

5.1.2.1 Affordable Housing

Both the Official Plan and CWSP support the development of complete communities, including a full range of housing types to support a mix of incomes and people living in their neighbourhoods throughout their lives. According to the CWSP, the overall goal for the Central Waterfront is that affordable rental housing and low-end-of-market housing comprise 25% of all housing units. Waterfront Toronto and the City of Toronto will work with private landowners to achieve the affordable housing targets identified in the CWSP.

Waterfront Toronto and the City of Toronto will work with private landowners to achieve the affordable housing targets identified in the CWSP. To meet this objective, a combination of built units (between 5%-10% of built units based on total residential gross floor area), land (equivalent to the land necessary to accommodate 20% of the residential gross floor area), and cash in lieu, will be secured to generate affordable rental housing, with priority given to units and land alone or in combination. Affordable rental housing is defined in the Official Plan as housing with total monthly costs that do not exceed the average rent across the City of Toronto for each unit size, as calculated by the Canada Mortgage and Housing Corporation.



Figure 5.9 Toronto Community Housing Corporation development at 60 Richmond Street East (Image Credit: Teeple Architects Inc.)



Figure 5.10 Mixed-use development in Regent Park, looking east along Dundas Street East from Sackville Street
(Image Credit: Urban Toronto)

5.2 BUILT FORM

Buildings in the Lower Yonge Precinct will be appropriately scaled for the waterfront context and be designed to achieve the high standards of design excellence expected on the Waterfront. They will create well-defined street and park edges at a moderate, human scale, and be organized to preserve views of the waterfront and convey a sense of activity and liveliness, as befits this pedestrian-focused precinct. Taller buildings will be located where they will not overwhelm adjacent open space, or adversely impact the surrounding urban context.

The scale of the buildings within the study area should reflect the high-density, urban character of adjacent areas, but also recognize the sensitivity of developing along the Toronto waterfront. Consideration should be given to protecting the amenity of streets and the public realm and to ensure optimum climatic and light conditions such as providing a scale of building that will demonstrate the importance of streets and the public realm. They should give careful consideration to shadow impacts on streets and public spaces ensure adequate access to sun and prevent impacts from wind.



Figure 5.11 Illustrative rendering of Lower Yonge Precinct Plan

Key objectives for development within the Lower Yonge Precinct are based upon the principles and policies of the CWSP, precedents established during previous precinct planning exercises, and a detailed consideration of the surrounding development context. They include:

- Built form will have a predominantly mid-rise character adjacent to streets to create an intimate, neighbourhood feel and achieve good sunlight conditions on public streets and open spaces;
- Building heights and density will transition downward from north to south, as well as from west to east;

- Towers will be broadly spaced to ensure sky views, access to light, minimize shadow impacts and preserve views; and
- Sidewalks, where high volumes of traffic are anticipated, will be lined with active uses at grade, to promote pedestrian activity, safety and visual interest.

5.2.1 Base Buildings

Base buildings will play a major role in establishing the precinct's character and in determining the quality of pedestrian experience. Base buildings will be scaled to:

- Achieve the desired neighbourhood character and scale;
- Ensure that tall buildings do not overwhelm the pedestrian environment; and
- Maintain access to sunlight and sky views for pedestrians and surrounding properties.



Figure 5.12 Skyline view of Lower Yonge Precinct towers

Most base buildings in the precinct will be built with a height of 27 metres, consistent with the proposed right-of-way width of Harbour Street (Fig. 5.14). A height limit of 27 metres, or approximately six or seven storeys, will also allow significant levels of sunlight to reach neighbourhood streets, while presenting a prominent street wall adjacent to Queens Quay East and Yonge Street. This consistency of base building is intended to create a pedestrian-oriented, mid-rise character for the Precinct.

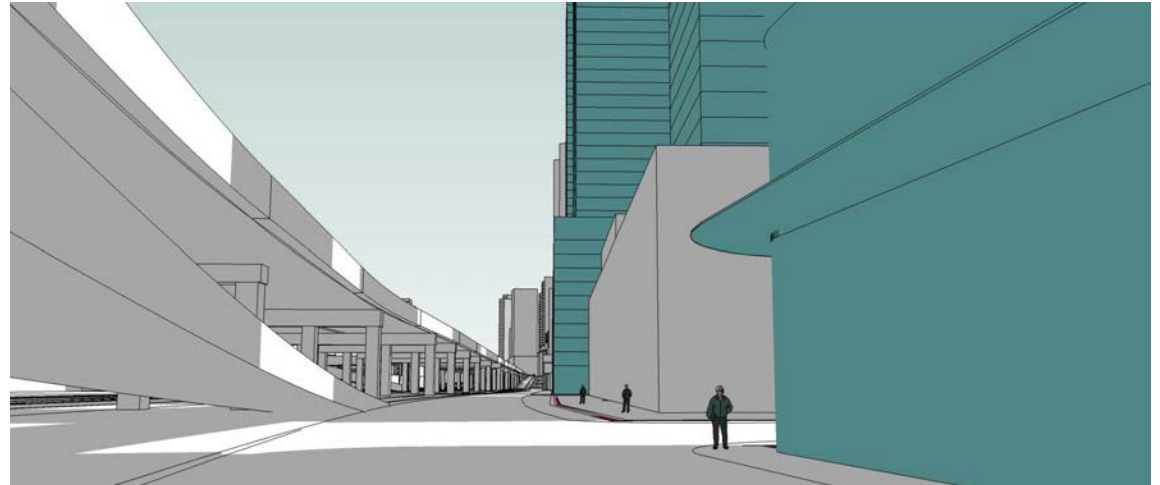


Figure 5.13 Illustration of the view looking east along Lake Shore Boulevard East from Freeland Street

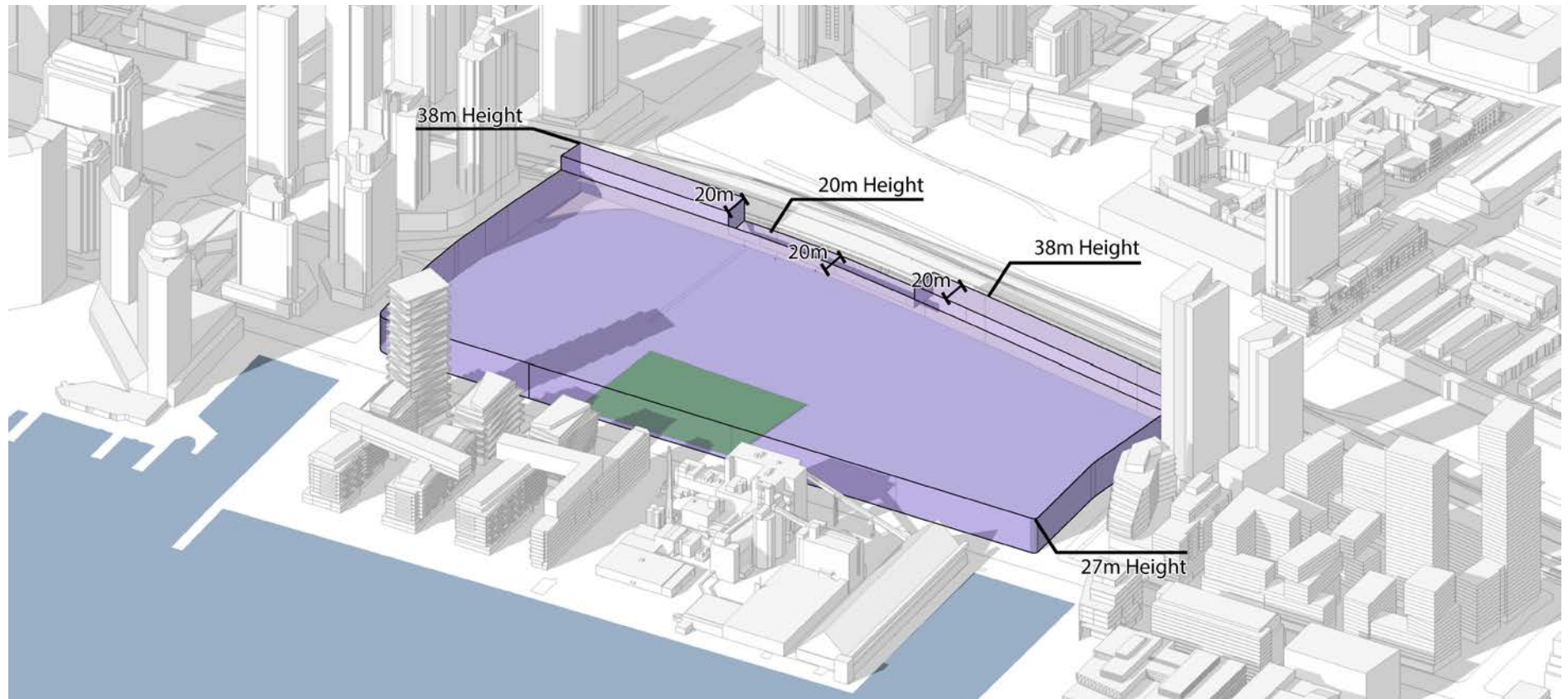


Figure 5.14 Base building heights

Base buildings adjacent to Lake Shore Boulevard East will be taller, with a maximum height of 38 metres in recognition of the wider adjacent right-of-way. An exception, however, is the proposed 20-metre base building height limit along Lake Shore Boulevard East between Freeland and Cooper Streets. This was instituted to reflect the height of the existing listed heritage building (LCBO head office) and ensure its conservation (see Fig.5.14). Consideration should be given to the adjacent base buildings transitioning from 20 metres on this block to the 38 metre maximum base building height on abutting blocks.

Base building facades should break up their horizontal massing through articulation such as breaks in the facade (architectural elements, entranceways, canopies/projections) to create a more finely-textured streetwall (see Fig. 5.15,5.16). This will facilitate further subdivision into retail bays, and distinguish Lower Yonge from office districts where monolithic base buildings are more common.



Figure 5.15 Artistic rendering of 1 Bloor Street base building (Image Credit: Urban Toronto, Hariri Pontarini Architects)



Figure 5.16 Articulated Base building, Gooderham Tower, Distillery District (Image Credit: architectsAlliance)

To create well defined street walls, a minimum of 85% of the length of base building facades should be constructed within one metre of either the property line or required setback along all public rights-of-way. Acceptable minor variations to the street wall may include recessed building entrances, recessed balconies, and privately-owned publicly accessible open spaces. Drop-off areas should be contained within the site.

The architecture of base buildings adjacent to a public right-of-way or public open space should be articulated to achieve a fine-grained precinct character. This articulation may be achieved with changes in materials, architectural detailing

or vertical recesses. Tower and base buildings should be massed and articulated to mitigate wind impacts on public rights-of-way and public and publicly accessible open spaces. Wind conditions at grade should be suitable for sitting and standing, with higher standards applying within parks and other places where people are expected to linger. To assist with inclement weather in the public realm, it is recommended that continuous weather protection, with a minimum depth of 3 metres, be provided on all street frontages where feasible. In the case of a conflict between weather protection and street trees, the street trees will take priority.



Figure 5.17 Residential development (Montevideo), Rotterdam
(Image Credit: Pedro Kwok on Flickr)

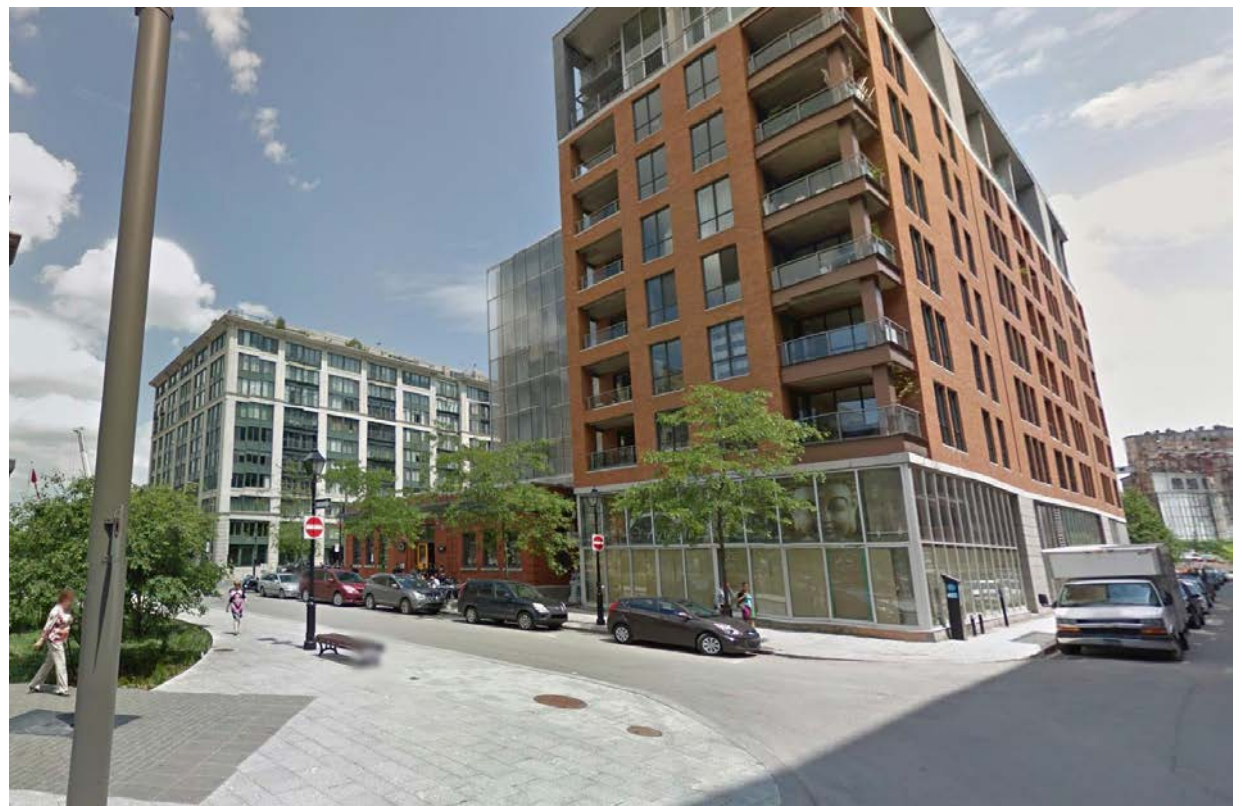


Figure 5.18 Residential building (Novel Europa) in Old Montreal



Figure 5.19 Base building Setback and Promenade zones

Setbacks

Setbacks are extensions of the public realm and should be designed as seamless continuations of the public sidewalk with consistent materials, grades and design elements. Setbacks will be established to broaden sidewalks and provide spaces that can be animated to enrich the public realm. Along both sides of north-south local streets within the precinct, base buildings will be set back to expand views south towards Queens Quay and the lake, and allow more sunlight to reach the street by achieving a one-to-one ratio between street-width and building height. In order to achieve this, the following are proposed:

- Along the east sides of Yonge Street and Cooper Street and the west side of Lower Jarvis Street, a 10-metre setback from curb to building face will provide a wide pedestrian walkway with a double row of street trees and views south to the water's edge to help achieve a continuous, active streetscape.
 - To address substandard existing sidewalk widths, provisions should be made to allow for the public realm to extend under the existing tower at Yonge and Queens Quay.
 - The overall north sidewalk of Queens Quay is required to be a minimum of 6 metres unobstructed in width to comply with relevant City policies.
 - Buildings along Cooper Street, Freeland Street and New Street with the exception of the block containing the LCBO office and warehouse heritage buildings (north of Harbour Street between Freeland and Cooper Streets), will have a minimum setback of 3 metres to allow for activation and animation to spill out into the public realm.
- Occupiable space, including balconies and vertical elements that block views, should not encroach into setbacks above grade. Balconies should be inset behind the street wall.



Figure 5.20 Ground Floor Animation Map

Base Buildings: Ground Floor Animation

Ground floor animation is achieved through both use and design. The types of uses on the ground floor will dictate the amount of activity that these spaces create and the design, both interior and exterior, can help or inhibit the successful interplay of these uses with the public realm.

Ground floors should accommodate uses that spill out and enliven the public realm. The Ground Floor Animation Map (Fig. 5.20) shows active uses located along frontages identified within the Ground Floor Animation Zone. Active uses include, but are not limited to: stores, cafes and restaurants, commercial uses that service local residents and workers, recreational and arts facilities, and building lobbies. Retail uses should be concentrated primarily along Queens Quay East and Harbour Street, but also along Yonge Street, Cooper Street and Lower Jarvis Street. They should occupy a minimum of 60% of those frontages to support their individual roles: Queens Quay as the “main” street, Harbour as a local retail street and Yonge, Cooper and Lower Jarvis Streets as important north-south connections to the waterfront.

To enhance public sidewalks as pedestrian priority zones, the ground floors of all buildings within the precinct should provide unobstructed views both to and from the public realm, as well as numerous doorways to engage the public realm. In areas where this cannot happen, interruptions should be brief and intervening spaces should be well designed with high-quality materials and design elements that provide visual interest. At least 80% of the length of ground floor facade within this zone should be devoted to transparent windows and doors, or visually open to allow maximum visual interaction between sidewalk areas and interior spaces.

Other recommendations for the Ground Floor Animation Zone and base building treatment include:

- Articulation of ground floor facades (fenestration pattern, material, vertical recesses, etc.) is encouraged to achieve a fine-grained streetscape at a comfortable human scale. Articulation also creates a high degree of visual variety and interest when viewed from the adjacent sidewalk.
- Ground floor uses, including retail stores within the Ground Floor Animation Zone, should have separate and unique entries from the adjacent street spaced, on average, every 7 to 10 metres.
- Ground floor uses should have a minimum floor-to-ceiling height of 5 metres to convey the publicly oriented nature of internal uses. Building lobbies should not be more than 10 metres wide along the street frontage to preserve available frontage for more animated uses.
- Retail signage will be designed and implemented to prioritize the architectural character of a building.
- Grade-related residential uses are not recommended for the Lower Yonge Precinct.



Figure 5.21 Ground floor retail / commercial, King Street East (Image Credit: Designstor Inc.)



Figure 5.22 Proposed Ground floor retail, Monde at Sherbourne Common (Image Credit: Urban Toronto)

5.2.2 Tall Buildings

Tower Height

There are a number of planning and design considerations for high-rise towers given the substantial impact they have on the public realm. Height should be considered in the wider waterfront context and should transition down from the Gardiner/Lake Shore corridor towards the waterfront. Stepping height down towards the water allows light to infiltrate into the precinct and



Figure 5.23 One Bloor East tower
(Image Credit: Urban Toronto/Hariri Pontarini Architects)



Figure 5.24 Residential towers, Distillery District
(Image Credit: architectsAlliance)

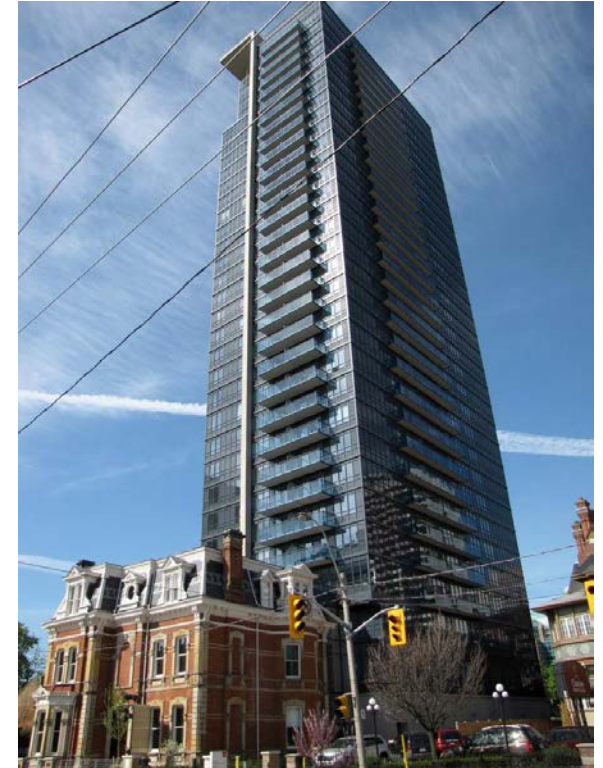


Figure 5.25 Residential towers, Sherbourne Street
(Image Credit: Urban Toronto/Tridel)

provide sky views. Heights should also transition down from Yonge Street towards Lower Jarvis Street, in order to acknowledge the prominence of Yonge Street, the context of approved towers in East Bayfront and the general trend of heights stepping down from the Financial District.

Tower heights and built form will also consider the view of the Precinct from the Inner Harbour and Toronto Islands. The design of the skyline for developments should be complementary and contextual with the existing skyline.

An iconic, landmark tower, with unique and innovative architectural attributes is contemplated to be located adjacent to Yonge Street on the Toronto Star site at 7 Yonge Street.

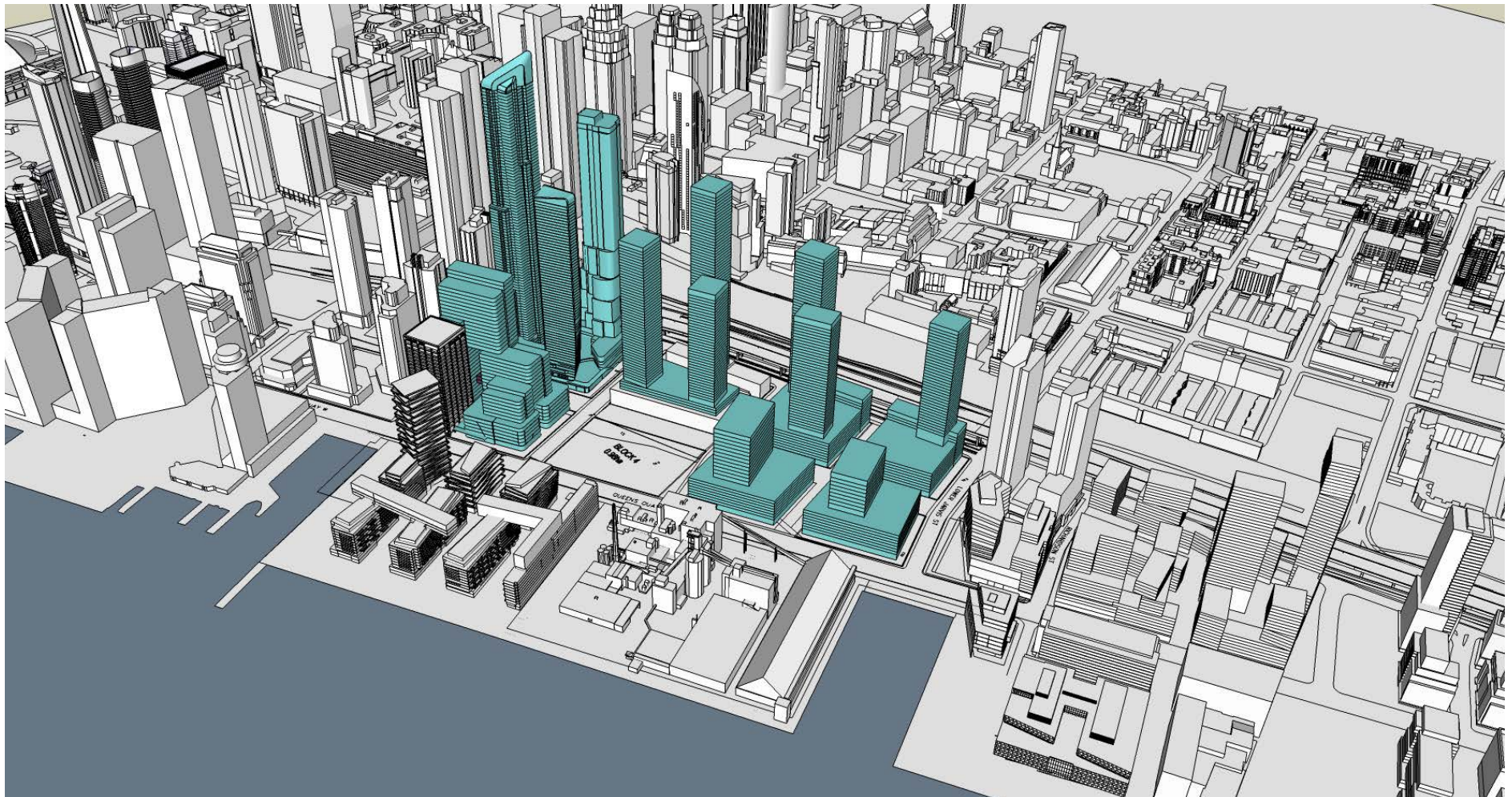


Figure 5.26 Illustration of the aerial view of Lower Yonge Precinct looking northwest

Tower Stepbacks

Tower stepbacks are intended to guarantee the prominence of the base building by ensuring that it becomes the precinct's dominant built form and reducing the perception of towers from the street level. Tower stepbacks also reinforce the comfortable one-to-one ratio between street width and building height, provide open sky views, mitigate wind impacts and protect direct access to sunlight.

Stepbacks are greater on north-south streets to broaden views towards the waterfront allowing for more sunlight to penetrate into the precinct. Tower stepbacks are also greater adjacent to Queens Quay East to enhance the character of the waterfront's "main" street and mitigate the substantial visual impact of the anticipated, broader office buildings.

Tower stepbacks from base buildings will be provided generally in accordance with the following minimum distances:

- Towers adjacent to Queens Quay should step back a minimum of 10 metres at a height no greater than 27 metres from the face of the building below.
- Towers adjacent to Harbour Street should step back a minimum of 5 metres at a height no greater than 27 metres from the face of the building below.
- Towers adjacent to Lake Shore Boulevard East, where permitted, should step back a minimum of 5 metres at a height no greater than 38 metres from the face of the building below.

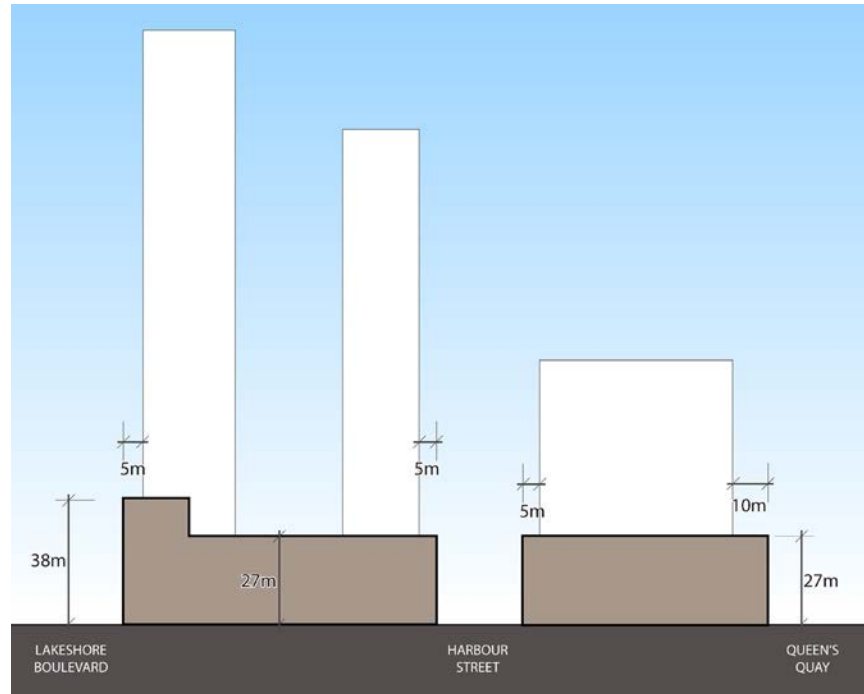


Figure 5.27 Tower Stepback (north-south section)

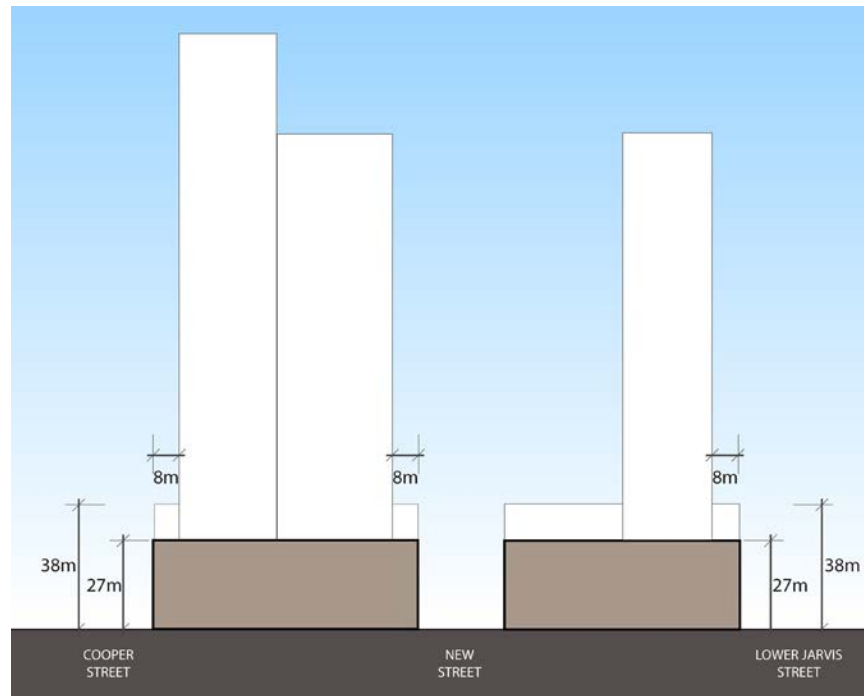


Figure 5.28 Tower Stepback (east-west section)

- Towers adjacent to Yonge, Freeland, Cooper, New and Jarvis Streets should step back a minimum of 8 metres at a height no greater than the permitted height of the base building, from the face of the building below.
- Towers on the block containing the LCBO office and warehouse heritage buildings should step back 10 metres from the heritage building facades on the Lake Shore Boulevard East, Cooper Street and Freeland Street frontages.

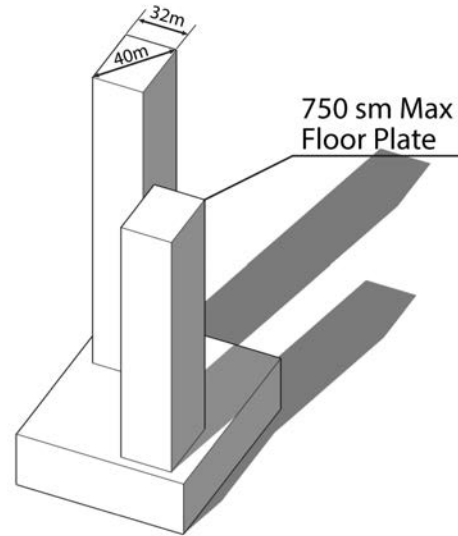


Figure 5.29 Tower floorplates - Residential

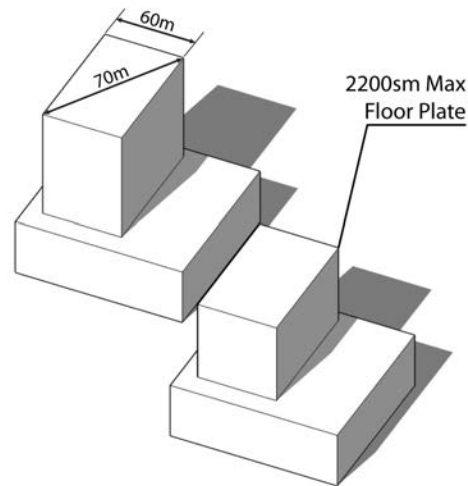


Figure 5.30 Tower floorplates - Commercial

Tower Floor Plates

The size and shape of a tower's floor plate, together with its height and placement, determine its impact on the surrounding streets, parks and open spaces. The Lower Yonge Precinct Plan recommends the following:

- Maximum residential tower floor plate length: 32 metres
- Maximum residential tower diagonal dimension: 42 metres
- Limit commercial tower floor plate to 2,200 square meters or less
- Maximum commercial tower floor plate width: 60 metres
- Maximum commercial tower diagonal dimension: 70 metres



Figure 5.31 Tower Location (illustrative) and Tower Separation

Tower Separation

Providing minimum distances between towers helps to limit negative impacts on the public realm, while also protecting neighbouring towers and properties from loss of sunlight and views. The City's Tall Building Design Guidelines anticipate that large sites will require master plans that define appropriate spatial separation between towers in consideration of a broad range of site-specific factors and objectives.

Given the waterfront's public objectives, separation distances in the Lower Yonge Precinct should be established in excess of the minimum prescribed by the Tall Building Design Guidelines, in order to avoid the "wall of condos" effect along the waterfront. For this reason, a 30 metre minimum separation distance has been established for all towers in the Lower Yonge Precinct. Wider separation will also help to preserve views to the waterfront.

Tower Area Ratio (TAR)

The Tower Area Ratio (TAR) measures the ratio of the total area of the average tower floorplate(s) above base buildings to the area of the development block (see Fig. 5.32, 5.33). The TAR is a new implementation tool responding to the recommendation in the City's Tall Building Design Guidelines that, as the height of tall buildings increase, the separation distance between towers should also increase to ensure the protection of skyview, privacy and daylighting. The City's Tall Building Design Guidelines provide guidance to increase distances but do not prescribe a specific measure. Given the waterfront prominence of Lower Yonge, it is appropriate to address this direction in the Lower Yonge Precinct Plan.

As part of the UDR, a study was undertaken to determine the target percentages for the Lower Yonge Precinct. Residential developments described as creating a "wall of condos" had a TAR

or 27% or greater. These residential developments were characterized by tightly spaced towers that appear as a consolidated mass of development when viewed from adjacent streets, blocking long views.

Residential development characterized by open sky views and access to sunlight were typically found to have a TAR of below 20%. Therefore, this Precinct Plan sets a maximum TAR of 20% for mixed-use/residential towers north of Harbour Street.

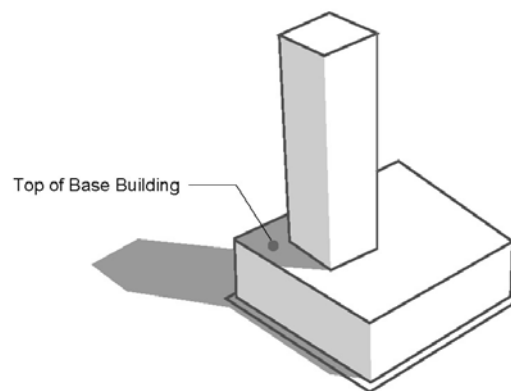


Figure 5.32 Maximum TAR of 20% or mixed-use/residential towers north of Harbour Street

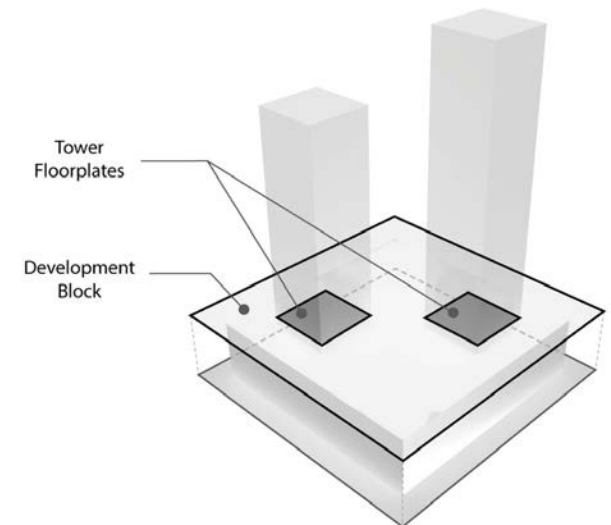


Figure 5.33 Tower Area Ratio (TAR) Concept diagram

5.2.3 Base Buildings – Heritage

The LCBO office building has a strong presence along Lake Shore Boulevard East and the connected warehouse building currently defines the streetwall height along Freeland Street and Cooper Street, effectively framing the public realm.

Any new vertical additions or alterations to the LCBO complex should conserve the legibility of the three-dimensional quality of these buildings along Lake Shore Boulevard East, Cooper Street and Freeland Street. On these frontages, a minimum stepback of 10 metres to any vertical addition or alteration for the entirety of the facade of the vertical addition, including any balconies, is recommended.

5.3 Parking and Loading

Development within the Lower Yonge Precinct must have well organized parking, loading and servicing to enable the delivery of a high quality public realm. Successful organization locates these “back of house” activities away from the public realm and out of view. Parking and loading will be located below grade.

Parking and loading access points should be located on Freeland and New Streets (Fig. 5.38). Service and parking access driveways should not be located on Harbour or Cooper Streets in anticipation of their future development as higher order streets that will connect beyond the precinct and carry increased pedestrian traffic. Yonge Street, Queens Quay East, Lower Jarvis Street and Lake Shore Boulevard East should also not be streets with vehicle access points, as they are major streets with higher traffic and pedestrian volumes. Curb cuts on these streets would create unnecessary vehicular/pedestrian conflicts. Every reasonable effort should be made to reduce the



Figure 5.34 5 St. Joseph Street, Toronto



Figure 5.35 Distillery District, Toronto (Image Credit: architectsAlliance)

adverse effects of parking/loading functions on the quality of the pedestrian environment. Loading and servicing areas at grade should be wrapped with active uses a minimum of 6-10 metres in depth to limit the disruption to the building's activated frontage.

Parking and loading will be shared to reduce the number of interruptions to the public sidewalk. To the extent possible, access points should be limited to one frontage and parking per street, and loading and servicing functions should share access points to reduce the number and width of vehicle routes across public sidewalks.

Service driveways and parking access driveways for two-way traffic should not be wider than 6 metres. In case of one-way traffic, driveways should not be wider than 4 metres. Vehicle access points will be well integrated into the design of building facades and may be concealed behind discrete garage doors or paired with a pedestrian route and finished with high quality materials.

Ventilation shafts and other site servicing equipment will be located away from the public sidewalk and, to the extent possible, incorporated into the building itself.

Parking requirements in the Precinct may be reduced, as it is within 300 metres of Union Station. Car-share and bike-share facilities are also encouraged in lieu of residential parking spaces and will be assessed at the rezoning stage. Garage, loading and service entry areas will be designed to:

- Be integrated with the overall design facade;
- Have attractive garage door panels;
- Be resistant to damage from vehicle impact; and
- Obscure views during both daytime and nighttime (lit conditions).



Figure 5.36 Parking and loading entrance

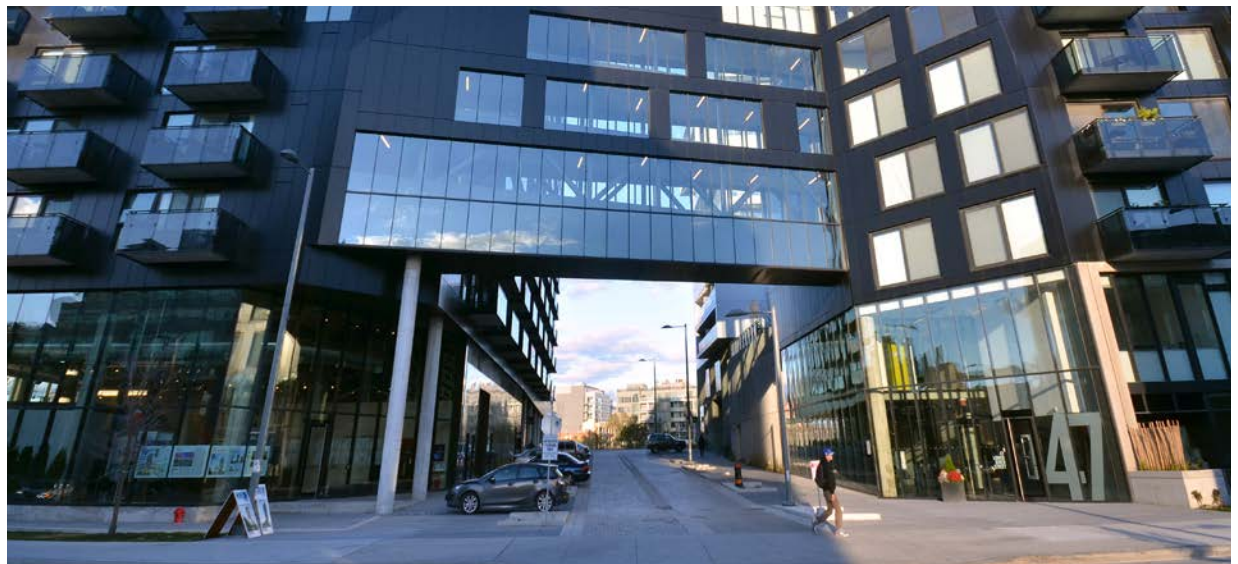


Figure 5.37 Parking access lane, River City condos, Toronto



Figure 5.38 Servicing Map

6.0 Community Services and Facilities

- 6.1 School
- 6.2 Childcare
- 6.3 Community Recreation Centres
- 6.4 Library Facilities
- 6.5 Emergency Services
- 6.6 Human Services

The Community Services and Facilities Study for the Lower Yonge Precinct prepared by the City of Toronto in August 2014 provides a strategy for assessing community services and facilities that are available to the local population in the Lower Yonge Precinct. Community services and facilities include both non-profit and public services, such as schools, public libraries, childcare, community and recreation centres, arenas, swimming pools, human services, senior services and community meeting/gathering spaces.

A key objective in the planning of community services for the Lower Yonge Precinct is to ensure that the services are integrated with services that are available or planned in the wider area. The overall guiding principles for the provision of community services include:

- Provide key services such as schools, daycares and community centres at the earliest possible opportunity;
- Integrate the community space into the neighbourhood fabric;
- Co-locate services where appropriate;
- Locate community services adjacent to parks where appropriate; and
- Ensure accessibility for all, including seniors, children and people with disabilities.

The Lower Yonge Precinct is projected to be home to roughly 13,000 people and 15,000 employees. As part of any new community, it is integral to provide community services and facilities to support residents. A community services and facilities study based on the populations projected in the plan established that the precinct will need one large community centre (with pool), two child care centres, potentially a library, and space for human services. Discussion with the Toronto District School Board established a need for a public elementary school to accommodate the community.



Figure 6.1 Community Services Map

6.1 School

Based on predicted pupil yield factors of 0.02 for market condominium units, 0.18 for rental units and 0.36 for affordable rental housing, the Precinct is expected to generate over 400 elementary school students. This is sufficient to warrant a school in the precinct. The Toronto District School Board (TDSB) is exploring more urban format school typologies. This involves flexibility in the design of facilities in order to facilitate co-location with other uses. Initiatives such as reducing the size of the catchment area to eliminate bussing and encourage walking to school are anticipated. Additionally, the school board can explore new ideas such as satellite schools in the Precinct to accommodate the prevalent age cohort in the precinct.

Typically, the TDSB requires that a sufficient population base be in place prior to opening a new school, so the school location should correspond with the final phases of development. That said, ensuring the timely delivery of a school into the community would help entice families to move into the community. The LCBO property is the preferred location for the school as it is centrally located, close to the proposed park and community centre, will house the greatest proportion of units, and will likely be phased.

Currently, the closest TDSB elementary schools are Downtown Alternative School on Lower Jarvis Street and Market Lane Public School on the Esplanade near Sherbourne Street. The closest catholic elementary schools are St. Paul Elementary School on Sackville Street and St. Michael Annex on George Street South. Nearby high schools include Inglenook Community Secondary School on Sackville Street and St. Michael Choir Catholic School on Bond Street.

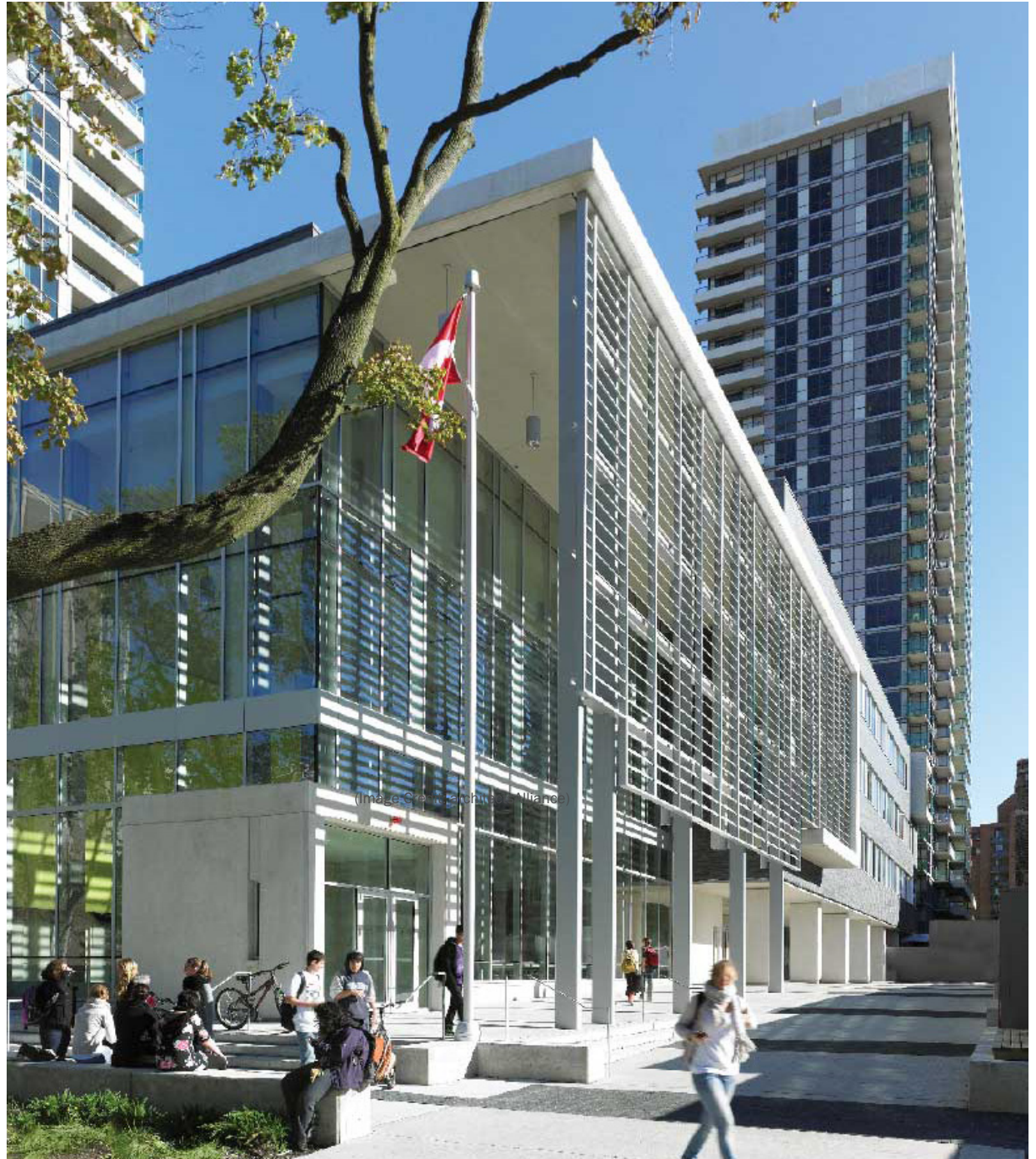


Figure 6.2 North Toronto Collegiate Institute, Toronto (Image Credit: ShonTron/Urban Toronto)

6.2 Child Care

Two child care centres are planned for the community, one on the LCBO site and one on the Loblaws site. These spaces will be provided and secured through Section 37 agreements. Child care centres will be in compliance with the Ontario Day Nursery's Act and will include both indoor and outdoor space. Ideally, one of the daycares could co-locate with the potential school to accommodate the growing need for before and after school care. There is also a childcare centre planned for the Pier 27 development located south of the Precinct.

6.3 Community Recreation Centres

A 50,000-square-foot community recreation centre, including a gym and indoor pool, is planned for the northern block of the 1-7 Yonge Street site. The centre will be secured through a Section 37 Agreement and built as part of the early phases of development for the property.

6.4 Library Facilities

Toronto Public Library has indicated that there is a need for a neighbourhood or district library in the Precinct, but it does not have sufficient operating or capital budget to accommodate one at this time. The precinct can be serviced by the existing St. Lawrence Library and a new district library abutting the West Don Lands, planned for the First Parliament site at Front Street East and Parliament Street.



Figure 6.3 Regent Park Aquatic Centre, Toronto (Image Credit: MacLennan Jaunkalns Miller Architects)



Figure 6.4 Fort York Branch Library, Toronto (Image Credit: KPMB Architects)

6.5 Emergency Services

The precinct is serviced by the following emergency services. There are no plans for additional facilities in and around the precinct.

- Fire: Station 333 located at 207 Front Street East
- Police: 51 Division located at 51 Parliament Street
- EMS: Station 40 located at 58 Richmond Street East

6.6 Human Services

Human service space is flexible space that is typically between 15,000 to 20,000 square feet to accommodate a variety of different public and not-for-profit agencies at the same time or a number of different agencies over time. Agency and City Division partnerships will maximize use of space, including sharing of resources such as staff and parking. Human services space can function as a community hub based on particular partnerships and services such as health, family and children's services and seniors. They typically provide for temporary or permanent 'designated workspaces' to serve clients. No specifically-dedicated human service space is currently planned for the Precinct, although space could be incorporated into developments as proposals emerge.

7.0 Sustainability

- 7.1 Buildings
- 7.2 Energy
- 7.3 Resiliency and Adaptation to Climate Change
- 7.4 Mobility
- 7.5 Biodiversity
- 7.6 Wise Use of Resources

Sustainability is integrated into every aspect of waterfront revitalization. The Lower Yonge Precinct will develop green, livable, and prosperous communities. It will enhance greenspace, create social and cultural gains for everyone, and stimulate innovation and economic development. Given its prominence on the waterfront, coupled with the heights and high densities planned for the area, developments in this precinct will be held to world-class standards of sustainability. The Precinct is expected to be an example for environmental stewardship on the waterfront.

In view of the recent agreement adopted at the 21st Conference of the Parties (COP21) in Paris governing greenhouse gas (GHG) emissions and the transformational role that cities play in delivering results. Representing the majority of emissions, cities play a critical role in reshaping the economy and transitioning to a low carbon future. Recognizing that climate change is one of the most important issues of our time, City Council unanimously adopted Toronto's Climate Change Action Plan in 2007. The Action Plan set the GHG emission reduction target at 30% by 2020 and 80% by 2050. In 2015, city council adopted a work plan for TransformTO, a 2 year project to develop a strategy to meet these targets.

Using the Lower Yonge Precinct, the City of Toronto can showcase all that is possible to limit the global temperature rise to 2°C and create a carbon neutral world.

7.1 Buildings

Buildings account for a substantial portion of Toronto's energy consumption, natural resource extraction, waste generation and GHGs. High-performance green buildings are therefore critical to transforming the Lower Yonge precinct into a sustainable and resilient community and

in meeting the City of Toronto's GHG emission reduction targets.

The Toronto Green Standard (TGS) is a two-tier set of performance measures for sustainable site and building design. Tier 1 is required for new

construction in Toronto and Tier 2 is a higher, voluntary level of performance with a financial incentive. Projects that achieve Tier 2 may be eligible for a partial refund on Development Charges paid to the City. New development in the Lower Yonge Precinct is expected to achieve Tier 2 of the TGS.

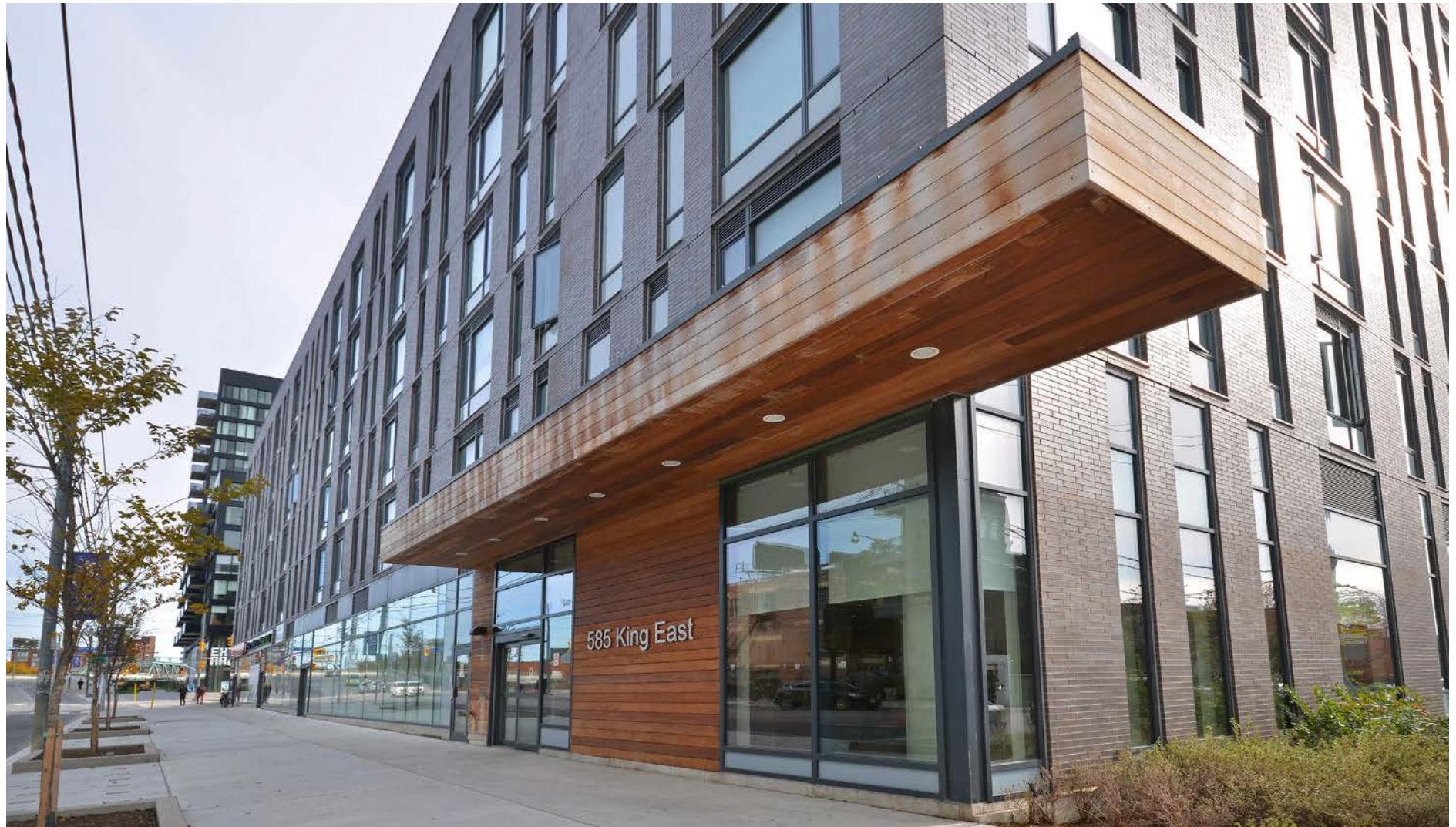


Figure 7.1 585 King Street East, Toronto (LEED Gold certified)



Figure 7.2 George Brown College, East Bayfront, (LEED Gold certified and targeting TGS Tier 2)

In addition to TGS, Waterfront Toronto's Minimum Green Building Requirements (MGBR), which are mandatory performance standards that apply to building projects on the lands controlled by Waterfront Toronto, support the development of advanced, high-performance buildings. Development in the Lower Yonge Precinct is expected to comply with TGS Tier 1 and 2 and support the objectives of the MGBR.

Leveraging one of the most internationally recognized green building standards in the world, the MGBR includes requirements for Leadership in Energy and Environmental Design (LEED) Gold certification. The MGBR also includes the following requirements:

- 1) LEED Gold Certification, including credits in:
 - a. Water-efficient landscaping
 - b. Water use reduction
 - c. Energy efficiency
 - d. On-site renewable energy
 - e. Measurement and verification
- 2) Smart Building, including:
 - a. Suite-level electricity, gas and water metering and data collection
 - b. Intelligent Community infrastructure
- 3) Electric Vehicle Infrastructure
- 4) Green Roof (minimum 60%)
- 5) Engagement and Support
- 6) Bicycle Parking and Storage
- 7) Waste Management
- 8) District Energy

- 9) High Efficiency Appliances
- 10) Community Integration
- 11) Long-term Flexibility, including:
 - a. Column and slab structural system
 - b. Minimum ground floor height
 - c. Minimum heights for typical floors above ground
 - d. Minimum heights for above grade parking
- 12) Integrated Design Process
- 13) Progress Tracking System

While private developers need not pursue LEED Gold certification, it is expected that buildings located in the waterfront community demonstrate how they intend to meet equivalent levels of sustainability performance with the ultimate goal of net zero energy buildings.



Figure 7.3 UTSC Environmental Science and Chemistry Building (LEED Gold certified) (Image Credit: UTSC)



Figure 7.4 Sherbourne Commons, stormwater management system that is integrated into the park design

7.2 Energy

The City of Toronto Environment & Energy Division (EED) prepared a Community Energy Plan for the Lower Yonge Precinct. The Plan considers energy early in the land-use planning process and calculates potential energy consumption, demand, and GHG emissions based on development estimates provided by City Planning and Waterfront Toronto.

The purpose of the Plan is to identify opportunities to integrate efficient, resilient, and low-carbon local energy solutions in both, individual buildings and district-wide. When implemented, these opportunities will contribute to meeting the City of Toronto's targets for reduced energy consumption, demand, and GHG emissions, as well as renewable energy generation, and help create a sustainable community.

Developers in the precinct will be expected to demonstrate how they intend to meet the following key recommendations:

- Designing new buildings to Tier 2 of the Toronto Green Standard, which could reduce energy use, electricity demand, and emissions by 23%, 17%, and 25%, respectively;
- Incorporating on-site power generation from high efficiency combined heat and power plants and renewables such as solar PV, in order to help alleviate local electricity constraints and also reduce emissions;
- Implementing thermal networks (i.e. district energy) – including locations of pipes and energy centres, as well as district energy ready buildings – to act as a platform for large-scale renewable energy sources (e.g. lake water cooling, sewer heat, and biomass);

- Providing strategic backup power capability for multi-unit residential buildings – including water pumps, elevators, and common areas – to allow residents to withstand area-wide power outages for at least 72 hours.

The Plan also suggests next steps for implementation, in particular:

- 1) Require developers to submit an Energy Strategy as part of a complete application, whether for an Official Plan Amendment, Zoning By-law Amendment, Plan of Subdivision, or Plan of Condominium. The Energy Strategy should identify how the development will incorporate opportunities identified in the report and others strategies they may have to integrate efficient, resilient, low-carbon energy solutions. The EED will provide a Terms of Reference for the Energy Strategy and a list of suggested qualified consultants to the developer, as well as be responsible for review of the Energy Strategy once submitted, and will work with the developer on implementation.
- 2) Designate the planned Community Centre to act as an Emergency Reception Centre for displaced individuals during area-wide power outages.

Waterfront Toronto Carbon Tool Results

In collaboration with the C40-Climate Positive Development Program, Waterfront Toronto developed a Carbon Tool to help understand how to achieve low carbon development. The tool analyzes and compares the sustainability performance of projects at the design and planning phase. It provides carbon outputs for a baseline (which is a build-as-usual scenario assuming compliance with Ontario Building Code and Toronto Green Standard Tier 1), Scenario 1 (which includes compliance with Waterfront Toronto's MGBR and sustainability best practices), and a Scenario 2 (which includes longer term stretch objectives to achieve a climate positive outcome). This is done to understand how well a project is expected to perform over a 'build-as-usual' scenario and what additional strategies and targets need to be applied to achieve carbon

reductions. The tool does this by quantifying and visualizing the relationships between development decisions and sustainability outcomes. During this process, there is an ability to see how sustainability strategies in energy, water, waste, transport, and materials impact carbon reductions and explore new ways of improving performance.

The Carbon Tool produced preliminary results on projected carbon emissions for the Lower Yonge Precinct. Below is the detailed breakdown of estimated reductions in carbon emissions.

Focus Areas	Baseline (TGS Tier 1 and Ontario Building Code)	Scenario 1 (Assuming compliance with MGBR and Sustainability Best Practices)	
Total Carbon (mton/p/yr)	4.1	3.0	-25%
Total Primary Carbon (mton/p/yr)	3.9	3.0	-24%
Energy (kWh/m2/yr)	213	144	-32%
• Electrical	71	48	-32%
• Thermal	142	96	-32%
Water (L/p/d)	408	300	-26%
Wastewater (L/p/d)	311	213	-32%
Materials (mtonCO2/m2/yr)	0.14	0.07	-49%
Waste Landfilled (kg/p/yr)	683	516	-24%
Transport (mtonCO2/yr)	17,483	15,807	-10%
TOTAL	19,319.14	17,130.07	

Figure 7.10 Waterfront Toronto Carbon Tool - Projected carbon emissions for Lower Yonge Precinct

Window-wall ratio

Consistent with objectives to pursue energy efficient designs and low carbon community development, building design is encouraged to achieve progressively low window-to-wall ratios. It is recommended that all residential buildings provide a maximum window to wall ratio of 60% window (i.e. minimum 40% non-glazed exterior treatment). For non-residential buildings, it is recommended that they provide a maximum window to wall ratio of 75% window.

It is further recommended, that where applicable, curtain wall, as opposed to window wall treatment is used to provide enhanced thermal performance.



Figure 7.6 High window-to-wall ratio and curtain wall system, Theatre Park Condos, Toronto (Image Credit: Urban Toronto)



Figure 7.7 Low window-to-wall ratio and window wall system, 132 Berkeley Street, Toronto



Figure 7.8 Curtain wall system, Ice Condos, Toronto (Image Credit: Urban Toronto/architectsAlliance)



Figure 7.9 Window wall system, Peter Street Condos, Toronto (Image Credit: Urban Toronto)

7.3 Resiliency and Adaptation to Climate Change

The table below demonstrates the contribution of each focus area to overall carbon emissions in the Lower Yonge Precinct. Energy and transport contribute the greatest amount to carbon emissions. As such, the aim must be to focus efforts to reduce carbon predominantly in those two areas.

To continue to push the bar on sustainability and achieve low carbon community development, the energy solutions noted in Section 7.2 must be considered. They should also be incorporated in combination with reducing transportation emissions through compact development, convenient active transportation options, transit connectivity and zero-emission vehicles.

In Toronto, and elsewhere around the world, the impacts of climate change are apparent. Extreme weather events are more frequent and severe, and changes in weather patterns are becoming more evident. To tackle these urgent issues created by climate change, new ways of planning and design need to be considered to reduce the vulnerability of human and natural systems and promote safe, resilient communities.

Focus Area	% Contribution to Overall Carbon Emissions (Baseline Scenario)
Electrical Energy	57%
Thermal Energy	
Potable Water Use	<1%
Waste Landfilled	6%
Materials	3%
Transport	34%
TOTAL	100%

Figure 7.11 Waterfront Toronto Carbon Tool - Contribution of each focus area to overall carbon emissions in Lower Yonge Preinct.

For example, to better mitigate water-related climate change impacts, an advanced green infrastructure approach that employs strategies to significantly reduce stormwater runoff is recommended. Green infrastructure is defined as natural systems and human-made vegetative technologies that provide ecological and hydrological functions and processes that enhance the ability for healthy and sustainable living strategies may include the installation of roof-top water storage solutions, permeable surfaces, bioswales, green roofs and walls, and other greenspace enhancements.

Further, to mitigate the increase in the number of heat days, strategies to reduce the urban heat island effect becomes even more critical. Developments shall include mitigation measures such as tree and vegetation plantings and the use of high albedo material. Finally, in order for the precinct to be resilient to power disruptions from extreme storm events, developers are encouraged to establish community reception centres and reliable multi-residential backup power systems.



Figure 7.12 Solar Panels on washroom facility in Corktown Common

7.4 Mobility

Sustainable mobility is key to developing complete and healthy communities and reducing carbon emissions. The Lower Yonge Precinct will strive to direct and/or re-shape people's travel patterns towards walking, cycling and transit use. This is achieved by living close to everyday needs, providing higher-order transit connections to the City, and developing the necessary infrastructure, such as separate bicycle lanes and generous sidewalks. This will encourage active and sustainable transportation by making it safe, convenient, and attractive. In Lower Yonge, all residents shall be within a 5-minute walk from a transit stop and dedicated bike lanes. The future East Bayfront LRT line will considerably enhance sustainable mobility within the Precinct.

Transportation Demand Management

Transportation Demand Management ("TDM") is the application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles), or to redistribute this demand in space or in time. In other words, TDM is about changing the behaviors of commuters in order to reduce congestion and encourage a balance of commuter trips by walking, biking, transit, and driving.

The City of Toronto has often required the submission of TDM Studies for proposed office buildings in the Downtown core. Given its planned mixed-use nature, and the significant anticipated office components of each of the proposed sites in the Lower Yonge Precinct, new applications will be required to provide a TDM report/study. The study will outline how a project will address congestion generated by employees, including the nature of parking facilities, carpooling programs, cycling infrastructure (showers and bike parking), flexible hours, transit access and shuttle services, among other initiatives.



Figure 7.13 Queens Quay East streetcar



Figure 7.14 Sherbourne Street, separated bike lane

7.5 Biodiversity

A healthy ecosystem makes for a more sustainable and inviting community. Improving the biodiversity of the Precinct can take the form of tree planting, bioswales, and parks. These strategies not only provide habitat, linear linkages and contribute to overall biodiversity, but also help clean the air, beautify our public spaces, foster a sense of place, and support active and healthy lifestyles. Developments will be encouraged to meet or exceed the minimum green roof requirements and provide opportunities for enhanced on site landscaping.

Green roofs are another useful tool to promote and enhance biodiversity. The City of Toronto adopted a bylaw in 2010 to require the construction of green roofs on most types of new building development. The City also encourages green roofs through the Eco-Roof incentive program and by providing explanatory tools and resources through the City's green roof website. Green roofs help reduce the urban heat island effect and associated energy use, manage stormwater runoff (reducing the pollutants that enter our waterways), and beautify our city. All buildings in the Lower Yonge Precinct are expected to provide green roofs in accordance with Waterfront Toronto's MGBR.



Figure 7.15 Corktown Common



Figure 7.16 Green Roof, East Bayfront

7.6 Wise Use of Resources

7.6.1 Water

Implementing best management practices to reduce potable water consumption, protect water quality, and promote low impact development are opportunities that will be expected of developments in the Precinct.

Reducing potable water consumption can be achieved at the building scale through high-efficiency fixtures and appliances, as well as by implementing water reuse strategies, such as utilizing non-potable water sources for irrigation and toilets. These objectives are achieved through reducing outdoor and indoor water use in line with credits achieved through LEED Gold certification. Minimizing stormwater runoff can be achieved by integrating green infrastructure into every element of urban development. Developments will be expected to follow these practices.

Developers are encouraged to look for innovative ways to reduce demands on municipal water resources. For example, a decentralized anaerobic treatment system for wastewater and blackwater to reduce the demand on municipal water resources and infrastructure may be considered. Using the biogas produced from the system as a green energy alternative and reusing the treated effluent for irrigation or other non-potable uses offers further opportunities to showcase innovation and leadership.

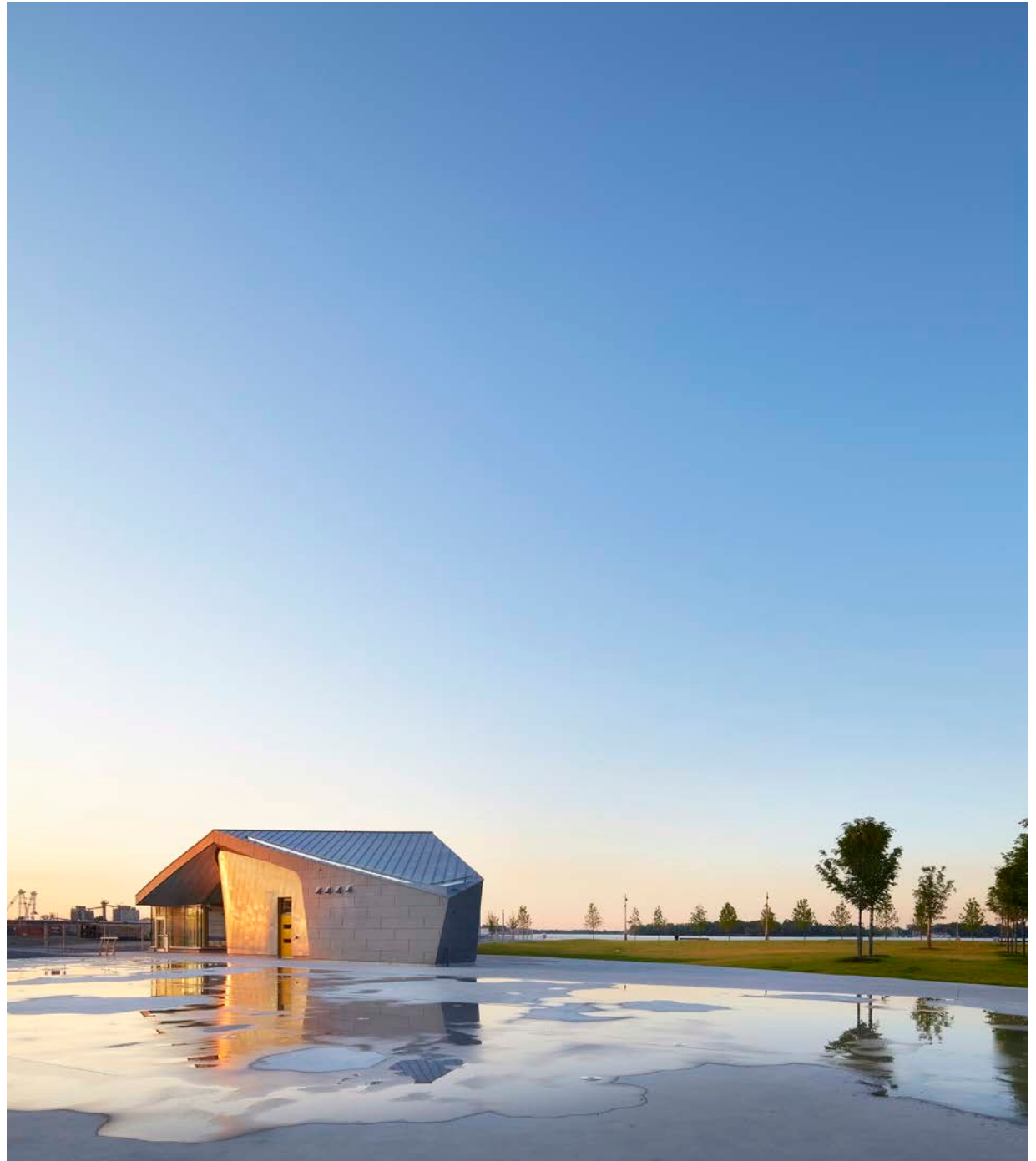


Figure 7.17 Sherbourne Common, East Bayfront

7.6.2 Waste

With landfill space in short supply and an increasing population, waste management is a critical issue for the City of Toronto. Strategies that may be implemented on the building scale may include tri-sorting, collection areas for hazardous waste, and designing kitchens with separated cabinet space for the segregated collection of recyclables, organics and waste.

Construction, demolition and excavation-related waste must also be addressed by mandating aggressive diversion targets for builders. Developers are encouraged to achieve 75% waste diversion from construction, demolition and excavation activities.

Several construction projects along the waterfront have successfully reduced the amount of construction waste going to landfill as a result of aggressive waste diversion measures (see Fig.7.18).

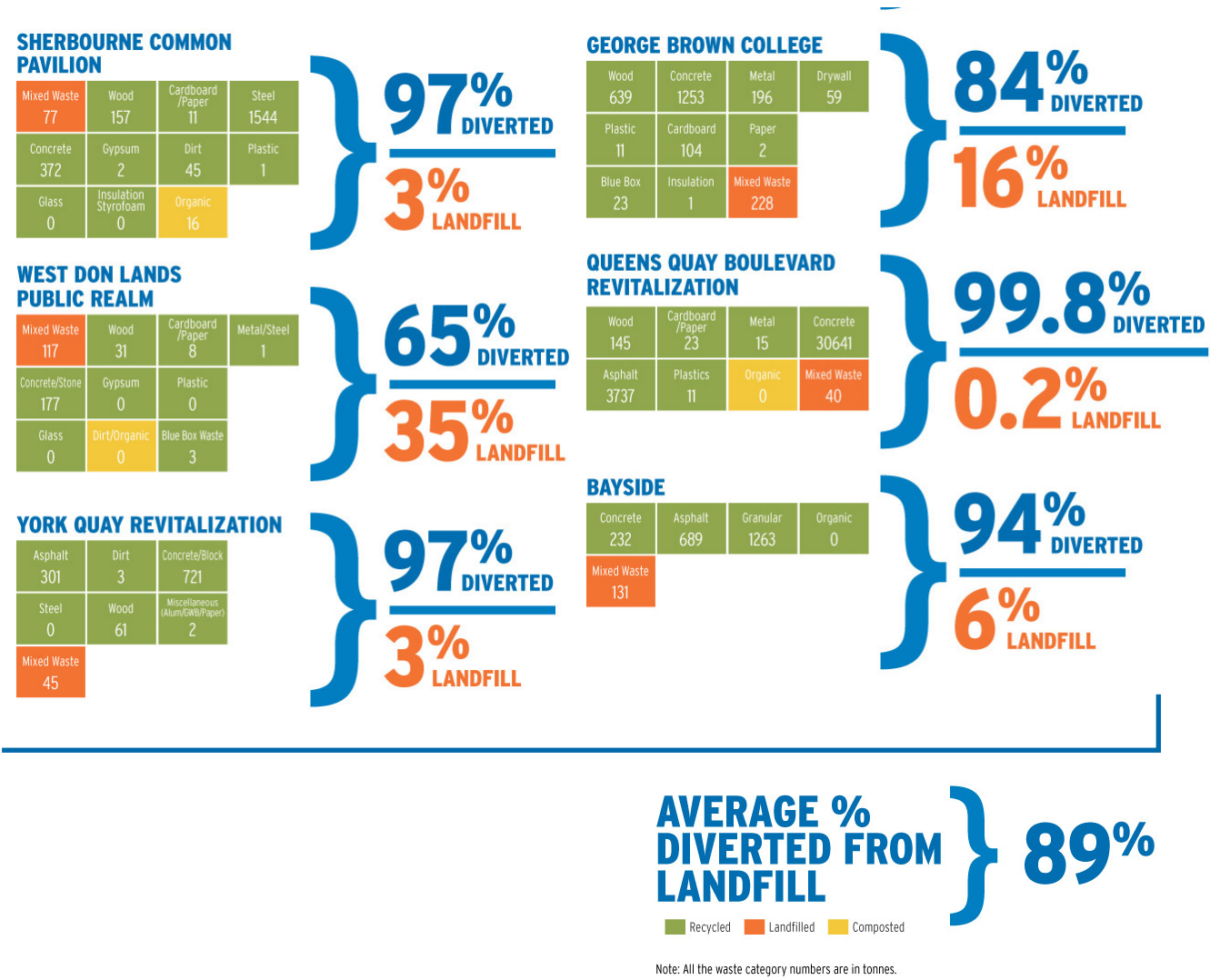


Figure 7.18 Waste diversion statistics in the waterfront

7.6.3 Materials

The use of environmentally sound materials for both a public realm and building-level application is essential to save valuable forest and quarry resources. Industry continues to provide an increasing number of sustainable material options. New development will be encouraged to use local, reclaimed, recycled, certified, sustainably harvested, renewable, and high-albedo materials as much as possible.



Figure 7.19 Corus Quay, East Bayfront



Figure 7.20 Dai Nagoya Building, Tokyo (Image Credit: Skyscraper City)

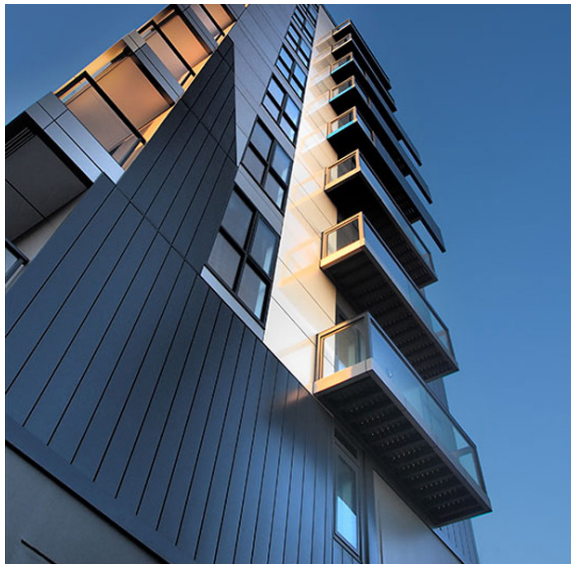


Figure 7.21 Melbourne Apartments, Melbourne
(Image Credit: the Hickory Group)

7.6.4 Human Health and Well-being

The Lower Yonge Precinct will be a place that combines the best of urban living, amenities, and built form for people in every walk and stage of life. Ensuring a vibrant mix of residents, employees, visitors and activities, the area will feature a variety of community services, parks and open spaces, affordable housing, and various housing types and sizes. The Lower Yonge Precinct will be a showcase for inclusive, diverse, and equitable living designed for everyone. By catering to all people, stable communities are created, allowing residents to benefit from the enrichment of diversity and to remain in the neighbourhood as their demographic situations change.



Figure 7.22 Sherbourne Common North, East Bayfront



Figure 7.23 Sherbourne Common North, East Bayfront



Figure 7.24 Corktown Common

8.0 Innovation and Economy

The Lower Yonge Precinct will provide lasting economic benefits by creating new employment opportunities. The precinct has the opportunity to be connected to the intelligent community network and the development of high-quality buildings and valuable public amenities, which will also contribute to the economic success of the area.

Working with its partners, Beanfield Metroconnect, Waterfront Toronto has established Canada's first ultra-high-speed broadband network. This network could be expanded into the Lower Yonge Precinct. Expansion of the network into the Precinct would allow residents and employers to have access to industry-leading technology. The intelligent community network is guaranteed to be maintained among the best in the world for at least 10 years after occupancy of the final building within the Designated Waterfront Area.

Planned waterfront-wide outdoor Wi-Fi network access in the public realm will provide community access to the Internet, bridging the digital divide to make essential data and services available to all residents.

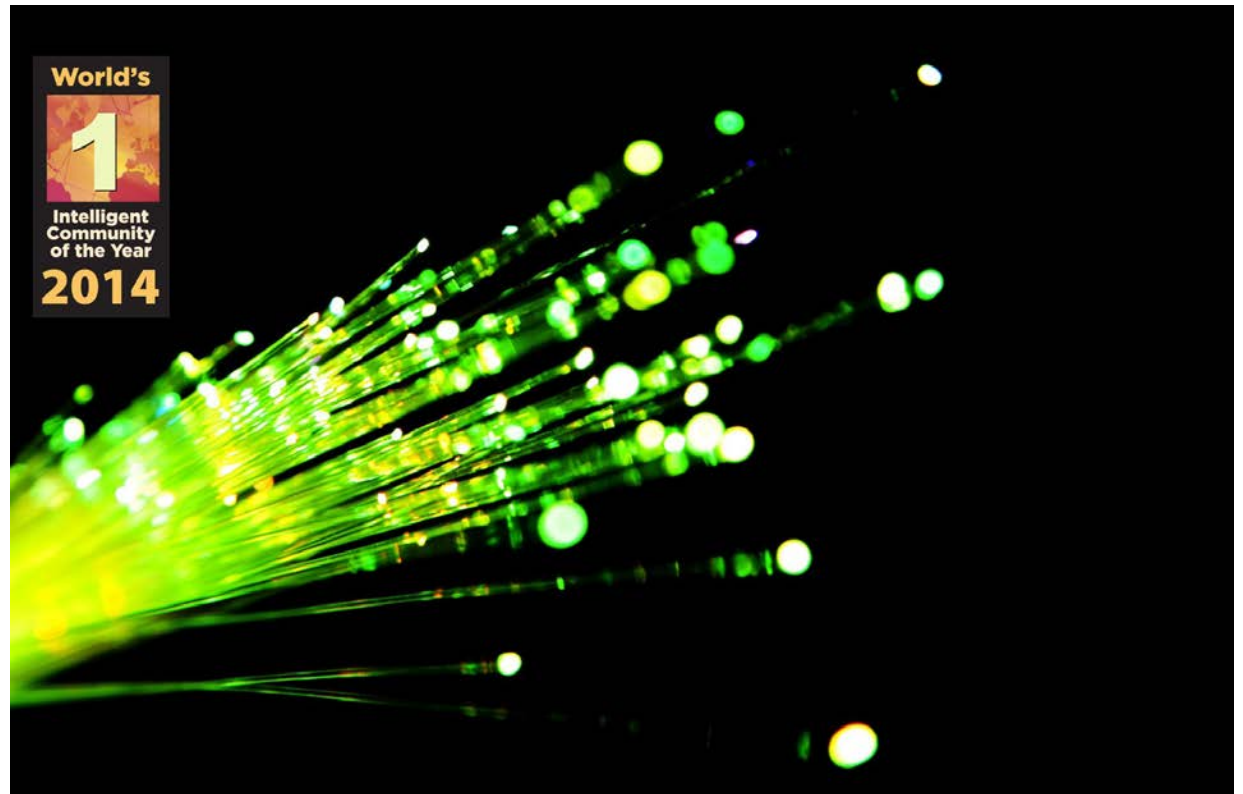


Figure 8.1 In 2014, the Intelligent Community Forum selected Toronto as its Intelligent Community of the Year.

9.0 Public Art

- 9.1. Public Art Context
- 9.2. Method and Approach
- 9.3. Site Selection
- 9.4. The Public Art Plan

9.0 Public Art

Public art has played a vital role in major urban revitalization initiatives around the world. When a neighbourhood is being reinvented, as is the case with the Lower Yonge Precinct, public art can be a window onto an area's context and reference aspects that are not immediately apparent, be they social, natural, cultural, physical, political or historical. Art in public places can infuse the urban experience with moments of reflection, and weave the human perspective seamlessly into the urban fabric.

Across the development of Toronto's waterfront, Waterfront Toronto and the City of Toronto are working closely on planning and implementing inspiring public art programs as integral components of a successful public realm.

Both the City of Toronto and Waterfront Toronto strongly support public art as an important part of city building and seek to secure it as part of all significant private sector developments. Development in the Lower Yonge Precinct will

follow the City's Percent for Public Art Guidelines, which recommend that a minimum of 1% of the gross construction cost of each significant development be dedicated to public art.

The Central Waterfront Secondary Plan outlines policies for the public realm, including Paragraph 14, which recommends: "a coordinated Central Waterfront public art program for both public and private developments". Waterfront Toronto, along with the City, has produced this high level Public Art Plan for the Lower Yonge Precinct that outlines a scope of public art opportunities which support the Central Waterfront Secondary Plan and Precinct Plan objectives. Channeling public art benefits into public rights-of way and open spaces supports the City of Toronto Official Plan as well as City of Toronto Urban Design's Percent for Public Art Guidelines.



Figure 9.1 Tom Otterness, *Immigrant Family*, 2007, Toronto



Figure 9.2 Daniel Borins and Jennifer Marman, *The Water Guardians*, 2015, Toronto

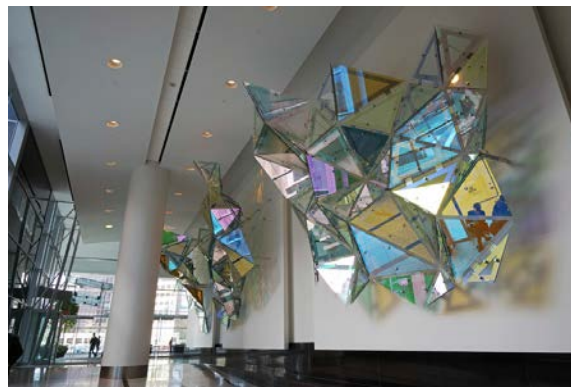


Figure 9.3 Christian Eckart, *Glass Hexagonal Perturbation* - HAT Trick, 2012, Calgary (Centennial Place)



Figure 9.4 Richard Deacon, *Between the Eyes*, 1990, Toronto

9.1 Public Art Context

The East Bayfront neighbourhood adjacent to the Lower Yonge Precinct is being developed with a comprehensive public art program offering a rich public realm. This document anticipates that the Lower Yonge Precinct will be a continuation of this precedent. Further, there are significant existing public artworks and future art opportunities immediately outside the boundary of this precinct, but informing the public art landscape for Lower Yonge.

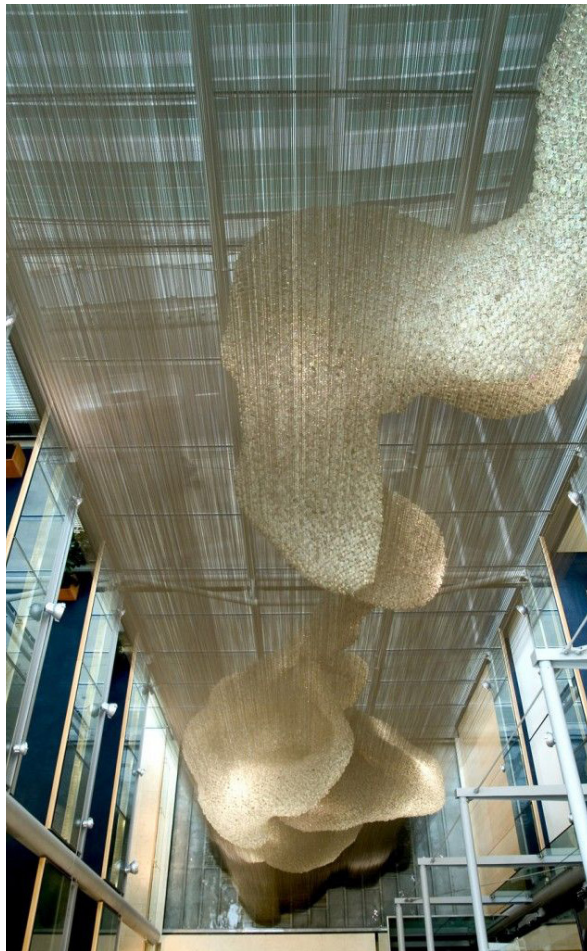


Figure 9.5 Thomas Heatherwick, *Bleigiessen*, London UK (Wellcome Trust)



Figure 9.6 Katharina Grosse, *Just the Two of Us*, 2013, New York City (Public Art Fund)



Figure 9.7 Zhang Huan, *Rising*, 2012 Toronto

9.2 Method and Approach

Waterfront Toronto has had tremendous success to date in implementing and planning for ambitious public art programs in the West Don Lands and East Bayfront precincts.

These achievements demonstrate that a dynamic program of art in public places, when planned purposefully and holistically, has the potential for a much greater impact than each of the individual pieces.

Planning for public art within the Waterfront Toronto public art program is based on two main guiding principles:

1. Strategic distribution of public art contributions throughout a precinct ensures that the neighbourhood as a whole benefits, with high profile locations for art attracting a high caliber of artist and real opportunities for public engagement.
2. A successful art program will build character and distinct identity for a community with a cohesive collection of artworks that are commissioned with acknowledgement of each other, speaking to a loose thematic thread, creating a bigger picture, enhancing quality of place for those who will live, work, learn and play here.

It is the intention of this Public Art Plan that these two guiding principles will be implemented at all times, guided by the City's Planning Percent for Art Program in consultation with the City's Cultural Services Public Art Office and Waterfront Toronto. Commissioning public art on key public sites and within POPS, which link the neighbourhood together and integrate it into the larger urban network, will result in a program of work that succeeds in achieving much greater impact than each of the individual pieces.

Channeling public art benefits into public rights-of-way and open spaces supports the City of Toronto Official Plan, as well as Urban Design's "Percent for Public Art Program Guidelines" which state:

"There may be other instances, such as an on-going City initiatives in a local park, where it is appropriate to pursue off-site public art contributions regardless of potential on-site opportunities. Contributions to the off-site, pooled, ward-based fund will be used towards City-supported public art plans on publicly owned lands in the local community."

Building on the collaboration between Waterfront Toronto, the City of Toronto and private developers that has been fundamental to the successful implementation of the West Don Lands Public Art Strategy and the approval of the East Bayfront Public Art Master Plan, the Lower Yonge Precinct Public Art Plan recommends that city planners and private developers work collaboratively to contribute to a holistic vision for public art in Lower Yonge.

Typically, developers are provided with three options for the provision of public art: on-site commissions; cash contribution towards a high profile local public site(s); or a combination of the two.

By the time the Lower Yonge Precinct is under development, there will be numerous examples, in both the West Don Lands and East Bayfront precincts, of successful commissions implemented through exercising both the off-site and onsite/off-site combination options.

Throughout the West Don Lands and the majority of East Bayfront, developers contribute off site to high-profile public locations. Where private developers have elected to keep a portion of

their art contribution on their site (on-site/off-site combination), they have agreed to coordinate their on-site plans with the larger precinct vision expressed in the Waterfront Toronto art plan.

These are compelling precedents for application of the Lower Yonge Public Art Plan, particularly with respect to the public sites and POPS sites identified in this plan. There are numerous opportunities identified herein for developers to exercise the off-site and combination options. Commissioning artwork at the sites shown on this plan will ensure a strong identity for the neighbourhood that is framed by a unique, compelling art collection. Artworks commissioned within POPS will be realized through the typical City Planning Percent for Art program and procedures. Artworks commissioned at public sites within the precinct will be implemented by Waterfront Toronto, working closely with the City's Cultural Services Public Art Office and City Planning.

Both of these channels will remain in communication and the elements will unfold with full, accurate and current knowledge of activity within the other program in order to ensure a seamless and meaningful final program. Through both channels, artwork will be commissioned using best practices in artwork selection, guided by the principles of artistic excellence and the international direction of public art.

9.3 Site Selection

The Lower Yonge Precinct is an important site within the Designated Waterfront Area. Although the development blocks within this precinct will all eventually be privately owned, there will be some spectacular public open space sites that will offer unique opportunities for art that will help define the identity of this area.