Sweeny Sterling Finlayson &Co Architects Inc + Dillon Consulting

Steeles West District

Urban Design & Streetscape Plan

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Other documents to consult:

Vaughan Official Plan 2010, adopted by City of Vaughan Council on September 7, 2010 (as modified on September 27, 2011, March 20, 2012 and April 17, 2012)

Steeles West Secondary Plan, Volume 2 of the Vaughan Official Plan (as modified at the Ontario Municipal Board, 2016)

Term of Council Service Excellence Strategy Map (2014-2018) Community Improvement Plan for the Steeles Avenue Corridor,

Jane Street to Keele Street, City of Vaughan, June 11, 2007

Land Use Review: Steeles Avenue Corridor - Jane Street to Keele Street, Final Report, City of Vaughan, September 2004

Vaughan Vision 2020 – The City of Vaughan Strategic Plan, December 2007

Green Directions Vaughan – Community Sustainability and Environmental Master Plan, 2009

City of Vaughan Design Criteria and Standard Drawings, March 2004

OPA 620 Proposed East-West Collector Road Class Environmental Assessment, City of Vaughan, May 2010

Steeles Corridor: Jane to Keele OPA 620 Municipal Servicing Master Plan Class Environmental Assessment Study, October 2011

York Region Pedestrian & Cycling Master Plan, April 2008

Active Together Master Plan, Parks, Recreation, Culture & Libraries Master Plan, City of Vaughan, 2008

Pedestrian and Bicycle Master Plan Study, City of Vaughan, January 2007

York University Secondary Plan Update, City of Toronto, October 2009

Keele Street Class Environmental Assessment Study from Steeles Avenue to Rutherford Road, York Region, 2012

Metrolinx Mobility Hub Guidelines for the Greater Toronto and Hamilton Area

Spadina Subway Extension Project, Toronto Transit Commission



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Conceptual Rendering West Along Mid Block Greenway





Introduction

- Purpose
- Vision
- Study Area
- What is an Urban Design & Streetscape Plan?

Purpose

The Steeles West Urban Design and Streetscape Plan (the "Plan") provides specific design parameters to enact and enhance the planning framework. The construction of the northward extension of the Spadina Subway line to a new stop at the site (Pioneer Village Station) creates a catalyst for the development and redevelopment of the area. A primary objective of the Plan is to craft a plan that allows the City of Vaughan to evaluate and respond to development applications consistently, with a comprehensive set of overall design guidelines. This area is anticipated to develop over a long time frame (+25 years). This Plan is to catalogue and document the overall design thinking for the evolution of the area.

The Plan also highlights and demands placemaking and identity building within the Steeles West Secondary Plan area to make it a unique and well identified community that will help connect the City of Vaughan, the City of Toronto, and York University.

Included within this Plan are an overall Development Concept, Urban Design Guidelines and a Streetscape Plan. These are all elements to be read in conjunction with each other in assessing the anticipated development potential of the Study Area. These do not replace pertinent planning documents, but instead provide further clarification of the intentions of those documents.

Vision

The new Steeles West District will be a multi-modal, mixed-use precinct, centred around pedestrian and transit-supportive development. A fine-grain and high quality network of streets, blocks and buildings will be created that will provide connectivity, sustainability and variety throughout.

Introduction

Study Area

The Study Area of the Steeles West Urban Design & Streetscape Plan is located at the southern edge of the City of Vaughan, bordering on the City of Toronto. Steeles Avenue West is a City of Toronto road that borders the municipalities. As a result, this Plan only addresses lands on the north side of Steeles Avenue West, but the design and details have been coordinated wherever possible with the City of Toronto on the south side.

Located on the north side of Steeles Avenue West. the Study Area is bounded by Jane Street to the west. Keele Street to the east, and an extensive hydro and rail corridor to the north. The total land area is approximately 47.8 hectares (118 acres). This land is located within the Humber River watershed/Black Creek subwatershed.

The primary development driver will be the northward extension of the Spadina Subway, extended northwards from its current terminus in **Toronto at Downsview Station, to a new terminus** at the Vaughan Metropolitan Centre (Highway 7 and Jane Street). The subway extension will provide a stop, Pioneer Village Station, within the Steeles West District at the intersection of Steeles Avenue West and Street C/ Northwest Gate. The station will have a YRT/ Viva bus terminal on the north side of Steeles Avenue and a TTC terminal on the south side. A large surface commuter parking lot will be located in the hydro corridor to the north of the station. The Pioneer Village Station will provide convenient, reliable, higher order mass transit service to residents, workers, students and visitors.



KAWARTHA

DURHAM

regional scale

municipal scale

*

SIMCOE

PEEL

TORONTO





Introduction

What is an Urban Design & Streetscape Plan?

The Study Area is expected to change dramatically over the next 30 years, as (i) the Pioneer Village subway station is built, (ii) a new bus terminal is built, and (iii) as York University lands develop. In addition, the continued expansion and growth of the City of Vaughan will generate development pressure in this area as it transitions from suburban industrial land use towards a more intensive and urban mixeduse community. The Steeles West Secondary Plan provides development principles and objectives, a public realm framework, and urban design policies for the new District.

This Plan provides a design framework to (i) direct growth and change, and, (ii) to guide new development and redevelopment. This will include the location of future road alignments, proposed parks and open spaces, and transit station and infrastructure. The Plan will also detail road classifications, potential buildings types and configurations, and street and built form relationships.

This Plan is intended to represent the desired approach for growth of the Steeles West Primary Centre over the long term (25+ years) as the lands develop.





- Lot Fabric
- Open Spaces and Natural Features
- Circulation (Pedestrian, Cycling, Transit, Vehicular)
- Built Form
- Issues and Constraints
- Opportunities

An understanding of the existing Study Area and context is essential in the formulation of any good long-range planning document. This Plan assesses the existing elements of the site as a "baseline" from which the Plan can build.

While the Steeles West Secondary Plan envisions a radically different future for the Study Area, there are also important current realities that must be accommodated.





Кеу	
site	

Key

site

Above: Overlay of the existing land ownership with air photo.

Lot Fabric

The overall Study Area, at approximately 47.8 ha (118 acres), is broken down into 8 parcels of land, with 7 landowners. The most significant landholdings based on area are:

1)	United Parcel Service Ltd.	16.45 ha	40.6 acres
2)	Milestone Group	16.2 ha	40.1 acres
3)	Glen Steeles East Ltd.	6.4 ha	15.9 acres
4)	York Region & TTC	3.7 ha	9.1 acres (2 lots)
5)	City of Vaughan	1.2 ha	3.0 acres
6)	1053364 Ontario Limited		
7)	653135 Ontario Limited		

The majority of the land area is held by a small number of landholders. These large parcels can accommodate multiple buildings on each site along with the creation of associated road connections and parks. This arrangement ultimately provides flexibility in the deployment of density and in the arrangement of viable building types within each parcel. The benefit of large area landholdings also includes easier and more potentially efficient street and park layouts.

Two government organizations (City of Vaughan and York Region) control approximately 10% of the land area. Further, the Region controls one of the most strategic and intense sites (at the location of the new subway station), as well as a key "corner" parcel (at Jane). These key, publicly-owned parcels have the ability to "set the tone" for development quality and intensity in the Study Area.







Open Spaces and Natural Features

The lands were originally 19th century farmsteads. Portions of the Study Area are currently developed with one and two-storey industrial buildings, complete with surface parking lots and some container storage. The remainder of the lands are undeveloped and exist as cultural meadows and agricultural fields (five vegetation community types of cultural meadows, cultural woodlands, shallow marsh, open aquatic, and agricultural).

The cultural meadows are uses as east-west travel corridors for mammals (coyotes, red fox and whitetailed deer) and breeding habitats for birds. Birds also use the agricultural fields. 17 of 25 species of birds listed on-site are protected by the Migratory Birds Convention Act (MBCA), and ten species are considered for conservation priority in York Region.

A cultural woodlot and cattail marsh (stormwater pond) is located at Jane Street and Steeles Avenue. Portions of the Hydro Corridor were leased for farming.

The land is relatively flat, and there are no watercourses within the Study Area. However, the ecologically and historically significant Black Creek Valley is a natural feature located adjacent to the Study Area, west of Jane Street. The entire Study Area is within the Black Creek sub watershed of the Humber River, and is designated a "Conservation Area/Regional Forest" in the York Region Regional Greenlands System. It is identified as a "highly sensitive" hydro geologically sensitive area. The study corridor is situated within the Peel Plan physiographic region, characterized as a level of undulating tract of clay soils with imperfect drainage. Soils are Chinguacousey clay loan, a shaly calceareous clay till with slight potential for erosion, and low run-off and slow percolation.



Circulation

Pedestrian

There are currently no sidewalks internal to the Study Area. The only sidewalk on Steeles Avenue is located between Jane Street and Northwest Gate, or approximately 1/3 of the Steeles Avenue frontage along the length of the Study Area. There are sidewalks on Jane Street and Keele Street at the edges of the site. In addition, there is an existing informal trail within the hydro corridor.

Cycling

There is currently no dedicated infrastructure for cycling (lanes or trails) internal to the Study Area or on adjacent streets.

Transit

The boundaries of the Study Area are currently serviced by York Region Transit (YRT/Viva), Brampton Transit, Go Transit and TTC. The transit routes that service the arterial street network which borders the Study Area include:

VIVA Orange (full along Jane and Steeles). VIVA Purple (full along Keele and Steeles) YRT Route 20 (full along Jane and Steeles) YRT Route 20A (full along Janes and Steeles) YRT Route 3 (along Steeles) YRT Route 22A (along Keele and Steeles) YRT Route 10 (full along Steeles) GO Transit (along Keele and Jane) TTC Route 35D (limited along Jane) TTC Route 107 B/C/D (full along Keele) TTC Route 60 (Steeles) TTC Route 35B (along Steeles) Brampton Transit Züm 501 (along Keele, Jane and Steeles)

Brampton Transit Züm 501A (along Keele and Steeles)

Vehicular

Vehicles currently travel along the main arterial streets, Steeles Avenue, Jane Street and Keele Street. There are no internal streets in the Study Area. Individual properties are serviced by individual driveways with access from curb cuts, generally from Steeles Avenue (although United Parcel Service Canada Ltd. has access on Jane Street, and Milestones has access on Keele Street). These main arterial roads carry significant volumes of traffic, particularly in rush hour, when they are often very congested and slow moving.

North of Steeles Avenue, Jane Street and Keele Street are major north-south arterial roads in the City of Vaughan, under the jurisdiction of the Regional Municipality of York. South of Steeles Avenue, Jane Street and Keele Street are major north-south arterial roads under the jurisdiction of the City of Toronto. Steeles Avenue is a major eastwest arterial road under the jurisdiction of the City of Toronto.

Rail

The CN Rail line crosses over Jane Street and under Keele Street. The rail lines north of the site are currently used by freight trains (CN Rail).





Built Form

Within the Study Area, there are 6 existing buildings at the following locations:

1) 2900 Steeles Avenue West UPS distribution centre, a large, single storey industrial warehouse, recently expanded and doubled in size. This large building is setback from the street, and surrounded by shipping container parking and driveway aisles.

2) 2720 & 2740 Steeles Avenue West: Two identically shaped, concrete and glass, office and light industrial two-storey buildings, well set back from Steeles, and surrounded by surface parking.

3) 2700 Steeles Avenue West One concrete and glass, two-storey office building, surrounded by surface parking.

4) 2600 Steeles West One red brick, two-storey office building, surrounded by surface parking.

5) 2300 Steeles West One four-storey office building, surrounded by surface parking (located at Keele Street).













Existing Land Uses

York University and Black Creek Pioneer Village are located immediately south of the Study Area, and have entrances onto Steeles Avenue.

Low-rise industrial and commercial buildings front onto the north side of Steeles Avenue, along with large tracts of undeveloped land and altered landscapes. A large UPS distribution facility and expansion building is located near Jane Street and Steeles Avenue, on the north side of Steeles Avenue.

The Hydro One transmission corridor is to the north of the Study Area.

Built Heritage and Cultural Landscapes

The roadscapes bounding the Study Area and farmsteads once located within the Study Area are identified to have 19th century survey and settlement origins. However, no features in the study area are designated under the Ontario Heritage Act or are identified as being of heritage interest. There are heritage buildings and cutural heritage elements on the south side of Steeles, within York University lands. Of the original farmsteads built on York University lands, the Stong House and Barn and the Hoover House remain. Additionally, vestiges of the agricultural landscape remain, including woodlots, residual tree lines and drives and the York Pond.

Fixed Elements

There are a number of "fixed" elements to the development of this District:

- **1.** Portions associated with the subway station.
- **1a** Transit infrastructure construction timelines.
- **1b** Subway Station Main Entrances already designed and under construction, these locations are set and will provide at-grade connections to the new subway station.

1c Transformer Station - will be developed as part of the subway station construction as an integral part of the power for the station's operation. It will exist as a surface building north of the subway entrance.

1d YRT/ Viva Bus Terminal - will provide surface connections with various bus routes servicing the surrounding area.

1e Commuter Parking within Hydro Corridor - A large commuter parking lot will be constructed within the corridor by YRT/TTC to provide parking for commuters.

2. Hydro Corridor - will continue to function as an integral servicing element to the power distribution of surounding areas.

3. Street network - the major streets are already allocated within the Official Plan (Steeles West Secondary Plan) and the East-West Collector Road Environmental Assessment. Conceptual TTC Pioneer Village subway station site design at Steeles Avenue West and Street C (Janet Rosenberg & Studio)





Issues and Constraints

As part of the analysis for the Study Area, various design issues and constraints were identified:

Edges

Physical constraints create rigid "edges" to the area due to the large ROW widths and traffic flows, and utility corridors/railway.

Inward nature of surrounding uses

York University, employment lands, Beechwood Cemetery, Pioneer Village and the hydro corridor contain specific uses that all function inwardly.

Linear arrangement of district

The Study Area is constrained in terms of overall depth in the north-south dimension due to the existing 'edges' of Steeles Avenue and the hydro corridor. This narrow configuration creates challenges in the ability to connect, as well as the traditional "transit access", which is usually measured in a concentric ring surrounding the transit station within walking distance (400m and 800m, or 5 and 10min)





Coordination

Coordination must be coordinated between one Region (Region of York), two municipalities (Vaughan and Toronto) and one large single landowner/operator (York University).

Transit priorities

Valuable land will be occupied with the many "parts" that come with a new subway station: subway trench and cover, power (transformer), vent, access, station entrance design, bus terminal, transit demand management (parking) and safety requirements. These parts will all need to be coordinated and co-located where possible.

Secondary Plan framework

Maximum heights, densities, park locations, conceptual roads and linkages are found within the Steeles West Secondary Plan. As discussed earlier, these initial parameters form the basis of the Steeles West Urban Design & Streetscape Plan.

Recent investment of some landholders

United Parcel Service Ltd. (UPS), known municipally as 2900 Steeles Avenue West, is the owner of approximately 16.45 hectares of land. The property is generally located to the north and east of the intersection of Jane Street and Steeles Avenue West immediately north of the York University campus in the City of Toronto.

The existing UPS operation in the City of Vaughan is a key component of the UPS network and this location functions as a "hub" operation. Nearly 90% of all materials and packages delivered by UPS in Canada are processed at this operation. UPS's facility processes and accommodates hundreds of tractor trailers of materials each day of the week with a large distribution fleet of trucks, including tractor trailers and their own smaller vehicles.





UPS maintains their fleet of vehicles on site, and in addition, maintains fuel (gasoline, diesel, and propane) storage facilities for the fleet. Operations continue 24 hours per day, 7 days a week.

After completing a second phase of development in 2009, the UPS property continues to have the capability for future expansion under existing zoning rights. The future expansion, for what would be a third phase of development, has been protected for in the municipal approvals for the site. The third phase of expansion is also referenced in the site plan approval of the second phase. Municipal site plan approval for the third phase will be required. It is anticipated that this third phase will result in the development of an additional 20,000 square metres of gross floor area.

Steeles West Secondary Plan Policy Modifications: (See Ontario Municipal Board Order pertaining to United Parcel Service Canada Ltd.)

The Steeles West Secondary Plan policy modifications protect UPS's existing use of its lands and its entitlement to expand such uses in accordance with policies and zoning in place prior to the adoption of the secondary plan.

As indicated above, UPS is a large industrial operation, with a large number of vehicles loading and off- loading goods and products on a 24 hour, 7 day per week basis. As such, this type of activity has the potential to negatively impact sensitive land uses, including residential uses. As a matter of practice and consistent with Provincial guidelines, adjacent re-development will be required to demonstrate compatibility through appropriate studies and design with mitigation occurring within the new development site or in combination with mitigation at source (in this case on the UPS lands).

In the absence of any specific proposal for development of the surrounding lands, the policies of the Steeles West Secondary Plan have been modified to require that the existing and zoned industrial use(s) for the UPS lands be protected from the introduction of potentially incompatible, sensitive land uses.

The modifications require that all necessary studies be conducted and peer reviewed by the municipality prior to the approval of any zoning by-law amendments allowing for sensitive land uses in proximity to the UPS property. The required studies will need to demonstrate compliance with all relevant Provincial standards to satisfy matters of land use compatibility and to demonstrate that necessary mitigation will occur on those lands where the sensitive land uses are proposed to be introduced.



Planned Transit Network

The Spadina Subway Transit Strategy (2015 Annual Service Plan) details the proposed YRT/Viva network following implementation of the Spadina Subway extension.

The subway extension will include three subway stations in York Region: Pioneer Village Station (Steeles West District), Highway 407 Station, and the Vaughan Metropolitan Centre Station.

Within the Study Area, the Pioneer Village subway station is connected to a new bus terminal and a commuter parking lot with 1,850 spaces. Additionally, the existing surface bus network will be restructured to connect with the three new subway stations.

The Spadina Subway Transit Strategy proposes to direct numerous routes in Vaughan to the new subway stations and assume operation of some TTC contracted routes in Vaughan. Changes to the Viva network would see Viva orange and purple removed from the York University/Steeles West area. Service to York University from Richmond Hill Centre Terminal would be replaced by a new route, Route 101 York U Shuttle. Routing plans around/to the York University and Pioneer Village Stations have not yet been finalized at this time. Currently, the Plan proposes that the following YRT/ Viva routes provide service within/ adjacent to the Steeles West District Study Area:

- YRT Route 3 (along Steeles)
- YRT Route 20 (along Jane and Steeles)
- YRT Route 22A (along Keele and Steeles)
- YRT Route 29 (formerly TTC Route 107) (along Keele and Steeles)
- YRT Route 65 (formerly TTC Route 165) (along Steeles)
- YRT Route 75 (formerly TTC Route 105) (along Steeles)
- YRT Route 101 (along Keele, Steeles)

The above routes could use the new east-west street (Street X) as an alternative to Steeles Avenue.

All routings are subject to change.





Stong Homestead, Black Creek Pioneer Village



York University Campus Sign

Opportunities

There are significant opportunities associated with the development of the Study Area. These include:

1. The land use and retail opportunities that come with transit-oriented development.

2. Large landholdings allow for collaborated and consolidated infrastructure systems, including sustainable water, waste and energy.

3. Proximity to York University and Black Creek Pioneer Village provide activity co-generators that can create an interesting mixture of visits and opportunities for new businesses.

4. A large amount of urban and pedestrian activity that will be generated by the combination of commuter parking, bus terminals, the subway itself, and surrounding neighbourhood including York University.



- Mobility Hub Guidelines
- Land Use Review Steeles Ave Corridor
- City of Vaughan Official Plan (2010)
- Steeles West Secondary Plan
- York University Secondary Plan

The Urban Design and Streetscape Plan incorporates and is informed by the various planning documents that are in-force at the Provincial, Regional or Municipal level and applicable to the Study Area. These form the basis for the recommendations contained in the Urban Design Development Concept, Urban Design Guidelines and Streetscape Plan.



Mobility Hub Guidelines For The Greater Toronto And Hamilton Area

"Mobility hubs have great potential to help transform the region and reinforce progressive provincial land use policies as laid out by the landmark Green Belt Plan and Growth Plan for the Greater Golden Horseshoe. The hubs will be centres of activity and place, attracting opportunities for live, work, and play, all connected to the greater region through reliable, rapid transit. However, this will only happen with the successful integration of land use and transportation planning, committed private sector partners, and a common vision for the future." (page 3 of the Metrolinx Mobility Hub Guidelines)

"Mobility hubs consist of major transit stations and the surrounding areas (approximately 10 minute/ 800 metre radius) with significant levels of transit service planned for them and high development potential."



In 2010, Metrolinx released a full draft of the Mobility Hub Guidelines for the GTHA which guides planning and development at mobility hub locations identified within "The Big Move" Regional Transportation Plan. Major planned and existing transit station areas that are significant for the regional rapid transit system are recognized as mobility hubs in the Big Move.

York University- Steeles West is identified as a mobility hub and more specifically as a "Gateway Hub." Gateway hubs are understood to have an intersection of two rapid transit lines with significant ridership activity and a minimum density target of approximately 50 people + jobs per hectare.

The document specifies the York University–Steeles West location as a "u6" **Unique Destination**. This designation is important for the coordination of applicable design guidelines and appropriate strategies.



PF.2-Mobility Hubs in the "Big Move"

The organization of the document is arranged by Objectives, Themes, and then into Guidelines & Strategies. Some applicable and noteworthy guidelines are noted:

1.0 Seamless integration of modes at the rapid transit station.

Theme 1: Seamless Transfers Between Transit Modes, Networks, And Routes (1.1-2) Theme 2: Balancing Access To Transit Stations (1.3-6)

2.0 Safe and efficient movement of people with high levels of pedestrian priority.

Theme 1: Clear Mode Share And Transportation Performance Targets (2.1-2) Theme 2: Complete And Safe Streets (2.3-6)



3.0 A well-designed transit station for a high quality user experience. Theme 1: Creating Landmark Transit Stations (3.1)

Theme 2: Value-Added Customer Amenities (3.2-3) Theme 3: Understandable Stations And Station Spaces (3.4-5)

4.0 Strategic parking management.

Theme 1: Minimizing Need And Supply Of Commuter Parking (4.1-3) Theme 2: An Area-Based Approach To Parking Management And Reduction (4.4-5) Theme 3: Parking Designed To High Standards (4.6-7)

- 5.0 A vibrant, mixed-use environment with higher land use intensity. Theme 1: A Dynamic Vibrant And Compatible Mix Of Uses Within Walking Distance Of Transit (5.1-2)
- 6.0 An attractive public realm. Theme 1: A Strong Sense Of Place (6.1)
- 7.0 A minimized ecological footprint. Theme 1: Minimized Ecological Footprint (7.1)

8.0 Effective partnerships and incentives for increased public and private investment. Theme 1: Enhancing Development Potential And Attracting Developers (8.1) Theme 2: Establishing Partnerships Between Stakeholders (8.2-3) Theme 3: Incentives For Design Innovation And Excellence (8.4-5)

9.0 Flexible planning to accommodate growth and change. Theme 1: Designing With Change In Mind (9.1)

Theme 2: A Flexible And Responsive Planning Framework (9.2)

The Mobility Hub Guidelines are regional in scale, with guidelines that are of relevance to the unique places within the entirety of the Greater Toronto Hamilton area transportation network.

The Steeles West Urban Design & Streetscape Plan has been developed to be supportive of the Mobility Hub Guidelines for the GTHA. However, it is intended that the guidelines found within this document specifically address the planning and development opportunities and constraints within the Steeles West Study Area.







PF.4 - Proposed Mobility Hub Boundary -Pioneer Village and York U Stations



Land Use Review: Steeles Avenue Corridor

The full Study is entitled "Land Use Review: Steeles Avenue Corridor, Jane Street to Keele Street" (September 2004). This study formed the basis for OPA 620 and the Steeles West Secondary Plan.

This report studied the lands that became subject to OPA 620, the Steeles West Secondary Plan, as well as this document, the Steeles West Urban Design & Streetscape Plan. The Land Use Review was conducted to build upon:

- proposed rapid transit improvements, including (the not-then funded) Spadina subway extension
- the adjacency to York University
- Steeles Avenue as a boundary and important transit corridor
- Highway 407 and visibility and accessibility created
- development potential from landowners

The main catalyst was the onset of multiple Environmental Assessments for transit, as well as OPA 529, which established a transit right-of-way between York University and Vaughan Corporate Centre.

The Land Use Review resulted from a long consultation process, including technical advisory committee from key stakeholders, interviews with key landowners, as well as two public open houses. Twelve objectives were created to provide a foundation for new Official Plan policies. Upon review, these 12 objectives are very similar to the "Development Principles And Objectives" found in the Steeles West Secondary Plan (11.3.3).

The proposed road network included a continuous east-west road network, which would accommodate buses and commuters and reduce congestion on Steeles. A series of north-south streets were to complete the road network, coordinated with streets from York University south of Steeles.

Land Use and Density was influenced by the rapid transit improvements and proximity to York University. Recommendations of 1.0 - 3.0x the lot area were recommended, and that higher densities would be difficult to accommodate given existing traffic constraints on Steeles, Jane and Keele (Figure PF.5).

The "Urban Design Vision" (Figure PF.6) showed a potential mid-block connection throughout the site area, with a evenly spaced layout of "conceptual open spaces", connected through the mid-block connections.

Land Lise Review – Steeles Avenue Carridar, Jane Street to Keele Street



PF.5 - Land Use Vision and Density Targets



PF.6 - Urban Design Vision.



Steeles West Secondary Plan

The Study Area is subject to the Steeles West Secondary Plan. This forms the basic framework for the planning of the Steeles West Study Area by setting out the structure, block divisions, context and overall design vision. More specifically, the Secondary Plan provides the approved building heights (in number of storeys), approved densities, conceptual locations of parks and open spaces, and their hierarchy of use, as well as the conceptual alignment of streets and linkages.

The site is recognized as a convergence of interregional and regional transit service, between the Toronto Transit Commission, York Region Transit (YRT), and GO Transit.

The Steeles West Secondary Plan forms the basis for the development concept in this Plan.

At full build out, the Secondary Plan area is expected to accommodate approximately 5,000-5,500 residential units (10,000 - 11,000 people), and approximately 100,000 - 120,000 sq. m of Office/Commercial uses which will generate an estmated 4,000 - 5,000 employees. It is a significant development area. **Development Principles and Objectives:**

a. A transit-supportive Plan: Support and capitalize on existing and planned transit investments.

b. A Plan to use infrastructure effectively: Manage development within the capacity of existing and committed transportation and servicing infrastructure.

c. Create a compact, mixed-use precinct, concentrating worker and resident population within a 10-minute walking distance of the future Steeles West Station.

d. Complement and reinforce the academic function and campus environment of York University.

e. Ensure early phases of new development establish the vision for the Corridor at the outset and provide the opportunity for further land use evolution.

f. Develop a consistent, attractive image and pedestrian environment along Steeles Avenue through landscaping and the placement and massing of buildings.

g. Provide a balanced transportation system convenient, safe and comfortable for pedestrians, cyclists, public transit and private vehicles.

h. Integrate transit facilities, roads and development as seamlessly as possible with surrounding development. i. Ensure future residential neighbourhoods are adequately served by community services and amenities such as schools, urban squares and parks, libraries, emergency services and recreational facilities.

j. Maintain and support the primary function of the Hydro Corridor to transport electricity.

k. Encourage the urban design of future development to be of the highest quality.

I. Promote and demonstrate environmental sustainability.

Density

The Secondary Plan outlines a radiating density structure based upon the following transition in scale from the subway station:

Transit Core

within 250 m of station FSI = 4.0

Transit Transition

250 - 500 m from station FSI = 2.5

Corridor

500+ m from station FSI = 1.5





City of Vaughan Official Plan: A Plan for Transformation - 2010

The 2010 Official Plan describes the future direction for the Study Area within the context of the entire City.

The Study Area in its entirety is designated as a **Primary Centre** Intensification Area, one of six within the City of Vaughan. Primary Centres are intended to be the most intensive of four types of intensification areas able to accommodate the Vaughan target of 45% residential intensification, as well as make efficient use of underutilized sites serviced by existing or planned high-level mass transit. Primary Centres will accommodate a wide range of uses and will have tall buildings.

Steeles West Primary Centre will be transit-oriented with significant opportunity for residential, office and institutional uses. Primary Centres will have a fine grain of streets suitable for pedestrians and cyclists, with internal and surrounding connections in the form of sidewalks and greenways. Pedestrian-friendly builtform will encourage the location of active use at the ground floor.

As part of the "Future Transportation Network", Steeles Avenue, Keele and Jane Streets are all defined as "Major Arterials". A new east-west street is shown as a "Proposed Major Collector", in addition to a new north-south connection in the east portion of the Study Area.

Steeles Avenue is also identified as a "Regional Rapid Transit Corridor", while the "Subway Extension" is shown overlaid on the Study Area, with a stop at Steeles.

The centre half of the site is designated as "High Rise Mixed Use", while the two ends (facing Jane and Keele) are "Mid-Rise Mixed-Use". Mid-rise buildings are up to twelve storeys in height, while those over six storeys will incorporate a minimum setback of 3 metres for taller portions. A 15 metre separation distance between mid-rise buildings are required for privacy and daylight access. Highrise buildings are greater than twelve storeys, with a pedestrian scaled podium of three to six storeys, with taller elements setback a minimum of 3 metres. High-rise buildings shall not have floorplates larger than 850 square metres setback 15m from property lines, and separated at least 30m from other high-rise buildings:



PF.7 - Schedule 1 - Urban Structure



York University Secondary Plan

The City of Toronto created a Secondary Plan for York University in 2009 through Amendment 104 to the Official Plan (By-law 1239-2009).

One of the most significant changes to the Secondary Plan from the previous Plan was the adoption of "Precincts" within the York University landholdings, which permitted a variety of additional uses (including Residential) located on the edges of the campus. Most applicable to the Steeles West Study Area are Precincts called "Steeles West" and "Steeles East", located on the south side of Steeles Avenue across the from the Study Area in this Plan.

This Secondary Plan acknowledges that the Spadina Subway Extension will create three new subway stations within or proximate to the York University campus, as well as two "Transit City" rapid transit routes would also provide service to the area (north-south on Jane Street terminating at Steeles West Station, and east-west on Finch Avenue and connecting with Finch West Station).

The Secondary Plan seeks to preserve unique elements of the original York University Master Plan (including the ring road, ceremonial entrances and key natural landscapes) while creating an evolution of the University campus to allow people to live, work, learn and play.

The **Steeles West Precinct** is to be developed as a "high-density, transit supportive mixed-use corridor" that is "complementary to and compatible with development on the north side of Steeles Avenue in Vaughan" (2.2.2).

Steeles Avenue West is to have a "pedestrian friendly streetscape with active ground floor uses and building entrances, the existing row of trees on Steeles will be preserved, and a new pedestrianfriendly gateway entrance to the University will be created at NorthWest Gate" (2.2.2).

The **Steeles East Precinct** will be a mixeduse corridor having primarily office and/or research uses. This precinct will also support Steeles West Station and development should be "complementary to and compatible with development on the north side of Steeles in Vaughan" (2.2.2). A gateway will also be created at Founders Road, while historically significant Stong House and Barn will be conserved, as well as associated cultural heritage landscapes.

All non-university land uses, densities and building heights provided in this Secondary Plan will be permitted in the Edge Precincts (including Steeles West and East) subject to the preparation of Precinct Plans in accordance with section 5.1 (4.1.2). Map 10-13 shows "prime retail frontages" along Steeles at the main intersections of Northwest Gate and Founders Road.

The majority of lands on the south side of Steeles are designated as "Mixed Use Areas - A", with some

lands at the east end of the precinct and the corner at Keele as "Mixed Use Area B".

Mixed Use Areas - A will provide street-related development that includes a variety of uses in mixed-use buildings, provide street-related commercial, service, office and public uses along the majority of street frontages, buildings built at or close to the street line, and building bases developed at pedestrian scale height (4.2.2).

Mixed Use Area - B permits research, technology, office and accessory commercial uses (retail and service), with street-related uses along the majority of street frontages, buildings built at or close to the street line and building bases developed at pedestrian scale height (4.2.5).

Density

Minimum and maximum gross densities have been established, while net densities will be determined at the Precinct planning stage.

The two blocks facing Steeles, on either side of the Steeles West station (Northwest Gate/Street "C"), are within 250m and shown at 4.0x FSI, with Mixed Uses Areas (typically retail at-grade, residential or office above). Office is encouraged for the sites adjacent to the station.

Density calculations will be based on gross development block area including land for buildings, lands dedicated for secondary streets, parkland,



community services/facilities, open spaces, transit facilities, landscaping, parking, driveway areas and servicing (4.3.1.2).

There are certain density exemptions where floor space is dedicated to specific uses, and density transfers are allowed generally relating to existing to preservation of heritage and archaeological resources (4.3.3).

Building Heights

Minimum building height for buildings fronting Keele Street or Steeles Avenue is 4 storeys (13.5m). Minimum building height for buildings fronting a primary street is 3 storeys (10.5m), and two storeys (6m) for a secondary street. Maximum building heights for Edge Precincts are governed by the Zoning By-law Airport Hazard Map, but the tallest buildings are located within 250m of the subway station fronting a major street (4.4).

For more details, consult the York University Secondary Plan.







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Consultation

Extensive consultation has occurred in setting the development framework in place. This includes consultation that was conducted as part of the original 2004 Land Use Review, the adoption of OPA 620 (and tested at the OMB), and the new 2010 Official Plan. In addition, the east-west collector road (Street "X") was also subject to a public Environmental Assessment process. The City of Vaughan also consulted on the Servicing Strategy for the area.

Within the Steeles West Urban Design & Streetscape Plan, the consultant team and City Staff held an initial Stakeholders Meeting in Summer 2010, and a public meeting in Spring 2012. Additionally, drafts of this document were circulated to York University, the City of Toronto, the TRCA, and York Region Rapid Transit for input.

Three urban design framework options were developed in Phase 1 of the Study, based on slightly different interpretations of the OPA 620 / Steeles West Secondary Plan development framework in order to initiate the consultation process for this Plan. The preferred option was developed with stakeholder input and is found within.



Consultation

The basic principles of the plan were created, approved and subject to a public process through the creation of Official Plan Amendment 620 and the subsequent Secondary Plan process. This laid out the framework for conceptual street locations, parks and open spaces, heights, densities, and the location of transit facilities.

The consulting team contacted all landowners and ratepayer associations within the site area, as well as on the fringes of the site area with an invitation to participate in an stakeholder meeting. In addition, relevant City of Vaughan departments and external agencies were consulted throughout the creation of the development concept. On July 7, 2010, the City and &Co Architects held a workshop with interested landowners and ratepavers. Three options were presented to the group, and comments were received on the options presented. At the same time, comments were invited from the public, and a website dedicated to the progress of the study was public on the City of Vaughan's website. Discussions and input were continued with Vaughan staff. All comments from individual and workshop consultation were incorporated into the creation of the final development concept.

The preferred Development Concept, Urban Design Guidelines and Streetscape Plan were presented to key stakeholders in Spring 2012, including York University and City of Toronto, as a follow up for comment. These comments were considered in this final document.



&Co



Above: Excerpt from the July 7, 2010; Landowners, Ratepayers & Councillors Workshop. Option A, Demonstration Plan.





Above: Excerpt from the July 7, 2010; Landowners, Ratepayers & Councillors Workshop. Option B, Demonstration Plan.

Excerpt from the July 7, 2010; Landowners, Ratepayers & Councillors Workshop. Option C, Demonstration Plan.



Development Concept

- Vision
- Objectives
- Definitions
- Transit as catalyst
- Development Intensities
- Conceptual Plan
- Streets
- Urban Character
- Retail
- Blocks
- Built Form
- Parks and Open Space
- Phasing

The "Development Concept" resulted from the analysis of the planning framework, existing site conditions, input from key stakeholders and the application of best practices.

A governing vision and key objectives have been created for the concept, and then various components of the design itself are broken down and explained further.

Development Concept



Vision:

To create a walkable, pedestrian-friendly, transit-supportive mixed-use community that allows people to live, work and shop in their neighbourhood through a variety of modal options.

Study Objectives

- **1**. To create a mix of land uses.
- **2.** Promote compact built form.
- 3. To provide well distributed, well

appointed and attractive open spaces.

4. To provide a building framework

that engages the public realm.

5. To maximize the built potential for

use of public transit.

6. To create beautiful, pedestrian-

oriented streets.

7. To create connections across

existing barriers.

8. To develop a strong public realm

framework that supports a diverse

program mix and vibrant urban life.

Definitions

For the purposes of this document:

Mid Rise Building A building up to 8 storeys in height.

Tall Building A building over 8 storeys in height.

Tower Floorplate

A Tall Building floorplate gross floor area, not including balcony floor area.


Transit as Catalyst

Throughout the 2004 Land Use Review, OPA 620, Steeles West Secondary Plan, the Official Plan as well as the Mobility Hub Guidelines, it is apparent that the extension of the subway to and through the Study Area provides the rationale for increased density in the Steeles West Study Area.

An analysis of these documents shows that the density permissions and height limits are at the highest surrounding the new subway station, located roughly mid point in the site. Density and height then gradually terrace down towards the edges (at Jane and Keele). The intent of this is to provide the greatest amount of residents and workers, in mixed uses, in close proximity to the subway station within walking distance. In addition, buses will connect with the subway station and will provide surface connections to intra-regional and regional transit.

As stated, one of the objectives of this Plan and the design guidelines is to maximize the ability to achieve those permitted densities and heights. This will provide the highest potential number of future riders and users of transit, and will provide mobility alternatives to the personal automobile.

Development Intensities

In the various reference documents mentioned above, there are different radii used surrounding the proposed Steeles West Station as indicators of development intensity.

This results in part from differences in the walking distances within the "two and a half", "five" and "ten" minute window. They generally range from 200-250 metres for 2.5 minutes, 400-500 metres for 5 minutes, and 800 metres for 10 minutes. Within this Plan, we will reference the upper end of the range for development intensity limits, so that 250m means the distance travelled in 2.5 minutes, 500m is the distance travelled in 5 minutes, and 800m is distance travelled in 10 minutes.

Based on the Mobility Hub Guidelines, the "Primary Zone" (0-250m) is the area most influenced by the high level of accessibility to transit, where pedestrian activity should be most prioritized, and traveler amenities can be provided through development (ie. retail, pedestrian connections).

The "Secondary Zone" (250m-500m) provides opportunities for transit-oriented development, and safe and direct walking and cycling connections to the transit station through this zone are critical.

The "Tertiary Zone" (500m - 800m) is the transition of the mobility hub to the area outside of the hub, and direct and safe walking and cycling connections to the station are still very important, but also should connect to other transit and cycling systems outside the hub.





Conceptual Renderings of Full-Site Build-Out



Conceptual Plan

The Plan built on the three options presented in the July 2010 consultation and created a preferred "Conceptual Plan" for the overall full development of the lands.

This plan builds upon the Secondary Plan framework of primary and secondary street network, allowable heights and densities, and the distribution of open spaces to imagine a full buildout as properties redevelop over time (25+ years). This option was selected as it provided the most equitable and even distribution of parks and open spaces that would act as focal points for each surrounding area, and provides more units fronting onto parks. The east-west mid-block road ("Greenway") was offset to the south to create larger northern blocks that would allow for buildings oriented north-south. The blocks facing Steeles would be single-loaded and could allow for office or residential buildings. This midblock greenway was is an essential element to the connection throughout the District and its function would be more local than the street on the north (Street "X"), or Steeles Avenue.







Figure DC.2 Overall Conceptual Rendering of Full Build Out



Streets

Streets are the primary public realm element in the Steeles West Urban Design & Streetscape Plan.

Streets:

- divide up larger land holdings into blocks
- provide connections through communities
- provide connections to other communities
- provide building address and access to individual developments
- are public spaces and an important part of the public domain
- are democratic environments
- are green infrastructure

The existing large landholdings will be subdivided by public streets; not in a piecemeal fashion of individual roads serving inward developments, but within a larger grid which provides multiple functions and travel routes for vehicles, pedestrians and cyclists.

Streets found within the Secondary Plan are included within the overall concept street network, as well as a number of recommended additional "local" streets that help create pedestrian-friendly block sizes.



Conceptual Rendering of Street "G"







New blocks should be sized to create a pedestrianfriendly environment and provide dimensions that accommodate efficient underground parking layouts.

There are several specific street types that are important throughout the District. These streets should be planned and constructed to the dimensions provided and further detailed within the Conceptual Plan. This plan also deliberately shows continuous streets that connect throughout the District. In particular, the east-west mid-block street (The Greenway) is shown as a street intended, ultimately, to connect blocks from the east to the west. This Greenway street is an essential local connection between blocks and should prioritize pedestrian and cyclist mobility. The E-W collector (Street "X") is designed to prioritize transit and vehicular movements.

Note: Streets C-, D+, F+ are recommended additions to the Secondary Plan Street Network

Figure DC.3 Street Network (ROW)





Streetscape Character

Streetscape Character Areas have a distinct identities within the Steeles West Study Area. These areas will have common characteristics, features and functions that will help create identity. Compatible development and specific public realm design will enhance and support the identity of each Streetscape Character Area.

Retail Hub

This is the most concentrated Streetscape Character Area, centred around Street and the location of the proposed Steeles West Subway Station. Street "C" also is the northward extension of Northwest Gate, a key ceremonial entrance into York University and the location of the Subway Station entrance south of Steeles Avenue.

The "Retail Hub" area will be the focus of the highest amounts of density and height, consistent with the location around the Station as prescribed in the Mobility Hub Guidelines and Secondary Plan. It will be the urban activity centre within the Steeles West District with local shopping, restaurants, and transit activating the streetscapes. This area will be a destination for commuters moving through the hub, but also people who live and work in the District. As a result, the highest concentration of residents and workers will be located around this street. In addition, the location of the commuter parking lot within the hydro corridor will bring a large number of commuters to and from the site, as they park and walk to the subway station. The "Retail Hub" area will feature wider sidewalks, street-related service, commercial or public uses, encouraged to spill out into a sidewalk area, as well as main building entrances for buildings above. It will also provide for movements of pedestrians, buses, passenger vehicles, taxis, and dedicated bicycle lanes. The design of Street "C" should prioritize mobility based on the Metrolinx Mobility Hub Guidelines:

- i) trip reduction, shortening or avoidance
- ii) walking
- iii) cycling
- iv) transit
- v) ridesharing and taxis
- vi) single-occupant vehicles

Greenway

The east-west midblock street is otherwise known as the "Greenway" Streetscape Character area, which is the main internal connection of the entire Study Area. This neighbourhood street is intended to connect the various parks and open spaces proposed on the north side of the development blocks, and provide a linear "green" linkage throughout the District.

The design of the Greenway incorporates street trees on both sides, as well as suitable building setbacks for landscaping. The north side will include room for a second row of trees and potential bioswale, and will directly connect and link the multiple open spaces proposed on the north side. Layby parking will also be provided on the north side where feasible.

Ceremonial Edge

The "Ceremonial Edge" is the character area facing Steeles Avenue and York University lands. Steeles Avenue has a long, fairly straight frontage that will be framed by a number of mid-rise scaled buildings, with some taller buildings closer to the subway station at Street "C". The north side of Steeles Avenue will feature large canopy trees and a generous setback of buildings to continue the landscaped corridor and sensitivity to the cultural landscape of York University on the south side of the street. A separate cycle track is proposed. Buildings will provide frontage (including entrances) on Steeles, while at-grade uses should be activated with multiple residential unit entrys/exits, and especially at key intersections for future service and retail commercial uses. As per both the Steeles West and York University Secondary Plans, buildings on both sides of Steeles are to be a minimum of 4 storeys in height.

Priority Connection

Five streets, Street "A", "C", "E" "G" and "X" are identified as "priority connections". They are arranged fairly evenly across the District, and will account for the main entrances in from Steeles West, Keele and Jane Street. They also will align with connections south, across Steeles West into York University, connecting the two sides (also municipalities, Vaughan and Toronto) through signalized intersections. Streets "C", "G" and "X" will also feature surface transit routes.





Figure DC.4 Streetscape Character Diagram





Retail

A key characteristic of the success of the Steeles West District is a consistent "streetwall", or building frontage, which draws the pedestrian along the street, provides a consistent edge to the street and maintains interest. In mixed use areas, the visual interest and comfort of pedestrians on the street and in public spaces hinges on how the buildings and their uses interface with these spaces. The character and scale of the street wall is important because it is the part of the building that is most intimately involved in shaping the image of a place and the quality of the pedestrian experience.

A high quality pedestrian experience is often associated with the provision of grade-related retail uses. Grade-related retail provides a variety of shopping activities and street animation that promotes energy at the street level. This is vital to enable workers, residents and visitors to shop for daily needs, including meals, close to where they live and work, without the need for car trips. This is opposite to the separation and spreading of singleuse buildings common to suburbs that typically require individual car trips between destinations. Including grade-related retail in key locations will concentrate retailers and create focal shopping areas within the District.

There are three areas where retail is strategically identified within the District, and each location factors into the creation of "Character". All buildings in the three retail areas identified should be designed to provide for retail either immediately, or in the future. Accordingly, appropriate ground floor heights should be incorporated to protect for retail uses.

Primary Retail

"Primary" Retail areas are where a mandatory provision of grade-related retail is recommended in the development of any new building. These areas are at major entry points into the area from Steeles, along Streets "A", "C", "E" and "G" ("Priority Connections"). The location of Primary retail is premised on providing some retail within a 2.5 minute walking distance of almost the entire Study Area (250m). This will allow for convenient access for pedestrians who are living and working in the area.

The area along Street "C", which is the main cross street of the new Steeles West subway station and bus terminal(s), will have the greatest concentration of density and height, and therefore the largest number of potential users. It is anticipated as the primary initial provider of grade retail in new development, due to the activity generated around and at the subway station and bus terminals. The area at Street "G" is also anticipated as a key retail location that could be developed in the short-medium term.

Secondary & Tertiary Retail

Areas categorized as "Secondary" and "Tertiary" Retail are areas primarily facing the proposed eastwest Greenway. This Greenway is anticipated as the major interior, neighbourhood connection for the whole District. It will have a more local nature in vehicular, pedestrian and cyclist movements, which will lend itself to being a good Secondary Retail option that connects to the Primary Retail.

In particular, Secondary Retail is retail connected to Primary Retail and that terminates adjacent to the parks within the overall plan. These locations opposite the parks will be good locations for restaurants, cafes, or retailers. Secondary Retail is located on the north side of the Greenway.

The "Tertiary" Retail is retail located along the south side of the Greenway that connects with the Primary Retail areas. These areas would function well as residential or live-work units in the interim until retail is viable in these locations.

Retail fronting Steeles Avenue West

As noted, some retail is anticipated at key intersections with Steeles Avenue (on Priority Connection Streets "A", "C", "E", and "G"). Retail is permitted along the length of Steeles Avenue West.





Figure DC.5 Retail Frontage Diagram





Street Type - Greenway (17.5m)

One of the most important streets to be created within the overall plan area is the east-west "Greenway" which will connect through the entire Study Area, from east to west, in a mid-block configuration. This street is the primary internal connection between neighbourhoods in the Study Area and the central transit station. It is the primary local connection for pedestrians and cyclists across the District. The Greenway will also need to provide on-street parking to support the mobility hub pick-up and drop-off, and parks.

The Greenway has a 17.5m right-of-way (ROW) with an enhanced boulevard on the north and south side which will also connect the planned parks and open spaces spaced throughout the Plan. Within the ROW, one travel lane will be provided in each direction. Boulevards on either side allow for street trees, sidewalks and lighting. Traffic calming and enhanced public realm measures such as curb extensions should be employed wherever possible in the detailed design. This street will also support Secondary and Tertiary Retail.

The Greenway has been jogged at Street "C" to align with the TTC's location of the bus terminal driveway access. This has been coordinated so that this driveway will be protected for and upgradeable to allow for the continuation of Street "C" through and beyond the bus terminal in the future. A larger intersection / pedestrian area at Street "C" and the Greenway is to be included to serve high pedestrian volumes associated with the Mobility Hub.



Greenway Street 17.5m (row width)

The expanded North boulevard includes a double row of street trees, as well as the potential option for a Rain Garden (subject to further study and detailed design).



Street Type - Street "C" (26m)

Street "C", the northward extension and connection of Northwest Gate from the York University lands, will travel north-south between Steeles Avenue and the East-West Collector Road (Street "X"). This is one of the main gateway streets of the new District, and will be the intersection of surface transit (bus terminals north and south of Steeles) and the new subway station. Accordingly, the built form surrounding Street "C" carry the greatest height and density permissions for the area. The street will be designed as a 26.0m ROW with transit, which allows for two travel lanes each way, a dedicated bike lane, a turning lane, and a premium pedestrian boulevard on each side.

Street "C" will also be the main retail street the District, with the greatest amount of pedestrian activity driven by the highest population density, as well as proximity to transit access (subway station and bus terminal).

In the short term, Street "C" will be the primary connection to the new subway station as well as the main connection to the planned commuter parking lot in the hydro corridor from Steeles Avenue West. It will also service the north bus transit terminal. This will make the initial function heavily weighted towards passenger and bus traffic, but once the adjacent streets and blocks are developed, they will provide some traffic relief.



Street C, North @ Street X 26.0m (row width)

Flanking boulevards are critical pedestrian connections between York University, Steeles Avenue West and transit facilities.

Built form along the street will have active frontages with retail use and setbacks for patios and display.



Street Type - Public Laneway

Public local and private laneway design shall conform to the City of Vaughan Design Standards, from 7.5 to 8.0m. (Secondary Plan - 11.3.12.15).

Street Type - Private Driveways

Private driveways will be built primarily to locally service buildings internal to blocks. All streets identified within the Corridor are required to be built and maintained to a City operational standard and shall provide permanent public access for traffic through the Corridor at locations satisfactory to the pertinent authorities (Secondary Plan - 11.3.12.19).

The City may permit private driveways designed and built to City standards with public easements that convey the road to the City at no cost, any time in the future that the City deems necessary. (Secondary Plan - 11.3.12.20)

Steeles West - North Boulevard

The North boulevard of Steeles Avenue West will be characterized by a double allee of trees framing an enhanced 3.0 metre wide cycle track for cyclists, and a minimum 2.0 metre wide sidewalk for pedestrians. While the width of the North boulevard on Steeles Avenue West varies along its length across the District, it is anticipated that the dimensions demonstrated will be adjusted to suit local conditions.

Proposed North Boulevard +/- 11.2m (row width)

This boulevard features a continuous cycle track and double allee of trees.





Street Type - Street "X"/ East -West Collector (26m)

The East-West Collector Road (Street "X") design and location is the result of an Environmental Assessment completed in 2012, which creates a 26.0m collector street on the northern edge of the District, adjacent to the existing hydro corridor. This street features an asymmetrical cross section, with two travel lanes each direction, along with a centre turning lane with additional width which will be used by the various buses travelling to the new bus terminal located at Street "C". Street "X" will be transit priority. The street is also aligned to the southern boundary of the hydro corridor. A larger boulevard will be provided on the south edge of the ROW for pedestrian sidewalks and planting. The East-West Collector Road / Street "X" will relieve traffic congestion from Steeles Avenue, as it will connect to Keele Street. Through detailed design, it is recommended to optimize the roadway design in order to include a cycling facility on the north side of Street "X".

Eventually this street is proposed to connect westwards to Jane Street to provide an alternate east-west route between Jane Street and Keele Street.



East-West Collector (Street X) 26.0m (row width)

The South boulevard shows a boulevard with an active transportation path, planting and street lighting, while the North accommodates street lighting.



Street Type - Street "G" (23m)

Street "G" will have a 23.0m overall ROW width with travel lanes supportive of bus transit and dedicated bike lanes. Street "G" is the northward extension of Founders Road from the York University lands, north of Steeles Avenue. It may continue through the Hydro Corridor in the future, and also provide vehicular traffic relief from Keele Street.

Lay-by parking is to be provided, where feasible, on the west side of the street (on north block).



Proposed Street G 23.0m (row width)

On-street, off-peak parking is provided on one side of the right-of-way



Street Type - Local Streets (20m)

The majority of the remaining new streets will be classified as Local Streets, with a 20.0m ROW. This will allow for one travel lane in each direction, and either parking on one side or sharrow lane widths to provide safe cycling. Bump-outs or curb extensions are traffic calming measures. These extensions will also provide enhanced pedestrian crossings. A 5.75m boulevard on each side will be provided to support plantings, sidewalks and lighting. These streets will be found in the north-south direction between Steeles Avenue and Street "X".

Note: An alternate cross section for Street E (to include bike lanes) is to be determined through detailed design.



Proposed Local Street 20.0m (row width)

On-street parking is provided on one side of the right-of-way

Green Streets (bioswales) are subject to further study and detailed design.



Blocks

Blocks come in different sizes, but certain dimensions provide for the ability to unlock the potential for multiple building types, which is important in a mixed-use, higher density community like the Steeles West Study Area. Blocks that are too big, either overall, or in one dimension, create fragmented, undevelopable blocks, or blocks that rely on excessive private driveways and private streets to service buildings. Private driveways do not extend the public realm or connect parts of communities. They are typically confusing for visitors to navigate and embody the disconnection between ownership of the area. They are not naturally surveilled, since pedestrian and/or vehicular travel is missing from their structure. Blocks that are too small only allow for traditional, less intensive building types and will remain problematic for future flexibility and uses as they limit traditional building types.

For example, low density residential building types can fit within block depths up to, and less than 35 metres, while mid-rise and tower buildings typically need 40 to 50 metres or more.

Generally, the blocks have been laid out at 90 to 110m in width, which allows for two mid-rise or tower buildings with adequate separation between buildings, and sufficient width to make efficient parking garages, provide on-site amenity, and servicing.

Design Implications

The geometry of the site, particularly between the hydro corridor and Steeles Avenue, provides limited options in terms of the numbers of blocks that can be created. The east-west street depicted midblock throughout the site (the "Greenway") creates two blocks, one north and one south. The preferred development option utilizes this configuration. The southern blocks are suited primarily to buildings facing Steeles Avenue West (as well as on the Greenway Street), which when paired, create significant private amenity spaces with courtyard shapes. The northern blocks are slightly deeper, and allow for north-south buildings also addressing the local north-south streets and parks.

There are a number of north-south streets also depicted in the Secondary Plan. This breaks up the blocks created by the intersections of the conceptual streets. Three additional small streets outside of the Secondary Plan street network are proposed; these additional streets will improve connectivity and break up larger blocks in accordance with the principles in the Steeles West Secondary Plan.

The blocks have been laid out to allow for doubleloaded blocks (two series of buildings), other than the blocks facing Steeles West which have a depth more suited to one building.





Figure DC.6 Conceptual Block Plan with preliminary block dimensions.



Built Form

Built Form is an encompassing term that collectively describes all buildings and structures and how they relate to the adjacent streets and community. Managing the ways that buildings interface with streets and open spaces is important in the creation of beautiful and high-functioning communities. Cohesive, coordinated built form can generate beautiful and successful communities, while disparate, fragmented built form often leads to less beautiful, enjoyable and ultimately less successful places to live and work.



Conceptual Built Form, West from Subway Station

The Steeles West Secondary Plan provides "built form" policies that provide a baseline for this Plan:

(11.3.10.5) **Buildings are to:**

- a define street edges, public spaces and intersections;
- b face and have their main entrances onto a public street and sidewalk;
- c have their main entrance facing Steeles (where the buildings are located on Steeles Avenue);
- d be massed at an appropriate scale to ensure good sunlight, sky views, and wind conditions in streets, parks and open spaces, providing stepbacks as appropriate;
- e be sited and organized to achieve a harmonious relationship to the planned built form context through building massing and setbacks, roofline, profile, and scale;
- f be designed, where through-lots are provided, so that all elevations facing a street present active front elevations and fenestration;
- g address the street such that a continuous building facade along the street frontage and at corners is created;
- h be generally sited parallel to the public street and along the edges of parks and open spaces;
- i maximize ground floor coverage;
- j be sited and organized at-grade to enhance the public nature of streets, open spaces, and pedestrian routes, and so provide convenient access for pedestrians to public transit;
- k have grade-oriented main entrances connected directly to the public sidewalk and, where possible, located close to on-street parking; this applies in particular to each commercial use located at grade;
- I each building shall have its own lobby and entrance adjacent to the street;
- m be sited and organized so that principal windows and walls are separated to ensure adequate light, view and privacy; light view and privacy setbacks should be proposed, to regulate the design of building facing conditions; and
- n overlook all streets, parks and publicly accessible open spaces with active building faces, in order to provide "eyes-on-the-street".



Building typologies

The expected building typologies are high density residential, prestige office employment, commercial uses in mixed use development, and public and institutional uses. These types, in combination with the permitted densities are expected to generate higher-intensity multiple-storey building forms throughout the lands, including mid-rise and tower buildings.

The tallest buildings will be located on the corners closest to the subway station, and fronting onto Steeles Avenue West (11.3.10.8). On Steeles Avenue West, buildings are a minimum of 4 storeys or 13m in height (11.3.10.8).

Streetwall and Frontages

The creation of a consistent streetwall through the coordination of the scale and position of adjacent building frontages is important to creating a consistent street "look" and "feel". Generally, when multiple buildings line up, they create a seamless and reinforced street edge, thereby defining the public environment, which creates a more comfortable pedestrian "feel", or experience.

The Secondary Plan currently describes specific urban design policies relating to the creation of strong streetwall and frontages through discussion of setback areas (11.3.10.9), build-to-lines (11.3.10.10), and minimum built frontage (11.3.10.11).

The Urban Design Guidelines included in this Plan demonstrate and describe how to coordinate and control these elements to achieve consistency.

The conceptual design of the Steeles West District provides consistent streetwall/frontages, generally with a suitable minimum building setback (3-5m) to allow for landscaping, and appropriate distinction between the public realm (on the street) and the private function of the buildings. It will also allow for coordinated grade-related retail and building lobbies.



Built Form

Design

The built form of the preferred concept is primarily mid-rise, where buildings are generally massed at 6-8 storeys at the streetwall, and any further building mass is setback from that base building. Any elements taller than 8 storeys are setback from the streetwall by 3 metres in an effort to break down the mass and provide distinction between the base building. All towers (other than Blocks 11 and 12) are shown as residential point tower floorplates, at a size of 750 square metres maximum. Towers should generally be setback a minimum of 3m from midrise streetwalls to break up the overall heights, provide a human-scaled street wall, and to provide microclimate wind protection on the surrounding streets. The buildings found within Blocks 23 and 24 (at the easternmost part of the land area, between Street "G" and Keele Street), are shown as typical prestige office building types (with building depths for double-loaded corridors at 33 metres wide). The existing 4-storey office building found at the intersection of Keele and Steeles, being recently built is expected to remain. These buildings were shown specifically as Prestige Office building types to maximize the available density potential.





The remaining mid-rise buildings are shown as residential typology, with building depths with double-loaded corridors at 25 metres wide. This assumption is not meant to be prescriptive, as the Secondary Plan permits a number of mixed uses, but demonstrates the application of the streetwall and frontages at a block scale. The street blocks are designed to accommodate a variety of building types, as their individual application will demonstrate as lands are developed over time.





Parks and Open Spaces

A variety of parks and open spaces are located conceptually within the Secondary Plan, distributed throughout the developable area. They are located mostly one per block as defined in the Secondary Plan (for larger blocks), with the exception of the western block at Jane, and the western block at Street "C".

Parks and Open Space blocks are categorized in the Secondary Plan as:

Neighbourhood Park (3) Neighbourhood Square/Green (5) Urban Plaza (1) Potential School Site or Open Space (1) Existing Stormwater Management Pond (1)

Parks and public squares will: "provide central common spaces and key social gathering spaces for citizens. Public squares are smaller than typical neighbourhood parks, and are intended to address the passive recreation needs of residents and employees of the Secondary Plan Area." (11.3.8.7) Parks and public squares should be designed based on the following design guidelines as outlined in the Secondary Plan (11.3.8.11):

- a Parks and squares should be planned as focal points
- b Streetscapes along the street right-ofway that abut a park should be designed to reinforce a high-quality, formalized relationship between the open space and its adjacent land uses.
- s Buildings should front onto the park to create built form edges to the public space.
- d The landscape along the street frontage should include high canopy street trees and be complementary on both sides of the street.
- e Entry/access points should be located conveniently and incorporate civic design themes.
- f Hard and soft landscape elements and features shall be designed to define and articulate activity areas, circulation, entry points, seating and gathering areas.
- g Parks and squares should be designed with a minimum of two (2) street or lane frontages.
- h Neighbourhood parks should be 0.8 2.5 hectares in size. Public squares will range in size from 0.4 to 0.8 hectares.

Design Implications

Working together with City of Vaughan Staff, a Development Concept Plan has emerged which supplies all the parks and open spaces found within the Secondary Plan. They are provided in a variety of a shapes and sizes, and situated in the same approximate locations as per the Secondary Plan.





Gateways

The most significant gateways and key sites are located at the following major intersections.

Three Major Gateways:

- (A) Northwest Gate / Street "C" and Steeles Ave. W. (Block 12 and Block 14)
- (B) Jane Street and Steeles Ave. W. (Block 2) Keele Street and Steeles Ave. W (Block 24)

These three locations are significant intersections. Most people will arrive at Gateways "B" by personal vehicle or surface transit. Those arriving via subway will emerge at Gateway "A".

Three Minor Gateways:

©Street "A" and Steeles Ave. W. (Block 4 and 9) Street "E" and Steeles Ave. W. (Block 18 and 20) Street "G" and Steeles Ave. W. (Block 22 and 24)

See also York University Secondary Plan - Gateways.

Urban Plaza U

The Urban Plaza will be created as part of the Steeles West subway station redevelopment. It features an iconic station entrance (designed by ALSOP Architects), with a large square in front that provides visibility and address onto Steeles Avenue West. The Square will be 0.4 - 0.8 ha in size. (11.3.8.12)

Figure DC.7 Gateways, Urban Plaza and Parks & Open Spaces

Park and Open Space Blocks

D Block 5 and 8 **B** Block 15A, 19A, 21B and 23B

The park blocks are meant to act as large attractors of residents and visitors in acting as focal points for the community. They will provide large and convenient respites from the significant density and larger buildings that will surround them. Parks are located to provided orientation and larger common amenity areas.

The block labelled "D" is conceptually planned to include a potential elementary school site (11.3.8.17). The integration and design as a school will be reflected at the appropriate trigger point (approximately 10,000 residents) (11.3.8.20)



Phasing: Initial, Interim and Continuing

The full build-out of the District will develop in parts, as individual landowners construct new buildings or applications for developments are filed and received.

It should be noted that United Parcel Service Ltd. (UPS) has advanced plans to establish, maintain and enlarge the UPS facility at this location due to its proximity and accessibility to the Greater Toronto Area and recent investments in the facility. The near doubling in size of the operation in 2009 will be followed by a further expansion to the full limit of the development potential available under existing zoning rights. It would therefore be reasonable to accept that this operation will remain in operation and expand within and beyond the time frame of the Steeles West Secondary Plan and the City of Vaughan Official Plan planning time horizon.

Modification to the Steeles West Secondary Plan (Volume 2) of the City of Vaughan Official Plan See Ontario Municipal Board Notice of Decision pertaining to United Parcel Service Canada Ltd.

2900 Steeles Avenue West

11.3.18.1 That the following policies shall apply to the lands identified as 'Lands Subject to Policy 11.3.18.1' on Map 11.3.A 'Steeles West Secondary Plan – Land Use':

a. The area identified as 'Lands Subject to Policy 11.3.18.1' on Map 11.3.A 'Steeles West Secondary Plan – Land Use' shall be subject to the provisions of the OPA 450 "Prestige Area" and "Employment Area General" Designations. b. The existing use of the lands identified as 'Lands Subject to Policy 11.3.18.1' on Map 11.3.A 'Steeles West Secondary Plan – Land Use' is expected to exist beyond the timeframe of the Official Plan and shall continue to operate and develop.

c. Expansion or extension of the existing use in accordance with the Zoning By-law shall be permitted. Expansion or extension of the existing use requiring an amendment to the zoning by-law shall also be considered without amendment to this Plan.

d. Policy 5.2.1.2 of Volume 1 of this Plan shall apply to applications for more sensitive land uses proposing to locate in proximity to the existing employment use on the subject lands and such applicants will be required to provide landscaping, buffering or screening devices, and any other necessary mitigation measures to ensure land use compatibility with the employment use prior to development, at the expense of the applicant for the more sensitive land use.

e. Zoning by-law amendments for any part of the subject lands shall permit only uses that are in conformity with the "Prestige Area" and "Employment Area" designations of OPA 450. Redevelopment of any part of the subject lands for uses not in conformity with the "Prestige Area" and "Employment Area" designations of OPA 450 shall only proceed by way of an approved tertiary plan. New non-employment uses contemplated by a tertiary plan would not constitute a conversion, as requirements under the Growth Plan (Policy 2.2.6.5) have been fulfilled through the Vaughan Official Plan 2010 review. The remaining Secondary Plan lands can be developed in accordance with the Development Concept in the Steeles West Urban Design & Streetscape Plan. It is recognized that these lands may also remain as-is, with existing buildings and site plan configurations for the near term.

The intent of the Steeles West Urban Design & Streetscape Plan is not to force landowners to move or redevelop. The Development Concept provides a framework to plan and review future application(s) in the Steeles West Intensification Area.

Phasing is an important concept for the infill or redevelopment of existing sites. Market demand and financing may restrict the ability to provide too many buildings in short spans of time. Accordingly, portions of an existing site can be infilled incrementally to support overall site redevelopment.

The following series of images demonstrate how a potential phased redevelopment of a sample of the Study Area lands might occur:





Existing Site (Vacant/Light Industrial) Identify and utilize (where possible) existing intersections.

3



Interim Phase

Internal infill of buildings and allocation of parks and open spaces should be structured in anticipation of connections between new and existing streets.



Initial Phase

Develop the street edges with new buildings. Establish internal through streets within the existing lot. Parking demand can be maintained with a combination of remaining existing surface and new underground or structured parking spaces.



Continuing Phase

Extend street connections to existing and new neighbourhoods where possible. Re-configure new blocks to coincide with the development concept.



- Streets & Blocks
- Built Form
- Tall Buildings
- Public Realm
- Site Plan
- Sustainability
- Lighting

The following guidelines have been created to illustrate the types of built form control recommended to achieve the objectives of the Steeles West Secondary Plan. Guidelines are useful tools in the creation and delivery of new communities and the infill of existing ones. They demonstrate the desired outcome and recommendations for the layout, look and function for the Steeles West District as development occurs. Design Guidelines provide the City, the public and the development community with a clear understanding of the benchmarks for design proposals.

Streets and Blocks





S.1 - Align Streets

Align local streets on either side of major arterials to allow for future crossing points and connectivity between neighbourhoods. Avoid dead-end streets and cul-de-sacs, which isolate parts of the neigbourhood and fragment pedestrian movement.

S.2 - Define Open Spaces

Define parks and public open space with public streets. This stimulates public access and promotes security within the park. Buildings with primary frontages and ground level active uses will also help to define and activate the public parks and open spaces.



S.3 - Park Edges

Parks should have a minimum of two street frontages and 50% frontage abutting public streets. Avoid creating parks adjacent to the rear yards of existing or proposed development.

S.4 - Create a Fine Grained Grid

Develop a fine-grain street grid, which offers choices for pedestrians, cyclists, and vehicular movements, and creates more intersections for passive traffic control. "Fine grain" means that a variety of ways of travel are available due to the number of street intersections and smaller blocks make a community more walkable.

S.5 - Street Types

Design streets and street right-of-way (ROW) to reflect the desired adjacent land use, including the intensity of uses, heights, and provision of modal options. Utilize street types to support a variety of functions in the development area.



grain street grid.

Avoid use of cul-desacs(11.3.12.26)



Streets and Blocks

Figure S.9 & S.10

On-street cycling is provided in a shared-use lane.

S.6 - Parking Near Activity

Where feasible, allocate lay-by and street parking on-street near activity generators such as community facilities, large open spaces, parks, grade-related retail or on important streets.

S.7 - Tree and Soil Volume

Street trees require generous soil volumes and quality soils to survive and grow. Provide sufficient soil volumes in street ROW design for street trees to properly mature (Refer to City Tree Planting Guidelines). Provide permeable tree bases to allow for rainwater and infiltration to nourish tree growth. Where sufficient volumes cannot be provided, provide structural soil cells to ensure adequate soil volumes required to reach maturity.

S.8 - Co-locate Utilities

Coordinate, locate and consolidate utilities and services in underground tunnels, duct banks or other technologies wherever possible. (11.3.11.18, 11.3.13.15) Avoid locating underground utilities under street tree planting beds wherever possible.

S.9 - Green Streets

This Plan includes a conceptual Green Street network that is subject to further review and detailed design. Green Streets are an integrated approach to infrastructure as high functioning landscapes that perform multiple functions with multiple benefits, including stormwater management and addressing urban heat island, biodiversity and human health. The proposed Green Streets have enhanced plantings and tree canopies that will create a beautiful and comfortable walking and cycling environment. In the **Steeles West Streetscape Plan, Green** Streets are located along right-of-ways that connect major parks and on-street commercial spaces.







Figure S.8

Streets and Blocks





S.11 - Mid-Block Connection

Provide a high quality mid-block pedestrian connection, street, or lane for blocks over 150m in length. Mid-block connections should be wide enough to allow for safe cyclist and pedestrian passage, well lit and be naturally surveilled from adjacent buildings (11.3.11.14-11.3.11.16).

S.12 - Emphasize Crossings

Emphasize important pedestrian street crossing areas through a combination of tactile walking surface indicators, changes in materials, contrasting colours and appropriate vehicle signals (crosswalks, etc) to provide greater visibility to motorists, cyclists and encourage pedestrian use.

S.13 - Shorten Pedestrian Crossing Distances

Curb extensions or "bump-outs" are effective in calming traffic and shorten the roadway crossing distance for pedestrians. Curb extensions should be used on appropriate streets for crosswalks and intersections wherever possible.

S.14 - Access to Transit

Create clear, direct and enjoyable pedestrian and cycling routes for access to transit facilities.



Figure S.12



Built Form

BF.1 - Intensify near Transit

Locate higher levels of intensity and height surrounding the new Steeles West Station. These highly transit-supportive development sites are located within a five minute walk from the subway station (a 5 minute walk corresponds to a 500 metre radius). See Ontario Municipal Board Notice of Decision pertaining to United Parcel Service Canada Ltd.

BF.2 - Mid-Rise Street Scale

"Mid-rise" scale creates a comfortable pedestrian environment in an urban neighbourhood, and allows for sunlight access on the opposite sidewalk. Blocks primarily within the 250m radius to the subway station can have heights in excess of this scale (11.3.10.8f)

BF.3 - Build-To Lines

Establish build-to requirements for buildings facing important streets in applicable and site specific zoning bylaws. Build-to lines help create a cohesive streetscape (11.3.10.10).



Figure BF.3

Built Form





Figure BF.4 & BF.5



Figure BF.6

BF.4 - Design Variety

Consider a variety of architectural designs and facades to create variety in built form within developments that occupy large or multiple blocks. Continuous repetitive architectural styles, building design and materials produce sterile and ostrasizing streetscapes. Design diversity is encouraged.

BF.5 - Building Finish

Strong, pedestrian friendly streetscapes require building facades to be designed with durable materials, and aesthetic qualities appropriate to the character and scale of the public realm.

BF.6 - Defining Private Space

Define the threshold between private residential uses at grade and the public realm through measures such as screening, setbacks, planting, and elevation changes.

BF.7 - Pedestrian Shelter

Incorporate weather protection along Primary Retail sidewalks to protect from sun, wind and rain. Buildings with components such as canopies, or awnings provide relief, cover and definition of space while complementing at-grade use.

BF.8 - Create Street Rhythm

Design building facades and streetscape elements to create a consistent rhythm with visual interest and vitality. Rhythm can be achieved through changes of materials, fenestration, building articulation and spacing of streetscape elements (ie. trees, planters, etc).

Figure BF.4 -BF.8





Tall Buildings

TB.1 - Minimum Tower Spacing

Tall buildings (taller than 8 storeys) should be spaced sufficiently far apart to prevent overcrowding of skyviews and skylines, as well as reduce wind tunnelling and create comfortable microclimates. The separation distance between towers should be a minimum of 30m. A similar separation should be considered where towers are located on adjacent blocks and/or across streets.

Figure TB.1



TB.2 - Maximum Floorplate

Design tall residential buildings above any podium with a maximum gross floor area of approximately 750 m² (exclusive of balconies) to minimize shadow impacts on surrounding streets, sidewalks neighbouring buildings and private amenities.

TB.3 - Street Edges

In residential developments, set back "tall buildings" from the podium street edge for at least 2/3 of the frontage. Locate the podium parallel to street edges.

TB.4 - Minimize Shadows

Minimize shadows cast by tall buildings on public open spaces/parks and private yards. Applications involving tall buildings should include shadow studies and analysis by the applicant, particularly where there is the potential for appreciable shadow impacts on public parks and private open spaces (including rooftop gardens). Figure TB.2 & TB.3



Χ



Figure TB.2

 $X \times Y = 750m^2$, max tower floorplate. Z = Setback of tower from podium & street edge

Public Realm



Figures PR.2-7

PR.1 - Protect Microclimate

New development can affect microclimate and have an impact on human comfort in the public realm. To ensure favourable shade and/or wind conditions, locate tall buildings a minimum of 30m apart, and avoid tall slab buildings. Similarly, provide weather protection along Primary and Secondary Retail streets. For cool months, maximize sun exposure by careful siting of architectural and site elements, and by providing weather protection from wind, rain and snow. For warm months, ensure opportunities for shade.

PR.2 - Connect Open Spaces

Connect new open spaces to create a network of parks, pathways, and gathering spaces to promote active transport (walk, cycle, etc) and healthy living.

PR.3 - Open Space Hierarchy

Create types and sizes of parks and open spaces to support a diversity of district, neighbourhood, and local activities that contribute to place-making and a legible public realm.

PR.4 - Focal Points

Create neighbourhood focal points with open and public spaces. Each open space can take on different functions or thematic qualities to provide identity for neighbouring inhabitants and workers.

PR.5 - Open Space Variety

Design new open spaces to provide a variety of options for residents and visitors: passive and active space; planted and paved areas; pathways and seating.

PR.6 - Space Flexibility

Provide flexible indoor and outdoor community spaces that can be programmed at hours in the day and evening.

PR.7 - Open & Urban

Create year-round pedestrian friendly urban environments: square, plaza, courtyard, promenades. These open spaces complement vibrant social spaces like recreation and cultural facilities, schools, commercial-retail areas and transit hubs.











Public Realm



Figure PR.8



Figure PR.8 & PR.9

PR.8 - Park Views

Maximize the opportunity for views from buildings adjacent to parks and open spaces. Large windows, balconies, terraces or amenity areas provide a point of visual connection with the exterior.

PR.9 - School Open Space

Locate schools adjacent to public parks to encourage the shared use of open space and potential reduction in overall site area needed for school sites.

PR.10 - Park Edge Enhancements

Provide for enhanced planting, wider sidewalks, and bicycle lanes along streets that connect to and surround major parks and open spaces. This emphasizes the relationship of the park to the surrounding neighbourhood.

PR.11- Mid-Block Security

Maximize the opportunity for views from buildings adjacent to mid-block connections. Pedestrian safety and comfort can be enhanced with visibility, passive surveillance, lighting, access and direct interaction with large windows, balconies, terraces and amenity areas.



Figures PR.11

Public Realm



PR.13 - Consistent Street Treatment

Provide a consistent, solid, stable and durable pedestrian environment with continuous street edge treatments. Coordinate the streetscape with neighbouring properties.

PR.14 - Sidewalk Design

Sidewalks should be designed to be barrierfree. This should include intersections with curbs, connections to building entrances, and across private driveways. Entrances to retail should be flush with grade and the public sidewalk to allow for accessible entrance/exit.

PR.15 - Wide Sidewalks

Provide sidewalk widths wider than 2.0 metres on main streets, grade-related commercial areas and in higher density areas, which allows for greater volumes of pedestrian movement, street retail sales and a more comfortable pedestrian experience.

PR.16 - Double-Sided Sidewalks

Wherever possible, sidewalks should be on both sides of the street to facilitate convenient and safe pedestrian movement.

PR.17 - On-street cycling

All shared-use (vehicular & cycling) lanes will be designated with roadway markings and have a minimum width of 3.5 metres, whereas wider is encouraged. On-street cycling allows for connections between local and regional cycling network and to the mobility hub itself. Streets "C" and "G" have a dedicated cycling lane.



Figures PR.13-16



Figure PR.18



Figure PR.19 & PR.20


Public Realm

PR.18 - Off-street cycling

Off-street bicycle pathways will be a minimum of 3.0 metres in width. This minimum width allows for two-way movement along the network. Pathways should be accessible and finished with a solid, stable and smooth material. Visibility of the finished pathway should be provided with markings and/or colour contrast to minimize conflicts with pedestrians.

PR.19 - Street Furniture

Street furnishings should be co-ordinated to avoid conflict with building at-grade use, sidewalks, planting, utilities, lanes, driveways and crosswalks. Furnishings should be co-located with pedestrian and cyclist acitivities to contribute to a consistent and coherent public realm.

PR.20 - Bike Parking

Bike Parking (including short-term for visitors and commuters) should be considered both as streets and blocks are constructed. Convenient access to safe and visible bicycle parking will encourage visitors and commuters to utilize bicycles to get around.

PR.21 - Transit

Transit stops should include amenites like shelters (weather protection) and be co-ordinated with associated street furnishings (waste, recycling, wayfinding etc.), and the overall streetscape to minimize conflicts with vehicles, planting, lighting etc. Stops should be directly accessible to sidewalks.

PR.22 - Wayfinding

Incorporate wayfinding and visual cues into street and building design to direct pedestrian, bicycle, and vehicular movement. The ease to which a resident or visitor can move through a space will enhance their understanding and enjoyment of that space.

PR.23 - Tree/Utility Coordination

Coordinate street planting with utility location to minimize disruption and ensure adequate space and growing conditions for trees to reach healthy maturity. Consideration must also be made for planting bed maintenance operations.

PR.24 - Public Art

Public art is a valuable public element to be considered for the Steeles West District. Art reinforces the urban design goals of the public realm and outlines consideration of site conditions, built form opportunities and context. Public art selections will help define a unique character for the evolving district, and can be integrated into the architecture, landscape and open space design of a place early in the design process. Public Art should consider the following:

Artistic Excellence - High aesthetic standards, with attention to design, materials, construction and location.

Image - Create important visual interest through focal points, meeting places or identifiers that enhance the area's image.

Authentic Sense of Place - Recognize local cultural significance or create new identity Informative - Create interest and "clues" for navigation and to welcome visitors into a new area.

Timely Consideration - Art should be considered early on in site planning stages to integrate with the site.

A separate Public Art Plan should describe how this is implemented; in the interim, the above will function as criteria to base public art applications on. A full maintenance programme should be established during the commissioning.

Site Plan



This category in particular should be accessed during a site plan application, but also can be considered in rezonings.

Figure SP.1





Figure SP.2 & SP.3

SP.1 - Uniform Street Edge

Coordinate building setbacks with adjacent properties to help create a uniform street edge. "Build to" lines can be incorporated to ensure the desired proportion of the street frontage is created with building(s). Variety and articulation can still be incorporated into buildings to create interest and identity (11.3.10.5).

SP.2 - Entrances at Street

Locate functional primary building entrance(s) along street frontages to encourage security and public activity at street level. The number of entrances and spacing should be co-ordinated with the streetscape (11.3.10.5 k).

SP.3 - Corner Frontages

Design corner lot buildings with entries and articulation on both streets to maximize views and maintain an animated street edge (11.3.10.15).

SP.4 - Ground Floor Residential

Create entrances to ground floor residential units by providing setbacks, landscape, changes in grade, articulation or structures. Provide a threshold of semiprivate space between an entrance and a street/sidewalk to allow for privacy and safety.

SP.5 - Ground Floor Height

Design multi-unit, multi-storey buildings on collector and arterial streets with a ground level floor-to-ceiling height to accommodate a mix of uses, including grade-related retail (where appropriate). A minimum height of 4.5m to the underside of ceiling is recommended.





Site Plan

Figure SP.4, & SP.6





SP.6- Private Open Spaces

Provide visibility to any private open space in order to increase the surveillance of the open space and improve views (CPTED). Private open spaces should be connected to public streets and parks, and eventually the Black Creek Ravine System (11.3.8.15). Some neighbouring private open spaces (Black Creek Pioneer Village) have sensitivity to height (11.3.10.7).

SP.7 - Barrier Free Access

Incorporate barrier-free access into the site plan design. Refer to the Accessibility for Ontarians with Disabilities Act for details and regulations.

SP.8 - Enclose Refuse and Loading

Provide loading, garbage, and recycling areas within multi-unit residential and mixed use buildings.

SP.9 - Sight Triangles and Driveway Radii

Driveway radii should be minimized and coordinated with site organization and built form to provide appropriate sight triangles.

Figure SP.1, SP.2 & SP.5

Site Plan





Loading and Parking at the rear, away from primary street frontage.



Loading and Parking lane or driveway leading away from primary street frontage.

Figures SP.9 & SP.10

SP.9 - Loading Access

Wherever possible, locate servicing/ loading access from secondary streets, laneways or driveways (11.3.11.17 r).

SP.10 - Surface Parking - Rear

Where surface parking is permitted, locate lots to the rear of buildings where possible to maintain consistent street frontage. Where not possible, locate to the side of street-facing buildings. Any surface parking lot design should provide a ratio of 1 tree to for every five parking spaces (1:5) (11.3.11.17).

SP.11 - Screening from Side Streets

Screen parking and loading from any streets using planting, landscaping, decorative walls, and/or fencing (11.3.11.17*i*)



Figure SP.11



Site Plan





Figures SP.12-13

SP.12 - Threshold for Structured Parking

Provide all parking for buildings 4 storeys or taller in structured garages, preferably below grade. Some convenience/ accessible parking spaces may be considered at-grade. Ramps and entrances should be consolidated where possible to minimize sidewalk disruption and necessity for driveways (11.13.11.17).

SP13 - Wrap Parking Structures

Above-grade parking structures should be wrapped or faced with primary facades facing primary or secondary streets at-grade. This ensures the animation of adjacent street frontages.

SP14 - Shared Parking

Reduce the total amount of parking provided by adopting shared parking practices in mixed-use areas. Combine parking requirements for different uses based on the intensities for each use at different times of the day. Consider street parking for visitor parking provisions (11.3.12.56-57).

SP15 - Parking Under Driveways

Parking may be provided under private driveways where allowed), but should not be a deterrent for them to be publicly accessible or not built to public standards.

SP16-On-Street Parking

Maximize on-street parking opportunities. Encourage on-street parking on main streets and secondary streets wherever possible to supplement visitor parking requirements for developments or public facilities, including those found in parks. Allow for on-street parking on private lands to be counted towards parkland dedication (11.3.12.56-57).

Figure SP.15



Site Plan





Figure SP.16

SP.17 - Signage & Bylaws

All residential and commercial signage within the Study Area is subject to an application and approval with the City of Vaughan's existing sign bylaws. A comprehensive sign plan may be submitted for review, and/or undertaken within an application for Site Plan Approval (11.3.11.19).

SP.18 - Signage Coordination

Residential and commercial signage should be co-ordinated to be complementary with buildings, streetscape and landscape, while avoiding conflict with building at-grade use, sidewalks, planting, utilities, lanes, driveways and crosswalks. Where possible, signage can contribute to a consistent and coherent public realm, by integration with exterior architectural building components and landscape features.

SP.19 - Signage Design

Signage should be high quality design with minimal visual clutter; and complement the building(s) in terms of materials, scale and consistency in design. Pylon signs and back-lit box signs are prohibited. Lighting for signage should be top-lit or lit-letter (11.3.11.19).





Figures SP.16



SS.1 - Sustainability as a Feature

Develop environmentally sustainable measures such as energy conservation and storm water management into block and public realm design. Their creative incorporation can provide amenity for residents and neighbours (11.3.13).

SS.2 - Mitigate Heat Islands

Local street sidewalks, surface parking areas and urban hardscapes should mitigate the heat island effect by minimizing the extent of paved surfaces and a co-ordinated integration of light coloured and/or porous paving materials, shading from large canopy trees and canopied structures.

SS.3 - Stormwater Management

The increase in stormwater run-off resulting from new development of the lands shall be controlled effectively by combining low impact development (L.I.D.) with standard stormwater management practices. L.I.D. designs shall encourage infiltration, evapotranspiration and water reuse, including such techniques as bioretention areas and bio-swales. The Black Creek Valley System should be protected through good practices (11.3.13.8-14).

SS.4 - Landscape Irrigation

Create landscapes that require little to no potable water for irrigation. Strategies include using drought-tolerant and resilient plant selections, using recycled water for irrigation and high efficiency irrigation technology (rainwater harvesting, greywater reclamation, drip-line systems) (11.3.13.4).

SS.5 - Community Gardens

Consider opportunities for urban agriculture, community gardens and pocket parks between buildings and spaces. These can strengthen the local identity and community, and provide options for gardening for multi-unit residents.



Figures SS.1-3



Figures SS.1-3





Figure SS.8

SS.6 Light Pollution

Lighting levels should be co-ordinated and reduced to mitigate the effects of light pollution, trespass and energy efficiency while balancing the requirements for safety and visibility.

Consider all light sources when developing a lighting plan.

Exterior light fixtures should be shielded to prevent glare and/or light trespass onto any neighbouring properties.

No up-lighting from exterior light fixtures.

See "Lighting" section of the City of Vaughan Sustainability Metrics and City of Vaughan Exterior Lighting Guidelines.



Figure SS.9

SS.7 Green Energy

Renewable energy is encouraged to be produced on-site and incorporated into building and streetscape elements (roofs, street lights, transit shelters, parkland). Photovoltaic and ground source heatingcooling strategies should be considered and integrated into building and site design at an early stage of project development.

SS.8 Sensitive Flora & Fauna

Sensitive migratory birds and other fauna should be considered within the overall design of sites, parkland and structures to mitigate potential future conflicts and potentially provide wildlife habitat. Development should consider the Migratory Birds Convention Act (MBCA) in order to protect and consider areas for species to co-exist post-development.

SS.9 - Green Standards

New buildings and developments should strive to exceed or meet local, national and international environmental standards. "Integrated Design" is encouraged (water, energy and waste systems).

SS.10 - Building Practices

Developments should consider and incorporate renewable, local, recycled and/or sustainably harvested materials.

SS.11 - Green Roofs

Green (planted) or high-albedo roofs are strongly encouraged to reduce the heat island effect.



Lighting

The York University Astronomical Observatory is located directly south of the Study Area, and is impacted by the availability of a "dark sky" to effectively maintain their research, teaching and public outreach roles. Light polluted skies from emerging development poses a real threat to their current facilities.

In addition, impacts of lighting from new development, particularly from commercial uses and parking lots, on adjacent properties and on Black Creek Pioneer Village in particular, shall be minimized (11.3.11.21)



Figure L.1 - York University Astronomical Observatory

L.1 - Street Lighting

Local streetlights and commuter parking lots shall be designed to maintain dark sky lighting to minimize the ecological impact of artificial lighting and achieve desired light levels, uniformity and light spill control in accordance with dark-sky requirements by directing light downward and inward and maintain zero cut-off light level distribution around observatory locations. Light designs should comply with International Dark-Sky Association (IDA) standards.

L.2 - Building and Site Lighting

Lighting for site plans should be designed to be directed downward and inward and maintain zero cut-off light level distribution at the property line.

Refer to "Lighting" section of the City of Vaughan Sustainabiilty Metrics (Site Plan)

Recommended Minimum Target: - Shield exterior light fixtures >1000 lumens to prevent night sky lighting - No up lighting allowed **Aspirational Target:**

Develop lighting controls that reduces night time spillage of light by 50% from 11 pm to 5 am (non residential)
No architectural lighting allowed between

11p m and 5 am

L.3 - Efficient Lighting

Technological advancements in lights (ie. LED) allow for receptacles and bulbs to utilize significantly less energy and can last longer while still producing ample light levels for visibility and safety.

L.4 - Pedestrian-Scale Lighting

Areas of high activity (priority connections /primary retail areas/ Greenway street) should generally incorporate LED pedestrian-scale lighting as per City Standards. See Vaughan City-Wide Streetscape Implementation Plan and Financial Strategy.





Streetscape Plan

- Community Context
- General Framework
- Character of Street Network
- Street Hierarchy
- Street Typologies & Design
- Green Infrastructure
- Streetscape and Open Space Details

Streets are essential elements of the overall framework of the Study Area . Streets structure the distribution of land, inherently defining the nature of the urban fabric. They are also connective devices for the community and adjacent neighbourhoods. Streets also give address and access to the parcelized development blocks. However, it is important also to recognize that streets play a critical role in defining the public realm. They give identity and character to a community and are seen as important "democratic" spaces in the city, which should be viewed as safe environments during all hours of the day and throughout the year.

The Steeles West Secondary Plan establishes the framework of the overall street network. The Streetscape Plan builds on this framework and includes a more detailed street system with a hierarchy that supports both public and private sector interests.



Community Context

York University

As its most immediate and largest neighbour, York University plays a vital role in the development of the Steeles West District. The general urban fabric of the university extends roads and blocks to its northern edge. Despite the clear physical linkage with the university, there are also important socioeconomic issues which will influence the future development of the Steeles West community. **Clearly the Steeles West District will be related to** York University as a key commercial and residential partner. A unique mix of users (residents, students, academics. service workers. etc.) will attract enthusiastic cycling and pedestrian activity. Transit users will also contribute a mixed mobility culture, thereby reducing the influence of the automobile throughout this new community. The urban design and streetscape measures used must recognize this reality in order to meet the needs of these primary users.

It is also important to recognize the sensitivity of the Steeles West community to the existing operations at York University. One notable measure is the pursuit of "dark skies" and the reduction of light pollution to help ensure the continual work of the observatory on campus.

Employment Lands / Highway 407/

Hydro Corridor

The Steeles West District is unique in that it is bounded by land uses that are in tension with the residential and commercial focus proposed by the Secondary Plan. The employment lands to the east and west, and the Highway 407/hydro corridor to the north, provide an unusual context for a high density, mixed-use community. It is for this reason that emphasis needs to be placed upon making the Steeles West District a "complete" community. Its isolation from other residential areas in Vaughan and Toronto means that adequate open space, commercial/retail and opportunities for institutional uses need to be planned for the sustained development of this high density, mixeduse community.

Black Creek

Black Creek is the most pronounced natural heritage feature to the Steeles West community, and is a major tributary to the Humber River watershed. Similar to other watersheds in urban areas, both Black Creek and the Humber River are under continual stresses brought on by stormwater runoff, pollution, erosion and engineered constraints from past city building methods. Thus, the Plan strives to lessen the strain on the watershed through a more sustainable urbanism.

Black Creek Pioneer Village

Black Creek Pioneer Village offers a significant cultural and natural heritage reference for the Steeles West community. With close proximity to the Spadina Subway Extension, Steeles West will offer a gateway to the visitors coming to Black Creek Pioneer Village. At the same time the village can provide a landmark and notable heritage influence to the built environment of Steeles West.

Mobility Hub

As demands for public transportation continue to grow regionally, so, too, will the need for Steeles West to integrate the various modes into a seamless multi-modal hub. As part of the Province's Growth Plan and Metrolinx's "Big Move", Steeles West will include a York University-Steeles West mobility hub with a new TTC subway station. This subway station is part of an expansion of the Yonge-**University-Spadina Line, connecting Downsview** Station to the future Vaughan Metropolitan Centre. Although in the City of Vaughan, the Steeles West community directly borders the City of Toronto and will, therefore, be an important transit hub for not iust the TTC but also York Region Transit. GO Transit and possibly other regional transit agencies. With such a transit focus. Steeles West will also be an important place for pedestrians, cyclists and vehicular users and function as a transition point among commuters. The streetscape will have an ever important role in helping to accommodate safe and efficient access to all these services.



Separated Yet Connected

Despite being physically isolated, the Steeles West District will be connected to neighbourhoods in the north and south by the Spadina Subway Extension. The mobility hub in the District will serve the needs of a much wider community and allow for Steeles West to be connected to a broader urban area. It is for this reason that the Plan must address varying expectations of a more complex urban condition. The area must integrate the needs of residents, commuting workers, visitors, shoppers, students, and transit users.



Figure SP. 1 Context Diagram





General Framework

The Streetscape Plan builds upon the Steeles West Secondary Plan street network and proposes a number of additional "local" streets that will help divide up the landholdings into suitable block areas for a walkable community.

New blocks should be sized to provide generous dimensions that accommodate efficient building and parking garage layouts (and/or underground parking structures).

Internal circulation of these blocks should be designed to work with the street network by providing appropriate access for drop-off, pick-up, parking and loading. Consolidation of these entries are encouraged to reduce the number of breaks in the streetscape.

Several streetscape types have been identified throughout the District. The Steeles West Streetscape Plan clearly outlines this hierarchy.



North Promenade (Vaughan, ON)



Loading Bay (York University, Toronto, ON)



Steeles Ave view of York University



On-street Parking (York University, Toronto, ON)





Figure SP. 2 Street Framework



- Internal Street Network
- Internal Roads to Milestones Properties _ _
- Existing Road Network through York University
- – – Proposed Road Network expansion through York University
 - NOTE: Proposed Road Network is provided by recommended plan as outlined in York University Secondary Plan Update and Transportation Master Plan (October 2009)



Overall Character of Street Network

In defining the character of the street network it is important to understand a multitude of user expectations. It is also critical to note that the Steeles West community will need to balance differing spatial scale and levels of activity, with some areas being more neighbourhood-oriented and other areas bustling with urban activity. The street network will play a vital role in defining these spaces and how they are perceived.





Queens Quay (West 8 Competition, Toronto, ON)

Exchange of the Multi-Modal System

The Steeles West District is envisioned as a sustainable urban community with an emphasis on diverse mobility opportunities. A significant portion of the Steeles West Secondary Plan area is recognized as a "mobility hub" by Metrolinx. With the advancement of the Spadina Subway Extension, the District anticipates a variety of modes which will facilitate a more holistic transportation system. Historically, this has resulted in conflict between automobile users, cyclists, incoming transit systems, pedestrians and supporting facilities. Through the Streetscape Plan, Steeles West will plan for appropriate spatial requirements which meet the needs of each transportation user and ensure that provisions are made for comfortable exchanges between each mode, thereby minimizing conflicts.

Within the 2011 Metrolinx Mobility Hub Guidelines, the York University – Steeles West Station will be designated as a "Unique Destination", a typology within the urban context. As part of a transportation focal point it is recognized that this mobility hub will be centred upon the distinctive nature of York University which is anticipated to be a "large trip generator". As a "Unique Destination", a wide variety of transportation needs will need to be met through the design of the overall streetscape, thereby further reinforcing the advancement of a multi-modal streetscape throughout the Steeles West District.

Safe Streetscapes

Just like any other space in the city, streetscapes have a responsibility to contribute to a safe environment. The City of Vaughan has actively incorporated Crime Prevention through **Environmental Design (CPTED) principles into** their planning process for reviewing development applications: however, it is important to note that many of these same principles need to be applied to streetscapes and the exchange between the public and private realm. Carefully planning for continual views along streetscape corridors can help to improve natural surveillance. This can be achieved through defining the right type of street furnishings, planting and pedestrian scale lighting (particularly in places of high pedestrian activity), as well as avoiding rear-lotting against public streets. In limiting access points into development parcels, we can also ensure that a clear exchange exists between the public and private realms and can help to define a system of natural access control upon private property. This measure can also help in reducing breaks in the streetscape. Maintaining a quality environment is also important in giving residents and commercial owners a sense of ownership of their community.



Apart from personal safety and security the overall streetscape designs for Steeles West will also need to offer safe functional use on a day to day basis. As a result streetscape details should include durable site furnishings, low maintenance street tree and plant selections, and "non-trip" paving solutions. In order to further reinforce "safe streets", barrierfree design should be supported through the public and private realms. The entire pedestrian network must also be designed to be accessible. As being a focus of multi-modal movement, streetscapes need to take into account a safe exchange between users including pedestrians, cyclists, automobiles and modes of public transit. Such measures can help to promote streetscapes as comfortable and safe environments at all times of the day, which will be of particular importance to Steeles West residents and users.



A Part of the Larger Public Realm System

The street network is a vital component of the public realm experience. In order to achieve this. a fundamental understanding of the role streets play in the community must be established. Streets are more than functional pieces of infrastructure: they are also places of social and cultural importance. They are seen as essential components to successful retail and commerce in the urban environment. They are places of movement as well as places of social interaction which give rise to a sense of place. Outdoor patios, wide sidewalks, large pedestrian queuing pads, site furnishings and seating walls can all help to reinforce streets as a place of gathering and community importance. Therefore, issues of microclimate should also be taken into consideration, thereby designing streets which are hospitable for all 12 months of the year.

This approach informs the character of the streets, despite their dimensions or role within the street hierarchy. The character of each street will be inviting, safe and multi-functional, which builds the basis of the urban fabric.

Place Making

Streets are much more than just devices of circulation; they are places that harbour social activity in the community. Their design is critical in giving sense of place and definition to how the Steeles West District will be perceived by residents and visitors alike. Using streetscapes for place making is achieved through understanding the role of the street and designing it to serve the purposes of its users, while invoking a noticeable character and experience. It is through the use of paved materials, site furnishings, lighting, physical arrangement of vehicular vs. pedestrian movement, defining areas of static activity, street trees, at-grade planting, the street wall, and iconic elements that place making takes shape. This section establishes a clear strategy for each of these items which helps the street network become a vital part of the community's identity.



Cherry Blossom (Chicago, IL)

St. George Street (Toronto, ON)



Sustainable Streets

In an effort to reduce adverse impacts from the overall development of Steeles West, the District will look to employ a series of sustainable measures. The Steeles West Streetscape Plan outlines how sustainable streetscape design and engineering can help to reduce adverse impacts at both the human and urban scale.

Advancing Urban Forestry

Robust street tree allocation will be advocated through the Streetscape Plan. This includes street tree planting along every street typology and the use of sufficient soil volumes to ensure survival of trees in the long term. In places with high volume pedestrian use, paved surfaces and constrained right-of-way widths, street trees will be planted using structural soil cell systems to maintain treelined streets in urban conditions (Street C). Mature street tree canopies provide at-grade improvements to micro-climate, while also advancing the urban forest canopy to the betterment of the wider context.

Streetscape Stormwater Management

Streetscapes offer a great opportunity to provide stormwater infiltration on site and reduce the need to redirect runoff to rearby ponds and watersheds. The Streetscape Plan outlines a conceptual network of bioswales and rain gardens as source controls, (subject to further study and detailed design). These Green Streets could provide localized infiltration and natural irrigation, providing stormwater relief, water quality improvement and aesthetic features to the streetscape.





Top Left: Bio-Swale (Seattle, WA) Bottom Left: Rain Garden (Seattle, WA) Top Right: Urban Heat Island Mapping (Boston, MA) Bottom Right: Urban Forest Canopy











Figure SP. 3 Landscape Strategy & Stormwater Attenuation *

Example Street Trees in Urban Condition (use of structural soil cells/ advanced soil systems)



Street Trees in Continuous Plant Bed

➡ Bioswales and Street Trees

Rain Gardens and Street Trees

Double Allee of Street Trees in Continuous Plant Bed

York University Landscape of Cultural Significance

* Green Streets (Bioswales and Rain Gardens) are subject to further study and detailed design



Street Hierarchy

The Steeles West District will be made up of a development strategy which will yield unique spatial conditions throughout the District. Some areas will be more retail and commercial-oriented, while others will be neighbourhood-based. To appropriately address the needs of each, the Streetscape Plan must respond to the varying needs of the community. As a result, the Streetscape Plan identifies a street hierarchy and typologies which will address the multifaceted needs of residents, workers, visitors, and commuters.



Top: St. George Street (Toronto, ON); Mid Left: Humber Bay Shores Active Transportation (Toronto, ON); Mid Right: Sidewalk and Planted Edge (Brampton, ON); Double Allee (Brooklyn, NY)







Figure SP.4 Streetscape Character





Ceremonial Edge
Internal Minor Connections
Contextual Connections

Right of Way Dimensions:

17.5m ROWGreenway26.0m ROWStreet C11.2m ROW (+/-)Steeles Ave. (Northern Blvd)26.0m ROWStreet X23.0m ROWStreet G20.0m ROWStreet A B D E F
(inter block connections)



Pedestrian and Cycling Focus

The streetscape network for the Steeles West District is modeled after the concept of "complete streets" and advancing of active transportation infrastructure. The different contextual relationships and functions of each street informs how pedestrians, cyclists, transit and vehicular movements are best accommodated.

With a particular focus placed on walkability and cycling, the Streetscape Plan incorporates contextual linkages, proposed connections, commuter needs, pedestrian and cycling, as well as expected growth in demands of active transportation facilities. As a result, the pedestrian and cycling network includes a variety of classifications to help define a formal approach to non-motorized movement throughout the community.

These classifications are based upon the needs of commuters (fast moving, direct connections, high volumes at peak hours) and passive users (slower pace, indirect and meandering movement, consistent low volumes).

The classifications assigned to each street are also tied to contextual relationships to transit amenities (including demands of the mobility hub), retail activity, association to open space, projected vehicular speeds/volumes, and linkages to existing and future connections within Vaughan, York University and the City of Toronto. Taking these variables into consideration impacts the widths of pedestrian sidewalks and character of cycling facilities upon each street. Varying widths of pedestrian sidewalks, dedicated cycling lanes, sharrow lanes, offroad cycling tracks and a mixed-use active transportation path are all utilized throughout the Steeles West District.

The provision of short term bike parking within streetscapes should follow the strategy and design criteria outlined in the "Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy". The Streetscape Components Matrix in this Streetscape Plan (page 129) specifies all street furnishings including bike stands.



St. George Street - Road Distribution of Various Modes (Toronto, ON)



Separated Cycling Track along Road (Portland, OR)



Off Road Cycling Trail (Toronto, ON)







Figure SP. 5 Pedestrian and Cycling Network



Example Priority Transit - Pedestrian Sidewalk | Dedicated Cycling Lanes Greenway - Pedestrian Sidewalk | Sharrow Lanes Ceremonial - Pedestrian Path | Offroad Cycle Track (single sided) Street X - Active Transportation Path



- *⟨***----***⟩ Local Roads Pedestrian Sidewalk | informal Cycling Connection*
 - Future Connection to City of Vaughan Cycling Network
 - Future Offroad Cycling Connection to City of Toronto Cycling Network
- Future Signed Routes to City of Toronto Cycling Network *(-----)* York University Proposed Cycling Lanes Network
 - (Secondary Plan and Transportation Master Plan)

NOTE:

The Keele Street Environmental Assessement has determined the overall profile of the future R.O.W. According to the EA, Keele Street will have a 1.5m (min.) sidewalk and a dedicated cycling lane.



Public Parking Strategy

As a multi-modal community it is important for the **Steeles West District to adequately accommodate** the needs of car users. Appropriate parking stock accessible to the public will be assessed through a parking study; however, the overall streetscape plan also plays an important role in including parking at strategic locations. It is understood that a surface commuter parking lot will be located within the hydro corridor, north of Street X. In addition, underground parking will be allocated to buildings along Street C, and portions of these facilities should be made available for public use. These facilities will assist in providing primary parking stock to serve the needs of the mobility hub, including transitional mode users, and regional patrons of the retail, office and commercial amenities along Street C.

Beyond the Street C and the transit facilities, the Steeles West District will have more of a residential/commercial mixed-use focus. The community feel will be highlighted with on-street parking on selected streets, including most north south streets (north of the Greenway) as well as along the Greenway adjacent to open space and development blocks. It is anticipated that parking needs of residents will be located in underground parking facilities associated to each block. These public on-street parking facilities will then serve the needs of visitors to the Steeles West District. They will also act as overflow parking during times of peak use of transit facilities and events.



TTC Finch Station east parking lot



Public underground parking entry (Boston, MA)



Public underground parking



On-Street meter parking (Charlotte, NC)





Figure SP.6 Public Parking Strategy

TTC Commuter Parking Lot (preliminary footprint)

- Paid Underground Parking for Public Use
 - Greenway On-Street Parking
 - North-South Minor Street On-Street Parking (See Bike Lane Alternate for Streets A and E)
- Future On-Street Parking (to be determined by City of Toronto)

ICONIC STREETS





Mid-Block Local Road "Greenway" (17.5m)

The Mid-Block Local Road or "Greenway" is the central east-west spine of Steeles West District life. It is a critical neighbourhood linkage which ties together the community's public places, civic spaces and the mobility hub. The Greenway is a 17.5m right-of-way (ROW) that works in conjunction with added setbacks on both the north and south sides. The southern setback will be mainly a landscape treatment and will be determined during site plan application.

The southern setback is envisioned to be largely planted; however, in special conditions hardscape should be considered to support at-grade commercial activity, particularly when facing parkland on the opposite side of the street.

The northern setback is designed to facilitate a near-continuous rain garden along the Greenway. This proposed rain garden would be designed to link directly to the bioswales along the north-south minor streets with a 20.0m ROW. * The section of the Greenway, from south to north, includes:

- 1. Minimum 3000mm landscape setback.
- 2. 2000mm concrete pedestrian sidewalk.
- 3. Planting zone, with street trees. The planting zone will have street trees placed 8m on centre.
- 4. Asphalt roadway. Roadway will accommodate both cyclists and motorists.
- 5. Asphalt on-street parking. Parking will be largely allocated along park blocks. Where parking is not needed, the boulevard will revert to a planting zone, with street trees placed 8m on centre.
- 6. 2000mm concrete pedestrian sidewalk.
- 7. Landscape edge treatment.
- 8. 7000mm rain garden designed with double allée of trees and overflow system.*

* Green Streets (Rain Garden) are subject to further study and detailed design

Plan - Sample Section of Greenway



The design philosophy behind the Greenway section is to introduce an asymmetrical design emphasizing the public realm on the north side of the street. This allows for clear pedestrian access to the community parks which are all located on the northern side of the street. As a result, the design also aligns the parking along the north side to further frame the park spaces with added street activity. Onstreet parking will be allocated where feasible to support the mobility hub and parks. Cyclists and vehicles share the travel lanes, thereby encouraging recreational riders to utilize the Greenway at lower speeds. The intersection at Street C will accomodate wider paved areas to support high pedestrian volumes, further supporting the mobility hub. Traffic calming and enhanced public realm measures, such as curb extensions and pedestrian crossings, should be employed wherever possible.



detailed design









Section B - Greenway with on-street parking on north side $_{97}$

ICONIC STREETS



Street C (26.0m)

As part of the core mobility hub, Street C is the most important gateway, link and street destination in the Steeles West District. As a northern extension of Northwest Gate from York University, Street C connects transit facilities, including two bus terminals located north and south of the Steeles Avenue, the new subway station, and supporting commuter parking facilities within the hydro corridor.

Street C will be an active, multi-functional and multi-modal street and as such, is designed to accomodate the greatest amount of pedestrian activity within the Study Area . As the key primary retail street of the District, boulevards must support retail commercial viability and offer amenities for mobility hub pedestrian (and cycling) traffic. To further support the expected pedestrian volumes, street trees will be planted using soil cells to maximize hardscape surface area within the sidewalk and boulevard area.



Outdoor Patios (Montreal, QC)

Street C section, east to west, includes:

- 1. Minimum 3000mm at-grade building setback. Setback must be constructed of hardscape materials to complement the public boulevard.
- 2. Minimum 4300mm sidewalk and boulevard treatment. Sidewalk and boulevard to be constructed of hardscape materials (combination of concrete and unit paving).
- 3. Street trees planted in soil cells.
- 4. Minimum 1500mm dedicated bicycle lane (northbound).

- 5. 16200mm asphalt roadway. Roadway is 3300mm x 4 travel lanes (2 lanes each way).
- 6. Minimum 1500mm dedicated bicycle lane (southbound).
- 7. Minimum 5500mm sidewalk and boulevard treatment. Sidewalk and boulevard to be constructed of hardscape materials (combination of concrete and unit paving).
- 8. Street trees planted in soil cells.









The design philosophy behind Street C is to create a comfortable and safe urban streetscape designed to maximize space for pedestrian flows and activities within the ROW as a public space destination in itself, while also allowing for cyclists, transit and vehicles to travel through this link.

Street C is designed with a flexible framework to accomodate growth and change as the mobility hub develops.

The street layout is an asymmetrical design and caters to indoor-outdoor spaces which are expected to emerge from the at-grade retail, restaurants and services located within the buildings fronting both sides of the street. A sun model determined that the east side of the street will be more attractive for outdoor café/ dining uses as the sun will be directly overhead after 12pm. It will continue to provide natural light to the east side until the western building's shadows cross the ROW. As a result, Street C will require a larger setback along the east side of the street to achieve a wider boulevard space. There will be a maximum of 3m depth from the face of the building for semi-private commercial space.

The west side of Street C is designed to a minimum boulevard width of 5.5m within the ROW, which allows space to support commuter pedestrian movement to the YRT bus terminal and subway entry located along the west side of the street, and the associated urban retail anticipated to meet the needs of commuting pedestrians and the Steeles West District.

Street C will also provide short-term bike parking to address possible overflow of bike parking surrounding the subway station.



Steeles Avenue (North Side) (+/-11.2m)

The Steeles Avenue cross section outlines the design for the north side of the street located within the City of Vaughan. The streetscape design has been developed in coordination with the City of Toronto and York University from the north curb line to the property line and outlines the proposed setback. The section includes, from south to north:

- 1. 820mm apron (splash guard) against the curb.
- 2. 2400mm planted boulevard with street trees (ability to allow street lighting), planted 8m on centre in a continuous soil trench, as per City of Toronto Streetscape Manual Detail.
- 3. 3000mm wide cycle track (will be converted to function as an east/west commuter cycle track upon full build-out of the Steeles West streetscape length between Keele to Jane).
- 4. 2400mm planting zone with street trees, planted 8m on centre (in a continuous soil trench).
- 5. 2580mm concrete pedestrian sidewalk.

NOTES:

Varying width unit paver access points and transitional zones will be introduced based upon site specific conditions. These zones will allow for periodic furnishings including seating, receptacles, pedestrian lighting and bus shelters. In locations where bus shelters are permitted these zone must be a minimum width of 12m. Fire hydrants and other utilities will be placed on the curbside apron.



Section A - North Side of Steeles Ave. Cycle Track & Pedestrian Sidewalk (Typical)



Plan - North Side of Steeles Ave. Cycle Track & Pedestrian Sidewalk (+/- 11.2m Typical Condition)



The design philosophy behind the Steeles Avenue streetscape is to create a comfortable commuter cycling and pedestrian environment and to complement the York University campus streetscape on the south side, including the cultural heritage landscape. This is achieved through a double row of trees to soften the extent of hardscape throughout Steeles Avenue, while providing generous cycle lanes and sidewalks. It is expected that Steeles Avenue will be a commuter route for cyclists as it will have less interruptions than the Mid-Block Greenway. Therefore, a planting zone has been designed to avoid pedestrian/cyclist conflict. The concept is based on similar conditions where separation of cyclists and pedestrians is warranted, comparable to the Martin Goodman Trail along the Toronto waterfront.

Steeles Avenue (North Side) Atypical Conditon (+/- 10.2m)

Due to isolated constraints in the width of the boulevard, particularly outlined along the eastern end of the Study Area , a streetscape design for the "atypical" condition of 10.2m (width) is provided. In order to keep with the same design philosophy of the typical condition, the cycle track can be reduced to 2.5m, and the width of the sidewalk reduced to 2.08m. These reductions in width will allow for a continuous double allee along the entire length of Steeles Avenue West.



Section B - North Side of Steeles Ave. Cycle Track & Pedestrian Sidewalk (+/- 10.2m Atypical Condition)

EAST - WEST STREETS



City of Toronto Standards for Steeles Avenue

The City of Toronto will maintain certain portions of the North Side of Steeles Avenue West. City of Toronto Road Operations maintains grass cutting in summer on both sides of Steeles Avenue except business development areas. City of Toronto Road Operation does not, however, perform any winter maintenance on the North Side of Steeles Avenue except for bus stops. It also does not maintain or make repairs to the sidewalks but will make repairs to the cycle track. Should the City of Vaughan decide not to maintain the cycle track during the winter the City of Toronto will install "No Winter Maintenance" signs.

All tree planters and street tree pits will be constructed to the City of Toronto street tree standards (as outlined in Toronto Streetscape Manual, including Toronto Street Trees: Guide to Standard Planting Options). The City of Toronto T-1A Continous Soil Trench: Open Planting Bed and Concrete Sidewalk detail with a low curb will be used for all planters along Steeles Ave West in this location. In addition, street furnishings, signage and markings will also be designed to meet the City of Toronto standards. City of Toronto has approved the street tree species proposed in the Streetscape Plan.

Refer to the Streetscape Components Matrix or the Toronto Streetscape Manual for more information.



T-1 Open Planting Bed - City of Toronto





EAST - WEST STREETS

Street X – East-West Collector Road (26.0m)

Expected to carry significant commuter traffic volumes, Street X, between Street "C" and Keele Street adjacent to the south property limit of the existing hydro corridor, is designed within a 26m ROW. This section, from south to north, includes:

- 1. 3000mm Active Transportation Path mixed use pedestrian and bicyle path on the south side.
- 2. 2500mm planting zone with street trees planted 8m on centre.
- 3. 18000mm asphalt roadway. Roadway is made up of 3500mm x 4 travel lanes (2 lanes each way) and a continuous 4000mm left-turn lane.
- 2500mm landscape buffer. Buffer will be wide enough to accommodate proposed pedestal utilities and allow for planted strip to buffer against hydro corridor.

Street X (Typical)

The design of Street X should recognize its importance as a commuter road for cyclists and transit users as well as motorists. The illustrated section shown is modelled after the preferred option in the OPA 620 East-West Collector Road EA of May 2012. Through detailed design, it is recommended that lane and boulevard widths are optimized to also include a cycling facility on the north side. The utility/landscape buffer on the north side of Street X offers an opportunity to provide some barrier to the street from the windswept landscape of the hydro corridor, which will remain largely unaltered.



Section A - Street X (Typical)

Street X at Commuter Parking Lot

The Steeles West Subway Station commuter parking lot and bus terminal will ultimately be serviced by Street X. An appropriate interface between Street X and the commuter parking lot could include a decorative low fence, accompanied by a concrete sidewalk and landscape buffer. The landscape buffer can also be designed to include a bioswale which can connect to the overall stormwater management network. This adjacent landscape treatment should occur outside of the 26m ROW in order to ensure a continuous row of street trees along the north side of Street X within the ROW and to protect for the utility corridor.



Section B - Street X against commuter parking

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NORTH - SOUTH STREETS



Street G | Local Street with Transit and Cycling Lanes (23.0m)

Street G is a local north-south street designed as a gateway location and to support public transit and cycling, as well as on-street parking. This section, from west to east, includes:

- 1. 2000mm concrete pedestrian sidewalk.
- 2. 3000mm planted boulevard with street trees. Street trees will be planted 8m on centre.
- 3. 2500mm asphalt on-street parking. Parking will be broken at strategic points to allow for pedestrian crossings and intersections.
- 4. 1500mm asphalt dedicated bicycle lane (southbound).
- 5. 7000mm asphalt roadway. Roadway is made up of 3500mm x 2 travel lanes.
- 6. 1500mm asphalt dedicated bicycle lane (northbound).
- 7. 3500mm planted and furnished boulevard with street trees. Street trees will be planted 8m on centre. The boulevard will also include bus stops, benches, receptacles and bike racks in appropriate areas.
- 8. 2000mm concrete pedestrian sidewalk.



Section A - Street G (Typical)

The design philosophy surrounding Street G is to allow for significant width for transit vehicles, while supporting dedicated lanes for cyclists. It is expected that both sides of the street will also be bounded by a landscape setback. On-street parking is assigned to support retail activity focused upon Street G. Street G is also expected to be an important connection between York University and the Vaughan Metropolitan Centre. As road improvements on campus will connect York University to Street G, it is expected that Street G will extend northwards, through the hydro corridor, and connect with Highway 7 in the future.



NORTH - SOUTH STREETS

Local Street without Transit (20.0m)

Street A-, A, B, C+, D, E*, F, and F+

Street F is an example of a local north-south street with no transit. Street F is designed to be a local community connection and is not for major volumes of vehicular traffic. This section, from west to east, includes:

- 1. 2000mm concrete pedestrian sidewalk.
- 2. 3550mm planting zone (vegetated bioswale option).*
- 3. 2500mm asphalt on-street parking. Parking will be broken at strategic points to allow for pedestrian crossings and intersections.
- 4. 6400mm asphalt roadway. Roadway is made up of 3200mm x 2 vehicular lanes.
- 5. 3550mm planting zone (vegetated bioswale option).*
- 6. 2000mm concrete pedestrian sidewalk.

With a narrower width, these local streets will be more comfortable for local cyclists compared to Street C and G (other north-south streets), which are expected to be more commuter focused.

The street section allows space for the future incorporation of bioswales designed to absorb stormwater run-off and also transport additional stormwater to rain gardens along the Greenway. Therefore, the bioswale allowance is wider than



typical planted zones and boulevard conditions. Bioswales can contain street trees planted 8m on centre.*

It is also expected that both sides of the street will be bounded by a landscape setback.

* An alternate cross section for Street A and E with bike lanes is to be determined through detailed design. Section A - Local Street (Typical)

* Green Streets (bioswales) are subject to further study and detailed design

NORTH - SOUTH STREETS



Jane Street

Although studied, the Jane Street Corridor is not part of the scope of this Streetscape Plan. Jane Street was subject to an environmental assessment (EA) at the time of this Study.

Jane Street is a visibly significant edge to the Steeles West District. The streetscape will be a focal point as it will demarcate a major gateway feature at the corner of Steeles Avenue, as well as a possible minor gateway feature at the intersection of the Greenway.

It is recommended that a formal connection to the cycle track along Steeles Avenue should be accommodated and landscape treatments help buffer pedestrians from the significant traffic volumes along Jane Street. Where possible, a double allee of street trees should be implemented. Consistent site furnishings and lighting standards should be identified for Jane Street through the section adjacent to the Steeles West District.




NORTH - SOUTH STREETS

Keele Street

An Environmental Assessment for Keele Street between Steeles Avenue West and Rutherford Road was being conducted by York Region at the time of this Study. The Region has since completed the Class Environmental Assessment Study and the preferred option recommends a roadway section consisting of four 3.3m traffic lanes, two 3.5m HOV lanes, two 1.5m bike lanes and a central median planter. A 1.5m concrete sidewalk is flanked by a ROW widening strip as required, to be planted with street trees.

Beyond the ROW widening strip, there will be a landscape setback through the Steeles West District section of Keele Street. This setback will incorporate more robust planting and insular pedestrian pathways, providing additional landscaping and circulation opportunities between buildings and Keele Street. These measures will help ease the impacts of Keele Street's heavy vehicular volumes, particularly during times of peak flows.

NOTE:

The Keele Street section is subject to change pending detailed design by York Region.



Section A - Keele Street West Side (Typical - as determined by the EA)



Section B - Keele Street (Typical) - provided by York Region



Character of Retail Streets

Within the Study Area, three essential conditions have emerged which define streets that can support retail:

- **1.** Mobility Hub Retail Street (Primary)
- 2. Neighbourhood Retail Street (Secondary)
- 3. Parkland Supportive Retail Street (Tertiary)

These streets will act to support a variety of scales, and house both regional and community focused retail and services. The retail streets are critical in making Steeles West a complete community, encouraging walking and cycling as ways to move around within the District. The Streetscape Plan also calls for flexibility in areas to allow for adaptation, thereby promoting viability of business in active pockets of the community. Retail streets are designed to include spaces of transformation to allow for restaurant and commercial activity to spill into the public realm and further activate the streetscape. Appropriate setbacks of buildings and connection to public sidewalks is key in formulating a streetscape that can adapt to varying commercial needs.

Primary: Mobility Hub Retail Street

Metrolinx's Mobility Hub Design Guidelines outline a dynamic vision for transit oriented community. A clear benchmark for all planned mobility hubs is to include a measure of placemaking; Objective 5 outlines this measure as a "vibrant mixed-use environment with higher land use intensity".

Within the Steeles West Corridor, **Street C** is designed to take on the role of the active mixed-use environment, which supports the needs of the wider Study Area and community. Street C is designed as a retail street with wider sidewalks, generous street corners, street trees in paving, and site furnishings that allow for passive activity and support retailers. These measures will ultimately support a comfortable environment capable of handling high volumes of pedestrian flow, particularly at peak hours of transit exchange.

The built environment also responds to the needs of year-round pedestrian movement offering protection from the elements and a balance of sun and shade. Street C's retail focus also supports connectivity between moving from various modes of transportation. The introduction of unique paving materials, seating walls and lighting will enhance the experience of Street C.



Street C Concept Plan





Magnificent Mile (Chicago, IL)



Magnificent Mile (Chicago, IL)

Secondary: Neighbourhood Retail Street

Neighbourhood retail opportunities will be designed to address the street and integrate with the urban mixed-use residential/commercial community. It is expected that these streets will have a more community related function, with retail businesses at street corners and intersections to maximize frontage and visibility. However, situations may arise where additional temporary attenuation is required to improve the business viability of particular commercial uses. In such an event, changes to the street will need to be discussed with City staff, bylaw controls and engineering to determine whether such adaptations should be permitted. This may include the need for temporary/ seasonal outdoor patios, special lighting or signage, and shade structures.

These neighbourhood retail streets are focused along the southern portions and intersections of **Street A, Street E** and **Street G.** Combined with Street C, the distribution of retail will ensure that the Study Area supports the five-minute walking radius model, whereby retail will be no further than 500m-600m from any given place within the Steeles West District. It is expected that the combination of the Mobility Hub Retail and Neighbourhood Retail Streets, will provide the District with a holistic commercial distribution, providing residents with access to vital goods and services. This will further reduce the need to drive for local trips, while promoting walking and cycling as an alternative means of movement.



Santana Row (San Jose, CA)



Rockville City Centre (Rockville, MD)





Rittenhouse Sq. (Philadelphia, PA)



Tertiary: Parkland Supportive Retail Street

As an extension of the neighbourhood retail street network, areas opposite to parkland should be treated with added sensitivity. In order to promote at-grade commercial and retail uses, the streetscape plan calls for more flexibility to adapt typical streetscape conditions beside parkland. Similar to Neighbourhood Retail Streets, temporary attenuation to improve viability of restaurants and business by temporary/seasonal outdoor uses should be encouraged, in strategic locations. By creating more retail activity and sustained commercial uses around parkland we can ensure more active use of the parks while also creating more visibility of community open space, reinforcing **CPTED** principles. Parkland-supportive retail can be a unique opportunity which gives added value to the single loaded road condition.



Steeles

Streetscape Plan



Figure SP.6 Retail Frontage Diagram





Green Infrastructure

The new street network for Steeles West an opportunity to rethink the role of road infrastructure in the City as multi-functional and integrated design. There are a number of measures that can be taken to reinvent the streets and reduce their environmental impacts throughout the District and in the wider context. Steeles West is not part of an existing natural heritage system and, therefore, streets will play a particularly important role in "greening" the overall District.

The Steeles West Streetscape Plan includes a proposal for "Green Streets", incorporating rain gardens and bioswales into the ROW as an added layer to improve the quality of stormwater and reduce the quantity of stormwater entering the muncipal system and the Black Creek watershed.

Urban Forestry

One of the most important aspects of streets is that they can provide much needed relief through the provision of trees. Tree planting along streets can account for approximately 70% of all trees in urban areas. They provide protection from the elements in winter and shade from the sun in summer. Street trees also assist in creating microclimatic conditions and cool the environment during days of extreme heat. This can have wide ranging effects on reducing the urban heat island effect and making the overall urban environment a much more comfortable place. Therefore, it is important to recognize the importance of street trees to the overall urban forestry strategy. Urban forestry also works to sequester carbon from the environment which helps reduce air pollution. It is for this reason that every effort be made to introduce viable street trees as part of the streetscape strategy for each street. Trees within the boulevard should always be planted with optimal growing conditions in mind. Street trees should be seen as an investment and. therefore, their sustained growth is greatly valued.









Tree Guidelines

Growing conditions should be designd to ensure healthy tree growth to maturity and this should include a minimum of 16 cubic metres of soil per tree in boulevard conditions with a minimum bed width of 2.0m. Soil trenches should be designed with the least amount of breaks to ensure continuous trenches and overlap of soil volumes for each tree. Trees should be placed with a minimum of 1.0m away from sidewalks and curbs. This offset will improve growing conditions and help to accomodate snow storage. Street trees should be selected for durability within the local climate and should vary in order to avoid a monoculture. Parks & Forestry street tree diversity guidelines are a maximum of four (4) of any one tree species within a block, and a maximum of 10% genus in the District

In conditions of intense urban activity and limitations to "soft" boulevard treatment, the use of alternative planting methods is required to meet soil volume requirements for healthy tree growth. This would include the use of enhanced planting strategies such as soil cells, at present only identified for Street C and constrained sections of Steeles Avenue. Use of this system should be considered for private streets and tree planting areas constructed over structured parking.



Stormwater Management

Bioswales & Rain Gardens

"The integration of stormwater management and water recycling facilities in the design of building, open spaces and parking areas is encouraged." 6.2 Secondary Plan

The Steeles West Streetscape Plan includes a proposal for Green Streets, a conceptual network of rain gardens and bioswales as source controls on selected streets based on considerations of topography, adjacent land use, and street function. The street network can generate a tremendous amount of stormwater runoff and. depending upon grading of adjacent surfaces, the stormwater management system is expected to take added volumes that subsequently drain on to them. Traditionally this water would be moved through drains to another location, adding with it a collection of residue from the paved surfaces, creating higher velocity to the movement of water, and increased potential for flooding. As a result, the Streetscape Plan recommends the use of source controls to help reduce the impacts of stormwater generated from the municipal rights-of-way and their immediate context including water quality. It is important to note that the integration of source controls into the street network requires a different approach to maintenance of streetscapes as compared to traditional sodded boulevards, and therefore will require further study and detailed design prior to implementation.

How it Would Work

Onsite stormwater management can help reduce these impacts by providing immediate collection and infiltration. The collection of onsite stormwater can also be used to irrigate plant beds, boulevards and gardens. Both bioswales and rain gardens are designed to work with the natural grade of the Study Area. As the overall grade is lower along Steeles Avenue (to the south) and higher to Street X (to the north), the system simply works by collecting and moving water through the bioswales along the local streets (20m ROW) which run north-south. The gradual grade towards the south will allow for infiltration and irrigation of the street trees and terrestrial planting along these streets. At times of higher volumes the water within the bioswales will migrate south into the Greenway rain garden. The rain garden will be a wider and more aesthetically diverse stormwater attenuation system designed to collect and infiltrate more water, while supporting the irrigation of a wider array of plants. Both the bioswales and rain gardens will be subject to pedestrian access and amenities. These will include sidewalk connections from the curb edge (including on-steet parking) to the sidewalk and development sites. In order to accommodate the continued function of the bioswales and rain gardens, strategic points of access will be made providing pedestrian access over these facilities, thereby minimizing the number of crossings. The bioswales and rain gardens will be directed under these access points by way of a culvert. Appropriate signage and lighting will help identify the access points to reduce pedestrian disruption to the bioswales and rain gardens.



rain garden (Kitchener ON)



rain garden (Portland OR)



Guidelines

Bioswales* are located along certain 20m ROW north-south local streets, north of the Greenway. The selected streets have parks located adjacent to them, on either the east or west side.

- A bioswale located on either side of the street.
- ٠ Bioswales at a minimum width of 3.45m.
- · Bioswales are connected through culverts.
- Lighting fixtures and street trees integrated into the bioswale design.
- Only native plantings.

Rain Gardens* are located within the setback on the north side of the Greenway (where feasible)

- Located on the north side only.
- Within setback only.
- Rain garden minimum width of 5m (7m preferred).
- Use of largely native planting.

orange lines indicate flow of bioswale blue lines indicate flow of rain garden





Stormwater Ponds

The draft Municipal Servicing Master Plan Class Environmental Assessment Study – Steeles Corridor: Jane to Keele OPA 620 Report, dated October 2011, has identified several locations for stormwater management ponds within the Study Area. The preferred Alternative "C" shows several ponds located along Steeles Avenue, located both in the west and east precincts of the plan. This draft EA report was completed after the final submission of the Steeles West Urban Design & Streetscape Plan in August 2011, and therefore the conceptual plan in the Steeles West Urban Design & Streetscape Plan Study does not include the preferred pond locations.

These preferred locations are meant to be conceptual and to be determined through site plan approvals for each development/land parcel. The ponds are presently in a schematic design phase, and therefore it is important to recognize that as they evolve into detailed design, these ponds are expected to change. Also, the preferred locations will affect the density distribution across individual blocks and land parcels, and may result in a configuration of buildings different than the conceptual plan. Proposed building configurations, resulting densities and final locations of stormwater ponds should be evaluated against the policies of the Secondary Plan, and the guidelines found within this Steeles West Urban Design & Streetscape Plan.



Municipal Servicing Master Plan Class Environmental Assessment Study - Alternative "C"





South Pond - UIOT Durham Campus (Oshawa, ON)



Stormwater Pond - Western Waterfront (Toronto, ON)

Recommendations and guidelines should take into account the following when determining the final locations for ponds:

- Ponds should be combined with parks and open space blocks wherever possible.
- Avoid pond location at "Primary Retail" corners unless located within parks and open space.
- Ponds should be designed as urban amenity features and are highly encouraged to integrate into the landscape design approach.
- The strategic use of cisterns or underground storage is to be considered where optimal pond location coincides with strong urban edges at "Priority Connections" and "Greenways" or "Ceremonial Edges".
- Locations internal to blocks away from "Priority Connections" are encouraged (other than in parks).
- Detailed design should also take into account measures from added stormwater mitigation measures, such as the introduction of rain gardens, bioswales, advanced site plan infiltration features, use of L.I.D.S. and climate change to help ensure that stormwater ponds are sized appropriately.

PLANTING



Street Trees

The allocation of trees is very important in defining the composition of the streetscape. In addition to environmental benefits, street trees help to define space and hierarchy. In the Steeles West Streetscape Plan, each street type has a selection of trees to offer diversity and interest when traveling through the Steeles West District.

The following species have been selected for the Streetscape Plan as the "foundation" street trees. To meet City of Vaughan tree diversity guidelines of maximum 4 trees per block of any one species, additional species should be selected from the City of Vaughan Tree and Plant Species List (Appendix D in the Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy) to complement the foundation street tree list. Consider tree form, performance in local environment, diversity, any limitations of the planting site and harmonizing tree selections within and between blocks to enhance sense of place.

Street Tree Species

NAME	COMMON NAME	HEIGHT
Capinus betulus 'Fastigiata'	Hornbeam	12 m
Quercus rubra	Red Oak	28m
Gingko biloba	Maidenhair Tree	17 m
Gleditsia var. inermis	Honey Locust	17 m
Acer saccharum	Sugar Maple	22 m
Tilia cordata	Littleleaf Linden	17 m
Acer saccharinum	Silver Maple	20 m

Rain Garden Tree Species

NAME	COMMON NAME	HEIGHT
Prunus serrulata	Cherry Blossom	8m
Quercus bicolor	Swamp White Oak	20 m
Fagus sylvatica	European Beech	25m







Figure SP.7 Street and Rain Garden Tree Species



Street and Rain Garden Trees



Note: To meet Parks & Forestry tree diversity guidelines of maximum 4 trees per block of any one species, and maximum of 10% genus in the District, additional decidous tree species should be selected from the City of Vaughan Tree and Plant Species List (Appendix D in the Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy).

PLANTING



Street Tree Allocation Method

Trees will be clustered; however each block should include a minimum of two tree species*. This measure is to ensure that if a particular species becomes prone to an emerging disease or outbreak, removal of that species will not leave the entire streetscape without maturing street trees. The following is the description of tree selection according to street type:

* See City of Vaughan street tree diversity guidelines. The selection of additional tree species should complement the design intent described for each street type in this section.

Local Street | 20.0m ROW combination of Silver Maple and Honey Locust

Streets A-, A, B, C+, D, E, F and F+ are included in this typology. Silver Maple were chosen for the intersections to create visual interest as well as a subtle neighbourhood aesthetic. Honey locust trees will be allocated to the central stretches of the street. The wider canopy of the honey locust will provide significantly more shade and also are relatively fast growing and attain their leaves quickly.

Street G | 23.0m ROW combination of Red Oak and Gingko

This tree selection applies to Street G. Since this street can accommodate a larger volume of traffic and have a wider ROW, the streetscape plan identifies larger species of trees which can provide more substantial shade. The corners will be identified by red oak trees and gingko trees along the middle of the corridor for visual distinction.

Street C | 26.0m ROW combination of Red Oak and Honey Locust

Street C will consist of trees with the largest canopies. A particular emphasis is placed on the shade provided by these trees throughout varying times of the day and year. Street C is also the widest street within the Steeles West District and therefore can benefit from the added mass these trees offer. Both tree species are to be planted rows within a structural soil cell system that has proven success in urban conditions. Red oak species are planted at the corners, while honey locust is planted in the middle of the block.

26.0m ROW Street X Collector combination of Gingko and Red Oak

Street X is characterised as a collector road and it has the widest area of the paved lanes, therefore the Plan looks to use red oak trees along the corridor since they grow to be tall and offer a more substantial canopy, which will provide a large amount of shade for both the pedestrian and the vehicular environment. Ginkgo trees will be concentrated at the intersections, which are shorter and narrower, in order to not obstruct sightlines from the road.



Honey Locust

Sugar Maple

Swamp White Oak

European Beech

Streetscape Plan



additional decidous tree species should be selected from the City of Vaughan Tree and Plant Species List (Appendix D in the Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy).

PLANTING



17.5m ROW / Greenway

combination of Linden and Hornbeam (street) and Cherry, Swamp White Oak and European Beech (rain gardens)

The Midblock Road or 'Greenway' has the most variety in its composition. This particular street will have two rows of trees within the right of way, supported by additional trees within the rain garden which runs parallel to the street. For the Greenway it is essential to maintain the format used throughout the plan along the street and have a separate palette of trees within the rain garden. Linden trees are used at street corners and visual intersections, and hornbeam trees along the inner corridor.

Within the rain garden, cherry trees are used at the corner for visual interest; swamp white oak and american beech along the corridor. This will help to bolster the edges of the park and provide a great deal of shade.

Steeles Avenue West

combination of Sugar Maple, Silver Maple and Red Oak

The Steeles Avenue tree selection is part of the 'Active Transportation' corridor which runs the length of the project boundary. In order to differentiate this street, the Streetscape Plan has identified three (3) types of trees within the double allée which also joins with Jane Street and Keele. A large stature green mountain maple will be used at the corners to create visual distinction, while silver maple and red oak will break up the inner corridor. Jane Street and Keele Street both play off this layout for consistency, minus the red oak trees. Presently hydro lines do exist along the north side of Steeles Avenue. All efforts should be made to coordinate tree planting in alignment with these utilities.

Despite using a different set of tree species, the north side looks to complement the south side of Steeles Avenue West, by introducing large scale trees that have similar form and height to those existing trees on the south side. In addition, the tree planting will maintain a double allée throughout its length, further reinforcing the strong tree line and cultural heritage landscape along York University's northern edge.





Greenway & Street F - Street Tree Demonstration Plan E C Street X Mid-Block Road Street F Steeles Avenue C



Note: To meet Parks & Forestry tree diversity guidelines of maximum 4 trees per block of any one species, and maximum of 10% genus in the District, additional decidous tree species should be selected from the City of Vaughan Tree and Plant Species List (Appendix D in the Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy).

PLANTING



Bioswale Planting (seleced north-south local streets)

Bioswales are composed of terrestrial planting. Each will work to stabilize the grading designed to facilitate infiltration and movement of water. They support other measures of stormwater management including municipal storm sewers and ponds. The composition of the bioswale should be made up of river stone and the following plant materials:



BIOSWALE PLANT LIST

Perennials

NAME	COMMON NAME		
Eutrochium maculatum	Spotted Joe-Pyeweeds		

Grasses

NAME	COMMON NAME
Carex bebbii	Bebb's Sedge
Spartina pectinata	Prairie Cordgrass



Spotted Joe-Pyeweeds

Bebb's Sedge



Prairie Cordgrass

Wildlife Linkages: The Green Streets network of enhanced landscapes provide corridors for wildlife, linking York University landscapes to the south with the Hydro corridor lands to the north of the District.





PLANTING



Rain Garden Planting (Greenway)

The composition of the rain gardens builds on the plant types of the bioswales and has additional planting that consists of flowering plants, grasses and shrubs. The variety of plants creates a distinct vibrancy as an identifiable marker of the Greenway. The Greenway rain garden design is made up of river stone and the following plant materials:

RAIN GARDEN PLANT LIST

Shrubs

NAME	COMMON NAME
Salix discolor	Pussy Willow
Comus stonlonifera/C. sericea	Red Osier Dogwood

Perennials

NAME	COMMON NAME	
Echinacea purpurea	Purple Coneflower	
Rudbekia hirta	Black-Eyed Susan	
Salvia nemerosa 'May Night'	May Night Sage	
Lobelia cardinalis	Red Cardinal Flower	

Grasses

NAME	COMMON NAME
Carex bebbii	Bebb's Sedge
Arrhenatherum elatum 'Variegatum'	Bulbous Oat Grass
Carex vulpinoidea	Fox Sedge
Spartina pectinata	Prairie Cordgrass
Juncus effusus	Soft Rush







Pussy Willow

Purple Coneflower

May Night Sage

Bebb's Sedge

Fox Sedge Prairie Cordgrass



Streetscape and Open Space Details

Design components have been selected in order to help provide identity to each street type within the Steeles West District. Although there is variation in the selection of certain elements, it is important to note that all items work towards creating an overall family of details. The consistent use of this family of elements within the District will reinforce the community identity and overall sense of place. It is important to note that significant deviation from these furnishings will contribute to an inconsistent streetscape.

Paving

Overall the paving palette is made up of simple materials. Accents materials are used in strategic locations to highlight street hierarchy. Essentially much of the pedestrian movement zones have been designed with the use of cast-in-place concrete. Coloured concrete accents are used to provide additional impact at certain intersections. Precast pavers are also utilized to demarcate edge treatment on higher order streets (Street C, Street G, and Steeles Avenue West). The use of pavers will help to accent planting and street trees particularly in high traffic areas and retail hubs.

Lighting Fixtures and Furnishings

The overall selection of lighting and furnishings are designed to complement each other. They are contemporary in style and designed with a soft colour palette in order to not draw significant visual impact. The City of Toronto has stipulated that Steeles Avenue West be constructed using the City's standards for site furnishings. Although identified in the matrix, all efforts should be made to further coordinate these standards with the rest of the Steeles West District.

Planting

Street planting is an important part of the Streetscape Plan. It is important to introduce understorey planting along all the boulevards, where possible. Ornamental grasses and terrestrial wildflowers should be applied.







Maglin SCRC1604 Recycle Unit/ Waste Receptacle (Silver powdercoat finish)



Maglin SCB1600 Series Bench (Silver powercoat finish, Ipe wood seat)



Streetscape Components Matrix

	intersection corner paving	sidewalk paving*	lighting fixtures (LED)*	street benches*	waste receptacles*	bicycle racks*	planting bed vegetation	tree grates	additional notes
Greenway (17.5m)	CIP Concrete with Coloured Accents	CIP Concrete	Philips Lumec Capella	Maglin SCB1600 Series	Maglin SCRC 1604	Maglin MBR 600	Rain Garden Option		* Enhanced Streetscape Level of Service includes street furnishings, pedestrian lighting and precast concrete unit pavers. See Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy. Rain Garden Option subject to futher study & detailed design
Street C (26.0m)	CIPConcrete with Coloured Accents	CIP Concrete and Precast Payers	Philips Lumec Capella	Maglin SCB1600 Series	Maglin SCRC 1604	Maglin MBR 600		Cast Iron Grate	* Premium Streetscape Level of Service includes street furnishings, pedestrian lighting and precast concrete (or stone) unit pavers and other amenities. See Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy. Businesses should be encouraged to introduce temporary planters in summer months to enhance Street C. Street C includes structural soil cells for street tree planting.
Steeles Ave. West (north) (11.2m/ 10.2m)	CIP Concrete with Coloured Accents	CIP Concrete and Precast Pavers	Philips Lumec Capella	City of Toronto Standard Benches	City of Toronto	City of Toronto Standard Bike Racks	Ornamental Grasses and Wildflower		* Enhanced Streetscape Level of Service includes street furnishings, pedestrian lighting and precast concrete unit pavers. See Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy. Coordinate with City of Toronto Standards for Streetscape design details and furnishings.
Street X (26.0m)	CIP Concrete	CIP Concrete	Philips Lumec RoadStar	Maglin MLB1050BW Series	Maglin SCRC 1604	Maglin MBR 600	Ornamental Grasses		* For Standard Urban Streetscapes, streetscape-related furnishings are provided within private setbacks. See Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy.
Street G (23.0m)	CIP Concrete	CIP Concrete and Precast Pavers	Philips Lumec Capella	Maglin SCB1600 Series	Maglin SCRC 1604	Maglin MBR 600	Wildflowers		* Enhanced Streetscape Level of Service includes street furnishings, pedestrian lighting and precast concrete unit pavers. See Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy.
Street A-, A, B, C+, D, E, F, and F+ (20.0m)	CIP Concrete	CIP Concrete	Philips Lumec Capella	Maglin SCB1600 Series	Maglin SCRC 1604	Maglin MBR 600	Bioswale Option		* Enhanced Streetscape Level of Service includes street furnishings, pedestrian lighting and precast concrete unit pavers. On Standard Urban Streetscapes, streetscape- related furnishings are provided within private setbacks. See Vaughan City-Wide Streetscape Implementation Manual & Financial Strategy. Bioswale Option subject to further study & detailed design



Gateway Treatments

Similar to the use of site furnishings and paving materials, gateways are also used to help define sense of place; however, gateways constitute a much more distinct and obvious opportunity to express entry into a community or neighbourhood. Gateways are places which can foster civic pride, public art and key spaces in the city, as well as landscape and architectural expression. Gateways can exist in a multitude of conditions based on site visibility, building constraints and community needs. They can also be places of gathering or visual expression or a combination of both. The Streetscape Plan also provides a hierarchy to gateway treatments, identifying major and minor locations. The location of each gateway relates to the immediate context, and therefore references gateway locations along the northern edge of York University. It is also important to note that the Steeles West Mobility Hub is identified as a "Gateway Hub" and "Unique Destination" through the Mobility Hub Guidelines. Gateways should always be designed to a high level of finish and construction, while paying special attention to materials and details. Consistency in elements, such as signage, lighting and materials should be encouraged; however, it is also important to note that the gateway locations outlined will have differing spatial constraints and should address the immediate site in each application. The allocation of public art should also be strategically allocated in places of high traffic and public focus, including the Mobility Hub as well as community parks. The design of these gateway features presents a unique opportunity to project an overall image of the Steeles West District and entry into the City of Vaughan. Thematic responses for gateways may include, but are not limited to:

Art and Design
Cultural Heritage
Contemporary Architecture







Figure SP.8 Gateway Locations



1 1

Major Gateway Locations

Minor Gateway Locations

• Potential Locations for Public Art (Vaughan City-Wide Public Art Program)