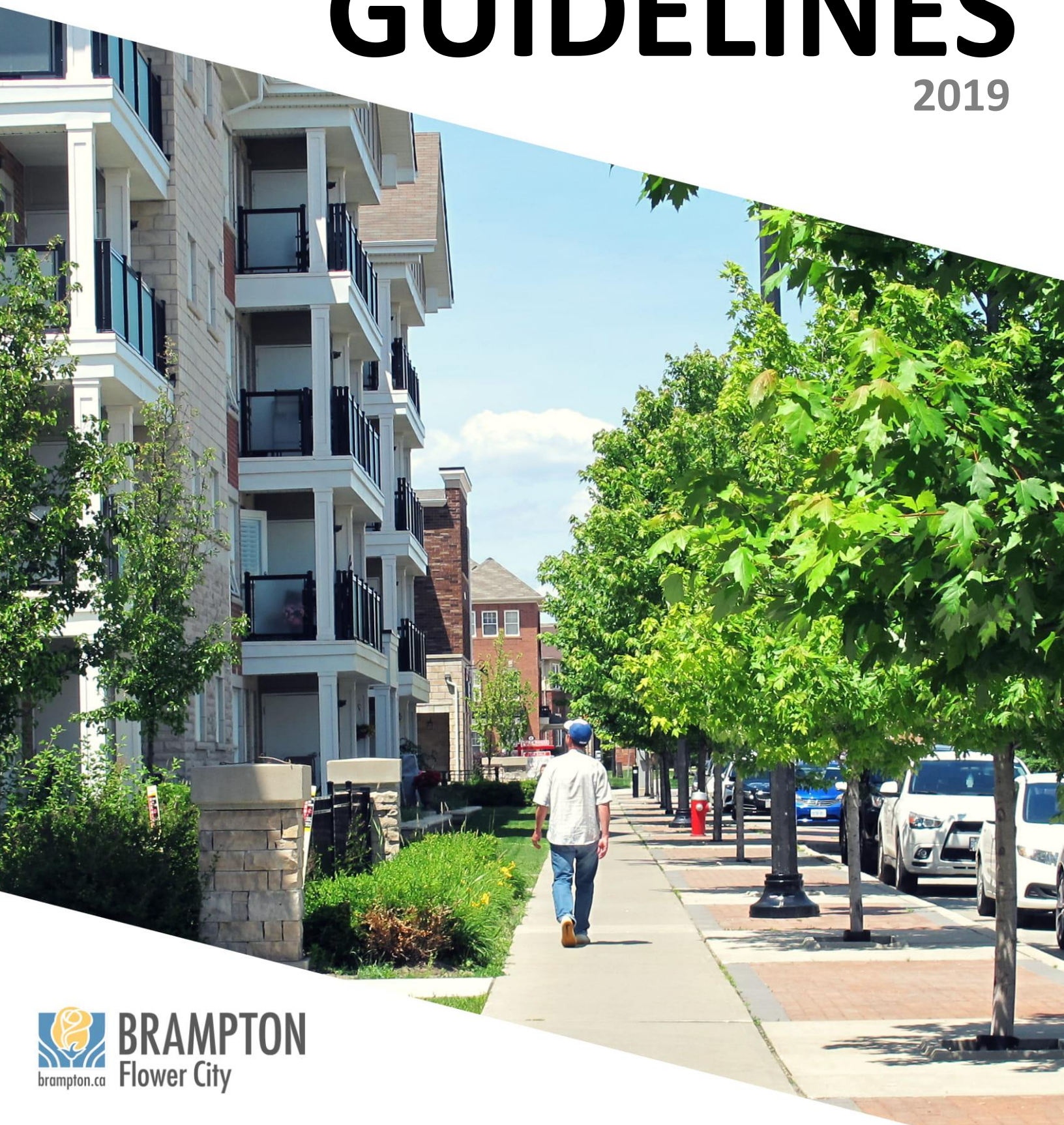
LANDSCAPE DEVELOPMENT GUIDELINES

2019



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TERMS OF USE

This is a living document that will be updated from time to time by the City of Brampton.

Use of information contained in the Landscape Design Guidelines does not absolve the reader from the obligation to exercise their best professional judgment and follow good practice.

The reader is advised to seek clarification from the City should there be a concern or conflict with the information provided herein and their proposed development.

The City of Brampton, at their discretion, may consider alternatives to these guidelines when the developer (or their agent) provides a written request for special consideration identifying the reasons.

For further information or questions pertaining to the document, the applicant is encouraged to contact the Park Planning & Development Section at (905) 874-3448.

PURPOSE OF THE LANDSCAPE DEVELOPMENT GUIDELINES

This document is a guide to assist landowners, developers, and consultants in the development of public open space within the City of Brampton. For the purpose of this document, open space includes, but is not limited to, parks, streetscapes, buffers, recreational trail systems, cemeteries, woodlands, valley lands, hazard lands, natural heritage systems and NHS blocks, engineered channels, and stormwater management facilities. This document is intended to further build on the City's vision, as described in the *Strategic Plan*[1] and the *Development Design Guidelines*[2], by clearly outlining the process and minimum design requirements necessary to complete the open space components associated with all new development.

The objective of this document is to ensure that consistently high standards of landscape development are delivered through the implementation of the following procedures and guidelines.

[1] City of Brampton. *Strategic Plan*. City of Brampton website.
[2] City of Brampton. *Development Design Guidelines*. City of Brampton website.

INTERPRETATION OF THE LANDSCAPE DEVELOPMENT GUIDELINES

This document deals with lands owned by the City of Brampton, boulevards and buffers owned by the Region of Peel, and private open space regulated by the City's site plan control process, all of which are categorized as open space according to the preceding definition.

The design and development of public open space is subject, but not limited to, the Planning Act, the Official Plan, the *Strategic Plan*, the *Development Design Guidelines*, the *Subdivision Design Manual*[3], the *Sustainable Community Development Guidelines*[4], the *Construction Manual for Subdivision Development*[5], the *Accessibility Technical Standards*[6] and all of their amendments. These documents shall be read in conjunction with these guidelines for a complete understanding of the development process in Brampton. Development of public open space is also subject, but not limited to, the regulations and standards administered by the Ministry of Natural Resources and Forestry, Ministry of the Environment and Climate Change; Toronto and Region Conservation; Credit Valley Conservation; and the Region of Peel. The principles of CPTED (Crime Prevention through Environmental Design) shall also be incorporated with the guidelines outlined in this document.

A general overview of the process and technical requirements for the development of public open space is discussed in these guidelines and applies to all developments. As changes in policy and technical requirements occur from time to time, the City issues notices to those consultants who are on our mailing list. It is recommended that the Applicant, or their representative, should always refer to the City's website to obtain the most recent update of or amendment to this document prior to preparing submissions to the City.

[3] City of Brampton. *Subdivision Design Manual*. City of Brampton website.
[4] City of Brampton. *Sustainable Community Development Guidelines*. City of Brampton website.
[5] City of Brampton. *Construction Manual for Subdivision Development*. City of Brampton website.
[6] City of Brampton. *Accessibility Technical Standards*. City of Brampton website.

THE DEVELOPMENT PROCESS

As Brampton continues to rapidly grow over the next number of years, most of the City's open space development will be associated with and implemented through the Subdivision Application and Site Plan processes. Because there are significant differences in the procedures and technical requirements, each process is dealt with separately in these guidelines.

Following Draft Plan approval, the submission of a Landscape Plan will be concurrent with submission of the Engineering Plan. Plans of Subdivision will only be released for registration after all of the City's requirements have been satisfied and the landscape (and engineering) plans have been approved.

Site plan landscape submissions may be made to the City concurrent with the initial Site Plan application, or at any time thereafter. Site plan approval will not be granted until the landscape plans are approved.

These guidelines are supported by several companion City of Brampton documents which include, but are not necessarily limited to the following:

- *Official Plan*
- *Strategic Plan*
- *Secondary Plan and Block Plan Policies*
- *Community Design Framework (CDF) for the development area*
- *Community Design Guidelines (CDG) or Design Briefs for the development area*
- *Site Plan Review Process Document*
- *Subdivision Design Manual*
- *Development Design Guidelines*
- *Sustainable Community Development Guidelines*
- *Construction Manual for Subdivision Development*
- *Accessibility Technical Standards*
- *Street Corridor Master Plan and Design Standards*
- *Brampton's PathWays Master Plan*
- *Gateway Beautification Program*
- *Parks and Recreation Master Plan*

- *Conditions of Draft Plan approval for the subdivision*

All due consideration should also be given to other applicable regulations and guidelines including but not limited to the:

- *Municipal Act*
- *Planning Act*
- *Conservation Authorities Act*
- *Navigable Waters Protection Act*
- *Environmental Assessment Act*
- *Endangered Species Act*
- *Ontario Heritage Act*
- *Ontario Building Code*
- *City of Brampton Development Charges By-law*
- *City of Brampton Zoning By-law*

The Roles of the Community Design Framework (CDF), Community Design Guidelines (CDG) and Design Briefs

Most new development in Brampton, with the exception of a few infill projects, originates through the Block Plan. Please refer to the *Development Design Guidelines* for further information related to the design process.

The design aspects of the proposed neighbourhoods within a block plan are first considered in the Community Design Framework (CDF), one of several component studies that contribute to the creation of the Secondary Plan.

The CDF identifies the opportunities that exist within a given area that will be capitalized on to influence the overall design of a community and the establishment of a land use plan. The CDF focuses on the basic structuring elements of the community including the arrangement of various land uses, public open space, stormwater management ponds and the road network that delineates them. More importantly, it identifies special character areas that will give the new community distinctiveness and a sense of place.

Other important supporting infrastructure including recreational pathway systems, as well as cultural and natural heritage features, will also be identified and integrated into the planning process at this stage. With respect to recreational pathways that are contemplated in natural areas, there is an increasing need to investigate alternative

alignments as early as possible in the process. This is usually done in conjunction with the Environmental Implementation Report (EIR) and Master Environmental Servicing Plan (MESP) to ensure that key environmental constraints are identified and adjustments can be made accordingly.

The next level of detail is captured in the Community Design Guidelines (CDG), which is also prepared by the applicant and submitted as part of the block planning process. This document supplements the City's 'parent' document, the *Development Design Guidelines*, by describing the unique and special design features that will distinguish the proposed community, with particular emphasis on the special character areas that have been identified in the CDF. The information provided in this document should be immediately translatable into detailed design drawings at the subdivision design stage without the need for a lot of interpretation by the designer.

Design Briefs are an abbreviated form of Community Design Guidelines that are typically required for stand-alone sites that are regulated through the Site Plan approval process. Because of the relatively small scale involved, the recommendations tend to be very site-specific and even more prescriptive than those in the Community Design Guidelines.

PART I: SUBDIVISION DEVELOPMENT

LANDSCAPE DEVELOPMENT GUIDELINES FOR SUBDIVISION DEVELOPMENT

This section is intended to provide an overview of the main design considerations and requirements for landscaping and outdoor recreation facilities related to new developments.

1.1. BOULEVARDS

Street trees, along with lighting, street furniture, signage, and built form, play a key role in defining the character, visual appeal, and functionality of a street. More importantly, they provide a major proportion of the City's tree canopy, which is essential to the environmental sustainability of the City and the health of its residents and visitors.

1.1.1. Boulevard Trees

a) **Tree Spacing:** Trees should be selected and planted at 8.0 m to 10.0 m on center as a general practice and where space permits.

b) **Dominant Species:** Each street should have a dominant species planted in groups of 4 - 6 trees, comprising at least 50% of the overall mix.

c) **Sub-dominant Species:** Two sub-dominant species mixed in with the dominant species will make up the balance. Group sizes of sub-dominant shall be 3 - 5 trees.

d) **Tree Arrangement:** Tree groupings shall be arranged in staggered blocks with sub-dominant species interwoven among larger groupings of dominant species.

e) **Tree Texture:** Trees selected for any given street should be of similar texture; which is either fine textured or coarse textured.

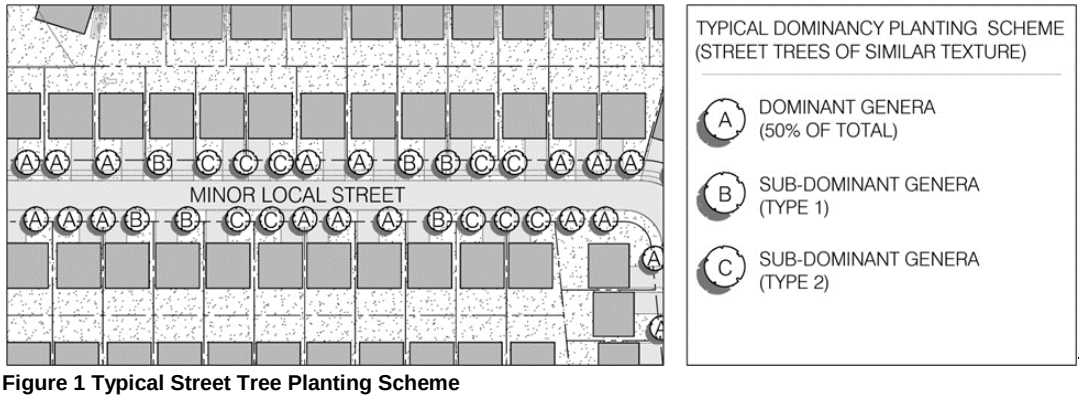


Figure 1 Typical Street Tree Planting Scheme

f) **Minimum tree size**: 70 mm caliper diameter at breast height (dbh), with a wire basket and burlap only.

g) **Soil:** Individually planted trees require a minimum of 30 cubic meters (m3) of soil per tree, while groupings of two or more in a soil bed require a minimum of 20 cubic meters (m3) of soil per tree.

h) **Soil depth:** A minimum of 0.7 meters of soil depth.

The following table classifies the most common boulevard trees into four categories based on form and texture. Please refer to

Appendix B for a complete list of approved boulevard trees.

	Large/full form **(more than 9.0 m spread)** Use where clearance to building is > 6.0 m and >14.0 m to adjacent tree.	**Narrow/medium form** **(up to 9.0 m spread)** Use where clearance to building > 4.5m and > 12.0 m to adjacent tree.
Coarse Textured (Dense Canopy)	▪ **Acer x freemanii 'Jeffersred'** ▪ **Acer rubrum** ▪ Acer saccharum ▪ Acer platanoides (#) & cultivars (#) ▪ Platanus occidentalis ▪ Quercus alba ▪ **Quercus macrocarpa** ▪ **Quercus rubra** ▪ **Tilia cordata** ▪ Tilia x euchlora	▪ **Acer x freemanii 'Armstrong'** ▪ Acer platanoides 'Columnare' (#) ▪ Corylus colurna (#) ▪ Syringa reticulate 'Ivory Silk' ▪ **Tilia x flavescens 'Glenleven'**
Medium/Fine Texturec (Medium/ Open Canopy)	▪ Celtis occidentalis ▪ **Gleditsia triacanthos** ▪ **Gleditsia triacanthos var. inermis 'Skycole'** ▪ Sophora japonica 'Regent' (#) ▪ Ulmus x 'Homestead' ▪ Ulmus x 'Pioneer' ▪ Zelkova serrata 'Green Vase' (#)	▪ Amelanchier canadensis ▪ Carpinus betulus 'Fastigiata' ▪ **Gingko biloba** ▪ **Gingko biloba 'Autumn Gold'** ▪ Phellodendron amurense (#) ▪ **Pyrus calleryana 'Aristocrat', 'Bradford', 'Capital', 'Glen's Form', 'Redspire'**

Table 1 Common boulevard trees categorized by form and texture

Notes:

a) Trees in bold represent dominant species and are to represent at least 40% of overall species mix.

b) (#) Use in small quantities only. Less than 8 % of total tree quantity.

c) Use large/full form selection along arterial roads where clearances permit.

d) Avoid using *Acer rubrum*, *Acer saccharum* and *Tilia* varieties on arterial roads due to salt intolerance.

1.1.2. Boulevard Buffers

a) **Buffer Plantings:**

   a. **Shrub and perennial plantings** are generally discouraged in road buffers and may only be used in select locations with the City's approval. Please refer to the *Parks Construction Standard Details* for further information.

   b. **Deciduous, flowering, and coniferous trees and buffer turf** areas shall be planted in road buffers.

c. **Coniferous tree plantings** shall be a mix of three specimen heights (180 cm, 250 cm and 300 cm) in approximately equal proportions. Coniferous trees shall be planted in buffer turf and shall have individual mulched saucers with a minimum of 3.0 meters of turf between saucers.

1.1.3. Arterial Roads

These streets form the edges and boundaries of the community.

a) **Planting:** Deciduous and coniferous tree rows and groupings, entry feature shrub and perennial plantings, and berming as required for noise mitigation. Plantings are to be located in designated planting buffers.

b) **Architectural Components:** Decorative acoustic wall and/or fencing as required.

c) **Tree Size:** Large canopy trees are preferred along arterial roads. However, this objective may need to be compromised with the introduction of smaller or narrow form selections in close proximity to overhead utilities.

d) **Species:** Selected for their tolerance to road salt and winter hardiness.

e) **Setback:** Optimum tree setback from the roadway is 7.0 m where attainable.

f) **Arterial Road Buffers:** Bulb plantings are to be provided through the following method:

- For arterial road buffer sod areas, landscape drawings shall indicate planting locations for early flowering bulbs such as *Scilla*, *Crocus*, *Chionodoxa* and *Puschkinia*.
- The average planting coverage is 10 square meters of mass bulb planting for every 10 linear meters of road buffer, although the exact extent of this planting will depend on the available space as agreed to with the City.
- A note is required on the affected drawings stating that the City will collect cash-in-lieu from the developer at the rate of $80.00 / square meter (subject to market costs at the time) and that the City will use these funds to provide the bulb plantings at a later date.
- The specific design and layout of the flowering bulb clusters will vary, depending on site conditions.

1.1.4. Residential Reverse Frontages and Flankages

In this arrangement, residential lots back or flank onto an arterial road with the front yard facing a local street.

a) **Noise Wall/Fence**: The backyard is separated from the street by a noise wall/fence (typically 2.2 m in height) on top of a berm that has a maximum slope of 3:1, subject to the applicable noise attenuation requirements.

b) **Noise Wall and Berm Location:** The noise wall and berm may be centered 0.3 m inside private property or public property depending on the abutting right-of-way; half of the berm is on the street side (varying from 3.0 m to 4.5 m wide depending on the width of the buffer block). (Refer to City of Brampton Subdivision Site Plan Fencing and Wall Standards).

c) **Berm Size:** The backyard portion of the berm may not exceed 1/3 of the backyard depth and the level backyard between the house and the berm must be at least 7.0 m.

d) **Buffer Size:** Buffers on reverse frontages of parkways and on lots flanking onto an arterial road are usually 4.5 m wide with a typical berm height of 1.5 m, again subject to the applicable noise attenuation requirements.

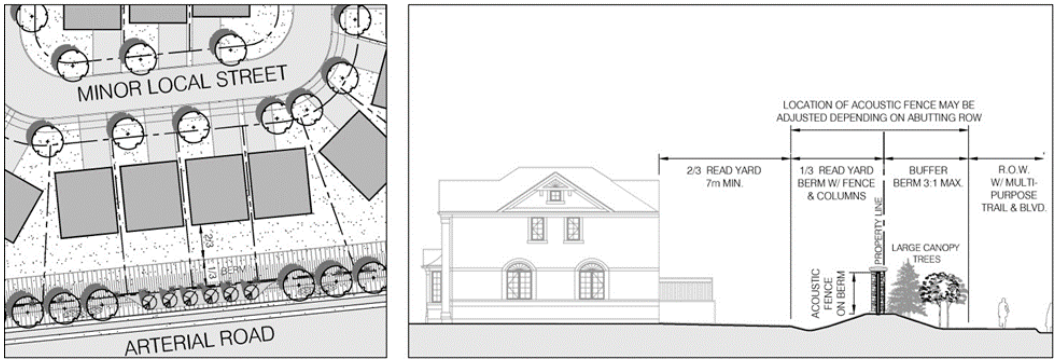


Figure 2 Typical landscape treatment along residential reverse frontage lots

1.1.5. Collector Roads

These streets play an important transitional role in connecting neighbourhoods within the City. Accordingly, their landscape treatment from one neighbourhood to the next should reflect a recognizable degree of visual continuity, particularly in the selection of plant material, while also achieving biological diversity.

a) **Planting:** Dominantly deciduous trees. Plantings are to be located in the boulevards.

b) **Tree Size:** Medium to large tree species are preferred.

c) **Setback:** The minimum setback from the roadway shall be 1.0 m.

1.1.6. Local Roads

These streets are mostly residential and will typically vary from 17.0 m to 20.0 m in width with exceptions permitted for Alternative Design Standards (ADS) in select locations (see Section 1.2.5).

a) **Planting:** Deciduous trees in boulevards or adjacent to residential front lawns.

b) **Tree Size and Spacing:** In circumstances where projecting porches reduce these front yard depths to less than 3.0 m, it may be necessary to use smaller or narrower selections, which should be planted proportionately closer together (6.0 m to 8.0 m).

c) **Street Corners and Flankages:** May be accentuated through the use of trees of distinctive form, colour or texture.

Figure 3 Typical street tree spacing along a local road with reduced front yard setbacks

1.1.7. Window Roads

A “window road” is a local residential street with homes on one side and an arterial road on the other.

a) **Buffer Planting and Fencing**: Typically have a 3.0 m of R.O.W. added to their standard width where they abut the arterial road to allow for buffer planting and fencing.

b) **Tree Species and Spacing:** The emphasis should be on groups of conifers at 2.0 m - 3.0 m spacing to provide immediate visual screening.

c) **Fence:** A continuous 1.2 m high fence of decorative metal construction is required within the buffer.

d) **Walkway Openings:** Typically provided in the fence at each end of the “window” condition; these should be accented with decorative masonry columns.

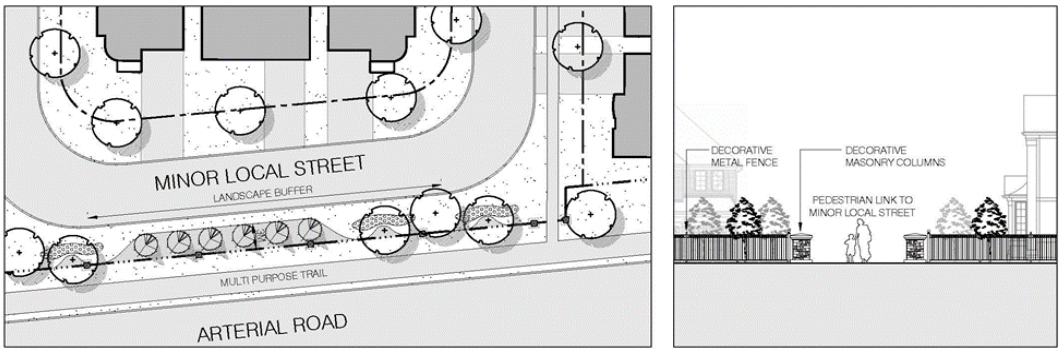


Figure 4 Typical landscape treatment along a window road

1.1.8. Alternative Design Standards (ADS) for Roads

In circumstances where Alternative Design Standards (ADS's) have minimized clearances and setbacks, it is necessary to carefully select boulevard trees for their more compact form and make extra efforts early in the design process, to coordinate their placement with driveways, streetlights and aboveground utilities.

1.1.9. Gateways and Other Streetscape Enhancements

Key elements described in the *Gateway Beautification Program*[7] and the *Street Corridor Master Plan and Design Standards*[8] are implemented directly by the City; however, developers are expected to assist wherever any of the prescribed enhancements are contiguous to their projects. In addition, developers may, at their discretion and subject to the City's approval, introduce local enhancements to their projects to create special local character and distinctiveness. Typical enhancements can be categorized as follows:

1.1.9.1. Decorative Medians

a) **Planting:** Hardy deciduous tree plantings in raised planting beds flanked by decorative paved splash strips

b) **Median Width**: Must be at least 5.0 m wide from curb face to curb face.

c) **Surfacing:** Where a 5.0 m width is not possible, medians must be provided with decorative surfacing acceptable to the City, such as imprinted and/or coloured concrete. Asphalted medians are generally not permitted.

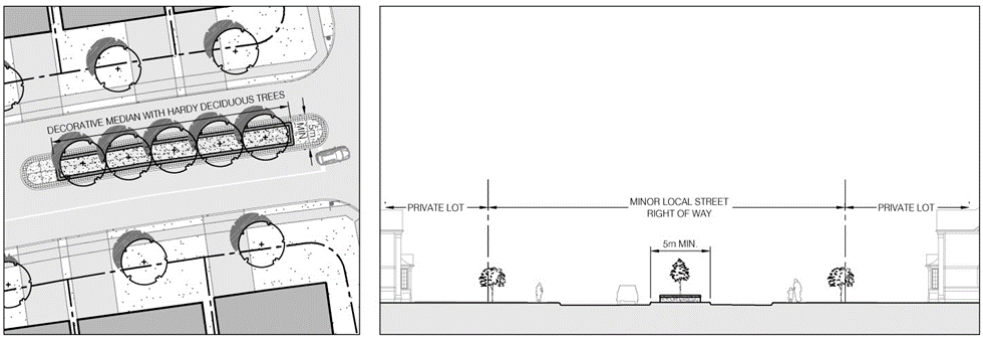


Figure 5 Typical median landscape treatment

1.1.9.2. Intersection Entry Features

The locations and style of community and neighbourhood entry features are typically identified in the design guidelines for a development area or may also be proposed for standalone developments.

Entry features and gateways generally originate in one of the following two ways:

[7] City of Brampton. *Gateway Beautification Program*. City of Brampton website.
[8] City of Brampton. *Street Corridor Master Plan and Design Standards.* City of Brampton website.

City-Mandated through the *Gateway Beautification Program:* The *Gateway Beautification Program* guidelines identify a hierarchy of civic enhancements at a number of specific entries, road corridors, and key internal focal points throughout the City. These are to be constructed by adjacent developers where feasible, or in conjunction with municipal capital projects. Please refer to the *Gateway Beautification Program* for further information.

Developer-Initiated: Subject to the City's approval, developers/builders may implement at their discretion entry features and gateways for branding or marketing purposes in locations that do not require City-mandated enhancements.

1.1.9.2.1. Entry Features Architecture

Entry features should be primarily of durable masonry construction although decorative metal can be incorporated in moderation. Stone and cultured stone are preferred, where suited. Ensure that the masonry entry features comply with the following requirements:

a) **Specify Severe Weathering (SW) grade** for all brick architectural features.

b) **Overhang or Coping:** Ensure there is sufficient overhang of the cap or coping and provide a drip groove.

c) **Waterproof Caulking:** Ensure that the joints, such as the cap and wall coping and between columns and wall sections, etc. have flexible waterproof caulking and not mortar to prevent moisture wicking and provide a vapor barrier at the top of the footing.

d) **Weepers:** Provide several weepers to allow more air circulation behind the brick facing and ensure that a vapor barrier.

e) **Trim Pieces and Plinths:** Ensure projecting trim pieces and plinths are chamfered to direct water away from the wall or column face.

f) **Lighting fixtures** of any kind are discouraged.

1.1.9.2.2. Entry Feature Locations

a) In circumstances where the adjacent corner property is free-hold residential, such structures must always be located on City property outside of the road allowance which is usually a 1.0 m wide block dedicated gratuitously to the City.

b) In most other cases which are usually some form of block development, the entry feature is to be incorporated into the site plan for the block.

1.1.9.2.3. Entry Features Planting

a) **Species:** Flowering trees, conifers, shrubs, perennials and flowering bulbs (daffodil and tulip varieties) shall be integrated into the entry feature plantings. In all cases, a significant floral display should be included. The exact species, quantities and design configuration for the entry feature planting will receive direction from the City during the detail design

stage. Limit trees, shrubs and perennials to 5 – 7 selections while ensuring a succession of bloom and fall foliage colour.

b) **Planting Scale and Proportion:** Both flowering bulbs and perennial clusters shall be of appropriate scale and proportion (minimum cluster size of 1 species or variety to be 2 sq. m.).

c) **Planting Arrangement:** Avoid planting arrangements of many small planting clusters or too many diverse species.

d) **Planting Position:** Ensure that the plant material position does not obstruct daylight triangle sight lines and entry feature signage. Plantings should complement and not obscure the architectural elements.

e) **Irrigation:** Some locations may require automated irrigation for entry feature planting beds at the discretion of the City with irrigation system designs to be supplied and installed at the developer's expense.

The consulting landscape architect shall notify the City two months prior to installation of the entry feature planting bed at which time the City's staff will confirm if the installation may proceed or the developer must pay the City cash-in-lieu in the amount prescribed in the approved streetscape cost estimate for future installation by the City.

Figure 6 Developer-initiated entry feature

1.1.9.3. Special Boulevard Surface Treatments and Street Furniture

a) **Special Elements:** Enhanced sidewalk treatments and street furniture may be utilized strategically.

b) **Benches and litter receptacles:** Conform to the City standard style and colour.

c) **Decorative splash strips**: Conform to the City standard colour and pattern for the area, if introduced.

d) **Surface Materials:** Landscaped areas should be treated with surface materials appropriate to the anticipated level of maintenance and wear:

- Areas of pedestrian movement and traffic islands should be finished with decorative hard surfacing other than asphalt.

- Sodded or planted areas adjacent to intensively used pedestrian areas may need to be protected with concrete edges or railings in some instances.

1.1.10. Boulevards Grading

Grading design should take into account both the intended use and the eventual maintenance requirements of the area along with the need to assure soil stability.

a) **Boulevards:** Slopes for turf on boulevards may vary between 2% to 5%.

b) **Buffers:** Slopes for turf and mulched planting beds in buffers may vary between 2% - 33% (3:1).

c) **Hard Surfaces** (other than pathways): Slope between 1% - 3%

1.2. PARK TYPOLOGY

1.2.1. City Parks

The City Parks within Brampton vary in size from 12 ha to 40 ha (30 acres to 100 acres). City Parks are destinations for active recreation and focal points within the City. These parks are intended to service the entire city. City parks are designed and constructed by the City.

1.2.2. Community Parks

Community Parks provide a range of opportunities for outdoor active and passive recreation that is comparable to City Parks. They vary in size from 10 ha to 12 ha (25 acres to 30 acres) of active tableland and are located in areas where the service area is able to accommodate 15,000 to 20,000 people within a 3.0 kilometre (1.86 mile) radius. Community parks are designed and constructed by the City.

1.2.3. Neighbourhood Parks

1.2.3.1. General Requirements

a) **Theme or Character:** Introduce variation in the appearance and function of the Neighbourhood Parks by establishing a strong character or theme in the design of the playground and other components such as paved areas, entry gate architecture and other park accessories. Theming shall be incorporated in approximately 50% of the parks as directed by the City.

b) **Distinctive Elements:** A landmark play component or a specific theme for a park that makes the location memorable is encouraged. Examples of park themes: Animal Kingdom, Pirate Ship, Western Town.

c) **Creation of Functional Areas or "Rooms":** Use topography, planting and built form where appropriate, to clearly define the functional areas or "rooms" of the park.

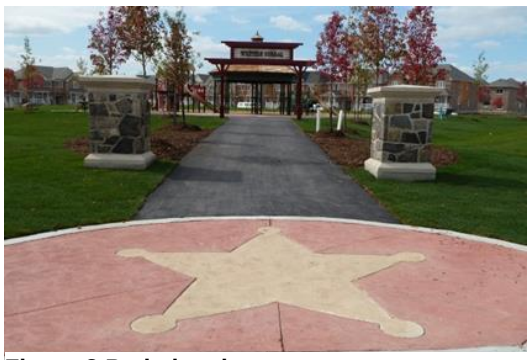


Figure 8 Park theming - entry treatment

Figure 7 Park theming - shade structure

d) **Seating Areas Surface Material:**
Provide precast unit paving surface or cast in place concrete paving at seating areas.

1.2.3.2. Playground Design

Using the current edition of CAN/CSA-Z614 and Annex 'H', *Children's Playspaces and Equipment* as the regulatory guide, designers are encouraged to take advantage of and utilize the wide array of play components that are available from local suppliers. The following principles should be applied in the selection and arrangement of the elements:

a) **Size of Playgrounds:** Playgrounds in a Neighbourhood Parks should generally have a minimum play area of 350 sq. m.

b) **Target Age:** Most Neighbourhood Parks should provide play opportunities for a complete range of pre-adolescent children from toddlers up to age 12.

   a. Vest pocket parks may only have space for junior play as determined in consultation with the City prior to the first design submission.

c) **Swings**: Swings are a basic standard requirement in all playgrounds, unless otherwise agreed to by the City:

   a. Neighbourhood Parkettes or Vest Pocket Parks with junior playgrounds only, should contain a minimum of two (2) bays of swings on 2.4 m height bars consisting of:
      - two (2) tot seats
      - one (1) fully accessible seat and one (1) belt seat

   b. All larger playgrounds should have a minimum of two (2) bays of swings on 2.4m height bars and two (2) bays of swings on 3.0 m height bars consisting of:

      2.4 m height bars
      - two (2) tot seats
      - one (1) fully accessible seat and one (1) belt seat

      3.0 m height bars
      - four (4) belt seats

c. Saucer swings are encouraged as an excellent alternative to some or all of the conventional swings, particularly where space is limited.

d) **Other Playground Components:**

a. Incorporate a significant number of moving components (in addition to swings, spring toys and play panels) into every playground with a minimum of two (2) in every layout.

b. Emphasize mobile overhead components such as slide bars and spinning wheels, and ground level mobile components, such as rocking logs and spinning platforms.

c. A dedicated sand play area with an active play component of a digger or sand table is strongly encouraged, provided it is contained by a formed concrete curb or other approved edging material, depending on design.

e) **Playground Accessibility:**

a. Provide a number of accessible play components in every playground. Designers are required to meet or exceed the Annex H addition to CAN/CSA-Z614 to provide increased accessibility and opportunities. The accessible ramp shall be located in close proximity to the accessible play components.

b. Prior to the initiation of detailed design, selected playgrounds, may from time-to-time be designated by the City as “fully accessible”. In such cases, special efforts will be required by the designer to make the playground equally challenging for children of all capabilities while working within the budgetary limitations of the project.

f) **Avoid:**

a. Avoid excessive use of stairs, platforms and multiple slides on the same structure and introduce more challenging and varied play components.

b. Avoid using tube slides.

g) **Playground Surface Material:** Engineered wood fiber is the preferred surfacing material for playgrounds; however, rubberized play surfacing may also be used in limited locations as agreed to by the City.

a. Provide appropriate playground surfaces with sub-drain system connected to the nearest storm sewer. Contain the playground surface material by a formed concrete curb or other approved edging material, depending on design.

1.2.3.3. Local Parks

a) **Size**: 1.2 ha to 2 ha (3 acres to 5 acres).
b) **Purpose:** Intended for spontaneous recreational opportunities (no programming).
c) **Potential Elements:** The City, at its discretion, may on a site specific basis add a formal mini-soccer or softball field with a small parking lot which would require the maximum 2

ha (5 acre) size under this classification. May include, but is not limited to: a playground, multi-purpose court, seating areas, walkways, lighting, shade structures, open active area, landscaping, floral displays, buffer areas and/or natural or cultural features.

1.2.3.4. Town Squares

a) **Size:** 0.6 to 1.5 hectares (1.5 to 3.7 acres)
b) **Purpose:** Located in neighborhoods to accommodate 4,000 to 5,000 people within a 0.4 kilometer (1/4 mile) radius for active and passive recreation.
c) **Potential Elements:** May include, but is not limited to: a playground, multi-purpose court, seating areas, walkways, lighting, shade structures, open active area, landscaping, floral displays, buffer areas and/or natural or cultural features. Note: parks less than 0.5 hectares are only provided in exceptional cases and special situations.

1.2.3.5. Vest Pocket Parks

a) **Size:** 0.4 ha to 0.6 ha (1.0 acre to 1.5 acres)
b) **Purpose:** Utilized most often to provide modest facilities in under-serviced areas between the larger parks or introduced to create a special neighbourhood focal point, recreational trailhead or point of entry into a woodland or similar open space.
c) **Potential Elements:** Structured facilities are generally limited to a sitting area and a junior playground if needed.

1.2.3.6. Urban Parks

a) **Size and Purpose:** Urban Parks are smaller specialized parks that are most suitable within the City's higher density urban areas or in underserviced areas where the acquisition of larger parks is not possible.
b) **Potential Elements:** May include informal and formal playgrounds, seating areas, more intensive hardscape elements, public art, and unstructured green space. The type, number and scale of facilities within these parks should be determined on a case-by-case basis. In certain instances, these parks may be located in private spaces that provide for public access.

1.2.3.7. Linear Connectors

a) Lands that are oriented to off-road recreational trails and/or connecting links between other forms of parkland or major community destinations.

1.2.4. Sports Facilities

a) **Location and Size:** Sports fields will typically be limited to City and community parks and to very selective locations in Neighbourhood Parks that are larger than 4 acres.

b) **Design, Orientation, Setbacks and Construction:** Shall conform to the *Parks Construction Standard Details*[9] and *Landscape Specifications*[10].

c) **Setbacks of Facilities from Residential Property Lines:** 20.0 m for unlit facilities and 30.0 m for illuminated sport fields.

d) **Setbacks of Swales, Berms and Catch Basins:** No closer than a minimum of 6.0 m from light poles.

e) **Setback of Plantings:** 10.0 m from sports field lighting.

f) **Sports Field Grading:** All sports fields shall be graded with a crown and sloped a 1.5% minimum, except artificial turf or formal fields (which have specific design and engineering requirements) or sand based fields with subdrains and irrigation.

g) **Vehicular Maintenance Route:** Provide a 6.0 m wide vehicular maintenance route around the field perimeter to allow access to the light poles. The vehicular maintenance route grading shall not exceed 5%.

1.2.5. Neighbourhood Park: Parking

a) **Parking Lot Location:** Generally, parking lots will only be located where there are sports fields or some other community facility that is considered a higher volume "drive to"' destination.

b) **Parking Lot Screening:** Parking lots should be screened from adjacent streets and residences with plant material while allowing adequate opportunities for visual surveillance from surrounding streets.

c) **Separation Distance from Road Property Line:** Minimum 4.0 m separation distance should be provided from the road property line to edge of the parking lot.

d) **Setback from Residential Properties:** A minimum 20.0 m setback is recommended for all parking lots from adjacent residential properties.

e) **Parking Lot Pathway Connection:** Parking lots should be connected to the asphalt recreational pathway system within the park.

f) **Parking Lot Measurements:** Stall sizes shall be 2.7 m wide by 5.4 m long. Aisle widths will be 6.6 m wide. The access road from the municipal street to the first parking lot stall will be minimum 7.5 m wide. The radius of concrete curb at the road will be minimum 7.5 m.

g) **Handicapped Parking Spaces:** Shall be provided at the rate of one per field and in accordance with the *Accessibility Technical Standards*.

h) **Parking Lot Surfacing and Drainage:** Generally, parking lots should be surfaced with asphalt paving and drained internally using curb and gutter with catch basins; however,

[9] City of Brampton. *Parks Construction Standard Details*. City of Brampton website.
[10] City of Brampton. *Landscape Specifications.* City of Brampton website.

as LID (Low Impact Development) techniques are proven and accepted, permeable paving, bio-swales and other 'green' technologies may be introduced at the discretion of the City.

i) **Parking Lot Painting:** For asphalt parking lots, parking spaces shall be delineated with painted white lines.

j) **Precast Concrete Bumper Curbs:** May be considered from time to time by the City as an alternative to curb and gutter, and should be located at the ends of parking stalls to prevent cars from traveling onto grassed area and pedestrian pathways.

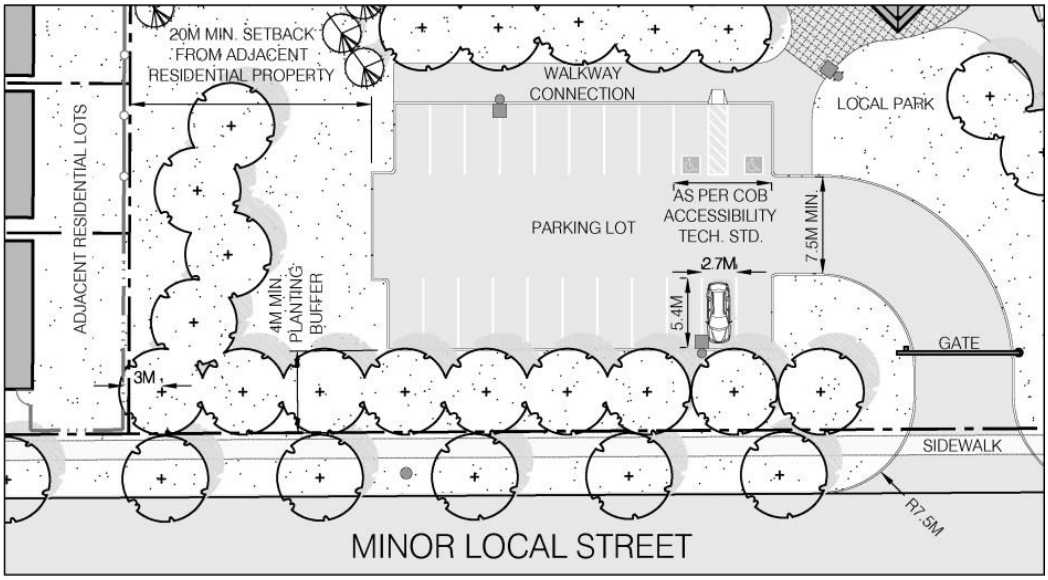


Figure 9 Typical landscape treatment for parking lot in a park

1.2.6. Neighbourhood Park: Planting

Shrub and perennial plantings are generally discouraged in Neighbourhood Parks and may only be used in select locations with the City's approval.

Tree plantings in parks shall comply with the following general guidelines:

a) **Tree Setbacks:** Setback trees 3.0 m from recreational pathways, fences or other planting and a minimum of 3.5 m from the edge of playgrounds.

b) **Conifers Planting:** should be planted in single saucers at a minimum of 5.0 m apart to allow for grass cutting.

c) **Tree Arrangement:**

   a. Arrange tree groupings to permit a reasonable degree of visual surveillance for public safety while also buffering unsightly views from adjacent roads and other obtrusive land uses.

   b. Arrange shade trees in substantial compact groups around shade structures seating areas and playgrounds to provide shade.

c. Arrange conifers in compact groups on the most wind-exposed sides of the same areas.

d) **Tree Density:** Trees will be planted at a density of 120 trees per hectare (i.e. 50 trees per acre).

All planting is to be supplied and installed in accordance with the *Parks Construction Standard Details*.[11]

1.2.7. Neighbourhood Park: Site Grading

a) **Grading Design:** Grading design should take into account both the intended use and the eventual maintenance requirements of the area along with the need to assure soil stability. Slopes may vary as follows:
   - Turf or mulched planting beds associated with open play areas in parks: 2% - 5%
   - Turf and mulched planting beds elsewhere in parks: maximum 25% (4:1)
   - Areas surrounding the playground edge: minimum 2% slope.
   - Hard Surfaces (other than pathways): 1% - 3%

b) **Berms:** Ensure that berms do not negatively affect or eliminate flat open play areas. Berms should be substantial enough to provide significant additional recreational value, such as an effective small toboggan hill.

c) **Play Slopes:** Utilize and accentuate natural grade changes where possible to create play slopes for summer and winter (maximizing north and east-facing slopes for winter).

d) **Park Drainage:** Should be internal to the extent practicable by directing surface runoff to catch basins within the park. Drainage onto adjacent private lands is not permitted. Drainage onto parkland from adjacent lands and overland flow routes across parkland are not permitted unless prior written approval has been received from the City.

The consultant shall verify that grading plans are correct and that site grading conforms to the grading plan. Ponding and poorly drained areas will not be accepted.

1.2.8. Neighbourhood Park: Site Furniture

a) **Seating Locations:** As specified in the City standard detail no. L876 (refer to the *Parks Construction Standard Details*), standard benches are to be provided in tableland parks adjacent to playgrounds and other selected locations.

b) **Seating Positioning:** Orient seating areas toward the play area with space for bicycle racks, benches, and trash receptacles. Standard benches should generally be positioned adjacent to pathways on a separate concrete pad but in special circumstances may also be located away from pathways on grass or mulched surfaces.

[11] City of Brampton. *Parks Construction Standard Details.* City of Brampton website.

c) **Trash Receptacles:** Should be located near benches, shade structures and pathway intersections. A separation of 5.0m is desired between site furniture and trash receptacles to avoid wasps.

d) **Park Identification Signs**: Should be located strategically along major road frontages and at the primary entrance(s) into the park block. The City shall supply all signs to the contractor for installation during the park construction or at any time prior to Preliminary Acceptance of the site.

1.2.9. Neighbourhood Park: Shade Structures

The following design guidelines shall be considered when including shade structures in any park. Deviations may be considered in response to a specific design theme that is being promoted in the immediate development or block plan area. Refer to Parks Construction Standard Details L800 to L803.

1.2.9.1. Shade Structure Proportions, Shape and Size

a) **Minor Structure** 6.0 m nominal (20'): May be octagonal or square in shape. Refer to City Standard Detail No. L800 in the *Parks Construction Standard Details* for further information related to the shade structure proportions.

b) **Major Structures** 6.0 m x 9.0 m nominal (20' x 30'): Typically used in larger Neighbourhood Parks and Community Parks. Major structures sized 6.0 m x 12.0 m (20' x 40') are typically implemented in Community and City Parks.

c) **Picnic Shelters:** Should be rectangular in shape and approximately 6.0 m x 12.0 m nominal (20' x 40').

1.2.9.2. Shade Structure Flooring

a) **Surfacing:** Floors should be concrete (minimum 100 mm thick) with a broom finish and Brampton "Heritage" colour pigment. Other low maintenance floor surfaces, such as unit pavers on concrete base or imprinted concrete, will be considered if the design context justifies it.

1.2.9.3. Shade Structure Colour and Materials

a) **Shade Structure Colours:** Can be site-specific and complement surrounding development or park colour schemes.

b) **Preferred Materials:** Metal is preferred, however, cedar shingle roofs may also be considered. All vertical or inclined steel components such as posts and beams, shall be hot-dipped galvanized and painted.

1.2.9.4. Shade Structure Lighting and Electrical

a) **Luminaire:** All shade structures shall include a luminaire with a wire guard as per the *Parks Lighting Guidelines*[12].

b) **Cables and Conduit:** shall be routed inside the structural components of the shade structure to the luminaire.

c) **Outlets:** All shade structures shall include an electrical outlet in a lockable box as per the *Parks Lighting Guidelines*[13].

1.2.9.5. Shade Structure Accessibility

a) All shade structures shall be completely accessible as per the *Accessibility Technical Standards*[14].

1.2.10. Neighbourhood Park: Lighting

Please refer to the *Parks Lighting Guidelines* for further information.

1.2.11. Neighbourhood Park: Fencing

All fencing shall be supplied and installed in accordance with the *Parks Construction Standard Details.*

Please refer to Appendix C: *Subdivision and Site Plan Fencing and Wall Standards* for fencing and noise attenuation requirements.

1.3. NATURAL HERITAGE

1.3.1. Valleylands

a) **Valleylands are to be left in their natural state** for the most part except for the installation of recreational trails and bridge crossings that are prescribed in the *Brampton's PathWays Master Plan*[15] and/or approved *Community Design Guidelines*.

b) **Passive recreation** such as walking, cycling and bird watching are also supported by unobtrusive interpretive and way-finding signage, sitting areas and lookouts.

c) **Where significant alterations are made** to valleyland, restoration plans will demonstrate a net ecological gain to the satisfaction of the City, and the applicable Conservation Authority.

[12] City of Brampton. *Parks Lighting Guidelines*. City of Brampton website.
[13] City of Brampton. *Parks Lighting Guidelines*. City of Brampton website.
[14] City of Brampton. *Accessibility Technical Standards.* City of Brampton website.
[15] City of Brampton. *Brampton's PathWays Master Plan*. City of Brampton website.

Figure 11 Granular trail in valley land

Figure 10 Asphalt trail in valley land

1.3.1.1. Access and Linkages

a) **Recreational Trail Location:** Recreational trails shall typically be located to avoid the root systems of mature trees and through areas of less sensitive vegetation. Areas with steep slopes or seasonally wet conditions must be described.

b) **Recreational Trail Surfaces:** Alternative recreational trail surface materials (i.e. granular, wood chip) may be considered in lieu of asphalt for use in areas with shallow roots, organic soils, or with seasonally ponded conditions if alternative recreational trail locations are not feasible.

c) **Elimination and Rehabilitation of Undesirable Recreational Trails:** General measures to eliminate and rehabilitate undesirable recreational trails and hazardous conditions shall be implemented.

d) **Wayfinding and Regulatory Signage:** Shall be provided to identify intended use of recreational trail, level of maintenance to be provided, and applicable bylaws.

e) **Gates:** No gates shall be installed that provide direct access to the valleyland from the residential lots.

1.3.1.2. Invasive Species

a) **Invasive Species** that detract from biological diversity and inhibit pedestrian movement in woodlands shall be controlled. All invasive species deemed hazardous to the public, at the top of bank and in valley lands shall be removed.

b) **Herbaceous Species:** Shall be controlled by repeated pulling of plants prior to seed set. Certain conditions may require control with an approved herbicide.

c) **Woody Species:** Shall be controlled by trimming flush to the ground followed by treatment of the stubs with an approved herbicide.

d) **Severe Infestations:** In areas with severe infestations, canopy and soil management may be required to alter environmental conditions of the woodland.

1.3.1.3. Habitat Enhancement

a) **Dead or Decaying Trees:** Preserve large standing dead or decaying trees that do not present a hazard to pedestrians. All dead wood and trees/limbs deemed hazardous to the public, at the top of bank and in valley lands shall be removed.

b) **Native Coniferous Species:** Planting nodes of native coniferous species along valleyland edges is desirable.

c) **Fallen Trees:** The disposal of fallen trees by cutting them into 2 m to 3 m long logs and placing them in secure locations where they do not endanger pedestrians is desirable in small quantities.

d) **Brush:** Small quantities of brush may be placed in piles not to exceed 0.9 m in height and min. 1.5 m from edge of recreational trail.

e) **Bird Houses and Bat Roosts:** The provision of bird houses and bat roosts in strategic locations is desirable.

1.3.1.4. Restoration Planting

a) **Restoration Planting:** Shall be required where tree cover is to be restored.

b) **Restoration Planting Species:** All restoration planting shall consist of native species and shall be selected appropriately for the given soil, moisture, and light conditions of the site, as well as any specific stresses.

c) **Restoration Tree Planting Ratio:** A planting ratio of 40% caliper trees (30 mm to 70 mm) and 60% tree whips (1.0 m to 2.0 m) shall be provided.

d) **Restoration Tree Planting Densities:** A planting density of 10 trees per 100 m2 shall be provided, based on the aforementioned mix of caliper trees and whips.

e) **Groundcover Restoration:** Restoration plantings of groundcovers shall utilize regeneration from seedbank, or may be seeded with a nurse crop of low maintenance grasses if seedbank is unavailable.

f) **Sodding:** Restoration planting areas shall not be sodded.

1.3.1.5. Environmental Buffer

a) **Plant selection:** Select native plant materials that is appropriate for existing site conditions and to maximize ecological function.

b) **Total Quantity of Plant Material:** Use the following formula to calculate the total quantity of plant material.

- Number of shrubs = square area of buffer divided by 9.0 sq. m.
- Number of trees = square area of buffer divided by 36.0 sq. m.

1.3.2. Woodlands

All woodlands located on tableland areas are to be evaluated pursuant to the policies of the *City of Brampton Official Plan*[16]. Woodlands are to be left in their natural state except for the installation of pathways required to facilitate a recreational trail system. Refer to the *Woodland Management Plan Guidelines*[17] for further details.

A Woodland Development and Restoration Plan shall be completed for each woodland block which will detail the short term management measures as per the recommendations of the *Woodland Management Plan*.

The following describes the general requirements with respect to woodland management:

1.3.2.1. General Requirements

a) **Runoff:** Runoff from re-graded development areas shall not be permitted to flow directly into woodlands.

b) **Hoarding:** Temporary hoarding shall be installed in accordance with City standard detail no. L110 and shall be erected prior to the issuance of the topsoil stripping and grading permit.

c) **Fencing:** Permanent fencing shall be installed in accordance with Appendix C: *Subdivision and Site Plan Fencing and Wall Standards*.

1.3.2.2. Pedestrian Access and Linkages

a) **Recreational Trail Location:** Recreational trails shall typically be located to avoid the root systems of mature trees and through areas of less sensitive vegetation. Areas with steep slopes or seasonally wet conditions must be described.

b) **Surfaces:** Alternative surface materials (i.e. granular, wood chip) may be considered in lieu of asphalt for use in areas with shallow roots, organic soils, or with seasonally ponded conditions if alternative trail locations are not feasible.

c) **Elimination and Rehabilitation of Undesirable Recreational Trails:** General measures to eliminate and rehabilitate undesirable recreational trails and hazardous conditions shall be implemented.

d) **Wayfinding and Regulatory Signage:** Shall be provided to identify intended use of recreational trail, level of maintenance to be provided and applicable bylaws.

e) **Gates:** No gates shall be installed that provide direct access to the woodland from the residential lots.

1.3.2.3. Conservation of Biotic Resources

[16] City of Brampton. *City of Brampton Official Plan.* City of Brampton website.
[17] City of Brampton. *Woodland Management Plan Guidelines*. City of Brampton website.

Existing biotic (living) resources associated with the woodland (e.g.: topsoil, seedbank, plant material, etc.) which are displaced by development shall be reused wherever possible on the same project, or made available to the City for use in other such projects.

1.3.2.4. Restoration Planting

a) **Restoration Planting:** Shall be required where forest cover is to be restored.

b) **Restoration Planting Species:** All restoration planting shall consist of native species and shall be selected appropriately for the given soil, moisture, and light conditions of the site, as well as any specific stresses.

c) **Restoration Tree Planting Density:** Restoration efforts within a woodland will achieve a minimum tree density of 1000 stems per hectare, in accordance with the definition of a Woodlot as described in the City's Woodlot Conservation By-law. This density will be calculated using existing and proposed restoration planting.

d) **Restoration Tree Planting Ratio:** A planting ratio of 40% caliper trees (30 mm – 70 mm) and 60% tree whips (1.0 m to 2.0 m) shall be provided.

e) **Groundcover Restoration:** Restoration plantings of groundcovers shall utilize regeneration from seedbank, or may be seeded with a nurse crop of low maintenance grasses if seedbank is unavailable.

f) **Sodding:** Restoration planting areas shall not be sodded.

1.3.2.5. Woodlot Edge Re-Establishment

a) **Edge Re-Establishment:** shall be required where an existing edge is disturbed by development (e.g.: grade changes, etc.) or to protect sensitive interior areas from post-development conditions.

b) **Edge-Reestablishment Species:** All tree, shrub and ground cover species shall reflect the native species present in the adjoining woodland.

c) **Edge-Reestablishment Groundcovers:** Shall utilize regeneration from seedbank, or may be seeded with a nurse crop of rye grass.

d) **Sodding:** Woodland edge re-establishment areas shall not be sodded.

1.3.2.6. Invasive Species

a) **Invasive Species** that detract from biological diversity and inhibit pedestrian movement in woodlands shall be controlled. All invasive species deemed hazardous to the public, at the top of bank and in woodlands shall be removed.

b) **Herbaceous Species:** Shall be controlled by repeated pulling of plants prior to seed set. Certain conditions may require control with an approved herbicide.

c) **Woody Species:** Shall be controlled by trimming flush to the ground followed by treatment of the stubs with an approved herbicide.

d) **Severe Infestations:** In areas with severe infestations, canopy and soil management may be required to alter environmental conditions of the woodland.

1.3.2.7. Habitat Enhancement

a) **Dead or Decaying Trees:** Preserve large standing dead or decaying trees that do not present a hazard to pedestrians. All dead wood and trees/limbs deemed hazardous to the public, at the top of bank and in woodlands shall be removed.

b) **Native Coniferous Species:** Planting nodes of native coniferous species along woodland edges is desirable.

c) **Fallen Trees:** The disposal of fallen trees by cutting them into 2 to 3m long logs and placing them in secure locations where they do not endanger pedestrians is desirable in small quantities.

d) **Brush:** Small quantities of brush may be placed in piles not to exceed 0.9 m in height and min. 1.5 m from edge of recreational trail.

e) **Bird Houses and Bat Roosts:** The provision of bird houses and bat roosts in strategic locations is desirable.

1.3.2.8. Environmental Buffer

g) **Buffer Planting Species:** Shall consist of native species and selected appropriately for the given soil, moisture, and light conditions of the site, as well as any specific stresses.

h) **Buffer Tree Planting Density:** Planting in woodland buffers will achieve a minimum tree density of 1000 stems per hectare, in accordance with the definition of a Woodlot as described in the City's *Woodlot Conservation By-law*.

i) **Buffer Tree Planting Ratio:** A planting ratio of 40% caliper trees (30 mm – 70 mm) and 60% tree whips (1.0 m to 2.0 m) shall be provided.

j) **Groundcover Restoration:** Restoration plantings of groundcovers shall utilize regeneration from seedbank, or may be seeded with a nurse crop of low maintenance grasses if seedbank is unavailable.

1.3.3. Wetlands

1.3.3.1. Access and Linkages

a) **Recreational Trail Location:** Recreational trails shall typically be located to avoid areas of sensitive vegetation. Areas with steep slopes or seasonally wet conditions must be described.

b) **Surfaces:** Alternate types of surfaces (i.e. granular, wood chip) will be considered in lieu of asphalt for use in areas with shallow roots, organic soils, or with seasonally ponded conditions if alternative recreational trail locations are not feasible.

c) **Elimination and Rehabilitation of Undesirable Recreational Trails:** General measures to eliminate and rehabilitate undesirable recreational trails and hazardous conditions shall be implemented.

d) **Wayfinding and Regulatory Signage:** Shall be provided to identify intended use of recreational trail, level of maintenance to be provided and applicable bylaws.

e) **Gates:** No gates shall be installed that provide direct access to the wetland from the residential lots.

1.3.3.2. Invasive Species

a) **Invasive Species** that detract from biological diversity and inhibit pedestrian movement in wetlands shall be controlled. All invasive species deemed hazardous to the public, at the top of bank and in wetlands shall be removed.

b) **Herbaceous Species:** Shall be controlled by repeated pulling of plants prior to seed set. Certain conditions may require control with an approved herbicide.

c) **Woody Species:** Shall be controlled by trimming flush to the ground followed by treatment of the stubs with an approved herbicide.

d) **Severe Infestations:** In areas with severe infestations, canopy and soil management may be required to alter environmental conditions of the wetland.

1.3.3.3. Restoration Planting

a) **Restoration Planting:** Shall be required where determined by an Environmental Impact Study (EIS).

b) **Restoration Planting Species:** All restoration planting shall consist of native species and shall be selected appropriately for the given soil, moisture, and light conditions of the site, as well as any specific stresses, in accordance with the recommendations of the Environmental Impact Study (EIS).

1.3.3.4. Environmental Buffer

a) **Buffer Planting Species:** Shall consist of native species and selected appropriately for the given soil, moisture, and light conditions of the site, as well as any specific stresses, in consultation with the Conservation Authority.

b) **Buffer Planting Density:** The entire wetland buffer will be planted with appropriate vegetation, in consultation with the Conservation Authority.

1.4. STORMWATER MANAGEMENT FACILITIES

It is expected that every effort will be made to integrate stormwater management (SWM) facilities into their neighbourhoods by ensuring that they meet the following general guidelines:

a) **Street Frontages:** Should have street frontages on at least two sides.

b) **Landscaping:** Should take advantage of the water as an additional visual asset.

c) **Connections:** Should be combined with other public open space wherever practicable. Should also provide locations for community and neighbourhood gateways when these are desired.

d) **Natural Habitat:** Should provide viable natural habitat that is acceptable in close proximity to residential properties.

e) **Grading and Drainage:** SWM for parkland must comply with the Master Drainage Plan for the development where applicable.

    a. All internal storm drainage fixtures shall conform to the Public Works and Engineering Department standards.

    b. Parkland in conjunction with school sites or stormwater management facilities should be graded as one continuous drainage area to the extent that is practicable.

SWM ponds must be designed to facilitate ease of access for maintenance vehicles for periodic cleanout. Views, vistas and architectural features such as shade structures, raised viewing platforms, lookouts and fountains may be incorporated into the design to accentuate the stormwater management facilities as community gateways and focal points in naturalized open spaces. These proposed features would be dependent on pond size, location, and visibility from the adjacent public streets.

1.4.1. Pedestrian Access and Linkages

Although public use of SWM pond sites is not promoted by the City, it is recognized that residents make use of them for passive recreation.

a) **General Access:** Allow for limited safe public access (but no water contact).

b) **Lookouts:** Plant material is to be situated to provide thickets adjacent to the waterline to discourage access to the water in locations other than proposed lookouts and to continue access by geese.

c) **Recreational Trail Surfacing:** Maintenance access routes are used as local recreational trail loops and accordingly, they are to be provided with a limestone surface.

d) **Recreational Trails:** A continuous recreational trail shall be constructed around the SWM pond and shall adhere to the following criteria:

    a. Minor recreational trails shall be:
        - 2.4 m wide with a 0.5 m sod buffer on both sides of the recreational trail;
        - Constructed of limestone screenings; and
        - Located at a minimum height of 0.3 m above the 5-year predicted water level.

b. Major recreational trails (which form part of the City's recreational trail system) shall be:
   - 3.0 m wide with a 0.5 m sod buffer on both sides of the trail;
   - Constructed of asphalt;
   - Located at a minimum height of 0.3 m above the regulatory storm event; and
   - Located 1.0 m away from the pond embankment.

The maintenance access road may facilitate the recreational trail; however, it shall be located a minimum of 3.0 m away from the property line, where they abut residential properties. Please refer to the *Subdivision Design Manual* [18] for further information related to the design of stormwater management facilities.

1.4.2. Planting

The balance of the land around the pond should be established as naturalized meadow interspersed with groups of coniferous and deciduous trees that allow for and frame views of the pond from the adjacent streets and private property. Special care should be taken at the design stage to ensure that plants will not block attractive views of the pond as they mature.

The following are general notes about the planting scheme that are to be taken into account when designing a facility:

a) **Planting Setback:** Minimum setbacks for planting from the maintenance access road adjacent to the forebay are 3.0 m for caliper trees and conifers and 3.0 m for shrubs.

b) **Planting Bed along Water Edge:** A continuous planting bed with dense plant material should surround the entire water edge of the pond to deter geese from accessing the water.

c) **Planting Bed Boundaries:** Planting beds should be well defined such as to facilitate mowing equipment to operate between them. A minimum distance of 3.0 m is required between plant bed edges and trees or other obstacles.

d) **Trees in Planting Beds:** Trees should be grouped inside plant beds or in well-defined clusters allowing mowing equipment to operate around them.

e) **Mulch in Planting Beds:** Continuous mulched planting beds shall be provided immediately below the maintained tableland areas. These continuous beds shall only be interrupted where a maintenance access road or pathway access is required.

f) **Location of Planting:** Planting should not occur in areas designated for sediment storage.

g) **Plant Species:**

[18] City of Brampton. *Subdivision Design Manual*. City of Brampton website.

a. The ratio between deciduous trees and coniferous trees should be approximately 60 /40.

b. **Deciduous Trees:** A variety of hard and soft deciduous trees such as Silver Maple, Bur and Red Oak, White and Green Ash, Mountain Ash, Black Cherry, Balsam Poplar, Pignut Hickory, Basswood and Trembling Aspen should be provided.
   - **Sizes:** Deciduous tree plantings should consist of the minimum percentage sizes as noted: 150 cm - 30%; 300 cm, 40 mm & 60 mm caliper - 20% each (combined total of 60%); and 70 mm caliper - 10%.

c. **Coniferous Trees:** A variety of coniferous trees such as White Spruce, Eastern White Cedar and White and Red Pine should be provided.
   - **Sizes:** Conifer tree plantings should consist of the minimum percentage sizes as noted: 100 cm - 40%; 150 cm - 50%; and 200 cm - 10%.

d. **Shrub varieties** such as Red Osier, Gray and Alternate Leaved Dogwoods, Nannyberry, Serviceberry, Chokecherry, Bush Honeysuckle, Elderberry, Highbush Cranberry, Pussy, Sandbar, Bebb's, Peach-leaved and Black Willow, Hawthorne, Staghorn Sumac, and Snowberry can provide a range of mature heights, textures and seasonal colour.
   - **Sizes:** Shrub plantings should consist of the minimum sizes: 40 cm - 30%; 60 cm - 40%; and 80 cm - 30%.

e. **Aquatic plants** range between emergent, submergent, and floating types based on their location within the pond.
   - **Emergent Plants**: Cattail, Narrow-leaved bulrush, Arrowhead, Plantain, Burrweed and various grasses and sedges. Cattails should be planted down-wind to avoid spreading quickly throughout the pond.
   - **Submergent Plants**: May be introduced where depths are appropriate for varieties such as Canada, Waterweed, and Curly Pondweed.
   - **Floating Species**: Floating species such as Bullhead Lily should be planted on the leeward side of the pond for wind protection (where depths are appropriate).

f. **Total Quantity of Plant Material:** The following formula should be applied for calculating the total quantity of plant material. The densities were developed based on the total stormwater management pond area subtracting the permanent "wet" pond area resulting in a remaining total "dry" pond area including the area of maintenance roads and sediment storage areas:
   - Number of shrubs = square area of "dry" pond divided by 9.0 sq. m.
   - Number of trees = square area of "dry" pond divided by 36.0 sq. m.
   - Number of aquatic plants = based on linear length in meters of water's edge x 1.0 m width x 0.5 m centres

Refer to the *Subdivision Design Manual* for additional details.

1.4.3. Safety Stations and Warning Signage

a) **Safety Stations:** In an effort to provide the highest level of safety on public sites bordering on or containing ponds and waterways, safety stations along the water edges of such locations shall be provided.
    a. Developers are required to install the safety station in accordance with City standard detail no. L850 (refer to the *Parks Construction Standard Details*) as a developer cost item.
    b. The safety station pole and all associated hardware and accessories will be provided to the developer by the City at no cost and the developer will be required to provide installation services for the stations only.
b) **Warning Signage:** All SWM facilities require the placement of permanent SWM facility warning signs. Refer to Detail No. L850.

1.5. TABLELAND TREES

Refer to the City of Brampton's *Tableland Tree Assessment Guidelines* for direction regarding the evaluation, and compensation requirements for tableland trees.

1.6. CEMETERIES

Existing cemeteries within the development area and burial grounds that are discovered during the development process are gratuitously conveyed to the City.

a) **Road Frontage**: all cemeteries shall be fenced with 1.2 m height heritage-style decorative metal fencing with lockable gates and masonry columns.

b) **Suitable Access** for maintenance vehicles is to be provided and shall conform to the Public Works and Engineering requirements for traffic safety.

c) **Fencing:** The remaining perimeter of the cemetery that does not abut a public right-of-way shall be fenced with standard 1.2 m high black vinyl-coated chain link fencing.

d) **Landscaping:** The use of landscaping, particularly native species is encouraged where appropriate.

Please refer to the Cemeteries section in the *City of Brampton Official Plan* for further information.

1.7. RECREATIONAL TRAILS AND PATHWAYS

Note: For the purposes of Section 1.7, all references to trails or pathways are considered as "recreational trails and/or pathways" as understood under the current revision of the Occupiers Liability Act.

The recreational trail typologies that were originally prescribed in the *Brampton's PathWays Master Plan* are summarized below and have been further refined as described in Appendix A: *Recreational Pathways* Hierarchy.

1.7.1. Boulevard Multi-Use Recreational trail (Class 1)

a) **Travel Width:** 3.0 m preferred
b) **Travel Surface:** Asphalt preferred
c) **Clearing Width:** 6.0 m preferred
d) **Clearing Height:** 3.0 m preferred
e) **Desirable Grades:** < 3%

1.7.2. Off-Road Multi-Use Path (Class 1)

a) **Travel Width:** 3.0 m preferred; 3.5 m in areas of high recreational trail use
b) **Travel Surface:** Asphalt preferred
c) **Clearing Width:** 6.0 m preferred
d) **Clearing Height:** 3.0 m preferred
e) **Desirable Grades:** < 3%

1.7.3. On-Road Bicycle Lane (Class 2)

a) **Travel Width:** 1.5 m preferred

1.7.4. Bicycle Lane with On-Street Parking (Class 2)

a) **Travel Width:** 1.8 m bike lane + 2.2 m parking stall

On-Street Signed Route (Class 2)

a) **Travel Width:** 4.0 m – 4.5 m wide curb lane recommended

Design and construct all pathways in accordance with the *Parks Construction Standard Details* and *Landscape Specifications*.

a) **Pathway Sight Lines:** All pathways shall be designed to have unobstructed sight lines to promote visibility and safety.

b) **Pathway Accessibility:** Pathways shall be designed to enhance accessibility and ease of circulation.

c) **Pathway Width:** Pathways adjacent to playground areas must be a minimum of 3.0 m wide which should be increased to 5.0 m adjacent to shade structures in order to provide adequate clearance for maintenance vehicles. Pathways adjacent to rubberized surface playgrounds or pathways wedged between separate play areas shall have a minimum width of 4.0 m.

d) **Pathway Turn Radius:** Pathways shall have a minimum 6.0 m radius at the inner pathway edge at turns, intersections and at concrete sidewalks.

e) **Pathway Grading:** Pathways should have a maximum gradient of 5% for full accessibility with a 2% cross slope. Culverts should be used as required.

   a. Limited sections of up to 15% may be permitted where there is no alternative, however, these portions of the pathway are considered wheelchair- inaccessible and should be designated and signed accordingly.

   b. Pathway approaches to pedestrian bridges should have a maximum gradient of 5%. Bridge approaches must be graded to ensure positive drainage away from the abutments.

f) **Reinforced Sod:** All pathway connections at street boulevards should include a minimum 5.0 m wide area of reinforced sod (cell-based) between the curb and sidewalk for maintenance vehicle access.

g) **Drainage Swale:** Culverts shall be utilized to accommodate an existing or proposed drainage swale, or where the pathway will impede runoff resulting in flooding of the pathway surface.

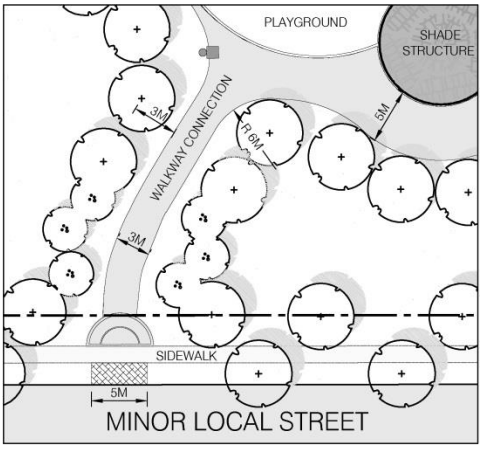


Figure 12 Typical walkway connection

Please refer to the *Brampton's PathWays Master Plan*, *Brampton's PathWays Planning and Design Guidelines*[19] and the *Brampton's PathWays Technical Appendices*[20] for further details.

1.8. SUPPLEMENTARY DESIGN REQUIREMENTS

Depending on the circumstances, the following general specifications may apply to parks, streetscapes and other public open space and should be read together with the *Landscape Construction Standard Details* and the *Standard Subdivision Notes for Landscape Development*[21]. In the event of discrepancies, the *Landscape Construction Standard Details* and the *Standard Subdivision Notes for Landscape Development* will prevail. Refer to the City of Brampton webpage for a complete set of landscape construction standard details.

[19] City of Brampton. *Brampton's PathWays Planning and Design Guidelines*. City of Brampton website.
[20] City of Brampton. *Brampton's PathWays Technical Appendices*. City of Brampton website.
[21] City of Brampton. *Standard Subdivision Notes for Landscape Development*. City of Brampton website.

1.8.1. Site Grading

a) Culverts are generally discouraged, but where they are needed to avoid potential ponding, their minimum diameter should be 300 mm and minimum length should be 7.0 m. They should include galvanized end aprons.

b) Sheet drainage may be permitted onto boulevards where there is no sidewalk.

c) Conventional swales should have a minimum slope of 2% and should not exceed 80.0 m in length. The centre line of swales must be a minimum of 3.0 m from fence lines, property lines, pathways or sidewalks, planting beds and trees unless otherwise specified. The side slope gradient should not exceed 4:1.

d) Bio-swales that include an adequate infiltration component to accommodate moderate rain events, may be designed at less than 2.0%.

1.8.2. Sodding and Seeding

Sodding and seeding is to be supplied and installed in accordance with the *Standard Subdivision Notes for Landscape Development* (Park Construction Standard Detail No. L010). The low-maintenance ('low grow') turf may be specified in select locations which will be determined during the drawing review process.

1.8.3. Planting

Refer to the comprehensive Appendix B: *Plant Chart* for selections considered suitable for various applications in Brampton. Minimum plant material sizes shall be:

- Deciduous Trees 70 mm caliper minimum
- Coniferous Trees 1.8 m to 3.0 m height
- Shrubs 60 cm to 100 cm height
- Groundcovers/ Perennials 1 gal. potted/container grown

Ornamental grasses and vines are generally discouraged in parks, buffers, medians and entry feature beds and may only be used selectively with the City's approval in limited quantities as a visual accent.

1.8.4. Retaining Walls

a) **Material:** Retaining walls should be of cast in place concrete, precast concrete or natural stone construction.

b) **Design and Construction:**

    a. Walls of 600 mm or higher must be designed by a certified structural engineer.

b. The Public Works and Engineering Department must review the plans and the structural engineer shall provide to the City written certification that the wall was constructed in accordance with the approved plans.

c. Walls 600 mm or higher must have an appropriate safety barrier.

c) **Fences:** Walls in combination with chain link fences shall be of precast or cast-in-place concrete with the fence posts core drilled into the wall.

d) **Armourstone Retaining Walls:** Generally, armourstone retaining walls are not acceptable in Neighbourhood Parks and scenic outlooks, and can only be used selectively with the City's approval.

a. If used, the armourstone must be a dimensional architectural grade of Wiarton stone with flat tops and square ends that can be neatly jointed.

1.8.5. Fencing

Please refer to Subdivision and Site Plan Fencing for fencing and noise attenuation requirements.

All fencing shall be supplied and installed in accordance with the *Parks Construction Standard Details*.

1.8.6. Signage

The framework for outdoor wayfinding and signage is detailed in the *Outdoor Wayfinding and Signage Program*[22]. Please refer to this document for further information.

[22] City of Brampton. *Outdoor Wayfinding and Signage Program.* City of Brampton website.

LANDSCAPE SUBMISSIONS FOR SUBDIVISION DEVELOPMENT

1.9. General Requirements

1.9.1. Applicant's Responsibilities

For the duration of the design development, construction, and warranty period, the applicant's responsibilities are to:

- Secure and compensate qualified design consultants
- Obtain all necessary approvals and permits
- Prepare the project site for construction

1.9.2. Consultant's Responsibilities

The consulting landscape architect shall represent the applicant and ensure that all submissions are coordinated with the engineering submissions and the final approved engineering drawing. The consulting landscape architect shall be a full member of the Ontario Association of Landscape Architects (OALA) with stamp. The consultant's responsibilities are to:

- Prepare concept plans, master plans, and construction drawings
- Administer the tendering process, construction review, contract administration and post construction administration
- Liaise with external agencies which may have concerns related to the project and obtain all required approvals (i.e.: Conservation Authorities, School Boards, Region of Peel, etc.)
- Liaise with other departments within the City of Brampton to obtain all required approvals
- Co-ordinate meetings and site inspections
- Prepare and circulate all meeting minutes

1.10. Submissions Prior to Draft Plan Approval

1.10.1. Concept Plan

Concept Plans for all open space blocks within the plan of subdivision showing recreational trail connections shall be submitted to the satisfaction of the Public Works and Engineering Department and shall comply with the approved Community Design Guidelines.

- A **Tree Evaluation Report** shall be submitted as part of the Concept Plan submission. Please refer to *the Tableland Tree Assessment Guidelines* for further information.
- **Special Studies** related to stormwater management, groundwater and surface water hydrology, vegetation, soils, etc. shall be prepared by the consultant and submitted to the Public Works and Engineering Department as required.
- A **Woodland Management Plan**, where required, shall be prepared by the consulting arborist and submitted to the Environmental Planning in accordance with the City's

Woodland Management Plan guidelines. The Woodland Management Plan shall be included with the 1st landscape submission described below.

1.11. Submissions Prior to Registration of Subdivision

Engineering and landscape design submissions for subdivisions are based on a three submission review and an optional pre-servicing submission. Any submission that is deemed incomplete will not be processed and will be returned to the applicant.

- A **pre-consultation meeting** is to be arranged by the engineering consultant with engineering staff to discuss the submission prior to the first engineering and landscape submission.
- A **covering letter** is to be included with each landscape submission that will certify the completeness of the submission and list any exceptions with the package and/or design that are not in accordance with City Standards and requirements.
- If additional submissions are necessary due to poor quality of work or not having incorporating requested changes, then the City will ask for an interim submission which will be subject to an additional charge.

Refer to the *Submission Requirements for New Subdivisions* [23]checklist for further information.

1.11.1. Plan Format

The applicant or consulting landscape architect is encouraged to request from the City the "official" polygon(s) representing the subject lands of the application. Please refer to the *Digital Submission Standards – Landscape Plans*[24] for further information.

- All plans shall be standard A1 (594 mm x 841 mm) metric size and 1:500 scale minimum. Enlargements, sections, elevations and details shall be included as required.
- The following items shall be included in the title block of each drawing:
    - Name and address of the applicant,
    - Name and address of the consultant,
    - Project name,
    - Region of Peel 21T file number,
    - City file number,
    - General notes,
    - Revision block,
    - Key plan,
    - Legend,
    - North arrow,
    - Drawing scale; and
    - Consultant's stamp.

[23] City of Brampton. *Submission Requirements for New Subdivisions.* City of Brampton website.
[24] City of Brampton. *Digital Submission Standards – Landscape Plans.* City of Brampton website.

All plans that are submitted for review and approval are to incorporate the *Parks Construction Standard Details, Standard Subdivision Notes for Landscape Development and Landscape Specifications* as applicable. The consultant is still required to produce project-specific, non-standard details where necessary. As the *Parks Construction Standard Details, Standard Subdivision Notes for Landscape Development and Landscape Specifications* are updated periodically, it is the responsibility of the consultant to make sure the most current information is used.

1.11.2. Tree Preservation Plan Prior to Pre-Servicing

A **Tree Preservation Plan** shall be submitted to the City for review and approval. Please refer to the *Tableland Tree Assessment Guidelines* for further information.

- Prior to the issuance of a topsoil stripping permit, protective hoarding shall be installed in accordance with the approved Tree Inventory and Preservation Plan:
    - along the property boundary where the plan abuts the existing park block and/or along the dripline of any vegetation with the park block
    - along the buffer block line of any woodland or greenbelt buffer block
    - along or beyond the dripline of any vegetation noted for preservation
- All hoarding will be provided and erected by the applicant at their expense and to the satisfaction of the City, prior to the topsoil stripping, pre-servicing or any construction occurring on the site, and shall be maintained by the applicant throughout all phases of the servicing and construction of the site.
- A letter from the consulting landscape architect or arborist shall be submitted to the City stating that all tree preservation hoarding is installed in accordance with the approved Tree Inventory and Preservation Plan

1.11.3. Woodland Development Plan

Please refer to the City of Brampton's Woodland Management Plan Guidelines.

1.11.4. 1st Landscape Submission

- Subdivision landscape plans comprising parks, open space and streetscape plans will be received by the Environment and Development Engineering Division in conjunction with the subdivision engineering plans submission.
- A covering letter from the consulting landscape architect will accompany each landscape submission stating that the landscape plans are coordinated with the engineering plans and in compliance with the approved Community Design Guidelines and City standards. The letter will also identify any exceptions with the package and/or design that are not in accordance with City standards and requirements.
- Should the plans not be acceptable, the consultant and the applicant will be notified in writing and the submission package returned to the consultant for amendment as required.

- Plans are to be submitted for review, based on the approved Draft Plan requirements and shall comply with both the Concept Plans and the approved Community Design Guidelines.
- The Schedule of Quantities (Appendix D: Schedule of Quantities) shall be located on the cover page of the landscape submission.

Landscape plans for all open space blocks shall include, but is not limited to, the following:

- Planting plans,
- Layout plans,
- Lighting plans,
- Grading and servicing plans (existing and proposed spot elevations, contours to within 10.0 m at the property lines, top and bottom elevations for retaining walls/curbs, etc.),
- Tree preservation plans,
- Woodland development plans,
- City standard details; and
- Other non-standard construction details.

All landscape plans shall be in accordance with the *Parks Construction Standard Details* and Landscape Specifications.

Cost estimates shall be submitted on the City of Brampton Cost Estimation Forms (Appendix E: Parkland Development Bid Comparison Form) with the signature and stamp of the consulting landscape architect.

If playgrounds are planned for the park block, the following guidelines apply:

- A **minimum of three (3) playground designs** by play equipment suppliers, which are approved by the City, shall be included in the submission accompanied by cost estimates that indicate the supply and install price of each component (e.g. swings, spring toys, etc.).
- City staff will define the playground budget prior to receiving playground designs.
- A **covering letter** from the playground equipment manufacturer shall confirm that the playground design meets or exceeds the Annex H addition to CAN/CSA-Z614 and describe all proposed ground-level and elevated accessible components.

Submission of Plans:

- Submit one set of plans to the Region of Peel Police for CPTED comments.
- Submit to other agencies (i.e.: CVC, TRCA, MNRF, MTO, MOECC, TCPL, etc.) as required for review and comment.
- If redlined copies are returned to the consultant with the City’s comments, they must be returned with the following submission.

1.11.5. 2nd Landscape Submission

The 2nd submission shall consist of:

- Covering letter,
- Revised drawings,
- Revised cost estimation forms,
- Redlined 1st submission drawings; and
- A written response addressing all 1st submission comments.

1.11.6. Final Landscape Submission and Plan Approval (Hard Copies)

The final submission shall consist of:

- Covering letter,
- Revised drawings,
- Revised cost estimation forms,
- Redlined 2nd submission drawings; and
- Written response addressing all 2nd submission comments.

If no further revisions are required, the City will request in writing the 'Approved Landscape Drawings' submission described below.

- Copies of approvals from all relevant agencies (i.e. TRCA, CVC, MNRF, MTO, MOECC, TCPL, Brampton Hydro, Peel Regional Police, etc.) shall be included with the final submission.
- A letter of credit to secure the full value of the proposed landscape works will be required.

The consultant shall submit the 'Approved Landscape Drawings' submission to the City, which consists of the following hard copies:

- Three (3) full size, bound and collated sets of all approved drawings with the note 'Approved Landscape Drawings' and the date submitted in the revision box of each drawing, with two (2) sets rolled and one (1) set folded
- Two (2) 11" x 17" reduced size, bound and collated sets of all approved drawings
- Two (2) copies of all approved cost estimation forms
- Three (3) full size coloured copies of the Detailed Homebuyers Information Map along with the number of copies that the applicant will require
- Two (2) 8 ½" x 14" reproducible reductions of the Final Homebuyers Information Map

All landscape drawings shall be approved prior to registration.

1.11.7. Digital Plan Requirements for Final Submission

The consultant shall submit a digital copy of the 'Approved Landscape Drawings' submission to the City, which consists of the following:

- Two (2) CDs or USBs with PDF files of all approved drawings, cost estimation forms and unsigned detailed HBIM. Ensure that the CD cover or USB is labeled with the date, subdivision name, City file number, 21T number and a note stating 'Approved Landscape Drawings & Cost Estimation Forms'
- Two (2) CDs or USBs with CAD files of the plan in MicroStation DGN (2D) or AutoCAD DWG (2D) format following the level structure provided in the Digital Submission Standards – Landscape Drawings

LANDSCAPE CONSTRUCTION FOR SUBDIVISION DEVELOPMENT

1.12. Tender Documents, Review, and Award of Contract (For Works Eligible for Levy Credit only – City Costs)

- The consulting landscape architect shall prepare tender documents, including construction drawings, details, specifications and tender forms as required.
- The tender package shall be reviewed and approved by the City before the tender call to ensure that it meets the current landscape development standards.
- Documents shall conform to the City standard details, specifications, and tender forms, the Canadian National Master Construction Specification (NMS), the Canadian Construction Documentation Committee (CCDC) and the Ontario Provincial Standards (OPS) where applicable.
- The consulting landscape architect shall submit a schedule outlining dates for the review of the tender package, tender release, and closing dates. Furthermore, the developer and the consulting landscape architect shall meet with the City to establish an acceptable bidder's list.
- Prior to award of the contract, the consulting landscape architect shall submit to the City, a recommendation of which bid is to be accepted for review and approval.
- The consulting landscape architect shall provide a spreadsheet of the unit prices for all bids for City record purposes.

1.13. Pre-Construction Meeting (All Works)

- The consulting landscape architect shall submit a construction schedule and a copy of the source topsoil analysis and recommendations for amendments for City review prior to scheduling a pre-construction meeting.
- For all works that are eligible for levy credit (City costs), the consulting landscape architect shall also submit a digital copy of the Parkland Development Bid Comparison Form (Appendix E: Parkland Development Bid Comparison Form) for development charges tracking.

- Following the submittal of the documents noted above, the consulting landscape architect shall arrange with the City and contractor a pre-construction meeting for all landscape works.
- The consulting landscape architect shall update the Status Report for Preliminary and Final Acceptance (Appendix F: Status Report for Preliminary and Final Acceptance) for the duration of the construction and maintenance period. This report will be required prior to the Preliminary and Final Acceptance inspections.
- The City may at its discretion complete Vendor Performance Records as a method of recording vendor performance, which could vary from superior to unsatisfactory depending on the circumstances. A record of unsatisfactory performance may result in the City not pre-qualifying this company to bid on future projects.

1.14. Weekly Progress Inspections (for Works Eligible for Levy Credit only – City Costs)

- The consulting landscape architect shall:
    - Provide inspection services, coordinate weekly site meetings and act as a liaison between the developer and the City.
    - Record and circulate the minutes of all meetings, process all change orders, site directives, substitutions, invoices and payment certificates.
- Construction review includes, but is not limited to, the following:
    - Rough and fine grading (including certification),
    - Topsoil analysis,
    - Compaction tests,
    - Layout and approval of facilities,
    - Playground subdrains,
    - Certification of structures,
    - Materials testing,
    - Lighting,
    - Plant material; and
    - Sodding/seeding.

It is the responsibility of the consulting landscape architect to inspect the site works throughout the construction phase and to certify in writing that all site works conform to the approved landscape plans and details. Site works that do not meet the City's requirements will be rejected by the City.

COMPLETION OF LANDSCAPE WORK FOR SUBDIVISON DEVELOPMENT

1.15. Preliminary Acceptance

- Prior to arranging a meeting for Preliminary Acceptance by the City, the consulting landscape architect shall review all of the works on site and provide a Certification of Landscape Works for Subdivision Development (Appendix G: Certification of Landscape Works for Subdivision Development) stating that all of the works have been installed in accordance with the approved landscape plans.

- Prior to Preliminary Acceptance, a third-party, independent playground inspection by a current CPRA (Canadian Parks and Recreation Association) Canadian Certified Playground Inspector is required for any play or exercise equipment.
    - Please note that, notwithstanding the third-party inspection, the CSA Playground Compliance Certificate from the manufacturer is also required.
    - The Playground Inspector's scope of work will include the initial inspection of the entire playground (including the resilient surfacing drop test), the production of an inspection report and the subsequent verification by the inspector that any identified deficiencies have been corrected.
    - The cost of correcting all identified deficiencies and ensuring that the playground and all components therein meet required safety standards will be borne by the play equipment supplier or playground contractor, as is applicable.
- At the time of Preliminary Acceptance, the following documents are required:
    - ESA Connection Certificate for site electrical;
    - Occupancy and final permit for shade structures, and;
    - Region of Peel clearance for water services.
- At the time of Preliminary Acceptance of playgrounds, the consulting landscape architect shall provide a playground maintenance/touch up kit, a parts list and operating manuals.
- Following the submittal of the Certification of Landscape Works for Subdivision Development (Appendix G: Certification of Landscape Works for Subdivision Development), the consulting landscape architect shall arrange with the City and contractor an inspection for Preliminary Acceptance.
    - At the inspection, the consulting landscape architect shall provide:
        - Two (2) 11"x17" reductions of the Plan of Subdivision's Schedule of Quantities (Appendix D: Schedule of Quantities) marked-up to identify the scope of landscape works considered for Preliminary Acceptance,
        - Completed Status Report for Preliminary and Final Acceptance (Appendix F: Status Report for Preliminary and Final Acceptance) and all supporting documents (refer to item nos. 1-17 of Status Report), and
        - Copies of all inspection reports and meeting minutes.
    - All required documentation must be compiled in a bound folder and presented to City staff at the beginning of the Preliminary Acceptance meeting.
- The two (2) year warranty period shall start on the date that Preliminary Acceptance has been granted and shall not be backdated.
    - The developer or consultant shall provide the City with written confirmation that the maintenance obligations as outlined in subsection 17.6 of the Subdivision Agreement will be fulfilled until Final Acceptance.
    - In cases of emergencies, as determined by the City in which the developer does not fulfill its required maintenance obligations, such work may be done without prior notice but the developer shall be notified forth-with.
    - The cost of such work will be calculated by the City and will include a management fee of forty percent (40%) as outlined in subsection 28.2 of the Subdivision Agreement.

- Inspections for Preliminary Acceptance of plant material and sod shall not be performed after November 15th or the first snowfall, whichever comes first.
    - In such circumstances, the acceptance inspections will be delayed until the following growing season and the two-year warranty will take effect at that time.
- The City will schedule a Preliminary Acceptance meeting and assume the responsibility for the maintenance of sod after it has been well rooted, established and cut a minimum of 2 times.
- Plant Material that in the opinion of the City is not in a healthy growing condition shall be replaced at the developer's expense and subject to a new one-year warranty.
    - The replacements shall be completed immediately to avoid additional warranty extensions.
- Other works that exhibit settlement, deterioration or other deficiencies shall be corrected at the developer's expense.
- At the time of the inspection, the City will issue a Preliminary Acceptance Report to the consulting landscape architect noting deficiencies identified at the inspection and expected one-year interim and Final Acceptance inspection dates.
- The consulting landscape architect shall circulate minutes of the meetings and deficiency lists within 7 days so as to not delay the Contractor's replacement schedule.
- The contractor shall complete the remedial work within 21 days from the date that the minutes of the meetings and/or deficiency lists were issued.
- Once the remedial work has been performed, the consulting landscape architect shall submit written confirmation to the City stating that all noted deficiencies have been corrected to its satisfaction.
- If the remedial work has not been performed within 21 days, the date of Preliminary Acceptance will be delayed until the consulting landscape architect has issued written confirmation stating that all noted deficiencies have been corrected to its satisfaction.

1.16. Payment Certificates (for Works Eligible for Levy Credit only – City Costs)

Prior to payment by the City to the developer for works completed, the following information is required:

- Letter from the consulting landscape architect identifying the final reimbursement costs for the parkland construction including all contract changes and quantity adjustments.
- Invoice from the developer identifying the final reimbursement costs.
- Statutory Declaration from the developer stating that all accounts for labour, subcontractors, supplies, etc. have been paid in full.
- WSIB Clearance Certificate from the contractor.
- Certificate of Publication certifying official notice published in the Daily Commercial News.
- A copy of the applicable approved cost estimates.
- A copy of all contract changes, change orders, and quantity adjustments.

1.17. One Year Interim Inspection

- The consulting landscape architect shall review the site to satisfy that any deficiencies have been corrected to its satisfaction.
- The consulting landscape architect shall arrange an interim inspection of all works one year from the date of Preliminary Acceptance with the City and the contractor.
- Interim inspections shall be performed prior to October 15th. If the interim inspection has not been performed prior to October 15th, the warranty on all works shall be extended by the same time as the delay in arranging the one-year interim inspection. Final Acceptance Certificates shall not be issued until one year after the interim inspection.
- Plant Material that in the opinion of the City is not in a healthy growing condition shall be replaced at the developer's expense and shall be subject to a new one-year warranty. The replacements shall be completed immediately to avoid additional warranty extensions.
- Other works that exhibit settlement, deterioration or other deficiencies shall be corrected at the developer's expense.
- The consulting landscape architect shall circulate minutes of the meetings and deficiency lists within 7 days so as to not delay the Contractor's replacement schedule.
- The contractor shall complete remedial work within 21 days from the date that the minutes of the meetings and/or deficiency lists were issued.
- Once the remedial work has been performed, the consulting landscape architect shall submit written confirmation to the City stating that all noted deficiencies have been corrected to its satisfaction.
- If the remedial work has not been performed within 21 days, the date of the interim inspection will be delayed until the consulting landscape architect has issued written confirmation stating that all noted deficiencies have been corrected to its satisfaction.

1.18. Final Acceptance

- Prior to arranging a meeting for Final Acceptance by the City, the consulting landscape architect shall review the site to ensure that all deficiencies have been corrected to its satisfaction and shall submit a completed Status Report for Preliminary and Final Acceptance (Appendix F: Status Report for Preliminary and Final Acceptance).
- Following the submittal of the completed Status Report for Preliminary and Final Acceptance (Appendix F: Status Report for Preliminary and Final Acceptance), the consulting landscape architect shall request an inspection for Final Acceptance of all works not less than one year from the date of the interim inspection and arrange for the City and the contractor to attend.
    - At the inspection, the consulting landscape architect shall provide any outstanding documents as well as copies of any conservation authority sign-offs.
- Inspections for Final Acceptance shall be performed prior to October 15th.
    - If the inspection for Final Acceptance has not been performed prior to October 15th, the developer shall be required to extend the warranty of the plant material until the following growing season.
- Plant Material that in the opinion of the City is not in a healthy growing condition shall be replaced at the developer's expense and shall be subject to a new one-year warranty.

    - The replacements shall be completed immediately to avoid additional warranty extensions.
- Other works that exhibit settlement, deterioration or other deficiencies shall be corrected at the developer's expense.
- The City will issue a Final Acceptance Report to the consulting landscape architect at the inspection noting approval of the landscape works or identified deficiencies.
- The consulting landscape architect shall circulate minutes of the meetings and deficiency lists within 7 days so as to not delay the contractor's replacement schedule.
- The contractor shall complete remedial work within 21 days from the date that the minutes of the meetings and/or deficiency lists were issued.
- Once the remedial work has been performed, the consulting landscape architect shall submit written confirmation to the City stating that all noted deficiencies have been corrected to its satisfaction.
- Upon receipt of the consulting landscape architect's certification that all noted deficiencies have been corrected to its satisfaction, the City will issue a Certificate of Final Acceptance, which shall be forwarded to the consulting landscape architect for signing and returned to the City for file.

1.19. Security Reductions

- Requests for security reductions shall only be granted on landscape works that have been given Preliminary Acceptance.
- The consulting landscape architect shall submit to the consulting engineer a summary of landscape works which details the work completed to date using the following format and shall copy the City.

Table 2 Summary of Landscape Works for Security Reductions (Sample)

No.	Description	Security Amount	% Completion	Value of Work Completed	Security Required
1.0	**Streetscape**				
1.1	Boulevard Trees 70mm cal.	$150,000	60%	$90,000	$60,000
1.2	Buffers – Steeles Ave	$80,000	N/A	$0	$80,000
1.3	Buffers – Financial Dr.	$60,000	100%	$60,000	$0
	Streetscape Subtotal	**$290,000**		**$150,000**	**$140,000**
2.0	Park Block 154	$450,000	100%	$450,000	$0
3.0	SWM Block 156	$350,000	50%	$175,000	$175,000
	TOTAL	**$1,090,000**		**$775,000**	**$315,000**

- The consulting landscape architect, on behalf of the developer, may apply to Environment and Development Engineering Division for full release of securities following the issuance of the Final Acceptance Certificates. Such requests are normally submitted through the consulting engineer.

1.20. Subdivision Release and Assumption

- The consulting landscape architect shall submit all project close-out documents and as-built drawings in both hard copy and digital formats prior to the release and assumption of a subdivision.
    - As-built-drawing submission requirements:
        - One (1) folded set hard copy
        - One (1) 11” x 17” reduction hard copy
        - Two (2) CDs or USBs with AutoCAD or MicroStation, and PDF.
    - For further information related to the digital drawing submission, refer to the *Development Digital Submissions Requirements Manual*.
- The applicant shall apply to the Environment and Development Engineering Division for Subdivision Release and Assumption, once Final Acceptance of all works has been granted.

PART 2: SITE PLAN DEVELOPMENT

LANDSCAPE DEVELOPMENT GUIDELINES FOR SITE PLAN DEVELOPMENT

1.1. General Considerations

This section is intended to provide an overview of the principal design objectives and requirements for landscaping and outdoor recreation facilities related to site plan developments.

For a detailed manual outlining the site plan process and submission requirements refer to the City of Brampton Site Plan Review Process document.

The Environment and Development Engineering Division in the Public Works Department has jurisdiction over the landscape treatment of industrial, commercial, institutional and multiple residential projects in connection with the site plan approval process.

All inquiries and submissions should be directed to:

Public Works and Engineering Department
Environment and Development Engineering Division
2 Wellington Street West
Brampton, Ontario, L6Y 4R2

Attention: Manager, Open Space Development
Telephone: (905) 874-3448

1.2. Industrial

1.2.1. Design Objectives

Industrial sites, which are aesthetically inoffensive and acceptable to viewers from the adjacent properties and streets and which adequately, accommodate the needs of employees, visitors, and the industrial functions of loading and storage.

1.2.2. Design Requirements

a) **Provision of Visual Screening:** Visually screen typically unattractive elements including parking lots, storage and loading areas and architectural features such as large expanses of blank exterior walls from adjacent streets and higher quality industrial or non-industrial uses.

b) **Landscape Treatment:** Recognition of the special needs for landscape treatment where industrial sites abut major collector or arterial roads and non-industrial uses.

c) **Recreational Open Space:** Provision of recreational open space such as courtyards and games areas for employees in labour intensive industries should be encouraged.

1.3. Commercial

1.3.1. Design Objectives

Provide utilitarian commercial facilities which are aesthetically and functionally compatible with the surrounding neighbourhood and community and which enhance and bring credit to the community through their design and landscape features.

1.3.2. Design Requirements

a) **Provision of Visual Screening:**

   a. Screen commercial sites from adjacent residential areas with the use of permanent masonry walls and landscaping as required by the City.

   b. Reconcile between the desired visibility of storefronts and displays and the need to screen parking areas from the street.

b) **Pedestrian Areas:** Establish functional, adequate pedestrian areas that provide direct access from parking to building entrances.

c) **Light Glare:** Prevent light glare on adjacent streets and properties.

1.4. High-Density Residential

1.4.1. Design Objectives

Provide utilitarian outdoor environments that respond to the special recreational needs of apartment occupants.

Provide convenient easily identifiable access points and routes between buildings and other internal and Neighbourhood facilities.

Utilize site development to minimize the impact of high-rise architecture on site users and the surrounding Neighbourhood.

1.4.2. Design Requirements

a) **Vertical Scale:** Minimize the vertical scale of buildings from within the site and from adjacent properties and streets through change in grade, berms, and the use of plant material.

b) **Provision of Visual Screening:**

a. Screen the site from adjacent lower density residential and recreational uses.

b. Screen large parking areas and outdoor storage facilities from other functions within the site.

c. Screen outdoor storage areas from all potential ground level views within and off the site.

c) **Pedestrian Facilities:**

a. Utilize landscaping to create attractive pedestrian entrances that can be clearly distinguished from service areas.

b. Provide sufficient pedestrian facilities and controls to protect landscaped areas from premature wear or trampling.

c. Establish a pedestrian circulation system that provides appropriate walking surfaces on anticipated pedestrian routes.

d. Protect other areas from pedestrian impact where necessary.

d) **Recreational Open Space:**

a. Utilize open space provided within the site for recreational facilities and functions.

b. Locate and design outdoor play facilities that address equally the needs of various age groups of children and the potential impacts on other residents.

e) **Landscaping Elements:** Utilize landscape elements to:

a. Establish public recreation space on the site which complements the predetermined recreation facilities.

b. Create greater energy efficiency through the provision of shade, windbreaks and permeable surfaces.

c. Buffer and/or separate conflicting internal uses such as storage areas, playgrounds and parking.

1.5. Medium-Density Residential

1.5.1. Design Objectives

Provide pleasant, utilitarian outdoor environments that visually buffer the buildings from surrounding uses and adjacent streets.

Provide for some of the private recreational needs of dwelling occupants on or directly accessible to the ground level adjacent to each unit.

1.5.2. Design Requirements

a) **Planting:**

   a. Provide “boulevard” type planting on all interior roads and parking areas.

   b. Utilize plant materials to buffer obtrusive architectural features such as blank end walls and continuous uniform facades.

b) **Buffers:**

   a. Provide visual and/or acoustic buffers on all frontages abutting major collector or arterial roads.

   b. Such buffers may consist of berming, planting and walls as required and as recommended by acoustical studies.

c) **Privacy Fencing and Areas:**

   a. Provide privacy fencing where abuts low density residential, if medium density housing is condominium.

   b. Utilize structural screens, planting and earthwork to create individual privacy areas for each dwelling unit that offers a reasonable degree of seclusion and security.

1.6. Institutional (Government Offices, Schools, Churches, Utility Buildings)

1.6.1. Design Objectives

Provide attractive functional sites that set examples for the City’s concept of effective site development.

Recognize the varied public visibility of institutional sites and their relative aesthetic importance in the community.

1.6.2. Design Requirements

a) **Provision of Visual Screening:** Consider visual screening of typically unattractive elements including parking lots, storage and loading areas and architectural features, such as large expanses of blank exterior walls.

b) **High Visitor Volume Facilities:** Where a facility is subject to high visitor volumes (e.g., police, municipal offices, utilities offices, courts, libraries, the following elements should be considered:

   a. Clear identification of visitor vehicle entrances and parking

   b. Attractive, clearly identified pedestrian areas and entrances that enhance the visitors’ initial impression of the facility through appropriate landscaping

c) **Landscape Elements:**

   a. Utilize landscaping as required to minimize any negative aesthetic relationships with adjacent uses and facilities.

   b. Utilize landscape elements to demonstrate to the public effective energy conservation influences such as shade, windbreaks and permeable surfaces.

d) **Recreational Open Space:** Utilize open space contiguous to employee intensive facilities for recreational facilities and functions (e.g., horseshoe pitch, badminton, basketball, outdoor eating).

1.7. Supplementary Design Requirements

1.7.1. Street Frontage Buffering

a) **Buffering:** Sites abutting roads and non-industrial uses are required to provide a minimum of 3.0 m wide landscape area planting, screen and/or decorative fencing, and berming as required by the City.

b) **Landscape Buffer Irrigation:** All commercial property landscape buffers shall be irrigated.

1.7.2. Side Yard Treatment

a) **Planting:** Where space permits, deciduous and/or coniferous tree planting should be provided on the flankage to a point approximately in line with the front of the building.

b) **Additional Screening:** If the site abuts a non-industrial uses, additional screening including hedging and masonry or other substantial walls may be required at the discretion of the Commissioner of the Public Works and Engineering department.

1.7.3. Parkland and Public Open Space Buffering

a) **Landscape Area:** A minimum 3.0 m wide landscape area with planting shall be provided on any site abutting a park or public open space.

b) **Fence:** A 1.2 m black vinyl chain link fence shall also be provided.

1.7.4. Plant Material

a) **Minimum Size for Plant Material**:

   a. 70 mm caliper for deciduous trees

   b. 1800 mm height for coniferous trees

   c. 600 mm height for deciduous shrubs

b) **Floral Displays:** All street frontage landscaping on commercial and institutional sites shall include substantial floral displays in addition to trees and shrubs.

1.7.5. Curbing

a) **Cast-in-Place Concrete Curb:** Landscaped areas that abut parking spaces, driveways or parking lot aisles, shall be protected with raised cast-in-place concrete curb with curb cuts provided at all pedestrian sidewalks.

1.7.6. Existing Vegetation

a) **Preservation:** The site plan guidelines of the City of Brampton require that the owner shall make every effort to retain significant existing vegetation as identified by a professional Arborist's report, through the careful arrangement of buildings and other site facilities.

    a. Trees that are specified for preservation shall be protected during construction with snow fence hoarding erected along the drip line of the trees to be preserved.

b) **Compensation:** Significant vegetation that cannot be reasonably preserved shall be replaced to the satisfaction of the City and such replacements shall be indicated on the landscape plan. Refer to the City of Brampton's *Tableland Tree Assessment Guidelines*.

c) **Grading:** Grading shall be proposed which does not affect the existing grades near any trees noted for preservation.

d) **Tree Evaluation Report:** At the City's discretion a tree evaluation report with recommendations carried out by a professional landscape architect or professional arborist may be required prior to site plan approval.

The consulting landscape architect shall provide written certification that the protective hoarding and sedimentation controls have been satisfactorily installed to the City prior to the issuance of a fill and/or topsoil stripping permit.

1.7.7. Landscape Traffic Islands

a) **Use:** Landscape traffic islands shall be used to define the ends of rows of parking and fire routes.

b) **Minimum Width:** Landscape traffic islands shall be a minimum width of 2.5 m.

1.7.8. Lighting

a) **Parking Area and Pedestrian Lighting:** Locations shall be illustrated and details for poles and fixtures provided.

1.7.9. Fencing

a) **Fencing and Noise Attenuation:** For fencing and noise attenuation requirements refer to Appendix C: *Subdivision and Site Plan Fencing and Wall Standards*.

LANDSCAPE SUBMISSIONS FOR SITE PLAN DEVELOPMENT

1.8. General Responsibilities

The complete site plan application process and submission requirements are explained in detail in the City of Brampton Site Plan Review Process User Guide, which can be accessed via the following link:

http://www.brampton.ca/EN/Business/planning-development/Documents/e-Forms/DevServ/SP-User-Guide.pdf

1.9. Submissions for Site Plan Approval

In order that applications for landscape approval can be expedited, it is essential that all information be clearly displayed in a relatively consistent format. The following guidelines are intended to assist in achieving this objective. A professional landscape architect, registered as a full member of the Ontario Association of Landscape Architects, shall prepare, stamp and sign all landscape plans and cost estimates. The Commissioner of Public Works and Engineering may waive this requirement at his discretion.

1.9.1. Plan Format and Drawing Requirements

1.9.1.1. Size

All drawings for a specific submission should be the same size. Sheet size shall not exceed A1 and the scale shall be maximum of 1:500 metrics. Where engineering and/or architectural drawings accompany the landscape submission all drawings should also be of similar size. All drawings shall be collated, stapled, and folded into 8 ½" x 11", for submission purposes.

1.9.1.2. Organization

The required information may be organized on a series of drawings or on a single drawing depending on the complexity of the project and at the consultant's discretion.

1.9.1.3. Drawing and Reproduction Quality

Information should be clearly delineated on a readily reproducible material. Whiteprint reproductions should have as little background as possible. Reproductions with excessive background that obscures the drawing will not be acceptable.

1.9.1.4. Essential Information

- Title block in lower right hand corner of drawing which indicates the title, owner, consultant, scale and date of submission and site plan number
- North arrow
- Key map oriented in same direction as drawing
- Legend that identifies all graphic symbols on the drawing
- Drawings containing only details, elevations, sections, or perspectives should contain a title block similar to the accompanying plan
- Landscape Architect's signed stamp
- Plant material list on planting plans

1.9.1.5. Graphic Symbols

The following graphic symbols shall be used consistently throughout all drawings:

- Existing contours in broken line, proposed contours in solid line
- Drainage direction with solid arrows and percentage slopes
- Property easement and right-of-way lines in broken line (dot-dash-style)
- Underground services in individually distinct lines with labels
- Existing vegetation clearly distinguished from proposed plant material
- Coniferous vegetation clearly distinguished from deciduous
- Sodded and seed areas clearly distinguished with the use of tones

1.9.1.6. Existing Trees

All existing trees shall be indicated on all plans according to species, size and condition. Tree protection fencing must be provided for trees to be retained.

1.9.1.7. Proposed Trees and Shrubs

All proposed trees and shrubs shall be indicated on a drawing and on a plant list which gives common name, generic (Latin) name, quantity, size (or caliper) and root condition of each species.

1.9.1.8. Reports and Cost Estimates

All reports, cost estimates and other miscellaneous documents included in landscape submissions should be in 8 ½" x 11" format with the subject matter and Site Plan Number clearly indicated on the front.

1.9.1.9. Standard Notes

The following standards notes shall be included on all submission:

City of Brampton Standard Site Plan Landscape Notes

1. The Contractor must notify the Public Works and Engineering Department of the City of Brampton prior to commencement of any planting.
2. The locations of all trees on street frontages must be approved by the Public Works and Engineering Department of the City of Brampton prior to their installation.
3. The Owner is required, upon completion of all landscape works, to submit an Acceptance Certificate prepared by a landscape architect to the Public Works and Engineering Department and to request an inspection by the Department.
4. All landscape works will be guaranteed for one year following inspection. Plant material, which is not in a healthy growing condition one year after inspection, shall be replaced to the satisfaction of the City with an additional one-year maintenance guarantee period. Supply and plant all replacements in strict accordance with plans and specifications.
5. Sod that is damaged or missing on the public boulevard is to be repaired/installed at the Owner's expense.
6. Any chain link fencing and components that are installed subsequent to Site Plan approval shall have a black gloss enamel finish by powder coat application. Prior to application of finish, treat with Parker Bonderite and chlorothenesolvent applied in a thickness of 4-5 mils by electrostatic coat and oven cured for smooth and even surface. All chain link fabric also to be black vinyl coated.
7. The Contractor is responsible for location of all underground services prior to excavation of tree pits and shrub beds.
8. All T-bars to be removed at the conclusion of the warrantee period.
9. Any transformer installed subsequent to site plan approval shall be screened with plant material to the satisfaction of the City of Brampton.
10. All signage is subject to the provisions of the sign by-law.

1.9.1.10. Specifications and Details

The submission shall include all applicable detail drawings and specifications necessary to convey the design intent and to facilitate accurate construction. The following specifications and details shall be included on all submissions, where applicable:

- Topsoil
- Grading
- Seeding
- Sodding
- Planting
- Fencing
- Protection of trees
- Surface treatments
- Landscape structures
- Any custom or specialty landscape components

1.9.1.11. Plan Approval and Securities

As stated in the standard site plan agreement, the Commissioner of Public Works and Engineering may request a letter of credit to secure the full value of the proposed landscape works. The applicant will be notified of this requirement (if applicable) at the time of site plan submissions.

LANDSCAPE CONSTRUCTION FOR SITE PLAN DEVELOPMENT

All landscape requirements as outlined in this document and on approved drawings shall be completed within the period stipulated in the Site Plan Agreement. Certification of completion of the landscape and fencing works must be completed by the consulting landscape architect and submitted to the City prior to the City releasing the letter of credit.

The owner is required to retain a qualified landscape architect to supervise all aspects of the construction work. The City may at its discretion inspect the work from time to time and report any deficiencies to the consultant.

COMPLETION OF LANDSCAPE WORK FOR SITE PLAN DEVELOPMENT

1.10. Preliminary Acceptance

At the completion of construction, the consulting landscape architect shall submit to the City the Certification of Landscape Works for Site Plan Development (Appendix H: Certification of Landscape Works for Site Plan Development).

If in the opinion of the City, the performance of the “works” is acceptable, then the City shall issue notification of Preliminary Acceptance of the landscape works to the owner and the one-year maintenance warranty period shall commence.

1.11. Warranty Period

A minimum of 10 percent of the security shall be held for the warranty period. The Public Works and Engineering Department shall then recommend a suitable reduction in securities held by the City, subject to approval by Engineering and Development Services and Legal Services.

1.12. Final Acceptance

At the expiry of the maintenance warranty period as stipulated above, and receipt of confirmation from the owner that landscape deficiencies as identified by the City at preliminary acceptance have been addressed, the owner may then request a final acceptance inspection and full release of any remaining securities held by the City.

Final acceptance inspections for landscape work must occur before October 15th or they will be scheduled for the spring of the next year.

The owner is responsible to request all inspections for final approval.

1.13. Security Reduction

In the event that any portion of the work is not completed within the time designated in the agreement with the City, the City may exercise its right to draw on any applicable letter of credit and apply the proceeds towards the completion of the work.

PART III: APPENDICES

Note: documents shown in this section are samples only. Full length digital versions or templates will be provided by the City (Open Space Development) staff on request.

Appendix A. *Recreational Pathways Hierarchy*

Appendix B. *Plant Chart*

Appendix C. *Subdivision and Site Plan Fencing and Wall Standards*

Appendix D. *Schedule of Quantities*

Appendix E. *Parkland Development Bid Comparison Form*

Appendix F. *Status Report for Preliminary and Final Acceptance*

Appendix G. *Certification of Landscape Works for Subdivision Development*

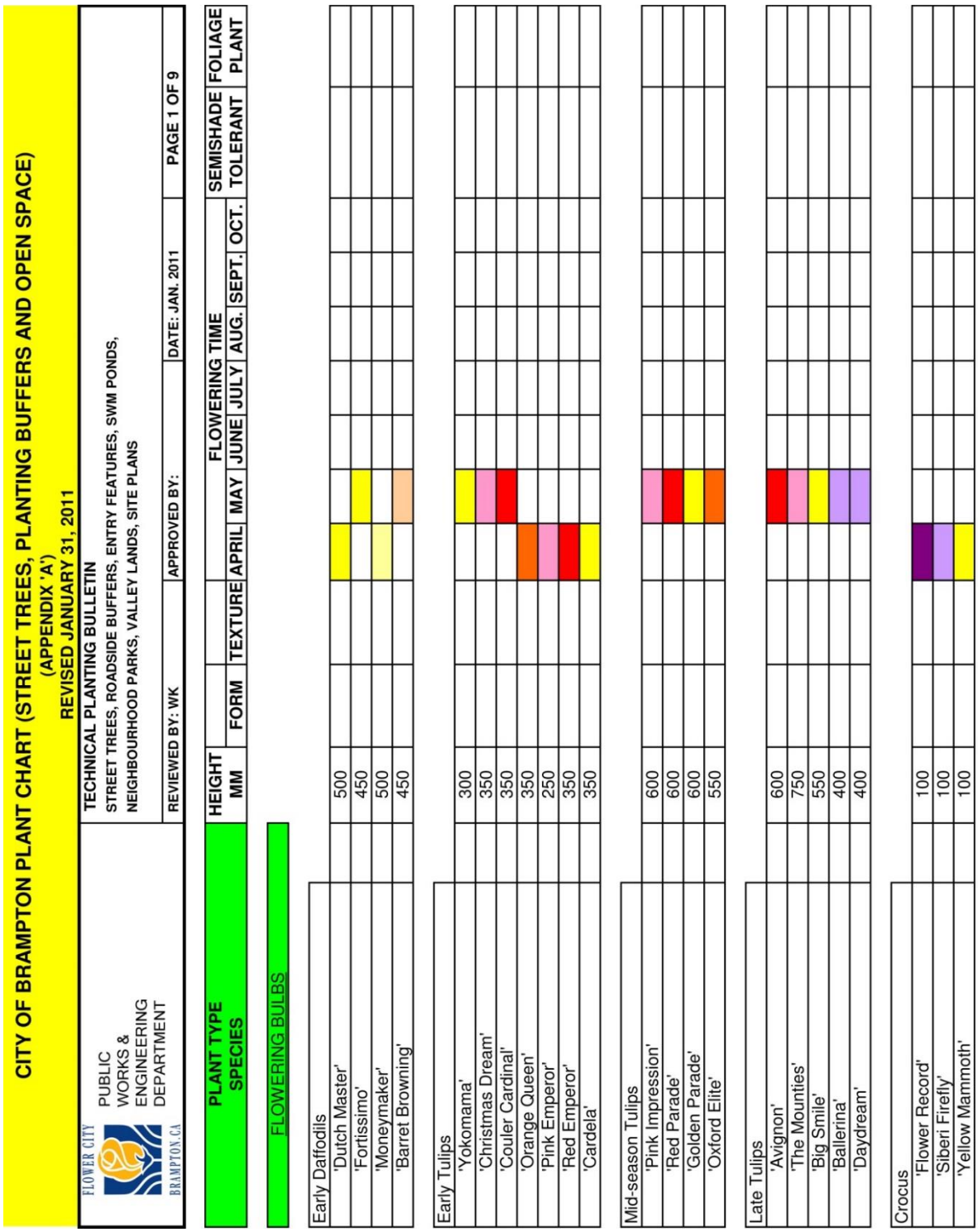
Appendix H. *Certification of Landscape Works for Site Plan Development*

Appendix I. *References*

Appendix A: Recreational Pathways Hierarchy

Trail Location	Design Standard	Location Criteria	Variables	Intended User
(1) Class I PRIMARY trails • Asphalt • CLASS 1 Type "A" • Valley Trails	• 3.0 metre wide surface. • Lit trails. • Compliant with City Accessible Technical Standards.	• High intensive levels of use. • All Neighbourhood Parks • Seven (7) Main north-south recreational trails as identified in the PathWays Master Plan including valleys, parks, Storm water Management ponds and Utility Corridors. • East-West Class 1 Off Road Boulevard trails. Lateral neighbourhood connecting residential areas to schools, recreation centres and shopping nodes.	• Site specific urban design treatment may result in a different hard surface treatment • Example – 3.0 metre wide coloured concrete trail through a subdivision. • Trails maybe UNLIT where connecting to areas outside municipal boundaries (dependent on discussions and agreements with each municipality).	• Active general public users including walkers, joggers, cyclists, in-line skaters, and other small-wheeled users. • Universal accessible.
(2) Class I: SECONDARY Trails • Limestone • CLASS 1 Type "B" • Valley Trails	• 3.0 metre wide surface • 2.4 metre wide "side" trails into adjacent land uses. • UNLIT trails. • Compliant with City Accessible Technical Standards.	• Moderate levels of use or in areas of environmental sensitivities. • Main north-south **unlit** trails into adjacent municipalities where different design standards apply. • Local **unlit** recreational loops such as woodlots, valleylands and storm water management ponds. • Sports Parks and other summer use areas only (i.e. no winter maintenance required).	• Asphalt in areas of high erosion such as pedestrian bridge approaches or within road ROW's as part of subdivision development. • Future adaptation to asphalt maybe required depending on volume and use. • *Narrower 2.0 or 1.8 metre widths maybe required depending on site-specific criteria.*	• Active users including walkers, joggers and cyclists. • Universally accessible surface with a higher level of maintenance in certain locations.
(3) *CLASS IV*: TERITARY • Natural Trails • ***NEW Designation*** • (Based on TRCA hiking and walking trail standards)	• **1.8 metres wide or less.** • Cut turf trails in open areas. • 5/8" crushed limestone trail in wooded areas with unmaintained surface. • Maintenance for vegetation clearances only. • Non-Compliant with City Accessible Technical Standards.	• Low levels of usage. • Local trails in areas where trails not previously established. • Open floodplain or parkland areas with grass coverage and where visible "worn" desire lines are established • Connections not part of main recreational trail network. • Local trails in highly sensitive areas.	• First stage of development to assess local "need" for trail based on requests within neighbourhood areas. • To be determined retroactively by demonstrated desire lines • Boardwalks may be considered in wetland areas.	• Passive uses such as walking, hiking, bird watching and other nature enthusiasts. • **Not accessible** for all users based on terrain, trail condition, time of year, etc. • Surface options are dependant on local area.

Appendix B: Plant Chart



CITY OF BRAMPTON PLANT CHART (STREET TREES, PLANTING BUFFERS AND OPEN SPACE)
(APPENDIX 'A')
REVISED JANUARY 31, 2011

FLOWER CITY BRAMPTON.CA
PUBLIC WORKS & ENGINEERING DEPARTMENT

TECHNICAL PLANTING BULLETIN
STREET TREES, ROADSIDE BUFFERS, ENTRY FEATURES, SWM PONDS, NEIGHBOURHOOD PARKS, VALLEY LANDS, SITE PLANS

REVIEWED BY: WK | APPROVED BY: | DATE: JAN. 2011 | PAGE 1 OF 9

PLANT TYPE / SPECIES	HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
FLOWERING BULBS												
Early Daffodils												
'Dutch Master'	500											
'Fortissimo'	450											
'Moneymaker'	500											
'Barret Browning'	450											
Early Tulips												
'Yokomama'	300											
'Christmas Dream'	350											
'Couler Cardinal'	350											
'Orange Queen'	350											
'Pink Emperor'	250											
'Red Emperor'	350											
'Cardela'	350											
Mid-season Tulips												
'Pink Impression'	600											
'Red Parade'	600											
'Golden Parade'	600											
'Oxford Elite'	550											
Late Tulips												
'Avignon'	600											
'The Mounties'	750											
'Big Smile'	550											
'Ballerina'	400											
'Daydream'	400											
Crocus												
'Flower Record'	100											
'Siberi Firefly'	100											
'Yellow Mammoth'	100											

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
Scilla siberica		180											
Chionodoxa forbesii		150											
Chionodoxa luciliae 'Pink Giant'		200											
Puschkinia libanotica		150											
PERENNIALS		NOTE: PERENNIALS ARE TO BE PLANTED ONLY IN ENTRY FEATURES OR AS DIRECTED BY THE CITY											
Coreopsis verticillata 'Moonbeam'		600											
Coreopsis 'Zagreb'		450											
Echinacea purpurea		1200											
Hemerocallis		NOTE: DAYLILIES ARE ALSO TO BE PLANTED IN CONIFEROUS TREE BEDS (SEE PLANTING MODULES)											
'Catherine Woodbury'		800											YES
'Custard Candy'		600											YES
'Happy Returns'		450											YES
'Hyperion'		600											YES
'Pink Lass'		600											YES
'Stella D'oro'		500											YES
'Summer Wine'		600											YES
Hosta													
'Halcyon'		500										YES	YES
'Royal Standard'		600						white	white			YES	YES
'Sieboldiana'		600					white	white				YES	YES
Rudbeckia 'Goldsturm'		600											
Salvia superba 'Maynight'		400											
Sedum spectabilis 'Autumn Joy'		600											YES
Sedum spectabilis Autumn Fire		601											YES

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
DECIDUOUS TREES		ONLY SPECIES CODED IN THE OLIVE GREEN COLOUR ARE TO BE USED AS STREET TREES(ST)											
Acer campestre		10 M	Full	Coarse						fall colour			YES
Acer x freemanii 'Armstrong'	(ST)	15 M	Narrow	Coarse						fall colour			YES
Acer x freemanii 'Celzam'	(ST)	15 M	Medium	Coarse						fall colour			YES
Acer x freemanii 'Jeffersred'	(ST)	16 M	Medium	Coarse						fall colour			YES
Acer negundo 'Flamingo'		8 M	Full	Coarse	PARKS ONLY					fall colour			YES
Acer platanoides	(ST)	15 M	Full	Coarse	* ACER PLATANOIDES TO					fall colour			YES
Acer platanoides 'Autum Blaze'	(ST)	12 M	Full	Coarse	REPRESENT NO MORE THAN					fall colour			YES
Acer platanoides 'Columnare'	(ST)	12 M	Narrow	Coarse	10% OF ALL STREET TREES					fall colour			YES
Acer platanoides 'Crimson King'	(ST)	12 M	Full	Coarse	leaf colour					fall colour			YES
Acer platanoides 'Deborah'	(ST)	14 M	Full	Coarse	leaf colour					fall colour			YES
Acer platanoides 'Emerald Queen'	(ST)	15 M	Full	Coarse						fall colour			YES
Acer platanoides 'Superform'	(ST)	14 M	Full	Coarse						fall colour			YES
Acer rubrum	(ST)	16 M	Full	Coarse						fall colour			YES
Acer saccharinum		18 M	Full	Coarse						fall colour			YES
Acer saccharinum 'Silver Queen'		16 M	Full	Coarse						fall colour			YES
Acer saccharum	(ST)	20 M	Full	Coarse						fall colour			YES
Acer truncatum x Acer platanoides	(ST)												
'Keithsform'	(ST)	11 M	Full	Coarse						fall colour			YES
'Warrenred'	(ST)	9 M	Full	Coarse						fall colour			YES
Amelanchier canadensis(Treeform)	(ST)	8 M	Full	Fine						fall colour		YES	YES
Amelanchier canadensis 'Ballerina'		5 M	Full	Fine						fall colour		YES	YES
Amelanchier x grandiflora		8 M	Full	Fine						fall colour		YES	YES
Amelanchier x grandiflora 'Cumulus'		8 M	Narrow	Fine						fall colour		YES	YES
Amelanchier laevis		6 M	Full	Fine						fall colour		YES	YES
Betula nigra		13 M	Full	Fine	VALLEYS ONLY					fall colour			YES
Carpinus betulus		20 M	Full	Fine						fall colour			YES
Carpinus betulus 'Fastigiata'	(ST)	12 M	Narrow	Fine	FLANKAGE AND SMALL LOTS					fall colour			YES
Celtis occidentalis	(ST)	20 M	Full	Fine						fall colour		YES	YES

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
Corylus colurna	(ST)	15 M	Narrow	Coarse									YES
Crataegus x modernensis 'Toba'		8 M	Full	Fine		white	VALLEYS ONLY						YES
Crataegus phaenopyrum		10 M	Full	Fine		white	VALLEYS ONLY						YES
Euonymus europaeus		5 M	Full	Fine	BUFFERS AND PARKS ONLY					fall colour			YES
Ginko biloba	(ST)	17 M	Narrow	Fine						fall colour		YES	YES
Ginko biloba 'Autumn Gold'	(ST)	10 M	Narrow	Fine						fall colour			YES
Gleditsia triacanthos	(ST)												
var. inermis 'Shademaster'	(ST)	17 M	Full	Fine						fall colour		YES	YES
var. inermis 'Skycole'	(ST)	15 M	Medium	Fine						fall colour		YES	YES
Gymnocladus dioica		13 M	Full	Fine	PONDS AND VALLEYS ONLY					fall colour			YES
Juglans nigra		18 M	Full	Fine	NATURALIZED AREAS ONLY					fall colour			YES
Lirodendron tulipifera		25 M	Full	Coarse	PARKS OR VALLEYS ONLY								YES
Malus		BUFFERS AND PARKS ONLY											
Malus 'Autumn Delight'		4.5 M	Full	Fine		white							YES
Malus baccata 'Columnaris'		8 M	Full	Fine		white							YES
Malus floribunda		7 M	Full	Fine									YES
Malus 'Indian Magic'		5 M	Full	Fine									YES
Malus 'Makamik'		10 M	Full	Fine									YES
Malus 'Sutyzam'		6 M	Full	Fine		white							YES
Malus 'Donald Wyman'		6 M	Full	Fine		white							YES
Ostrya virginiana		12 M	Full	Fine						fall colour		YES	YES
Phellodendron amurense	(ST)	13 M	Full	Fine	SELECTIVELY					fall colour			YES
Platanus x acerifolia 'Bloodgood'	(ST)	16 M	Full	Coarse						fall colour			YES
Platanus occidentalis	(ST)	16 M	Full	Coarse						fall colour			YES
Populus grandidentata		20 M	Narrow	Fine	VALLEYS ONLY					fall colour			YES
Populus tremuloides		10 M	Narrow	Fine	VALLEYS ONLY					fall colour			YES

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME							SEMISHADE TOLERANT	FOLIAGE PLANT
					APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.		
Prunus serotina		16 M	Full	Fine	VALLEYS ONLY					fall colour			YES
Prunus virginiana		7 M	Full	Fine	VALLEYS ONLY					fall colour			YES
Pyrus calleryana 'Aristocrat'	(ST)	11 M	Full	Fine		white				fall colour			YES
Pyrus calleryana 'Bradford'	(ST)	13 M	Full	Fine		white				fall colour			YES
Pyrus calleryana 'Capital'	(ST)	11 M	Narrow	Fine		white				fall colour			YES
Pyrus calleryana 'Glen's Form'	(ST)	13 M	Narrow	Fine		white				fall colour			YES
Pyrus calleryana 'Redspire'	(ST)	17 M	Narrow	Fine		white				fall colour			YES
Quercus alba	(ST)	20 M	Full	Coarse	LIMITED QUANTITYS					fall colour			YES
Quercus bicolor		15 M	Full	Coarse	VALLEYS ONLY					fall colour			YES
Quercus macrocarpa	(ST)	18 M	Full	Coarse						fall colour			YES
Quercus robur	(ST)	18 M	Full	Coarse						fall colour			YES
Quercus rubra	(ST)	16 M	Full	Coarse						fall colour			YES
Sophora japonica 'Regent'	(ST)	20 M	Full	Fine	VERY SM QNTITYS			white					YES
Sorbus thuringiaca 'Fastigiata'		8 M	Full	Fine		white	SELECTIVELY IN BUFFERS						YES
Syringa reticulata 'Ivory Silk'	(ST)	7.5 M	Medium	Coarse								YES	YES
Tilia americana		25 M	Full	Coarse						fall colour			YES
Tilia cordata	(ST)	16 M	Medium	Coarse						fall colour			YES
Tilia x euchlora	(ST)	15 M	Medium	Coarse						fall colour			YES
Tilia x flavescens 'Glenleven'	(ST)	16 M	Medium	Coarse						fall colour		YES	YES
Ulmus x 'Homestead'	(ST)	18 M	Full	Fine						fall colour			YES
Ulmus x 'Pioneer'	(ST)	25 M	Full	Fine						fall colour			YES
Ulmus x 'Frontier'	(ST)	25 M	Full	Fine						fall colour			YES
Zelkova serrata 'Green Vase'	(ST)	16 M	Full	Fine						fall colour			YES

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
BUFFER TREES FOR HYDRO ONE BRAMPTON AERIAL EASEMENTS		3.0 OR 4.5 METERS FROM POLE LINE											
Acer campestre	(3.0 M)	10 M	Medium	Coarse						fall colour			YES
Acer x freemanii 'Armstrong'	(4.5 M)	15 M	Narrow	Coarse						fall colour			YES
Acer x freemanii 'Celzam'	(4.5 M)	15 M	Medium	Coarse						fall colour			YES
Acer x freemanii 'Jeffersred'	(4.5 M)	16 M	Medium	Coarse						fall colour			YES
Acer miyabei 'Morton'	(3.0 M)	9 M	Medium	Coarse						fall colour			YES
Acer platanoides 'Columnar Broad'	(3.0 M)	12 M	Medium	Coarse						fall colour			YES
Acer rubrum 'Bowhall'	(3.0 M)	13 M	Narrow	Coarse						fall colour			YES
Acer rubrum 'Karpick'	(3.0 M)	12 M	Full	Coarse						fall colour			YES
Acer rubrum 'Frankensred'	(4.5 M)	18 M	Full	Coarse						fall colour			YES
Acer saccharum 'Endowment'	(4.5 M)	17 M	Medium	Coarse						fall colour			YES
Acer truncatum 'Pacific Sunset'	(3.0 M)	9 M	Medium	Coarse						fall colour			YES
Amelanchier canadensis Tree Form	(3.0 M)	8 M	Medium	Fine						fall colour		YES	YES
Amelanchier x grandiflora 'Cumulus'	(3.0 M)	8 M	Medium	Fine						fall colour		YES	YES
Corylus colurna	(4.5 M)	15 M	Narrow	Coarse									YES
Gleditsia tria. var. inermis 'Shademaster'	(4.5 M)	17 M	Full	Fine						fall colour		YES	YES
Gleditsia tria. var. inermis 'Skycole'	(4.5 M)	15 M	Medium	Fine						fall colour		YES	YES
Pyrus calleryana 'Capital'	(3.0 M)	11 M	Narrow	Fine		white				fall colour			YES
Pyrus calleryana 'Glen's Form'	(3.0 M)	13 M	Narrow	Fine		white				fall colour			YES
Pyrus calleryana 'Redspire'	(3.0 M)	17 M	Narrow	Fine		white				fall colour			YES
Syringa reticulata	(3.0 M)	10 M	Medium	Coarse								YES	YES
Syringa reticulata 'Ivory Silk'	(3.0 M)	7.5 M	Medium	Coarse								YES	YES
Tilia americana 'Boulevard'	(4.5 M)	20 M	Medium	Coarse						fall colour			YES
Tilia cordata 'Greenspire'	(4.5 M)	16 M	Medium	Coarse						fall colour			YES
Tilia x flavescens 'Glenleven'	(4.5 M)	16 M	Medium	Coarse						fall colour		YES	YES
Zelkova serrata 'Green Vase'	(4.5 M)	16 M	Full	Fine						fall colour			YES
Zelkova serrata 'Musashino'	(4.5 M)	15 M	Full	Fine						fall colour			YES
Picea glauca	(4.5 M)	25 M	Narrow	Conifer						evergreen			YES
Picea omorica	(3.0 M)	21 M	Narrow	Conifer						evergreen			YES
Picea pungens	(4.5 M)	20 M	Narrow	Conifer						evergreen			YES
Pinus nigra	(4.5 M)	15 M	Medium	Conifer						evergreen			YES

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
FOLIAGE SHRUBS		NOTE: SHRUBS ARE NO LONGER TO BE PLANTED IN ARTERIAL ROAD BUFFERS											
Amelanchier canadensis (shrub form)		5000								fall colour		YES	YES
Amelanchier alnifolia (shrub form)		2000								fall colour		YES	YES
Clethra alnifolia 'Hummingbird'		1000										YES	YES
Clethra alnifolia 'Paniculata'		1200										YES	YES
Cornus alba 'Elegantissima'		2000										YES	YES
Cornus alba 'Gouchaultii'		2000										YES	YES
Cornus alba 'Sibirica'		2000										YES	YES
Cornus alba 'Sibirian Pearl'		2000										YES	YES
Cornus sericea 'Isanti'		2000										YES	YES
Cornus sericea 'Flaviramea'		2000										YES	YES
Cornus stolonifera 'Cardinal'		2000										YES	YES
Cornus stolonifera 'Arctic Fire'		2000										YES	YES
Cotinus coggygria 'Young Lady'		1500										YES	YES
Euonymus alatus		200								fall colour			YES
Lonicera x xylosteoides 'Clavey's Dwarf'		1200											YES
Physocarpus opulifolius		2000				white	white					YES	YES
'Dart's Gold'		1200				white	white						YES
Diablo'		1200					white					YES	YES
Center Glow'		1200				white	white						YES
Coppertina'		1200					white					YES	YES
Golden Nugget'		1200				white	white						YES
Nana'		1200					white					YES	YES
Seward'		1200				white	white						YES
Summer Wine'		1200					white					YES	YES

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
Rhus aromatica 'Grow-Low'		1000											YES
Sambucus canadensis		3000										YES	YES
Sambucus canadensis 'Aurea'		2500					white					YES	YES
Sambucus nigra 'Black Beauty'		2500										YES	YES
Sorbaria sorbifolia		2000						white	white			YES	YES
Spiraea betulifolia		1500						white					YES
Spiraea vanhouttei		2500						white					YES
Spiraea x media 'Snow Storm'		1200				white	white						YES
Syringa meyeri 'Palabin'		1500											
Viburnum x 'Juddii'		1500										YES	YES
Viburnum dentatum		2000										YES	YES
EVERGREEN SHRUBS													
Juniperus chinensis 'Aurea'		1500											YES
Juniperus ch. 'Hetzii'		1500											YES
Juniperus ch. 'Hetzii Glauca'		1500											YES
Juniperus ch. 'Monlep'		1500											YES
Juniperus ch. 'Pfitzeriana Glauca'		1500											YES
Juniperus sabina 'Arcadia'		1500											YES
Juniperus sabina 'Blue Danube'		1500											YES
Juniperus viginiana		1500											YES
Taxus baccata		1500										YES	YES
Taxus x media 'Hicksii'		2000										YES	YES

PLANT TYPE SPECIES		HEIGHT MM	FORM	TEXTURE	FLOWERING TIME APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	SEMISHADE TOLERANT	FOLIAGE PLANT
EVERGREEN TREES		NOTE: CONIFEROUS TREES ARE NOT TO BE USED AS STREET TREES											
Abies balsamea		20 M											YES
Abies concolor		20 M		NOT IN NATURALIZED LOCATIONS									YES
Picea glauca		25 M											YES
Picea omorika		21 M		NOT IN NATURALIZED LOCATIONS									YES
Picea pungens		20 M		NOT IN NATURALIZED LOCATIONS									YES
Pinus nigra		15 M											YES
Pinus resinosa		18 M											YES
Pinus strobus		18 M											
Pinus sylvestris		18 M											YES
Thuja occidentalis		20 M										YES	YES
Thuja plicata		30 M										YES	YES
Tsuga canadensis		20 M										YES	YES
VINES		NOTE: VINES ARE TO BE USED ONLY IN SELECT LOCATIONS AS DIRECTED BY THE CITY											
Actinidia poligama													YES
Actinidia kolomikta													YES
Aristolochia sypho													YES
Aristolochia durior													YES
Celastrus scandens													YES
Clematis sp.													YES
Polygonum aubertii													YES
Parthenocissus tricuspidata													YES
Parthenocissus quinquefolia													YES

Appendix C: Subdivision and Site Plan Fencing and Wall Standards

CITY OF BRAMPTON

SUBDIVISION AND SITE PLAN FENCING AND WALL STANDARDS

(updated April 2018)

In accordance with the policies stated in Section 4.10.4.11 of the Brampton Official Plan, the following standards shall apply as a condition of development in plans of subdivision and site plans.

LOCATION

Walls or fences as specified shall be constructed in the following typical locations:

1.1 Along the property boundaries where noise attenuation is required:
(Noise attenuation requirements are identified in a noise study approved by the City and as stipulated in the applicable subdivision or site plan agreement).

- Precast concrete or masonry wall along railways and provincial highways.
- Acoustical wood, precast concrete, composite or masonry wall in other locations.

1.2 Along residential rear yard property lines that abut roads where a noise barrier is not required

- 1.8-metre-high wood screen fence.

1.3 Along residential side yard property lines which abut community mail boxes and adjoining flankages where applicable:

- 1.8-metre-high wood screen fence.

1.4 Along the rear yard and exterior side yard of corner lots which abut minor collector (23-metre-wide) roads:

- 1.8-metre-high wood screen fence.

1.5 Along property lines of church sites that abut residential uses:

- 1.8-metre-high wood screen fence.

1.6 Along property lines of low density residential uses (up to townhouse density) that abut existing or proposed restaurants, gas bars with convenience retail and other retail uses:

- 1.8-metre-high brick or architectural block wall.

1.7 Between other office/commercial and residential:

- 1.8-metre-high precast concrete fence or brick or architectural block wall.

1.8 Between small office and retail renovations (rezoned from residential) and existing residential:

- 1.8-metre-high wood screen fence.

1.9 Along all rear or side yard boundaries that abut parklands and hazard lands (except in the Rural Estate area):

- 1.2-metre-high chain-link fence.

1.10 Along the rear or side yard boundaries that abut valleyland in Rural Estate developments:

- 1.0-metre-high conifers planted at 6 to 9 metres, .3 metre inside private property to delineate the property boundary with one tree planted at each rear property corner.

1.11 Along all public walkways:

- 1.2-metre-high chain-link fence.

1.12 Along all parallel frontages between local residential streets and arterial roads where dwellings face the arterial road:

- 1.2-metre-high decorative metal fence.

1.13 Along all residential boundaries that abut school sites:

- 1.8-metre-high chain link fence (to be constructed by applicable school board).

1.14 Between industrial or commercial and parkland:

- Fencing or walls as determined for each location by the Commissioner of Public Works and Engineering.

1.15 Adjacent to any portion of industrial sites where outdoor storage is permitted:

- Pre-cast concrete walls (wood or composite noise wall designs may be permitted adjacent to open space at the discretion of the Commissioner of Public Works and Engineering.

1.16 In other locations to specifications required by the Commissioner of Public Works and Engineering and as stipulated in the applicable subdivision agreement.

1.17 All walls and fences between municipal and private property shall be located entirely on private property in accordance with the following setbacks:

i. Centre line of chain-link, decorative metal, light duty acoustic and privacy fence to the 15cm inside private property.

ii. Centre line of acoustical wall to be 30cm inside public property along City arterial road.

iii. Centre line of acoustic wall to be on the property line along Regional roads.

1.18 Walls and fences in other situations not referenced in 1.17 of these standards shall be located as follows:

i. Centred on property line between private residential uses.

ii. Entirely within the commercial, institutional or industrial property where these uses abut residential properties.

iii. As determined by the Commissioner of Public Works and Engineering in other situations.

2.0 OTHER REQUIREMENTS

2.1 All walls and fences shall be provided by the subdivision or site plan developer as required in the applicable subdivision or site plan agreement except as otherwise stipulated.

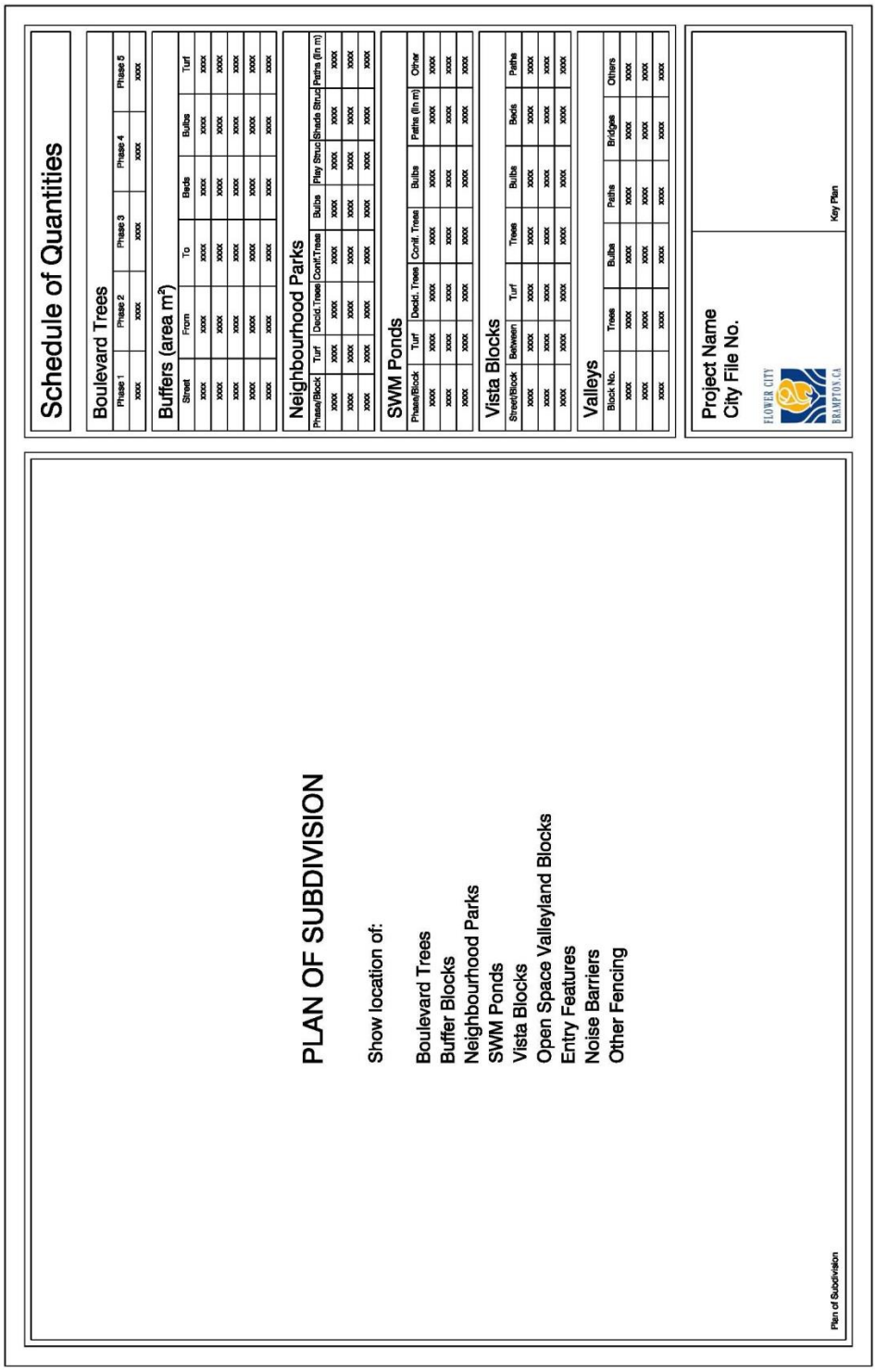
2.2 Design and construction shall be in accordance with the current City of Brampton standards for the particular type of wall or fence specified.

2.3 A gate shall be provided in the chain-link fence of each rear yard that abuts parkland and which does not abut any public access to the adjacent park. The Commissioner of Public Works and Engineering may waive this requirement at their discretion if access to the park is inappropriate for reasons of safety. Other gates will be permitted on request by residents and at the discretion of the Commissioner provided that they are constructed in accordance with City standards.

2.4 Entrance features consisting of decorative walls and landscaping may be constructed at the intersection of arterial and collector roads subject to the approval of the Site Plan Team. Any structure or planting which exceeds 1 metre in height shall be contained within a special landscape reserve block adjacent to the standard road allowance. Such reserves shall be conveyed to the City and a maintenance levy of ten percent (10%) of the estimated construction cost will be paid to the City prior to installation.

2.5 Requests to modify the foregoing requirements may be considered by the Commissioner of Public Works and Engineering on a project by project basis.

Appendix D: Schedule of Quantities



Appendix E: Parkland Development Bid Comparison Form

PARKLAND DEVELOPMENT BID COMPARISON FORM
WORKS ELIGIBLE FOR LEVY CREDIT (CITY COSTS)
CITY OF BRAMPTON
Public Works and Engineering Department

PROJECT NAME:		**FILE No:**	
		REG. FILE No.:	21T-
DEVELOPER:		**PHONE:**	
ADDRESS:		**FAX:**	
CONSULTANT:		**PHONE:**	
ADDRESS:		**FAX:**	
BLOCK No.:		**DATE:**	
AREA (ha):		**REVISED**	

ITEM	UNIT	BID '1' UNIT PRICE	BID '2' UNIT PRICE	BID '3' UNIT PRICE	BID '4' UNIT PRICE	BID '5' UNIT PRICE	AVG UNIT COST
1. SITE WORK							
Tree Protection/Hoarding	L.M.						#DIV/0!
Silt Fencing (including maintenance & removals)	L.M.						#DIV/0!
Clearing & Grubbing	L.S.						#DIV/0!
Topsoil Stripping & Stockpiling	Sq.M.						#DIV/0!
Rough Grading (area) or	Sq.M.						#DIV/0!
Rough Grading (volume) or	Cu.M.						#DIV/0!
Catch Basins (single include frame grate & adjustments)	Ea.						#DIV/0!
Storm Sewer Pipe - 450 mm dia.	L.M.						#DIV/0!
Storm Sewer Pipe - 200 mm dia.	L.M.						#DIV/0!
Water Meter Chamber	Ea.						#DIV/0!
Ground or Yard Hydrant	Ea.						#DIV/0!
50 mm Copper Waterline	L.M.						#DIV/0!
38mm Copper Waterline	L.M.						#DIV/0!
Culverts (300 mm dia. including end sections)	Ea.						#DIV/0!
3.0m Wide Asphalt Walkway - Tableland	Sq.M.						#DIV/0!

3.0m Wide Asphalt Walkways (Valleylands/Hazardlands)	Sq.M.						#DIV/0!
Lockstone Paving	Sq.M.						#DIV/0!
3.0m Wide Limestone Screenings Walkways	Sq.M.						#DIV/0!
Walkway Light Standards	Ea.						#DIV/0!
Spread Topsoil & Fine Grading (150 mm depth)	Sq.M.						#DIV/0!
Sodding	Sq.M.						#DIV/0!
Seeding - Mechanical	Sq.M.						#DIV/0!
Seeding - Hydroseeding	Sq.M.						#DIV/0!
Asphalt Parking Lots (including granular base, light duty asphalt & line painting)	Sq.M.						#DIV/0!
Cast-in-Place, Concrete Barrier Curb	L.M.						#DIV/0!
Heavy Duty, Precast Concrete Bumper Curbs (2.4m typ. length)	Ea.						#DIV/0!
Concrete Sidewalk (175 mm depth – heavy duty)	Sq.M.						#DIV/0!
Park Identification Signs (Installation only -supplied by City)	Ea.						#DIV/0!
Walkway Barrier Gates	Ea.						#DIV/0!
Other (Add items to addendum)							
2. PLANTING							
Deciduous Trees							
100 mm cal.	Ea.						#DIV/0!
70 mm cal.	Ea.						#DIV/0!
60 mm cal.	Ea.						#DIV/0!
50 mm cal.	Ea.						#DIV/0!
Coniferous Trees							
250 cm ht.	Ea.						#DIV/0!
200 mm ht.	Ea.						#DIV/0!
175 mm ht.	Ea.						#DIV/0!
Deciduous Shrubs							

100 cm ht.	Ea.						#DIV/0!
80 cm ht.	Ea.						#DIV/0!
60 cm ht.	Ea.						#DIV/0!
Coniferous Shrubs & Broadleaf Evergreens							
50 cm spread	Ea.						#DIV/0!
40 cm spread	Ea.						#DIV/0!
Ground Covers	Sq.M.						#DIV/0!
Other (Add items to addendum)							
3. SITE AMENITIES							
Park Benches	Ea.						#DIV/0!
Entrance Feature	L.S.						#DIV/0!
Bollards	Ea.						#DIV/0!
Pedestrian Bridge (including abutments and decorative piers)	L.S.						#DIV/0!
Stone Piers	Ea.						#DIV/0!
Steel Shade Structure/Trellis	L.S.						#DIV/0!
Raised Planters - Concrete Seat Wall	L.M.						#DIV/0!
Other (Add items to addendum)							
4. FACILITIES							
Playground							
Play Equipment (refer to drawings & specifications)	L.S.						#DIV/0!
Play Mix (including fibardrain system & engineered wood fibre)	Sq.M.						#DIV/0!
Drainage Line	L.M.						#DIV/0!
Concrete Curb (cast-in-place)	L.M.						#DIV/0!
Other (Add items to addendum)							

VALLEYLAND DEVELOPMENT BID COMPARISON FORM
WORKS ELIGIBLE FOR LEVY CREDIT (CITY COSTS)
CITY OF BRAMPTON
Public Works and Engineering Department

PROJECT NAME:		**FILE No:**	
		REG. FILE No.:	21T-
DEVELOPER:		**PHONE:**	
ADDRESS:		**FAX:**	
CONSULTANT:		**PHONE:**	
ADDRESS:		**FAX:**	
BLOCK No.:		**DATE:**	
AREA (ha):		**REVISED**	

ITEM	UNIT	BID '1' UNIT PRICE	BID '2' UNIT PRICE	BID '3' UNIT PRICE	BID '4' UNIT PRICE	BID '5' UNIT PRICE	AVG UNIT COST
1. SITE AMENITIES							
3.0m Wide Asphalt Walkway	Sq.M.						#DIV/0!
Walkway Lighting	Ea.						#DIV/0!
Park Benches	Ea.						#DIV/0!
Entrance Feature	L.S.						#DIV/0!
Bollards	Ea.						#DIV/0!
Stone Piers	Ea.						#DIV/0!
Pedestrian Bridge	L.S.						#DIV/0!
Other (Add items to addendum)							

STORMWATER MANAGAMENT FACILITY BID COMPARISON FORM
WORKS ELIGIBLE FOR LEVY CREDIT (CITY COSTS)
CITY OF BRAMPTON
Public Works and Engineering Department

PROJECT NAME:		**FILE No:**	
		REG. FILE No.:	21T-
DEVELOPER:		**PHONE:**	
ADDRESS:		**FAX:**	
CONSULTANT:		**PHONE:**	
ADDRESS:		**FAX:**	
BLOCK No.:		**DATE:**	
AREA (ha):		**REVISED**	

ITEM	UNIT	BID '1' UNIT PRICE	BID '2' UNIT PRICE	BID '3' UNIT PRICE	BID '4' UNIT PRICE	BID '5' UNIT PRICE	AVG UNIT COST
1. SITE AMENITIES							
3.0m Wide Asphalt Walkway (as part of a larger pedestrian trail network)	Sq.M.						#DIV/0!
Walkway Lighting	Ea.						#DIV/0!
Park Benches	Ea.						#DIV/0!
Entrance Feature	L.S.						#DIV/0!
Bollards	Ea.						#DIV/0!
Stone Piers	Ea.						#DIV/0!
Other (Add items to addendum)							

Appendix F: Status Report for Preliminary and Final Acceptance

BRAMPTON Flower City
brampton.ca

Public Works & Engineering
Environment & Development Engineering

Status Report for Preliminary Acceptance

Subdivision Name:	[Subdivision Name]	**Date:**	[Date]
Developer:	[Developer Name]	**File No.:**	[File no.]
Consultant:	[Consultant Name]	**Contractor:**	[Contractor Name]
City Staff (PWE):	[Names of City Staff and/or Delegates]		
Location of Work:	[Location of Work]		
Open Space Block No.:	[Open Space Block No.]	**Area (ha):**	

	No	Description	Date DD/MM/YY	Approval/ Confirmation Req'd by:	Approved by:
All Works	1.	Landscape Plan Approval		City-PWE	
	2.	Topsoil Composition Test		LA Consult.	
	3.	Pre-Construction Meeting		City-PWE	
	4.	Rough Grade Certification		Eng Consult.	
	5.	Final Grade Acceptance		LA Consult.	
Parkland Only	6.	Walkway Subgrade Compaction Results		LA Consult.	
	7.	Walkway Granular Base Compaction Results		LA Consult.	
	8.	Asphalt Walkway Composition Results		LA Consult.	
	9.	Catch Basin Cleaning Certification		Eng Consult.	
	10.	CSA Playground Compliance Letter		Supplier	
As required	11.	Electrical Engineer's Certification for walkway lighting		Elect Consult.	
	12.	Construction Permits: Structural		City-PWE	
	13.	Plumbing		City-PWE	
	14.	Other		City-PWE	
All Works	15.	Two cuts of sod: first		Contractor	
	16.	second		Contractor	
	17.	Certification of Landscape Works		LA Consult.	
	18.	Preliminary Acceptance		City-PWE	
	19.	Sodding/Seeding Acceptance		City-PWE	
	20.	One year Interim Inspection		City-PWE	
	21.	Final Acceptance		City-PWE	

I hereby certify to the Corporation of the City of Brampton that the landscape works for the Streetscapes or Open Space Blocks listed above have been installed in accordance with the landscape plans and details approved by the City of Brampton and that all deficiencies have been corrected to my satisfaction.

Landscape Architect's Signature

Date

Copy: file

The Corporation of The City of Brampton
2 Wellington Street West, Brampton, ON L6Y 4R2 311

BRAMPTON Flower City
brampton.ca

Public Works & Engineering
Environment & Development Engineering

Status Report for Final Acceptance

Subdivision Name:	[Subdivision Name]	**Date:**	[Date]
Developer:	[Developer Name]	**File No.:**	[File no.]
Consultant:	[Consultant Name]	**Contractor:**	[Contractor Name]
City Staff (PWE):	[Names of City Staff and/or Delegates]		
Location of Work:	[Location of Work]		
Open Space Block No.:	[Open Space Block No.]	**Area (ha):**	

	No	Description	Date DD/MM/YY	Approval/ Confirmation Req'd by:	Approved by:
All Works	1.	Landscape Plan Approval		City-PWE	
	2.	Topsoil Composition Test		LA Consult.	
	3.	Pre-Construction Meeting		City-PWE	
	4.	Rough Grade Certification		Eng Consult.	
	5.	Final Grade Acceptance		LA Consult.	
Parkland Only	6.	Walkway Subgrade Compaction Results		LA Consult.	
	7.	Walkway Granular Base Compaction Results		LA Consult.	
	8.	Asphalt Walkway Composition Results		LA Consult.	
	9.	Catch Basin Cleaning Certification		Eng Consult.	
	10.	CSA Playground Compliance Letter		Supplier	
As required	11.	Electrical Engineer's Certification for walkway lighting		Elect Consult.	
	12.	Construction Permits: Structural		City-PWE	
	13.	Plumbing		City-PWE	
	14.	Other		City-PWE	
All Works	15.	Two cuts of sod: first		Contractor	
	16.	second		Contractor	
	17.	Certification of Landscape Works		LA Consult.	
	18.	Preliminary Acceptance		City-PWE	
	19.	Sodding/Seeding Acceptance		City-PWE	
	20.	One year Interim Inspection		City-PWE	
	21.	Final Acceptance		City-PWE	

I hereby certify to the Corporation of the City of Brampton that the landscape works for the Streetscapes or Open Space Blocks listed above have been installed in accordance with the landscape plans and details approved by the City of Brampton and that all deficiencies have been corrected to my satisfaction.

Landscape Architect's Signature

Date

Copy: file

The Corporation of The City of Brampton
2 Wellington Street West, Brampton, ON L6Y 4R2 311

Appendix G: Certification of Landscape Works for Subdivision Development

CONSULTING LANDSCAPE ARCHITECT'S LETTERHEAD

Date

The Corporation of the City of Brampton
Public Works & Engineering Department
2 Wellington Street West
Brampton, Ontario. L6Y 4R2

ATTENTION: Environment & Development Engineering

RE: CERTIFICATION OF LANDSCAPE WORKS
Subdivision Name: [Click here and enter development name]
Developer Name: [Click here and enter developer name]
Contractor for Subdivision Development Works: [Click here and enter contractor name]
Contractor for Parkland Development Works: [Click here and enter contractor name]
City File No.: [Click here and enter city file no.]

Streetscape:

- **Boulevards:** [Click here and enter street names]
- **Buffers Blocks:** [Click here and enter block nos.]
- **Vista Blocks:** [Click here and enter block nos.]

SWM Blocks: [Click here and enter block nos.]
Valley Blocks: [Click here and enter block nos.]
Park Blocks: [Click here and enter block nos.]

I hereby certify to the Corporation of the City of Brampton that landscape works listed above as applicable to this development have been installed in accordance with the landscape plans and details approved by the City of Brampton and request an inspection for preliminary acceptance.

STREETSCAPE	C - complete NC - incomplete NA - not applicable (Indicate with an X)			
Plant Material	C	NC	NA	Explanation if incomplete
▪ Health/Form				
▪ Quantity				
▪ Soil Mix/Mulch				
▪ Fine Grade/Sod				
Entry Features				
Irrigation				
Decorative Paving				
Other				
SWM BLOCKS	C - complete NC - incomplete NA - not applicable (Indicate with an X)			
Plant Material	C	NC	NA	Explanation if incomplete
▪ Health/Form				
▪ Quantity				
▪ Soil Mix/Mulch				
▪ Fine Grade/Sod				
Lighting				
Head Walls/Rip Rap				

Pathways				
Bridge/Columns				
Signage				
Other				
VALLEY BLOCKS	C - complete NC - incomplete NA - not applicable (Indicate with an X)			
Plant Material	C	NC	NA	Explanation if incomplete
▪ Health/Form				
▪ Quantity				
▪ Soil Mix/Mulch				
▪ Fine Grade/Sod				
Lighting				
Asphalt Pathways				
Bridge/Columns				
Site Furniture				
Other				
PARK BLOCKS	C - complete NC - incomplete NA - not applicable (Indicate with an X)			
Plant Material	C	NC	NA	Explanation if incomplete
▪ Health/Form				
▪ Quantity				
▪ Soil Mix/Mulch				
▪ Fine Grade/Sod				
Underground Serv.				
Grading				
Asphalt Paving				
Decorative Paving				
Lighting				
Play Equipment				
Shade Structure				
Site Furniture				
Entrance Feature				
Fencing				
Other				

Landscape Architect's
Stamp and Signature

Appendix H: Certification of Landscape Works for Site Plan Development

CONSULTING LANDSCAPE ARCHITECT'S LETTERHEAD

Date

The Corporation of the City of Brampton
Public Works & Engineering Department
2 Wellington Street West
Brampton, Ontario. L6Y 4R2

ATTENTION: Environment & Development Engineering

RE: CERTIFICATION OF LANDSCAPE AND FENCING WORKS

PROJECT TITLE: _____
OWNER: _____
PROJECT ADDRESS: _____
SITE PLAN NUMBER: ***SP:*** _____

I hereby certify to the Corporation of the City of Brampton that landscape and fencing works have been installed in accordance with the landscape plans, details and site plan approved by the City of Brampton.

PLANT MATERIAL
Health/Form: _____
Quantity: _____
Soilmix/Mulch/Fine Grade: _____
Sodding/Seeding: _____
Other: _____

FENCING
Chain Link: _____
Wood Privacy: _____
Masonry: _____
Footings: _____
Fabric/Wood: _____

STREET FURNITURE
Playstructures _____
Lighting: _____
Other: _____
Comments: _____

Landscape Architect's Stamp and Signature

_____
Signature of Landscape Architect

_____
Company Name

_____
Date

Appendix I: References

City of Brampton. *Accessibility Technical Standards*

City of Brampton. *Brampton's PathWays Master Plan*

City of Brampton. *Brampton's PathWays Planning and Design Guidelines*

City of Brampton. *Brampton's PathWays Technical Appendices*

City of Brampton. *City of Brampton Official Plan*

City of Brampton. *Construction Manual for Subdivision Development*

City of Brampton. *Development Design Guidelines*

City of Brampton. *Development Digital Submissions Requirements Manual*

City of Brampton. *Digital Submission Standards – Landscape Plans*

City of Brampton. *Gateway Beautification Program*

City of Brampton. *Landscape Specifications*

City of Brampton. *Outdoor Wayfinding and Signage Program*

City of Brampton. *Parks and Recreation Master Plan*

City of Brampton. *Parks Lighting Guidelines*

City of Brampton. *Parks Construction Standard Details*

City of Brampton. *Site Plan Review Process User Guide*

City of Brampton. *Standard Subdivision Notes for Landscape Development*

City of Brampton. *Strategic Plan*

City of Brampton. *Street Corridor Master Plan and Design Standards*

City of Brampton. *Subdivision Design Manual*

City of Brampton. *Submission Requirements for New Subdivisions*

City of Brampton. *Sustainable Community Development Guidelines*

City of Brampton. *Tableland Tree Assessment Guidelines*

City of Brampton. *Woodland Management Plan Guidelines*