

TORONTO'S DOWNTOWN WATERFRONT MASTER PLAN

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WATERFRONTToronto

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WATERFRONToronto



The Downtown Waterfront will put Toronto at the forefront of global cities in the 21st century.

Our new waterfront will ultimately define how Toronto, Ontario, and Canada are perceived by the world.



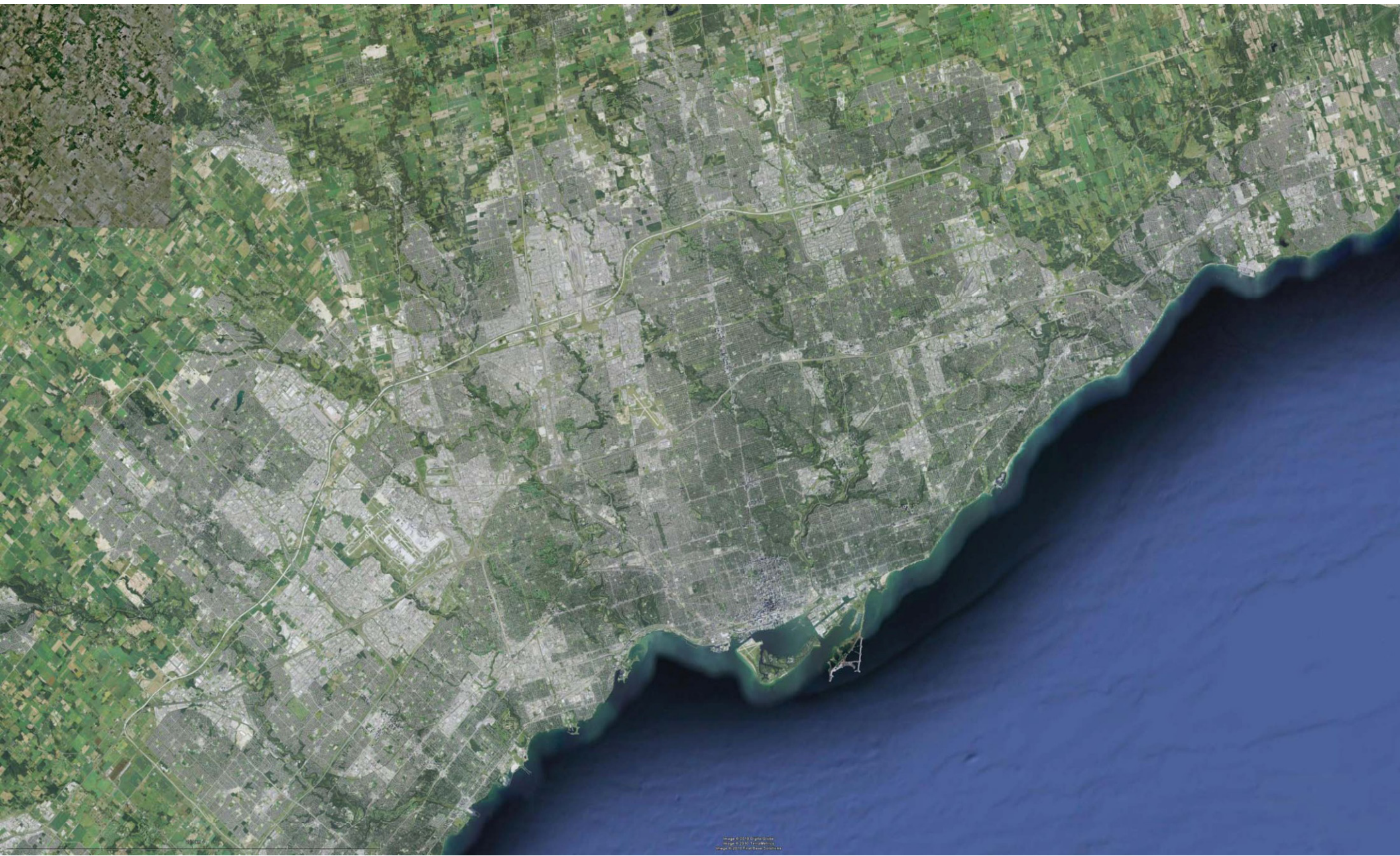
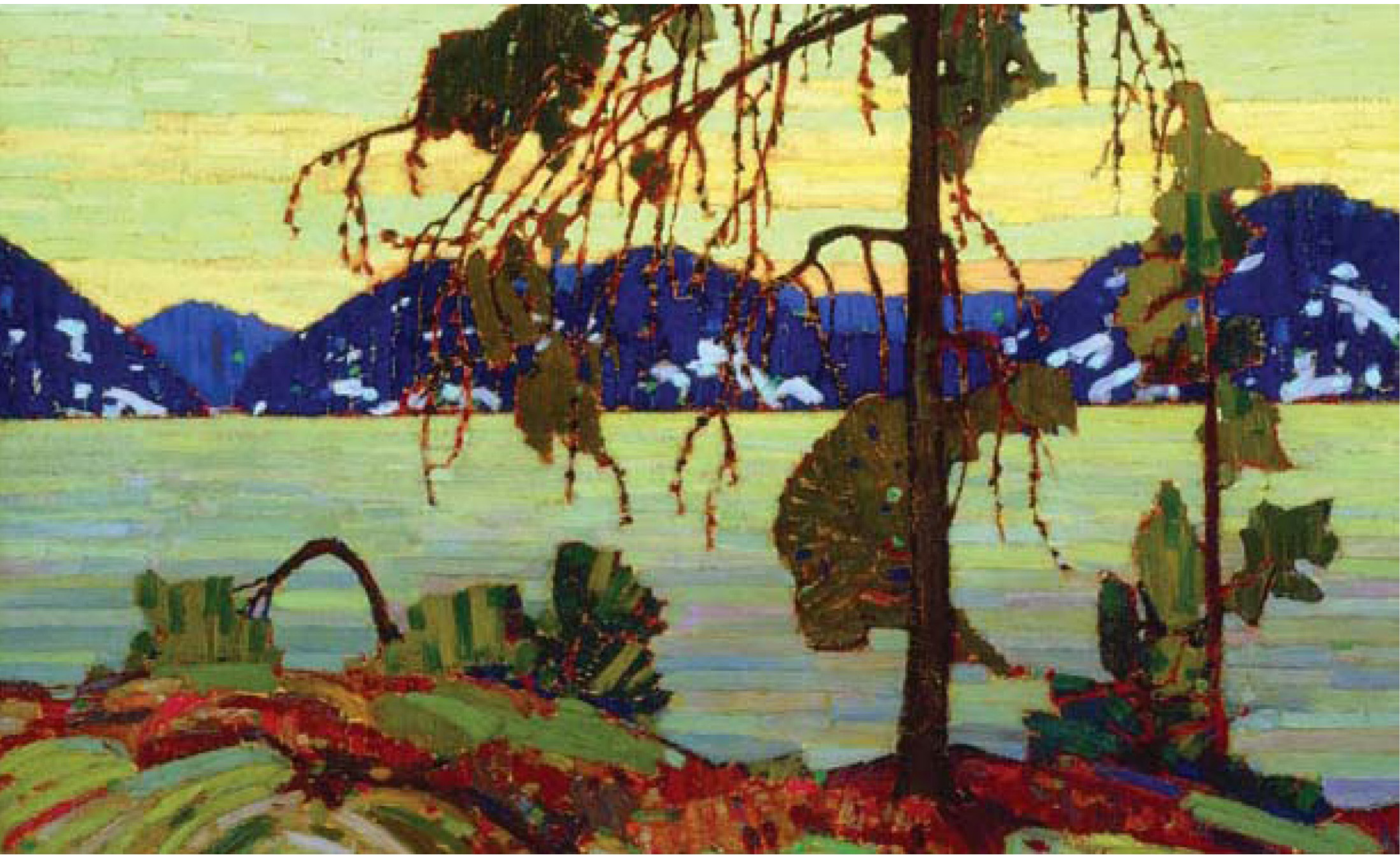
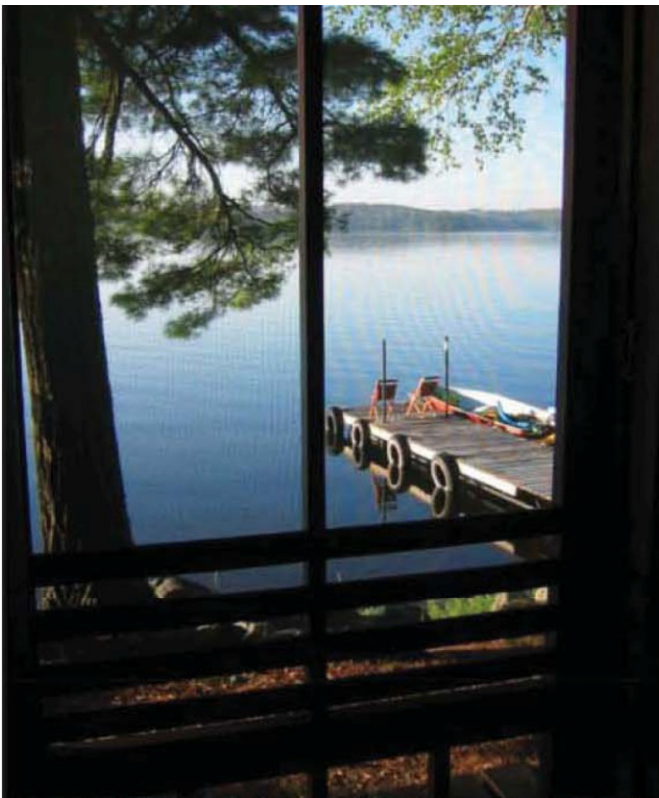


Image © 2010 GeoEye
Image © 2010 GeoEye
Image © 2010 GeoEye

The Vision sets a comprehensive strategy for coherence and continuity across the lakefront.

The plan binds together the existing disparate parts of the waterfront into a clear and powerful identity for a coherent Downtown Waterfront.









- 1. Little Norway Park
- 2. Ireland Park
- 3. Canada Malting Silos Retrofit
- 4. Portland WaveDeck
- 5. Marina Quay West park development
- 6. Music Garden
- 7. Spadina Quay Wetland
- 8. Spadina WaveDeck
- 9. Spadina Footbridge
- 10. HTO Park West

- 11. Peter Footbridge
- 12. HTO Park East
- 13. Rees WaveDeck
- 14. Rees Footbridge
- 15. Police Footbridge
- 16. Simcoe WaveDeck
- 17. Simcoe Footbridge
- 18. Canada Square mixed-use Cultural Village
- 19. York WaveDeck
- 20. Ferry Docks

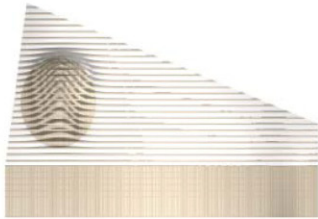
- 21. Yonge WaveDeck
- 22. Anticipated Foot of Yonge Open Space
- 23. Jarvis WaveDeck
- 24. Sugar Beach Park
- 25. Sherbourne Park North
- 26. Sherbourne Park South
- 27. Parliament WaveDeck
- 28. Parliament Footbridge
- 29. Finger Piers



Access and arrival to the waterfront is improved.

The interaction between the city and its waterfront is reinforced with improved connections in access including the Martin Goodman Trail, transit lines and spectacular new Wavedeck gateways at the terminus of city streets.





Portland Slip
Width at Head of Slip: 66.5m



Spadina Slip
Width at Head of Slip: 60.5m



Rees Slip
Width at Head of Slip: 38.8m



Simcoe Slip
Width at Head of Slip: 63.8m



York Slip
Width at Head of Slip: 32.5m



Yonge Slip
Width at Head of Slip: 53m



Jarvis Slip
Width at Head of Slip: 68m



Parliament Slip
Width at Head of Slip: 45m





Queens Quay will be transformed into a world class destination boulevard and neighbourhood main street.

The vibrant central spine of the waterfront will unify the entire district for leisure, commerce, and public transportation to create the iconic waterfront boulevard that Toronto never had.





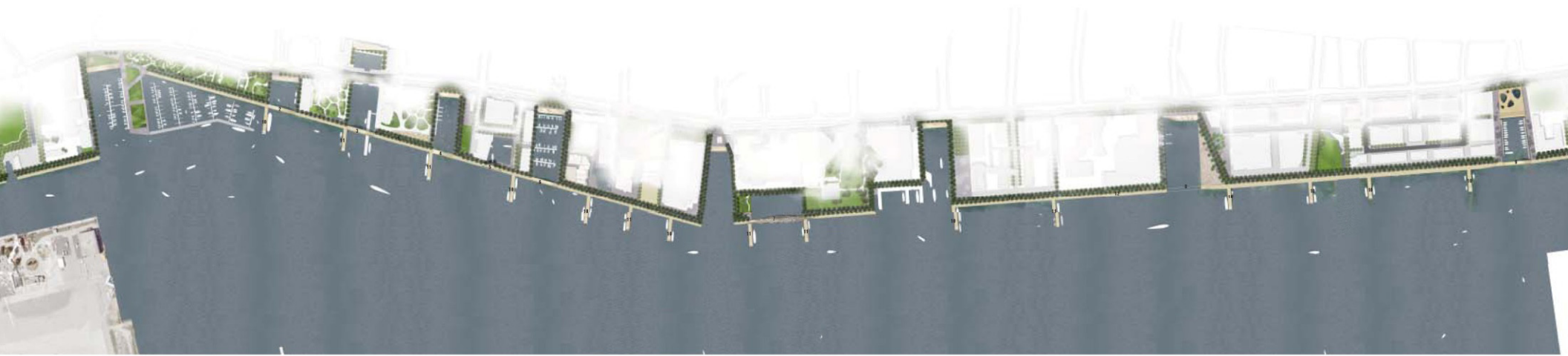




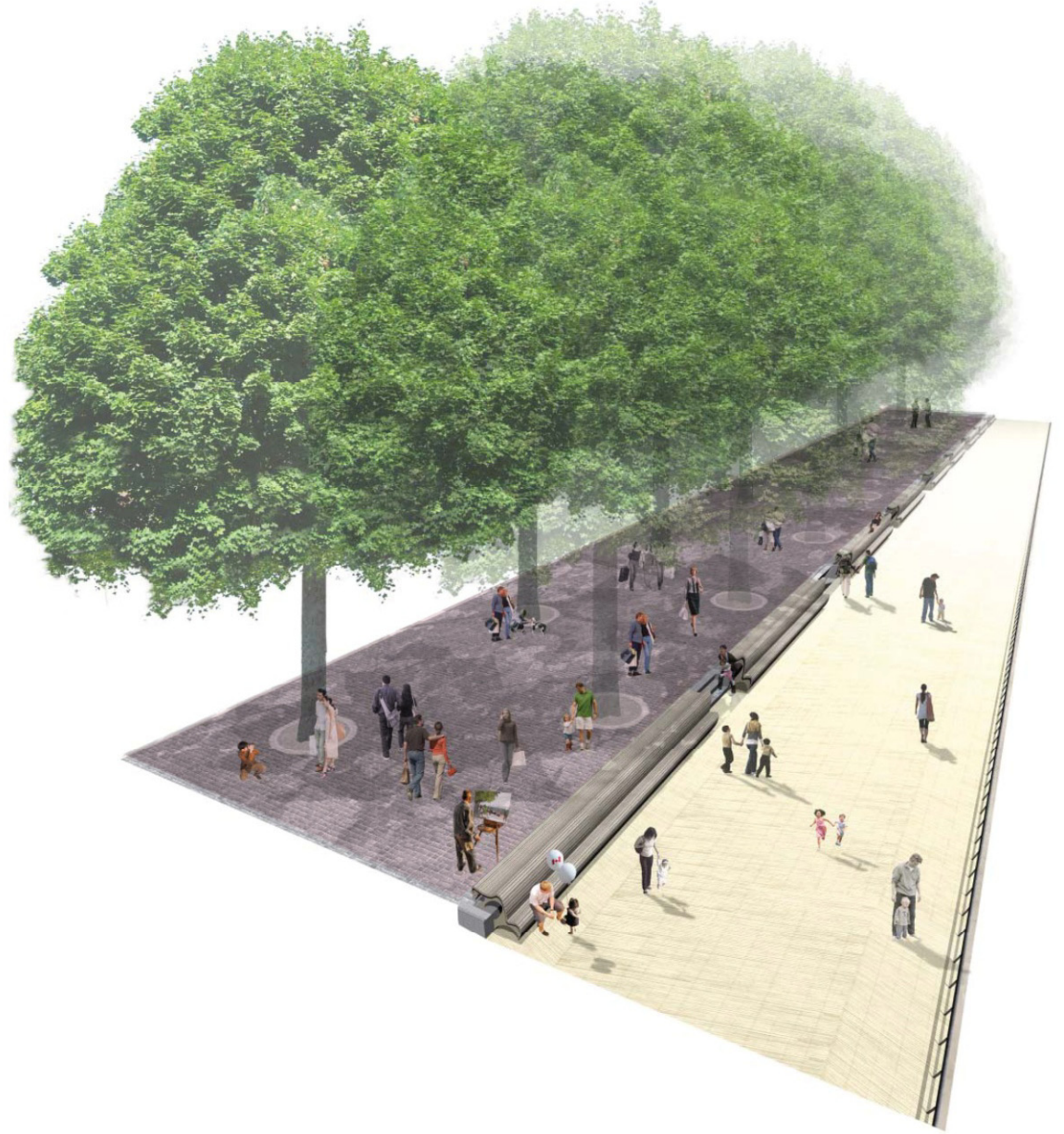


The water's edge is 100% publicly accessible.

The continuous water's edge route, composed of granite promenade and timber boardwalk, is fully public and expresses a coherent public realm where the city meets the lake.









Spadina Bridge
61.5m span



Peter Bridge
60.9m span



Rees Lift Bridge
42.1m span



Police Bridge
10.75m span (over water)
extended to 29.9m span total



Simcoe Lift Bridge
57.6m span



Parliament Lift Bridge
71.6m span





An expanded hub for boating and marine activities in Toronto Bay.

The plan increases the overall mooring potential while providing a new order and quality of public experience along the water's edge.



| VESSEL TYPE | | MOORING ZONE |
|---|---|---|
|  | up to 60m ASTA/Other full Ships |  long vessel mooring  dock wall mooring |
|  | up to 40m TPVA Commercial Vessels |  fixed pier mooring |
|  | up to 30m GLCC Cruise Ships |  fixed pier mooring |
|  | up to 30m Police and Fire Boats |  Police piers |
|  | up to 20m Day/Transient Keelboats |  Almas, fixed pier  dock wall mooring |
|  | up to 6m Dinghies |  Almas |
|  | 65 to 100m long vessel as GLCC Cruise Ship | not to be moored at fixed piers or along dock wall |





A spectacular and sustainable public realm is produced through the integrated design of infrastructure, public space & ecology.

These innovative hybrid public space designs reflect the serious commitment to sustainability at all levels within the project.









Public spaces will provide a variety of public experiences.

A collection of diverse public settings across the waterfront is stitched together through the public realm and anchored by the York Quay Cultural Village at the heart of the waterfront.



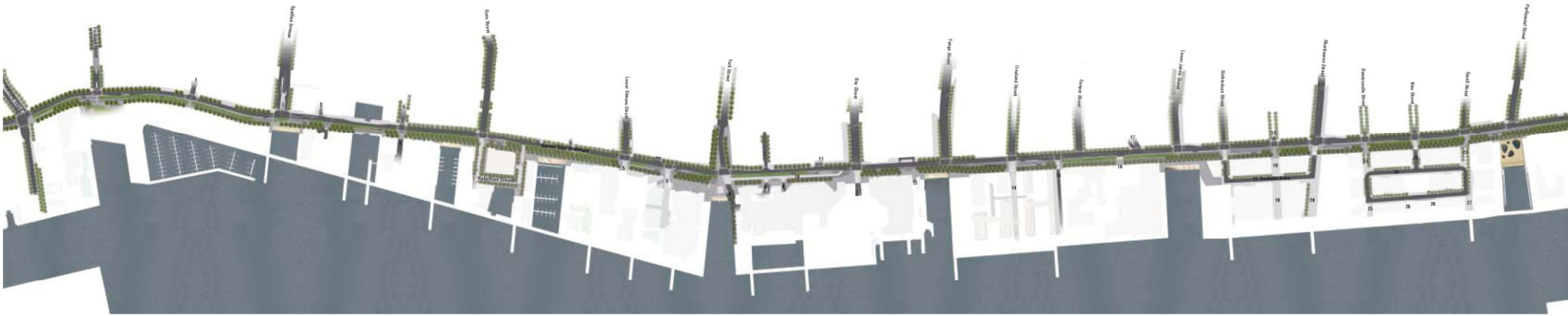






Streets and sidewalks will form the simple and robust 'glue' to bind the waterfront precincts.

They establish a clear character for the streetscapes which link the precincts and bind Queens Quay to the Water's Edge.



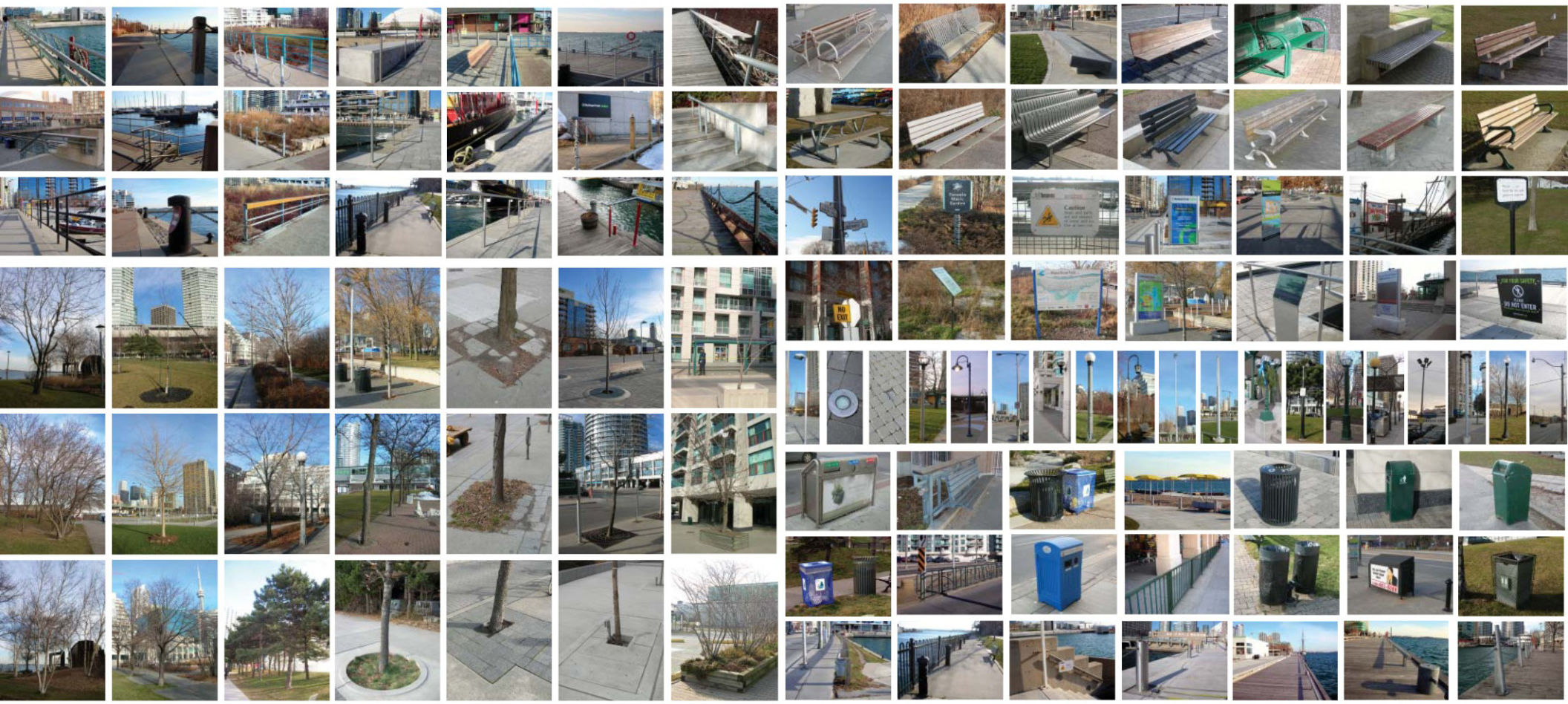


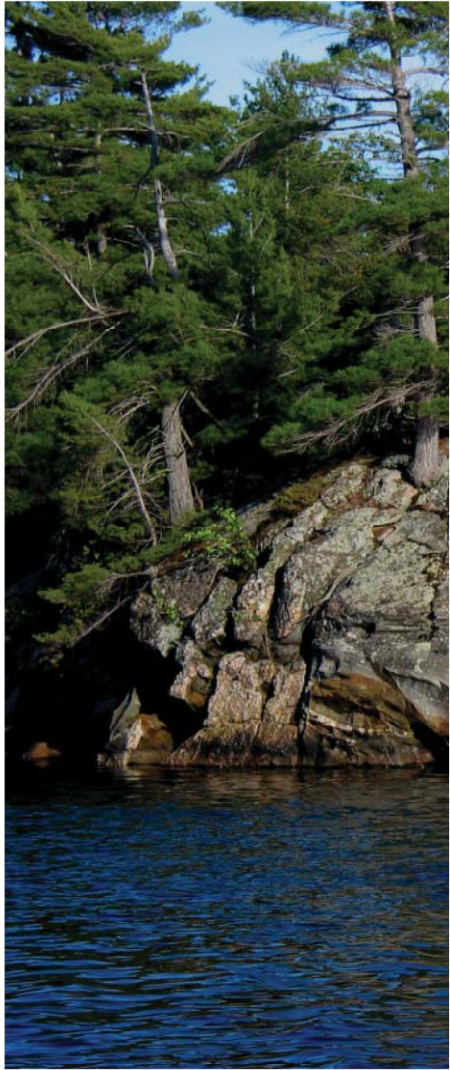




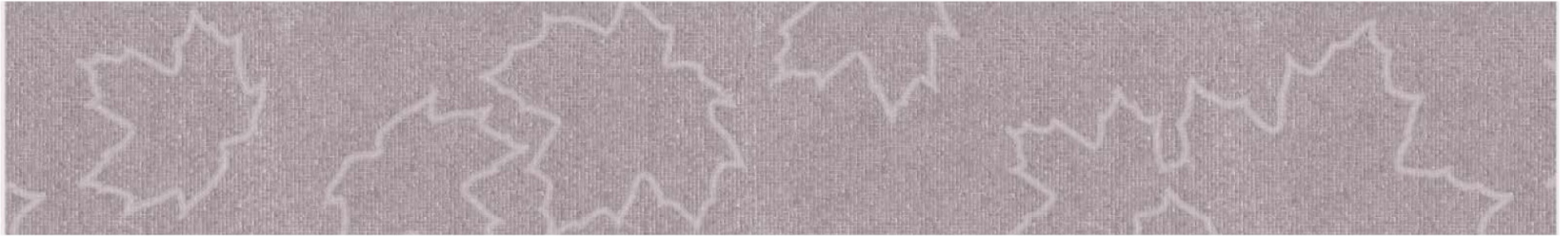
A family of materials and furnishings will create identity for the waterfront.

A priority is placed upon installing a set of materials and furnishings which provide visual continuity and consistency to reinforce the identity of the Canadian Lakefront.



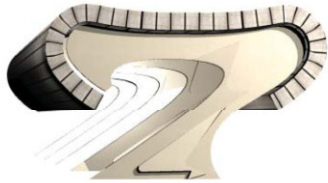


Granite Mosaic Type A - Outline
Queens Quay Boulevard

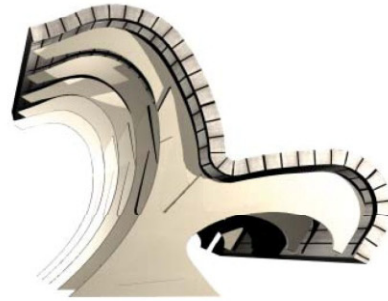


Granite Mosaic Type B - Silhouette
Water's Edge Promenade

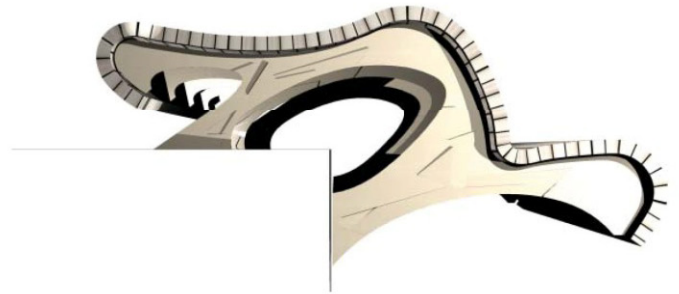




1. Basic bench

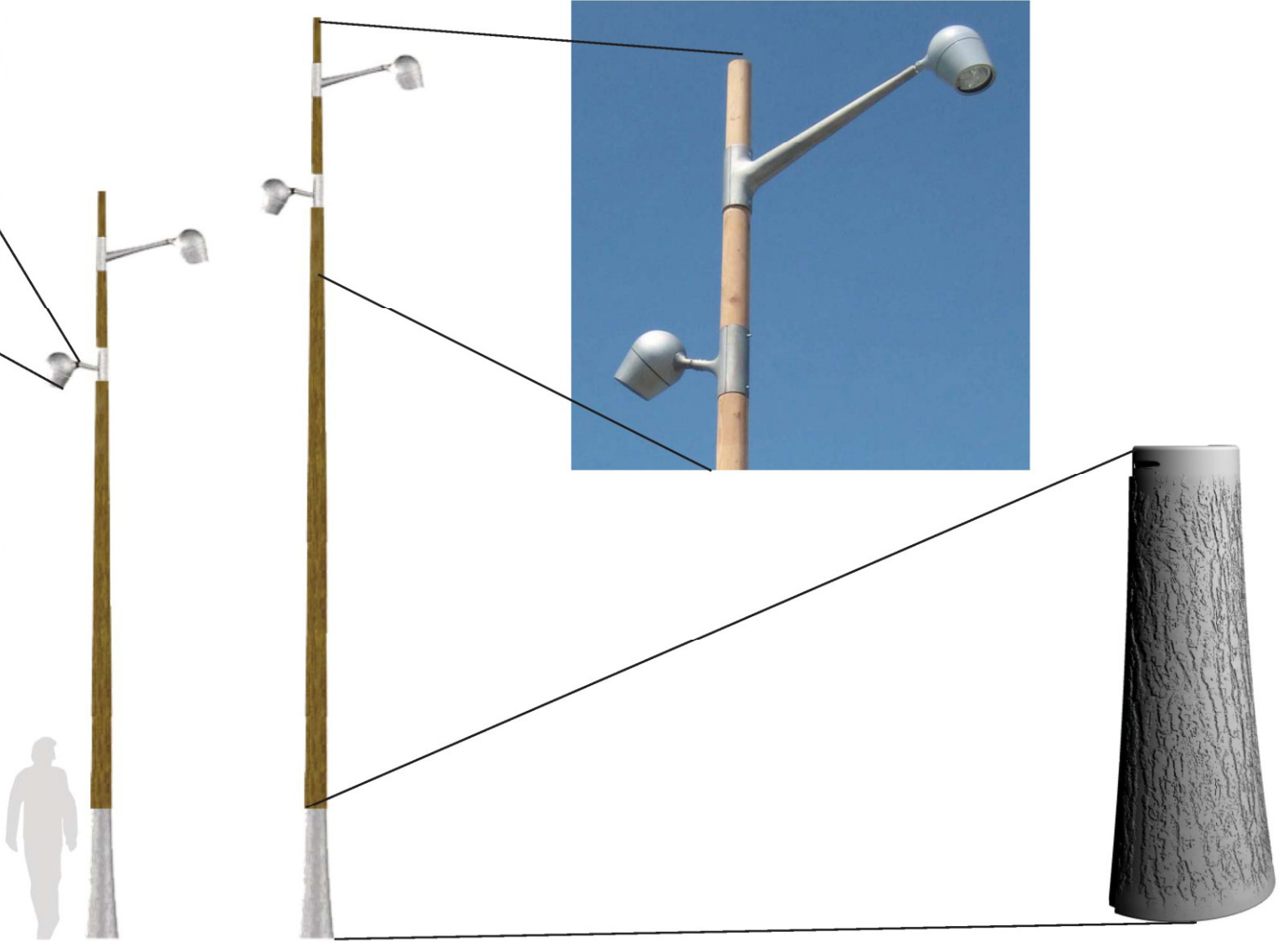


2. Bench with backrest



3. Dockwall bench - transition from water's edge boardwalk to promenade





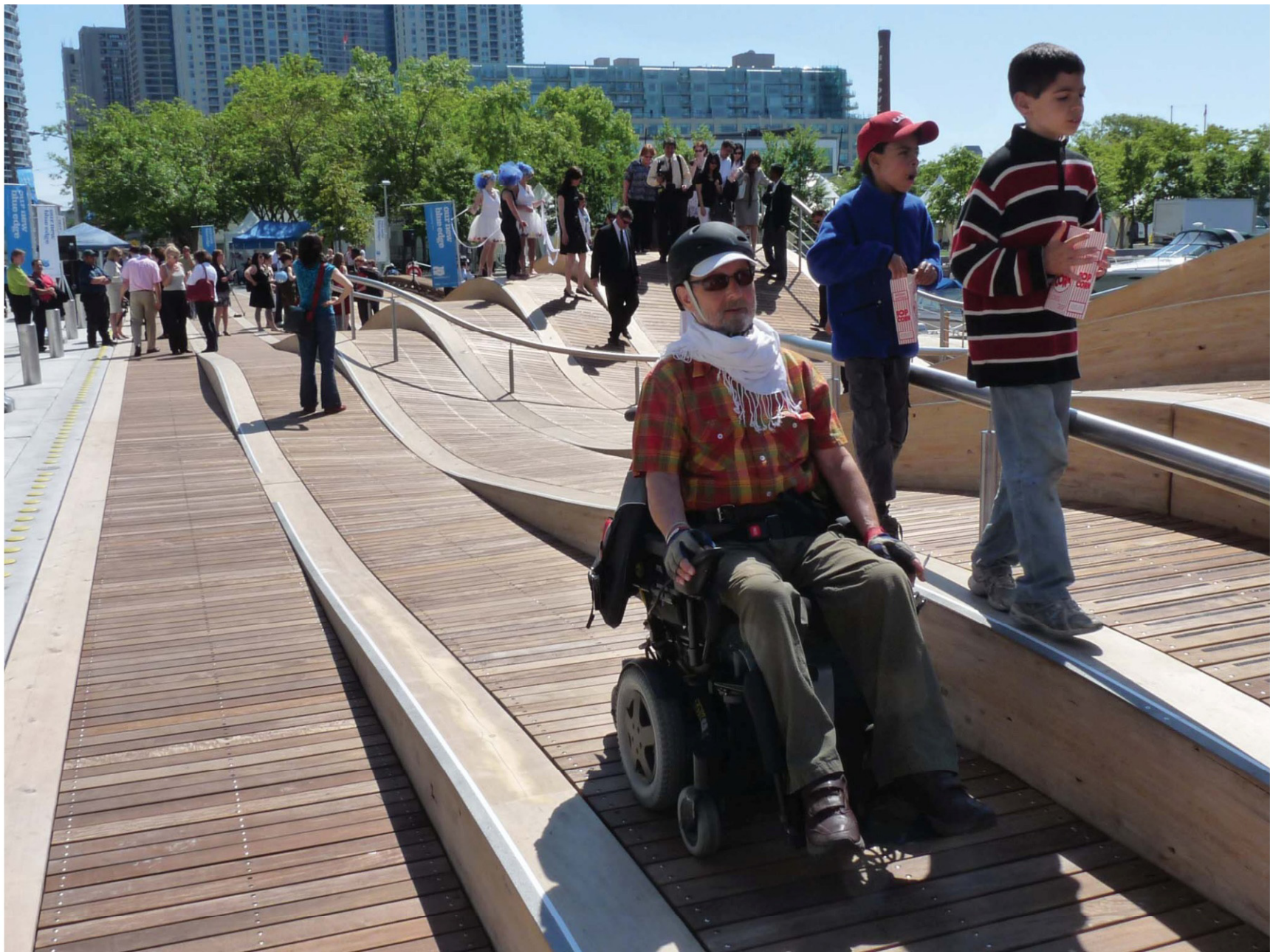
A coherent signage/wayfinding system will refine the legibility of the public realm.

Signage/wayfinding is conceived as an integrated system within the public realm that will ease orientation and aim to reduce visual clutter.



Accessible routes will provide barrier-free access to all aspects of the waterfront experience.

'Breaking through barriers' will enhance ease of movement and participation for all visitors by making the waterfront's facilities, programs, site information and services accessible.



1. Colour and Texture Contrasts

2. Physical Ease of Movement, Paths of Travel, Physical Access

1. Colour and Texture Contrasts

Colour and textual contrasts, plus tactile cues, help people who are blind or visually impaired find their way through their environment. Design and maintenance must be considered from a way finding perspective of people who have vision challenges.

The standard minimum colour/brightness contrast recommended between 60/40% - 70%/30% (Ideal).

After extensive testing for a unique outdoor public space application on the Wavedecks, Waterfront Toronto determined that a 62% contrast was registered by using a white strip to mark the end of steps on the Wavedecks (below). Note: the ideal recommended 70/30 contrast would not withstand the outdoor elements, since the black and dark grey strips would not continue to register against the fading wood and would eventually look like another joint in the deck/a shadow line.



Tactile clues that can be felt underfoot or detected by a person using a cane, assist people who are blind or visually impaired find their way through an environment and have been used extensively in the waterfront development. Examples include tactile warning domes, tactile alert strips, tactile handrail applications and different textures (below).



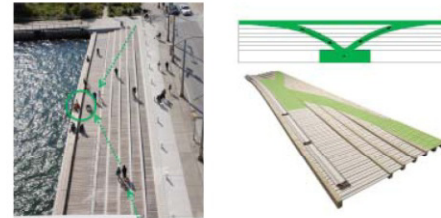
(left) Tactile dots demarcate edge of deck area (above) A contrast of paving textures on the edge of the pedestrian path in Nantes, France

2. Physical Ease of Movement, Paths of Travel, and Physical Access

The integration of access into waterfront design provides safe ease of movement, not only for people with physical challenges but for all visitors. Many barriers can be eliminated by awareness and planning early in the design process.

Integrate arrival and departure areas into the three waterfront systems (Primary Waterfront, Urban Waterfront, Floating Waterfront). Provide safe and spacious passenger loading zones in drop off areas, close to key popular spaces. Without these, the logistics and potential long distances to planned destination points could prevent many people with disabilities from visiting the waterfront. Designated parking spaces are essential for those who travel by car.

The design of the Wavedecks demonstrates the integration of accessibility through ramping, anti-slip surfaces and colour and texture contrast (below).

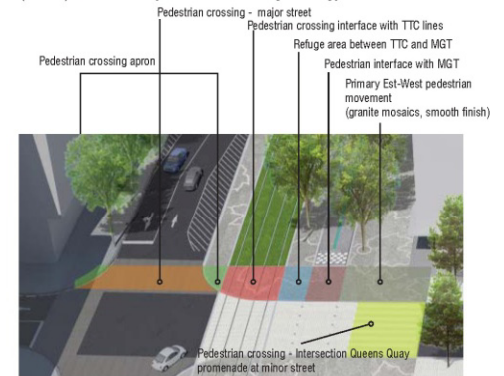


(above) Various cues provide information, guidance for safe movement, awareness, and anti-slip surface

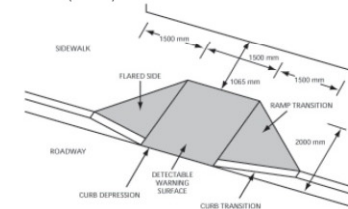


(above) Access points by both stair and ramp (5%) between the water's edge promenade and boardwalk facilitate easy movement between the two routes.

Walking zones provide accessible pathways to the water and texture differentiation for way finding guidance.
(below) Queens Quay Boulevard Paving Strategy



Design intersections for independent safe crossing.
- For a person using wheelchair or for those who have slower movement capabilities, there is a medium waiting space, or refuge, for pedestrian crossing.
- Tactile warning surfaces at curb ramps indicate to people who are blind or have vision loss, when they are approaching an intersection. Audible traffic/pedestrian signals alert people when it is safe to cross.
- Cut away curbs make access easy for people using wheelchairs and scooters (below).



3. Signage

4. Amenities and Details

5. Maintenance and Operations

6. Other Opportunities for Innovative Participation

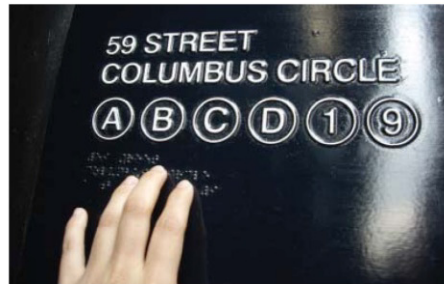
7. Communicating Access

3. Signage

Signage to assist those who are blind, visually impaired, deaf, have hearing loss or physical challenges is critical for safe, independent and easy movement through the waterfront environment.

The following accommodations can be integrated into the way finding plan throughout the waterfront:

- Braille signage
- Tactile signs that have slightly raised lettering and graphics above the surface of the sign. The recommended contrast between the sign lettering and its background should be a minimum of 70%.
- Large scale tactile maps that give information about the layout.
- Hand held tactile maps that provide specific route information. Both sizes should have a Braille overlay.



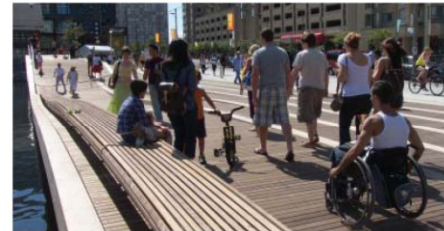
(above) Integrated Braille and raised letter signage, New York City

- Surface texture changes to alert people they should cross with care.
- A legend explaining the meaning of symbols and cues used along the waterfront.
- Pre-recorded instructions that can be downloaded off the web site to describe routes, event locations and alternate routes, should structures limit access.
- Audio information in a written format for those who are deaf or have hearing loss.

4. Amenities and Details

The following amenities are important to contributing to a positive total experience for the visitor with a disability and must be considered in the planning and design phase:

- Locate benches and seats throughout the public realm to provide areas of rest for those who tire easily.
- Include a tactile change in the area surrounding the bench to indicate to a person that a bench is near by.
- Provide accessible drinking fountains
- Ensure public washrooms follow City of Toronto Accessibility Design Guidelines
- Provide easily accessible waste receptacles and recycling bins



5. Maintenance and Operations

Accessibility includes not only the design elements, but the maintenance of spaces for ease of use and safety, not only for persons with disabilities, but for all visitors.

- Include procedures to ensure change of season activities are carried out. For example, remind maintenance staff that chains around decks have to be removed in the spring, after winter closure, so people with disabilities can gain access.
- Keep pathways clear of snow, ice, wet leaves, twigs and debris, at all times, through regular maintenance. This is critical for safety and the ease of access for people with disabilities.
- Use sand instead of salt because salt is an irritant to service dogs' paws.
- Check paths of travel regularly for uneven surfaces and damage. Complete any required repairs promptly.

6. Other Opportunities for Innovative Participation

On-going design creativity will continue to offer unique experiences to those with different challenges. Exploring best practices to find innovative, yet realistic solutions to breaking through barriers will present opportunities for participation by all people at the waterfront. Potential initiatives include:

- Accessible parks and parkettes with accessible picnic tables
- Tactile displays for interpretation
- A "Rocky Canadian Shield Area" dream that will bring visitors into natural environments (like the wilderness of a northern lakeside) in an accessible setting so they can interact with their surroundings.
- Doggy relief areas for service animals throughout the waterfront.
- Enhanced communication through innovative signage, bar code linkages to cell phones, blackberrys and I pods and leading edge technology for location identification.

7. Communicating Access

The waterfront experience begins with information about the facilities, site locations, programs and services. Often, extensive planning is the first step in any outing for a visitor with a disability, so it is essential that access is integrated into the creating, providing and receiving of information and communication materials and processes. Consider:

- Creating plain language material that promotes dignity.
- Making existing and new web sites and content accessible
- Having information available in alternate formats (eg. Braille, large print, written material for information that is audio, descriptive video)
- Planning inclusive stakeholder meetings for active participation.

Public art will reinforce the public realm with strategic points of dramatic impact.

World-class contemporary art installations within a coherent frame will contribute to both the image and experience of the waterfront.



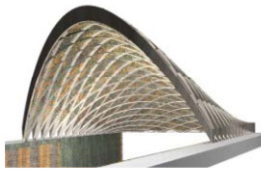


1. West 'Bookend' - Canada Milling Silos
 Combined Public Art/Heritage integration potential
 Important 'bookend' frame for Central Waterfront
 Lighting/Projection Installation on industrial architecture that may be a temporary installation that precedes future adaptive re-use of the structures



(top) Artist Olafur Eliasson's "Waterfalls" art installation at the Brooklyn Bridge crossing the East River in New York, 2008.
 (above) Existing Milling silo structures - iconic form

2. Queens Quay South-Side Linear Art/Infrastructure Installation
 Combined Public Art/Infrastructure integration potential within an important linear route across the Central Waterfront. The continuity of art as infrastructure along Queens Quay has the potential to establish a powerful linear sequence where everyday transit infrastructure is transformed and elevated to public art. Camouflage/Stealth infrastructure, link to context, colours of urban environment, for example, transit support poles holding TTC streetcar lines. Integration of art with necessary infrastructure, for example, TTC substation structures related to transit (at Jarvis Slip)



(top) Timber portal canopies for TTC designed as a coherent part of the Wavelock family
 (above left) Infrastructure camouflage within context? Reference: Windy Hill, Australia
 (above right) The spectacle of the sugar boats loading/unloading at the foot of Jarvis should be highlighted

3. Central West Public Art Installation
 Significant public art feature by a Canadian aboriginal artist
 Destination for art in close proximity to Cultural Village at York Quay and Powerplant Art Gallery
 Major attraction with high drawing power



(top) Anish Kapoor's 'Cloud Gate' in Chicago
 (above) Canadian aboriginal art should be the focus of this installation, executed at a large-scale integrated in the public realm

4. York Off-Ramp Gateway / Monument to Simcoe
 Combined Public Art/Heritage integration potential
 Important gateway to Central Waterfront from the downtown
 Transformation of Off-Ramp to Elevated Botanical Ramp
 Potential art/monument to Elizabeth Simcoe



(top) Wooden statue of Elizabeth Simcoe (example)

5. Foot of Yonge/ Ferry Terminal Installation
 Important gateway to Central Waterfront from the downtown commemorating the importance of the longest street in the world
 Potential glass/mosaic art installation as part of roof structure in proposed Metropolitan Boathouse/Ferry Terminal or other installation related to the Ferry Docks and public experience



(top) Coloured roof of the Santa Catarina Market, Barcelona (IMI Architects)
 (above) Iconic sign of the Pike Place Market, Seattle

6. East 'Bookend' - Victory Soy Silos
 Combined Public Art/Heritage integration potential
 Important 'bookend' frame for Central Waterfront at the East
 Lighting/Projection Installation on industrial architecture



(top) The 'Image Mill' video projection installation to celebrate Quebec City's 400th year involved dazzling projections on industrial buildings and structures in the harbour.
 (above) Existing Victory Soya silos

7. Temporary Art during Construction Phases
 Potential for public art installations within the construction process (painting, lighting, hoarding, installations etc.) that transcend the typical building site into a special event or experience of the place. This can publicly communicate aspects of the construction process to a broad public in a memorable and interactive way.
 The revitalization process along the Central Waterfront will occur over time in various phases. During extended construction periods, the typical 'blind spot' created in the cityscape can instead serve to get people thinking about the future of the city and its waterfront.



(top) Block of houses painted blue, Rotterdam (Floerjijn Hofman)
 (above) Construction hoarding in Tokyo by architects Klen Olyam creates a green screen, where fabric panels with graphic patterns and advertisements alternate with soil-filled burlap pockets that hold trailing plants - a temporary green living wall.

The waterfront will develop within the context of our built heritage and oral histories.

Expressions of the often intangible aspects of heritage on the waterfront will invite a broad public to explore the history of the place.





1910



1913



1918



1929



With the dynamic media of video projection, the public's imagination can be stimulated to interpret the city's rich heritage at the lake. The mixture of projected video images upon the surfaces of existing industrial remnants would create a poignant mix of traces of history and concrete, living artefacts. A nighttime spectacle which inflects new life into one of the waterfront's greatest artefacts by highlighting and activating the silo's as features of the public realm.



1



2



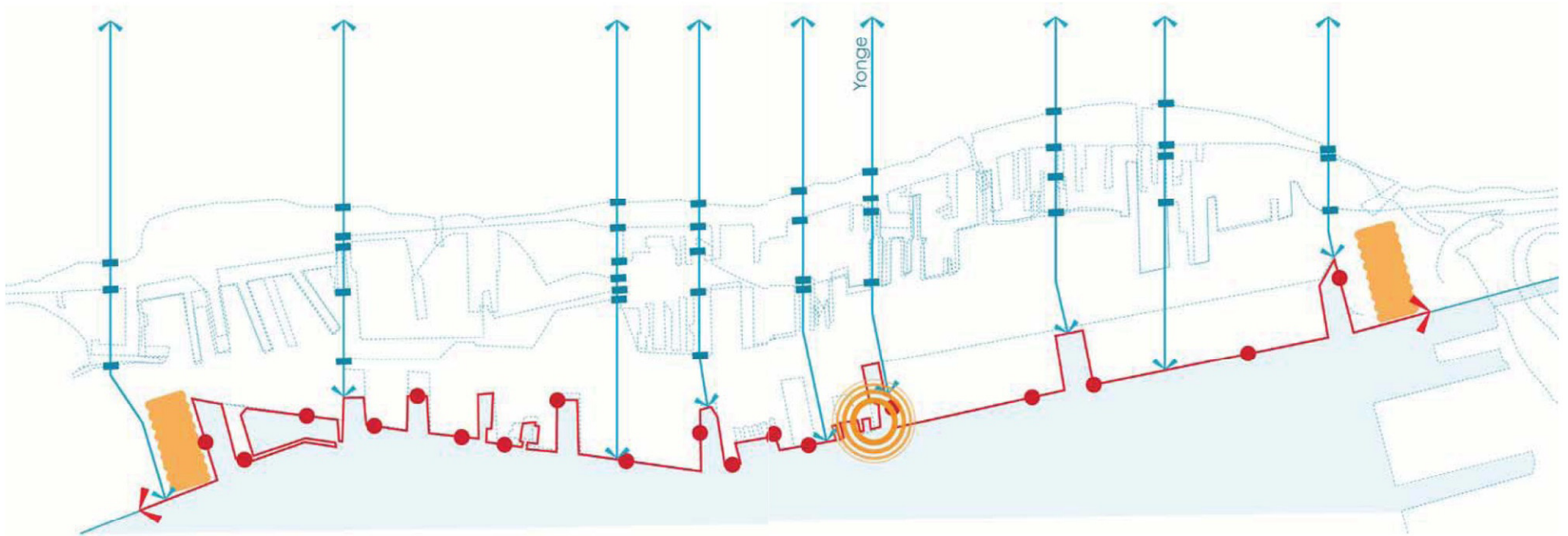
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4



5



Strategy Framework

- 
1. Connecting the City to the Waterfront
 Interpreting the Changing Shoreline
- 
2. The Heritage Dockwall
 Narratives of the Waterfront
- 
3. The Foot of Yonge
- 
4. Monumental Book-ends
 Celebrating the industrial past

The investments in the public realm should be preserved and protected.

A robust and beautifully detailed public realm can create a legacy for the city. Maintenance and operations are essential to encourage people to enjoy the waterfront to the fullest and protect the capital investment.

| Type | Materials / Estimated Life Cycle | Monitoring / Inspection | Regular Maintenance | Special Winter Maintenance Requirements |
|--|--|--|--|---|
| Timber Structures | | | | |
| WaveDecks | Steel piles, Steel primary beams, Coastal Yellow Cedar glulam secondary beams, Ipe hardwood deck boards Designed for 50 year life-cycle | Check underdeck lighting for operation and vandalism Inspect bench for vandalism - replace hardwood slats if necessary Monitor metal finishes for vandalism | Seasonal powerwash of deck surface, vacuum debris from corners of slip when accumulation occurs (seasonally) Clean underdeck lighting (if necessary) 1x per year Replace LED lights 1x per 20 years | Install chain and winter closure sign Settings of LED lights to winter lighting intensity (programmable) |
| Timber Footbridges | Coastal Yellow Cedar glulam primary and secondary beams, Ipe hardwood deck boards, Yellow Cedar paddle handrail terminus, stainless steel leaf node cover, LED handrail and under-bridge lighting Designed for 75 year life-cycle | Inspect timber column nodes/connections | Seasonal powerwash of deck surface Clean LED lighting (if necessary) 1x per year Replace LED lights 1x per 20 years | If City keeps open during winter season, snowclearing and de-icing (specify type) is required. Inspection of timber connections (steel plates) necessary after winter season. |
| Wooden Boardwalks | Steel piles, concrete understructure, hardwood (Ipe) deck boards, galvanized steel toerail and mooring bollards, LED lighting recessed in brickwall Designed for 50 year life-cycle | Inspect deck boards for vandalism - replace hardwood planks if necessary Check I FN lighting for operation and vandalism | Seasonal powerwash of deck surface (as necessary) 1x per year, vacuum/sweep debris from underneath water's edge bench when accumulation occurs (weekly/monthly), replace I FN lights 1x per 20 years | If City keeps open during winter season, snowclearing and de-icing (specify type) is required. Inspection of understructure connections (hurring strip) for deterioration after winter season. |
| Hardscapes | | | | |
| Granite Mosaic Paving | Granite 100x100x80mm paver 100+ year life-cycle | Monitor for differential settlement | Seasonal powerwash of mosaic paving surface 4x per year, weeding of the granite mosaic areas as needed | Avoid salting, Use brushes to clear snow from mosaic areas rather than blade |
| Granite Curbstones | Granite 300mm wide curbstone 100+ year life-cycle | N/A | N/A | N/A |
| Paleo-Tec Concrete Unit Paving | Precast Concrete 140x220x100mm paver 20 year life-cycle | Monitor for differential settlement | Clear litter and debris | N/A |
| MGT asphalt and graphic markings | Asphalt surface with Inlaid thermoplastic markings 12-15 year life-cycle | Inspect for peeling or damaged thermoplastic markings | Clear litter and debris | Clear ice and snow, avoid salting due to proximity of street tree allee |
| Furnishings | | | | |
| Benches | Hardwood (Ipe) bench slats on cast aluminum support structure 50 year life-cycle | Inspect hardwood (Ipe) bench slats for vandalism – replace hardwood slats if necessary Inspect cast aluminum supports for signs of vandalism – repair, paint touch-up as needed | Seasonal powerwash of bench surface (as necessary) 1x per year, sweep debris from underneath benches as needed | N/A |
| Light Mast | Timber (Coastal Yellow Cedar glulam) mast, cast aluminum light fixtures (Olivio), cast aluminum davit arm supports and bark-textured tooling 100 year life-cycle | Inspect for signs of vandalism – repair as required | N/A | N/A |
| Signage | Porcelain enamel signplate, Coastal Yellow Cedar glulam base, Steel footing with anticipated 25 year life-cycle | Inspect | Inspect | N/A |
| Plantings | | | | |
| Water's Edge Promenade double-row Native Trees | Acer (Maple) | Monitor for pest / disease infestation, 3x yr (spring, summer, fall) | Regular regime of horticultural practice | Deep spot watering in spring to flush out salt from winter streets |
| Queens Quay Promenade double-row Native Trees | Species TBD | Monitor for pest / disease infestation, 3x yr (spring, summer, fall) | Regular regime of horticultural practice | Deep spot watering in spring to flush out salt from winter streets |
| Inner District Street Plantings | Varies (Native species) | Monitor for pest / disease infestation, 3x yr (spring, summer, fall) | Regular regime of horticultural practice | Deep spot watering in spring to flush out salt from winter streets |
| TTC Trackbed Grass | Species TBD | Inspect for signs of spotty or thinned growth, compaction, stress – provide spot fertilizing, deep spot waterings, aeration, or over-seeding of thin or bare areas as required | Regular mowing and trimming 3-4x per month Irrigation (Regular, on-going), seasonal fertilization to promote strong root growth and a thick stand of turf; aeration 2x per year (spring and fall); lawn thatching 1x per year (spring or fall) followed by a thin top dressing of soil which will encourage new root growth | Deep watering in spring to flush out salt from winter streets |
| Silva Cells | Fiberglass reinforced, chemically-coupled, impact modified polypropylene frames and a deck with galvanized steel tubes. Manufacturer warranty for 20 years, however, life-cycle is expected to be for 100+. | Monitor silva cells following repair of underground services | N/A | N/A |

The public realm will be animated by diverse, year-round programming.

Waterfront public spaces will provide the flexible setting to host the evolving culture of activities and programs that reflect the diversity of contemporary Toronto.



- | URBAN | LAKE | PARK | TRANSPORT |
|----------------------------------|---------------------------|------------------|--------------|
| cafe/restaurant | aquatic habitat | wetland | transit stop |
| terrace at water / cafe spillout | sitting on the quay wall | playground | M.G.T |
| shops | muskoka chairs | picnic area | |
| mobile vendor | fishing spot | sports | |
| outdoor market | vista | water feature | |
| event space | cruise booth ticket | baseball diamond | |
| benches | marina related function | urban beach | |
| community centre | water taxi stop | | |
| culture | mooring berth | | |
| | commercial vessel mooring | | |
| | footbridge | | |
| | ferry docks | | |
| | kayaking | | |
| | ice skating | | |



This logic can be multiplied over a longer time-horizon on future projects.

A set of long-term strategic projects provide vision beyond the immediate scope of implementation.



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Gardiner Expressway

Bay Street

Yonge Street

Front Street

Cooper Street

Lower Jarvis Street

Richardson Street

Sheppard Avenue

Bonnyville Street

New Street

Small Street

Parliament Street

Queens Quay Boulevard

Dockside Drive

Knapp Lane

21

22

20

29

29

29

23

24

29

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