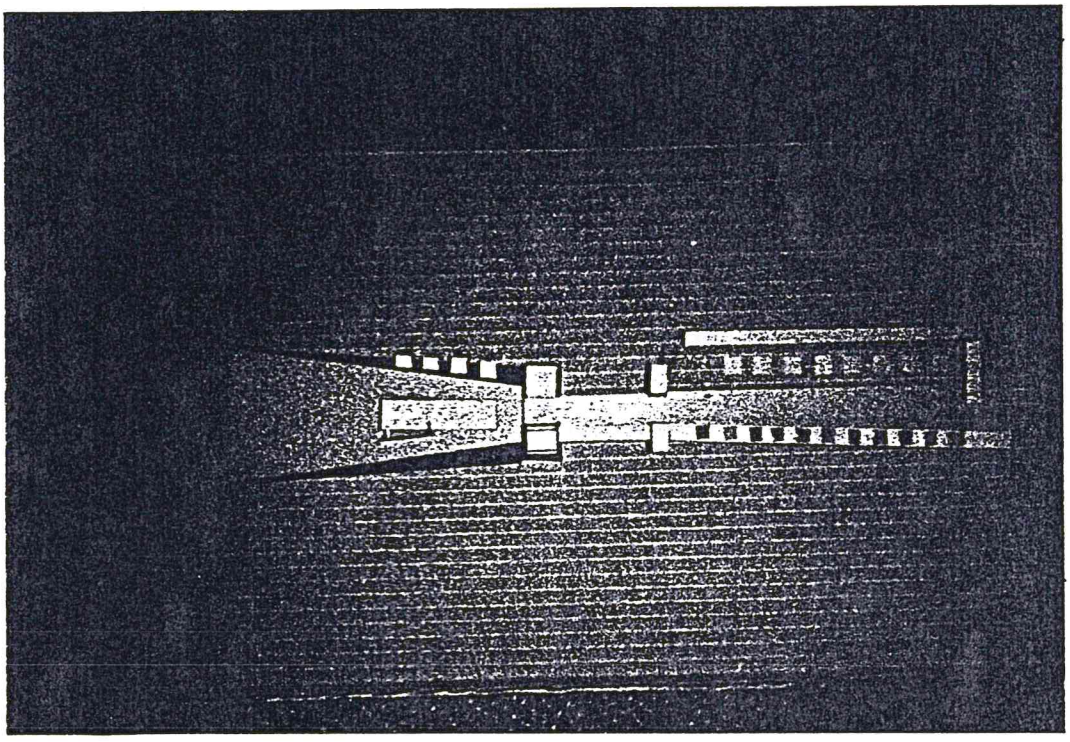


■ STUDY MODELS





■ STUDY MODELS



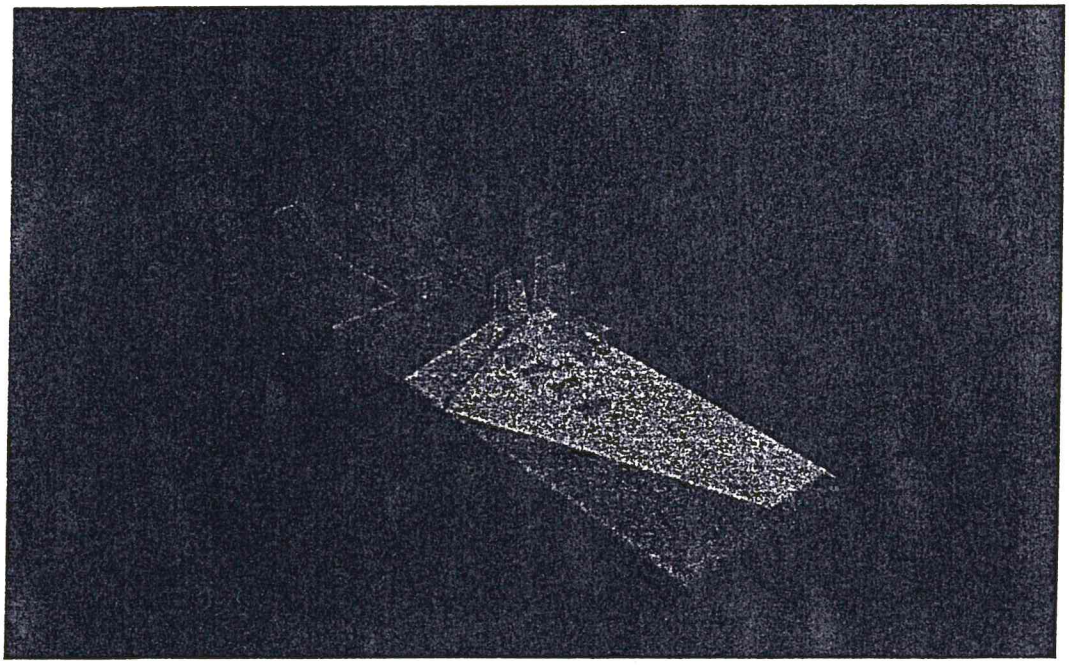


Fig. 4.22 – Context Plan.

■ DRAWINGS - PERSPECTIVE VIEWS

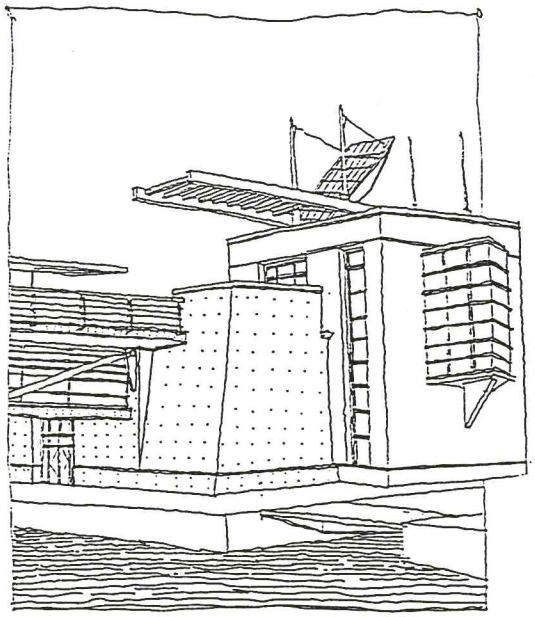


Fig. 4.23a - View of Boathouse/Gallery intersecting with Bridge.

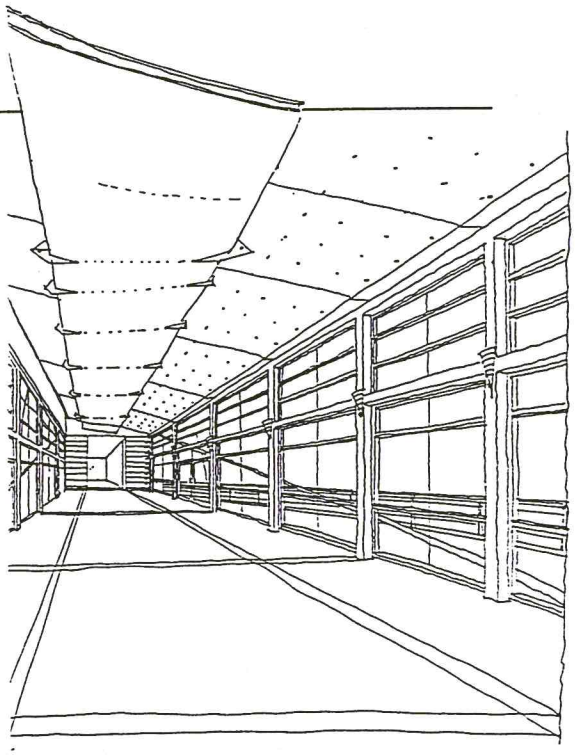


Fig. 4.23c - Interior view of Cafe/Reading Room under Bridge.

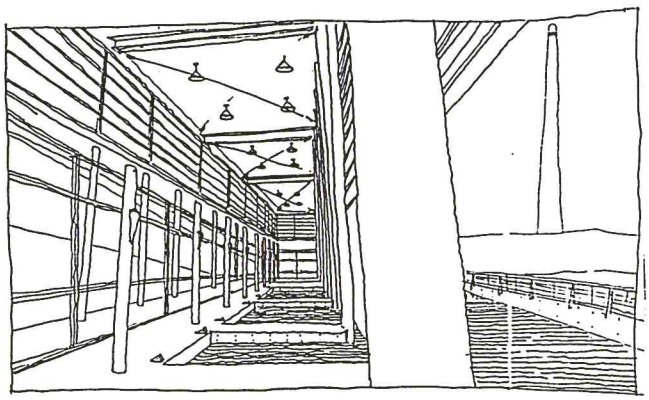


Fig. 4.23b - Interior view of Boathouse/Gallery.

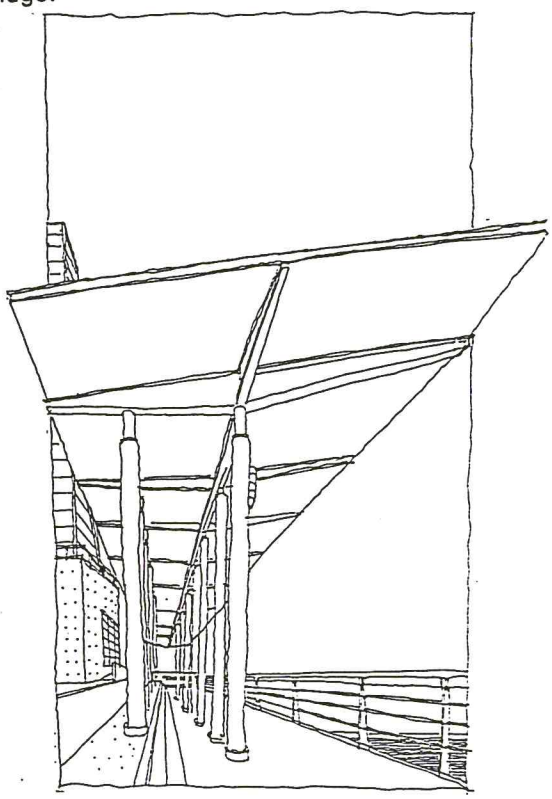


Fig. 4.23d - View of Observation Terrace on Bridge.

■ DRAWINGS – PLANS

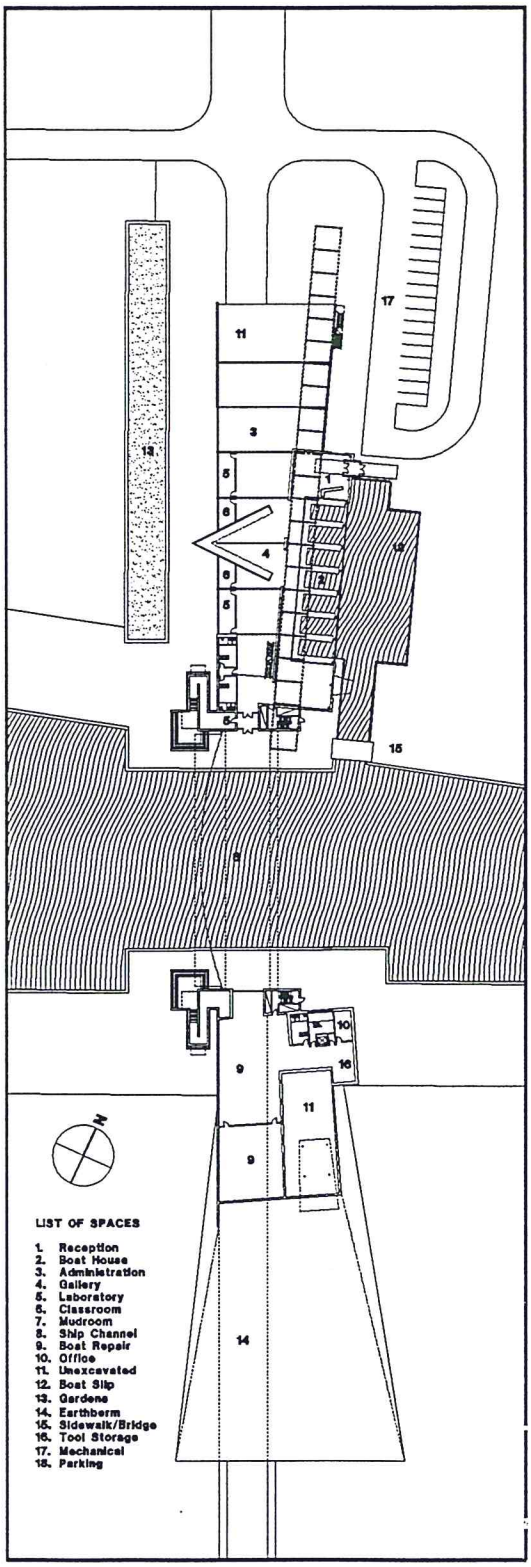


Fig. 4.24 – Plan, Ground Level.

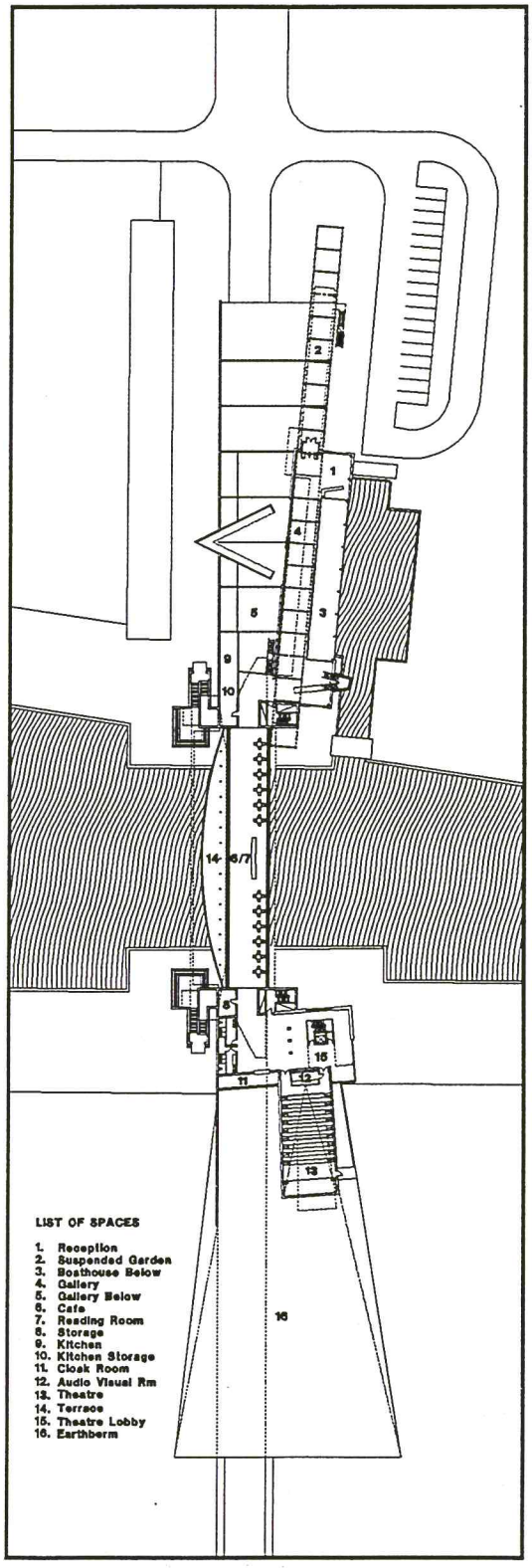


Fig. 4.25 – Plan, Level Two.

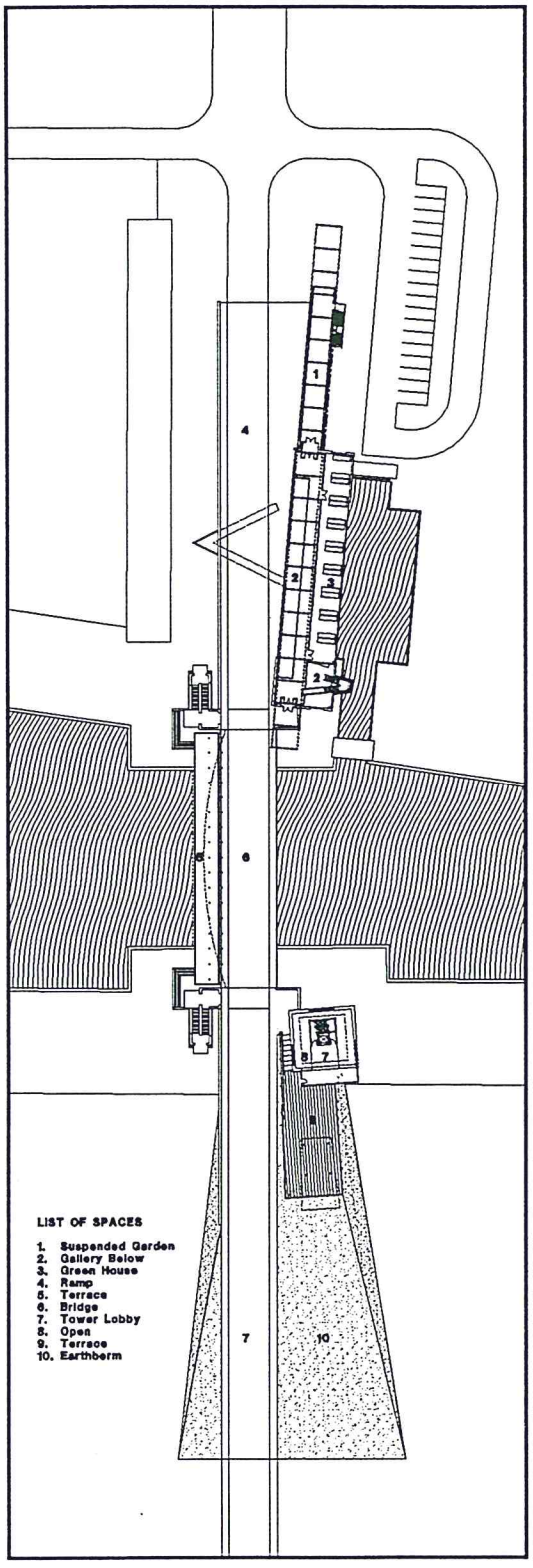


Fig. 4.26 – Plan, Bridge Level.

■ DRAWINGS – ELEVATIONS

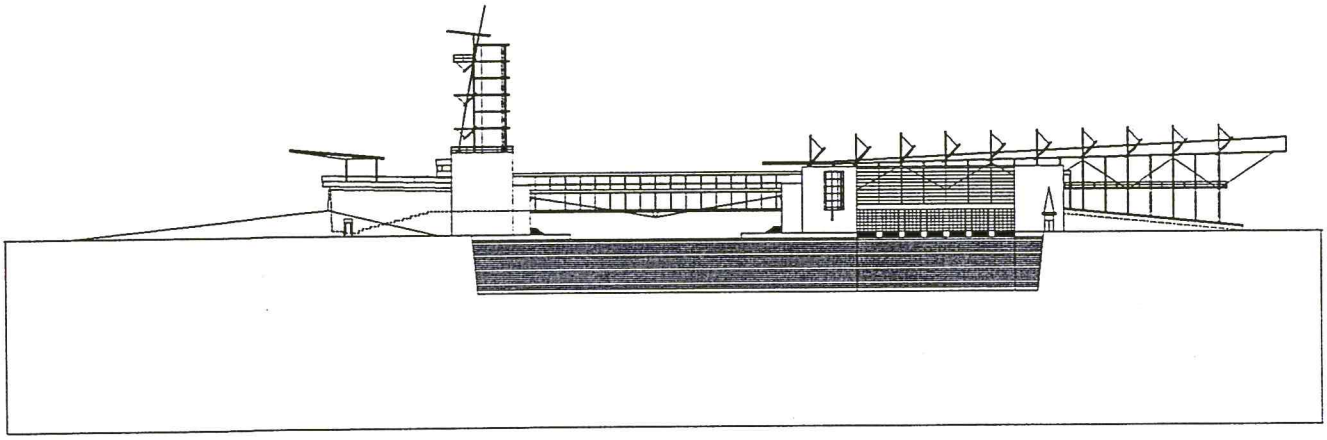


Fig. 4.27 – East Elevation.

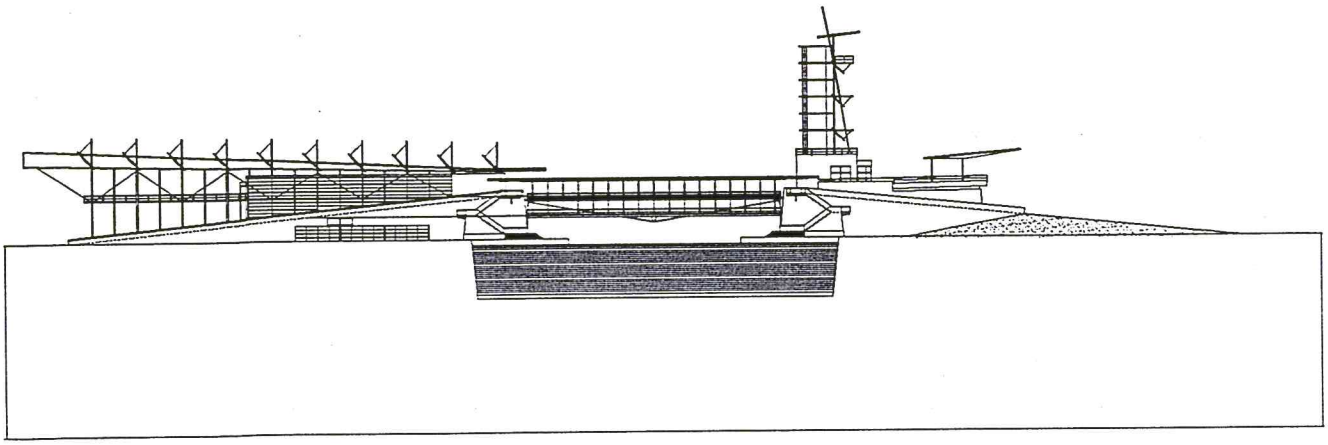


Fig. 4.28 – West Elevation.

■ DRAWINGS – LONGITUDINAL SECTIONS

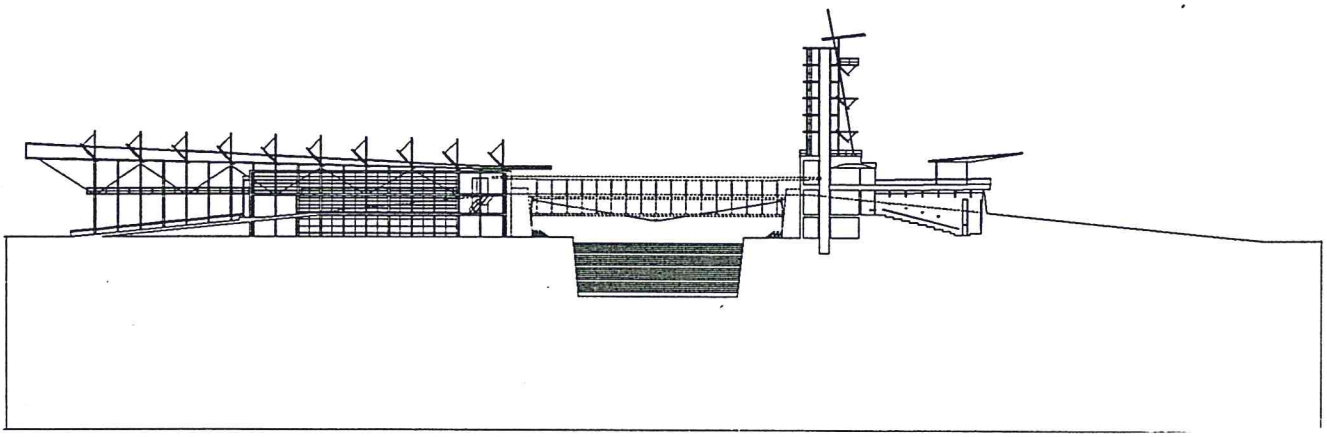


Fig. 4.29 – Longitudinal Section Looking East.

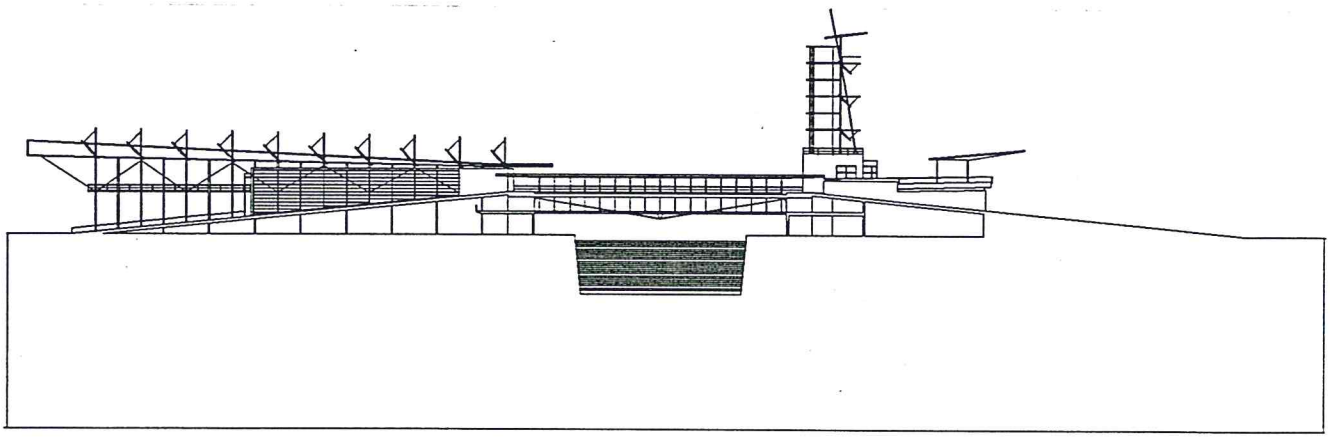


Fig. 4.30 – Longitudinal Section Looking East.

■ DRAWINGS – TRANSVERSE SECTIONS

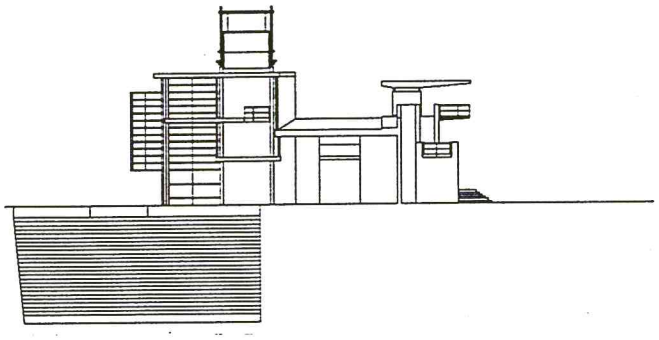


Fig. 4.31 – Section Through Ramp and Gallery Looking South.

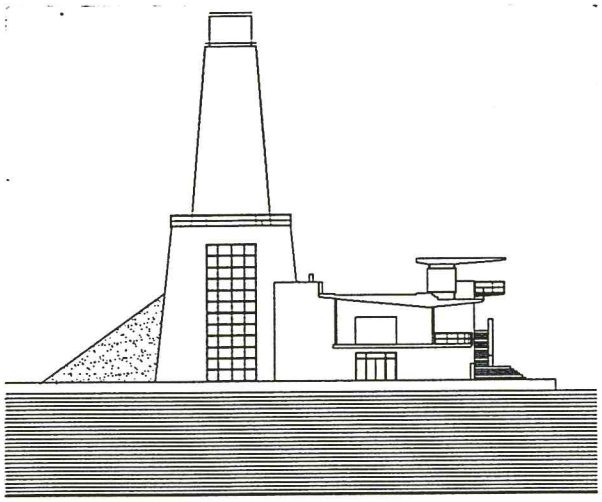
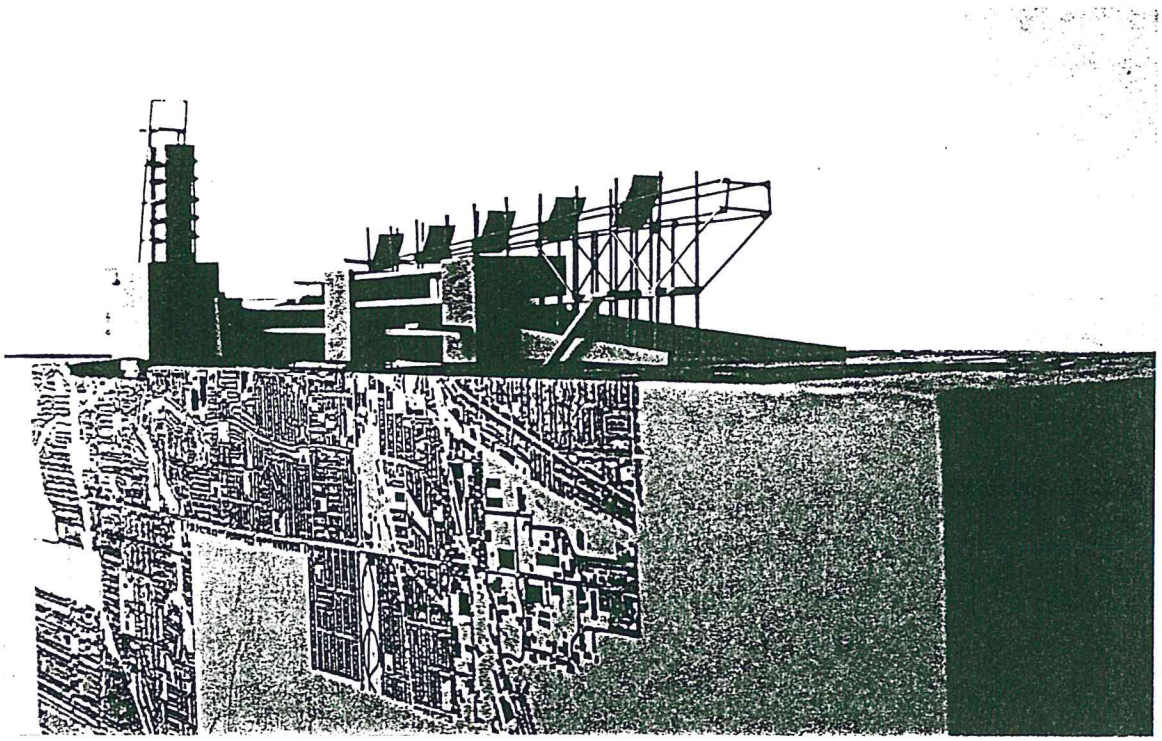


Fig. 4.32 – Section Through Bridge Looking South.

■ MODEL



5

CONCLUSION

This chapter draws general applications from the examples in CHAPTER 2 and from the thesis exploration in CHAPTER 4.

■ CONCLUSIONS

■ Defining The Representational Edge

The representational edge can be a,

1. Monument.
2. Public Open Space.
3. Monument and Public Open Space in unison.

In the site specific thesis exploration monuments and public open spaces were utilized. An ensemble of monuments were placed along a linear path or street representing a microcosm of the city as a whole.

■ The Functions Of The Representational Edge

The representational edges have many functions. They,

1. Celebrate and mark an important location and/or historic personality and event.

2. Act as gateway or threshold which allow us to perceive when we have passed from one area of the city into another.

4. Are visible distinct elements in the city.

5. Can terminate a view corridor or an axis.

6. Break down the vast contemporary city into smaller identifiable pieces.

7. Acts as structure for future infill.

In the site specific thesis exploration, the importance of the site as an entrance to a metropolitan park is marked and celebrated by the interpretive centre. The passage from the industrial area of the city to the natural character of the headland and from the headland back into the city, is celebrated as an architectural promenade along which events occur. The new representational edge acts as a boundary, a threshold and gateway into the park and industrial area. It also helps frame views towards the lake at the foot of Leslie Street and provides a facade to the lake as well as terminating the ship channel.

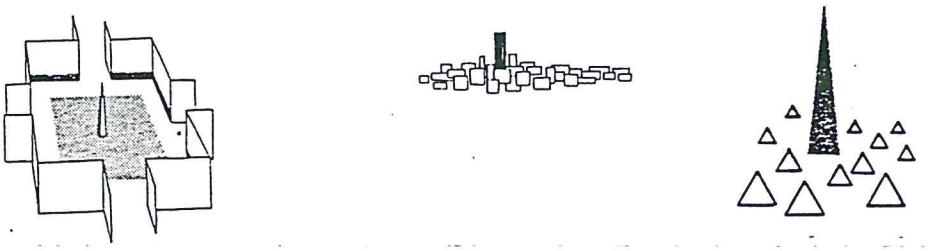


Fig. 5.1 - Monuments and open spaces. Both are visible elements in the city.

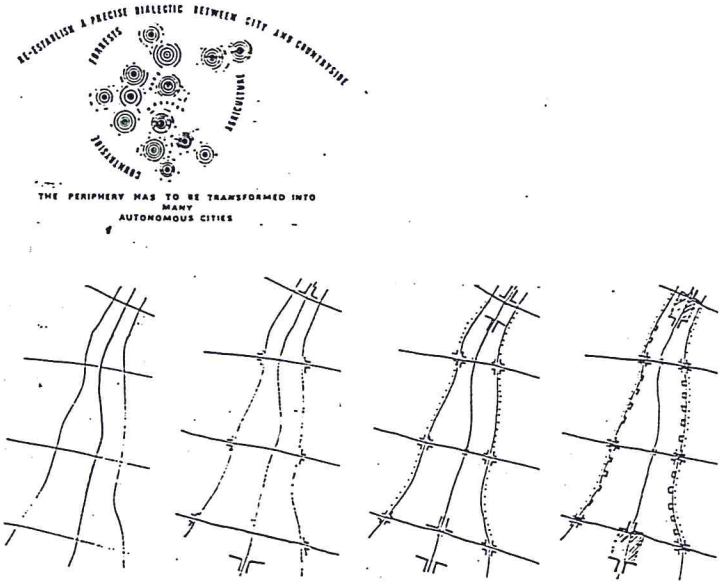


Fig. 5.2 - The representational edges can act to break down the city into smaller more identifiable pieces. They are such memorable elements which we can identify with an area. They act almost as if we made smaller cities within larger cities.

▪ Natural And Man Made Elements Utilized to Make The Representational Edge

The elements that make representational edges can be natural or man made.

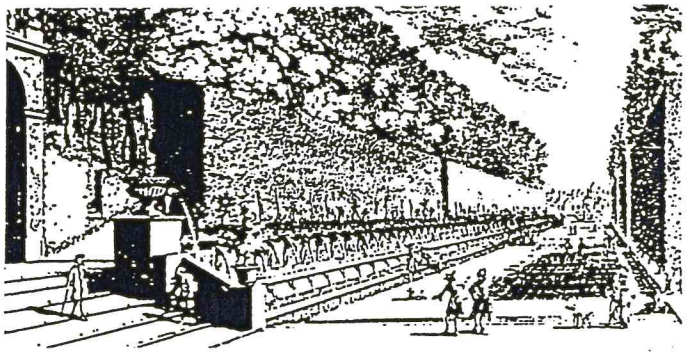


Fig. 5.3 - Natural materials used in an architectural manner.

The thesis design proposal utilized man made elements as well as natural elements such as the water and the earthberm.

▪ The Location Of The Representational Edge

The representational edge can be placed and found in

1. The **heart** of the city, where it will stand out amongst the more mundane urban fabric.

2. The **fringes** of the city where it may help define its edges acting as gateway or threshold.

Wherever it may be located, the representational edge is a unifying force. We assemble the representational edges as highlights or focal points into an overall picture of the city.

In the site specific exploration the representational edge occurred at the fringe of the city. The new representational edge is visible from many vantage points. It can help to structure and provide inspiration for future representational edges. For example, at the southerly end of Cherry Street and the Eastern Channel to the west. With these other future representational edges, the Cherry Beach Area begins to be more identifiable.

■ Character, Craftsmanship And The Representational Edge

Character and craftsmanship of detail is critical to the representational edges. Character and craftsmanship are qualities that we remember about cities. If the representational edge is to be a memorable element in the city, it must have both. Character and craftsmanship are also responses to how well we know a site. how well we have become acquainted, and represent its spirit.

The thesis design proposal responds to the dual character of the area. It also brought a sense of detail to celebrate the structure and the location.

■ The Public Works As Representational Edge

The public works is normally relegated to the engineer, and utilitarian functions . In this thesis it has played a particularly important role. As a representational edge, public works,

1. Are a repetitive typology that is found in abundance throughout Toronto and in many cities.

2. Has a consistent character. It can be an element which can effortlessly remain in our memories if it is imbued with a sense of detail. It can also become a unifying vocabulary making the picture of the city a more consistent one.

3. Are hybrid in nature. They have an architectural content in addition to the their utilitarian qualities. They can be utilized at locations which have different character and meaning.

Why not use it to serve us and to help improve the state of the city and our lives? In this thesis, the representational edge utilized a ramp and a bridge a tower and an "aqueduct like" structure. They were transformed by giving them appropriate "civic" architectural detail and utilized as a monument, symbolic of the spirit of the site, enriching the program of the interpretive centre.

▪ The Public Works As A Rehabilitative And Ecological Force In The City

Public works exist in the form of railroads, bridges, dams, sewers, pumping stations, water treatment facilities, stormawater runoff ponds... Usually these facilities are in derelict states, adding to the decay of their surroundings. Public works can be recaptured as important and symbolic elements in the city and become a rehabilitative and ecological force because:

1. Public works lend themselves well to being occupied with new programs. In many instances new architectural programs can be integrated into or adjacent to existing ones.

2. Their hybrid qualities can be utilized to address sites of different character and meaning.

With this in mind, **Can the Gardiner Expressway for example, be rehabilitated and offer something to the city?**

This thesis design proposal gives us a clue to that question. For example, the program for the interpretive centre utilizes the surface and internal caverns of the ramp and it occupies the underside of the bridge. Furthermore, the program is a complex one, not unlike the variety of zones that we find in the city in close proximity to one another. In the interpretive centre, boathouse, school, gallery, greenhouse and street find themselves in close proximity all sharing the same space.

The interpretive centre is like a microcosm of the city. It is many elements coming together to form a focus.

▪ A Final Note

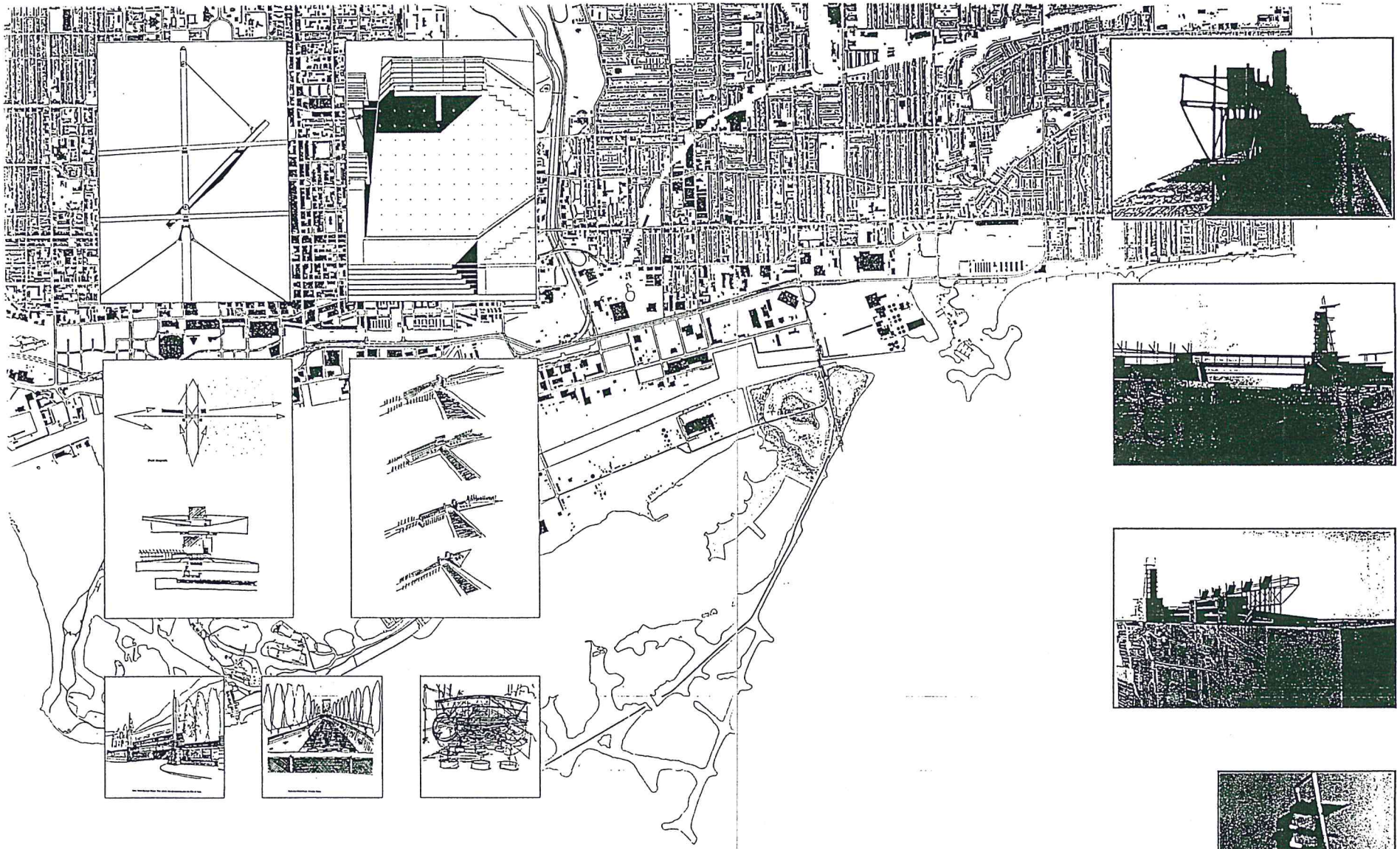
This book began by discussing that architecture, the way we build it, and how we experience it is important in our lives. This concern for the contemporary city, led of course to the architectural nature of the study.

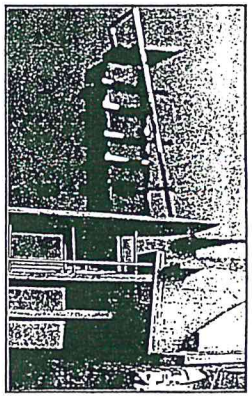
The term "representational edge" describes the places in the city that, when celebrated and marked by monuments and or open spaces imbued with character, will contribute to the picture of the city as a whole. Breaking down into smaller more identifiable and memorable pieces will make the city a more meaningful place.

At the thesis site, we can celebrate an individual location, have it contribute to specific site, as well as in a more urban manner.

In particular, I have attempted to show that we can utilize the normally utilitarian objects that litter our cities and contribute little to them. The public works which inspired this project once given an architectural sense of detail and an architectural program can become a representational egde and a unifying vocabulary in **any city.**

The contemporary city does not have to be confusing and unremarkable. We can make it valuable to our lives.





• CONTEXT FOR THE THESIS

• Enthusiasms

• Chronicle

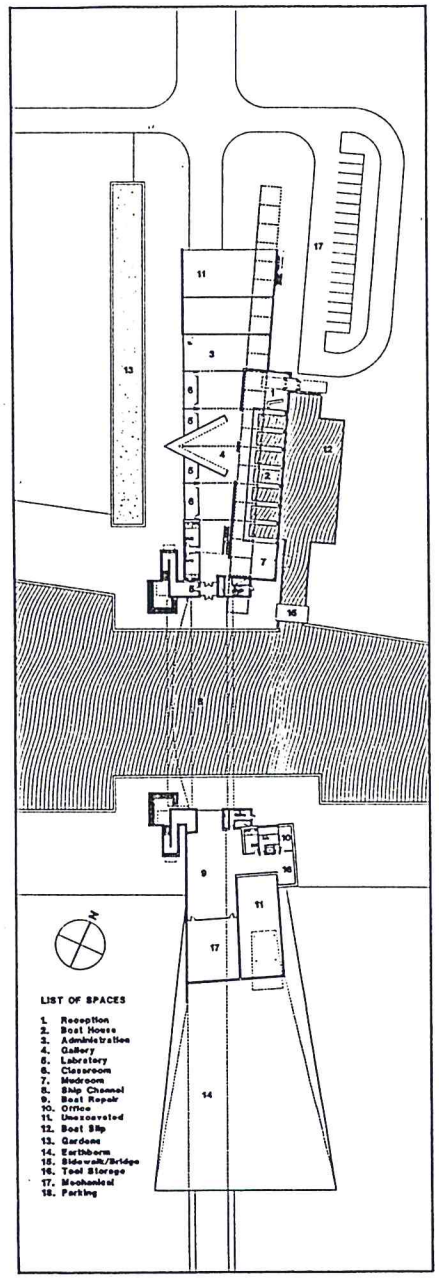
• The Edges Of The City

• The Postmodernist Edges Of The City

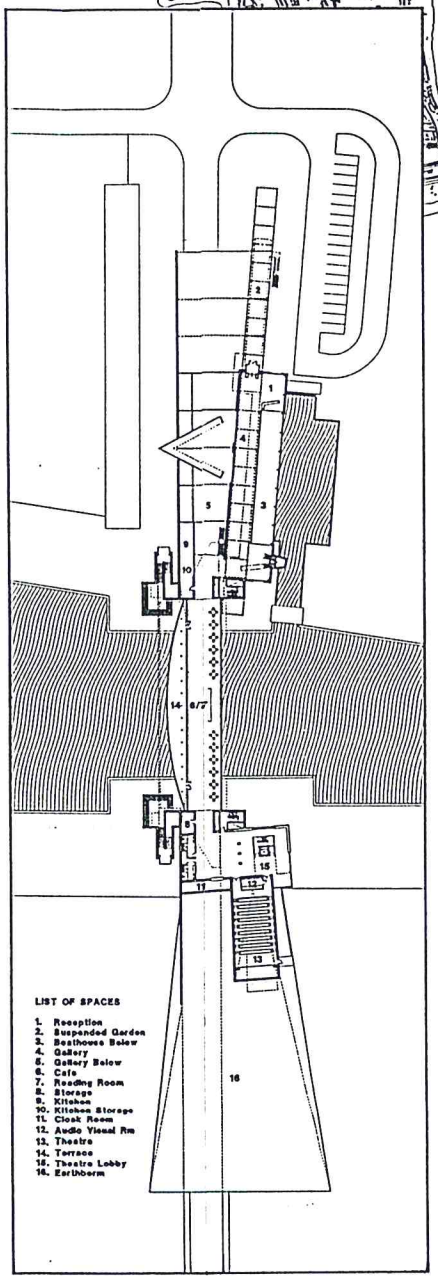
• The Contemporary City of Functional Zoning | The City Which Loses Organizational Edges

• THESIS STATEMENT

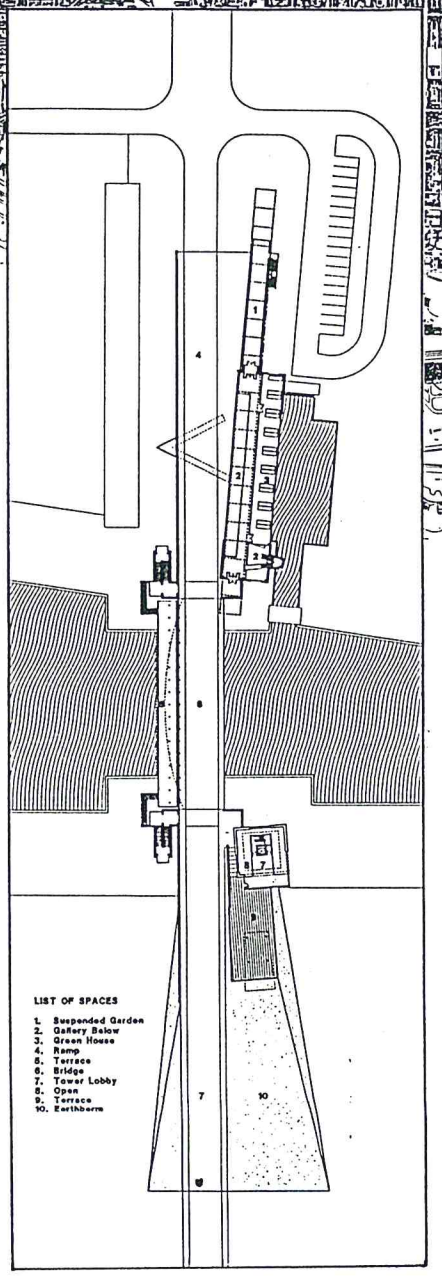
• VEHICLE FOR EXPLORATION OF THE THESIS

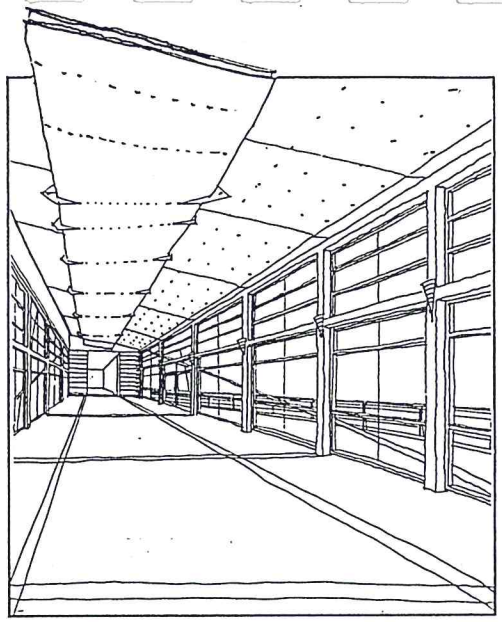


GROUND FLOOR PLAN

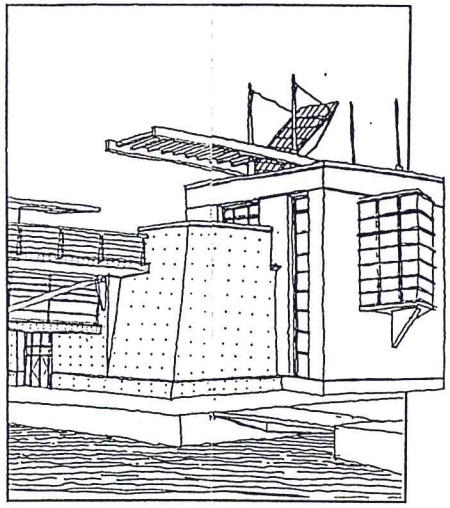


SECOND FLOOR PLAN

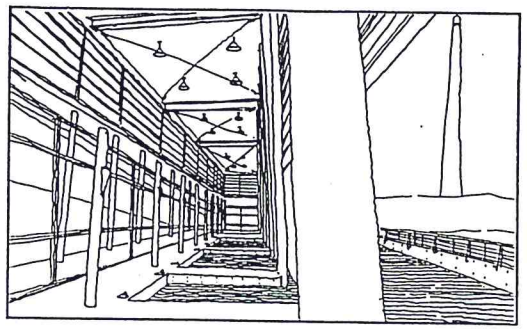




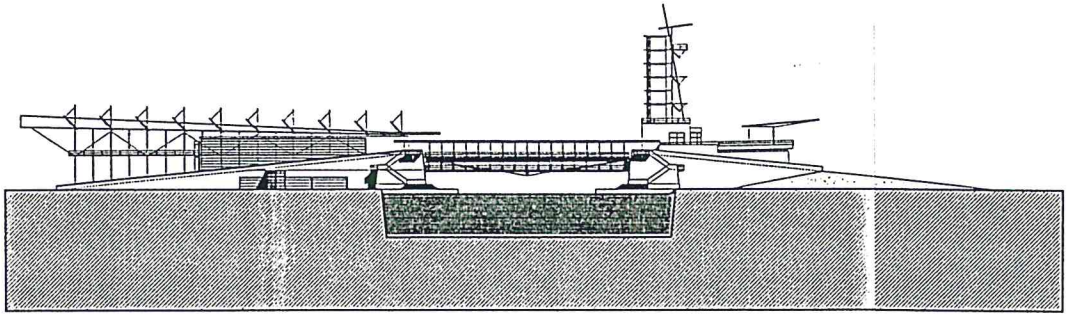
VIEW OF CAFE/READING ROOM UNDER BRIDGE



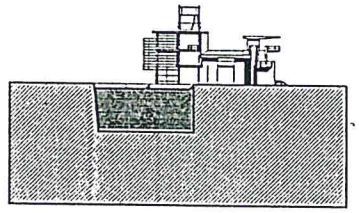
VIEW OF BOATHOUSE INTERSECTING BRIDGE - LOOKING SOUTHWEST



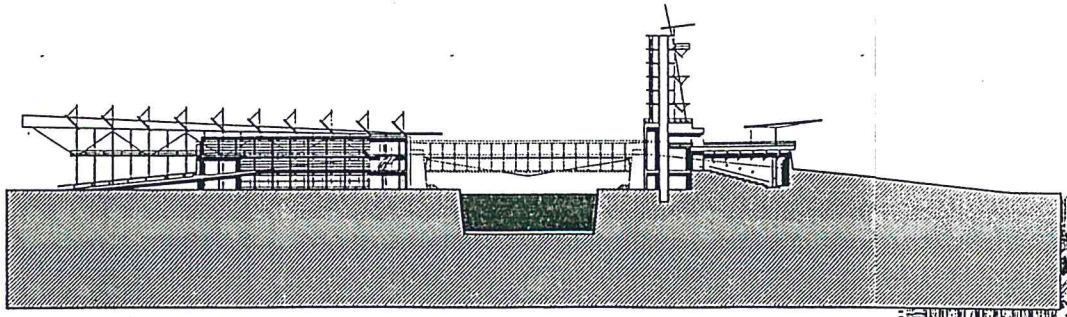
VIEW OF BOATHOUSE INTERIOR - LOOKING NORTH



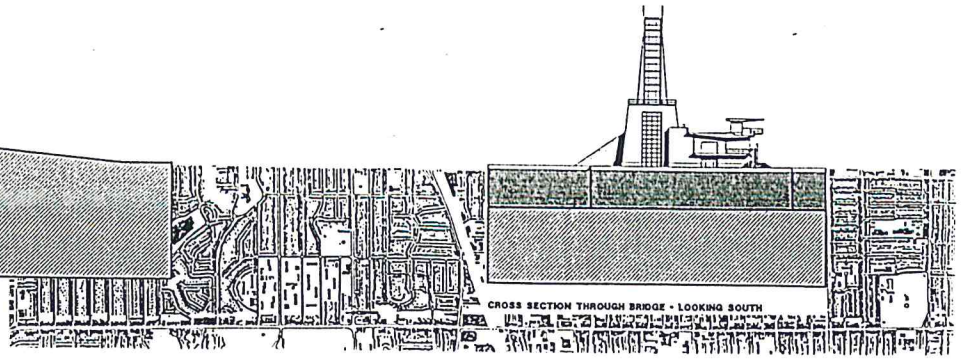
WEST ELEVATION



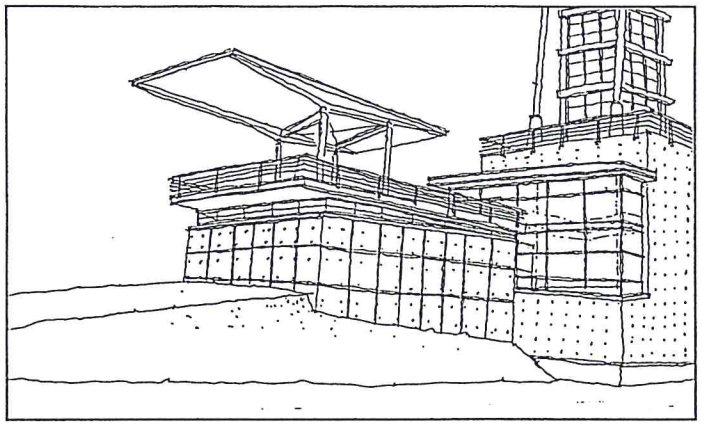
CROSS SECTION THROUGH BOATHOUSE/GALLERY AND RAMP



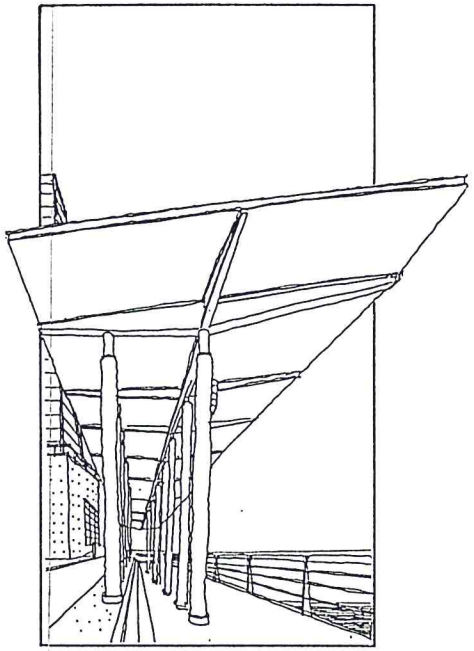
CROSS SECTION THROUGH BOATHOUSE AND THEATRE - LOOKING EAST



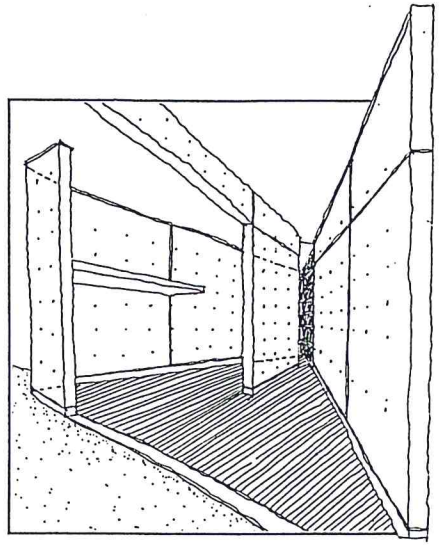
CROSS SECTION THROUGH BRIDGE - LOOKING SOUTH



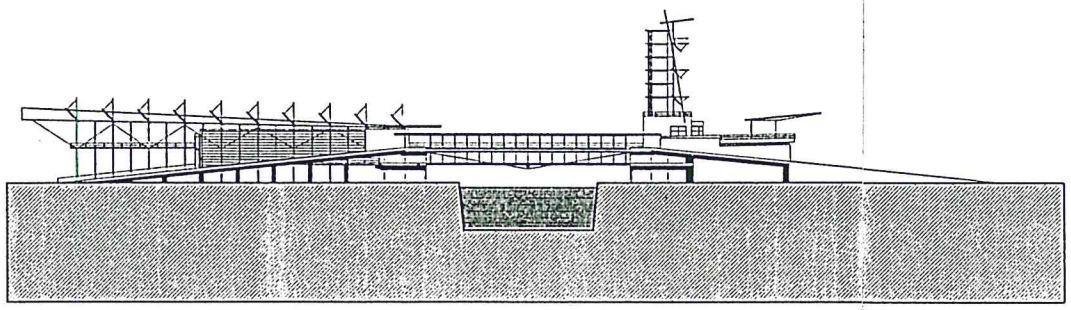
VIEW OF OBSERVATION TERRACE (WITH THEATRE UNDERNEATH) - LOOKING NORTHWEST



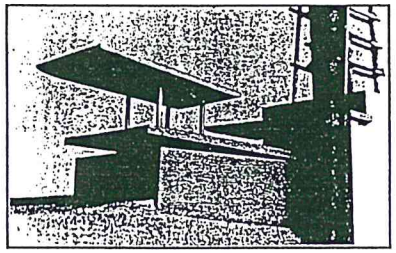
VIEW OF BRIDGE/OBSERVATION TERRACE - LOOKING SOUTHWEST

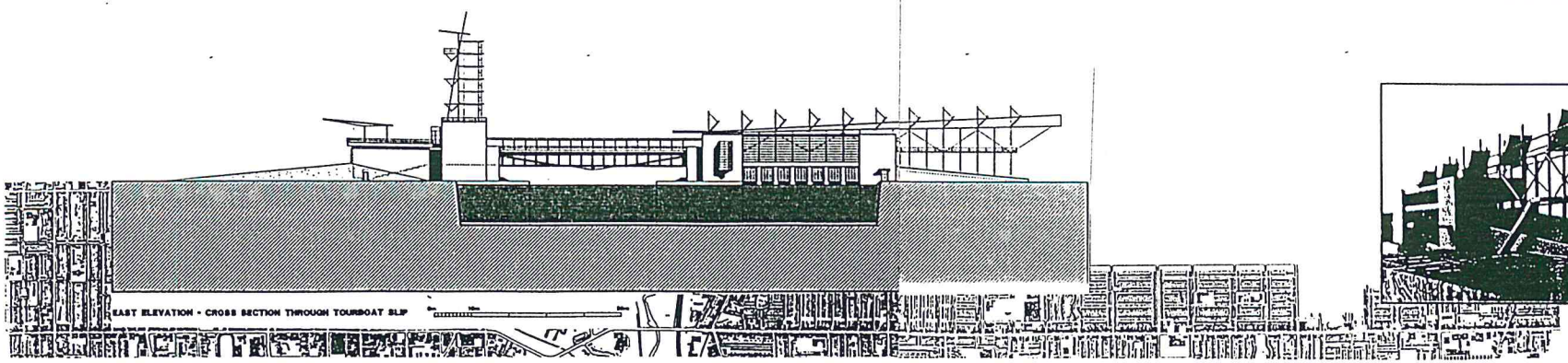


VIEW OF GALLERY UNDER RAMP - LOOKING SOUTHWEST



CROSS SECTION THROUGH RAMP GALLERY AND BRIDGE - LOOKING EAST





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