



# Downtown Moves: Transforming Ottawa's Streets

## Appendices

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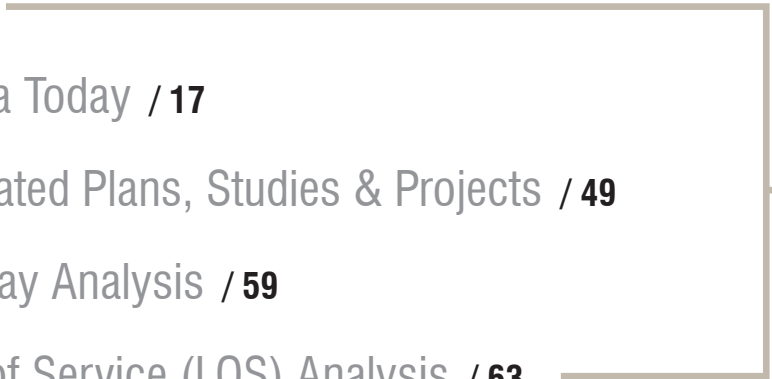

Vélo Québec

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## Appendix A Background



This section provides an overview of the general policy framework that informs the Downtown Moves study, as well as trends and experiences from other cities that have attempted to revitalize downtown streets.

The section is supported by the analysis table in Appendix C which provides a more detailed review of selected plans, studies, and projects.

## A.1 City Policy & Guidelines

There are a range of City of Ottawa policies and guidelines that have influenced this Study. The key policies and guidelines are outlined below.

### Official Plan

The Downtown Moves Study is both influenced and supported by the City of Ottawa *Official Plan* (OP), Amendment 76 approved by City Council on June 24, 2009, as it provides strategic directions to support transit, cycling and walking as viable and attractive alternatives to the private automobile, as well as an emphasis on urban design.

The majority of the study area is designated *Central Area* in Schedule B of the OP (Figure 1). The OP states that walking, cycling and transit to and in the Central Area are priority modes, particularly during peak traffic periods. This supports the pursuit of a safe and comfortable pedestrian and cycling environment on all downtown streets. Central Area policies consider the needs of all users of usable open spaces, pocket parks, sunlit pedestrian amenity areas and other culture and leisure resources, including an increased urban forest cover, that enhance the downtown experience.

The OP provides the policy framework that guides land use planning, with the intention to promote a substantial increase in the use of public transit and reduced automobile dependence during peak hours. The OP emphasizes the creation of pedestrian-friendly environments, requires the creation of places highly favourable to cyclists, and protects corridors for the Primary and Supplementary Rapid-Transit Network and transit-priority network.

The OP is presently under review.

The City's Official Plan can be found online at: <http://ottawa.ca/e/CON015317>



Figure 1: Central Area designation limits, Official Plan. Source: Schedule B, Official Plan.

## Central Area Secondary Plan

The Secondary Plan for the Central Area provides detailed area-based policy direction for a number of character areas within the Central Area of Ottawa. These character areas are: Parliamentary Precinct, Sparks Street, Upper Town, The Core, Bank Street, The Canal, Rideau Congress Centre and Rideau Street (Figure 2).

The vision and policies provided in the Central Area Secondary Plan that directly relate to the Downtown Moves Study are:

- Pedestrians will enjoy a safe, secure, comfortable, enriched, and enhanced street environment;
- Pedestrian corridors will connect with transit services and nearby areas, such as Sparks Street, Parliament Hill, the Canal, Rideau Street, Upper Town, and the Centretown neighbourhood;
- Place a priority on pedestrian movement at-grade, especially along pedestrian corridors which provide direct access to pedestrian-oriented uses and mid-block connections, particularly between Sparks and Queens Streets;
- Generally discourage above or below-grade pedways, and undertake to limit them to strategic locations which ensure the prominence of at-grade movement;
- Ensure minimum clear sidewalk widths and a continuity of weather protection;
- Reduce the number of commuter buses along Wellington Street, and the eventual removal of trucks, as alternative routes become available; and,
- Investigate the long-term open space needs of Upper Town.

The City's Central Area Secondary Plan can be found online at: <http://ottawa.ca/e/WD026832>

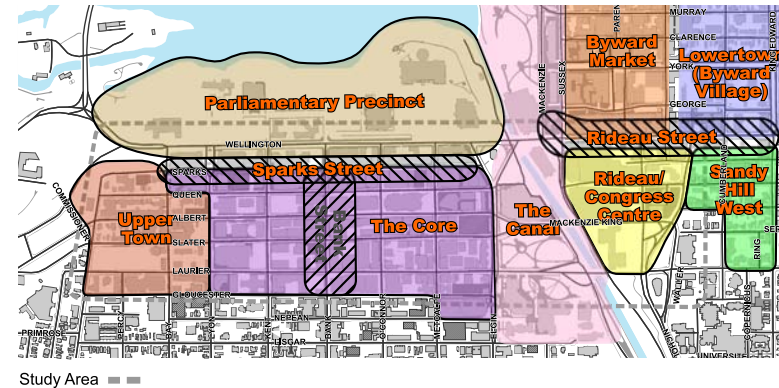


Figure 2: Central Area Secondary Plan – Character Areas. Source: City of Ottawa.

## Transportation Master Plan

The update of the *Transportation Master Plan* (TMP) was approved by the City of Ottawa Council in November 2008. The TMP sets the priorities and polices for the planning and development of mobility in Ottawa for the next 20 years. Among others, it establishes the Rapid Transit Network, and encourages the development of values, targets and policies for improved walking, cycling and transit usage. In keeping with the Official Plan, the TMP seeks to achieve the following increases in the share of morning peak-hour travel by pedestrian, cycling and public transit modes by 2031:

- Walking modal share of all person trips – from 9.3 per cent in 2005 to 10 per cent in 2031;
- Cycling modal share of all person trips – from 1.7 per cent in 2005 to 3 per cent in 2031; and,
- Public transit – from 23 per cent of total motorized trips in 2005 to 30 per cent in 2031.

All streets in downtown Ottawa will play important roles in the attainment of these objectives.

The TMP is presently under review.

The City's Transportation Master Plan can be found online at: <http://ottawa.ca/e/CON042839>

## Cycling Plan

The *Ottawa Cycling Plan* (CP), approved in 2008, builds on the urban cycling transportation network as outlined in the Official Plan (Figure 3), providing a framework to inform cycling in downtown Ottawa. When the City of Ottawa Council approved the CP in July 2008, the downtown component of the plan was conceptual in nature as neither the *Transportation Master Plan* nor the Downtown Ottawa Light Rail Tunnel project had been approved. Therefore, there is an opportunity for the Downtown Moves Study to explore refinements to the CP in downtown Ottawa.

The City's Cycling Plan can be found online at: <http://ottawa.ca/e/CON030825>

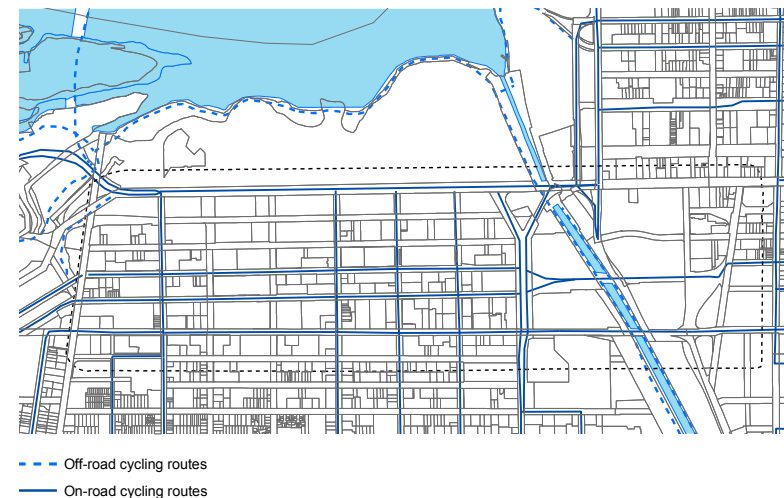


Figure 3: Existing Urban Cycling Transportation Network. Source: Schedule C, Official Plan, City of Ottawa.

### Downtown Ottawa Urban Design Strategy

The *Downtown Ottawa Urban Design Strategy* (DOUDS) was approved by City Council in 2004 as an action-oriented strategy to improve urban design and the public realm in the core of Canada’s capital. It contains over 40 strategies to be addressed over two decades. As it relates to Downtown Moves, some of the recommendations in DOUDS are:

- Create more hospitable and pedestrian-friendly street level environments for residents, workers and visitors to the Business Precinct;
- Protect key east-west streets from the negative impacts of traffic;
- Recognize the importance of north-south streets as equal to the downtown’s east-west streets to ensure that the same level of maintenance and development controls are in place along these streets;
- Increase the provision of bicycle routes and bicycle connections across downtown Ottawa; and,
- Provide priority sites for open spaces.

The *Downtown Ottawa Urban Design Strategy* can be found online at: <http://ottawa.ca/e/CON020356>



Figure 4: An Urban Design Strategy for Downtown Ottawa. Source: The Downtown Urban Design Strategy 2020.

## Choosing Our Future

*Choosing our Future* is a combined initiative of the City of Ottawa, the City of Gatineau and the National Capital Commission (NCC) to help Canada's Capital Region become more sustainable, resilient and liveable. One of the initiative's main goals is to enhance connectivity and mobility within the capital region. As it relates to Downtown Moves, *Choosing Our Future* intends to:

- Promote walking, cycling, and transit-riding amongst the capital region's residents as first-choices for transportation;
- Reduce travel distances through careful land use planning; and,
- Connect transportation networks between and within communities, minimizing environmental impacts, moving residents and goods safely, efficiently, and affordably, and encouraging social interaction.



## A.2 National Capital Commission

Planning and design in Ottawa are also guided by the National Capital Commission. As such, the overarching vision for physical planning and development in the National Capital Region is set out in the *Plan for Canada's Capital* (first issued in 1998). Some of the key planning directions proposed in the Plan, as they relate to and support the Downtown Moves Study, include the following:

- The long-term vitality of the Capital core area as a priority;
- The continuing role of Confederation Boulevard as the primary focus of public programming and capital investment;
- Continued improvement of the Capital Pathway Network; and,
- Location of key cultural and employment institutions in the core area, supported by public transit.

The vision established in the *Plan for Canada's Capital* is applied to all areas within the National Capital Region through master, sector and area plans. The downtown core of Ottawa is referred to as “Core Area”. The NCC’s *Capital Core Area Sector Plan* (2005) sets out how federal government lands in this core area should be planned until 2025. Within the core area of Ottawa, there are various character areas as illustrated in Figure 5. Key initiatives of the Sector Plan include:

- Reinforce and strengthen the Confederation Boulevard, increasing the prominence of public land uses and activities;
- Enhance and expand opportunities for public experience in the Core Area, including through the addition of new commemorations and public art;
- Improve linkages and mobility, facilitate the movement of both residents and visitors to and through the Core Area;
- Study and promote interprovincial transit integration which connects the downtown cores of Ottawa and Gatineau;

- Complete the gaps in the recreational pathway network;
- Promote the revitalization of Sparks Street Mall; and,
- Support the City of Ottawa in actions to reinforce the CBD and enhance its quality, to consolidate the links between the Capital and Civic Realms.

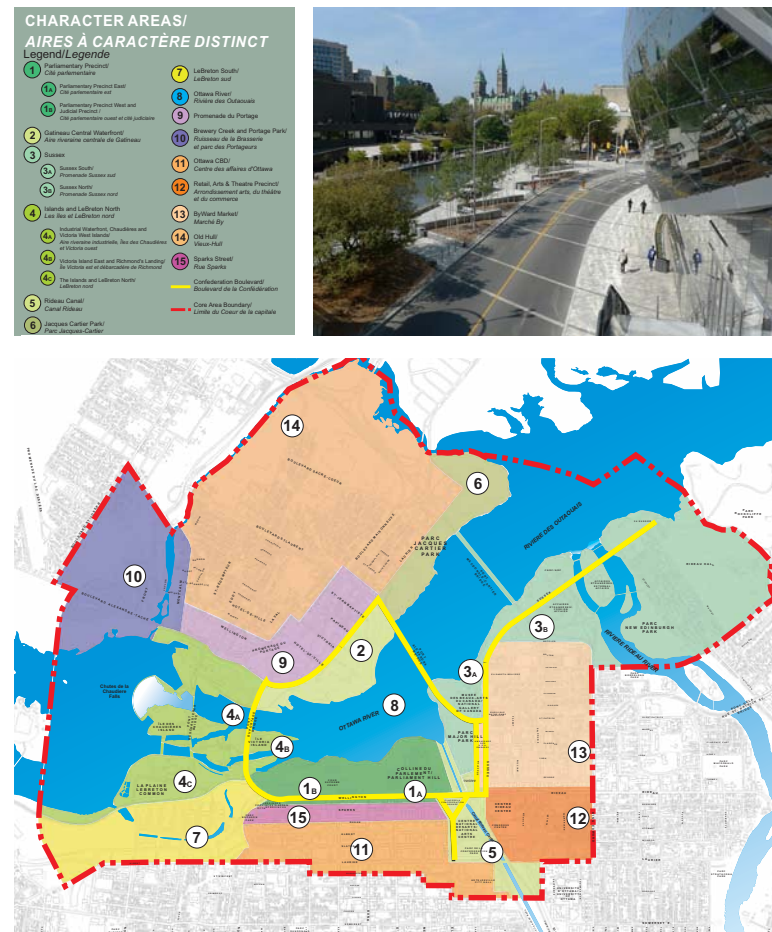


Figure 5: NCC's "Character Areas", as identified in the Capital Core Area Sector Plan (2005). Source: NCC.

## A.3 Provincial Policy Statement

The Provincial Policy Statement (PPS), issued under Section 3 of the Planning Act, provides policy direction on matters of public interest related to guiding growth and development in Ontario. The underlying principles of the PPS relate to the province's long term economic prosperity, environmental health and social well-being.

As part of the long-term economic prosperity policies, which aim at to building strong communities, the PPS states that:

*“Long-term economic prosperity should be supported by maintaining and, where possible, enhancing the vitality and viability of downtowns and main-streets”* (PPS, Section 1.7.1.b ).

As it relates to transportation, the PPS states that:

*“A land use pattern, density and mix of uses should be promoted that minimize the length and number of vehicle trips and support the development of viable choices and plans for public transit and other alternative transportation modes, including commuter rail and bus”* (PPS, Section 1.6.5.4).

The PPS can be found online at [www.mah.gov.on.ca/Page1485.aspx](http://www.mah.gov.on.ca/Page1485.aspx)

## A.4 Experience from Other Cities

Municipalities from across North-America are rediscovering the role that streets and downtowns play in renewing the vitality and livability of communities. The recurring theme is that streets and downtowns should no longer be built to accommodate the needs of the private automobile only, but rather should be redesigned to rebalance the needs amongst all users, prioritizing pedestrians, cyclists and transit customers. From this analysis, the following key themes are emerging in regards to the planning and design of downtown areas and their transportation networks:

- > Rebalancing streets in favour of walking and cycling;
- > The development of transit-oriented streets;
- > Enhanced on-road cycling facilities;
- > New opportunities for adjoining public space;
- > Flexible use of streets; and,
- > Green and sustainable streets.

The precedents fall into four categories:

- 1. Pilot projects that change how the right-of-way is used**
- 2. Streetscape planting**
- 3. Reinstating vehicle use on pedestrian malls**
- 4. Flexible space on the boulevard**



## 1. Pilot Projects that Change How the Right-of-Way is Used

### New York City Plaza Program

#### Overview

NYC Plaza Program is a major NYC initiative to improve mobility and safety across Manhattan, as well as a key component of the city's effort to ensure that all New Yorkers live within a 10-minute walk of quality open space. This project aims at retrofitting excess roadway space into public plazas and seating areas by simply painting or treating the asphalt, placing protective barriers along the periphery, and installing moveable tables and chairs.

Projects completed include Times Square (47th to 42nd Streets) and Herald Square (35th to 33rd Streets). Extensive safety improvements were also made along the Broadway corridor between Columbus Circle and Madison Square.

#### City

New York City (NYC), NY

#### Year constructed

May 2009, ongoing.



## Laurier Avenue Bike Lanes, Ottawa

### Overview

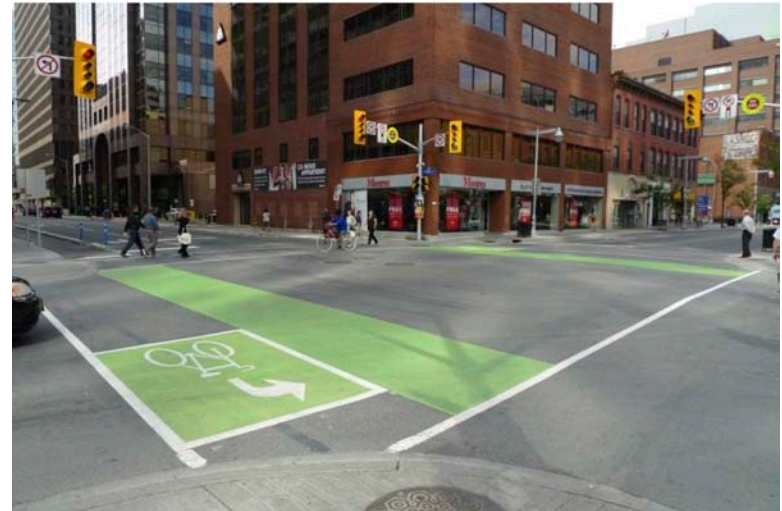
The City of Ottawa implemented the first downtown segregated bike lanes in Ontario in a two-year pilot project on Laurier Avenue West. The new bike lanes are separated from motor vehicles through the use of concrete curbs, plastic poles, parked cars and planter boxes.

### City

Ottawa, ON

### Year constructed

2011





## 2. Streetscape Planting

### Michigan Avenue Planters, Chicago

#### Overview

Large planters were implemented on the sidewalks and medians on 33 blocks of Michigan Avenue. These enormous planters act as bio-retention facilities/rain gardens that clean, control and reuse stormwater. The seasonal plant displays have complex diversity, are large in scale, lush and vary in texture and colour.

#### City

Chicago, IL

#### Year constructed

1993



## Bloor Street Transformation, Toronto

### Overview

The Bloor-Yorkville BIA partnered with the City of Toronto to completely transform and re-invigorate the corridor of Bloor Street between Church Street and Avenue Road. The streetscape uses extensive tree plantings in innovative and sustainable soil cell systems, widened granite sidewalks, seasonal flowerbeds and attractive up-lighting for each tree.

### City

Toronto, ON

### Year constructed

2008-2010





### 3. Reinstating Vehicle Use on Pedestrian Malls

#### Stephen Avenue, Calgary

##### Overview

Stephen Avenue is a vibrant pedestrian street lined with restaurants, cafés, pubs and bars, high-end retail and also supports live entertainment/festivals. The street has 5,000 to 10,000 people per hour during peak times. The street is a Pedestrian Mall in the day and has pedestrian priority in the evenings and over night. Vehicular movement is permitted on Stephen Avenue from 6:00 p.m. to 6:00 a.m.

##### City

Calgary, AB

##### Year constructed

Pedestrianized in 1970s and major additional work for the Winter Olympics in 1988.



## 4. Flexible Space on the Boulevard

### Pavement to Parks, San Francisco

#### Overview

San Francisco's Pavement to Parks program reclaim unused public right of ways and turn them quickly and inexpensively into new public plazas and urban parklets, eventually creating a network of public spaces. Currently, there are nine completed projects, including four plazas (Castro, Guerrero Park, Showplace Triangle Plaza, Naples Green Plaza) and five parklets (Divisadero Parklet, 22nd Street Parklet, 24th Street Parklet at Sanchez, 24th Street Parklet at Noe, Columbus Parklet #1 with Columbus Parklet #2 forthcoming).

This innovative program is lead in collaboration by San Francisco's Mayor's Office, the Dept. of Public Works, the Planning Department, and the Municipal Transportation Agency.

#### City

San Francisco, CA

#### Year constructed

2009, ongoing.



(image source: © Andres Power)



(image source: © Flickr user sbike)



(image source: © Warren Karlenzig)



## King St, Kitchener

### Overview

The revitalization of the downtown's six-block main hub stretches 1.1km along King Street, from Frederick/Benton Street in the southeast to Francis Street in the northwest. The design creates a pedestrian-first public realm street by transforming the existing lay-by parking and sidewalk into a flexible boulevard system that maximizes the pedestrian-zone width, while being adaptable for alternate uses during the winter months.

### City

Kitchener, ON

### Year constructed

2010



(image source: © IBI Group)



(image source: © IBI Group)



(image source: © IBI Group)



(image source: © IBI Group)



(image source: © IBI Group)





- B.1** Working in Downtown Ottawa
- B.2** Living in Downtown Ottawa
- B.3** Redevelopment in Downtown Ottawa
- B.4** Transportation Network
- B.5** Urban Design
- B.6** Street Inventory & Analysis

## Appendix B Downtown Ottawa Today

This section provides the basis on which the framework for Downtown Moves can be built. Existing conditions in regards to land use, population and employment, redevelopment, and transportation is summarized. An analysis of urban design and constraints and opportunities is provided, with an emphasis on street conditions.

Today, downtown Ottawa is the economic and cultural heart of the city, based on its unique combination of employment, government, retail, housing, entertainment and cultural activities. This includes Ottawa’s highest density of commercial offices (west of Elgin Street) as well as the Rideau Centre and the By-Ward Market (east of Elgin Street). While this area supported 104,000 jobs in 2011, there were only 10,900 living in the area (Source: City of Ottawa, Planning and Growth Management Department, Research and Forecasting Unit, 2012). Residential

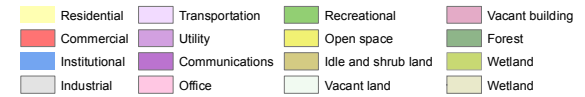


Figure 6: Land Use in Downtown Ottawa. Source: City of Ottawa GIS.



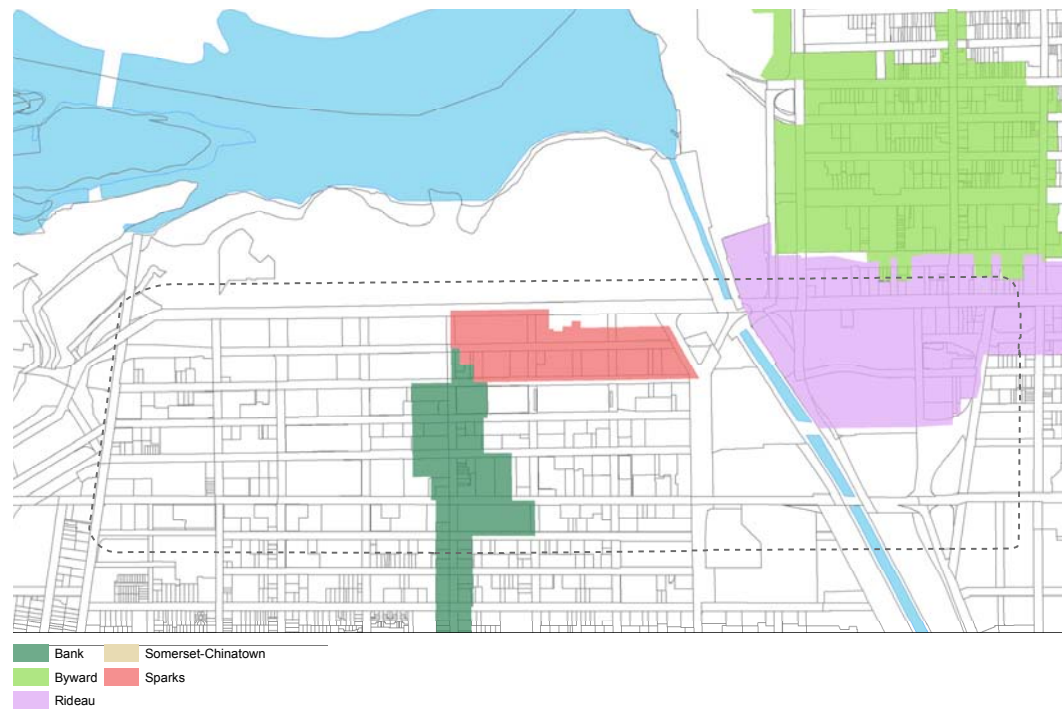
uses are prevalent only in the western portion of downtown Ottawa. The pattern of land use is shown in Figure 6.

The area also includes four Heritage Conservation Districts and three Business Improvement Areas (BIAs). Figures 7 and 8, respectively, illustrate these elements.

In summary, the urban fabric of downtown Ottawa attracts many office workers, tourists and residents to a relatively compact area.



**Figure 7:** Heritage Conservation Districts in Downtown Ottawa. Source: City of Ottawa GIS.



**Figure 8:** Business Improvement Areas in Study Area of Downtown Moves. Source: City of Ottawa GIS.

## B.1 Working in Downtown Ottawa

Considering the Central Business District of Ottawa, the downtown area employs approximately 104,000 people in 26 million square feet of office and commercial space. The City has projected that office and commercial space in downtown Ottawa will increase to approximately 30 million square feet by 2031 (Source: City of Ottawa, Planning and Growth Management Department, Research and Forecasting Unit). Figure 9 provides a breakdown of estimated employment distribution by block in the Central Area in 2011. Through the visual analysis provided in Figure 9, it becomes clear that the highest density office buildings are located in the quadrant formed by Lyon, Albert, O'Connor and Gloucester streets.

As downtown Ottawa offers a bus-rapid network along east-west streets (Albert and Slater), most office workers who commute to work via active transportation tend to use the sidewalks along Lyon, Bank and O'Connor Streets. With the forecast additional 4 million square feet of office commercial space by 2031, sidewalks will have to be enhanced to provide for pedestrian safety and comfort.

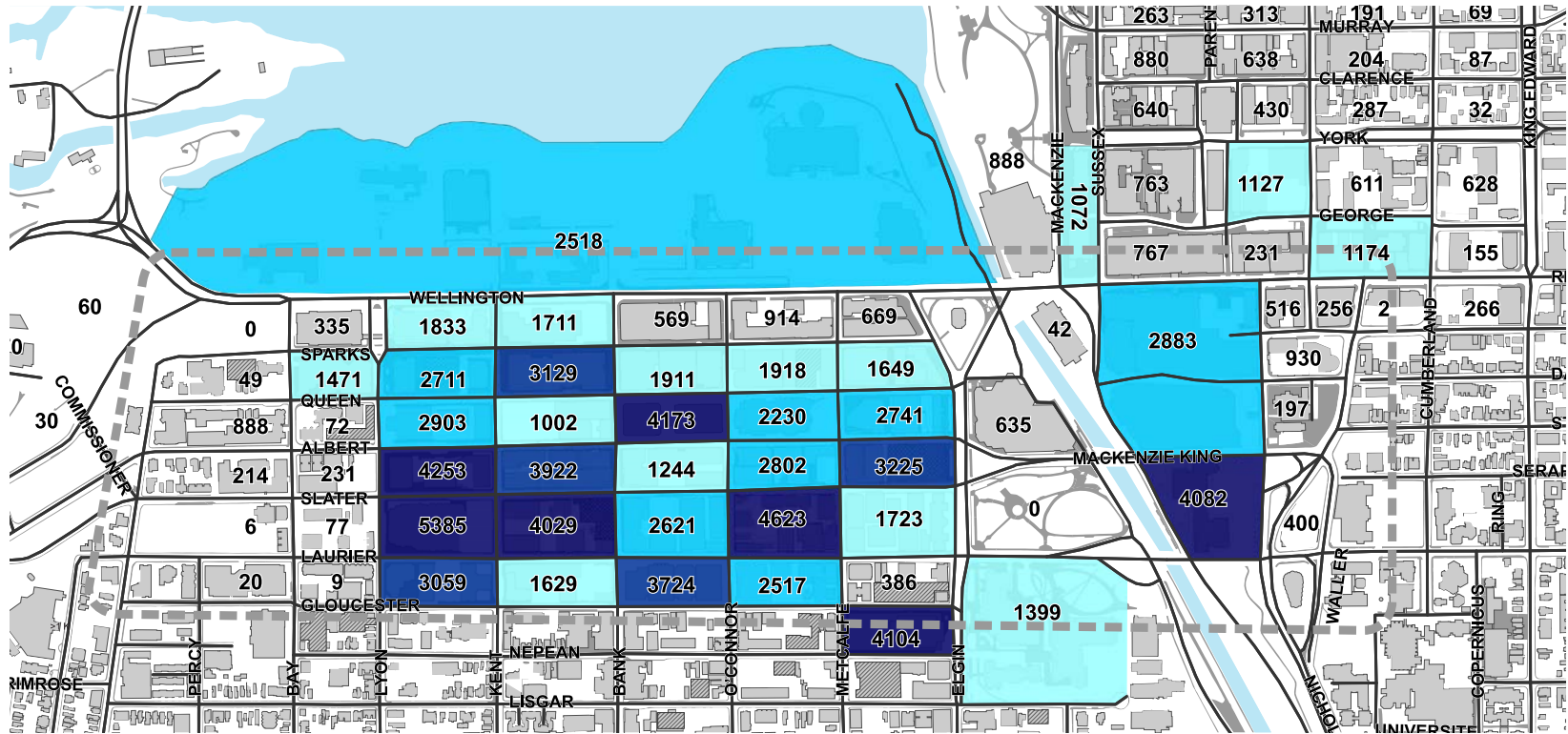
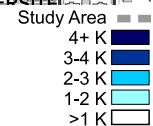


Figure 9: 2011 Estimated Employment by Block in Central Area. Source: City of Ottawa, Central Area Development Capacity Analysis (2011 Forecast).



## B.2 Living in Downtown Ottawa

Downtown Ottawa is home to approximately 10,000 residents (Source: City of Ottawa, Planning and Growth Management Department, Research and Forecasting Unit, 2012). As a result of Official Plan policies that encourage residential intensification, residential construction downtown has been on the rise since the early 2000s. In 2001, there was 4 million square feet of residential space in the Central Area. This number increased to 5.1 million square feet in 2006, and to 6.4 million square feet in 2011. By 2031, the City has projected that the number of residents living in the Central Area will increase to approximately 20,000, and there will be approximately 12 million square feet of residential space (Source: City of Ottawa, Planning and Growth Management Department, Research and Forecasting Unit, 2012).

This residential growth will in turn place increasing demand on the City's street network to accommodate walking, cycling and transit use downtown.

This analysis supports the need to enhance the size and quality of the walking environment in downtown Ottawa.



Figure 10: Residential zoned properties in the study area.



### B.3 Redevelopment in Downtown Ottawa

The vision for the Central Area, as laid out in the Official Plan, highlights the development of vibrant transit-oriented streets with enhanced pedestrian environments and office, residential and other uses above the street (source: Official Plan, Section 3.6.6). Residential and employment growth is also encouraged downtown. As a result of such policies, there has been significant redevelopment in downtown Ottawa offering new mixed-use development, contributing to the area's vitality. Figure 11 provides an illustration of the current development applications in, and adjacent to, the study area. The City forecasts that, approximately 6,500

new dwelling units (or approximately 6 million new square feet of residential development) will be constructed in the Central Area by 2031.

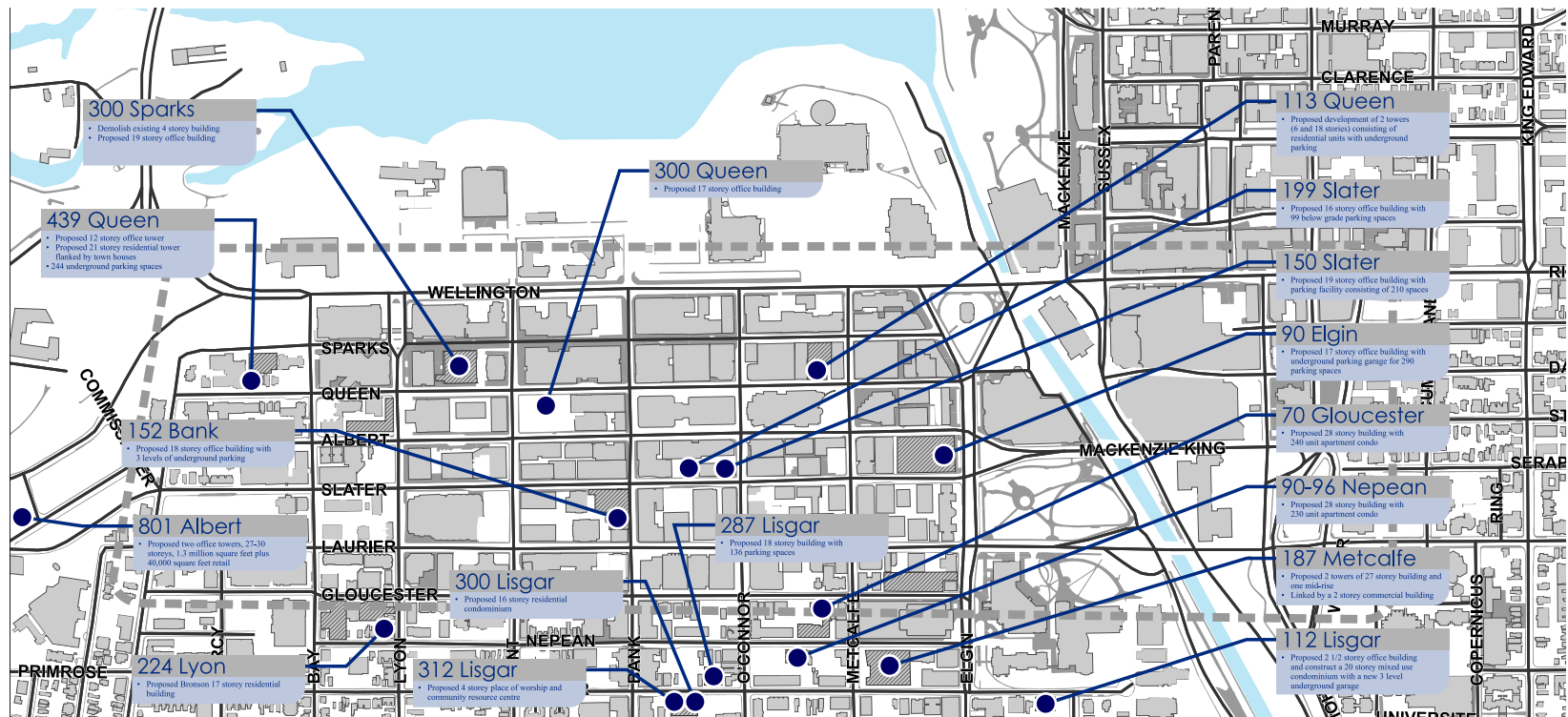


Figure 11: Recent Development Applications In and Adjacent to Study Area. Source: City of Ottawa.

## B.4 Transportation Network

### Pedestrians

Today, downtown Ottawa offers narrow street right-of-ways (18 to 20m), with the majority of space allocated to the roadway surface. An analysis of existing sidewalk and pedestrian spaces in the Study Area is provided in Figure 12.

While Sparks Street provides a pedestrian-only environment and wider sidewalks are found along Confederation Boulevard (Wellington and Elgin Streets), downtown Ottawa, in general, offers very narrow sidewalks to accommodate pedestrian levels. Some exceptions exist adjacent to the current BRT stops along Albert and Slater Streets. The width and quality of the sidewalks in downtown Ottawa will need to be enhanced to accommodate future demand as a result of the upcoming Confederation Line stations.

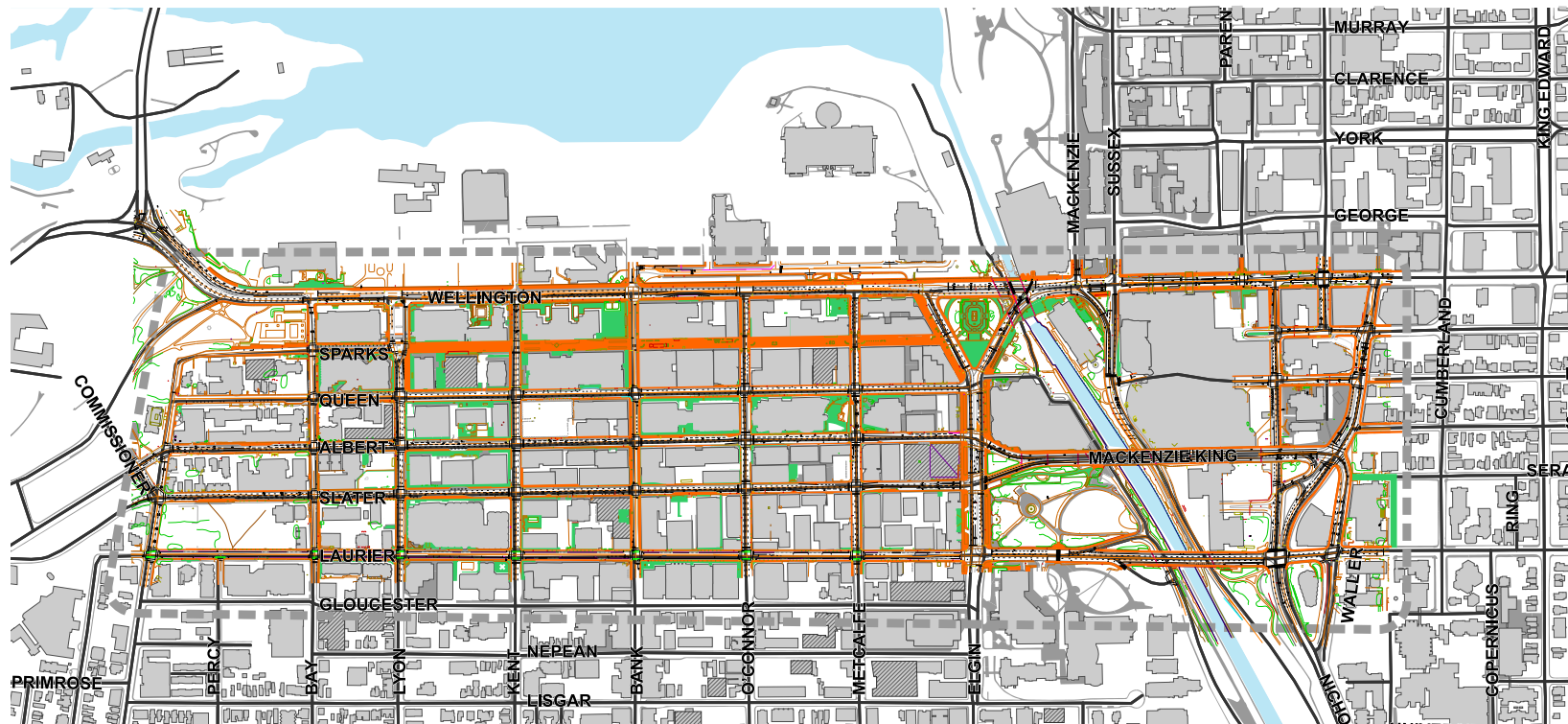


Figure 12: Existing Sidewalks and Associated Pedestrian Space in the Study Area. Source: Delcan, 2012.

Study Area —  
Sidewalk —  
Other Pedestrian Space on Adjacent Lands —

An analysis of pedestrian volumes across the Study Area revealed that the busiest pedestrian intersections are currently located along Metcalfe and Bank streets, south of Queen Street and north of Laurier Avenue. Other significant pedestrian crossings include the intersection of Wellington Street, Sussex Drive and Colonel By Drive, as well as most intersections along Queen, Albert and Slater streets (Figure 13). These busy pedestrian intersections correlate with existing bus stops and the route to major office buildings in downtown Ottawa.

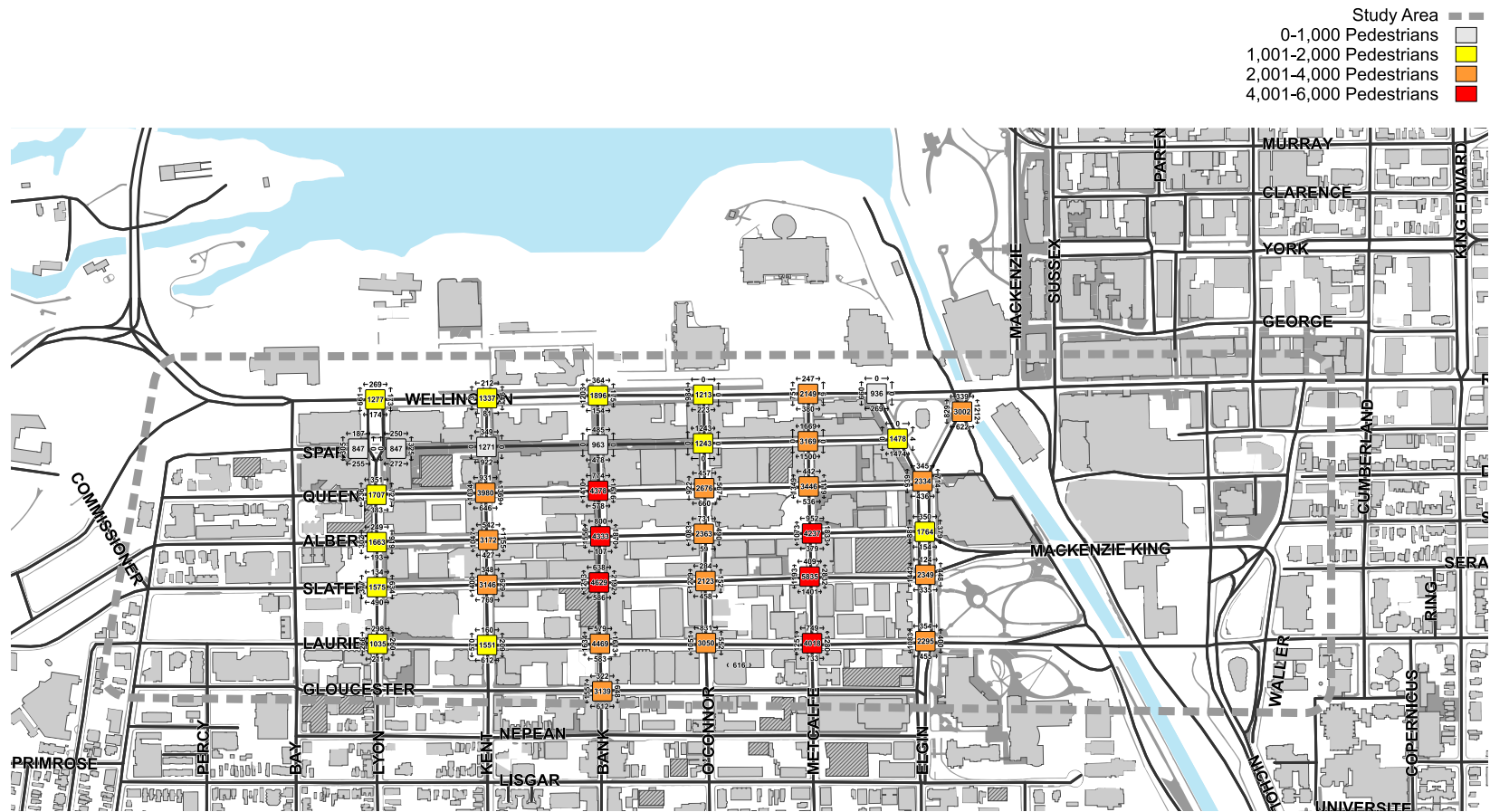


Figure 13: Pedestrian Volumes across Downtown Ottawa, P.M. Peak Period. Source: City of Ottawa.





Pedestrians in downtown Ottawa also have access to mid and through-block connections. These consist of indoor routes located on the ground level of office/commercial buildings, indoor routes located below or above grade in office/commercial buildings, and outdoor routes mostly via parking lots and laneways (Figure 14). Popular shortcuts, especially in winter, often have services and retail.

These mid and through-block connections greatly complement and enhance the outdoor walking routes and sidewalks that pedestrians in downtown Ottawa use.

The Downtown Moves study will ensure to integrate these routes in the overall plan to enhance the pedestrian environment in downtown Ottawa.

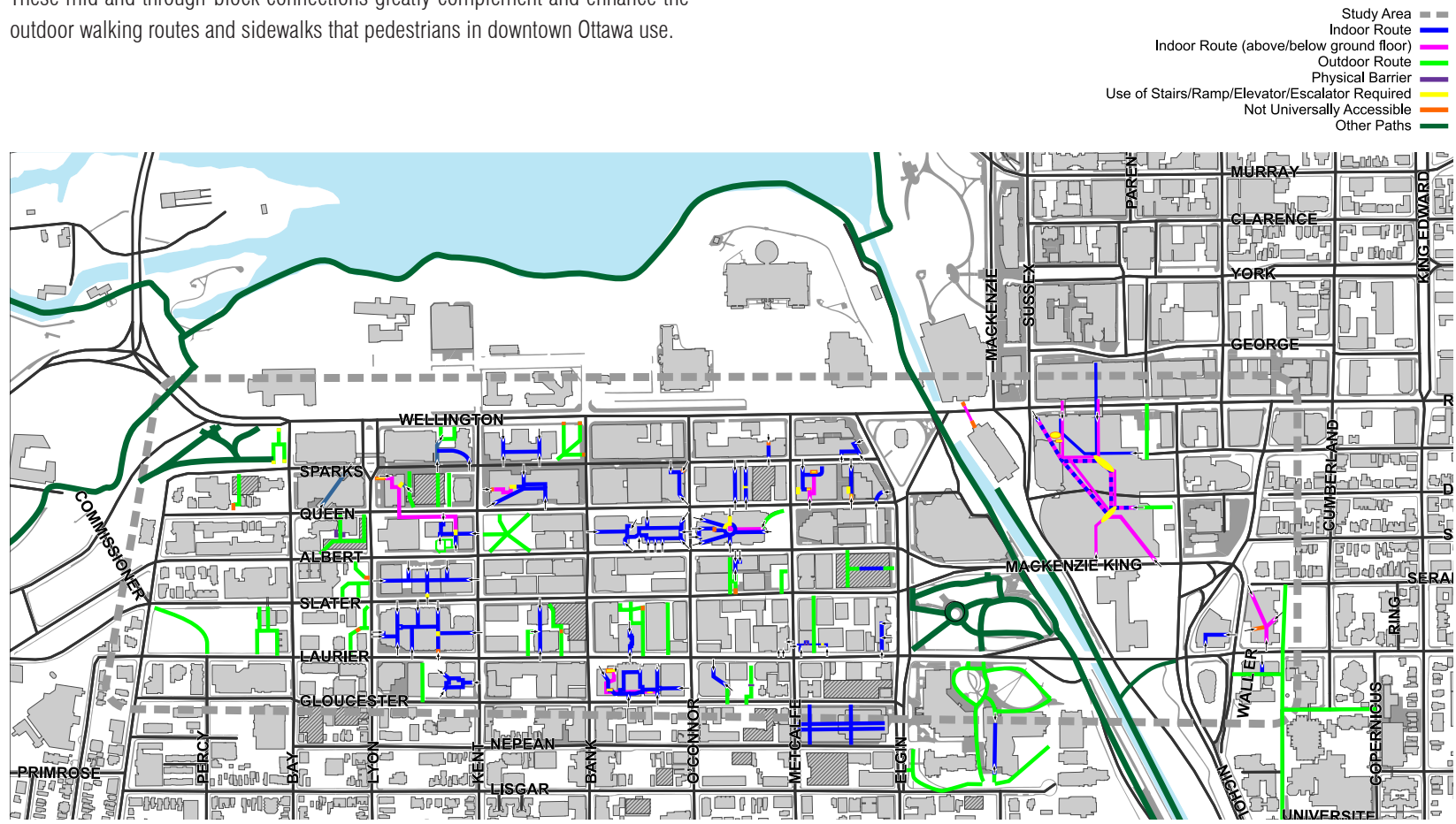


Figure 14: Downtown Ottawa Through-Block Connections. Source: Delcan, 2012.

## Cyclists

The existing cycling network across downtown Ottawa is comprised of dedicated, signed and segregated cycling routes (Figure 15). Dedicated (painted) cycling routes are found along Bay and Lyon streets as well as over the Mackenzie King Bridge. Signed (shared) cycling routes, making up the majority of the cycling network in the Study Area, exist on Slater, Albert, Queen, Bank, Elgin and Wellington streets. Two segregated one-direction routes are located on Laurier Avenue, constructed in 2012.

In addition, there are many programs and services in place to support and encourage cycling in downtown Ottawa. These include: Bixi bicycle-sharing program, free City of Ottawa bike-routes pocket map, CAN-BIKE safety courses and the Cycling Safety Evaluation Program (CSEP), amongst others. The City of Ottawa also established a Roads and Cycling Advisory Committee to provide advice and guidance on issues, policies and programs related to cycling.

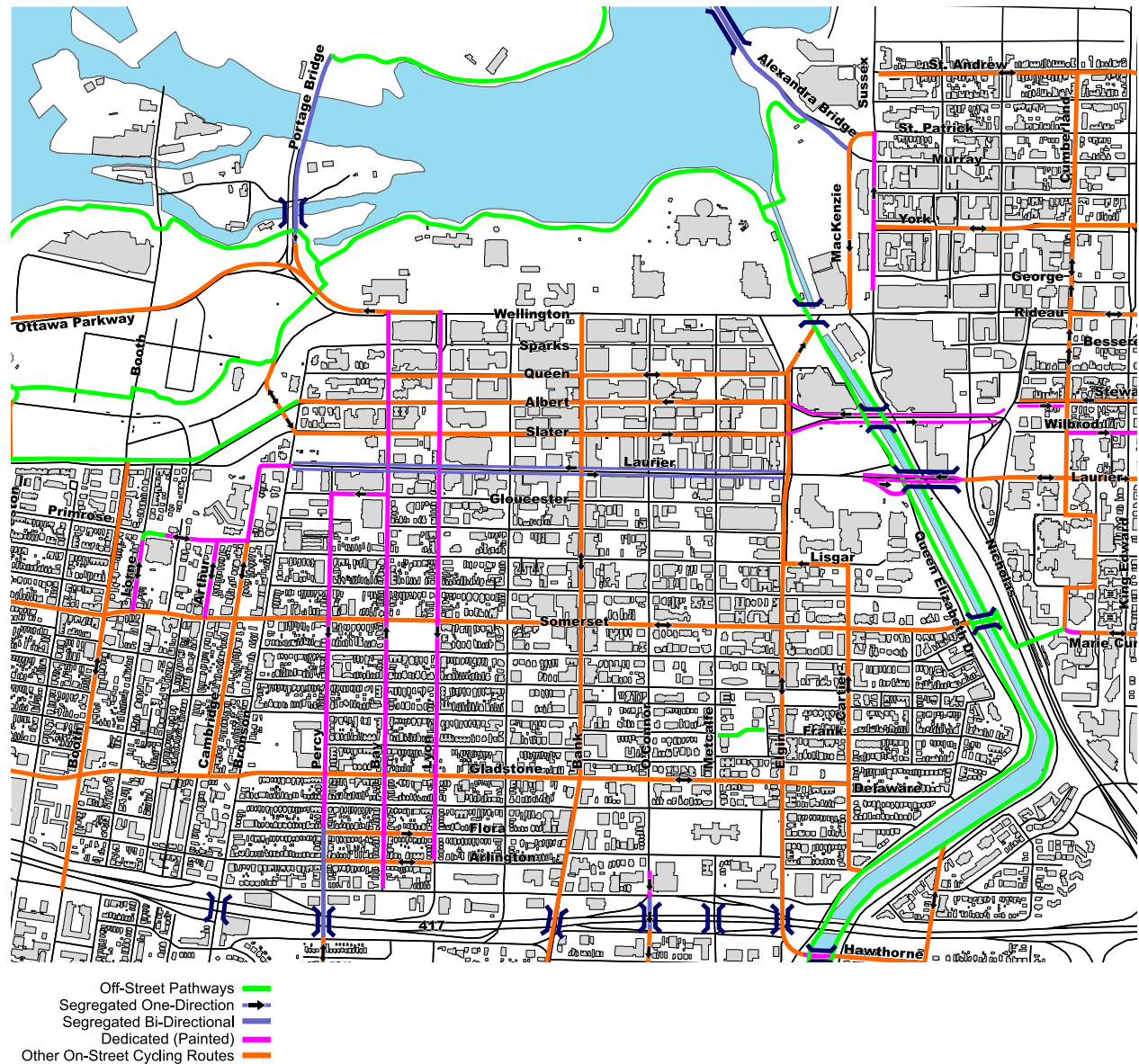


Figure 15: Bicycle Routes in Downtown Ottawa. Source: City of Ottawa.

## Transit

OC Transpo services within the Study Area include Transitway service (comprised of long distance local routes, rapid transit routes and express routes) using dedicated corridors and dedicated lanes along the Albert/Slater corridor, and local bus routes operating on other streets in the downtown area (primarily Rideau Street, Wellington Street, Bank Street, Bronson Avenue, Queen Street and Elgin Street). Local routes are structured to provide connections to services using the Transitway, other local routes, and major destinations the downtown.

Today, OC Transpo provides approximately 180 buses/hr in peak direction, in peak hour. This meets the needs of approximately 10,000 PPHPD (people per hour per direction) (source: OC Transpo). OC Transpo's 2031 Forecast Report indicates almost double the transit trips to downtown Ottawa during morning peak hour.

Société de transport de l'Outaouais (STO) services serving Gatineau Region are concentrated on the Rideau/Wellington Street corridor, with services running primarily inbound in the morning and outbound in the evening. STO buses enter/leave service via Cumberland or King Edward Avenue with a lay-up facility located at the north end of King Edward Avenue providing staging for outbound services. In 2011, there were approximately 120 STO buses in the peak direction during the week-day peak hour using the Rideau/Wellington Street corridor. One additional STO route (#21) ran on

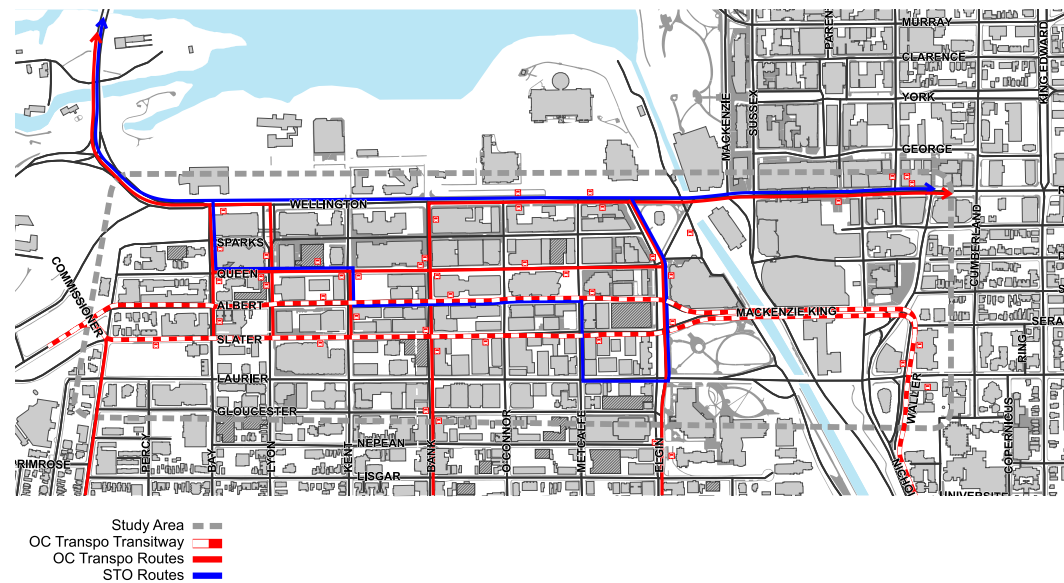


Figure 16: Existing Bus Routes and Stops in Downtown Ottawa. Source: OC-Transpo and STO.

a one-way (westbound) loop using Rideau, Elgin, Laurier, Metcalfe, Albert, Kent, Queen and Bay Street to connect downtown hotels with the Casino du Lac Leamy.

Private carriers serving communities located outside of the cities of Ottawa and Gatineau typically operate on the Albert/Slater corridor, with some eastbound services using Queen Street west of Elgin Street. These services primarily serve commuters and are generally limited in frequency with one or two trips occurring on each route during the peak hour.



## Automobile & Truck Activity

The road network within the Study Area is considered a grid, with the majority of the roads designated as arterial roads according to the Official Plan. The notable exceptions are Bay, Queen and Gloucester streets which are considered local streets.

The number of travel lanes on individual streets range between one lane and up to four lanes per direction during the commuter peak periods. During off-peak times, some of the travel lanes are used to accommodate on-street parking.

As shown in Figure 17 (One-Way and Two-Way Streets), the large majority of the streets in downtown Ottawa are one-way streets. Bank and Rideau Street, the few two-way streets found in the Study Area excluding Confederation Boulevard (Elgin and Wellington Streets), have primarily street-oriented businesses, are vibrant main streets and greatly contribute to an interesting pedestrian environment in downtown.

Much of the north-south vehicular travel is accommodated through a number of one-way streets that provide connectivity to/from the Highway 417 Corridor situated to the south (i.e., Lyon, Kent, O'Connor, Metcalfe streets). Two-way facilities providing north-south service include Bronson, Bank and Elgin streets. There are 13 northbound travel lanes and 13 southbound travel lanes. Peak hour traffic volumes on the north-south arterial streets

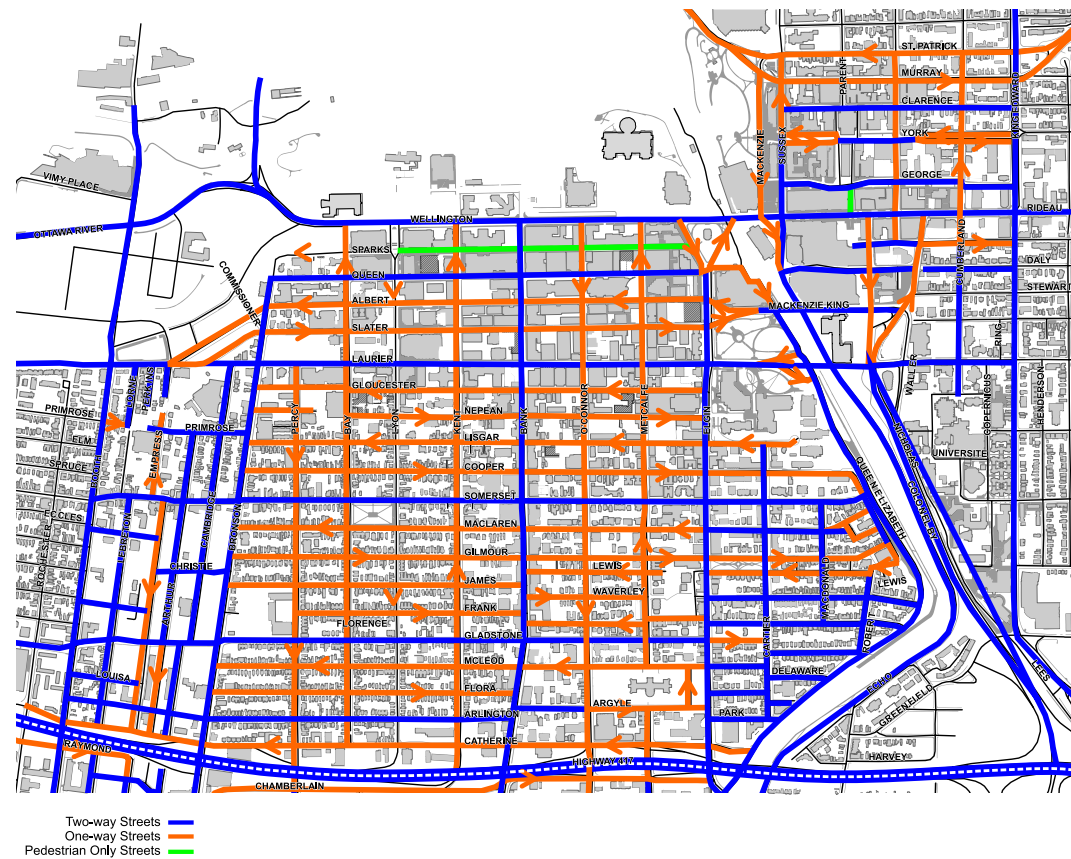


Figure 17: One-Way/Two-Way streets in Downtown Ottawa. Source: Delcan analysis.

currently range between 400 veh/h to 1,600 veh/h. Elgin Street and Bronson Avenue, located at the eastern and western extents of the study area, respectively, are noted to carry the greatest peak hour volumes. East of the Canal, the Nicholas-Waller Corridor form part of the City's Urban Truck Route, and carry a significant amount of the daily truck

traffic (more than 1000 trucks per day) compared to the balance of the roads in the downtown.

The number of one-way streets in the east-west direction is limited to the Albert and Slater couplet. There are seven eastbound travel lanes and seven westbound travel lanes. Peak hour traffic volumes

on the east-west arterial streets currently range between 500 veh/h to 2,000 veh/h. Wellington Street, located at the northern extent of the study area and most conveniently serves inter-provincial travel demand, is noted to carry the greatest peak hour volumes in the east-west direction.

Many of the study area streets are identified by the City of Ottawa as part of its Truck Route Network. These include portions of Wellington, Queen, Rideau, Albert and Slater, in the east/west orientation. In the north/south direction, Bronson, Kent, O'Connor, Metcalfe, Elgin, Nicholas and Waller are Truck Routes.

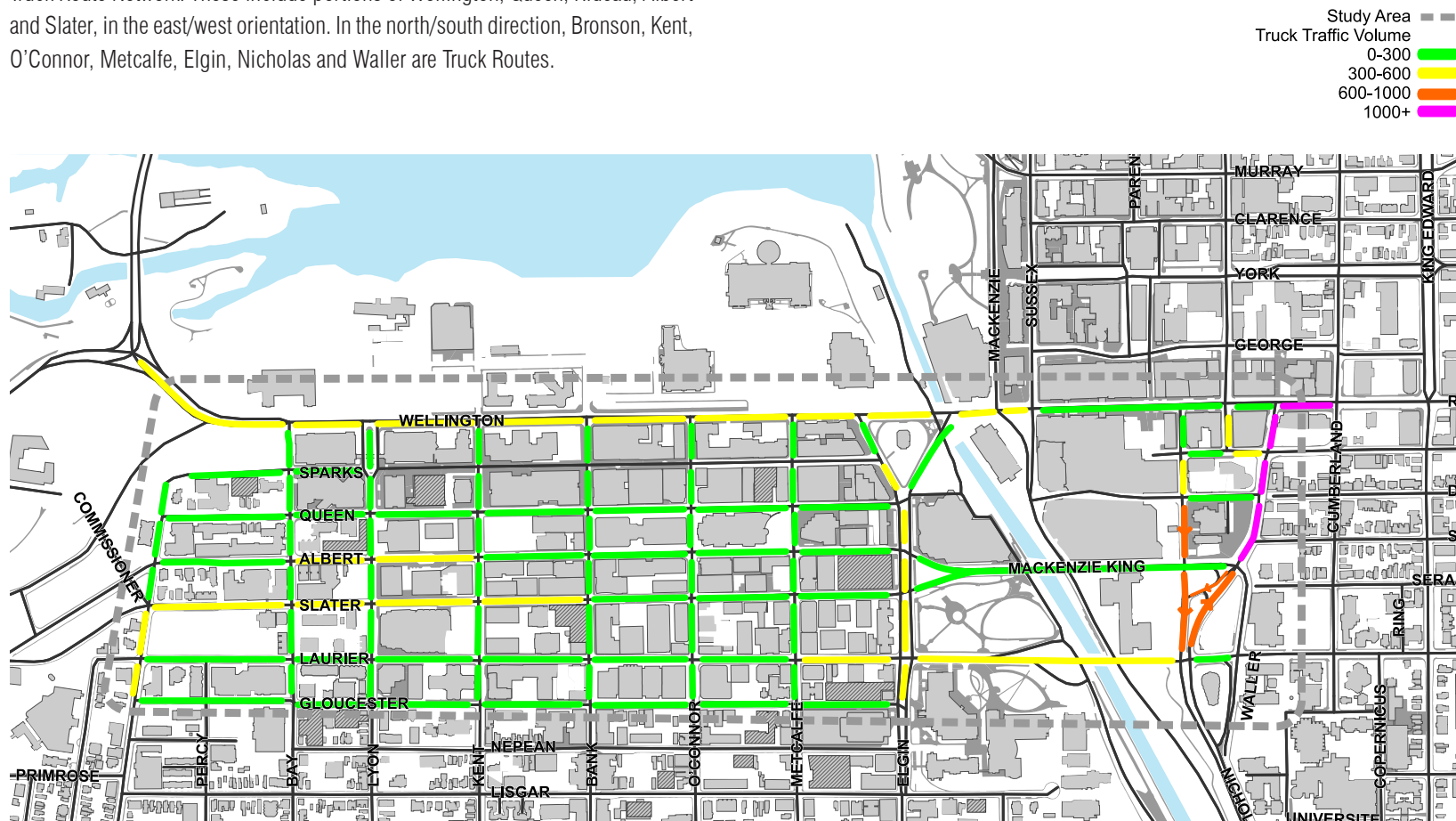


Figure 18: 8 Hour Truck Volumes through Downtown Ottawa. Source: Delcan analysis.

## Parking Supply and Loading

According to the Central Area Parking Study, there are approximately 20,000 off-street (structured and surface) parking spaces within the study area (west of the Canal only). The majority of the lots are private, with mid-block access driveways.

In terms of on-street parking, there are approximately 750 parking spaces and additional loading spaces that support the functionality of downtown uses. These are predominantly Pay and Display spaces. In addition, there are approximately 25 tour bus parking spaces or drop-off zones in the Central Area.

A number of taxi stands, and emergency service vehicle parking spaces are also distributed throughout the study area.

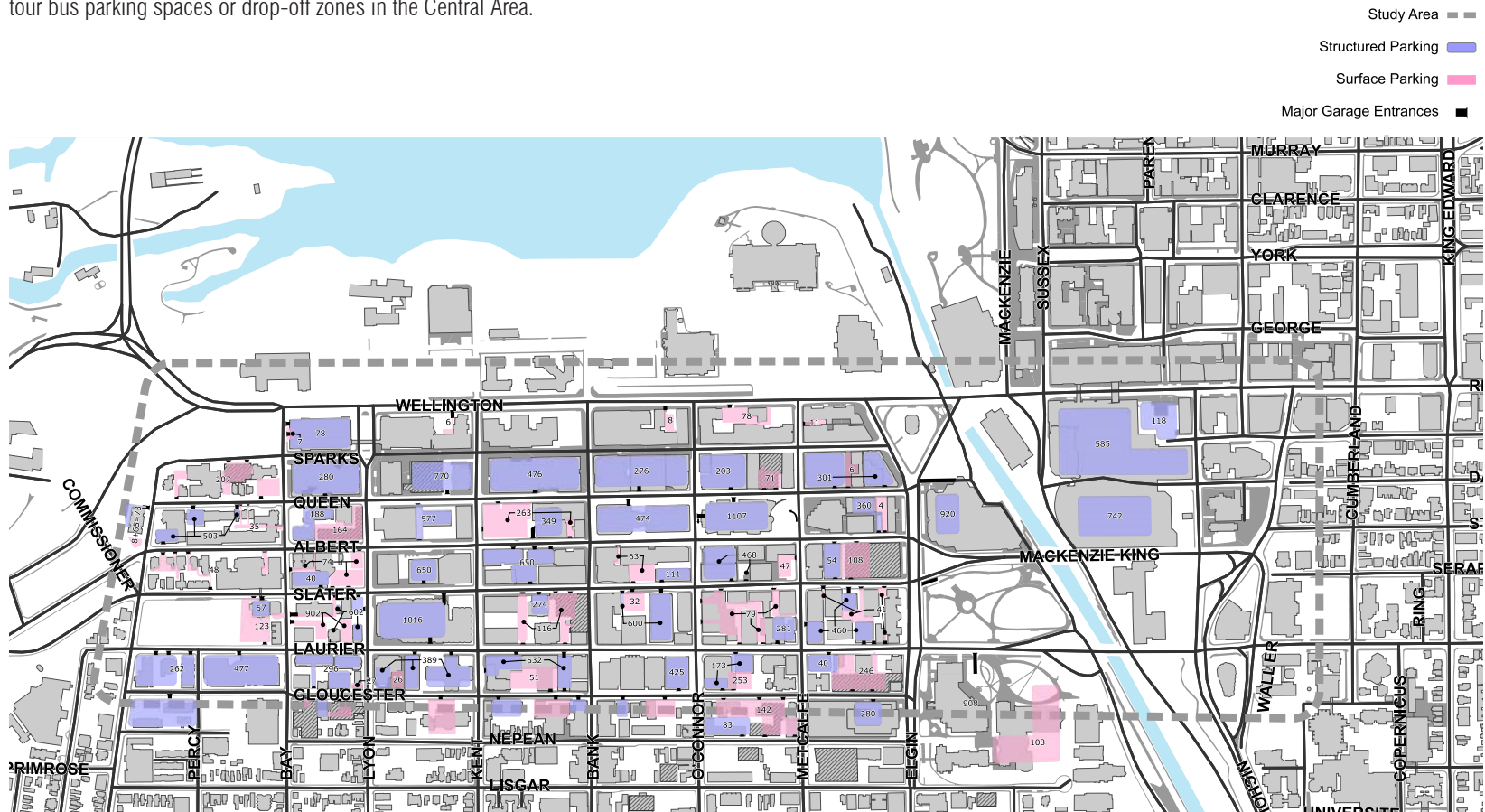


Figure 19: Off-Street Parking Supply in Downtown Ottawa. Source: Delcan analysis.

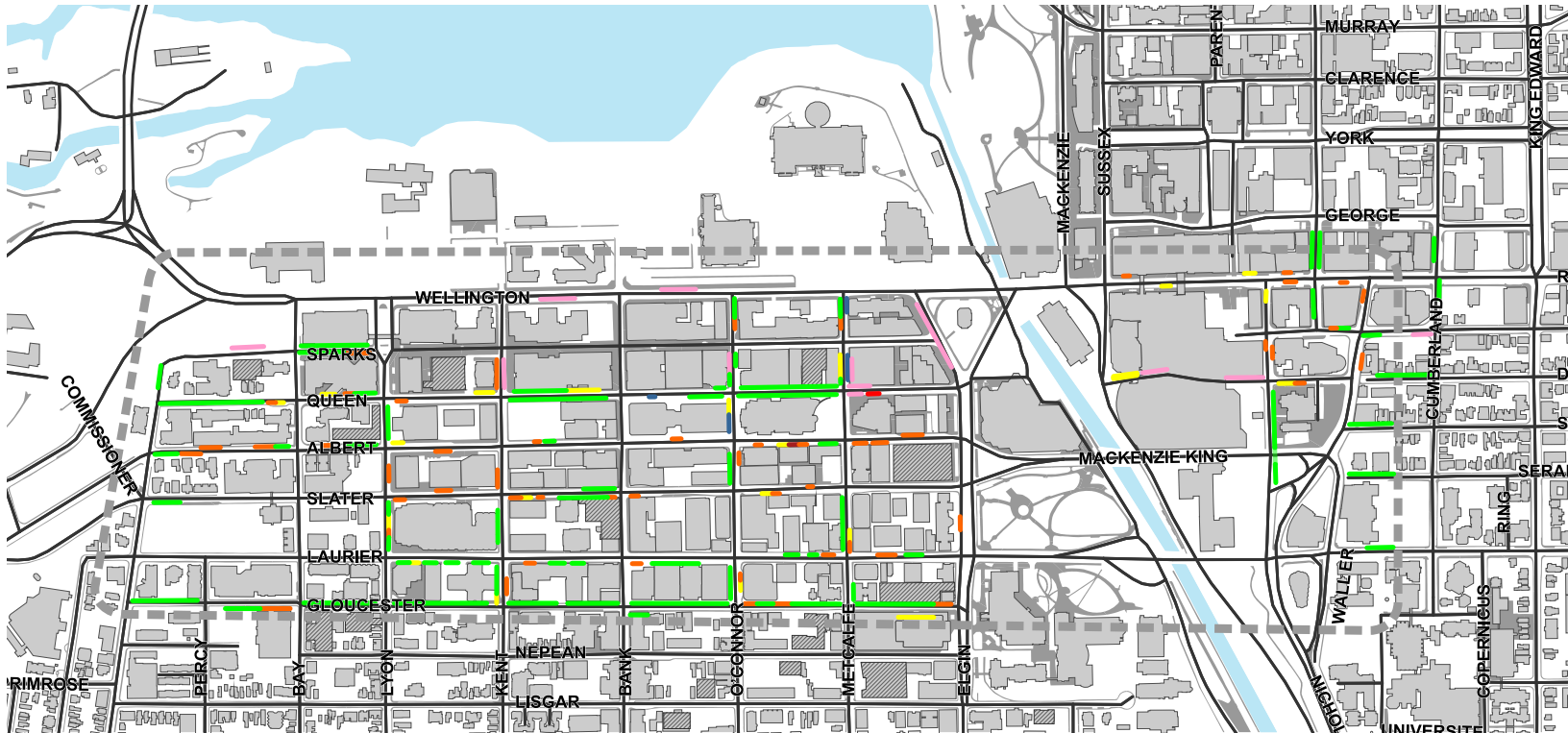


Figure 20: On-Street Parking Supply in Downtown Ottawa. Source: Delcan analysis.

- |                   |   |                 |   |
|-------------------|---|-----------------|---|
| Study Area        | — | Diplomatic Zone | — |
| On Street Parking | — | Taxi Zone       | — |
| Tour Bus Zone     | — |                 |   |
| Police Zone       | — |                 |   |
| Loading Zone      | — |                 |   |



## B.5 Urban Design

### Figure Ground: Buildings

- > Most of study area is built out.
- > Buildings fill their site, not fine-grained.
- > Downtown Ottawa is bordered by civic buildings.



Figure 21: Figure Ground: Buildings.

### Figure Ground: Streets & Open Space

- > 70Ha of open space (streets, parks, parking lots, midblock connections).
- > Typical block is 60m wide and 160-175m long.
- > Typical street spacing is 78-105m (N-S) and 180-195m (E-W).
- > Openings in the fabric - urban open space, parking.



Figure 22: Figure Ground: Streets & Open Space.





## Key Destinations

- > Key destinations frame downtown Ottawa, with major destinations within downtown Ottawa focused on the east.
- > Major shopping and entertainment destinations are also towards the east, while Sparks Street and Bank Street are destination corridors crossing downtown.
- > Civic uses around perimeter (including the Parliamentary Precinct) are international destinations.

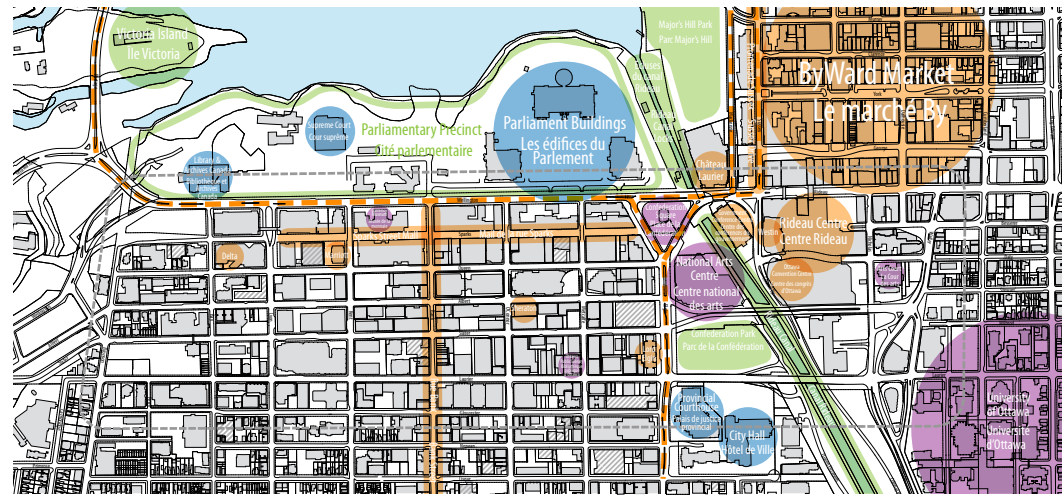


Figure 23: Key Destinations.

- Government / Gouvernement
- Cultural / Culturel
- Entertainment & Business / Divertissement & entreprises
- Parks & Open Space / Parcs & zones d'espaces verts
- Confederation Boulevard / Boulevard de la Confédération
- Parliamentary Precinct / Cité parlementaire

## Open at Night

- > The number and location of venues open at night are important factor for the vitality of a city and the perception of safety, however, few exist in the study area.
- > If there are few places open at night, people will go elsewhere, which is what happens today in downtown Ottawa.
- > Restaurants/bars/shops open at night are few and scattered, not clustered (and thus not able to provide a key destination).
- > This detracts from the livability of downtown Ottawa.

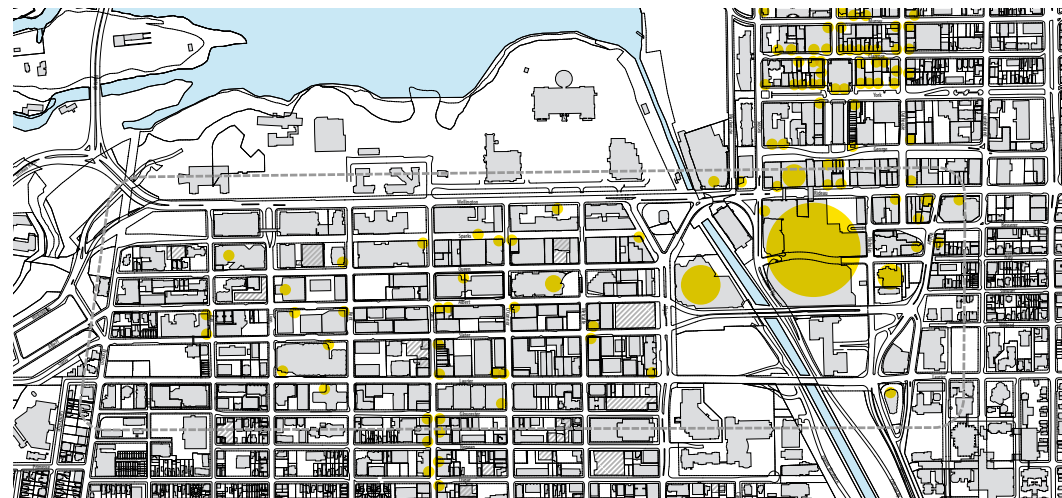


Figure 24: Open at Night.

- Open at Night / Ouvert le soir

## Parking Garage Entrances

- > There are approximately 90 entrance to parking garages in downtown Ottawa
- > Entrance to parking garages disrupt the sidewalk, however, most existing entrances need to be maintained.
- > Need to ensure pedestrians are given clear priority.

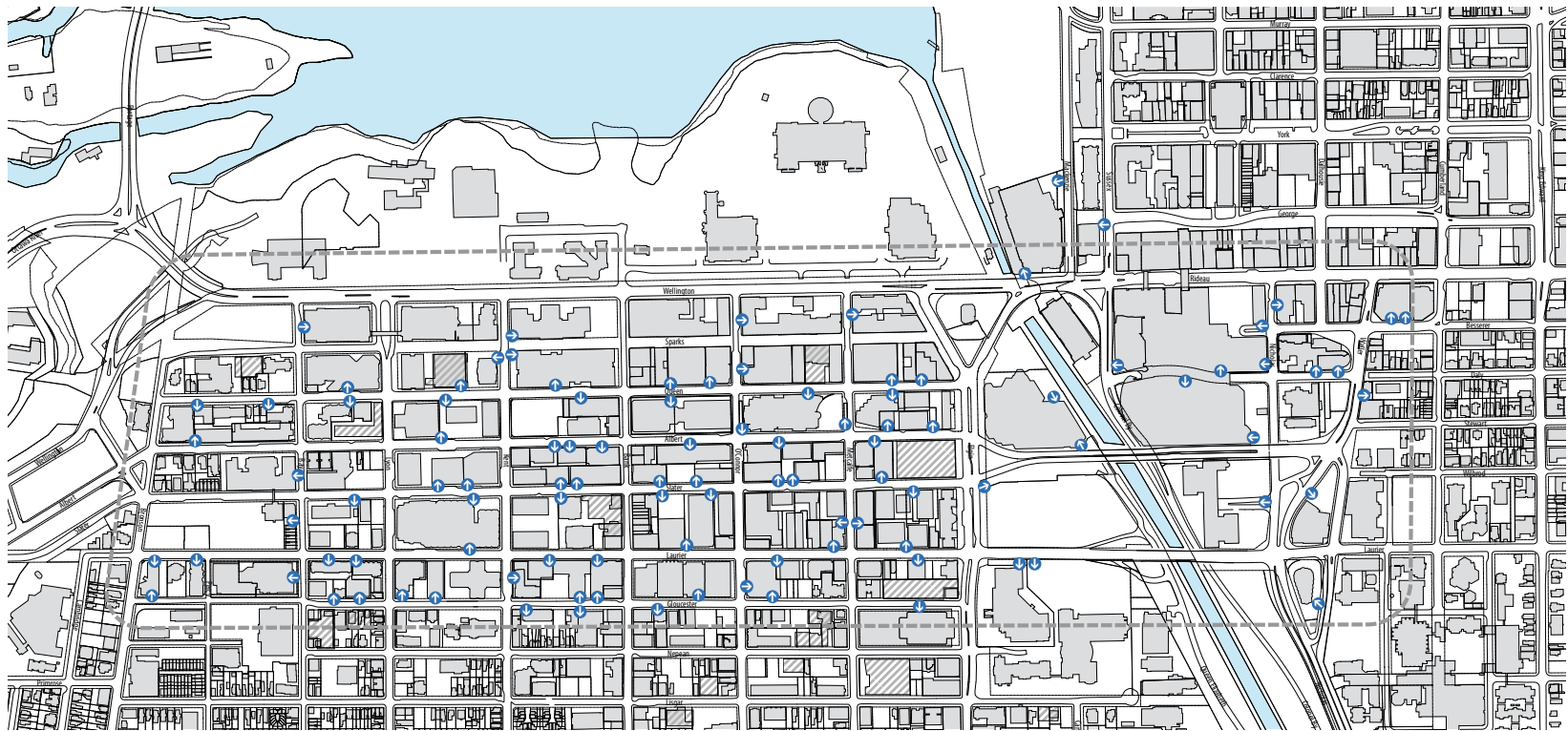
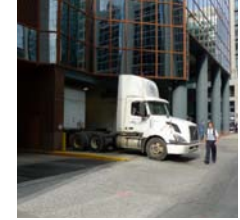


Figure 25: Parking Garage Entrances.

📍 Parking Garage Entrances / Entrées de garage

## Pedestrian Arcades & Easements

- > Intended to widen the width of sidewalk by using private frontage.
- > No block has a continuous system, limiting the value in inclement weather.
- > Some arcades are dark and detract from the pedestrian realm.

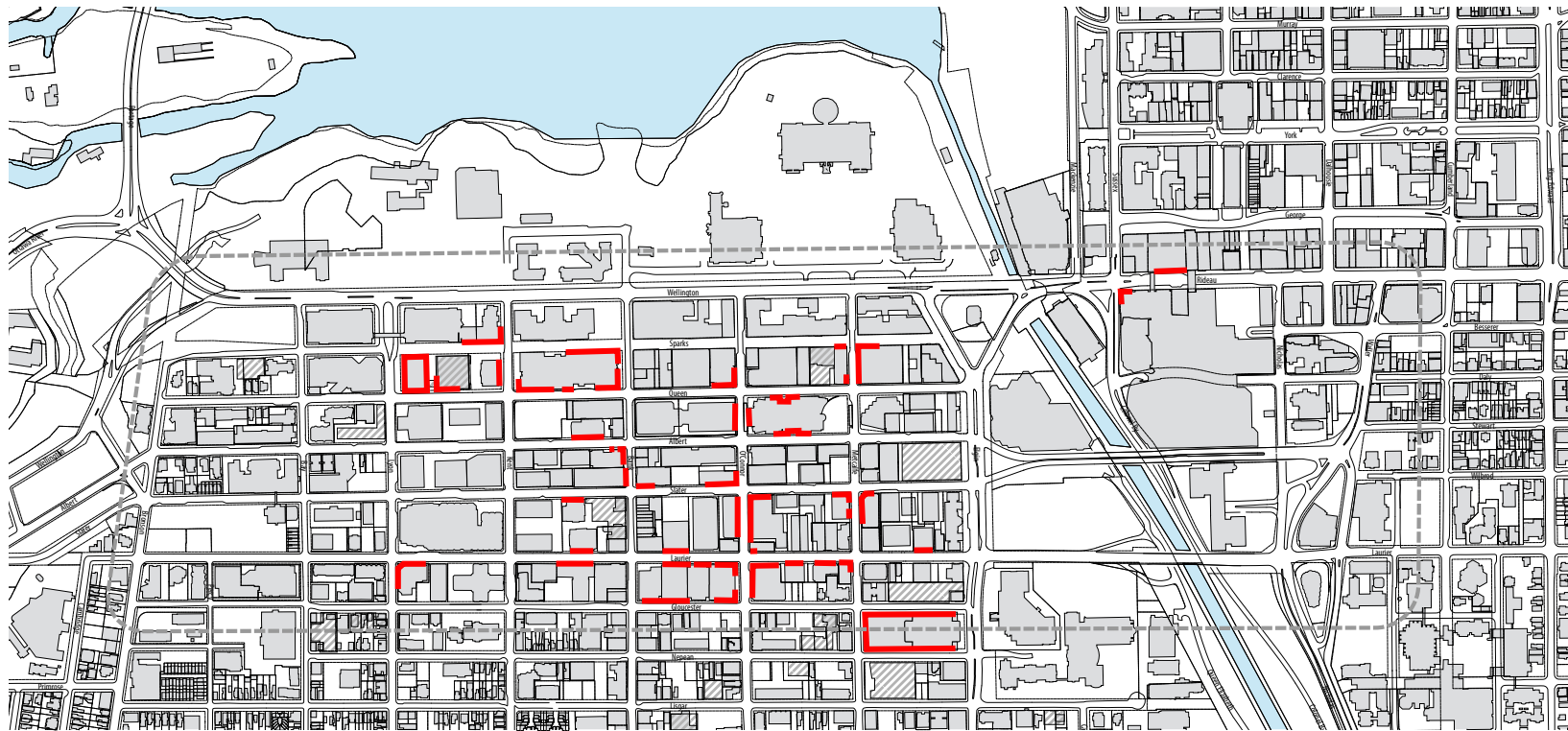


Figure 26: Pedestrian Arcades & Easements.

— Pedestrian arcades and overhangs / Piétons: arcades et porte-à-faux



## Parks & Open Space

- > Large public opens spaces exist around perimeter of downtown Ottawa.
- > Downtown Ottawa is bereft of high quality urban open space within the urban fabric.
- > Urban open space and parks are not well connected.

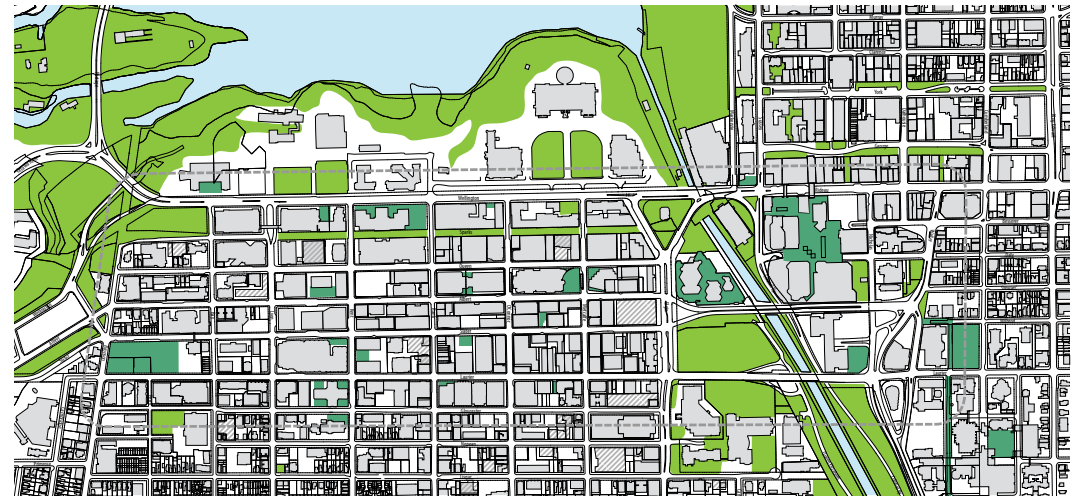


Figure 27: Parks & Open Space.

Public open space (parks, plaza, pedestrian malls, and green spaces, etc.) / Espaces publics (parcs, places, mails, zone d'espaces verts, etc)  
 Semi-public Open Space / Espaces semi-publics

## Trees

- > Tree species are typical for urban areas (eg. Lindens, Honey Locusts, Norway Maples), but do nothing to address biodiversity.
- > Trees are far-spaced, with no hope of canopies connecting.
- > Trees have limited soil volumes, connected soil volumes, isolated soil pits.
- > Higher maintenance species and/or systems.

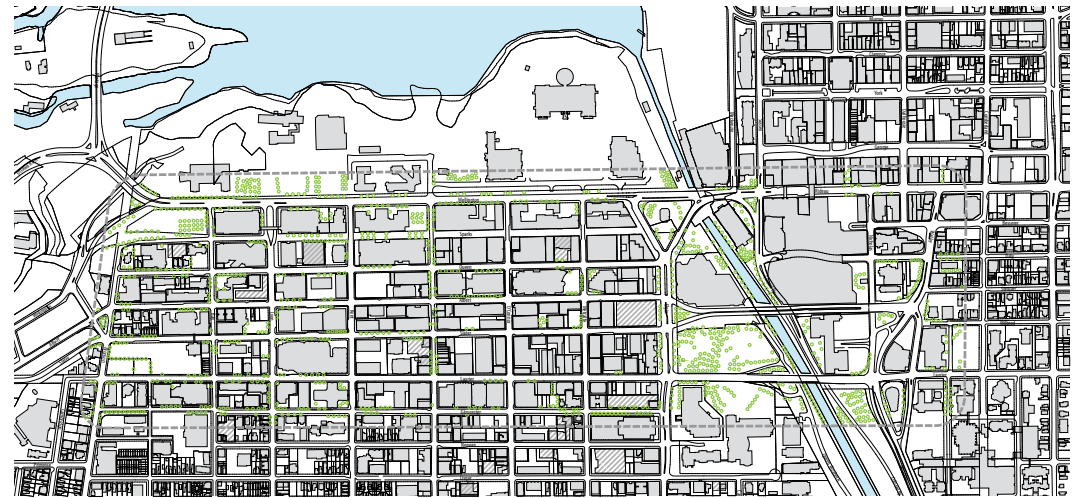


Figure 28: Trees.

Tree Location / L'emplacement des arbres



## Retail Uses

- > Retail uses at grade are essential ingredients to creating an attractive, vibrant, pedestrian realm.
- > Windows, doors, articulated facades, a variety of functions help to create a visually stimulating environment.
- > There are large gaps in the continuity of active frontages.
- > West third of downtown Ottawa has virtually no active ground floor uses. This area is mostly residential with apartment building entrances at ground level.

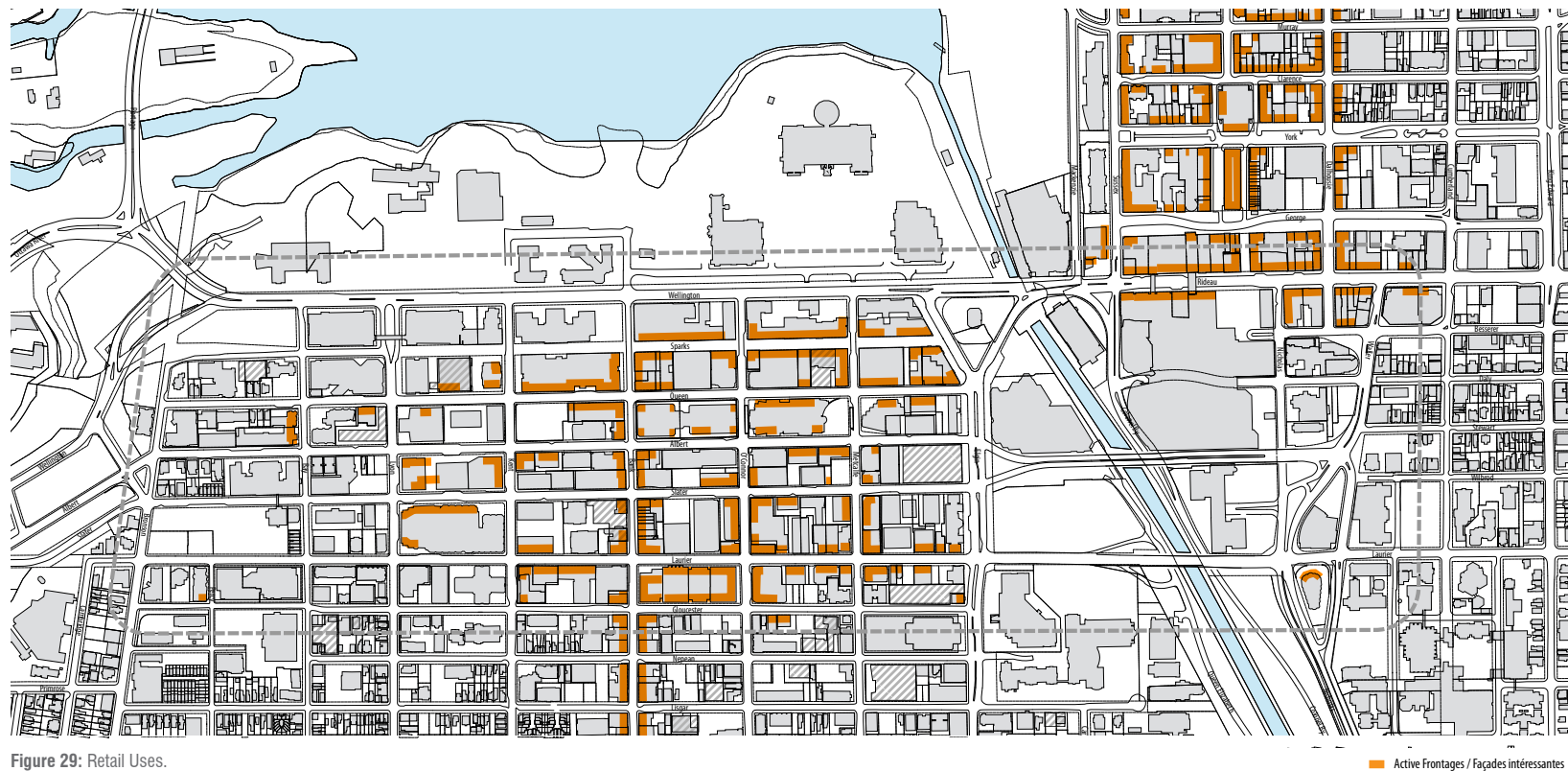


Figure 29: Retail Uses.



### Seating/Cafe Patios

- > Outdoor seating/cafe patios are an ingredient to creating a vibrant public realm.
- > Currently, the heavy bus traffic/noise/congestion sterilizes frontages and eliminates the opportunity to create appealing streets.
- > Outdoor cafes are concentrated on Sparks St.



### Public Art

- > The City requires 1% of the construction costs of new public infrastructure projects with budgets over \$2 million towards the creation of public art.
- > There is an opportunity to extend the program to private development as is the protocol in many urban centres.

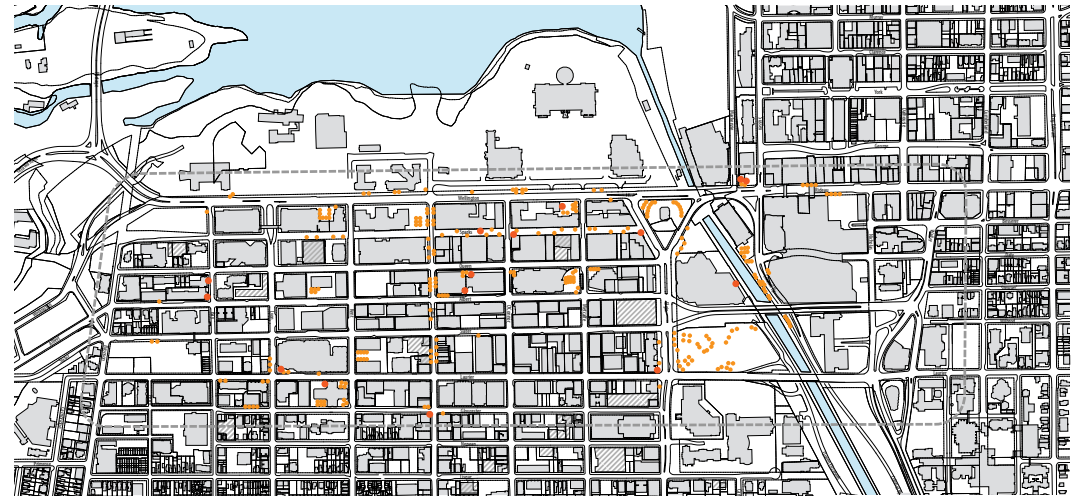


Figure 30: Seating/Cafe Patios.

● Seating & Bench / Sièges & bancs  
 ● Cafe-style Patio / Petites terrasses de cafés

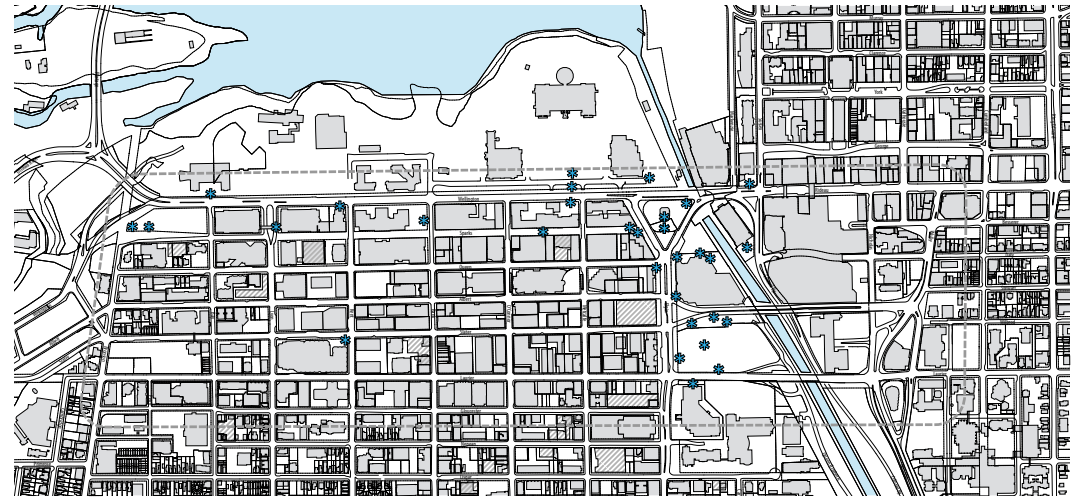


Figure 31: Public Art.

★ Public art location / Emplacement de l'art public

## B.6 Street Inventory & Analysis

Today, sidewalks in downtown Ottawa are narrow, have few amenities, and are in subpar condition, as demonstrated in the analysis provided in the previous sections. With narrow right-of-ways, one of the few ways to increase the space for pedestrians is to reduce the amount of space given to motorized vehicles. Ottawa has had some successes in other neighbourhoods in reducing the number and/or width of travel lanes, and rationalizing on-street parking and loading, such as on Bank Street and Wellington Street West.

Priority for pedestrians is of vital importance in pursuing a balance in the streets of downtown Ottawa. While other modes may require space within the street right-of-way, all users become pedestrians at some point during their trip, so making priority for pedestrians is making priority for all street users. According to the vision for the Core Area in the Official Plan *“Pedestrians will enjoy a safe, secure, comfortable, enriched and enhanced street environment”*. The vision also states that the image and identity of the Core will be significantly enhanced through an “urban design renaissance”.

Downtown Ottawa has many of the characteristics of a typical North American Central Business District. Many of the buildings are large, nondescript office buildings with heights ranging up to 30 storeys. Most buildings have little mix of uses, few entrances and limited active uses at grade. Retail activity is often located inside larger buildings, not facing the street. Blank walls facing the street are common. As a result, street life and vibrancy has suffered in downtown, particularly in the evening. Tall, sterile buildings impose their scale on the narrow downtown streets. As described in the *Downtown Ottawa Urban Design Strategy* (2003), buildings typically occupy most of the building envelope and footprint, with minimal setbacks and architectural detailing. Height controls cannot be revised and will continue to affect the style and type of development.

### Official Plan. The Core. Vision.

*“The height of new buildings will ensure the visual integrity and symbolic primacy of the Parliament Buildings and other national symbols as seen from Confederation Boulevard, reflect an increased sensitivity in design, provide a sense of human scale and create pedestrian interest.”*

The images over the next pages represent the range of urban conditions found along downtown streets. The following are common characteristics (with the exception of Bank and Rideau streets):

- > Few or no active uses at grade
- > No furnishings
- > No consistency or interest in sidewalk materials
- > No pedestrian lighting
- > No trees and/or landscape



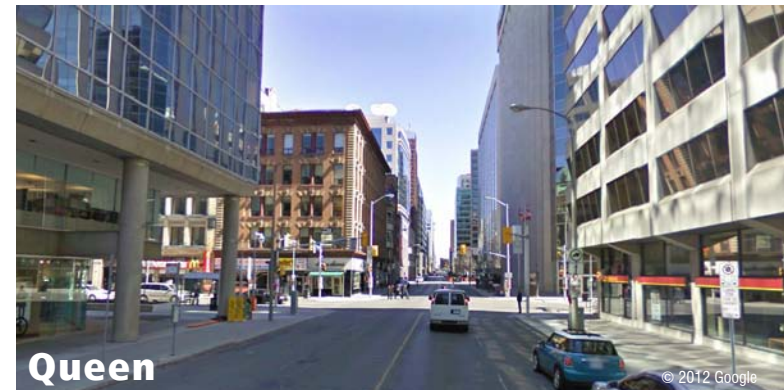
### Sparks Street

- Land Use and Building Types:** predominantly commercial space, mid-rise commercial/office buildings.
- Transportation Role:** pedestrian mall.
- Cycling Facilities:** pedestrian mall, no cycling allowed.
- Transit Role:** no transit routes.
- Facades and Frontages:** primarily street-oriented businesses, some inactive frontages.



### Queen Street

- Land Use and Building Types:** predominantly office space, mid- to high-rise commercial/office buildings.
- Transportation Role:** local street, two-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** local OC Transpo and part of STO bus routes.
- Facades and Frontages:** primarily inactive frontages, some street-oriented businesses.



### Albert Street

- Land Use and Building Types:** predominantly office space, high-rise commercial/office buildings.
- Transportation Role:** arterial Road, one-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** Part of the OC Transpo Transitway.
- Facades and Frontages:** primarily inactive frontages.







### Slater Street

- Land Use and Building Types:** predominantly office space, high-rise commercial/office buildings.
- Transportation Role:** arterial road, one-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** part of the OC Transpo Transitway.
- Facades and Frontages:** primarily inactive frontages.

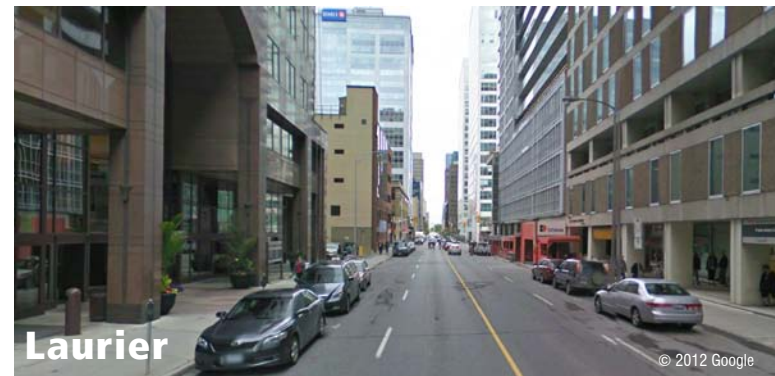


© 2012 Google

Slater

### Laurier Street

- Land Use and Building Types:** predominantly office space, mid- to high-rise commercial/office buildings (eastern end) and residential, high-rise condominium buildings (western end).
- Transportation Role:** arterial road, two-way.
- Cycling Facilities:** segregated bi-directional bicycling lanes.
- Transit Role:** part of STO bus route.
- Facades and Frontages:** primarily inactive frontages, some street-oriented businesses.

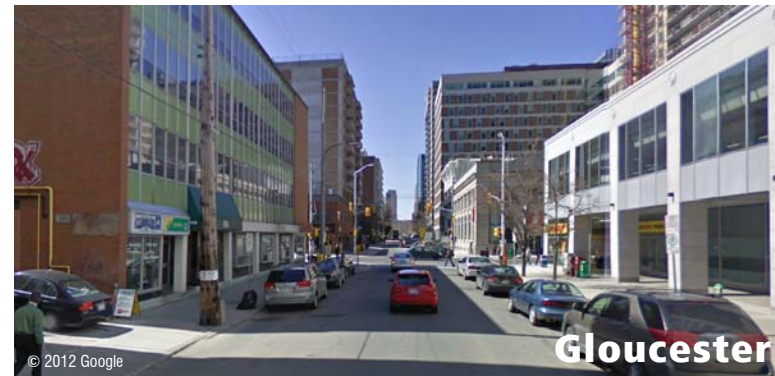


Laurier

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### Gloucester Street

- Land Use and Building Types:** mix of residential (western end), commercial/office (eastern end) and institutional (across the street), mid- to high-rise office and condominium buildings.
- Transportation Role:** local street, one-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** no transit routes.
- Facades and Frontages:** office and residential building entrances at ground level.



© 2012 Google

Gloucester



### Rideau Street

- Land Use and Building Types:** predominantly commercial with some residential space, high-rise commercial and condominium buildings.
- Transportation Role:** arterial road, two-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** major OC Transpo and STO bus routes.
- Facades and Frontages:** primarily street-oriented businesses, some inactive frontages.



### Elgin Street

- Land Use and Building Types:** predominantly office space, high-rise buildings (north of Lisgar Street) and mix commercial and residential, low-rise buildings (south of Lisgar Street).
- Transportation Role:** arterial road, part of Confederation Boulevard, two-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** local OC Transpo and part of STO bus routes.
- Facades and Frontages:** primarily inactive frontages (north of Lisgar Street).



### Metcalfe Street

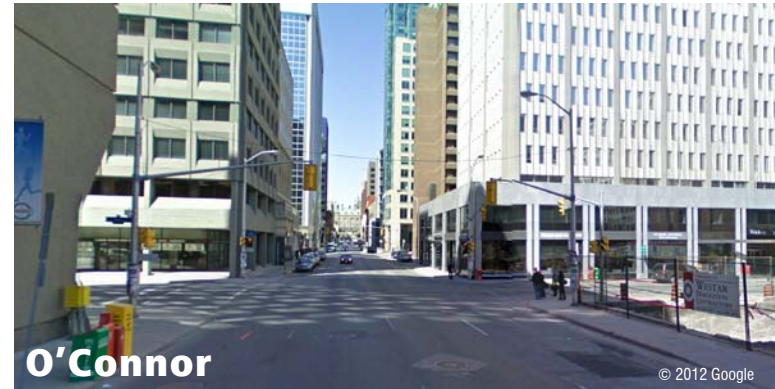
- Land Use and Building Types:** mix of residential (southern end), commercial/office (northern end) and institutional, mid- to high-rise office buildings.
- Transportation Role:** arterial road, one-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** part of STO bus route.
- Facades and Frontages:** primarily inactive frontages.





## O'Connor Street

- Land Use and Building Types:** mix of residential (southern end), commercial/office (northern end), mid- to high-rise office buildings.
- Transportation Role:** arterial road, one-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** no bus routes.
- Facades and Frontages:** primarily inactive frontages.



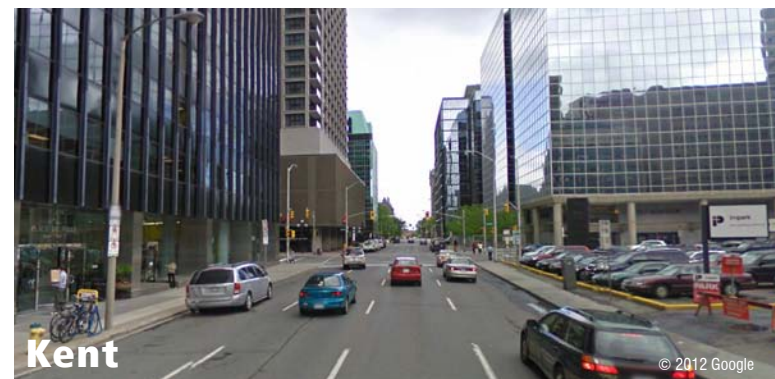
## Bank Street

- Land Use and Building Types:** commercial and office space, low-rise buildings.
- Transportation Role:** arterial road, two-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** local OC Transpo bus routes.
- Facades and Frontages:** primarily street-oriented businesses, some inactive frontages.



## Kent Street

- Land Use and Building Types:** office space, high-rise office buildings.
- Transportation Role:** arterial road, one-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** some local OC Transpo and part of STO bus routes.
- Facades and Frontages:** primarily inactive frontages.





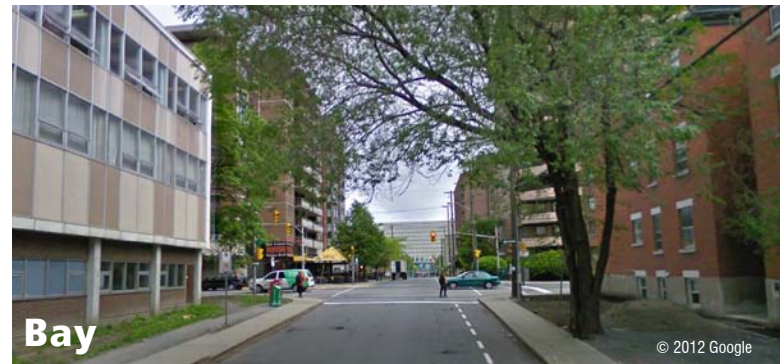
### Lyon Street

- Land Use and Building Types:** office space, high-rise buildings and surface parking lots.
- Transportation Role:** arterial road, one-way (two-way from Sparks to Wellington street).
- Cycling Facilities:** dedicated bike lanes.
- Transit Role:** some local OC Transpo bus routes.
- Facades and Frontages:** primarily inactive frontages.



### Bay Street

- Land Use and Building Types:** predominantly residential space, mid-rise condominium buildings.
- Transportation Role:** local street, one-way.
- Cycling Facilities:** dedicated bike lanes.
- Transit Role:** some local OC Transpo and part of STO bus routes.
- Facades and Frontages:** entrance to condominium buildings at ground level.



### Bronson Avenue

- Land Use and Building Types:** predominantly residential space, single detached, row-homes and low-rise condominium buildings.
- Transportation Role:** arterial road, two-way.
- Cycling Facilities:** no bicycle routes.
- Transit Role:** local OC Transpo bus routes.
- Facades and Frontages:** primarily inactive frontages.





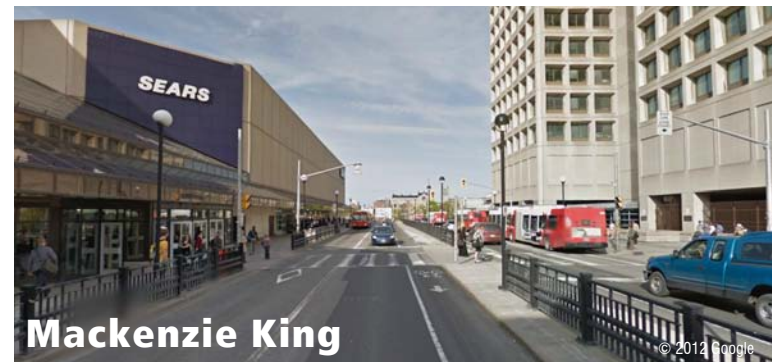
### Wellington Street

- Land Use and Building Types: institutional, office and open space, low-rise buildings.
- Transportation Role: arterial Road, part of Confederation Boulevard, two-way.
- Cycling Facilities: no bicycle routes.
- Transit Role: major OC Transpo and STO bus routes.
- Facades and Frontages: primarily inactive frontages.



### Mackenzie King Bridge

- Land Use and Building Types: commercial, office, provides view vista.
- Transportation Role: arterial road, two-way.
- Cycling Facilities: bidirectional cycling facility.
- Transit Role: major OC Transpo route, vital connection of Transitway.
- Facades and Frontages: entrance to Mackenzie King Station and Rideau Centre.



### Nicholas Street

- Land Use and Building Types: institutional, office space, hotel, commercial.
- Transportation Role: arterial road, part of inter-provincial truck route, one-way between Daly and Laurier, otherwise two-way.
- Cycling Facilities: no bicycle routes.
- Transit Role: no bus routes, but provides bus lay-up space.
- Facades and Frontages: street-oriented businesses north of Daly, primarily inactive frontages south of Daly.





### Waller Street

- Land Use and Building Types: institutional, high-rise residential, some low-rise commercial.
- Transportation Role: arterial road, two-way (one-way south of Mackenzie King), inter-provincial truck route.
- Cycling Facilities: no bicycle routes.
- Transit Role: some local OC Transpo bus routes.
- Facades and Frontages: primarily inactive frontages.



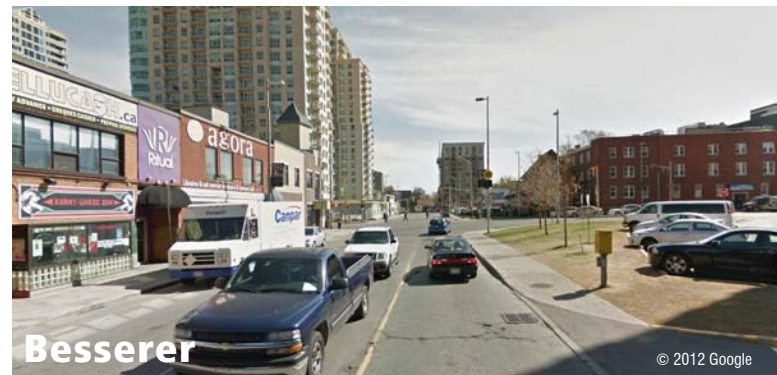
### Daly Street

- Land Use and Building Types: institutional, hotel.
- Transportation Role: local road, two-way, services and loading.
- Cycling Facilities: no bicycle routes.
- Transit Role: no bus routes.
- Facades and Frontages: primarily inactive frontages.



### Besserer Street

- Land Use and Building Types: commercial, high-rise condominium buildings, surface parking.
- Transportation Role: arterial road (from Nicholas to Cumberland), two-way west of Waller, one-way east of Waller.
- Cycling Facilities: no bicycle routes.
- Transit Role: some local OC Transpo bus routes.
- Facades and Frontages: some street-oriented businesses, but primarily inactive frontages.





### Stewart Street

- Land Use and Building Types:** predominantly residential space, low-rise rowhomes, and single detached space.
- Transportation Role:** local street, one-way.
- Cycling Facilities:** contraflow bicycle lane west of Cumberland, dedicated bike lane east of Cumberland.
- Transit Role:** no bus routes.
- Facades and Frontages:** entrance to residential buildings at ground level.



### Wilbrod Street

- Land Use and Building Types:** institutional, low to mid-rise residential.
- Transportation Role:** local street, one-way, connects to Séraphin-Marion Private.
- Cycling Facilities:** dedicated bike lane.
- Transit Role:** no bus routes.
- Facades and Frontages:** entrance to residential buildings at ground level.





## Appendix C Review of Associated Plans, Studies & Projects





STUDY/INITIATIVE	SALIENT RECOMMENDATIONS
<p><b>Choosing Our Future (City of Ottawa)</b> Completed in 2011</p>	<ul style="list-style-type: none"> <li>• Walking, cycling, and transit are residents’ first choices for transportation.</li> <li>• Walking, cycling and transit mobility can be enhanced by electronic communications, good planning and urban design.</li> </ul>
<p><b>Rideau Street Vision Statement and Guiding Principles (City of Ottawa)</b> Approved by City Council in August 2011.</p>	<p>Downtown Rideau St will be a commercial ‘high street’ destination that:</p> <ul style="list-style-type: none"> <li>• Serves pedestrians as the priority over trucks and buses;</li> <li>• Is recognized and accepted as Ottawa’s High Street that includes on-street parking, evenings and week-ends, to attract the lucrative car owner customer and support the night-time economy requirement of the cultural hub;</li> <li>• Provides traffic calming by way of continuous, upgraded sidewalks and on-street parking on Rideau St evenings and week-ends;</li> <li>• Has inviting pedestrian links between the theatre and arts community, the ByWard Market, the Ottawa Convention Centre, Arts Court, the Ottawa Little Theatre, the University of Ottawa, condos and adjacent neighbourhoods such as Sandy Hill and Lowertown;</li> <li>• Has appropriate types of public parking that are safe and convenient with the right mix of on-street parking and short-term, metered parking to support the cultural and night-time economy;</li> <li>• Is a flexible street that can be adjusted to accommodate special occasions/needs as they arise;</li> <li>• Has an uncluttered and beautiful streetscape with inviting and special pedestrian-friendly lighting that also lights building façades and street trees;</li> <li>• Has buried wires and no hydro poles in the sidewalks;</li> <li>• Is treated as a ‘gateway’ and transition to the nation’s Capital Hill and that the city maintains at the same standard as the NCC’s standard of care of the parliamentary district.</li> <li>• Diverts truck traffic and inter-provincial buses to alternate routes;</li> <li>• Balances competing interests between pedestrians, bikes, cars and buses so that it is easy to move in, around, and between, various modes of travel;</li> <li>• Designs the new LRT station to showcase arts and heritage.</li> </ul>
<p><b>Rideau Street Urban Design Study (City of Ottawa)</b> Launched in November 2007. Evolved into the “Rideau Street Vision and Guiding Principles” document (above).</p>	<ul style="list-style-type: none"> <li>• Rationalize the space allocated to the demands of the various functions of the street, including public transit.</li> <li>• Transit facilities (shelters and platforms) to be upgraded.</li> <li>• New street furnishings and public art would enhance the environment.</li> </ul>



<p><b>Downtown Ottawa Urban Design Strategy: Downtown West Precinct (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>Downtown West Precinct:</b></p> <ul style="list-style-type: none"> <li>• Ensure that the Western Downtown Precinct, LeBreton Flats and the Business Precinct are well connected through their road networks, open space systems and pedestrian linkages.</li> <li>• A new north-south street or pedestrian connection could be introduced between Laurier Ave and Albert St, through the blocks between Bay and Bronson. Street connections between the upper quarter and the lower quarter need to be strengthened.</li> <li>• Introduce a programme of streetscape improvements and street tree planting along Laurier and Slater St between Bronson and Bay St.</li> <li>• Re-image the western end of Sparks St and the northern portion of Bronson Ave to link directly with LeBreton Flats' redevelopment.</li> <li>• New buildings in the block bound by Sparks, Queen, Bronson and Bay streets should support a podium-base and be setback from the sidewalk to allow for streetscaping and planting.</li> <li>• Pedestrian movement along Sparks St should be extended to link directly through to LeBreton Flats from Bronson Park.</li> <li>• To allow pedestrians and cyclists to cross from Cathedral Hill into the upper park area, intersection treatments are required at the Albert, Slater and Bronson/Commissioners Road junctions.</li> <li>• Extend the street at the base of the escarpment to restore the street grid system in this location.</li> <li>• Undertake a comprehensive programme of streetscaping and public realm improvements along each of the new streets.</li> </ul>
<p><b>Downtown Ottawa Urban Design Strategy: Business Precinct (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>Business Precinct:</b></p> <ul style="list-style-type: none"> <li>• Create more hospitable and pedestrian-friendly street level environments for residents, workers and visitors to the Business Precinct.</li> <li>• Create a higher quality and more even transition between the Business Precinct and the Capital Realm.</li> <li>• Protect key east-west streets, including Laurier, Gloucester and Queen from the negative impacts of traffic.</li> <li>• Recognizing the importance of north-south streets as equal to the downtown's east-west streets to ensure that the same level of maintenance and development controls are in place along these streets. New buildings should front onto these streets and access to parking and servicing should be removed or mitigated.</li> <li>• Increase the provision of secure bicycle parking across the precinct.</li> <li>• Undertaking a co-ordinated programme of streetscape improvements along the length of Sparks, Bank, Queen, Laurier and Metcalfe St.</li> <li>• Key opportunities for the introduction of new open spaces exist along Kent, O'Connor and Bank St.</li> <li>• Capitalize on the Bank St Axis project (NCC): extend Bank St northwards to the Ottawa River, providing a critical connection between the Civic and Capital Realms and expand the City's waterfront open space provision. This important new link will impact on how the northern portion of the Business Precinct is used by workers and visitors and will influence patterns of movement both to and through the precinct. Any proposed new network of public open spaces should be closely linked to this project.</li> <li>• No new surface parking lots should be permitted, and extensions of approval for existing temporary lots should require landscaping improvements and taking back of any encroachments on the public right-of-way.</li> <li>• Priority sites for Urban Open Spaces include the intersection of Kent and Slater, Laurier and Bank, Queen and Kent, O'Connor and Gloucester.</li> </ul>

	<ul style="list-style-type: none"> <li>• An opportunity exists to consider Laurier Ave for the demonstration of City-led urban streetscape improvements at a consistent standard along its entire length.</li> <li>• Allocate dedicated funding for improved waiting area, transit facilities, signage, traffic signals and pedestrian comfort on Albert and Slater St.</li> <li>• The two block section between Queen and Wellington that leads from Parliament Hill to the central business district should form the backbone of the Interface District through a program of street design that is based on placing the best of art and culture, landscape, architecture, programming, industrial design and regional characteristics from each of Canada's provinces, territories and major cities.</li> <li>• Convert Sparks St back to a traditional heritage-scaled street by removing the kiosks/clutter. The street should be designed as a multi-use, well-managed city street with generous well-appointed sidewalks and designed to accommodate two-way vehicular traffic which could be closed at designated times or on a program basis.</li> <li>• Queen St has the potential to be one of the healthiest streets within the Business Precinct.</li> <li>• Queen St would benefit from a streetscaping programme that is similar in quality and style to the north-south streets of the Interface District.</li> <li>• Queen St will contribute to the Interface District by aligning itself more closely with Sparks St and the quality of development present in the Capital Realm along Wellington St. Where possible, traditional pedestrian routes through the shallow block should be restored to help open both Sparks and Queen and make them more accessible. All proposed new developments should accommodate pedestrian throughfares at grade level.</li> </ul>
<p><b>Downtown Ottawa Urban Design Strategy: Retail, Arts and Theatre Precinct (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>Retail, Arts and Theatre Precinct:</b></p> <ul style="list-style-type: none"> <li>• Bring forward the findings from the Inter-Provincial Bridge Study and initiate a plan for the removal of the truck route through the heart of the downtown.</li> <li>• A targeted road reconstruction programme to normalize the street pattern is required for the Nicholas/Laurier/Mackenzie/Waller/Rideau urban grid area. Repairing the urban grid in this location will make available new development sites - particularly in the areas west of Waller and south of Laurier Avenue - as well as improve circulation, enhance linkages between neighbourhoods and place priority on pedestrians, cyclists and transit users over interprovincial trucks.</li> <li>• Introduce more clear, at grade pedestrian links across Colonel By Drive to allow for greater access to the Canal and its related pedestrian and cycle networks. A more permeable and pedestrian-friendly Colonel By Drive may also encourage the Rideau Centre and Congress Centre to open their front doors to the banks of the Canal and create a more animated western edge for the precinct.</li> <li>• Improve the pedestrian experience along Rideau, particularly between Sussex Drive and Nicholas St. It will be challenging to improve the quality of this street until the volume of city buses along this route can be reduced or re-routed. To help achieve this in the longer term, Rideau St should be considered as a potential Light Rail Transit route.</li> <li>• A more vigorous maintenance programme should be introduced and new hardy street trees, landscaping and lighting be re-introduced to make the area more attractive and improve perceptions of safety.</li> <li>• To improve the visual impression along Rideau St, one of the pedestrian bridges linking the Rideau Centre with the Hudson's Bay Company should be removed. Alternatively, they should be re-designed into remarkable and inspiring set pieces for the Rideau Centre.</li> <li>• The City should redesign the expanded section between Rideau St and Mackenzie King Bridge to create a more natural</li> </ul>



	<p>continuation of Colonel By Drive from Rideau St to Mackenzie King Bridge. The plans for the future reuse of the Government Conference Centre, as well, the redesign of the Confederation Boulevard node, at the intersection of Sussex, Rideau and Colonel By Drive, must be carefully considered in any reconfiguration.</p> <ul style="list-style-type: none"> <li>• Introduce a programme of heritage theming to Nicholas and Daly.</li> </ul>
<p><b>Downtown Ottawa Urban Design Strategy: University Precinct (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>University Precinct:</b></p> <ul style="list-style-type: none"> <li>• Understand the development potential around the Nicholas/Laurier/Mackenzie/Waller/Rideau area to better respond to the possible transportation modification of a restored urban grid.</li> <li>• Enhance the relationship of the western edge of the University campus to the Transitway and Transit stops, Nicholas Stand the Rideau Canal corridor.</li> <li>• Waller St and Nicholas St are part of the proposed Nicholas/Laurier/Mackenzie/ Waller/Rideau Urban Grid Reconstruction Area. Traffic calming measures focused around Laurier and Waller will create a more pleasant pedestrian environment and result in a superior gateway entrance to the University from the west.</li> <li>• The level of secure bicycle parking should be increased.</li> <li>• Opportunities to re-image King Edward south of Rideau into a high profile, high quality street.</li> <li>• To ensure that King Edward remains safe for all users, a series of intersection treatments giving pedestrians priority are required at the Laurier, Osgoode, Somerset and Templeton intersections.</li> <li>• To improve the perception of King Edward and make the street more desirable for private investment, street tree planting, lighting, sidewalk enhancement, public art, street furniture and landscaping are recommended between Mann and Rideau.</li> <li>• The existing roadway system around Laurier Bridge and Nicholas creates a very unpleasant and challenging pedestrian environment. Consideration needs to be given to improvement of pedestrian access and permeability along the north-western edges of the precinct.</li> </ul>
<p><b>Downtown Ottawa Urban Design Strategy: Central Canal Area Precinct (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>Central Canal Area Precinct:</b></p> <ul style="list-style-type: none"> <li>• Elgin St beautification: make Elgin St a showcase street with streetscape improvements that mirror the quality of Confederation Boulevard.</li> <li>• While the sides of Elgin St were dealt with in the creation of Confederation Boulevard, the existing traffic islands and medians require significant improvements. The poor quality of this central feature and the great confusion of signage and traffic control measures are reducing the impact of the existing public realm investment in the area. Hardy street trees should be planted in each of the medians and boulevards, and higher quality finishes, such as granite, introduced. Street tree planting will help in the transition from the green spaces of the Canal Area Precinct to the harder urban forms of the Business Precinct.</li> <li>• Narrow Elgin St between Lisgar and Laurier Ave and remove the traffic islands in order to allow for the expansion of the green space around the Human Rights Monument and Provincial Courts. This width reduction will make Elgin St more compatible with its Main Street function and create a more human scale as it transitions from the national ceremonial role to the civic precincts and established neighbourhoods. De-clutter it of signage and some street furniture.</li> <li>• To function more as a neighbourhood street, Lisgar St, as one of the key access routes to City Hall, should be made two-way east of Elgin St.</li> <li>• To improve the quality of the environment along Lisgar St, it is recommended to: reclaim the City-owned right-of-way along its edges that are currently being used for surface parking on adjacent lands; convert Lisgar to two-way; undertake a major</li> </ul>



	<p>reinvestment in the streetscape and public realm of Lisgar St and adjacent frontages to match it to the improvements on the City Hall site outlined below.</p> <ul style="list-style-type: none"> <li>• The Central Area precinct is subdivided by major east-west arterials as well as north-south parkways. These large roads fragment the traditional urban street grid, waste significant amounts of valuable canal-side property and restrict connections through the site to the north and east. The impact of these road systems needs to be mitigated.</li> <li>• Consider removing or minimising the ramping system for Laurier and implementing traffic-calming measures, including safer pedestrian crossings between City Hall and Confederation Park.</li> <li>• Queen Elizabeth Driveway north of Lisgar St should be redesigned to allow the open space to take on a more direct waterfront relationship. The character of this road should be transformed from a parkway to a more gentle multi-use drive that winds through the park space, giving pedestrians priority over vehicles and increasing visual and physical access through to the Rideau Canal. New surface treatments will be required.</li> <li>• Disengage the primary commuter traffic route along Queen Elizabeth Driveway from the Mackenzie King Bridge south to Cooper St to allow for the creation of a new Canal front open space and the provision of a significantly enhanced setting for the heritage buildings.</li> <li>• Reconnect Cooper to the Queen Elizabeth Parkway to offload traffic from the Canal Park Area.</li> <li>• Establish Cooper as a two-way street east of Elgin.</li> <li>• Restore the landscape parkway character of Queen Elizabeth Driveway between Mackenzie King Bridge and Somerset. The Driveway should be realigned to create additional open space fronting directly onto the Canal.</li> <li>• Create a connected series of public squares and civic spaces between the historic buildings at the south end of the site.</li> <li>• Introduce an expanded network of pedestrian paths through the site.</li> <li>• Introduce a programme of street tree planting along the Lisgar St and Laurier Ave edges.</li> <li>• Ensure that buildings along the eastern edge are opened up to the Canal to reinforce this important edge.</li> </ul>
<p><b>Downtown Ottawa Urban Design Strategy: Centretown East (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>Centretown East:</b></p> <ul style="list-style-type: none"> <li>• Reinvent Metcalfe St as a major civic boulevard that links the Civic Realm with the Capital Realm.</li> <li>• Introduce a programme of two-way conversions along O'Connor and Metcalfe St. This will need to include a review of the ramping system and the future proposed changes to the 417 by the MTO.</li> <li>• Restore the street grid around the Canadian Museum of Nature to allow for the restoration of this major civic space.</li> <li>• Introduce a streetscaping program along Metcalfe, Somerset and Cartier Streets between Somerset and City Hall.</li> <li>• Somerset St will continue to function as an important east-west pedestrian and vehicular link through the downtown. The existing programme of planting and landscaping, paving and street furniture should be re-imaged to respond to the very localised character of this unique street.</li> <li>• Convert Metcalfe and O'Connor to two-way streets. Conversion to a two-way system will need to be linked to the current 417 study and requires a review of the highway ramping structure.</li> <li>• Reconstruct Metcalfe St             <ul style="list-style-type: none"> <li>• as a Civic Boulevard for Ottawa. This high profile, high quality public street creates a critical link between the Capital and Civic realms. The northern portion of Metcalfe terminates at the Parliament Buildings, the middle has some of the finest examples of historic local architecture, while the southern end is anchored by the Museum and proposed improved civic park space. Required streetscape improvements include street tree planting, special paving, lighting, coordinated street</li> </ul> </li> </ul>



	<p>furniture and traffic calming measures at key intersections.</p> <ul style="list-style-type: none"> <li>• Somerset would benefit from a program of planting and landscaping, paving and street furniture to soften the pedestrian environment.</li> <li>• Restore the urban grid and block structure around the Museum of Nature to allow for an expanded park. This can be achieved through the elimination of the Metcalfe St continuation between McLeod St and Argyle Avenue.</li> <li>• The intersection of McLeod and Metcalfe should have a special treatment. This will help to slow traffic and tame this very busy corner, making it more inviting for pedestrians.</li> <li>• The access system from the 417 and Elgin St to the Queen Elizabeth Driveway is poor. At present, this road network is confusing. This entry point to the downtown has the potential to be one of the most important and picturesque gateways to the heart of Downtown Ottawa.</li> </ul>
<p><b>Downtown Ottawa Urban Design Strategy: Bank Street Corridor (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>Bank Street Corridor:</b></p> <ul style="list-style-type: none"> <li>• Clean-up signage, street furniture clutter and lighting, leaving as much room as possible for pedestrians along this predominantly retail street, given its narrow sidewalks.</li> <li>• Reclaim the public ROW where it is encroached upon by surface parking lots, and should require enhanced landscaping and screening as part of all temporary parking lot renewals.</li> <li>• Kent and O'Connor St should be reviewed for conversion back to two-way systems.</li> <li>• Extend the quality of the proposed Interface District from the Capital Realm to the Civic Realm along Bank St at least as far south as Somerset St if not farther. The quality and style of streetscaping and public realm improvements, including planting and landscaping, paving and street furniture, should transition seamlessly from the Capital to the Civic Realm. The most significant investment should be made between Queen and Wellington, followed by Laurier Ave to Queen St, and finally, a more modest scale of investment should be made between Somerset St and Laurier Ave.</li> <li>• Preserve the Bank St frontage as a Main Street.</li> <li>• It is recommended that new open spaces be located on corners and other strategic locations which can provide linkages between places. Locations include parcels along the Bank and Kent St seams as well as the intersection of Gladstone and McLeod.</li> </ul>
<p><b>Downtown Ottawa Urban Design Strategy: NCC Vision for the Core Areas/Bank Street Axis (City of Ottawa)</b> Approved on March 2004.</p>	<p><b>NCC Vision for the Core Areas – Bank Street Axis:</b></p> <ul style="list-style-type: none"> <li>• Extend the Bank St pedestrian and visual corridor northwards down to the Ottawa River. This will provide a critical connection between the Civic and Capital Realms, including Bank St, the Parliamentary Precinct, the Escarpment Valley and the Ottawa River.</li> <li>• This project also includes the redevelopment of Victoria Way and the upper portion of Bank St.</li> <li>• Enhanced water access will be provided through the installation of a riverside dock/quay or floating island for water activities. Terraced steps and/or a funicular system will connect the Wellington/Bank junction with the Ottawa River. Existing on-site parking will be relocated and the area restored to its natural habitat.</li> </ul>
<p><b>Mid-Centretown Community Design Plan (City of Ottawa)</b> Ongoing.</p>	<ul style="list-style-type: none"> <li>• The Mid-Centertown CDP will present the potential solutions to many of the mobility issues in Centretown, whereas Downtown Moves will work out the technical requirements for making the recommended solutions work.</li> <li>• These include two-way street conversions; narrowing of selected north south arterials / expansion of public realm; expansion of cycle network; implications of additional calming and crossings arterial streets; and streetscape treatment.</li> </ul>

<p><b>Escarpment District Community Design Plan</b> (City of Ottawa) Plan approved by City Council in December 2008.</p>	<ul style="list-style-type: none"> <li>• A mid-block pedestrian mews will run north-south from Slater St to Laurier Ave, facilitating pedestrian movement through the district and providing a link from Percy St to the transit stops on Albert and Slater St.</li> <li>• Once completed, the mews would be dedicated to the City as a public right-of-way.</li> <li>• Streetscaping improvements to strengthen both external and internal linkages in order to increase pedestrian safety and to create a more pleasant pedestrian experience.</li> <li>• Streetscape improvements could be undertaken in partnership with adjacent development and co-ordinated with the development of the central park. Primary pedestrian crossing improvements would include special pavement over the entire intersection, while secondary crossing improvements would include special markings in the pedestrian crossing zone.</li> </ul>
<p><b>Pilot Laurier Ave Segregated Bicycle Lane</b> (City of Ottawa) Implemented in 2011.</p>	<ul style="list-style-type: none"> <li>• Pursue a multi-use pathway for public use through the development application process at 422 Slater St as indicated in the City of Ottawa Escarpment District Plan.</li> </ul>
<p><b>Municipal Parking Management Strategy</b> (City of Ottawa) Approved by City Council in 2009.</p>	<ul style="list-style-type: none"> <li>• Transportation demand management (TDM) initiatives funded by the parking program must be related to it. This would include bicycle parking, designated stalls for carshare vehicles, and car/van pool spaces, which specifically benefit areas that have paid parking.</li> <li>• Re-evaluate surface parking lots with the view towards divesting them.</li> <li>• To allocate a portion of paid parking revenues to BIAs, Neighbourhood or Ward for promotion and marketing and other projects.</li> </ul>
<p><b>Integrated Street Furniture Program (ISFP)</b> (City of Ottawa) Release of revised RFP, RFP submission due date and RFP evaluations TBD by City of Ottawa.</p>	<ul style="list-style-type: none"> <li>• Incorporate a Central City designated area where integrated street furniture and restricted advertising potential as proposed by staff is incorporated.</li> <li>• That given the size of Transitway style platforms on Rideau St that size restrictions for advertising be established with the BIA.</li> <li>• Give full consideration to the operating cost for the City in terms of bins that maximize capacity, reduce frequency of pick-up and have positive environmental impacts.</li> </ul>
<p><b>Ottawa Pedestrian Plan</b> (City of Ottawa) A draft Ottawa Pedestrian Plan was produced in January 2009.</p>	<ul style="list-style-type: none"> <li>• Close gaps in the existing sidewalk network, especially where short gaps occur in an otherwise continuous network of sidewalks and pathways.</li> <li>• Select routes that provide direct access to crossing points of key barriers, and those that cross arterial roads at signalized intersections wherever possible.</li> <li>• Follow existing patterns and respect the style of pedestrian facilities.</li> <li>• Downtown Ottawa is considered a low priority for Community Pedestrian Improvement Plan to take place.</li> </ul>
<p><b>Bayview/Somerset Area Secondary Study</b> (City of Ottawa) Development concept</p>	<ul style="list-style-type: none"> <li>• Bayview Road is kept in its present alignment, and is conceived as the community's "Main Street".</li> <li>• A traffic circle is introduced at the intersection of Burnside and Bayview Road to slow traffic through the community.</li> <li>• Local roads "fan out" from Bayview Road - courtyards will be wider towards the east, where high-rise point towers will be located.</li> </ul>



<p>approved by City Council in 2005.</p>	<ul style="list-style-type: none"> <li>• An enclosed pedestrian linkage between the community and the proposed "transit hub" will be integrated into the civic facility or mixed-use development.</li> <li>• An enhanced pedestrian and cycling connection between the site, the proposed "transit hub", the possible national facility to the east, the surrounding communities, and the riverfront area is suggested.</li> </ul>
<p><b>Canada's Capital Core Area Sector Plan (NCC)</b> Completed in 2005.</p>	<ul style="list-style-type: none"> <li>• Reinforce and strengthen Confederation Boulevard.</li> <li>• Relocate a section of the Ottawa River Parkway southward as part of LeBreton Boulevard.</li> <li>• Improve the integration of interprovincial transit to better connect the downtown cores of Ottawa and Gatineau.</li> <li>• Create and enhance connections between the core area and the Ottawa River, as well as between the Capital (Crown) and the civic (Town) spheres.</li> <li>• Promote sustainable modes of transportation.</li> <li>• Develop an illumination strategy to light up key symbols and sites in the core.</li> </ul>
<p><b>Sparks Street Mall Vocation Study (NCC)</b> Ongoing study.</p>	<ul style="list-style-type: none"> <li>• Pathways should be created through distinctive sidewalk and cross walk designs drawing people who have completed their visit to Parliament Hill on the north side of Wellington St southwards into the Sparks St district.</li> <li>• Gateway elements should be placed at strategic entry points, such as on Metcalfe and Bank Sts, facing the Parliamentary Precinct, to beckon visitors to enter the district.</li> <li>• Existing pedestrian connections should be improved and formalized through appropriate landscaping treatment and designated street crossings.</li> <li>• Establish better linkages between the three blocks east of Bank St and Place de Ville. This should be accomplished via sidewalk and crosswalk design elements, consistency of landscape design of the Mall, and raised crosswalks of distinct materials.</li> </ul>
<p><b>Urban Design Study: Sussex Drive, Rideau Street and Colonel By Drive (NCC)</b> Report completed in 2009. Detailed Design scheduled for 2012, subject to approval of Capital Funds.</p>	<p>The preferred design scenario:</p> <ul style="list-style-type: none"> <li>• The entire area east of the Conference Centre to the intersection of Colonel By Drive/Rideau St is dedicated to public space. The space is contiguous across the south side of Rideau St, strengthening the relationship to the Rideau Canal, Confederation Square and Confederation Boulevard.</li> <li>• A Grand Boulevard is developed along Colonel By Drive to celebrate arrival to the Capital. The Boulevard is envisioned with wide pedestrian promenades and formalized centre medians.</li> <li>• New pedestrian crossings on Rideau St at MacKenzie Ave link directly with the commemorative space.</li> <li>• The underpass and MacKenzie Ave ramp is removed and all pedestrian circulation is at grade.</li> <li>• Bicycle lanes are provided throughout the Node.</li> </ul>





## Appendix D Street Right-of-Way Analysis











## Appendix E Pedestrian Level of Service (LOS) Analysis

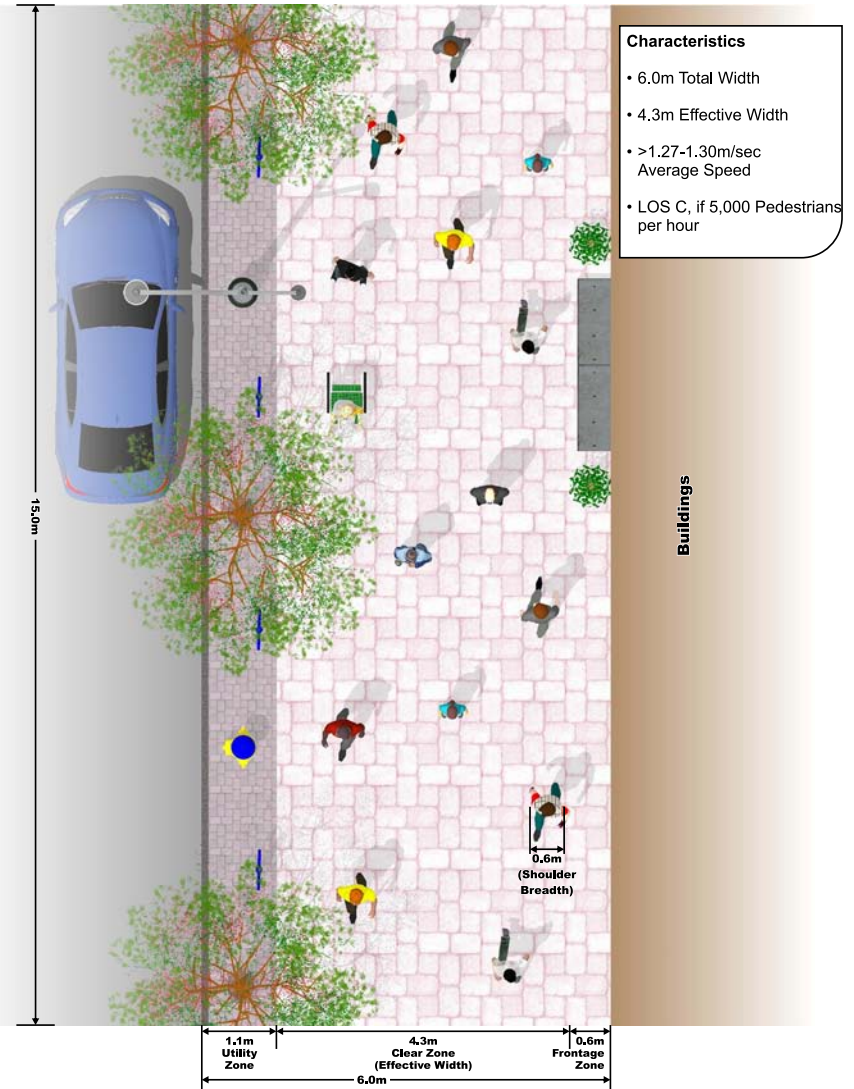


# Appendix E Pedestrian Level of Service (LOS) Analysis

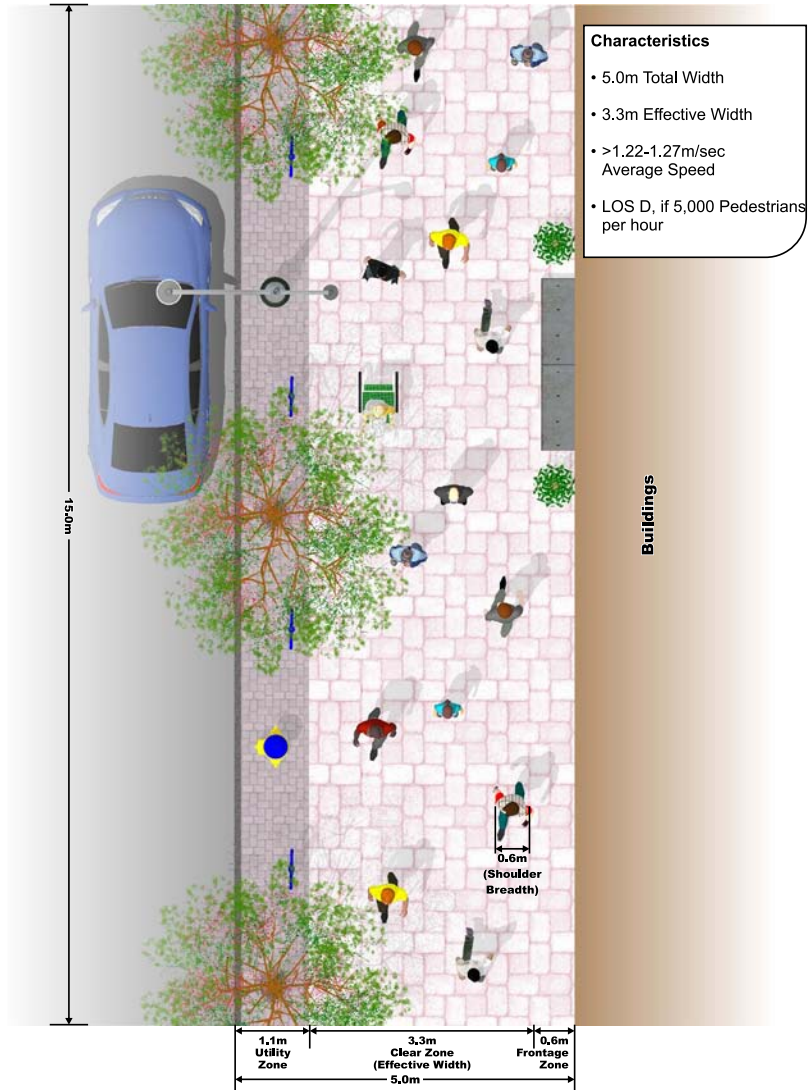
## Sidewalk Scenario 1



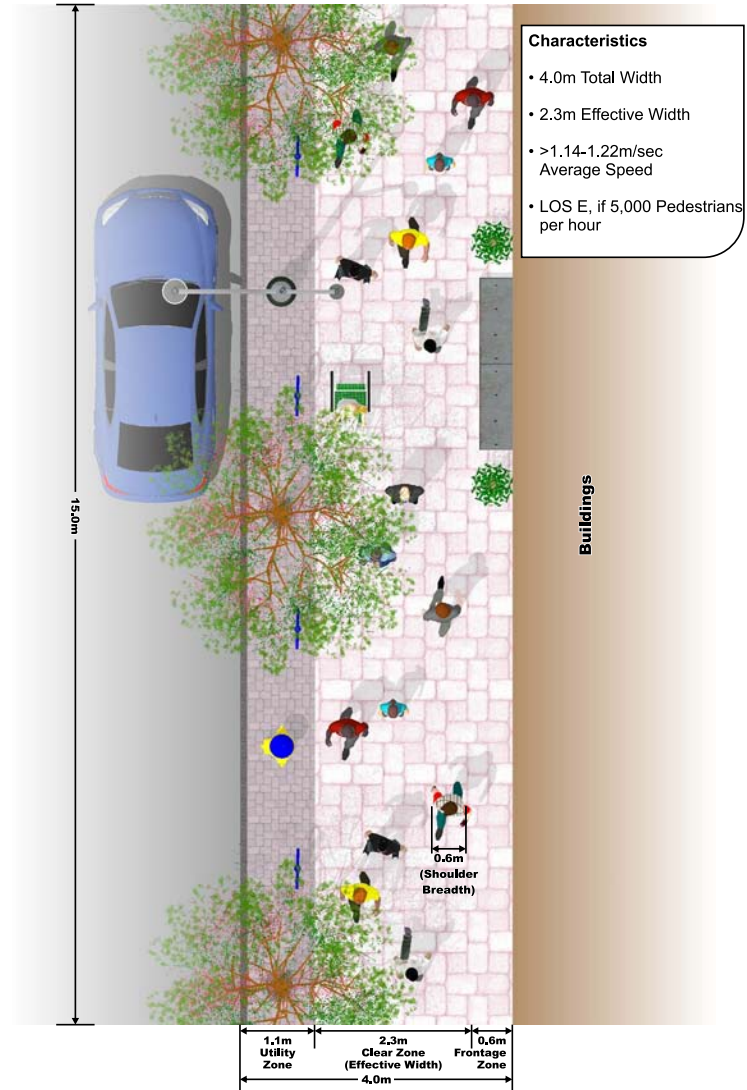
## Sidewalk Scenario 2



### Sidewalk Scenario 3

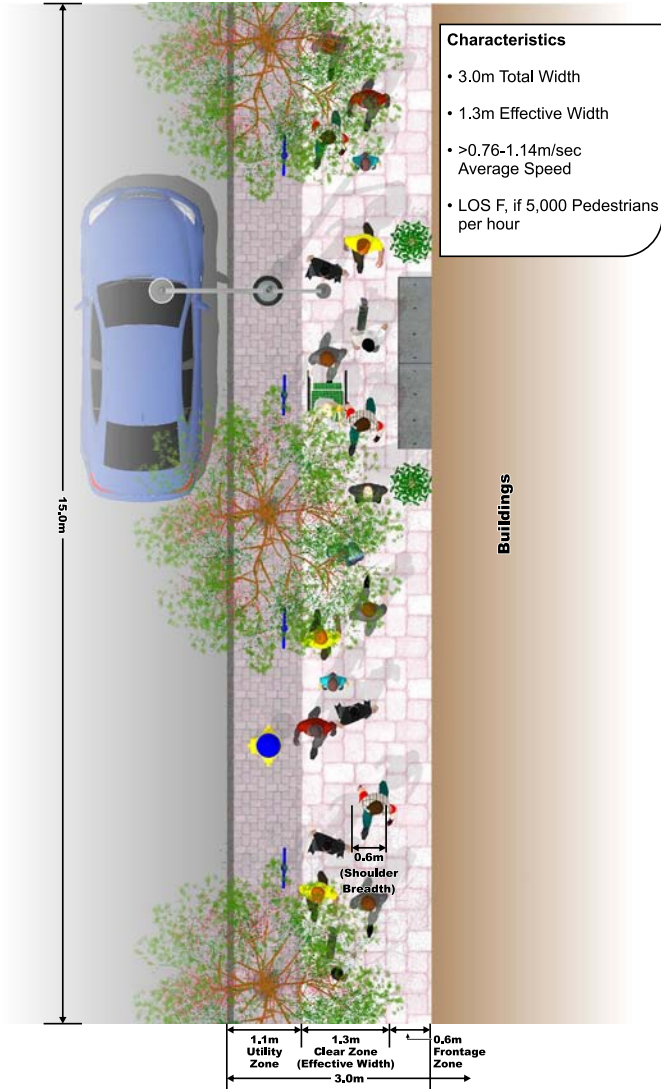


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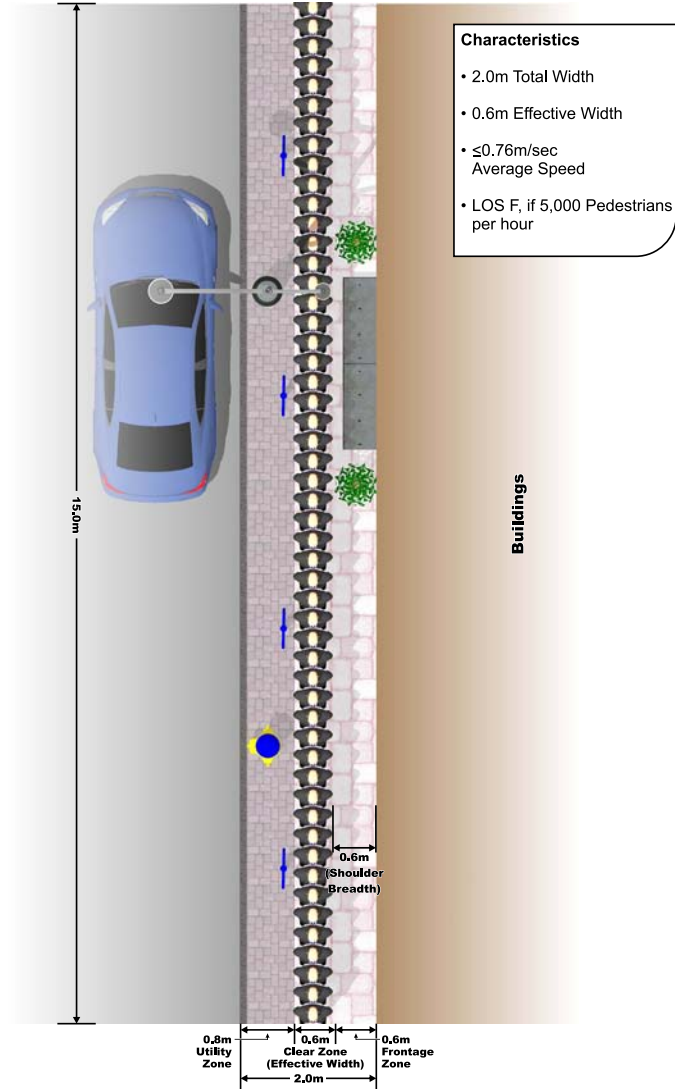




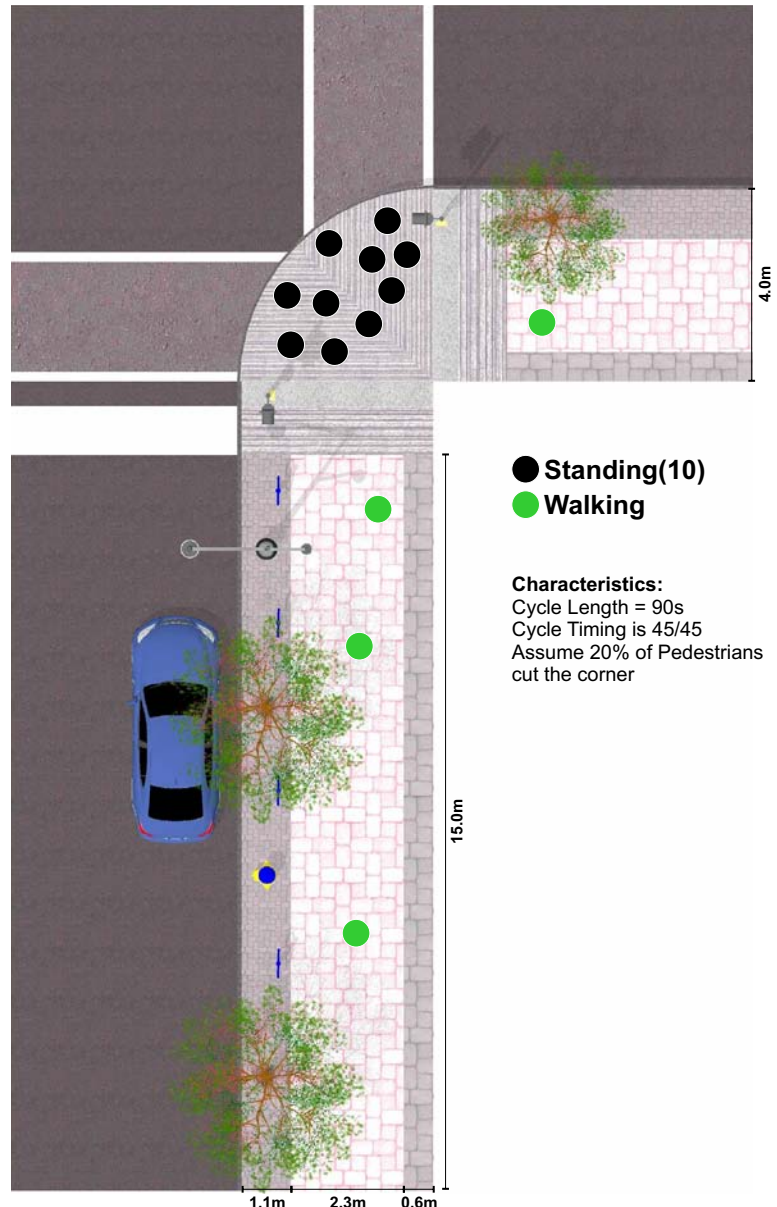
### Sidewalk Scenario 5



### Sidewalk Scenario 6

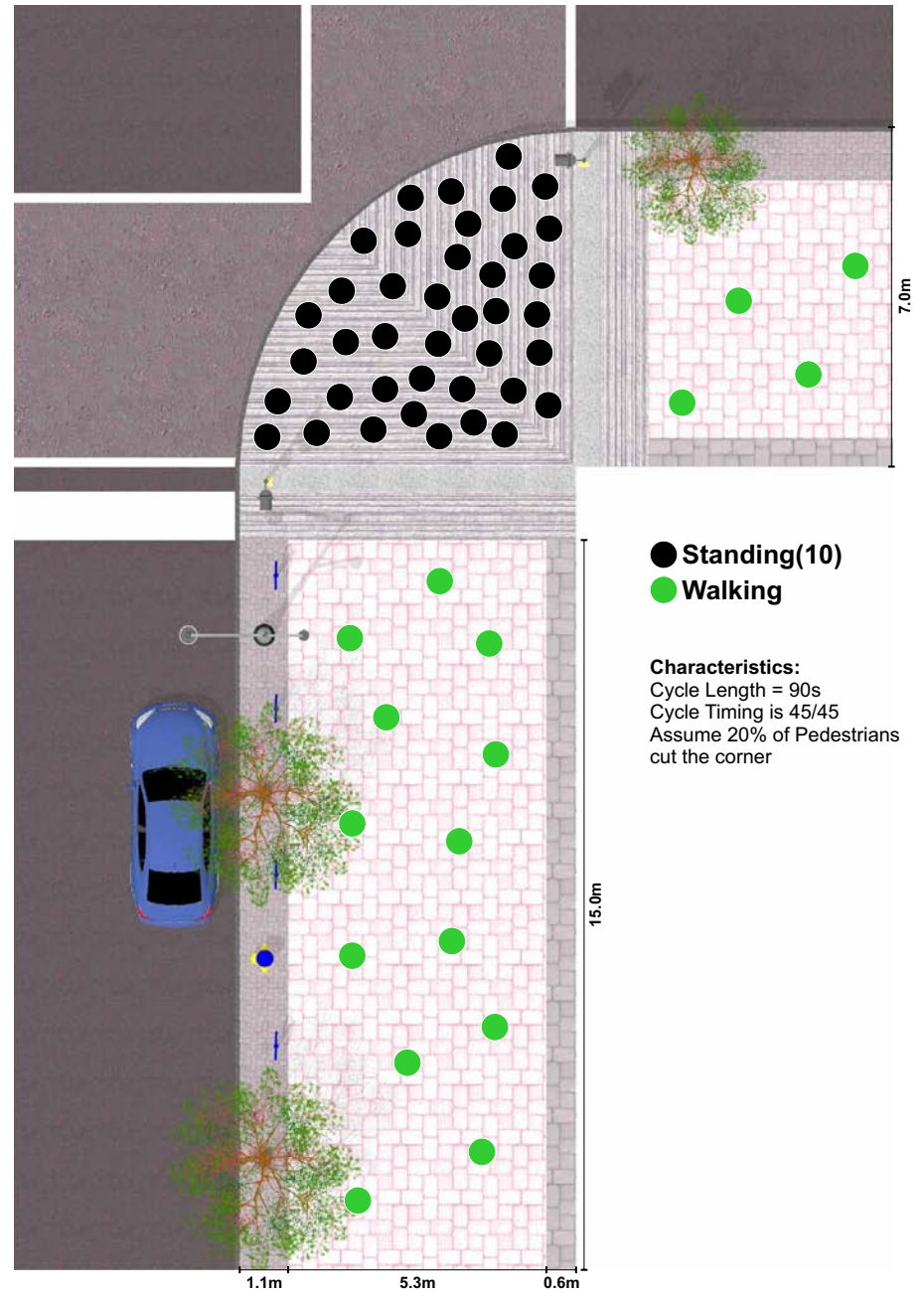


Corner & Sidewalk 1,000 pedestrians per hour



Corner LOS D / Sidewalk LOS B

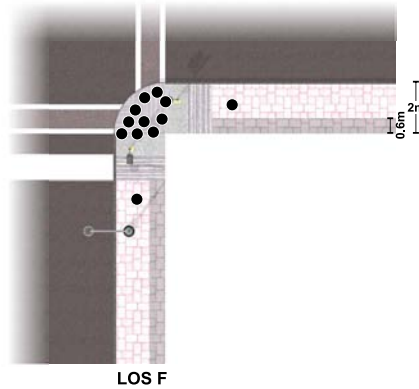
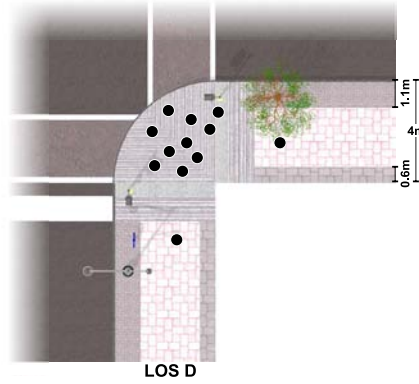
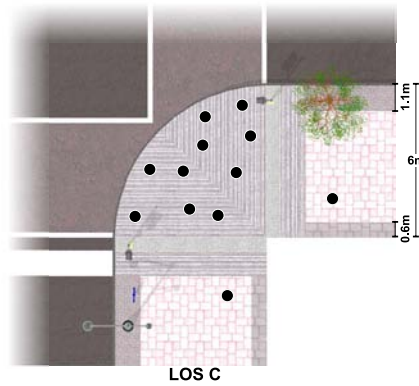
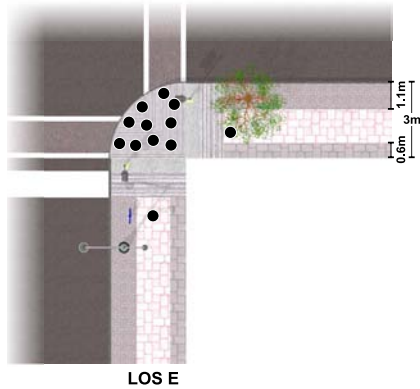
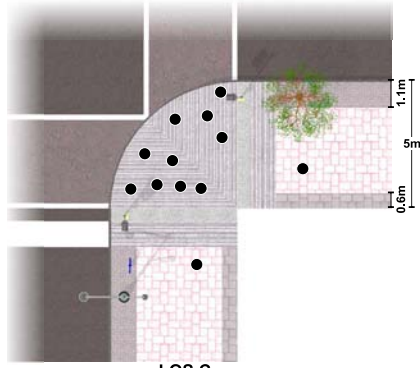
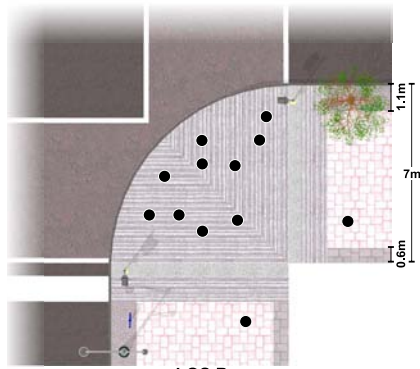
Corner & Sidewalk 4,000 pedestrians per hour



Corner LOS E / Sidewalk LOS C

### Corner 1,000 pedestrians per hour

**Characteristics:** Cycle Length = 90s  
 Cycle Timing is 45/45  
 Assume 20% of Pedestrians cut the corner



### Corner Level of Service D

**Characteristics:** Cycle Length = 90s  
 Cycle Timing is 45/45  
 Assume 20% of Pedestrians cut the corner

