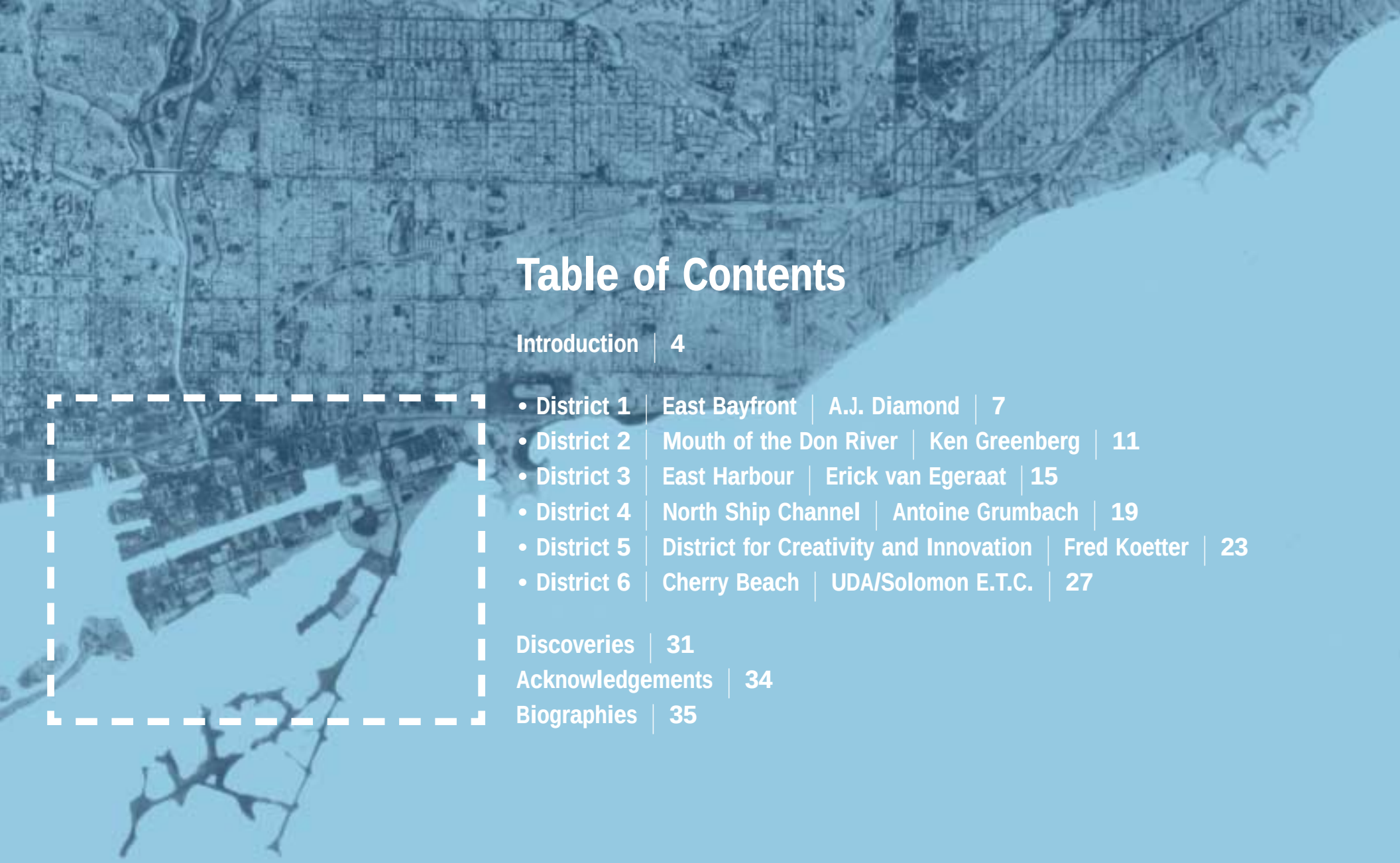
Urban Design Report 1

Report of the Results | Fall 2002

Toronto
Waterfront Design Initiative

The Toronto Waterfront Design Initiative (TWDI) brought together some of the world's most talented architects and urbanists to develop ideas and solutions for Toronto's waterfront.
The architects were organized into six teams and assigned to one of six districts located in the East Bayfront and the western portion of the Port Lands.

The Toronto Central Waterfront currently under study spans 10 linear kilometres of lakefront. It will ultimately provide 40,000 new residential housing units as well as new and improved parks, public spaces and amenities. Combined investment by the public and private sector is expected to exceed $17 billion.



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TORONTO

TORONTO WATERFRONT
REVITALIZATION CORPORATION

INTRODUCTION • The Toronto Waterfront Design Initiative (TWDI) began during the summer of 2002 when representatives from the City of Toronto, Urban Development Services and the Toronto Waterfront Revitalization Corporation (TWRC) formed a Steering Committee to organize an intensive three-day workshop or design *charrette*. In September 2002, the Committee selected six internationally renowned, architect-led teams and provided them with background information about the waterfront. The goal was to examine how large areas of underdeveloped land in the East Bayfront and the Port Lands could be designed to achieve the multiple goals of the Central Waterfront Plan. The TWDI was also designed to influence and inform precinct planning, the process through which the City of Toronto and the TWRC will conduct future detailed planning and urban design for the waterfront.

The teams were selected based on their reputation and experience in designing waterfronts and communities worldwide. The six teams were led by two architects from Canada (Jack Diamond and Ken Greenberg), two from the United States (Urban Design Associates/ Solomon E.T.C. and Fred Koetter) and two from Europe (Antoine Grumbach and Erick van Egeraat). All teams based outside Toronto were linked with a local architectural firm. Preliminary design ideas were shared with the Toronto-based architects, who provided local knowledge and site reconnaissance for their teams during the first phase of the Initiative. Most teams included landscape architects, architectural computer specialists, perspectivists, architectural model makers, and other professionals.

Each team was assigned slightly overlapping study areas in order to encourage interaction and debate between adjacent teams. For a full list of team members, please see page 34.

During September 2002, the teams began the research and exploration of their site using maps and background information provided by the City and the TWRC. Each team was provided copies of the City of Toronto Central Waterfront Draft Part II Plan, "Making Waves: Principles for Building Toronto's Waterfront" and the TWRC's initial report "Our Toronto Waterfront," and the most current version of the City's and the TWRC's plans and maps. Detailed data were posted on a secure website, including: maps, plans, written background material, aerial and ground photographs, and a detailed Design Brief explaining the six study areas, the amount of building recommended in the TWRC's Business Strategy, an analysis of current conditions, the design issues of the site, and challenges identified by the City and the TWRC. With this information, all teams were able to conduct extensive site analysis prior to the start of the *charrette* in October.

The objectives of the TWDI, as stated in the Design Brief were as follows:

- Develop a Land Use/Urban Design Plan for each study area defining the location, nature and character of local streets and blocks, uses, open spaces and streetscapes.
- Explore appropriate building types, conducting typological analyses of buildings for the unique characteristics of the waterfront.
- Explore relationships between the built form and the public realm, including the water's edge, green space, plazas, streets, sidewalk, parks, promenades or trails.
- Use the TWRC Business Strategy density yields as a point of reference.
- Identify creative parking and servicing strategies.

The Design Brief also contained "Ground Rules" including the following statements:

- Waterfront open space must be publicly accessible.
- The location and alignment of major roads and large-scale parks and open space are to be considered fixed elements. The character and design of these elements should be explored.

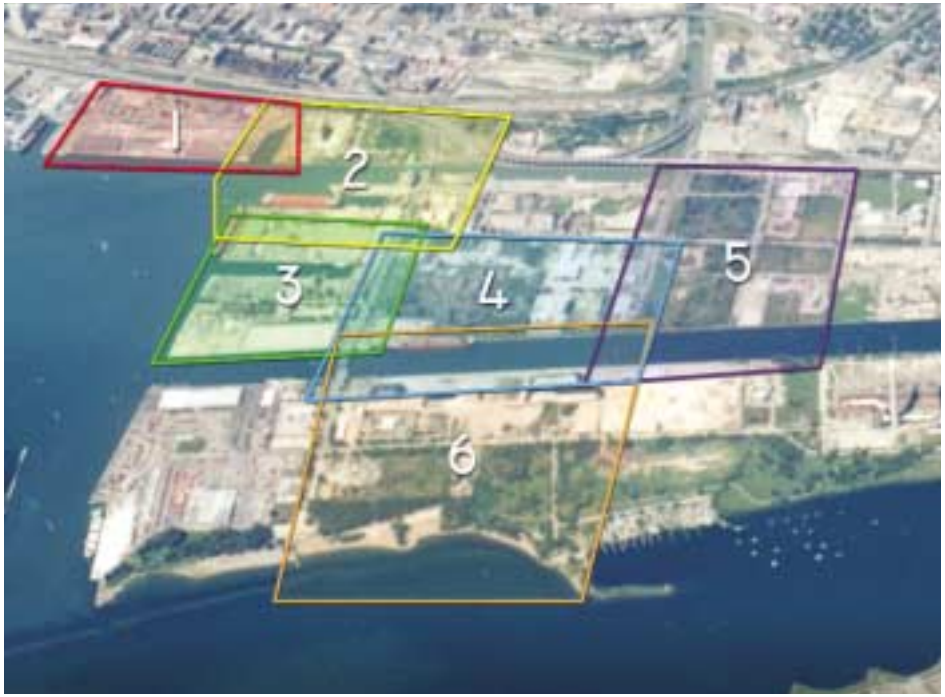
- Designs should address how each study area fits within the overall central waterfront.
- Provide for local open space and community facilities in each district.

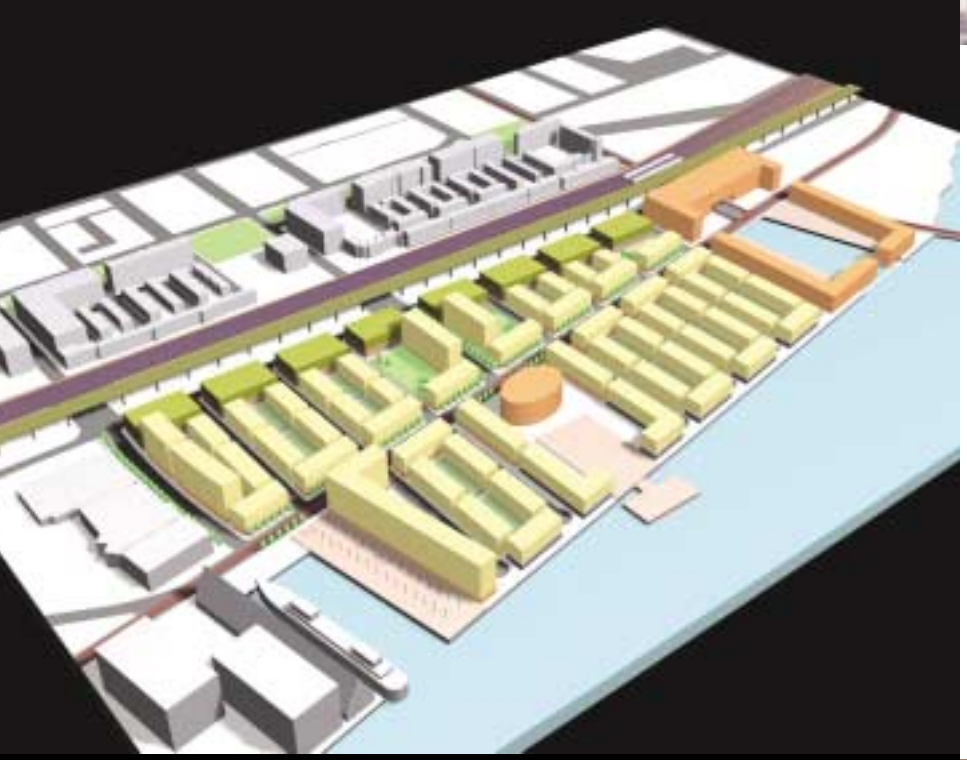
The focus of the TWDI was the *charrette*, which was held between October 15th, and 17th, 2002. The teams came prepared with design ideas and international precedents that could be applied to Toronto's waterfront. During the first day, City staff and TWRC representatives led the teams on a series of boat and bus tours of the Port Lands, the East Bayfront, and their individual sites. The *charrette* design work was conducted at the York Quay Centre, in space donated by Harbourfront Centre.

During the evening the architects were asked to present examples of precedents from around the world. The lecture was attended by approximately 400 members of the public, as well as members of City Council and other public officials.

Over the next few days, the teams worked intensively to generate design ideas about their areas and Toronto's waterfront development. City of Toronto staff, consultants, agencies, boards and commissions, and representatives of the TWRC provided background information, feedback and design assistance throughout the *charrette*. An informal design review took place at the end of the second day when the teams discussed and critiqued the preliminary designs.

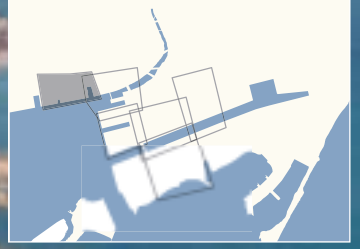
During the final day, the teams revised their designs and prepared presentation drawings. That evening, approximately 350 invited guests attended the final presentations. The *charrette* generated a great deal of positive media attention. In addition, the high level of community interest in the work undertaken during these three days indicated substantial public interest in the proposed redevelopment of the waterfront and an encouraging openness to new ideas.





"...The best city-water relationships have immediacy and intimacy. Venice, Amsterdam, Vancouver... are all good examples." ***AJD***

- Keep Queens Quay East in its current alignment.
- Develop a community in the East Bayfront with mixed residential, retail and other uses, at medium densities and height.
- Improve Jarvis, Sherbourne and Parliament Streets and connect them south to the water's edge.
- Create intimate, active, urban plazas next to the water at the foot of the north-south streets.
- Protect public urban plazas from winter weather conditions by allowing mixed-use buildings, with street level retail and public uses, to enclose and define usable, south-facing spaces close to the water's edge.
- Consider 'water courts' where buildings could be built over the water to help shield the public water's edge space from winter winds. Also consider buildings with large street level openings that can be raised or lowered according to the weather conditions.
- Create a continuous, public promenade that connects all of the waterside places along the lake.
- Widen the railroad underpasses and create pedestrian teamways to enhance the connection to the lake.
- Relocate the GO Transit station to the Parliament Street railway bridge and create an intermodal station servicing TTC, GO, water taxis and pedestrians.
- Maintain the Parliament Slip as a special public place, and as a future area for mooring boats, ferries and water taxis.



District 1

East Bayfront

A.J. Diamond, Diamond & Schmitt Architects Inc., Toronto

Transforming the Parliament Street tunnel into a vibrant intermodal, transportation hub

Concepts by A.J. Diamond • Waterfronts add inestimable value to cities by providing interest, amenity and delight, as well as largely unassailable open space.

In contrast to rural settings, in which amenities such as conservation and leisure areas surround the natural contours of lakes, rivers and oceans, benefits to urban areas accrue from man-made waters' edges; indeed at times buildings project into the water itself. The best city-water relationships have immediacy and intimacy. Venice, Amsterdam, Vancouver, Santiago, Lucerne, Zurich, St. Petersburg, Boston and Charleston, are all good examples.

Clues as to how best to develop Toronto's waterfront lie in the particular, and highly satisfying characteristics, of the city's street system and neighbourhoods. Toronto's super-grid of arterial streets lies on the old concession lines at about two kilometre intervals. These streets carry public transportation as well as high volumes of vehicular traffic. Not surprisingly, they support local retail uses along their lengths with development densities that are higher than their hinterlands. Transit stations occur where the super-grid quadrants intersect. Regional uses thrive on such wide accessibility. Toronto, as a consequence, is a flexible, multi-centred city.

The hinterlands of these super-blocks contain a grid of smaller streets with predominantly low-scale residential uses, at once protected and served by the surrounding arterial streets and their mixed-use and larger scale buildings.

Working from the general precedent of what makes urban waterfronts work, and Toronto's particular urban success, five principles guided the planning and design of the seven-hectare area bounded by lower Jarvis Street, Lake Ontario, Parliament Slip and the Gardiner Expressway, as well as the rest of the Port Lands:

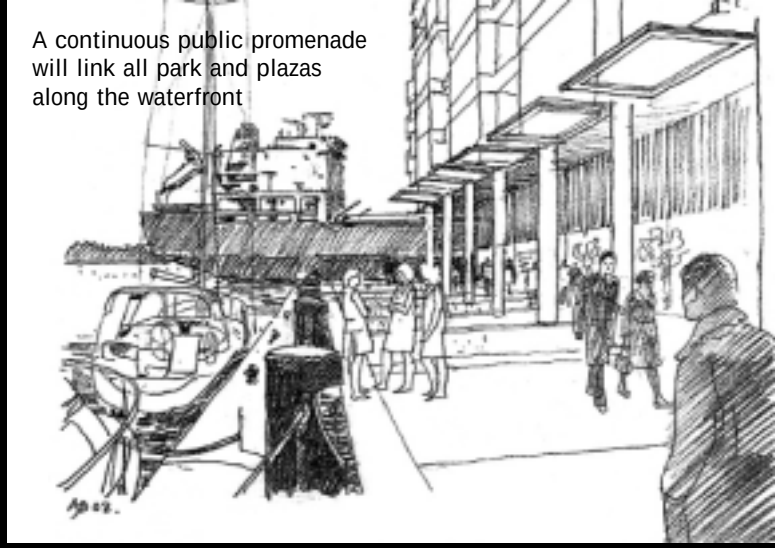
1. To extend the Toronto street grid to the water's edge, with street widths, including that of Lake Shore Boulevard, scaled to urban development needs rather than exclusively vehicular needs.

2. To develop a community with mixed residential, retail and other uses as appropriate, at medium densities and of sufficient magnitude to stabilize neighbourhoods. Building heights, with few exceptions, would not exceed eight storeys and would be built to the water's edge.

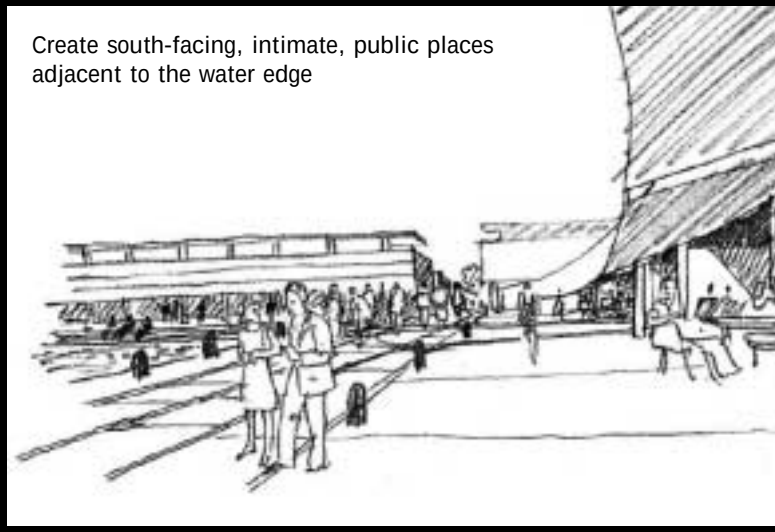
3. To create an accessible, intimately scaled public lake edge for pedestrians.

4. To establish an open space system, both natural and man-made, that caters to both local and regional uses. This system should be distributed through the Port Lands, taking into account the ecological needs of the mouth of the Don River and refraining from aggregating park space into one or two massive areas, which would not be conducive to residential, retail or cultural uses.

5. To utilize as far as possible existing road alignments and grades, waterways and historic features. This would allow gradual and effective implementation by both public and private enterprise. However, the removal of the Gardiner Expressway and the conversion of Lake Shore Boulevard to a normal city street would significantly benefit the redevelopment of the East Bayfront as a vital and attractive centre city community.



A continuous public promenade will link all park and plazas along the waterfront

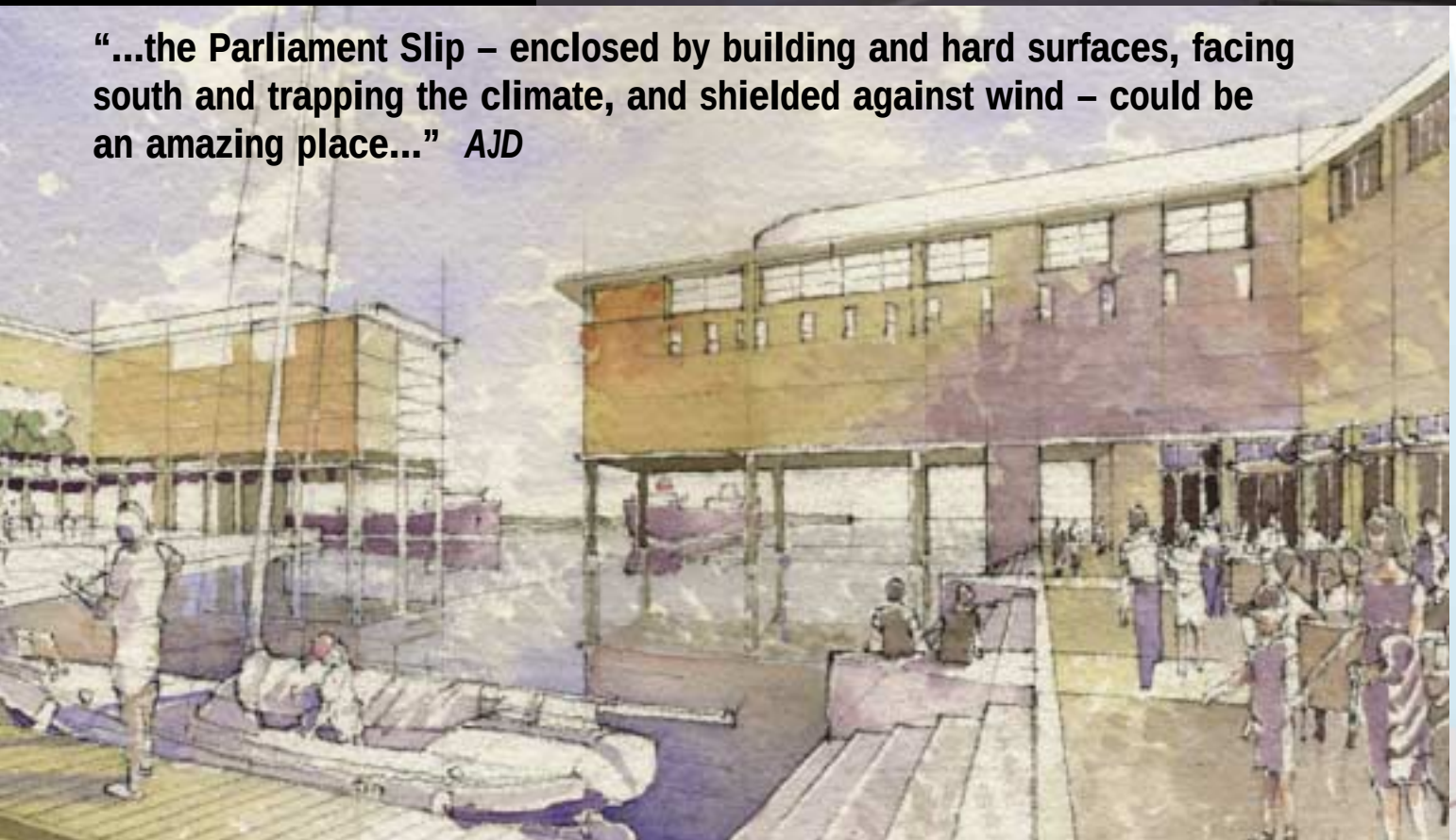


Create south-facing, intimate, public places adjacent to the water edge

A new plaza at the foot of Jarvis Street could accommodate a produce market

"...enduring neighbourhoods ... have stability, narrow streets, good public transit, a wide mix of public and private uses, retail and residential uses, and street continuity..." *AJD*

"...the Parliament Slip – enclosed by building and hard surfaces, facing south and trapping the climate, and shielded against wind – could be an amazing place..." *AJD*



"...this is a very interesting and complex piece of artificial land...It has a whole series of artefacts, found objects, and uses that are in different stages of use– some new ones that are being incubated, some old ones that are phasing out..." *KG*

"The Port Lands emerged from an engineered landscape, from which the city has derived enormous prosperity through much of the 20th century. What we see here today is what remains after the retreat of the *Industrial Glacier.*" *KG*

Keeping this in mind, key design ideas for this area include the following:

- Allow the development of the waterfront to occur incrementally over time and accommodate the preservation, evolution, succession and co-existence of a highly diverse mix of uses.
- Preserve industrial and marine uses and artefacts including lift bridges, silos, slips, quays, cranes, industrial and maritime machinery, railroad tracks, and other notable historic elements.
- Naturalize and realign the mouth of the Don River to create a lacustrine marsh park under the elevated Gardiner Expressway.
- Re-align Lake Shore Boulevard out from underneath the Gardiner Expressway as a graceful bridge over the Don River.
- Eliminate the Parliament Street road/bridge connection across the mouth of the Don River and replace it with an elegant, high-level pedestrian/cycle bridge.
- Create a continuous public, water's edge promenade around all piers.
- Maintain Queens Quay East in its existing right-of-way, improved as a boulevard with a new Light Rapid Transit extended to Cherry Street.
- Keep the Parliament Slip open for maritime use and transform its northern end into a waterfront square.

District 2

Mouth of the Don River

Ken Greenberg, Greenberg Consultants Inc., Toronto

With Peter Clewes, Architects Alliance, Toronto

proposed

existing

"...we are proposing a slender, elegant pedestrian and cycle bridge which could rise to about 7 or 8 metres above water level..." *KG*

"...our team is taking the position that we keep the Gardiner because the solutions, frankly, are worse than the problem. So what we're saying is let's wait for a better time, and assume for the purpose of this exercise that the Gardiner is going to be there..." *KG*

Concepts by Ken Greenberg • The transformation of the vast and complex Port Lands will happen incrementally. A viable vision for the future has to deal with this reality. Our task was to define a flexible framework that could be implemented and interpreted over time, allowing for "succession" and the inevitable co-existence of highly diverse uses. We began with a careful assessment of found conditions and searched for ways to work with what exists to enhance the sense of place by adding new layers to the industrial and maritime heritage, rather than thinking of the site as a *tabula rasa*.

Our site functions as a hinge or gateway in two fundamental respects – by linking the Don River system to the Harbour and by serving as the gateway to the Port Lands. We looked for elements that would build on this reality. In contrast to adjacent areas, this site has the potential to build on its underlying characteristics and develop a strong green character. The river mouth can support a variety of landscape types as part of the larger waterfront park network with development opportunities set back from and framing this opening of the Don River system to the harbour.

What emerged was a series of key infrastructure moves structuring the public realm.

Build carefully on what exists:
- Allow the development of the waterfront to occur incrementally over time to accommodate the preservation, evolution, succession and co-existence of a highly diverse mix of uses.
- Maintain Queens Quay East in its existing right-of-way, improved as a boulevard with a new Light Rapid Transit extended to Cherry Street

Industrial memory, new green amenity:
- Preserve industrial and marine uses and artefacts including bridges, silos, slips, quays, cranes, industrial and maritime machinery, and railroad tracks.
- Naturalize and realign the mouth of the Don River to create a Lacustrine Marsh Park under the elevated Gardiner Expressway.
- Re-align Lake Shore Boulevard to emerge and open up gently over this park, rising out from underneath the Gardiner Expressway and taking the form of a graceful bridge over the Don River.
- Keep the Parliament Slip open for maritime use and transform its northern point into a waterfront square.
- Eliminate the Parliament Street road/bridge connection across the mouth of the Don River and replace it with an elegant, high-level pedestrian/cycle bridge aligned with Parliament.
- Create a continuous water's edge public promenade around all piers.

As these public elements are phased in, they establish a strong public realm and open up opportunities for incremental redevelopment of portions of the site, including the adaptive re-use of silos, Essroc Pier and seawall, and the creation of new mixed-use blocks fronting the new public water's edge. Implementation advances step by step with staged investments in the public realm and private response. An ambitious long-term vision emerges – the evolution of a new kind of open-ended and vibrant place for living, working, recreation, culture, and education at the mouth of the restored Don River.

"...preserve the area around the Essroc Pier for marine uses, and re-establish the lacustrine marsh at the base of the river..." *KG*

Integrate parks and waterside plazas into the site

VIEW	Unlock the view to the lake!
PROXIMITY	A city is about proximity!
DENSITY	A waterfront is the ultimate drop in density!
PEDESTRIANS	Prioritize pedestrians!
BARRIERS	Connect to the lake wherever you can!
SCALE	Size down your civic space!
SPACE	Shape your urban space architecturally!
ARCHAEOLOGY	Make use of existing assets!
CONTROL	Be in control of the ground floor!
PROCESS	Be decisive!
TIME	Start NOW!

District 3

East Harbour

Erick van Egeraat, EEA Architects, The Netherlands

With Mark Sterling, Sterling Finlayson Architects, Toronto

Ensure continuous public access to the water's edge through a combination of parks, playgrounds, flanking piers and promenades

"...we need a series of actions, interventions, activities, which all come down to the same mindset: let's try and see what we can do with the water..." *EE*

"...if you are really serious about improving your waterfront why don't you start with opening up the street end views to the water..." *EE*

existing

Transform the Mouth of the Don River into a naturalized marsh

Consider building housing under the Gardiner

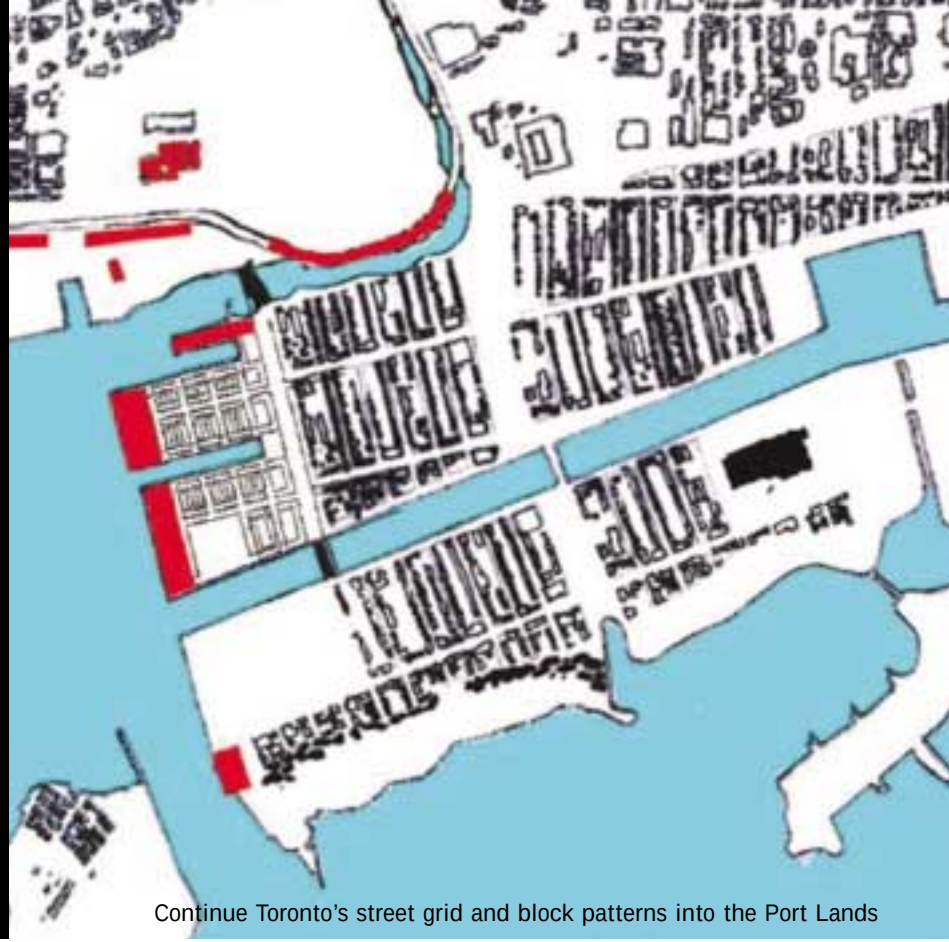
If the Gardiner stays up, urbanize its edges

Concepts by Erick van Egeraat • The redevelopment of the Toronto waterfront can benefit from many impressive precedents that have been realized worldwide over the last 20 years. The redevelopment of derelict, former industrial zones that withhold the city from the merits of an impressive coastline edge has been a major topic in contemporary urbanism for some time. However, to take references from other cities increases the risk of ignoring the unique and intrinsic solutions for the City of Toronto. Therefore it is important to understand and build upon the inherent qualities and assets of the city to uncover Toronto's true potential.

A specific strength and quality of Toronto lies within its neighbourhoods, which are entrenched in the simple but flexible grid system. The potential of the grid is almost infinite and can serve as a natural and strong reference for the redevelopment of the waterfront area. Our strategy is to extend the existing grid from the adjacent eastern neighbourhoods to the water's edge, providing a basis for an urban model. The brief and program for the grid can then be identified to ensure an urban mix of functions and densities, which intensifies towards the water's edge.

Parallel to this strategy of the grid, we propose to incorporate the existing industrial structures as much as possible for new, cultural purposes in order to establish a history and a character to the new city extensions. Even reputed obstacles like the Gardiner Expressway can be transformed into positive contributions by transforming them through inventive, symbiotic solutions into imaginative buildings and urban spaces.

Toronto can achieve a strong identity by the clever, efficient and original use of the city's existing features, which are currently hidden in the scale and physical expression of the city. This strategy needs to be supported and maintained by a framework master plan that is not too precise or ambitious in its architectural proposals, but one that can co-ordinate, support and improve the energy and potential of many smaller, future initiatives for the City of Toronto.



Continue Toronto's street grid and block patterns into the Port Lands

Toronto Block

Traditional Park & Community Centre

Block

Slab

Sport

Towers

Super Block

Adobe

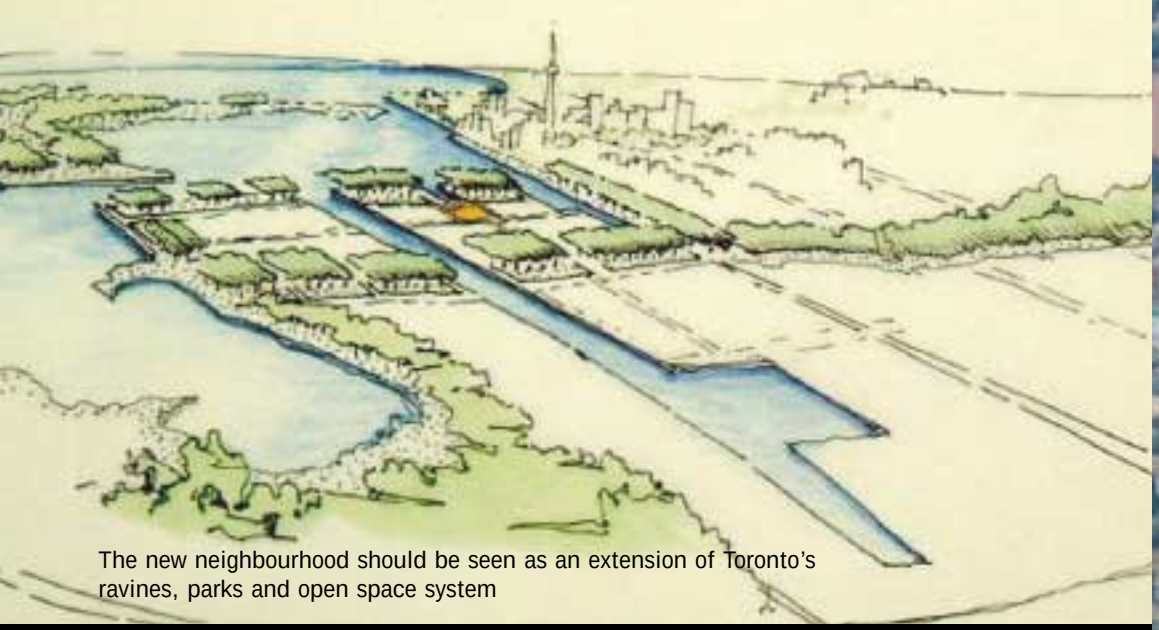
Patio

Sculpture

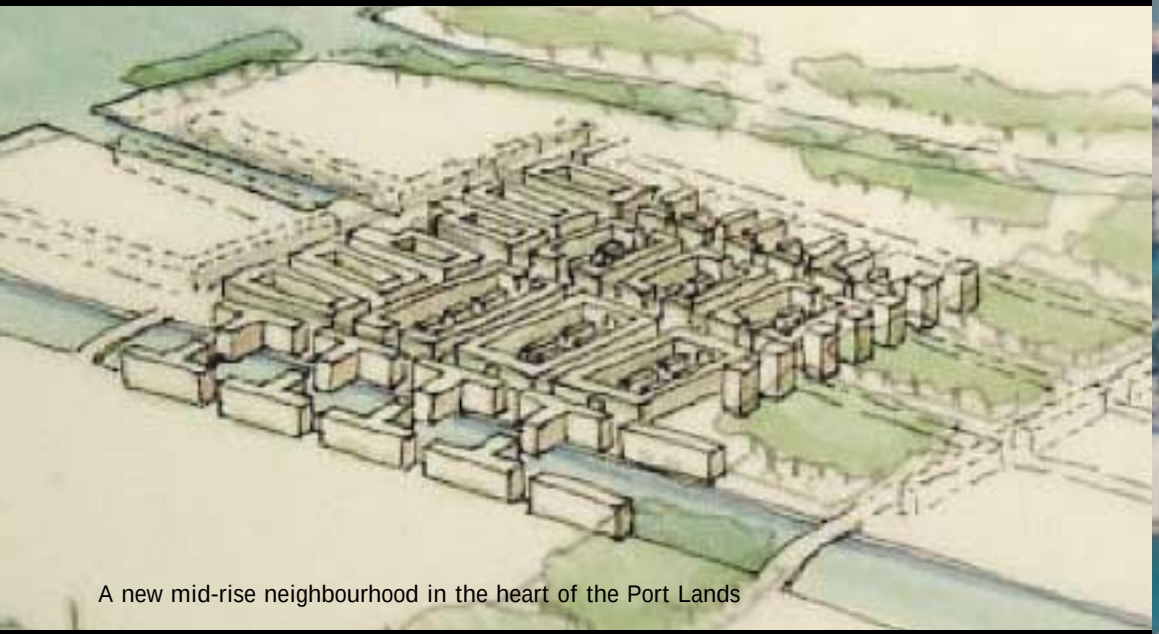
Kashbah

Media Offices

Mixed Use



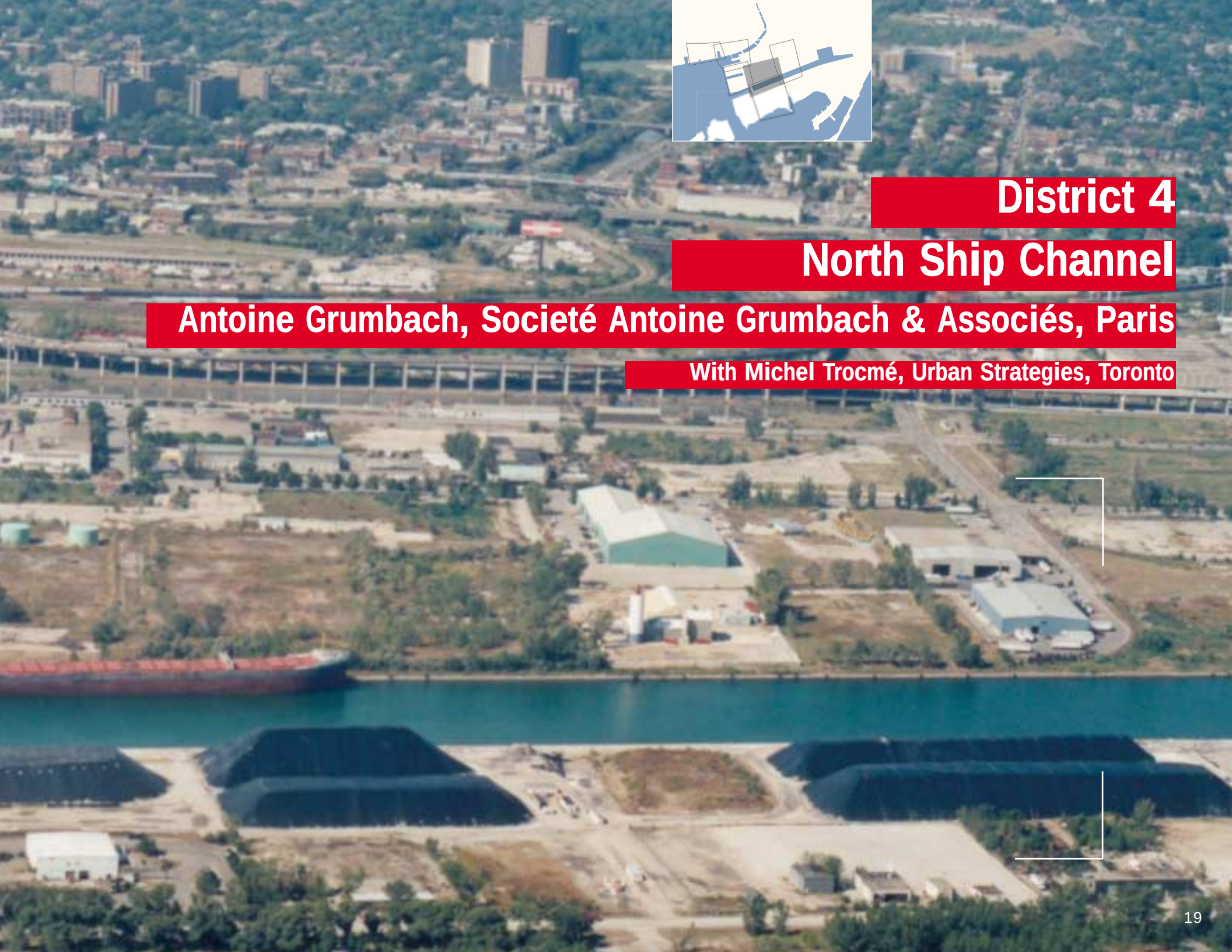
The new neighbourhood should be seen as an extension of Toronto's ravines, parks and open space system



A new mid-rise neighbourhood in the heart of the Port Lands

"...I think the first thing is to extend a street from water to water starting from a square at Cherry Street to the Turning Basin..." *AG*

- Move the location of the proposed central park in order to create a neighbourhood of critical mass and continuity.
- Widen and reinforce the proposed Don River Valley Corridor from the Keating Channel to the lake.
- Reinforce the urbanity of the area, between Cherry Street and the Don Roadway, by introducing an historic industrial street pattern with dense, low to medium scale housing.
- Knit the residential neighbourhood together around a main street that leads from a public square - adjacent to the slip between Polson and Cousins Quay – to the Turning Basin.
- The neighbourhoods are composed of mixed-use city blocks with apartment buildings along the periphery of the block and houses arranged along the streets and semi-private mews within the blocks.
- Establish a new community of "water rooms" with buildings that extend into the Ship Channel to create intimate water courtyards.



District 4

North Ship Channel

Antoine Grumbach, Societé Antoine Grumbach & Associés, Paris

With Michel Trocmé, Urban Strategies, Toronto

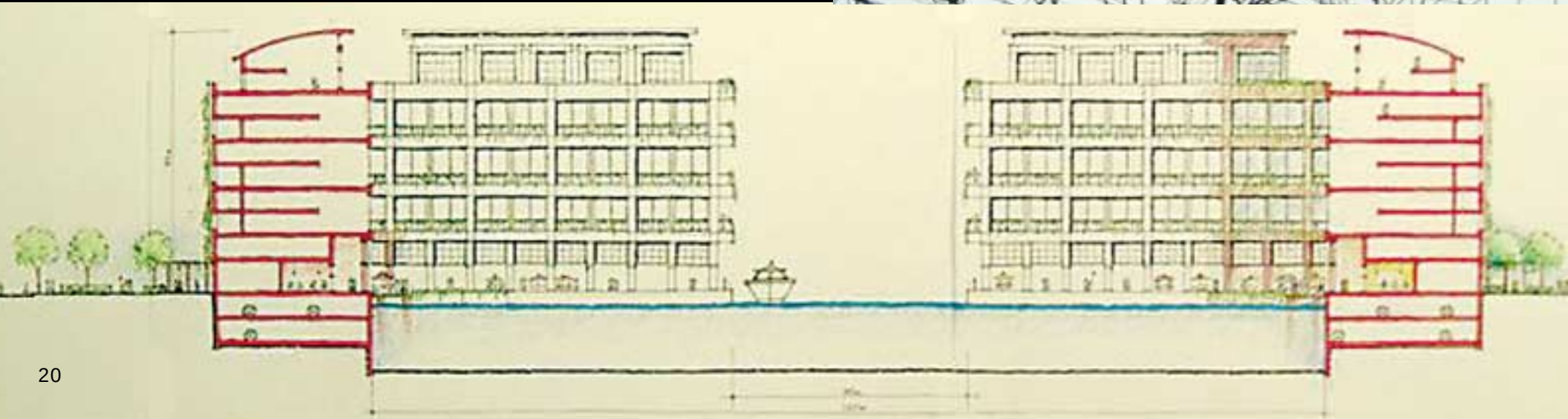
Concepts by Antoine Grumbach • Territorial Approach — The first studies for the harbour industrial district dating back to 1912-1920 establish a structure of streets and open spaces, which have supported industrial activities but left a limited legacy of significant industrial buildings. Our development strategy builds on the recent history of the site, and extends the ecological corridor of the Don Valley with a park opening to the Lake.

Master Plan, Public Realm Structure — The development of Toronto's waterfront must build on the historic industrial street pattern. The objective is to reconcile Toronto's urban scale with the immensity of its Lakefront and to re-knit the industrial landscape around an east-west linear spine. The proposal establishes a large public square opening onto the harbour at the slip between Polson Quay and Cousins Quay and at Cherry Street. The east-west axis of the site will be reinforced by the streetcar, which will strategically link the new square to the widened Don Corridor Park. The presence of this park is essential for the identity and the residents. It should be inscribed in the logic of the territory, anchoring the Don Valley Corridor to the lakefront.

Morphology — The proposed mixed-use residential fabric includes a system of apartment buildings along the block peripheries with small freehold houses along semi-private mews within the blocks. This allotment form presents several advantages. It preserves the character of the urban block structure and offers a wide range of residential forms and outdoor amenities, from semi-detached houses and duplexes to apartments with garden terraces on the upper floors.

The Ship Channel — Establishing a new community alongside the immense Ship Channel (a body of water as wide as the Champs Elysées) requires a careful exploration of the domestic qualities and dimensions of the city without closing views or altering the aquatic character of the site. The "Water Rooms", conceived as the traces of an imagined industrial history directly on the water's edge, will give to the neighbourhood a special character, inspired by the constraints and the potential of the place, without affecting the scale of the channel.

The ship channel can be transformed into a unique and vibrant series of sheltered "water rooms"



"...the first stage of the project is certainly to work along Cherry Street, and to build the identity of the place ...to create the road and to plant the trees..." *AG*

The proposed new neighbourhood, to the east of the Don Corridor, will contain an eclectic mix of uses and will be a District for Creativity and Innovation

"...it is a very important idea that one has a reasonably regularized street and block pattern..." *FK*

"The area bounded by the Don Corridor, Lake Shore Boulevard, Bouchette Street and the Ship Channel, will have the widest diversity of uses in the Port Lands including: commerce, film/media, information technology, allied arts, and residential. The result should feel, almost from day one, like a real city." *FK*

- Create and encourage a rich co-existence and interaction between the various land uses by employing a flexible block structure and by permitting unpredictable juxtapositions of disparate uses and building types - from small terrace houses to industrial lofts to big box retail.
- Create legibility and order along the defined street frontages and permit flexibility and surprises within the secondary streets and lanes of large blocks.
- Allow for opportunities for a variety of mid-block passages, creating a network of secondary connections that increase development options by establishing access and give a neighbourhood-like scale to large blocks.
- Along the north edge of the Ship Channel, establish a generous public promenade and a medium-density residential community oriented southward.

The Ship Channel promenade looking east

District 5

District for Creativity and Innovation

Fred Koetter, Koetter Kim & Associates, Boston

With Paul Reuber, Paul Reuber Architects Inc. Toronto

A parking garage that was designed to ultimately be converted into either housing, offices or a building containing research and development uses

"...we started off development in the district by defining Commissioners Street; then we added retail uses along Lake Shore Boulevard and some transitional open lot parking, which would later be located in parking structures. Next, we continued development down at the water's edge, and then started filling in northward. By this time there would be enough services to attract a very large user. Finally, we envisioned other employment based users – maybe something research oriented, or an office and research facility combined..." ***FK***

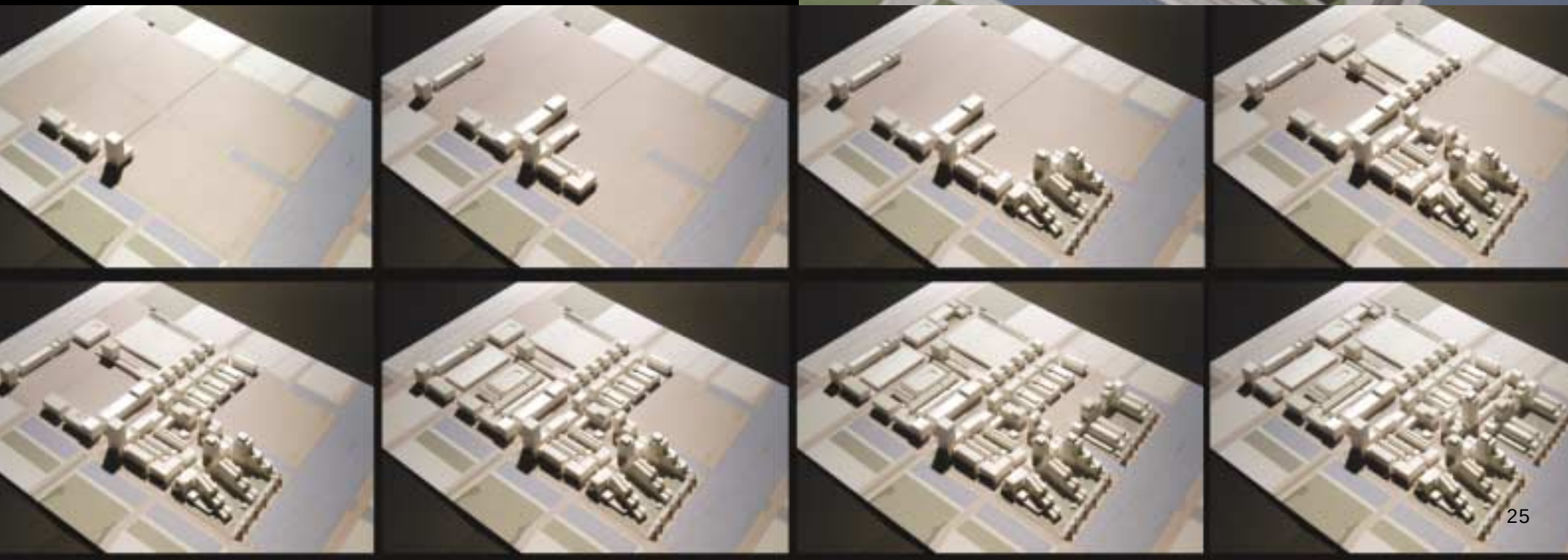
The Ship Channel promenade looking west

Concepts by Fred Koetter • This site, bounded by the Don Corridor, Lake Shore Boulevard, Bouchette Street and the Ship Channel, lies close to every activity and amenity in this entire area of the city. With the opportunities provided by these varied adjacencies and by a variety of access routes, this site has the potential to become the most active mixed-use quarter of the Port Lands district. One imagines a wide range of possible convergent uses – commerce, film / media, information technology, allied arts, specialized manufacturing, residential, recreation, etc.

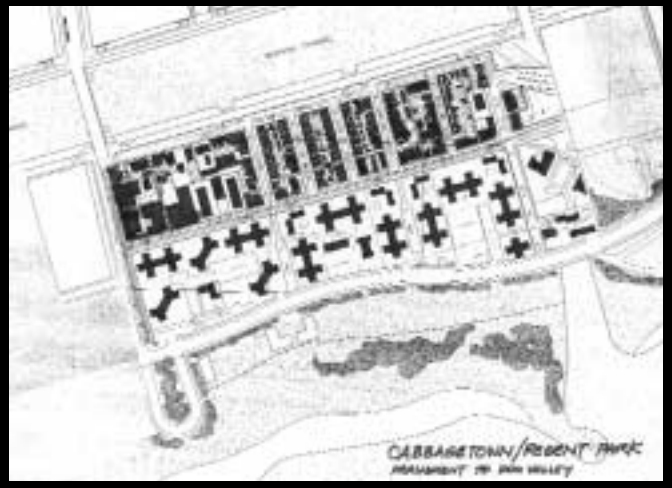
We have explored an urban design strategy that would encourage and inspire a rich and intense co-existence and interaction of these uses, often with unpredictable juxtapositions of disparate uses and building types, ranging from small terrace houses to industrial lofts to big box retail.

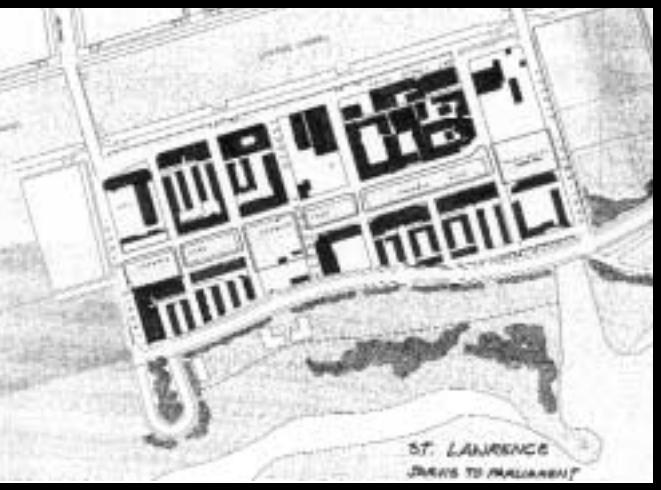
This desired environment is given its primary legibility through the maintenance of building-defined street frontages, a high percentage of contiguous (or near-contiguous) building and, in contrast, an exploitation of the great internal flexibility potential of the rather large blocks being projected for the site. This flexibility includes the opportunity for a variety of mid-block passages to create a network of secondary connections within the new area of the city.

The result should feel, almost from day one, not like a “development” but like a real city. It should be variegated, unpredictable, intense in some places, calm in others, memorable, desirable, liveable and loveable.



The scale of the proposed Cherry Beach neighbourhood is very similar to a number of Toronto's well-known neighbourhoods





- Create a new mixed-use neighbourhood south of the Ship Channel using graduated building heights ranging from low-rise (four to six storeys) north of Cherry Beach, through mid-rise and up to high-rise (20 storeys) at the edge of the Ship Channel.
- Create an urban promenade along the Ship Channel lined with medium rise buildings and punctuated by residential point towers.
- Create a small canal connection from the Ship Channel to the Outer Harbour to permit small watercraft to circulate and to animate the channel with boats and marine activities.
- Provide a wide range of residential units.
- Develop Unwin Avenue as the community's 'main street' modelled after Toronto's best commercial streets.
- Create a series of north-south streets connecting the Ship Channel to the beach, each distinguished by residential squares or canals.
- Organize the neighbourhood into a series of small, pedestrian-friendly blocks.
- Improve Cherry (Clark) Beach with enhanced landscaping and trails as both a neighbourhood focused park and city-wide amenity.
- Create an intimate water's edge drive as the seam between the northern edge of the beach and the southern edge of the new neighbourhood.

District 6

Cherry Beach

Paul Ostergaard, Urban Design Associates, Pittsburgh

John Ellis, Solomon E.T.C., San Francisco

With Joe Lobko, Joe Lobko Architects Inc. Toronto

"...we wanted to create a neighbourhood that had small blocks and a grid of streets, to make it very pedestrian-friendly, and vehicle-friendly, at a very pleasant scale..." ***JE***

Concepts by John Ellis and Paul Ostergaard • The new Cherry Beach neighbourhood will be situated between the Ship Channel and the beautiful band of islands and beaches of Toronto's Outer Harbour. The design for the neighbourhood proposes a low-scaled beach-oriented community along the Outer Harbour, transitioning in scale and density to an intense urban edge along the Ship Channel. This transition in scale provides the opportunity for a wide range of residential units, from four-storey walk-up units along the beach, to mid- and high-rise residential living focused around a series of public squares and canals.

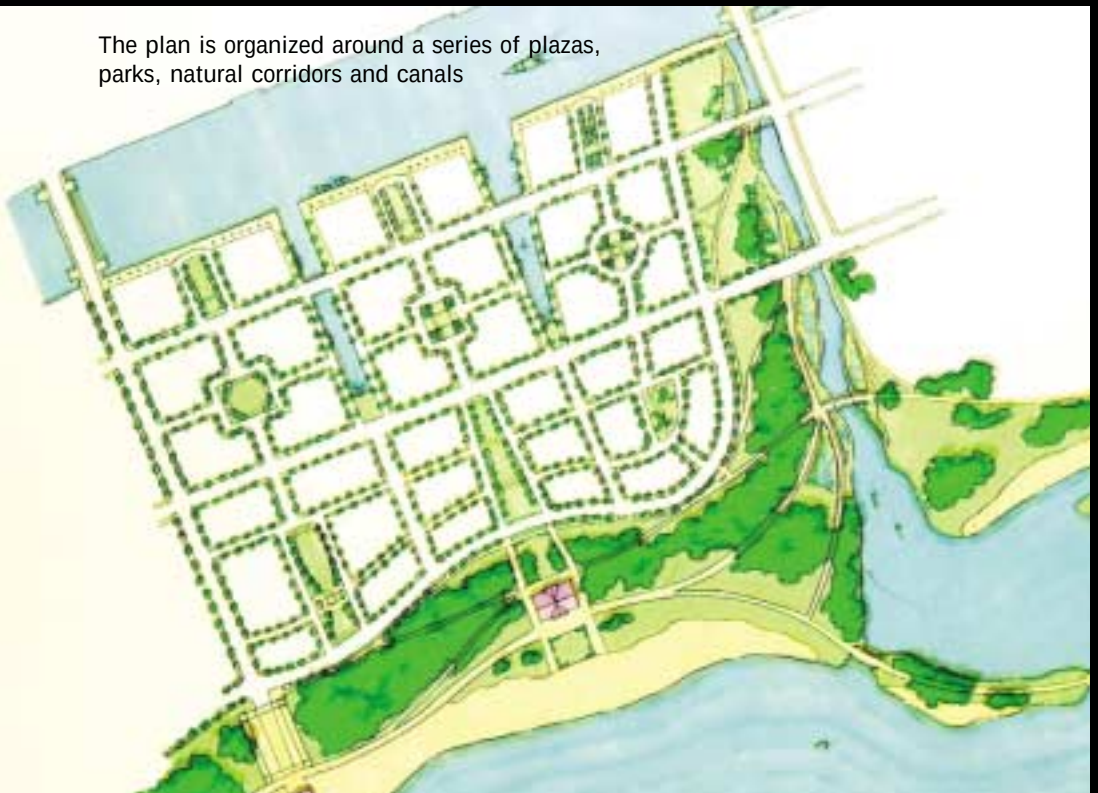
The design concentrates traffic, light rail and shopping along east/west Unwin Avenue as the community's "main street." The street will be lined with shops and restaurants serving residents and beach visitors. This reduces traffic along the beachfront and allows the creation of a neighbourhood-scaled frontage drive lined with trails and beach amenities.

A series of north/south streets connects the Ship Channel to the beach, each distinguished by residential squares or canals. Small, pedestrian-friendly blocks will support a program of 3,500 residential units of great range, encouraging a diverse population.

The Ship Channel will be an intensely urban edge lined with residential point towers, and feature a pedestrian promenade along the channel, which is animated with boats and marine activities. Within a small area, the variety of public spaces and architecture of Cherry Beach will create a rich urban experience surrounded by natural beauty.

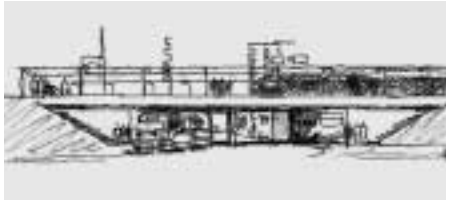
Canal promenade looking south

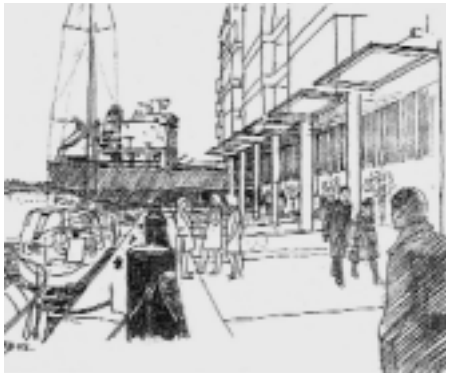
The plan is organized around a series of plazas, parks, natural corridors and canals



Cherry Beach Drive will be the seam between Cherry Beach and the new neighbourhood

Discoveries





The following is a summary of the key findings and design ideas generated by the design teams:

Connect the City with the Lake

• Improve the quality of the north-south streets in the East Bayfront (Jarvis, Sherbourne and Parliament Streets) to encourage better connections with the lake. The foot of these streets leads to special waterside urban places.

• Widen the railroad underpasses and create pedestrian "teamways" to reduce barriers and enhance the connection to the lake.

• Relocate the GO Transit station to the Parliament Street railway bridge and create an intermodal connection between TTC, GO Transit, pedestrians, water taxis and ferries. The Parliament Slip becomes a water transportation hub to reach points in the Port Lands, the Toronto Islands, downtown and beyond.

Create Special Places Where the City Meets the Lake

• Create intimate, waterside, public open spaces connected to each other by the water's edge promenade at the foot of Jarvis, Sherbourne and Parliament Streets.

• Locate public buildings, open spaces and activities, oriented toward the lake, at the foot of the major streets in the East Bayfront.

• Maintain the current alignment of Queens Quay East to prevent the proposed bisection of the Parliament Slip and to increase the opportunity to extend the City's neighbourhoods down to the water's edge.

• Maintain the Parliament Slip as a special urban place for people, and for boat moorage, ferries and water taxis.

Activity, Scale and Climate on the Waterfront

• Create intimate, active, urban plazas next to the water. Relate open space adjacent to the lake to the proposed activity and the micro-climactic conditions.

• Protect public spaces from winter weather conditions by allowing buildings with street related retail and public uses to enclose and define usable, south-facing spaces close to the water's edge.

• Consider 'water courts' where buildings can be built over the water to help shield the public water's edge space from cold winter wind. Also consider buildings with large ground floor openings that can be raised or lowered according to the weather conditions.

Restore the Mouth of the Don River

• Create a lacustrine marsh park at the mouth of the Don River for flood protection, to reduce silting, and as a natural open space amenity connected to trails and to the Central Waterfront open-space system.

• Replace the low-level proposed vehicular bridge crossing from Queens Quay East to the Port Lands with an elegant high-level pedestrian and cycling bridge in order to preserve views and enhance access to and from the Don River.

• Relocate Lake Shore Boulevard, east of Cherry Street, out from under the Gardiner Expressway and create an elegant bridge over the Don River in order to allow pedestrian and bicycle trails to pass underneath.

Incremental Approach

• Allow the development of the waterfront to occur incrementally and to evolve over time to accommodate the preservation, evolution, succession and co-existence of a highly diverse mix of uses.

Industrial Heritage

The East Bayfront and Port Lands are man-made landscapes composed of landfill. The site is not a blank slate, nor should it be viewed as such for planning and development purposes.

• Preserve industrial and marine uses and artefacts including bridges, silos, slips, quays, cranes, industrial and maritime machinery, railroad tracks, and other notable historic elements.

Neighbourhoods of Critical Mass and Focus

Several of the study areas are surrounded and contained by strong natural and man-made boundaries. In order to create a successful urban neighbourhood in a contained area:

• Maintain an appropriate balance between development and open space.

• Relocate the proposed Commissioners Park in a north/south alignment as part of a widened Don River Corridor, in order to create a neighbourhood of critical mass and density.

• Create an east-west commercial arterial street (modelled after Toronto's best commercial main streets) as the focus of the new neighbourhood. The street will run from the proposed urban plaza (at the slip between Cousins and Polson Quays) to the Turning Basin.

• Establish Unwin Avenue as the main street of the neighbourhood on the south side of the Ship Channel, modelled after Queen Street East in the Toronto's Beach neighbourhood.

Spectacular Parks and Open Spaces

• Create a major public plaza where the slip between Cousins and Polson Quay meets the proposed new commercial street and Cherry Street.

• Remove the proposed waterfront drive across Polson and Cousins Quay, in order to preserve the integrity of the slip for marine uses and not to disrupt the continuous waterfront promenade.

• Connect the neighbourhoods with a system of parks, urban plazas, natural open spaces, and waterfront promenades.

• Create a narrow Northshore Drive as a buffer between the proposed new neighbourhood and Cherry Beach.

Continuous Waterfront Access

• Provide a continuous, public waterfront promenade throughout

the East Bayfront and the Port Lands.

• Extend as many streets as possible down to the public realm and maintain street end views as an important visual connection to the lake.

• Allow Torontonians to get close enough to the water to touch it. Provide floating piers, small inlets and canals connecting to the Ship Channel as a means of creating public amenity spaces and waterside addresses.

• Create 'water rooms' along the Ship Channel bounded by bridges lined with buildings.

• Create a new water route from the Ship Channel south to the Outer Harbour to make the area more accessible to small watercraft.

Building on Toronto's Typical Block Pattern

• Build on Toronto's typical block pattern, which consists of a series of interior blocks bound together by larger commercial arterial streets and natural open spaces.

• Adjust the block pattern in the area east of the Don Corridor, designated as the 'District for Creativity and Innovation', in certain key locations to encourage a rich and intense co-existence and interaction of convergent uses (commerce, film/media, information technology, allied arts, specialized manufacturing, residential and recreation).

Built Form

• Graduate building heights south of the Ship Channel and east of Cherry Street low-rise (four to six storeys) north of Cherry Beach, through mid-rise, up to high-rise (20 storeys maximum at the Ship Channel).

• Build a low-rise, dense community north of the Ship Channel with buildings that range from four to eight storeys.

• Screen large, blank-walled structures such as parking garages and large-scale buildings (such as those proposed for the 'District for Creativity and Innovation') from view within the centres of blocks or by lining them with street-related uses such as residential or retail.

• Locate buildings containing uses that are not sensitive to noise adjacent to the Gardiner Expressway, if the expressway remains in place- for example, courier companies, offices, service centres, and parking structures (that could be converted to other uses over time).

• Consider tall buildings close to the water's edge in the east harbour.

THE TEAMS

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Joe Lobko, Aaron Finbow, Joe Lobko Architect Inc., Toronto

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- Robert Fung, Chairman of the Toronto Waterfront Revitalization Corporation
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- Paul J. Bedford, Chief Planner and Executive Director, City Planning Division, Urban Development Services
- Robert Freedman, Director of Urban Design, City Planning, Urban Development Services and,
- Bruce Bodden, Program Manager, TWRC.

The TWDI was organized by Lorne Cappe, who chaired the Steering Committee which oversaw all aspects of the Initiative including technical, planning, design, budget and organizational details. The Committee included: Joe Berridge, Tony Coombes, Brigitte Ernewein, Steven Fong, Robert Freedman, Melanie Hare, Carolyn Humphreys, Kristen Jenkins, Michael Kirkland, Lynda Macdonald, Jayne Naiman, Eric Pedersen, Al Rezoski, David Russo, Zack Taylor and Michel Trocmé.

Harbourfront Centre played a crucial role in the planning, organization and as a generous patron of the TWDI. Special thanks to William Boyle, Chief Executive Officer, Harbourfront Centre and his exceptionally accommodating staff who made the *charrette* and presentations possible.

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The following City of Toronto Urban Design staff members facilitated the *charrette* presentations: Carolyn Humphreys, Karen-Ann Pezzack, Norm Sultmanis, John Canning, and Robert Mays. Thanks also to City of Toronto staff Radoslav Korolija, Jason Bunston, and Sue Molyneaux.

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Special thanks to Robert Freedman for his leadership throughout the Toronto Waterfront Design Initiative.

Aerial photography
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A.J. Diamond, M. Arch, FRAIC, OAA, OC (South Africa) received his Bachelor of Architecture degree at the University of Capetown. At Oxford University he received a Masters Degree in Politics, Philosophy and Economics. His graduate degree, a Master of Architecture, was received at the University of Pennsylvania. After teaching in the School of Architecture at the University of Pennsylvania and working in the office of Louis Kahn, he emigrated to Canada to inaugurate and run the Master of Architecture degree program at the University of Toronto from 1964-1970. Since 1965 he has been a practicing architect in Toronto, with a practice that extends across Canada, the U.S.A., Europe, the Middle East and Asia. He and his firm have won many regional, national and international awards in design, such as the Credit Foncier Prix and six Governor General's awards. In 1989, he was the recipient of the Toronto Arts Award for Design and Architecture. In 1994, he was named an Honourary Fellow of the American Institute of Architects. In 1995 he was appointed Commissioner of the Greater Area Planning Task Force. In 1996, A.J. Diamond was appointed an Officer of the Order of Canada, and in 1997 the Order of Ontario was conferred on him. In 2001 he received the Royal Architecture Institute of Canada Gold Medal.

Ken Greenberg, founding Director of Urban Design and Architecture for the City of Toronto, and Principal of Greenberg Consultants Inc. has played a leading role on a broad range of assignments in highly diverse urban settings in North America, and Europe. Much of his work focuses on the rejuvenation of downtowns, waterfronts, neighbourhoods, campus master planning, regional growth management, and new community planning in his own city Toronto and in such cities as Amsterdam, Paris, Montreal and San Juan, Puerto Rico. His projects include the award-winning Saint Paul on the Mississippi Development Framework, the Brooklyn Bridge Park on the East River in New York and the Fan Pier in Boston. Current projects include a Master Plan for the North Point/ Lechmere Square in Cambridge, the transformation of Regent Park, a large public housing project in Toronto into a new urban neighbourhood, a Master Plan for Downtown Fort Lauderdale. He applies a holistic approach to city building, crossing traditional boundaries and working in team settings collaborating with many talented professionals from a variety of disciplines. In each city, with each project, his strategic, consensus-building approach has led to coordinated planning and a renewed focus on urban design. Ken is a Fellow of the Royal Canadian Institute of Architects, the Toronto Society of Architects and the Institute for Urban Design.

Erick van Egeraat (1956, Amsterdam) studied architecture at the Technical University of Delft Department of Architecture, 1974-1984. His final project was 'Urban redevelopment in Amsterdam' and 'Thesis on urban design in Holland 1940–1980'. In 1983 Erick co-founded mecanoo architecten and was a partner there until 1995. In that year he founded Erick van Egeraat associated architects (EEA) in Rotterdam and Budapest. In 1998 he extended his practice to London and in 1999 EEA Prague was opened. Today there are 100 permanent members of staff in these four offices. Erick van Egeraat has received various awards and honors and participated in numerous national and international architectural juries. In 1997 the monography 'Six Ideas about Architecture' was published. Specific, appropriate and open-minded are the keywords of EEA's direction in architecture and related research. EEA's work continuously seeks for a different solution to the client's original brief by questioning and exploring to offer a new dimension to each project. Influenced by the cultural and historical context as well as by contemporary life, EEA aims to develop an architecture that responds to a known language with new emerging sensations in order to capture the life ahead, to create architecture that reflects the characteristics of our time and that is inspired by all creative art forms including fashion and design.

Antoine Grumbach (1942, Oran, Algeria) graduated as an architect at the Ecole des Beaux Arts in 1967. Already in an early stage, he analysed the issue of urban complexity and the (patterns of evolution) role of time in the production of cities. During this period, he produced a study entitled "The semiology of cafes" at the Ecole des Hautes Etudes in Paris, together with Roland Barthes. His passionate commitment to the urban issue, his concern with history, architectural continuity and the urban context has contributed to the development of a shared culture of the city. His numerous executed projects cover a wide range of scales, from the development of urban spaces (such as Marne la Vallée and Aix) to the realization of social housing (both new and rehabilitated), as well as vast programmes such as the 1011 room Sequoia Lodge Hotel at Disney Europe, the Météor/SNCF rail interchange at Paris-Tolbiac and the University of Versailles Saint Quentin. At the urban level, his studies and executed designs include the Mare & Cascades sectors in Paris, the docklands of Bordeaux and the rehabilitations of several low and high-rise housing estates. He is currently involved with the design of a tramway system on the South boulevard in Paris as well as the transformation of the A7 highway at Marseille.

Fred Koetter, FAIA has, over the past twenty-five years, been nationally and internationally recognized as a design leader. Through private practice and his public and academic involvement, he has been active in advancing the level of design for academic, corporate, and civic facilities. His projects and built works in these areas have been broadly recognized with extensive publication, many design awards, and competition-derived commissions. On a larger urban scale, Fred has developed city centre revitalization and regeneration plans for a number of North American and European cities. Recent works include strategic planning and all phase one building design at the new Immunex Biomedical Campus in Seattle, numerous buildings and on-going urban design consultation at University Park near the MIT campus, Riverside Residential Community at Canary Wharf in London, and MacMillan Hall Undergraduate Science Facility at Brown University. Fred is the author of numerous articles and books related to architecture and urban design including Collage City, co-authored with Colin Rowe. A leader in design through practice, he is also a lecturer, teacher, design juror and frequent speaker for architecture and urban design excellence nation-wide. In the area of academic activities, Fred Koetter has taught at Cornell, Harvard and, from 1993 to 1998, served as Dean of the Yale School of Architecture.

John G. Ellis, AIA, RIBA was educated at Cambridge University, England, and is a Principal at Solomon E.T.C. Architecture and Urban Design. He has been involved in many neighbourhood and master planning studies including the award winning housing design guidelines for former railroad and port-land at Mission Bay (San Francisco) in 1984. More recently John worked on the Draft Plan for the Market/Octavia Neighborhood. This calls for the demolition of the Central Freeway, damaged in the 1989 Earthquake, and its replacement with an on-grade boulevard together with up to 720 new dwellings. Current work includes designs for the Sacramento Waterfront, a three-mile stretch of riverfront linking the historic Old Sacramento to other communities along the water and the Cannery Area Plan for downtown Hayward, California which won a CNU Charter Award. Located on former industrial land, the plan calls for the establishment of a new 77acre mixed-use neighborhood with up to 950 dwellings arranged in a grid of streets and blocks around an armature of parks and open space. Another completed urban design master plan is for a two-mile length of the Milwaukee River, just north of downtown Milwaukee. The plan, largely implemented, created a new waterfront neighbourhood, linking existing neighbourhoods to the river and replacing formerly derelict industrial land with a mix of housing, retail and commercial uses.

Paul Ostergaard, AIA earned a Bachelor of Architecture degree with honors from Carnegie Mellon University (Pittsburgh, PA). As a design principal for UDA, Paul Ostergaard has recently focused on strategic plans for revitalizing downtowns and waterfronts, siting and integrating new large public buildings, and integrating transit improvements such that they promote additional private investment and help create successful new, mixed-use districts. Paul is also responsible for numerous traditional neighbourhood projects as well as for the architectural design of institutional buildings, university facilities, community centres, municipal buildings, and multi-family residential buildings. Projects currently under his direction include downtown urban design projects in Cincinnati, OH, Pittsburgh, PA, Minneapolis, MN, Asheville, N.C., Portland, Oregon, and Baltimore, MD. He has also participated on mixed-income neighbourhood revitalizations in East Baltimore, MD, Freemason Harbour, Norfolk, VA, Newark, NJ, and Pittsburgh, PA. Paul is president of the Pittsburgh Chapter of the American Institute of Architects, a member of the Urban Land Institute, and was a design member of the Advisory Service Panel for the Southwest Waterfront in Washington, D.C. in 1998. A member of the Congress for the New Urbanism, Paul was a guest speaker at the 1999 Congress in Milwaukee. As a member of the American Society of Architectural Perspectivists, Paul received the Society's Award for Excellence in Graphic Representation of Architecture in 1995.

Between October 15 and 17, 2002, six design teams consisting of architects from Canada, U.S.A. and Europe gathered at York Quay in Toronto's Harbourfront for a three day design *charrette,* which was the focus of the Toronto Waterfront Design Initiative (TWDI).

Jointly sponsored by the City of Toronto and the Toronto Waterfront Revitalization Corporation (TWRC), the event provided the opportunity to explore ideas about how specific areas of under used land around the East Bayfront and the Port Lands could be designed. In addition, the teams went beyond their individual district boundaries and made valuable recommendations about the overall urban design and planning of these lands as a whole; a process which continued after the TWDI was completed. Their efforts and dedication were extraordinary.

The Waterfront is a remarkable and largely unexplored opportunity to provide spectacular parks and recreational areas, to create new communities for living and working and to restore the linkages between the city and the lake.