

City of Brantford

Site Plan Manual

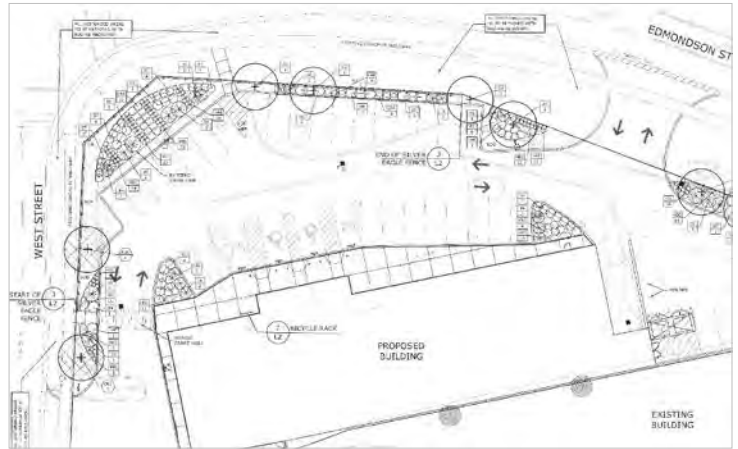
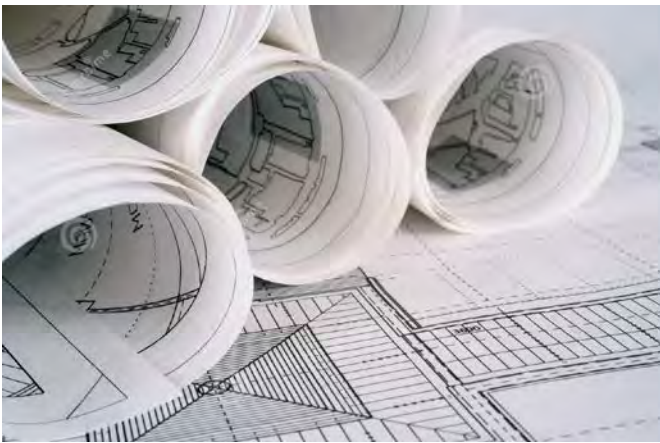


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1.0 INTRODUCTION

The Site Plan Manual has been developed to assist Site Plan Control applicants in understanding the City of Brantford's site plan application process, site design standards and technical requirements. The Manual is composed of two main sections: Section 2.0 Application Process and Section 3.0 Technical Standards. While the "Application Process" sets out detailed procedures for the site plan application process such as application timeline, fees and submission requirements, the "Technical Standards" provides detailed technical standards for a wide range of site elements including traffic circulation, pedestrian movement, fire protection, parking, landscaping, lighting and development engineering. A collection of useful information is also provided in "Section 4.0 Appendices", including application forms, guidelines for related studies, areas specific requirements, diagrams, maps and contact information, to assist the applicant in preparing site plan applications.

1.1 What is Site Plan Control ?

Site Plan Control is a form of development control authorized under Section 41 of the Ontario Planning Act R.S.O. 1990, and implemented through the City of Brantford Official Plan and Site Plan Control By-law 50-2001, as amended.

The City's Official Plan designates the entire City of Brantford as a 'Site Plan Control Area', whereby all development is subject to Site Plan Control with some exceptions. As such, City Council has enacted Site Plan Control By-law 50-2001 that requires all land Owners (or their delegates) to apply and obtain Site Plan Control Approval, prior to the undertaking of any "Development" on their lands, unless the development meets certain exemption criteria set out in the By-law.

1.2 How to use this Manual ?

The applicant should review and closely follow the application procedures throughout the site plan application process. The technical standards and guidelines of this Manual should be used as minimum standards for the site plan application submission. However, the applicant is strongly encouraged to exceed these standards and create higher quality development. The development should also comply with requirements of the City of Brantford Official Plan, Zoning Bylaw and Municipal Code, the Ontario Building Code, the Ontario Integrated Accessibility Standards Regulation, and any applicable laws. In conjunction with the technical standards of this Manual, the applicant is also advised to review the City's Urban Design Guidelines for general design directions in site design. Refer to Appendix 4.6 for links to other documents.

1.3 Site Development Objectives

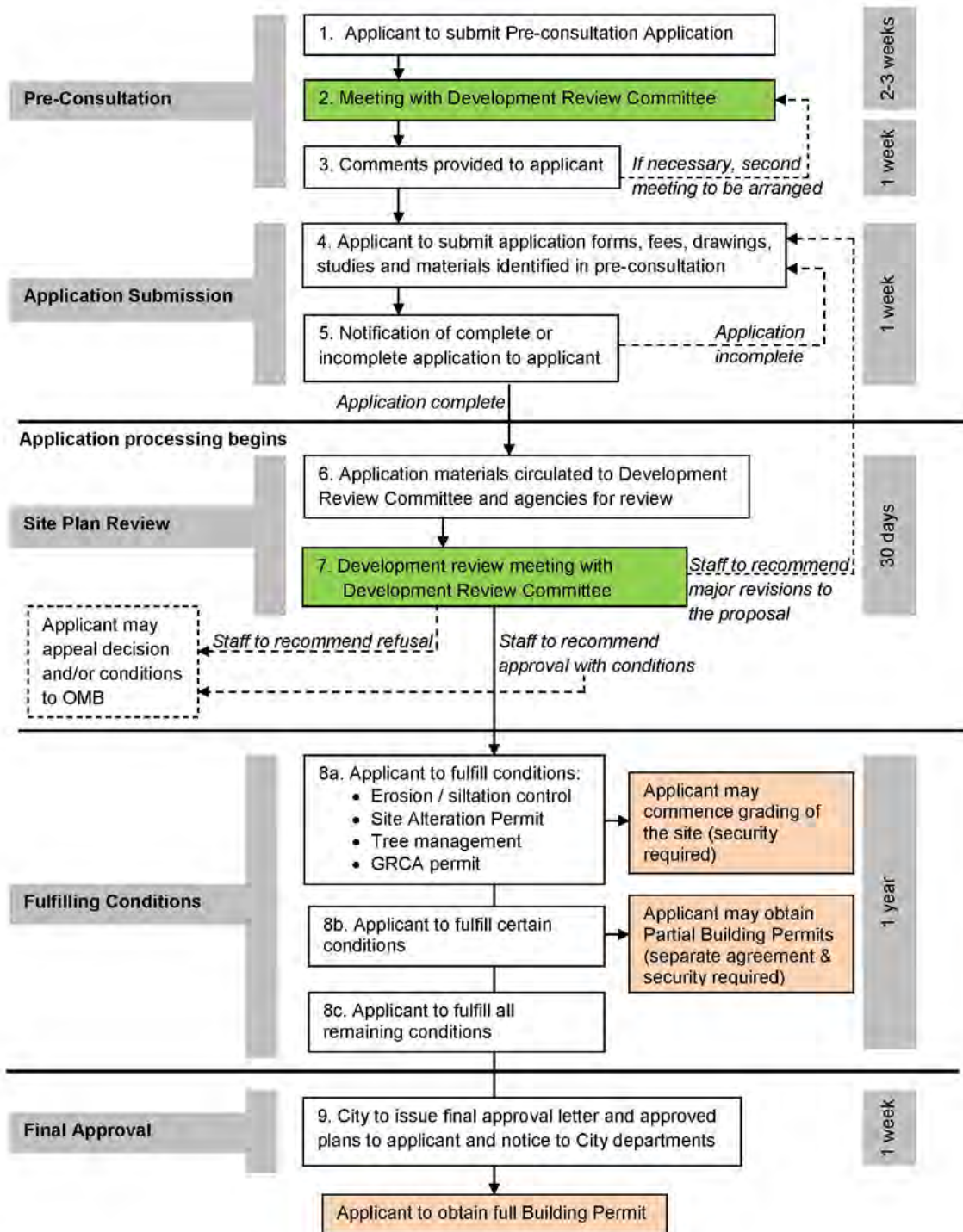
The City of Brantford promotes the creation of an attractive, functional, safe and environmentally sustainable community through high quality site design and development. The site development standards have been developed to achieve the following design objectives:

- Compatibility with surrounding lands uses in scale, built form and function
- Environmental sustainability through protecting environmentally significant features, integrating landscaping and reducing stormwater runoff
- Accessibility through safe and efficient pedestrian and vehicular circulation
- High quality building and landscape design which enhances the public space and creates an attractive streetscape
- Creating a sense of place though respecting community character, protecting important views, and creating community landmarks

2.0 APPLICATION PROCESS

2.1 Site Plan Application Process

The site plan application process is illustrated in the flowchart below:



2.1.1 Pre-Consultation

In recognition of the cost and time required to prepare site plan applications, and to reduce repetitious and costly application resubmissions, a pre-consultation meeting is required prior to application submission (pursuant to section 18.25, City of Brantford Official Plan). However, if the development is deemed to be significantly minor in nature by the Director of Planning, the requirement for pre-consultation may be waived, thus allowing the owner to immediately submit a formal application without the need for a Pre-consultation meeting.

The purpose of the pre-consultation meeting is to provide the Applicant with an opportunity to review the proposed application with City Staff, to discuss potential issues and receive preliminary comments, and to determine the required elements and materials that will be necessary to be submitted with the application in order for it to be considered “Complete” by City Staff.

The Applicant shall provide the Planning Department with, at minimum, a conceptual site plan drawing, general information sufficient to indicate the intention of the development proposal, and authorization from the current owner of the lands. Detailed pre-consultation requirements can be found in the Application for Pre-Consultation form (Appendix 4.1). The Applicant should also be prepared to answer general questions related to servicing, parking, landscaping and other development-related matters. The applicant is required to provide the completed Application for Pre-Consultation form, with the application fee and required materials as specified in the form. The complete pre-consultation submission will be circulated to the Development Review Committee and agencies for review, and a pre-consultation meeting will be held within approximately 2 weeks from the date of the application submission. At the pre-consultation meeting, the Development Review Committee will discuss with the applicant the proposed development and provide comments.

Within approximately one week following the pre-consultation meeting, Planning Staff will provide the applicant in writing, a summary of comments, preliminary issues and information of formal submission requirements in order for the application to be deemed “complete”.

Should the proposal be significantly revised following the pre-consultation meeting, a second meeting may be required. The Director of Planning shall make the final determination of the necessity for a second pre-consultation meeting.

Meetings to discuss development proposals arranged through Departments other than the Planning Department may occur from time to time, but are not recognized as formal pre-consultation meetings and will not fulfill the requirement for a pre-consultation meeting.

2.1.2 Formal Application Submission

The applicant is required to assemble all the materials according to the formal submission checklist, including application form (Appendix 4.2), drawings, studies, fees, etc.

Current Planning Staff will check the completeness of the submission and notify the applicant whether or not the submission is complete within one week from receipt of the site plan application.

If the application is complete, a letter will be sent to the applicant with the date and time of the mandatory meeting with the Development Review Committee. If the application is incomplete, the application and fee will be returned to the applicant, and the applicant will be required to re-submit the application.

2.1.3 Development Review Meeting

The complete application will be circulated to the Development Review Committee and agencies for comments – 2 weeks for review if no supporting studies or reports are required, 3 weeks if otherwise.

Within approximately 25 days of issuing the letter of complete application, a mandatory meeting with the Development Review Committee and the applicant will be held. These meetings are scheduled regularly and the Calendar, including deadlines for submissions can be found in Appendix 4.6.

At the meeting the Committee members will discuss their comments with the applicant. Any necessary red line revisions and commentary notes will be made at the meeting and written on the site plan.

If the application is approved, a letter of conditional approval, signed by the Director of Planning will be mailed to the applicant within approximately one week of the mandatory meeting and will include the redlined site plan and the list of conditions that must be fulfilled. Please refer to Appendix 4.3 for a list of Standard Conditions, and note that conditions vary from application to application. Copies of the letter of conditional approval will also be sent to members of the Development Review Committee. Please note that conditional site plan approval does not constitute the approval required to obtain a building permit.

The Development Review Committee may recommend refusal of the application or revision of the application. The applicant may appeal the decision or the conditions to the Ontario Municipal Board (OMB). If major revisions are required, the applicant is to revise and re-submit the application.

2.1.4 Fulfilling Conditions

The applicant is to fulfill all the conditions of the Conditional Approval within one year of the date of Conditional Approval. This approval will lapse after one year. Before the lapsing of the approval, the applicant may request an extension of the approval, and the Director of Planning may grant such extension at his/her discretion.

The applicant may commence grading of the site upon fulfilling certain conditions specified in the Letter of Conditional Site Plan Approval, such as Erosion / Siltation Control, Site Alteration Permit, Tree Management and GRCA Permit, etc.

The applicant may obtain partial Building Permits upon fulfilling certain conditions as specified in the Letter of Conditional Site Plan Approval. Please note that obtaining a building permit is not part of the site plan application process.

As standard conditions of site plan approval, the applicant is required to provide a cost estimate and securities.

The applicant is required to fulfill all remaining conditions in order to obtain final site plan approval.

2.1.5 Cost Estimate and Securities

As an important standard condition of site plan approval, the applicant is required to provide a cost estimate for 100% of the total cost of all on-site and off-site development works, to the satisfaction of the City. The Cost Estimate must include materials, removals, installations, restorations and contingency. The Cost Estimate must list cost item by item and unit prices.

On-site development works include but are not limited to storm water management facilities, grading, curbing, sidewalk, lighting, paving of driveways and parking areas, landscaping including plant materials, sodding, seeding and other site elements such as fencing, screen walls, retaining walls, and garbage enclosures. Off-site development works may include such elements as driveway ramps, planting, signage and street furniture within the public property adjacent to the subject site as required by the City.

Securities can be provided in the form of a certified cheque or a Letter of Credit. Refer to Appendix 4.4 for a standard template of a Letter of Credit.

Securities will be calculated by applying the formula below:

Estimated Cost of the Proposed Development	Less than or equal to \$350,000	Greater than \$350,000
Securities	100% of the estimated cost	100% of the estimated cost for the first \$350,000 + 50% of the amount above \$350,000

2.1.6 Final Site Plan Approval

Once all the conditions have been fulfilled, the Director of Planning will issue the final approval letter and Planning Staff will distribute the approved plans to the departments, agencies and the applicant.

After final site plan approval, as a separate process, the applicant may apply to obtain a full Building Permit. The building permit process is independent of site plan approval and final site plan approval does not authorize construction. Please contact the Building Department regarding the building permit approval process.

2.2 Submission Requirements

2.2.1 Site Plan Application Submission

The following requirements pertain to the initial formal site plan application submission, which does not required detailed engineering and landscape plans. Submissions not meeting these requirements will be returned to the applicant, and processing of the application will not begin until these requirements are satisfied.

Format

1. All drawings must be individually folded to sizes not greater than 8.5" x 14" with title blocks shown on the outside.
2. Drawings must not be folded inside each other.
3. All materials must be assembled into sets; grouping copies of the same drawing into a set is not acceptable.
4. Each set of materials must be individually bound (by rubber bands or paper clips etc.).
5. Provide materials according to the following "Required Information / Materials Checklist".
6. All information submitted for the application (i.e. forms, reports, studies, drawings, etc.) must also be provided at time of application in electronic form (e.g. PDF format), on a digital media or via email to the City Staff person responsible for the application.
7. Each drawing must include a title block showing the address of the site, title of the drawing, the name of the professional or company preparing the drawing, scale, north arrow, the original date of preparation and a list of revisions and their dates.
8. All drawings must be in metric units and to scale.
9. A printed drawing must match the scale of the drawing and be of a size in which details of the drawing are legible.
10. The stamps of qualified professionals such as an engineer, architect or landscape architect preparing the drawings must be affixed to the drawings.

Required Information / Materials Checklist

1. Site Plan Application form (Appendix 4.2) – 1 copy
2. Survey Plan (2 copies) of the site including the following information:
 - a. Total lot area
 - b. Property bearings, dimensions and stakes
 - c. Location and size of existing water mains, hydro poles, vaults, etc.
 - d. Location and type of closest existing fire hydrants
 - e. Location, species and size of existing trees
 - f. Encroachments and easements
 - g. Topographic information, e.g. contours, spot elevation.
3. Site Plan (12 copies) including the following information:
 - a. Key map showing location of the site
 - b. Site Statistics:

1. Total lot area
 2. Building coverage
 3. Gross floor area
 4. Building height proposed and permitted
 5. Number of units (for residential development)
 6. Number of parking spaces proposed and required
 7. Number of loading spaces proposed and required
 8. Area of landscaped areas proposed and required
 9. Amenity space proposed and required
 10. A Building Code Matrix, or notations on whether the building will be sprinklered or have a standpipe and how many streets it is required to face under the Ontario Building Code
- c. Site Elements:
1. Property boundaries including front, side and rear lot lines, minimum yard requirements
 2. Footprints of existing and proposed buildings and structures including locations and dimensions
 3. Outline of existing buildings on adjacent properties
 4. Location of existing and proposed hydro poles, vaults, transformers and fire hydrants
 5. Traffic circulation and Fire Route signs, pavement markings
 6. Fire Access Routes as required by the Fire Department and Ontario Building Code
 7. Building setbacks
 8. Parking area layout and dimensions of drive aisle and parking spaces
 9. Driveway width and radius
 10. Locations of building entrances
 11. Landscape areas, curbs, fences and their types and heights, retaining walls
 12. Existing vegetation with drip lines
 13. Road widening (if applicable)
 14. Adjacent street names, road ways and traffic islands where applicable
 15. Garbage enclosure
 16. Easement and right of way
 17. Outlines of development areas and phases
 18. Locations of signs and exterior light stands
 19. Visibility triangles at driveway entrances
 20. Sidewalks with barrier free curb ramps from the barrier free parking area to the barrier free entrance(s)
 21. Designation of entrances that are required to be barrier free as per the Ontario Building Code
 22. Existing surface water features including watercourses, wetlands and ponds, etc.
- d. Minimum Grading Information:
1. Description of the geodetic bench mark used to establish all elevations
 2. Existing and proposed elevations on the subject and adjacent lands to show the existing and proposed drainage patterns
 3. Locations of all existing and proposed catch basins, swales, retaining walls, berms, drainage courses, etc.
 4. Ground floor elevation of buildings
 5. Indication of how the roof leaders of the existing and proposed buildings drain, either overland or directly into the storm sewer system
 6. Preliminary storm water management details, e.g. location and types of storage facilities, etc.
- e. Mandatory Notes to be put on the Site Plan (where applicable):
1. All works involved in the construction, relocation and repair of municipal services for the proposed development shall be to the satisfaction of the General Manager of Public Works.
 2. Street Excavation Permits are required for any work in City right of way by any contractor.
 3. Private owner/developer is responsible for all servicing, utilities and costs.

4. Remove curb and pour new curb for any new driveways or driveways to be abandoned.
 5. Storm water drainage must not have a negative impact on adjacent properties.
 6. Driveway slopes must be 8% maximum, and sidewalk cross fall 2% to 4% maximum.
 7. A 5.0 m driveway visibility triangle on either side of the driveways projected from where the property lines meets the driveway is required where no plant material/structure greater than 0.6m is to be planted within this area.
 8. No person shall cause or permit alteration of a site in the municipality, without having first obtained a Site Alteration Permit in accordance with By-law 28-2011.
 9. Rooftop equipment shall be screened from street view.
 10. No person shall construct or demolish a building or cause a building to be constructed or demolished (including site servicing) unless a building permit has been issued therefore by the Chief Building Official.
4. Building Elevations (3 copies) showing the following information:
 - a. 4 sides of the building and structure
 - b. Notation of building materials and colours
 - c. Hatch patterns to represent different building materials, e.g. brick, siding, shingle, etc.
 5. Studies determined to be necessary in pre-consultation

2.2.2 Engineering Submission

The detailed engineering submission is required as part of the subsequent submission to fulfill conditions of site plan approval.

Engineering Drawings

1. All engineering drawings are to be in metric.
2. Common drawing scale is to be used to a maximum of 1:500.

Site Servicing and Grading Plans

These plans must include:

1. City of Brantford bench mark description and elevation.
2. All abutting streets with street names, right-of-ways, easements, geometrics, including traffic/parking control signs, pavement markings and islands, and property lines.
3. All utilities on existing roads including storm servicing, sanitary servicing, watermain, Bell, hydro and gas lines.
4. All utilities on the subject site including storm servicing, sanitary servicing, watermain, Bell, hydro and gas lines.
5. All aboveground street furniture within the right-of-way including hydro poles, light standards, transformers and pedestals.
6. All existing structures on the subject site are to be clearly shown and labelled.
7. Existing centreline elevation of abutting roads and existing grades through all site entrances.
8. Existing elevations along property line, all property corners and contours shown for a minimum of 10 metres outside the property limit so that external drainage patterns can be evaluated.

9. Proposed elevations through entrances, changes in slope of laneways, parking lot elevations, building corners, building entrances, top and bottom of grade changes.
10. All proposed sanitary and storm sewers, manholes and catchbasins including size and class of pipe and grades.
11. All proposed watermain, watermain appurtenances, hydrants and bends (angles labeled).
12. Watermain restraining distance chart for all fittings.
13. All surface drainage routes including swales, ditches, watercourses and their invert elevations and flow direction (flood plain limits).
14. The overall surface drainage pattern on the site is to be shown by flow arrows.
15. Location of roof downspouts and details of roof hoppers (flow controls).
16. Erosion and sediment controls.
17. A legend detailing all symbols used (i.e. catchbasins, retaining walls, road, property line, building line, existing and proposed elevations).
18. Key map with the site location.

Plan and Profile Drawings

These plans must include:

1. All sewer information (size, grade, material, inverts at 20m intervals and changes of grade) including manholes, drop structures, insulation, water valves, watermain bends, reducers, etc.
2. Stationing to be shown in the profile band and on the plan view.
3. Key map clearly identifying the section the profile is showing.

Survey Plan Requirements

An up-to-date survey must be prepared, stamped and signed by an Ontario Land Surveyor, or as an alternative, an O.L.S. stamp and signature on a site plan prepared by an architect or engineer indicating:

1. The lot number and registered plan, or concession / lot of City grid and address
2. The lot area in metric measure
3. Location of proposed building(s) - i.e. to verify setbacks
4. All existing structures, topographical features (i.e. swales, ditches, top of bank)

Geotechnical Investigation

A geotechnical investigation may be required and must be performed by a geotechnical engineer or competent engineering consultant to obtain information on the physical properties of soils around a site to design earthworks and foundations for proposed structures.

Noise and Vibration Impact Studies

A noise and vibration impact study may be required for developments such as a residential subdivision or a high-rise residential building if the development is close to a major traffic roadway,

a rail corridor, or industrial uses. These studies are to be carried out by competent consulting engineers and are to follow Ministry of Environment criteria.

Environmental Site Assessment

An Environmental Site Assessment (ESA) may be required to assess the risk of potential environmental liability at a property associated with current or historical activities at the site and neighbouring lands. Changes in land use to a more sensitive use may warrant a Record of Site Condition to be provided.

2.2.3 Landscaping Submission

The detailed landscaping submission is required as part of the subsequent submission to fulfill conditions of site plan approval.

General Landscape Plan Requirements

Landscape plans are to conform in all respects to the site development and grading plans as well as all other submitted/approved project drawings. Landscape plans must clearly indicate both existing and proposed property information including:

Drawing Information

1. Key map, showing the site location and adjacent properties
2. All measurements in metric; drawing(s) must be submitted at a standard, metric scale adequate to legibly illustrate all aspects of the proposed design – generally 1:400 or greater
3. North arrow and legend
4. Plan number, project name, municipal address and date of plan (including most current revision date)

Site Development Information

Existing Vegetation

1. All existing trees, site vegetation, street trees and other natural features (streams, slopes, etc.) within 5m of the property line on adjacent lands, must be accurately located on the plan with base elevations provided. Trees must be clearly specified as to the type, caliper and condition. Existing trees to be removed must be indicated with a broken line. The location and details of all vegetation to be preserved must be clearly shown, indicating the location of all protective fencing.
2. Sites with existing trees and site vegetation will generally require a tree survey/preservation plan as referred to in the following section. Depending on the scale of the development and the extent of existing site vegetation, this information may be combined on the landscape plan. If there is no existing vegetation on the proposed site a statement to that effect must be clearly made on the landscape and site plan(s).

Other Site Conditions

1. Location of walkways, curbs, interior roadways, parking lots, plantings, fencing, garbage enclosures, hydro transformers, all underground and overhead services, steps, ramps, retaining walls, slopes, berms, exterior lighting, pole/pylon signs, ground and portable signs, catch basins, manholes, water valves, hydrants, sub-drains, swales and all other existing and proposed features.
2. Existing and proposed elevations, gradients and drainage patterns throughout the site, at top and bottom of slopes, stairs, ramps, swales, along property lines and at all other natural and manmade elements.
3. Identification of all surface materials - paving, sod, hydro-seed, mulch, etc.
4. Recreation amenities: adult and children facilities.
5. Snow storage areas or methods of snow disposal.
6. Barrier-free requirements, i.e. drop curbs, accessible parking, ramps, handrails, etc.
7. Any other proposed landscape feature requiring additional clarification including architectural section(s) and construction drawings detailing fences, walls, walkways and other site elements.

Proposed Planting Information

1. Proposed plant material must be clearly located and labeled with a key system. A plant list is required including the full botanical name, common name, quantity, caliper, height, spread and special remarks for each proposed plant.
2. Planting Details – coniferous and deciduous trees, shrubs and perennials (staking, guying, installation methods, other). Planting details must conform to the current City of Brantford standards. Refer to the Tree and Shrub Planting Details (Appendix 4.12).
3. Detailed description of soil types and additives (fertilizers, peat moss, mulch etc.), seed mixtures and seeding rates.
4. Detailed landscape cost estimates.

Tree Survey and Preservation Plan Requirements

Depending on existing site conditions, the City may require the applicant to submit a Tree Survey / Preservation Plan. Generally if trees exist on or adjacent to the proposed development site, a Tree Survey / Preservation Plan will be required. The purpose of a Tree Survey is to determine what can be preserved within the proposed site development and/or to identify other issues with regard to adjacent and on-site hazards, nuisance vegetation and tree maintenance concerns. The preservation and protection of significant trees is encouraged through careful site planning, appropriate siting of buildings, servicing and lot grading.

If there is no existing vegetation on or adjacent to the proposed development site, a statement to that effect must be made on the landscape plan and site plan.

Qualifications

The Tree Survey / Preservation Plan must be prepared by an approved and qualified environmental consultant, certified arborist or other qualified professional with specific experience and detailed knowledge of trees and ecological systems.

Plan Requirements

General Drawing Information

1. Key map, showing the site location and adjacent properties.
2. All measurements in metric; drawing(s) must be submitted at a standard, metric scale adequate to legibly illustrate all aspects of the proposed design; generally 1:400 or greater.
3. North arrow and legend.
4. Plan number, project name, municipal address and date of plan (including most current revision date).
5. Name, address and phone number of the qualified consultant completing the survey, complete with membership stamp (if applicable) and/or signature.

Site Information

1. Detailed layout of the proposed site plan showing building locations, driveways, parking areas, walkways and other proposed site elements
2. Existing and proposed grades, contours and spot elevations
3. Location and type of service utilities
4. Construction area requirements (access routes, limits of excavation for foundations)
5. All existing vegetation and other natural (slopes, streams) or manmade features within 5m of adjacent lands

Vegetation Requirements

1. A detailed inventory of all existing vegetation is required including:

Individual Trees

- Surveyed location of each tree 100 mm D.B.H. (diameter at breast height, 0.3m above grade) or larger, including existing grades at the base of each tree trunk
- Species of plant material
- Size of plant material
- Limit of canopy and existing grade at that point
- Crown of tree
- Condition (state of health)
- Quality of trees with regard to species
- Sensitivity of tree to development; identify measures that can be taken to preserve trees (above and beyond protective fencing) where applicable
- Recommendation for retention or removal; state reason if tree is to be removed

Plant Groupings, Woodlots or Natural Areas

- Survey location of the outermost trees and existing grade at base of the trunk(s)
- Survey location of general areas of smaller vegetation or shrub growth
- Limit of canopy and the existing grade at that point
- Predominant species within the plant grouping and identification of vegetation communities within the plant grouping(s) using standard ecological land classification system(s).

- Average diameter of trees within each vegetation community (measured 0.3m above grade) and/or average height of smaller vegetation
- Condition and quality of all vegetation communities
- Sensitivity to development and preservation measures (if applicable)
- Recommendation for retention or removal; state reason if vegetation is to be removed

Report

An analytical report is also required. This report will evaluate the impact of the proposed development on the existing vegetation and describe measures to mitigate the impact of the proposed construction on vegetation recommended for preservation.

Specifications for Tree Protection (refer to Appendix 4.13)

1. All existing trees and shrubs to be retained shall be fully protected with fencing erected beyond the “drip line”. Groups of trees, natural areas and other existing plantings to be protected shall be done in a like manner with fencing around the entire group(s). Areas within the protective fencing shall remain undisturbed and shall not be used for the storage of building materials or equipment.
2. No rigging cables shall be wrapped around or installed in trees.
3. Surplus soil, equipment, debris, or materials shall not be placed over root systems of the trees within the protective fencing.
4. No contaminants shall be dumped or flushed where feeder roots of trees exist.
5. Where limbs or portions of trees are removed to accommodate construction work, they shall be removed carefully and exposed wood treated with an approved tree wound dressing, if necessary.
6. Where root systems of protected trees are exposed directly adjacent to or damaged by construction work, they shall be trimmed neatly and the area immediately backfilled with appropriate material to prevent desiccation.
7. Where necessary, the trees will be given an overall pruning to restore the balance between roots and top growth or to restore the appearance of the tree.
8. Trees to be preserved that have died or have been damaged beyond repair shall be replaced by the developer at his own expense with trees of a size and species approved by the City.
9. Alterations to grades around trees to be preserved should be minimized. If grades around trees to be preserved are likely to change, the developer shall be required to take such precautions as dry-welling and root-feeding to the satisfaction of the Parks Department.

Confirmation Follow-up Report

Where warranted the City may require a Confirmation Follow-up Report to coincide with the implementation of all tree protection measures, and following completion of initial site grading and construction to include:

1. Written confirmation from the qualified arborist /consultant that tree protection measures listed above have been implemented as approved

2. An assessment of damage to remaining trees slated for protection during initial site grading and construction:
 - Identify and provide value of trees (refer to “Guide for Plant Appraisal”, International Society of Arboriculture, Latest Edition) that were to be retained but have been removed or damaged
 - Using this damage value to provide a rehabilitation plan for disturbed areas indicating quantity and location of replacement trees of equal or greater value
3. Identification and assessment of any planned tree removal not conducted
4. Recommendation(s) regarding additional trees to be removed or transplanted due to as built site condition following construction
5. Recommended remedial measures

2.3 Fees

Fees are identified at the pre-consultation meeting. If you are not certain, please consult Planning Staff.

Application Fees	
Pre-consultation (refundable or credited to original applicant if site plan application submitted within 1 year of pre-consultation meeting)	\$400
Major application	\$8127
Minor application	\$3051
Plus engineering review (mandatory)	\$1600
Additional Fees where applicable	
Site plan review for each addition circulation beyond 2 circulations	\$250
Site plan agreement for each additional agreement (e.g. phased development)	\$750
Amendment to an approved site plan	\$1525
GRCA plan review fee as required	To be paid separately to GRCA
Site Plan Inspection Fees for Release of Securities	
Initial 2 visits	free
Each additional site visit beyond 2 initial visits	\$125

Applications meeting the following criteria are subject to the Minor Site Plan Application fee; otherwise the Major fee will apply.

1. To facilitate a development directly related to the functions or activities of a registered non-profit agency
2. To facilitate developments containing a minimum of 25% affordable housing units subject to satisfying the requirements of the City to ensure the affordable units are affordable upon development
3. No supporting reports are required for review (e.g. traffic impact, environmental impact, noise, storm water management reports etc.)
4. No change in use is proposed and no alteration to grades required
5. The change in land use involves the creation of 4 or less dwelling units in which case landscaping is not considered as part of the site plan review process

6. Consultation with external departments/agencies is limited to less than three
7. Minor additions to existing buildings equivalent to 20% of the existing structure, to a maximum of 500 m² (5382 ft²)
8. A minor redline revision to an approved site plan or a site plan application warranting review by only two departments would be subject to a 50% reduction in the minor fee

2.4 Post Application Process – Procedures for Security Release

Site Plan securities are required by the City to act as a guarantee to make sure that properties are developed in accordance with the registered site plan agreements and the approved drawings and reports. Once the site works have been completed, it is the responsibility of the applicant to request the reduction of the posted securities.

2.4.1 Partial Release (50% of the originally submitted amount)

The applicant has the option to request a partial release of securities when the following site works have been completed in accordance with the approved plans, reports and the registered site plan agreement:

- All servicing works
- Stormwater management
- Base course asphalt
- All exterior lighting (for residential development)
- If applicable, the roof of the building(s) must be completed

If approved, the City will release 50% of the originally submitted securities. The securities may not be released below 50% of the originally submitted amount until all site works are satisfactorily completed.

Submission Requirements

1. A cover letter requesting inspections and security reduction or release.
2. Signed and sealed certificate from the Professional Engineer, certifying that the grading, servicing and stormwater management have been developed in accordance with the approved plans and reports and are functioning as designed (refer to Appendix 4.5).
3. Signed and sealed certificate from the Landscape Architect certifying that all landscaping provisions, materials and workmanship as shown on the plans, have been adhered to and that all plant material is in healthy and vigorous growth condition (refer to Appendix 4.5). In cases where the approved landscape plans were prepared by a qualified landscape professional other than a landscape architect, and accepted by the City, the said professional may also submit the certification. In this case the seal may be omitted from the certificate.
4. If applicable, a signed and sealed certificate from the Lighting Engineer, certifying that all outdoor light fixtures for the development have been installed and maintained in accordance with the approved plans (refer to Appendix 4.5).

5. If applicable, a signed and sealed certificate from the Acoustical Engineer, certifying that all required noise mitigation measures required by the noise study have been installed correctly and are functioning as designed (refer to Appendix 4.5).
6. If applicable, proof of completion of all site-specific requirements outlined in the site plan agreement, such as registration of easements and encroachment agreements, conveyance of daylight triangles, etc. Please read the registered site plan agreement for the complete list of site specific requirements.
7. If applicable, the inspection fee for reduction/release of site plan securities as per the City's current Development Application Fees Bylaw (refer to the Section 2.3 in this Manual).
8. Requests for re-inspections require a letter which responds to each item on the site inspection deficiency list from the previous inspection.

Inspection Timelines

The inspection process typically takes 4 - 6 weeks to complete; however, volume of applications and unsuitable weather conditions may increase the timeframe for the inspection of the site works and the subsequent security reduction. For additional information, please refer to Section 2.4.3.

Inspection Fees

In accordance with the City's current Development Application Fees Bylaw, an inspection fee is required for the third inspection and any additional inspections. The first two inspections are covered by the site plan application fee. Refer to Section 2.3 in this Guide.

Reduction Procedure

After the site inspection, if the site works have been completed in accordance with the approved plans with no deficiencies, Planning Staff will forward a notification to the applicant indicating that all the works are satisfactory and that the securities will be reduced by 50% or to the 1-year 10% materials and workmanship warranty holdback, as applicable. A corresponding memo will be forwarded to the Finance Department authorizing the reduction of securities.

Reduction / Release Processing Timelines

Please note that it will take the Finance Department up to 3 weeks to process the release from the time they receive the instruction from the Planning Department to proceed.

Deficiencies / Outstanding Items

If deficiencies or outstanding items are present on the site, a notification with a list of deficiencies will be forwarded to the applicant and the securities will not be reduced. The applicant must correct all deficiencies and re-apply for the reduction of securities.

Deficiency Lists

The deficiency lists provided by the City should not be construed as a complete list of deficiencies. City Staff do not perform a complete site inspection and it is the sole responsibility of the owner/developer to make sure the site is developed in accordance with the registered site plan agreement and all approved drawings and reports, and to provide the City with proof of this in the form of professional certificates. Therefore deficiency lists shall not be construed to be a

waiver of any obligations of the developer under the site plan agreement and the City will retain its rights to enforce said site plan agreement at any time regardless of whether an issue/deficiency is noted on the deficiency list. Furthermore, additional deficiencies may be revealed after the original inspection and may be added to the original deficiency list.

Correction of Deficiencies and Re-inspections

Upon completion of all of the listed deficiencies, the applicant must confirm and indicate how the deficiencies have been rectified by submitting a signed and sealed explanatory letter by the appropriate professional(s), along with the appropriate inspection fees. Staff will then perform a new site inspection to determine whether all of their concerns have been satisfied. If there are no further noted deficiencies, the securities will be reduced by 50% or to the 1-year 10% materials and workmanship warranty holdback, as applicable.

2.4.2 Release to 10% Warranty Holdback

When all site works have been completed in accordance with the approved plans, reports and the registered site plan agreement the applicant may request the release of securities to the 1-year 10% materials and workmanship warranty holdback.

It is the responsibility of the applicant to request the release of the 10% materials and workmanship warranty holdback. Prior to the expiry of the one-year warranty period, the applicant shall submit a complete certification submission package with the required documentation, materials and fee to request an inspection of the site and, if all of the original conditions of site plan approval are still in compliance, the remaining securities will be released. The applicant will be notified and a memo will be forwarded to the Finance Department authorizing the release. Partial releases of the 10% warranty holdback will not be permitted.

Submission requirements for the release of the 10% warranty holdback

1. A cover letter requesting inspections and warranty holdback release.
2. Signed and sealed certificate from the Professional Engineer, confirming that no failures have occurred on site during the maintenance period and that everything still functions as intended (refer to Appendix 4.5).
3. Signed and sealed certificate from the Landscape Architect, confirming that no failures occurred during the maintenance period and the plants continue to be healthy and in vigorous growth condition (refer to Appendix 4.5). In cases where the approved landscape plans were prepared by a qualified landscape professional, and accepted by the City, the said professional may also submit the certification. In this case the seal may be omitted from the certificate.
4. If applicable, a signed and sealed certificate from the Lighting Engineer, confirming that no failures have occurred on site during the maintenance period and that everything still functions as intended (refer to Appendix 4.5).
5. If applicable, a signed and sealed certificate from the Acoustical Engineer, confirming that no failures have occurred on site during the maintenance period and that everything still functions as intended (refer to Appendix 4.5).
6. If applicable, the inspection fee for the release of securities as per the City's current Development Application Fees Bylaw (refer Section 2.3).

7. Requests for re-inspections require a letter which responds to each item on the site inspection deficiency list from the previous inspection.

2.4.3 Notes

1. Site works that are found to be a public safety issue, contravene City Bylaws or if the development is not in accordance with the approved site plan, the request for security release will not be processed until such issues have been resolved.
2. Should the required submission be incomplete or not in the correct format (i.e. seals missing from certificates, not all certificates submitted, etc.), the inspection and subsequent security reduction/release will not be processed until such time as the City receives all outstanding documentation. Processing will not commence until the City has received a complete submission.
3. All certifications for site plan works shall be sealed, signed and dated by certifying professional.
4. "Qualified" means one who, through education and professional designation, in combination with experience in the specific field for which he/she has been trained, as it relates to the work being certified, is competent.
5. Should there be substantial changes made to the approved site plan, a site plan amendment through the Planning Department may be required.
6. Requests submitted at a time when site works are not clearly visible due to snow cover and/or the landscaping cannot be fully inspected due to the plants being in a dormant state, site inspections by City Staff and consequently the release of securities may not occur until such time as the weather/seasons permit.

3.0 TECHNICAL STANDARDS

3.1 Site Design

Site design involves the spatial organization of activities and physical elements on a site including the placement and orientation of buildings, parking, lighting and pedestrian and vehicular circulation. Site design must be considered within the broader context of compatibility with adjacent land uses, integration with the local neighbourhood and community, and the interface between public and private spaces.

3.1.1 Building Placement and Orientation

1. Buildings should generally be situated to reinforce the character of the neighbourhood, help to frame the street edge, and create an attractive and safe environment for the internal and external spaces of the site.
2. Buildings on a corner lot should generally be situated close to the street intersection to frame both streets and emphasize the location as a focal point in the streetscape.
3. Building setback from the street should take into account the general character of the neighbourhood and the building setback of the adjacent properties to maintain a compatible and consistent street edge.
4. Buildings shall not be located within visibility triangles at driveway entrances.
5. Front façades and main entrances should face the street to assist with identification of the building, enhance the appearance of the streetscape, and provide visual surveillance of public space.
6. Within the City's Intensification Corridors, buildings should be located close to the street to define the street environment that is attractive and friendly for pedestrians. Consult the Urban Design Guidelines for further design directions on building and streetscape design.
7. Building placement and orientation should take into consideration solar exposure, predominant wind direction, topography, views to and from the building and adjacent buildings and/or natural features, so that the building will take advantage of natural light, reduce energy consumption, not obstruct prominent view, avoid casting shadows on neighbouring properties, and help to create a favourable micro climate for the site and adjacent areas.

3.1.2 Vehicular Access and Circulation

Before designing the layout of vehicular access and circulation of the site, the following should be determined in consultation with City of Brantford Transportation Service:

- Which area of the site can be developed?
- Are there any access restrictions imposed by the City of Brantford or the Ministry of Transportation (MTO)? Consult the Areas of Special Consideration Map in Appendix 4.19 to determine whether the development site is with a MTO Notification Area.
- Are there any daylight triangle and / or road widening requirements?
- Are there any easements that restrict access and / or circulation?

General Requirements

1. In designing roads, vehicular access and circulation, reference should be made to the City's Municipal Roads Bylaw contained in the City of Brantford Municipal Code or reference to Geometric Design Guide for Canadian Road (TAC) standards.
2. In designing roadways, vehicular access, circulation, and parking, reference should be made to the Ontario Traffic Manual (OTM) for the type, design, location and installation of signs and pavement markings.
3. The number of driveway connections to the public street should be minimized. Mutual or shared driveways are encouraged, especially along collector and arterial roads, to minimize the number of curb cuts.

Road Widening

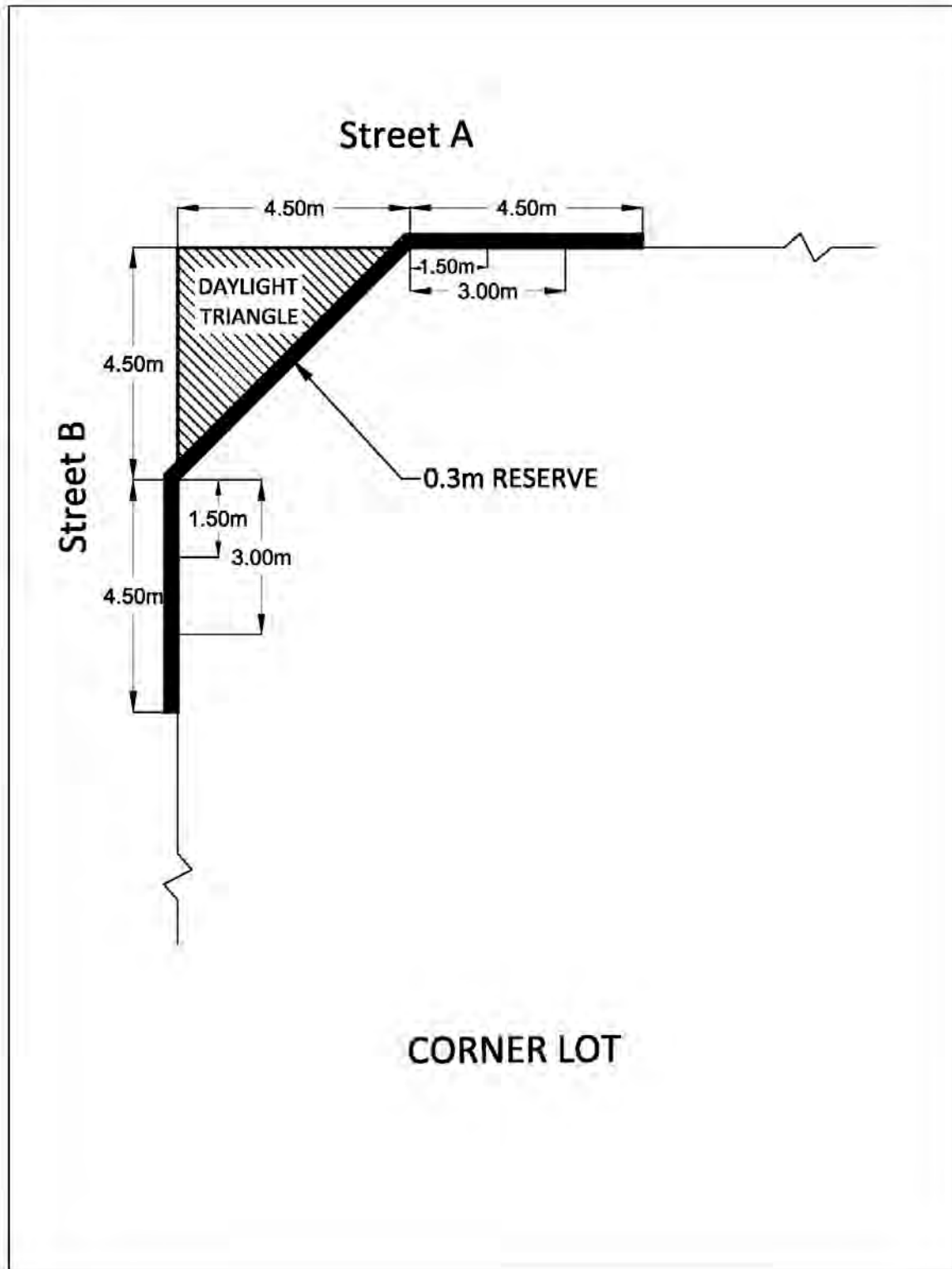
Road widenings shall be required in accordance with Section 11.3 of the Official Plan. Please refer to Schedule 5-2 of the Official Plan for a list of roads for which road widening is required.

Daylight Triangle

Corner lot developments fronting onto two streets, shall dedicate in clear title and at no cost to the municipality, a Daylight Triangle and 0.3m reserves for the purpose of vehicular traffic visibility, where no building or structure may encroach or be built upon. The exact dimensions of this required triangle and reserves shall be determined by the City's Transportation Services Department.

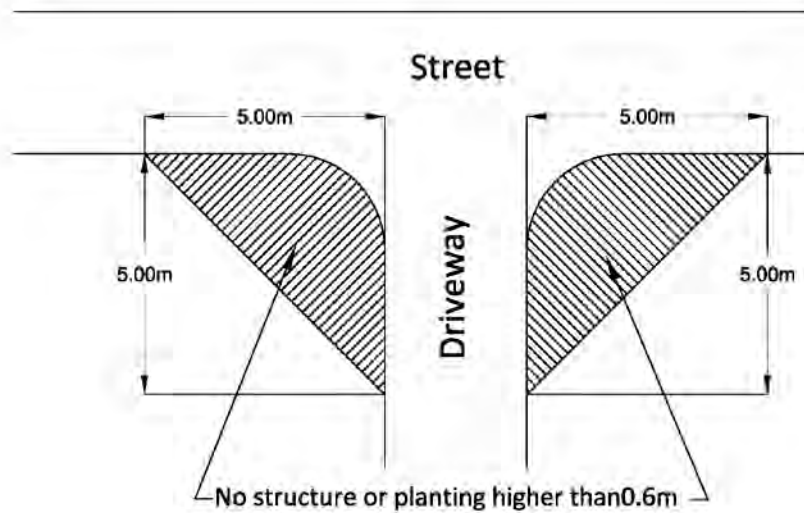
Generally Daylight Triangles should be calculated using the following dimensions and measured from the existing right-of-way if there is no widening required or from the proposed road widening right-of-way:

Local and Minor Collectors	- 4.5m
Arterials and Major Collectors	- 7.5m
Industrial Development Areas	- 10.5m



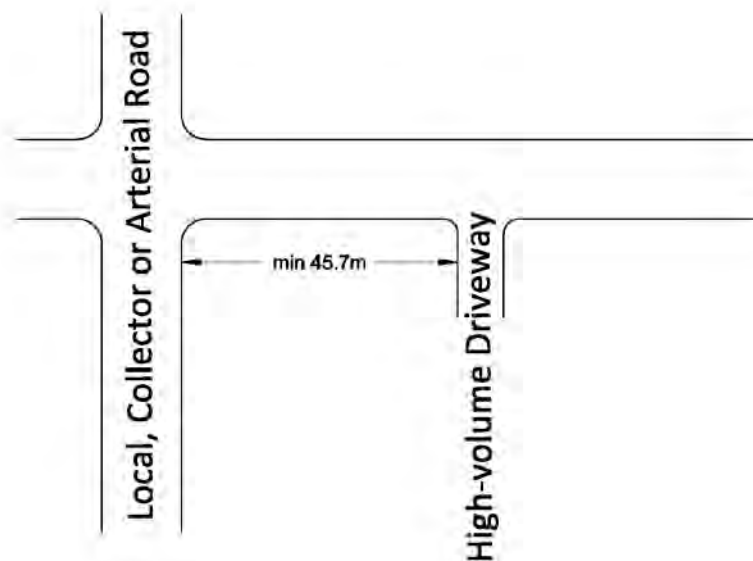
Visibility Triangle

A 5.0 m driveway visibility triangle on either side of a driveway projected from where the property line meets the driveway is required to be provided. No plant materials or structures greater than 0.6m are to be placed or maintained within this area. This requirement applies to the interior driveways as well. Visibility triangles should be identified on the site plan where applicable.

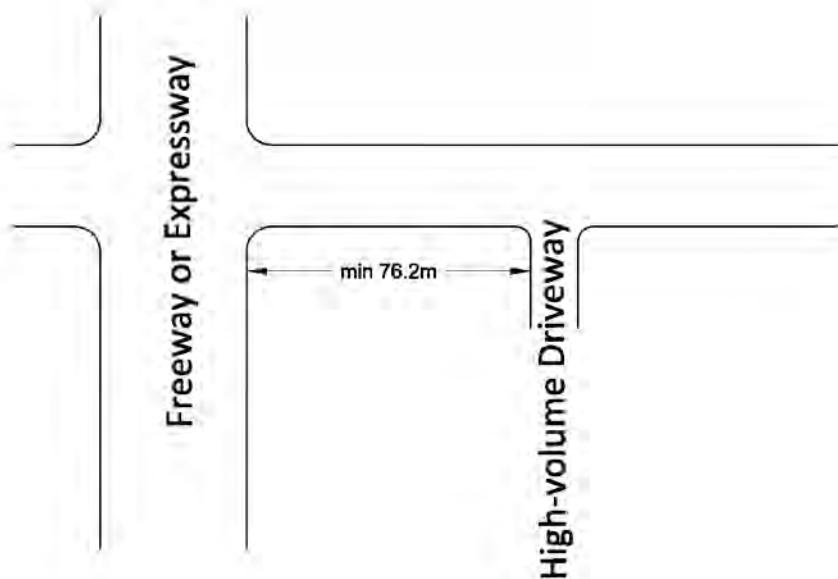


Driveway Location and Separation

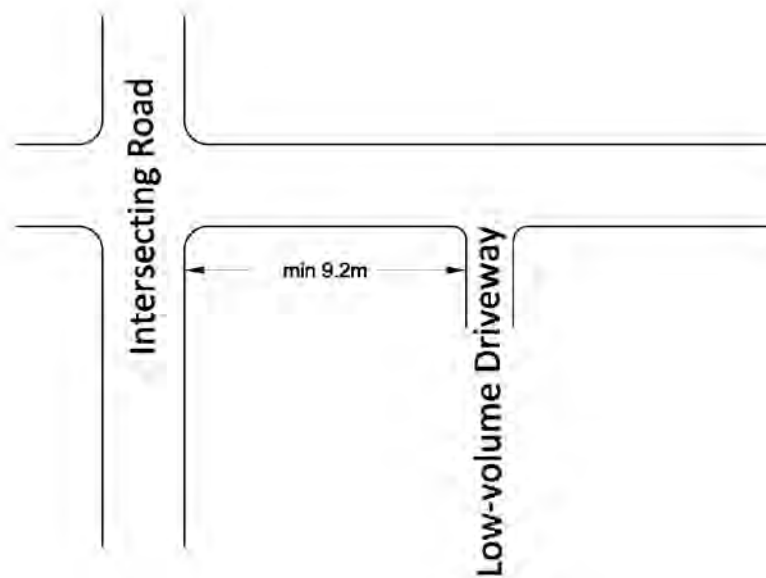
1. The following provisions shall apply to locating high volume driveways (i.e. driveways providing access to industrial uses, parking lots, and residential uses with 6 or more parking spaces and to most commercial uses).
 - a. No driveways shall be located closer than 45.7 m measured along the lot line from the nearest side of the driveway to the road allowance of an intersecting local, collector, or arterial road.



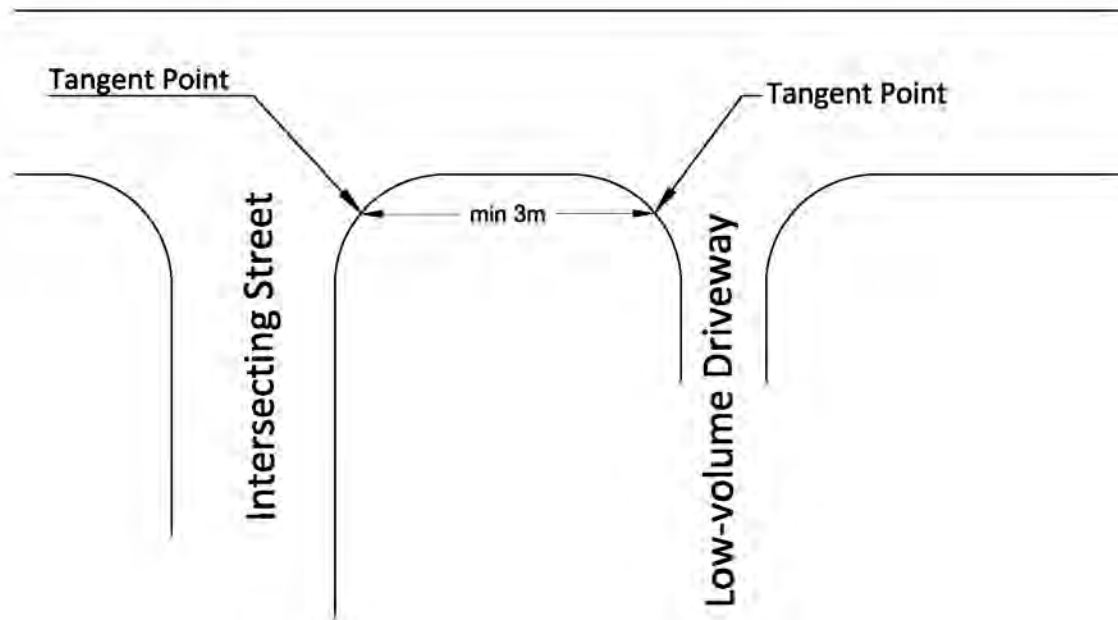
- b. No driveway shall be located closer than 76.2 m measured along the lot line from the nearest side of the driveway to the road allowance of an intersecting freeway or expressway.



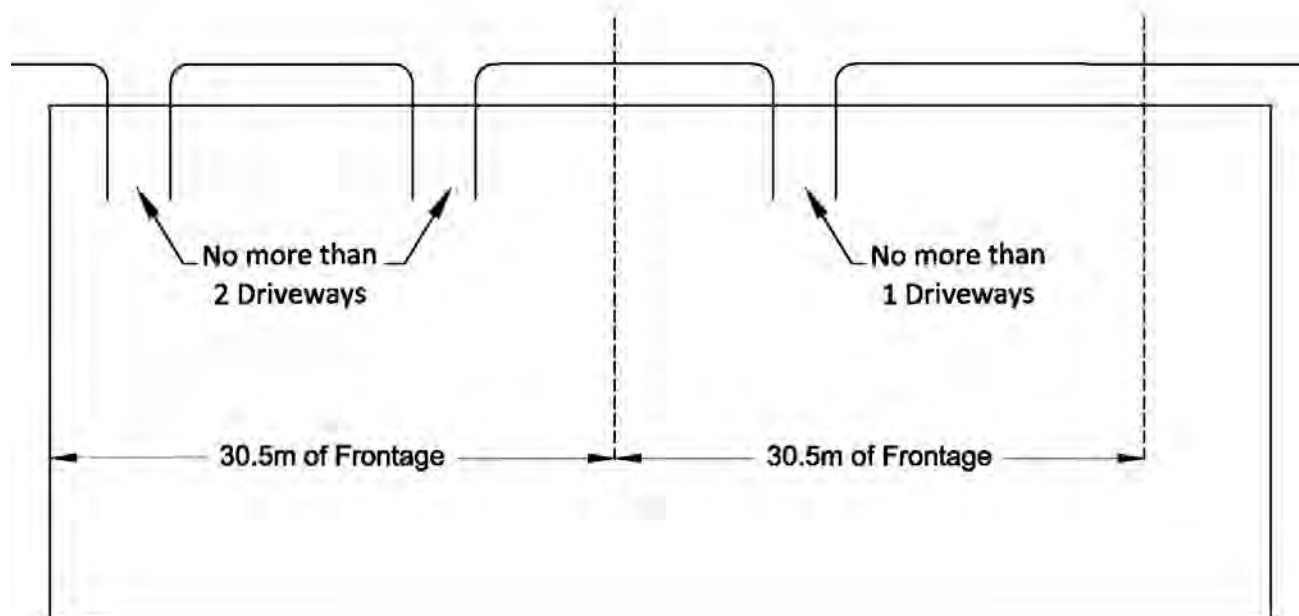
- c. No more than one high volume driveway shall be permitted for each 76.2 metres of frontage.
2. The following provisions shall apply to locating low volume driveways (driveways providing access to residential uses with no greater than 6 parking spaces) near intersections.
- a. No driveways shall be located closer than 9.2 m measured along the lot line from the nearest side of the driveway to the road allowance of the intersecting road.



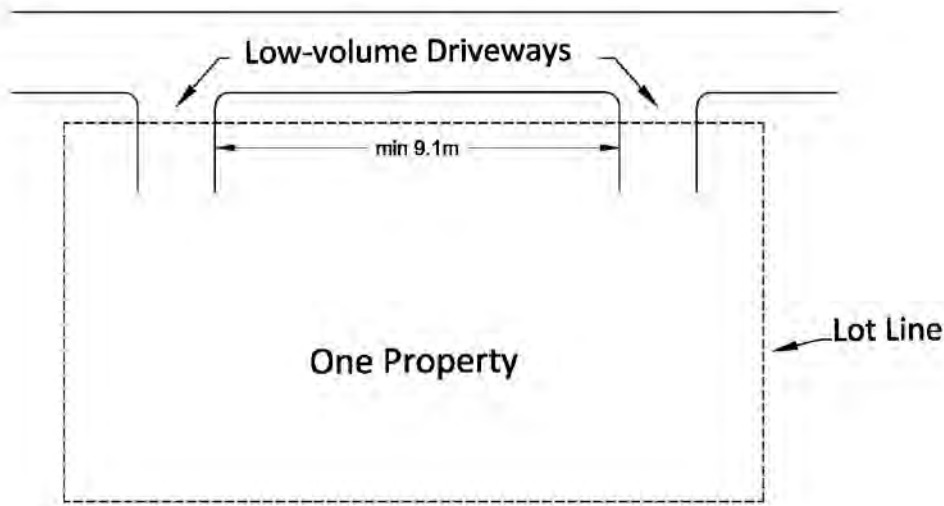
- b. No driveways shall be located closer than 3 m measured along the lot line from the nearest tangent point of the driveway curb radius to the nearest tangent point of the intersecting street curb radius.



- c. No more than two driveways shall be permitted in the first 30.5 metres of frontage of any parcel of land.
- d. Not more than one driveway shall be permitted for each additional 30.5 m of frontage.



- e. The distance between the two closest sides of two low volume driveways serving the same property, measured at the property line, shall be a minimum of 9.2 m.



3. Driveway curb drop measured at the roadway shall not extend beyond the projection of the abutting property line. A minimum driveway separation distance shall be determined based on TAC standards.

Driveway Width

1. The maximum width of a two-way driveway measured perpendicular to the centre line of the driveway and also measured at the street line is 9.2m.
2. A high volume driveway greater than 9.2 m in width is permitted and a central median of a minimum 1 m in width may be required.
3. Where a driveway is intended for use in one direction only (including each half of a driveway), the maximum width shall be reduced to 6m.
4. The minimum width of a driveway serving passenger vehicle parking only shall be 6m for 2-way traffic and 3m for 1-way traffic. The minimum width of a traffic aisle shall be in accordance with the standards of the Zoning Bylaw.
5. The minimum width of a driveway serving as access for commercial vehicles (e.g. to loading areas or for garbage pick-up) shall be 7m for 2-way and 3.5m for 1-way traffic.

Other Driveway Design Standards

1. All access driveways (and traffic aisles) shall be perpendicular to the street (and each other) and designed to ensure adequate visibility of intersecting traffic movements.
2. The sides of a driveway may meet the roadway at an angle less than 90 degree, but not less than 60 degree.
3. The maximum width of a curb cut measured at the roadway is 15.2m.

4. No part of any building or structure or other impediment is to be located within 6m minimum radius from the inside edge of a driveway turn.
5. The minimum curve radius for driveways serving as access for commercial vehicles (e.g. loading areas or garbage pick-up) should be 10.5m.
6. A minimum clearance of 5m shall be provided over all driveways used by commercial vehicles.
7. Traffic signs must be provided indicating the direction of traffic flow on driveways or aisles established for 1-way traffic.
8. The maximum grade of a driveway between the sidewalk and the road shall be 8%.

3.1.3 Fire Department Requirements

All fire access routes and fire hydrants (and water supplies to the hydrants) deemed necessary by the Fire Department must be installed and inspected by the City of Brantford prior to the issuance of a building permit.

Fire Access Route

1. Every building which exceeds 3 storeys in building height or 600m² in building area (the greatest horizontal area of a building above grade within the outside surface of exterior walls or within the outside surface of exterior walls and centre line of firewalls) shall be provided with fire access routes for Fire Department vehicles to the principal entrance and to each building face having access openings for fire fighting, as required by the Ontario Building Code.
2. Fire access routes shall be connected to a public street.
3. Fire access routes shall be located so that the principal entrance and every required access opening are located not less than 3m and not more than 15m from the closest portion of the access route required for Fire Department use, measured horizontally from the face of the building.
4. Fire access routes for every building shall be provided as follows:
 - a. For buildings provided with a Fire Department connection, a fire hydrant must be located so that the distance from a Fire Department connection to a fire hydrant does not exceed 45m and is unobstructed at all times.
 - b. For buildings not provided with a Fire Department connection, a Fire Department pumper vehicle should be located so that the length of the fire access route from a hydrant to the vehicle plus the unobstructed path of travel for the fire fighter from the vehicle to the building is not more than 90m.
 - c. The unobstructed path of travel for the fire fighter from the vehicle to the building is not more than 45m.

5. The unobstructed paths of travel for the fire fighter from the vehicle to the building shall be measured from the vehicle to the Fire Department connection provided for the building, except that where no such connection is provided, the paths of travel shall be measured to the principal entrance of the building.
6. Where a portion of a building is completely separate from the remainder of the buildings so that there is no access to the remainder of the building, the fire access routes shall be located so that the unobstructed path of travel from the vehicle to one entrance of each such portion is not more than 45m.
7. All properties that share a joint fire access shall identify the location and dimensions of the joint access and have such access registered on the property titles.
8. Fire access routes shall have a clear width of at least 6m.
9. Fire access routes shall have a centre-line radius of not less than 12m.
10. Fire access routes shall have an overhead clearance of at least 5m.
11. Fire access routes shall have a slope of not more than 8% over a minimum distance of 15m.
12. Fire access routes shall be designed to support the expected loads imposed by fire fighting equipment and be surfaced with concrete, asphalt, or other materials designed to permit accessibility under all climatic conditions.
13. Turnaround facilities shall be provided for any dead-end portion of the fire access route exceeding 90m, consisting of either a 27m diameter turnaround or a 6m by 24m hammerhead. The design of the hammerhead shall be such that the intersection of the fire route is located no closer than 10m to either end of the hammerhead.
14. Fire route signs complying with City of Brantford Bylaw 144-88, Part V (Appendix 4.11), must be provided at the owner's expense along fire access routes.

Fire Access for Townhouses

1. Access to townhouse units shall be provided, such that Fire Department vehicles can park within 15m of any unit on a hard-surfaced roadway at least 6m wide.
2. Where units of block townhouses front on amenity spaces, vehicular access shall be provided, with hydrant spaces at not less than 90m intervals.
3. Fire access routes to block townhouses should be from a street, as required by the Fire Department.
4. Where a block of townhouses is less than 45m in length, an access to the rear of the townhouse block shall be provided by means of a 3m break at the end of the block. In the case where the length of block townhouses is greater than 45m but less than 60m, access to the rear shall be provided by a 3m break at the end of the block. In addition to the 3m break, firewalls, additional fire hydrants, and or a fire safety plan, to indicate methods employed to prevent the spread of fire during construction, may be required to

the satisfaction of the City's Fire Department. In all cases, visitor parking shall not obstruct a 3m break providing access to the rear of the townhouse block.

Fire Hydrants

1. All fire hydrants must comply with the City of Brantford specifications.
2. Fire hydrants shall be spaced at the following intervals along a street or fire access route:
 - a. 90m for industrial, commercial, or multi-dwelling developments of more than three units;
 - b. 120m for residential developments of up to three units; or
 - c. One hydrant shall be installed at or near the end of the street or fire access route.Site conditions or layout may allow for deviation of these requirements at the discretion of the Fire Department.
3. Where a street or fire access route is less than 90m in length, fire hydrants shall be installed at the discretion of the Fire Department
4. The maximum distance from every portion of a required building face, pursuant to the Ontario Building Code, to a fire hydrant shall not exceed 90m.
5. When the closest public hydrant(s) are located on the opposite side of a multi-lane (4 or more) street across from the lands proposed for development, a private hydrant will be required on the subject lands at no cost to the City.
6. Where municipal water supply is available, fire hydrants shall be located adjacent to, or within 6m of a fire access route and be accessible in the event of a fire emergency.
7. The minimum flow rate from any hydrant assuming all hydrants in use shall be 2275 litres per minute, where such flow rate is available from the municipal water supply. Where such flow is not available from the municipal water supply, the flow rate shall not be less than the existing flow rate. Where the watermain is a dead-end main and is extended over 120m in length, the watermain size shall be increased and additional hydrants installed at the discretion of the Fire Department.

Fire Department Connections

1. The location of the Fire Department connection requires Fire Department approval and shall be located within 45m of a fire hydrant and the access and visibility must be unobstructed at all times.
2. Fire Department connections shall be located in conformity with the Ontario Building Code.

3.1.4 Parking Area

General Requirements

1. Parking spaces required by the Zoning Bylaw shall be provided in usable, demarcated areas surfaced with asphalt or other approved equivalent hard surface. All parking spaces must be demarcated with permanent line paint or other approved pavement marking(s).
2. Parking areas on abutting commercial properties are encouraged to connect with each other to provide movement between lots without having to use the adjacent public street.
3. No maneuvering areas for vehicles to enter or exit a parking lot shall be allowed on a public road. Truck Turning Radii for all movements must be shown on the site plan to ensure adequate on-site and off-site maneuvering room is available wherever trucks are required to make turning movements to, from and within the site.
4. Well-drained snow storage areas should be located adjacent to parking areas and away from catch basins.

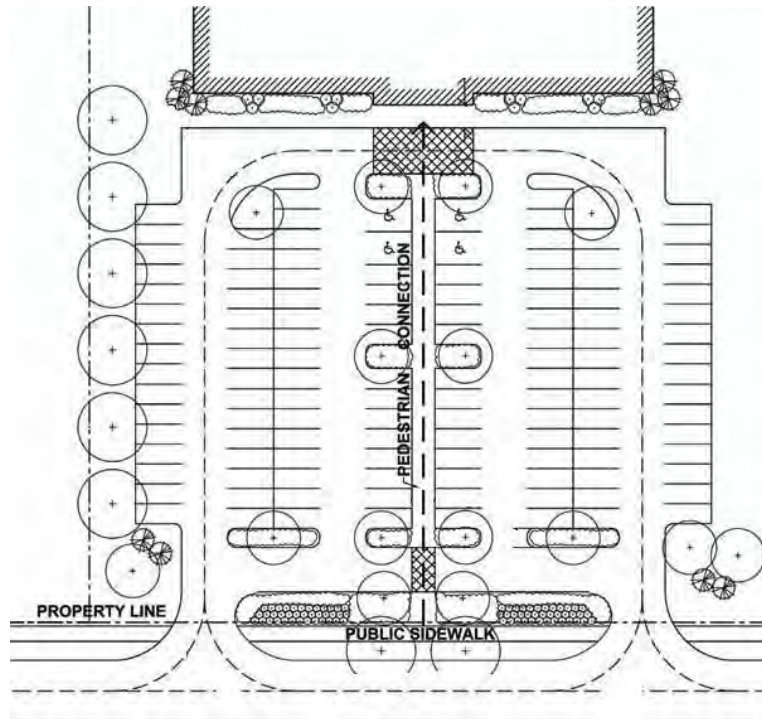
Location of Parking Area

1. Parking areas should generally be located behind or beside the building. This will allow the building to be located closer to the street and reinforce the urban design objective of creating attractive, pedestrian-oriented streets.
2. When parking cannot be located behind the building mass, and there are no other alternatives apart from the front yard for a small commercial development, front yard parking should be limited to a single or double loaded aisle.



Design Requirements

1. Drive aisles in a large parking lot should be generally oriented in the direction of pedestrian movement, or oriented toward (e.g. aligned perpendicularly to) the building main entrances to minimize the number of pedestrian aisle crossings.



2. In a large parking lot, pedestrian walkways should be provided passing through the parking lot and oriented towards the principle building entrances, and preferably buffered by landscape strips.



3. The walking distance from a parking space to a building entrance should generally not exceed 45m. This walking distance may be increased up to 60m if the parking area is

covered within a parking garage, or covered walkways are provided through the parking area.

4. A large parking area should be divided into smaller sections by the use of curbed landscaped islands at least 2.5m wide to sustain tree planting.



5. Generally no more than 15 consecutive parking stalls within a row should be placed without the separation of a landscape island.
6. Landscaped islands, at least 2.5m wide, instead of painted markings, should be provided at the ends of parking aisles.



7. Shopping cart storage bays within a parking lot should be no greater than 36 metres apart per parking aisle.
8. For maneuverability in a dead-end aisle, either a back-up space (e.g. hammerhead) at the end of the row, having a minimum depth of 1.2m and a maximum depth of 2.4m, or a wider parking space (i.e. 3.3m) should be provided.

Screening of Parking Area

1. Parking lots adjacent to public streets should be screened with low level fences, walls or shrub planting. The screening treatment should be low and visually permeable to some degree to maintain some visibility to enhance safety.
2. Where feasible, parking areas should not be located in a yard adjacent to a Residential Zone. Where a parking lot is located in such a yard, adequate screening in the form of a landscaped buffer consisting of planting and fencing should be provided.
3. Buffer strips and landscaping should be provided around the perimeter of parking areas. Buffer strips should generally be a minimum of 3 metres in width, but can vary in width and extent, depending on site characteristics, streetscape, grades and adjacent uses. Low level screening of shrubs, hedges or screen walls along with street trees should edge parking lots next to public streets. Tall and dense screening such as wood fences, brick walls and coniferous trees should be used in rear and side yards adjacent to



residential properties.

3.1.5 Pedestrian Circulation

The following standards should be applicable to all types of developments.

1. Pedestrian walkways shall be designed to make appropriate connections with building entrances, municipal sidewalks, parking lots and amenity areas within and throughout the site.
2. There should be at least one primary pedestrian connection from the site to an abutting street frontage.
3. Secondary pedestrian connections (on-site sidewalks) should link major activity areas, parking lots and buildings.

4. Pedestrian walkways shall be barrier free and designed to assist persons with disability to travel throughout the entire site and from abutting public sidewalks through the use of ramps, curb cuts and handrails.
5. Surfaces for all pedestrian walkways shall be hard, non-slip surfaces, and made of durable materials, to provide for safe movement under all weather conditions and for people with disability.
6. Pedestrian walkways shall be set back 0.6m from parking spaces to accommodate vehicular overhang and snow deposition.
7. Pedestrian walkways shall be separated from traffic aisles and driveways by concrete curbing.
8. Raised curbed pedestrian walkways should have curb ramps at points of entry or connection where there is grade difference.
9. Areas where pedestrian walkways cross vehicular lanes shall be identified by signage, bollards, and or different paving materials or hatched crosswalk markings, to improve visibility and pedestrian safety.



10. Pedestrian walkway widths should be:
 - Primary: minimum 2.0m
 - Secondary: minimum 1.5m
 - Walkway crossing: minimum 2.0m
 - Major commercial walkway crossing: 3-10m

3.1.6 Drive-through facilities

1. The design of drive-through facilities shall comply with regulations in Section 6.18.10 of the Zoning Bylaw.
2. Drive-through facilities should be located behind or along the sides of the building, and away from public streets or internal roads. Where a drive-through facility must be located

adjacent to a public street or a major internal road, it must be screened by a landscape strip.

3. Drive-through facilities should be located away from residential or sensitive land uses. Where a drive-through facility must be located next to these uses, it must be buffered by a landscape strip or barrier (which may include a noise wall) capable of mitigating the impact of noise, emission, view and light. A noise study may be required to ensure that noise generated by the facilities does not exceed the maximum limits established by the Ministry of the Environment.
4. The location and layout of a drive-through lane should be such that the traffic flow entering and leaving the drive-through lane does not disrupt traffic of on adjacent public street or internal road, or internal parking spaces on the lot.
5. The main building entrance should be located as far as possible from the order window of a drive-through lane. Pedestrians should be able to enter the main door of the building from the parking lot without crossing the stacking lane.
6. Drive-through stacking lanes should be separated from other areas of the site by raised landscape islands, landscape strips or fencing.



7. Entry and exit points of a drive-through lane should be identified by signs.

3.1.7 Site Lighting

These lighting standards have been established using the Illuminating Engineering Society of North America (IESNA) G-1-03 'Guideline for Security Lighting for People, Property, and Public Spaces'. However in some instances, the City of Brantford's lighting standards may be less than those found in the IESNA G-1-03 Guidelines, due to localized features, characteristics, or activities. This allows a pragmatic approach to site lighting within the City.

Definitions

Architectural Lighting – A Luminaire used for the sole purpose of accentuating a specific building feature or detail.

Candela – The International System of Units' unit of luminous intensity in a specific direction equal to one lumen per steradian (lm/sr).

Cutoff – A means of defining the distribution of a luminaire based on candela per 1000 lamp lumens where the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire. Luminaires are rated as Full Cutoff, Cutoff, Semi cutoff, or Non cutoff.

Cutoff (full) – A luminaire light distribution where zero candela intensity occurs at an angle of 90 degrees above nadir, and all greater angles from nadir. Additionally the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at an angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

Cutoff (semi) – A luminaire light distribution where the candela per 1000 lamp lumens does not numerically exceed 50 (5 percent) at an angle of 90 degrees above nadir, and 200 (20 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

Cutoff (non) – A luminaire light distribution where there is no intensity (candela) limitation in the zone above maximum intensity.

Decorative Lighting – A luminaire used to accentuate a specific site feature or detail, or used to project a visual feature, or create a visual mood on the site, but not for the purpose of general sight illumination.

Direct Glare – Glare resulting from high luminance or insufficiently shielded light sources in the field of view.

Exterior Lighting – Illumination emanating from any source or fixture exterior to the building (or attached to the exterior of the building).

Foot-candle – The amount of illumination provided by one lumen uniformly distributed on one square foot of surface measured at 46 cm (18 inch) above the surface.

Glare – The sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted, which causes annoyance, discomfort or loss in visual performance and visibility.

IES or IESNA – Illuminating Engineering Society of North America

Luminaire (light fixture) – A complete lighting unit consisting of a lamp or lamps and ballast(s) (when applicable) together with the parts designed to distribute light, to position and protect the lamps, and to connect the lamps to the power supply.

LUX – Unit of luminance, 1 Lux = 1/10.764 foot-candles

Nadir – The point on the celestial sphere directly below an observer and diametrically opposite the zenith.

Uniformity – The evenness of the distribution of light on the surface. Uniformity standards have been established by the IESNA.

General Requirements

1. Lighting should provide sufficient illumination of the site for pedestrian security and safety, vehicular movement, and enhancement of external building design and landscaped open space.
2. Design of lighting and light fixtures shall be compatible with the character of the building(s), landscaping and the site.
3. The type, location, height, intensity and direction of lighting shall ensure that glare is not cast onto adjacent residential properties adversely affecting living environment, or onto adjacent public streets. No light sources shall be visible from any adjacent residential properties.
4. The proposed location of the light poles must not conflict with the location of existing or proposed trees and landscaping on the site or any proposed tree protection measures.
5. Lighting shall be designed in a coordinated manner for the entire site and shall adhere to the fundamentals of CPTED (Crime Prevention Through Environmental Design) and IESNA Guidelines 'G-1-03'. Existing lighting conditions should also be considered.
6. The 'Photometric Plan' (or 'Site Lighting Plan') should demonstrate general compliance with lighting standards of this section. The Photometric Plan shall be prepared by a qualified professional engineer/designer, and should utilize 'LUX' measurements but also calculate these measurements in 'foot-candle' for information.
7. Flood lighting shall be directed away from habitable adjacent living spaces and streets, as per Section 6.13.1 of the City of Brantford Zoning By-law 160-90.
8. Lighting design and installation shall ensure that illumination needs are met without intruding on adjacent properties. The lighting uniformity ratio shall not exceed 4:1.
9. All concrete bases of light poles must be decorative architectural concrete.

Design Requirements

1. Fixture (luminaire)

The light source (bulb) shall be concealed with an opaque housing and shall not be visible from any street right-of-way or adjacent properties. The fixture (unless decorative), shall be horizontal to the ground with full or sharp cut-off within IES standards. A maximum 15 degree angle on the light fixture is permitted if the light source is not visible and does not abut a residential property.

2. Mounting

Fixtures shall be mounted in such a manner to ensure that light is contained on-site. Light is not permitted to cross any property line. Professionally designed accessory light-shields, and 'full cut-off' light fixtures should be used to achieve this goal.

3. Light Source (Lamp)

Energy efficient lighting such as LED and (rare earth phosphors) florescent tube are strongly encouraged; however, alternative light sources are also permitted. All lighting (exclusive of Architectural and/or decorative lighting) shall have a Colour Rendering Index rating of no less than 65.

4. Illumination Levels

- a. Designers should strive to achieve luminance of 5 to 20 LUX (0.5 to 2 fc) on all exterior building façades, as well as all entry points with a uniform ratio no greater than 8:1 or 6:1 (for façade surfaces).
- b. All 'Barrier Free' routes of travel external to the building shall maintain a minimum illumination of 50 LUX.
- c. All exterior lighting shall be designed and located in such a way that the maximum illumination trespass of 1 metre within the affected property does not exceed 2 LUX (0.2 fc) on abutting residential properties, and 15 LUX (1.5 fc) on abutting commercial properties and rights-of-way.
- d. All site lighting shall be designed so that the level of illumination as measured in LUX at any one point meets the standards of IESNA-G-1-03 'Guidelines for Security Lighting for People, Property, and Public Spaces' (Schedule A). If in question or dispute, the IESNA-G-1-03 standards shall be deemed the maximum standards.
- e. Lighting or glare that unnecessarily illuminates or substantially interferes with the use or enjoyment of any adjacent property is prohibited. Lighting unnecessarily illuminates an adjacent property if it exceeds the requirements of the lighting standards (Schedule A), or the lighting source is directly visible from that property. Cutoff fixtures, shields and appropriate adjustment of fixture mounting height, wattage, aiming angle and fixture placement should be used to control lighting.
- f. Lighting shall not be oriented to direct glare or excessive illumination onto streets or property in a manner that may distract or interfere with the vision of drivers or pedestrians.
- g. Where appropriate, architectural and decorative lighting are strongly encouraged to enhance the property; however, luminaries shall be aimed or shielded to minimize light spill into the night sky.

5. Photometric Plan Submission Requirements

The Photometric Plan shall include a point-by-point photometric grid superimposed over the site that clearly indicates the proposed site lighting levels, a fixture legend indicating the fixture type, fixture mounting height, bulb wattage, shield specifications (if employed), bulb type, bulb Colour Rendering Index rating(s), and fixture light shield locations. In addition the plan shall include a chart that calculates average LUX and foot-candle.

Schedule A – Site Illumination Standards

Adopted from IESNA-G-1-03 'Guidelines for Security Lighting for People, Property and Public Spaces'

Type of Use	Location	Minimum Illumination	Maximum Illumination	Zero Illumination Option (fc)
R,C,I,IN	Entry Feature Sign	5 LUX	8 LUX	Yes
		.5 fc	.8fc	Yes
C, I, IN	Storage Yard	5 LUX	20 LUX	Yes
		.5 fc	2 fc	Yes
C	Bank Machine	100 LUX	150 LUX	No
	(within 3m)	10 fc	15 fc	No
R, C, I, IN	Parking Garage, Covered Parking	45 LUX	70 LUX	No
		4.5 fc	7 fc	No
C, I	Parking Lot	15 LUX	30 LUX	No
		1.5 fc	3 fc	No
IN	Parking Lot	15 LUX	20 LUX	Yes
		1.5 fc	3 fc	Yes
MR	Parking Lot	5 LUX	15 LUX	No
		0.5	1.5 fc	No
C	Drive Up Service Window	30 Lux	60 LUX	No
	(within 3 m)	3 fc	6 fc	No

C, I	Gas Station Pumps		50 LUX	60 LUX	No
	(within 3 m)		3 fc	6 fc	No
MR, C, I, IN	Sidewalks, Walkways, Paths		5 LUX	15 LUX	No
			0.5 fc	1.5 fc	No
MR, C, I, IN	Stairways		15 LUX	30 LUX	No
	(within 3 m)		1.5 fc	3 fc	No
MR, R, C, I, IN	Open Space		.5 fc	15 LUX	Yes
	(undeveloped, Incl. Parkland)		.5 fc	1.5 fc	Yes

R – Residential MR – Multi-Residential I – Industrial C – Commercial IN – Institutional

3.1.8 Accessible Design

The City of Brantford requires that site design shall have regard for accessibility for persons with disability. Ontario Integrated Accessibility Standards of the Accessibility for Ontarians with Disability Act (AODA) is the provincial regulation governing the accessibility Design of Public Spaces (DOPS). DOPS applies only to new construction and major changes to existing features, and it applies to different categories of public and private organizations at different timelines. Detailed guidelines of DOPS can be accessed through the following web link:

http://www.mcass.gov.on.ca/en/mcass/programs/accessibility/other_standards/iasr_2012/toc_iasr.aspx

Accessibility for Ontarians with Disability Act Integrated Accessibility Standards can be downloaded at the following link:

<http://www.ontario.ca/laws/regulation/110191>

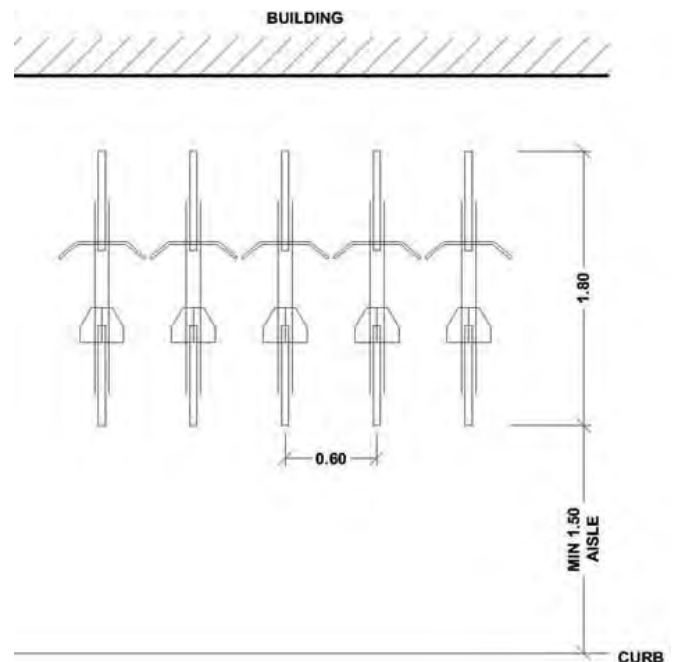
“Accessible Design” calls for design that includes the needs of people whose physical, mental, or environmental conditions limit their performance. Accessible public spaces include specific features that make it easier for everyone – people with disabilities, seniors and families – to use public spaces. The follow are some general site design principles for accessible public spaces:

- Sidewalks free of barriers and wide enough to move around
- Pedestrian signals at intersections with both audible and visual cues to move people safely across the street
- Gentler ramp slopes
- Wider accessible parking spaces for people with mobility limitations

3.1.9 Other Site Elements

Bicycle Facilities

1. A commercial, institutional, multi-residential, mixed use or industrial development should include a well-lit, hard surfaced area in close proximity to the main entrance of the building, for the parking and/or storage of bicycles. This area should include bicycle racks and permanent signage to identify the facility and its use.
2. Bicycle parking standards:
 - Bicycle parking space dimension: 0.6m x 1.8m
 - Bicycle aisle: 1.5m
3. The number of bicycle parking spaces should be generally 10% of the number of parking spaces on site.



Waste and Recyclable Storage Areas

1. Waste and recyclable storage areas should be located within the site.
2. Garbage storage facilities shall be located where convenient for the user, and where there is appropriate access for the collection vehicles.
3. Garbage storage facilities shall be located in an inconspicuous location or screened from the street by landscaping and fencing.



4. Garbage storage facilities shall facilitate the segregation and collection of materials. A secured enclosure is required for garbage bins and dumpsters and it should be constructed of a non-combustible and durable material.

5. Protective bollards (with shields and reflective bands) are required at corners of a garbage storage facility where it abuts vehicular traffic areas.
6. The exterior enclosure should match, or complement the exterior architectural finish of the building.
7. Waste collection truck access to garbage storage areas should be designed such that truck movements will not disrupt other vehicular and pedestrian access, play areas and parking areas. Trucks should avoid reversing or maneuvering onto public streets.
8. In a multi-tenant or multi-unit site, waste storage areas should be consolidated into a central location or a location accessible to all tenants.
9. Where suitable, consider using other waste storage systems (such as the Molok system) instead of the conventional waste storage system.

Loading, Service and Utility Areas

1. Loading facilities shall be located in areas that are outside the general view from all abutting streets yet in close proximity to a building's delivery access. In instances where such locations are not possible, landscape screening and buffering shall be required.
2. Service area (loading and garbage) should be designed such that when in use they do not block access to parking areas.
3. Long and difficult back-up movements for service vehicles through a parking area should be avoided by providing a separate hammerhead area or turning circle.
4. Truck access to service and loading areas should be designed with sufficient space so that truck movements will not disrupt other vehicular and pedestrian access. On-site circulation for trucks should avoid reversing or maneuvering onto public streets.
5. Materials utilized to screen service areas should be consistent with the overall building design and materials.
6. Noise attenuation may be required for service and loading areas adjacent to sensitive uses such as residences, schools, hospitals, etc.
7. Commercial and industrial areas with significant shipping and loading requirements should have a separate truck access to the site.
8. Signage should be placed to clearly identify loading and service areas.
9. Utility areas and mechanical equipment should be screened from public view.



Outdoor Amenity Areas

1. Outdoor amenity areas should be provided as a contiguous and usable space free from constraints such as steep slope, overland drainage flow or catch basins, etc.
2. Where appropriate to the development, amenity areas should include children's playgrounds.
3. Amenity areas should be defined by landscaping, planting, fencing, or different pavement materials.
4. Amenity areas shall be furnished with outdoor furniture (or play facilities where applicable), lighting and plantings to support passive or active recreational use.
5. Outdoor furniture and fixtures such as special lighting, trellises, arbours, raised planters, benches, fences and public art should be considered where people will congregate in outdoor amenity spaces.
6. Parking spaces should be oriented so that headlights and fumes are not directed towards the private amenity space, either by using parallel parking or screening with planting and fencing.

Commercial Outdoor Patios

1. The most common location of an outdoor patio is at the front of a restaurant along the street, extending from the building façade toward the edge of the sidewalk. The minimum clear width of public sidewalk abutting an outdoor patio should be 1.8m.
2. Outdoor patios in a shopping mall may be oriented to a building face or freestanding with a kiosk. A minimum of 6m clear width for pedestrians and emergency vehicles shall be maintained.
3. Outdoor patios and their associated awnings, railings, etc. shall not obstruct emergency access to the building and building entrances at all time.
4. Barrier-free access to outdoor patios should be provided for persons with disabilities.

Curbing

Continuous 15cm high poured concrete curbing shall be required in the following areas:

- Vehicular access from municipal roadways
- Landscaped traffic islands within a parking lot
- Pedestrian walkways adjacent to driveways, traffic aisles or parking lots
- Between a parking lot and a landscape area

Signage

1. All ground signs and pylon signs shall be shown on the site plan and shall comply with the City's Sign Bylaw.

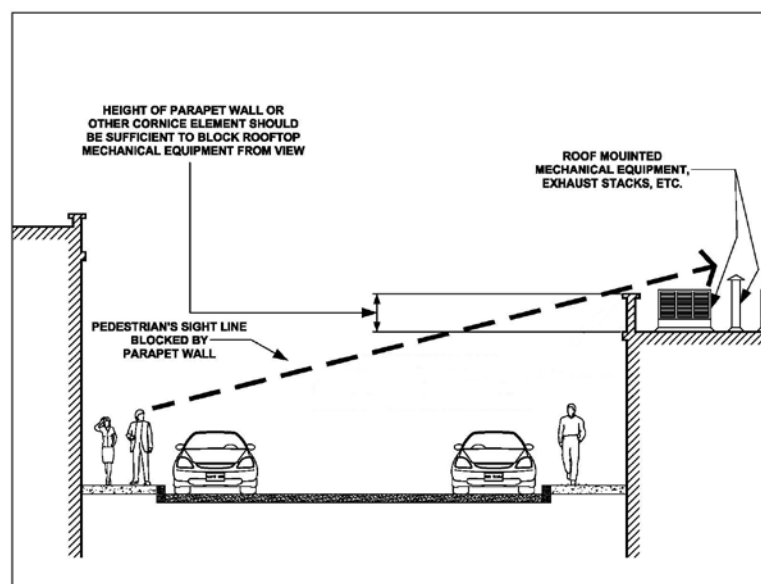
2. Signs must not block site lines for vehicular traffic and shall not be located within the public road right of way or within 1.5m of any vehicular traffic lanes.
3. Signage shall be coordinated throughout the site, designed in a manner consistent with the architecture and integrated into the overall landscape design.
4. Signage shall be appropriate in scale so as not to dominate the site or streetscape, and should contribute to an overall attractive site appearance.

Municipal Addresses

1. The municipal address or unit number of a building shall be displayed during all stages of construction.
2. The municipal address or unit number of a building shall be displayed within 2m of the building's main entrance. For large scale institutional, industrial, or multi-residential buildings, larger municipal address signage should be installed on the façade of the building abutting the respective municipal roadway, either above the main entrance or near the roofline of the building. Municipal address signage shall be clearly visible, illuminated, and identifiable from the respective roadway.
3. The municipal address of a site shall be displayed at prominent locations or on entry features abutting the respective municipal roadway.
4. At the main entrance of a large multi-tenant or multi-building development, a map showing the internal roads and / or walkways and the location of the units or buildings should be displayed to assist way finding for visitors and emergency services.

Rooftop Equipment

Rooftop equipment must be screened from all street views. Chimneys, stairways, service accesses, etc, shall be consistent with the building's architectural character by using similar building materials. This applies to all buildings in a public or private development.



Architectural Concrete Bases

All exposed concrete bases for light standards or bollards greater than 5cm from finished grade, shall be surfaced with architectural concrete finishes or other decorative finishes. All concrete bases within 3m of vehicular traffic areas shall employ permanent reflective strips/bands on/around the base's exterior. Construction details of such bases shall be included on the site plan.



Crime Prevention Through Environmental Design (CPTED)

CPTED is a multi-disciplinary approach to deterring criminal behavior that relies upon the environment to influence an offender's choices prior to the criminal act. It is based on the notion that instead of a reactionary response to crime, which typically results in increased fortification and fear of crime, a set of principles can be employed to better develop a site, which will positively influence the likelihood of proper and appropriate behavior on that site. The applicant is strongly encouraged to review and apply CPTED principles and methods in site design. For more information, consult the cptedontario.ca web site.

General CPTED Principles

1. Natural Surveillance

Maximizing visibility and the opportunity for observation through the placement and design of physical and social features. This includes the placement of gathering spaces/points of interest, building orientation, lighting, windows, entrances/exits, parking lots, walkways, security stations, fencing, landscaping, vegetation, signage, as well as any other physical obstructions. This principle helps create the perception of risk to an offender.

2. Natural Access Control

A logical and organized design to restrict, encourage and safely channel movement of people and vehicles into, out of, and within a site in a controlled manner. Natural Access control should be coupled with Natural Surveillance techniques. This principle helps

create the perception of control over the offender and easily identify those who venture into areas not intended for their use.

3. Territorial Reinforcement

Defined property lines and clear distinctions between public, semi-private, and private spaces through physical or visual design, can create a sphere of territorial influence that can be perceived by, and may deter potential offenders. Territorial reinforcement can be created using among other things, landscaping, pavement designs, gateway treatments, signs and fences. This principle helps create a sense of proprietorship by the rightful user and helps more easily identify those who venture into areas not intended for their use.

4. Maintenance

Well-maintained buildings and grounds inform potential offenders that 'Someone is Home'. It also reinforces the space's intended use and purpose. This principle helps create a sense of occupancy to the offender, as well as guardianship and proprietorship by the rightful user.

3.2 Landscape and Planting Design

As major elements in a site, landscaping and planting play an important role in enhancing the outdoor environment, providing shade, and creating a favourable micro climate. Landscaping and planting also help to integrate buildings with the site and surrounding areas, and buffer adjacent undesirable noise, sight and conflicting uses.

3.2.1 Landscape Architect Requirement

Landscape plans must be prepared by a Landscape Architect, who is a member in good standing with the "Ontario Association of Landscape Architects" (OALA). All plans must bear an OALA membership stamp, signature and date.

Where it has been determined by the City of Brantford that the proposed development will require limited landscaping, the requirement above may be waived with the provision that it will be reinstated if satisfactory landscape plans have not been produced after two formal submissions.

3.2.2 Landscape Standards

General Landscape Objectives

Applicants are encouraged to work with consultants to provide innovative designs with a goal towards improving the City's aesthetic image and create an attractive, clean and prosperous urban environment. Landscape designs should be developed in keeping with the distinct characters of different communities within the City and to preserve and enhance the unique qualities of each site including historic values and natural landscape features.

More specifically appropriate landscaping is required to achieve the following objectives:

- Provide scale, colour, texture and variety (particularly seasonal) to the exterior environment.
- Add visual interest to open spaces and blank façades.
- Soften dominant building mass and create a human scale for the pedestrian.
- Provide definition of public walkways, vehicular routes, public vs. private space and open areas.
- Provide a consistent, inviting visual image between adjacent properties along the streetscape.
- Screen unsightly areas; buffer site(s) from adjacent conflicting land use(s).
- Provide protection from excessive wind, sun, rain and snow.
- Stabilize steep embankments.
- Enhance the appearance of building setbacks and yard areas.
- Minimize the negative visual impact of parking and service facilities from adjacent properties and streets.
- Reduce the negative environmental impact often associated with large scale parking areas.
- Achieve energy conservation, water efficiency and help offset air pollution.
- Ensure long-term maintenance practice can be achieved.

- Protect natural features and tree conservation.
- Integrate storm water management features
- Create safe urban environments. Address safety issues with regard to site visibility as well as vehicular and pedestrian access and circulation, through the application of Crime Prevention through Environmental Design (CPTED) concepts and principles.

Landscape Elements for Specific Land Uses

The table below indicates the minimum landscape elements required for various types of developments, to be shown on the site plan and detailed on the landscape plans.

Landscape Site Elements

Landscape Site Elements	Industrial	Commercial	Apartment	Townhouse (more than 4 units)	Institutional
Landscape planting required along all property lines and municipal roadways	✓	✓	✓	✓	✓
Vehicular access to the site is to be defined by accent planting	✓	✓	✓	✓	✓
Main building entrances to be identified by a landscape area (accent and/or foundation planting)	✓	✓	✓	✓	✓
Pedestrian walkways to building entrances to be provided from the parking area	✓	✓	✓	✓	✓
Walkways, curb cuts & ramps, handrails, and so forth to be provided and designed for people with disabilities	✓	✓	✓	✓	✓
Pedestrian walkways and clear pedestrian routes to be provided from perimeter sidewalks to building(s) and from building to building throughout the site where possible	✓	✓	✓	✓	✓
Landscape screening required for parking, storage and service areas	✓	✓	✓	✓	✓
Children's recreation facilities complete with walkway connections from the building to the recreational facilities			✓	✓	✓
Landscape screening of privacy areas required from adjacent pedestrian walkways, internal roadways, recreational amenities & service areas			✓	✓	
Landscape screening and/or fencing required for all exposed parking, ground-level units, service & garbage areas adjacent to other uses		✓	✓	✓	✓
Landscaping including tree planting along internal roads	✓	✓	✓	✓	✓
Landscape screening of rear yard setbacks between privacy areas of townhouse blocks				✓	
Patios which may include wood decks				✓	
Privacy screens (1.8m high wood screen fence) required between rear privacy areas of units				✓	
Privacy screen returns may be required depending on layout of townhouse blocks				✓	
For large and/or high profile sites, establish focal points or areas of greater interest. For example, a sculpture, flower garden, pool, fountain, patio, naturalized areas, etc.	✓	✓	✓	✓	✓
Incorporate landscape features into rest areas to provide	✓	✓	✓	✓	✓

Landscape Site Elements	Industrial	Commercial	Apartment	Townhouse (more than 4 units)	Institutional
protection from environmental elements such as wind, sun, street noise, etc.					
Construction of berms or grade changes is encouraged to provide topographical relief in conjunction with buffering and screening	✓	✓	✓	✓	✓
Bicycle racks, site furniture	✓	✓	✓	✓	✓
Buffer strips are to be landscaped and planted with trees/shrubs	✓	✓	✓	✓	✓
Front yards to incorporate at least 1 tree and planting bed per unit/lot				✓	
Rear yards to incorporate at least 1 tree per unit/lot where abutting open space or other public areas				✓	
Intense landscape treatment required at intersection of municipal roadways	✓	✓	✓	✓	✓
Retaining walls over 1.0m high may require a guard rail at top of the wall subject to specific site conditions	✓	✓	✓	✓	✓
Recycling and garbage enclosure screening	✓	✓	✓	✓	✓
Ground supported and portable sign locations including lighting	✓	✓	✓	✓	✓
Exterior lighting of all vehicular and pedestrian routes	✓	✓	✓	✓	✓

Site Standards

Grading and Drainage

1. Developments shall respect the existing pre-development topographies and natural grades to the greatest extent possible.
2. The grading shall be consistent with the site servicing plan(s). Slope gradients must be indicated on the drawings as well as drainage patterns showing the direction of slopes.
3. Berms over large areas generally shall be arranged in a varied manner, using different slopes and heights, except when berms are used to screen an unsightly area where the full extent of the berming may be required.
4. Site grading shall provide proper drainage of the landscaped areas without causing soil erosion, and shall be sufficient to reduce winter kill on lawn areas and minimize damage caused by road salt.
5. Generally no slope should exceed 33% (3:1). Berms should be graded to appear as smooth, rounded, naturalistic forms.
6. Grass swales should slope at least 50:1.
7. The building and other site developments should not interfere with surface drainage. Lot grading generally should match the natural conditions on adjacent properties, unless there is an approved plan establishing other conditions.

Fencing

Wood Privacy Fencing and Standard Wood Fencing

1. 1.8m high Wood Privacy Fencing shall be required between all residential properties that abut multi-residential, commercial, industrial, or institutional uses.
2. All wood fencing is to be constructed with pressure treated pine or western red cedar with galvanized hardware. Construction grade wood material is not acceptable.
3. There shall be no openings between the boards of Privacy Fencing.
4. All fencing shall extend to the ground surface to prevent openings.
5. All wood fencing must be designed with some attention to detail / visual interest (i.e. lattice top) and must be integrated into the overall landscape design. Broad expanses of board on board fencing with no vertical or horizontal articulation / wood detailing will not generally be permitted.
6. Construction details must be provided on the site plan or landscape plan.

Chain Link Fencing

1. In areas where chain link fencing is required adjacent to parks and open space areas, a standard 1.5 metre high black vinyl coated fence must be installed. (Refer to Standard Chain link Fence Detail – Appendix 4.14)

Perimeter Fencing

1. Fencing abutting municipal roadways requires an upgraded design (decorative iron fencing, masonry pillars or upgraded wood detailing). High profile sites along busy streets may require perimeter fencing in addition to landscaping to provide appropriate screening and an attractive streetscape.
2. All perimeter fencing (including noise attenuation walls) abutting City property must be located 0.3 m within the property line on the subject property.

Other Fencing

1. Where concrete or masonry fence is proposed, construction details must be provided for review.
2. The acoustical design and structure of all required noise attenuation walls must be approved by a consulting engineer. A noise wall supplier must be selected from the City's List of Approved Noise Wall Suppliers (Appendix 15), and the name of the supplier must be indicated on the site plan.

Planting Standards

Planting / Landscape Strip

1. Generally a minimum 3m wide perimeter planting strip shall be provided for all commercial, park, institutional, industrial and medium / high density residential developments. Sites adjacent to high profile, high volume municipal roads may require wider planting strips with more intense landscape treatments (decorative fencing, lighting, additional planting, and so forth). Paved areas, excluding pedestrian walkways, loading zones and driveways, are not permitted within the landscaped strip. Where the width of the landscape strip is reduced, more intense landscape treatments are required to compensate for the loss of width.

2. The minimum requirement within and along planting strips is the planting of large deciduous shade trees (refer to the *Minimum Tree Spacing Requirements Table*) together with suitable ground cover.
3. A minimum planting bed area of 1m² per 1m of perimeter length or frontage shall be provided for all planting strips.
4. The equivalent number of trees and combination of shrub beds can be provided in a group or groupings along the landscaped strip.
5. Generally shrubs should be maintained at an average maximum height of 1.2m, to provide visibility to and from the site. Individual shrubs or small groupings of shrubs higher than 1.2m will be permitted intermittently to achieve greater visual interest. Within a visibility triangle, shrub heights should be maintained at 0.6m maximum.
6. Berms are encouraged within the landscape strip to provide additional visual buffering where there is adequate space.
7. The planting strip may also include architectural iron fencing, brick/concrete columns or piers, and low stone or masonry walls to improve views into the site and help screen vehicles, service areas and other unsightly areas.
8. Planting strips should provide opportunities for “framed views” of the site, mass shrub bed plantings, and pedestrian access points. Monotonous linear plantings will not generally be acceptable.

Landscape Buffers and Screens

1. Landscape buffers and screens including berming, help provide a noise, visual and psychological separation to reduce the adverse effects of conflicting land uses. Buffers may include a solid privacy fence combined with landscaping, or a combination of distance, landforms (berming) and/or planting.
2. Buffer plantings should contain a greater percentage of coniferous material, at adequate and varying height(s) to provide a visual screen. Adequate screening of garbage receptacles, service areas, parking, storage yards and other unpleasing views must be provided within the site.
3. Buffers shall also be provided (in accordance with the Zoning By-law) between:
 - industrial, commercial or institutional uses *and* residential or open space
 - medium and high density residential uses *and* low density residential uses

Plant Specifications

1. Minimum acceptable sizes for plant material:

Deciduous Trees:	60 mm caliper
Small Ornamental Trees:	50 mm caliper
Coniferous Trees:	1.8 –3.0m high, (average of 1.8m)
Deciduous Shrubs:	60cm high, minimum 2-3 gallon pot size (<i>some exceptions based on species</i>)
Coniferous Shrubs:	40cm spread (<i>spreading habit</i>) or 80cm height (<i>upright habit</i>), minimum 2-3 gallon pot size
2. All plant materials should conform to the latest edition of the Canadian Standards for Nursery Stock, Canadian Nursery Landscape Association.

3. Refer to the “Tree and Shrub Planting Details” and the “Topsoil and Sod Standards” sections for general planting requirements. Plantings installed directly into the subsoil are not acceptable. All planting beds and tree pits must have the required amount and quality of topsoil in order to meet the requirements for the release of securities.

Landscape Plantings

1. The spacing of plant material must account for the ultimate size and form of the selected species and also the purpose of the planting whether it is for screening, shade, aesthetics, naturalizing, or rehabilitation, etc. Generally plant material must be spaced to provide continuous plant groupings and masses. Large gaps in planting beds, or plants spaced too widely (considering their ultimate spread) will not be permitted.
2. No planting will be permitted within a drainage swale.
3. Generally all landscape planting bed areas containing trees and shrubs and/or perennials must be a minimum width of 1.5m. All shrubs / perennials must be installed in continuous planting beds. Monotonous, linear planting beds and landscaped areas will not be permitted. Creative design(s) and layouts are encouraged, using a diverse selection of plant material.
4. All trees and shrub beds must be mulched with a minimum of 100mm shredded bark mulch or equivalent mulch.
5. The use of native plant material indigenous to the Brantford area is encouraged, particularly on sites adjacent to existing natural areas. Generally a minimum of 50% of the total number of trees and 25% of shrubs planted shall be native species (Cultivated varieties of species are acceptable).
6. Generally, at least 40% of any proposed plantings shall consist of coniferous trees and shrubs.
7. All landscaped areas abutting parking areas and driveways shall be protected by 15 cm high concrete curbing.
8. Portions of the property that are reserved for expansion and otherwise unused shall be seeded and maintained as lawn.

Street Tree Planting

The developer may choose to acquire and install the street trees, rather than contribute to the City’s Boulevard Tree Contribution Fund. In this case the developer must adhere to the City of Brantford Street Tree Planting Guidelines (Appendix 16). In such cases, street trees shall be shown on all Landscape Plan drawings. The species, variety, size and location of trees will be reviewed and approved through the Site Plan Process. In addition, any required off-site securities shall include street tree plantings.

Minimum Tree Spacing

High branching deciduous trees are required along property lines, municipal roadways and within perimeter planting strips. The minimum number of trees required will be determined using the table below. The requirements of this table are in addition to any landscape planting strip or screening requirements. These trees can be provided in a group or groupings within the landscape strip. For example, commercial use adjacent to residential use will require 1 tree per 6 metres of the adjacent property line or parking lot perimeter.

Minimum Tree Spacing Requirements

Tree Spacing Along Perimetre Planting Strips / Property Boundary Requirements (One tree required every interval)						
Proposed Land Use	Commercial	Industrial	Institutional	Residential	Municipal Street	Open Space or Park
Commercial	11 m	9 m	9 m	6 m	7.5 m	9 m
Industrial	9 m	N/A	6 m	6 m	7.5 m	9 m
Institutional	9 m	9 m	9 m	6 m	7.5 m	9 m
Residential	6 m	6 m	6 m	6 m	7.5 m	9 m
Municipal Street	7.5 m	7.5 m	7.5 m	7.5 m	N/A	N/A
Open Space or Park	9 m	9 m	9 m	9 m	N/A	N/A

Restrictions

1. Invasive Non-native Plant Species

The planting of aggressive non-native species within or adjacent to woodlands or natural areas is prohibited in order to help safeguard the long-term ecological integrity of these areas. The Canadian Botanical Conservation Network (consult www.rbg.ca) invasive species list identifies plants that are not suitable for restoration and landscaping within and adjacent to storm water management areas, woodlands or natural areas. Note that this information is updated from time to time and applicants must reference the most current plant list(s) available.

2. Birch Species

Due to susceptibility to Bronze Leaf Borer, drought and short life span birch species will generally not be permitted.

3. Pyramidal Lombardy Poplar Species

Due to a short life span, this plant will only be permitted in combination with longer-lived tree species.

4. Ash Species

Ash trees are not permitted.

5. Plant Diversity

A diverse selection of proposed plant species is required on all landscape plans. The use of limited species in continuous rows, planting beds, mass groupings and large quantities will not be permitted.

General Landscape Standards for Parking Lots

Landscaping in parking lots shall achieve the following objective:

1. Provide an aesthetically pleasing view from the street
2. Break up the visual monotony of large expansive paving surfaces
3. Reduce summer pavement temperatures

4. Unify the appearance of the subject site and coordinate it with the surrounding development
5. Screen adjacent areas from headlights and the view of cars
6. Define access aisles to and from parking facilities
7. Attractively and efficiently separate adjacent paving lots under separate ownership and serving separate developments (except in cases of joint legal access)
8. Promote the safety, orientation and movement of pedestrian use

Landscape Standards:

1. Landscaped planting areas, measured from backside of curb, shall have a minimum dimension of 2m.
2. Landscaped planting areas shall contain, together with suitable shrub / ground cover plantings an average of :
 - one large shade tree every 8m, or 1 large tree / 16 sq. metres
 - one small tree every 5m or 1 small tree / 10 square metres
 - a combination of both
3. All landscaped planting areas must be protected from encroachment of automobile traffic by continuous concrete curbing.
4. Plant material selected must be :
 - pollution, salt and drought tolerant
 - low maintenance
 - free of nuisance fruit or berries
 - hardy - strongly branched
 - ground cover plants (instead of grass) under trees
5. Plant material at intersections shall not obstruct drivers' views of approaching traffic.
6. Consideration should be given in the design and location of landscaped islands and peninsulas for winter maintenance, snow plowing and snow storage.
7. Underground irrigation systems are strongly encouraged within high stress parking lot environments.

Top Soil and Sod Standards

Topsoil Requirements

1. All sodded and seeded areas should have a minimum of 150mm topsoil.
2. All planting beds should have a minimum planting bed depth of 450mm, consisting of planting soil and approved soil mixture supplement and an application of fertilizer (20-20-20).
3. Soil mixture supplement should consist of:
 - 2 parts screened sandy loam topsoil
 - 1 part shredded commercial peat moss
 - 1 part well rotted manure
4. Topsoil mixed with subsoil, rocks, roots, foreign debris and toxic material is unacceptable and shall be removed and disposed of off-site. Topsoil is defined as fertile,

friable natural loam (neither heavy clay nor light sand) containing sufficient organic matter to sustain vigorous plant growth (usually 4% - 6% or as recommended by soil testing laboratory). Topsoil pH value must range between 6 and 7.

5. All subgrades should be compacted to 85% SPD except in woodlands.

Sod Requirements

1. All landscaped areas should be covered with sod unless otherwise noted on the landscape plan.
2. Sod should be installed at all street frontages to the curb edge or within 1.5 metres of the traveled portion of the road.
3. All sod should be No. One Grade Sod, conforming to the latest edition of the Nursery Sod Growers of Ontario, Specifications, Classifications and Use.
4. All stones over 25 mm diameter shall be removed during fine grading of the topsoil and prior to laying sod.

3.3 Development Engineering

This section provides technical standards and requirements for the engineering elements in site development, such as grading, storm water management, water and sanitary sewer services, etc.

3.3.1 Design Criteria

Prior to an engineering submission, the applicant is required to contact the following external authorities for specific design criteria should the subject properties abut or contain:

- A watercourse/valley/creek/wetland block regulated by the Grand River Conservation Authority - GRCA (site plan, grading, drainage/servicing and landscape plans to be submitted)
- Hydro One Networks Inc. (grading, drainage, servicing and landscaping plans to be submitted)
- CNR (grading, drainage & servicing plans to be submitted)
- Pipelines or pipeline easements (grading, drainage & servicing plans to be submitted)
- Land adjacent to the Grand River (Ministry of Natural Resources and GRCA)
- If a development is occurring within the limits of the Ministry of Transportation of Ontario (MTO) boundaries, the approvals of the MTO are required

3.3.2 Infrastructure Modelling Criteria

The owner is to provide, at no cost to the municipality, a Functional Servicing Report (FSR), prepared, signed and stamped by a qualified licensed Professional Engineer in good standing with the Professional Engineers of Ontario (PEO), and in accordance with the recommendations of the said report, implement at no cost to the municipality, all necessary works. The City of Brantford will provide design standards to be used in the development of the functional servicing report as it relates to water consumption, sewage generation rates, etc. (See Table 1)

The report must identify how the proposed development will be serviced, including water, sanitary and storm connection points to existing municipal infrastructure. This shall be outlined by referencing proposed connection points to existing municipal infrastructure by approximate location on the sanitary, water, and or storm main to the closest hydrant or maintenance hole.

Servicing reports or requests for servicing capacity that only provide a municipal address will not be considered as the connection point to municipal infrastructure may be ambiguous if the property is located on a corner lot with municipal infrastructure fronting more than one side of the property.

Proposed connection points shall be provided on appropriate site servicing drawings and must accompany the anticipated water consumption and sewage generation values.

The FSR report shall address anticipated water requirements and sewage generation rates based on the design criteria outlined in Table 1 and the specific site development. The

Developer/Engineer must provide to the City all assumptions, design criteria, calculations, sanitary sewer design sheets and related data used to calculate water requirements and sewage generation volumes. Water requirements and anticipated sewage generation rates shall be totalized for the site and presented in Litres per Second (l/s) for consistency of hydraulic review.

Once received by the City, the FSR will be reviewed in the context of approved system design requirements and the potential to service the site from existing municipal infrastructure systems. Servicing capacity/constraints will be reviewed based on the estimated water consumption and sewage generation rates through the use of hydraulic modelling which will be facilitated by the City.

The costs for this hydraulic analysis will be the responsibility of the Developer/Engineer and will be based on the complexity of the hydraulic modelling.

The limits of the analysis and assessment will vary depending on the scope and potential impact of the proposed development. The limits will be reviewed, on a case by case basis, with the applicant as part of the pre-planning process.

Where required, the municipality will endeavour to provide supporting infrastructure data, such as Geographic Information System (GIS) data, and the related attributes and available flow data etc., under a separate license/data use agreement. In the event that data gaps exist, the applicant will be responsible for capturing the required information and shall provide this data to the municipality as part of the functional servicing report.

Table 1 Design Criteria, City of Brantford, November 2013

WATER SYSTEM DESIGN CRITERIA	
Residential	300 Lpcd
Employment	Equivalent population @ 300 Lpcd
Max Day Factor	2.0
WASTEWATER SYSTEM DESIGN CRITERIA	
Residential Generation Rate	270 Lpcd
Employment Generation Rate	Equivalent population @ 300 Lpcd
Peaking Factor	Use Harmon Formula
Extraneous Flows (l/l)	0.20 L/s/ha
STORMWATER DESIGN CRITERIA	
Use 5 year storm for minor system	
APPROVED POPULATION DENSITIES (PPU – Persons Per Unit)*	
Low Density (Eg. Single and Semi Detached units)	3.07 ppu
Medium Density (Eg. Townhomes, Row houses)	2.1 ppu
High Density (Eg. Apartments)	1.5 ppu

*Population densities approved through the City of Brantford's 2009 Development Charges Background Study, Hemson Consulting Ltd., March 2009.

3.3.3 Storm Drainage Criteria

1. Stormwater can be detained on site by the following storage methods:
 - Stormwater management ponds
 - Oversized pipes
 - Underground storage tanks/systems
 - Roof top storage
 - Hard surface ponding. Events up to the 5 Year level shall not be stored on paved surfaces, as this frequent ponding interferes with operation of site access and resident/pedestrian safety.
2. Sites are to be designed to self-contain storm events. Major overland flow route into City of Brantford right-of-ways will be reviewed for impact.
3. Storm runoff shall be controlled to local constraints of receiving systems; established watershed study, MTO guidelines, existing sewer capacity, pre-development to post-development where capacities are unknown or history of flooding or erosion.
4. Sewer networks designed on site are to capture the 5 year storm event. If a sewer system is not possible, surface drainage reaches shall be limited to 50 metres.
5. The quality treatment of storm water being discharged from site is required. The level of treatment is to be determined per the receiving system (see Ministry of Environment Design Guidelines). Wet Ponds, Oil Grit Separators and Landscape Filter Strips are acceptable methods. Oil grit separators are to be certified by the installer/manufacturer as per installation, operation and final cleaning for acceptance.
6. All storm sewer structures are to comply with OPSD specifications and adhere to the requirements of the Ontario Building Code.
7. Quality and Quantity control devices shall be located at the property line for municipal access and if not possible, easements are to be granted to the City of Brantford to provide access.
8. Existing external drainage routes travelling through the site, shall be accommodated within the stormwater management design of the site, without any impacts to upstream lands.

Low Impact Development

The City of Brantford will consider the use of Low Impact Development (LID) in Storm Water Management Design. Engineering staff can discuss any proposals of implementation of LID when a development application is submitted or prior to submission. In particular, a LID proposal should meet the following requirements:

- Downspouts are not to be connected directly to a storm lateral.
- Soak away trenches / pits should be utilized when applicable.
- Infiltration galleries should be utilized in ICI developments.
- Permeable pavement, perforated pipes and storage chambers should be utilized.

3.3.4 Permits and Other Approvals

The following permits or approvals may be required:

1. Street Excavation Permit
2. Driveway Permit
3. Site Alteration Permit
4. GRCA Approvals
5. Hydro One Approvals
6. Building Permit
7. Temporary Road/Lane Closure Permit
8. MTO Permit

3.3.5 Subdivider's Approvals

Applicants are referred to the subdivider to determine if the subdivider's approval of a proposal is also required where a plan of subdivision is not assumed by the City. Any revisions to the approved plans such as those required by the subdivider's engineer and architect, or otherwise, will require further review and approval by the City of Brantford.

3.3.6 Multi-Family and Condominium Servicing

General Servicing Requirements

Engineering drawings shall be prepared to show location (horizontal and vertical) of all underground services including sanitary, storm, watermains, hydro, Bell communication, gas, etc., together with cross section drawings of all roadways, sidewalks, and boulevards, certified and each drawing is to be stamped, signed and dated by a registered professional engineer of the Province of Ontario.

"As Constructed" drawings showing all constructed servicing and utilities are to be provided to the Development Engineering Department after the completion of the project.

Private Residential Roadways

1. Roadways shall not be considered to form any part of the required parking.
2. Parking lots shall be structurally designed to the residential road standards.
3. Designated fire access routes shall be provided throughout the development to the standards of the Fire Department and in accordance with good engineering practice.
4. Emergency access routes may be required. The consulting engineer must contact the Fire Department for actual requirements and approval (structural design to accommodate 18-ton vehicles).
5. Internal private roadways shall be designed in accordance with the current design criteria for a minor residential street (including curbs, gutters and sidewalks) with the following modifications:

- Minimum width of roadway shall be 8.0m between curb faces.
- Minimum center line turning radius shall be 12.0m (Fire Safety) for any development.
- The minimum road pavement design shall be as follows:

35mm	HL3
50mm	HL4/HL8
150mm	Granular "A"
300mm	Granular "B"
- An internal 1.5 m wide sidewalk on one side of all internal roadways:

125mm	Concrete
175mm	Concrete through driveways for excess loading
150mm	Granular "A"

Utility Services

The developer/builder is responsible for ensuring that all utility services are designed and constructed in accordance with the relevant agencies.

A certified statement signed and stamped by a registered professional engineer of the Province of Ontario stating that all services have been designed and constructed in accordance with City of Brantford requirements is required prior to registration of the development.

Lot Grading and Amenity Area

Typically smaller lots require additional attention due to many constraints. Minimum 2% and maximum 5% slopes apply to the amenity areas.

Amenity areas shall conform to general lot grading policy. No cross lot drainage is permitted except directional swales at rear and all side yards which connect drainage to acceptable receiving systems.

4.0 APPENDICES

This section provides related information as referred to in previous sections including guidelines and terms of reference for studies related to site plan applications, typical diagrams and construction detail drawings, as well as supplemental guidelines and site plan requirements, maps assisting the identification of areas subject to external agency review, and City Staff and agency contact information, etc.

4.1 Application for Pre-consultation (form)

APPLICATION FOR PRE-CONSULTATION

(Section 18.24, City of Brantford Official Plan)

This application form must be typed or printed in black or blue ink, completed entirely and signed.

This form can be found online at:

www.brantford.ca/BUSINESS/LANDUSEANDDEVELOPMENT/Pages/ApplicationFees.aspx

This form must be filed with the City of Brantford Planning Department accompanied by the fee and required materials.

Personal information on this form is collected under the authority of Section 18.24 of the City of Brantford Official Plan, as adopted by by-law, and Sections 8(1) and 10 of the *Municipal Act, 2001*, as amended and will be used to contact the owner, applicant and / or agent regarding the Site Plan Application. Questions about this collection should be directed to the Manager of Current Planning, Planning Department, City of Brantford, 100 Wellington Square, Brantford, Ontario, N3T 2M2, 519-759-4150 ext 5434.

OFFICE USE ONLY	
File No.:	_____
Related file:	_____
Fees submitted:	_____
Application submitted:	_____
Assessment Roll No.:	_____
Area:	_____

PART I – APPLICANT INFORMATION

1. **Name of Applicant¹** _____ Phone _____
 Address _____ Fax _____
 City, Postal Code _____ E-mail _____

¹ If the applicant is a numbered company, also provide the name of a principal of the company.

2. **Name of Agent** _____ Phone _____
 Address _____ Fax _____
 City, Postal Code _____ E-mail _____

3. **Name of Property Owner²** _____ Phone _____
 Address _____ Fax _____
 City, Postal Code _____ E-mail _____

When was the property acquired by the owner? _____

² It is the responsibility of the owner or applicant to notify the Planning Department of any changes in ownership within 30 days of such a change.

All correspondence, notices, etc. in respect of this development application will be forwarded to the Applicant, Agent and Owner.

PART II – GENERAL PROPERTY DESCRIPTION

- Municipal Address** _____
- Is there a related planning application or agreement applicable to the property?** Yes No Unknown
- If yes, File number:** _____ **Status:** _____
- Encumbrances**

Are there any easements or restrictive covenants affecting the subject land?

If yes, provide names of the encumbrances in respect of the subject lands:



APPLICATION FOR PRE-CONSULTATION

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February 2015

5. Existing Use of Property

- Agricultural Commercial Industrial Institutional Residential Vacant Other(s)

How long have the lands been used/employed for these uses(s)? _____

6. Previous Use of Property

- Agricultural Commercial Industrial Institutional Residential Vacant Other(s)

If Industrial or Commercial, specify use: _____

Details of Previous Uses	Yes	No	Unknown
Has the grading of the subject land been changed by adding earth or other material, i.e. has filling occurred?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has a gas station been located on the subject land or adjacent lands at any time?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has there been petroleum or other fuel stored on the subject land or adjacent lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there or have there ever been underground storage tanks or buried waste on the subject land or adjacent lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have the lands or adjacent lands ever been used as an agricultural operation where cyanide products may have been used as pesticides and/or sewage sludge was applied to the lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have the lands or adjacent lands ever been used as a weapons firing range?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the nearest boundary line of the subject lands within 500 metres (1,640 feet) of the fill area of an operational/non-operational landfill or dump?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there are existing or previously existing buildings, are there any building materials remaining on site which are potentially hazardous to public health (i.e., asbestos, PCB's)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there reason to believe the subject land may have been contaminated by former uses on the site or adjacent sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Heritage Features

Are the subject lands within or adjacent to an area considered a Heritage Landscape? Yes No

Are there any buildings or structures on the subject lands that are subject to a Heritage Easement or have been designated under Part IV or Part V of the Ontario Heritage Act? Yes No

Are there any buildings or structures on *the abutting lands* that are subject to a Heritage Easement or have been designated under Part IV or Part V of the Ontario Heritage Act? Yes No

If yes to either of the above, a Heritage Impact Assessment may be required. Is a Heritage Impact Assessment attached? Yes No

8. Servicing, Drainage and Access

Indicate what services are available:

- | | | |
|---|---|---|
| Water Supply | Sewage Treatment | Storm Drainage |
| <input type="checkbox"/> Municipal water | <input type="checkbox"/> Municipal sewers | <input type="checkbox"/> Storm sewers |
| <input type="checkbox"/> Communal wells | <input type="checkbox"/> Communal system | <input type="checkbox"/> Open ditches |
| <input type="checkbox"/> Individual wells | <input type="checkbox"/> Septic tank and tile bed | <input type="checkbox"/> Other (describe below) |
| <input type="checkbox"/> Other (describe below) | <input type="checkbox"/> Other (describe below) | |

If other, describe: _____



Indicate what services are proposed:

Water Supply

- Municipal water
- Communal wells
- Individual wells
- Other (describe below)

Sewage Treatment

- Municipal sewers
- Communal system
- Septic tank and tile bed
- Other (describe below)

Storm Drainage

- Storm sewers
- Open ditches
- Other (describe below)

If other, describe: _____

Has the existing drainage on the subject lands been altered?

- Yes No

Does a legal and adequate outlet for storm drainage exist?

- Yes No Unknown

Are the subject lands within an area that is subject to the regulations of the Grand River Conservation Authority (GRCA)?

- Yes No

Have you pre-consulted with GRCA?

- Yes No

Existing or proposed access to subject lands:

- Unopened Road
- Provincial Highway
- Municipal Road
- Other (describe below)

If other, describe: _____

Name of road/street: _____

PART III DETAILS OF THE PROPOSAL

1. Planning application(s) proposed:

- Official Plan Amendment Current land use designation: _____ Proposed designation: _____
- Zoning Amendment Current zoning: _____ Proposed zoning: _____
- Plan of Subdivision Number of lots: _____
- Plan of Condominium Type: _____ Number of units: _____
- Site Plan Control
- Part Lot Control

2. Provide a complete written description of the application with details of the proposed development including, but not limited to: proposed use(s), development details (i.e. height/storeys, floor area(s), number of parking/loading spaces, lot coverage, landscape area, etc). Indicate type of business proposed. If additional space is needed, attach a separate page.



APPLICATION FOR PRE-CONSULTATION

3. Does your proposal involve:

		Yes	No	N/A
(a)	*Demolition of existing building(s)			
(b)	Renovation of existing buildings(s)			
(c)	Addition to existing building(s)			
(d)	Construction of a new building			

* Refer to the Demolition Control Bylaw 26-91

PART IV – SUBMISSION REQUIREMENTS

1. Check each requirement of the following list:

1. Provide 12 full-sized (not smaller than 22"x34") hard copies of a site plan showing: lot lines, dimensions and area of the lot, names of abutting streets, road access point, driveways, parking and loading areas, number of parking spaces, landscaped areas and open space, pedestrian walkways, footprints, height, floor area and setbacks of existing and proposed buildings, building elevations (optional), and any other relevant information.
2. Provide 6 additional copies of the above site plan in 11"x17" size.
3. Each drawing must be individually folded to a size not greater than 8.5" x 14".
4. All drawings must be in metric and to scale, and must show north arrow and scale.
5. All full-sized drawings must be printed at the scales on the drawings.
6. Details of the drawing must be legible.
7. All information submitted for Pre-consultation must also be provided in electronic form (e.g. PDF format) on a digital media or via email to the City Staff in charge of the pre-consultation.

2. Pre-consultation Fee

The required fee for pre-consultation is \$400. This fee will be refunded if the development application is submitted within 1 year of the pre-consultation meeting.

Fee submitted: _____

PART V – ACKNOWLEDGEMENT

I/we hereby submit an application for Site Plan Control pre-consultation pursuant to City of Brantford Official Plan 18.24.2, and enclose the required fee of \$400.

AUTHORIZATION

If the applicant is not the owner of the land that is the subject of this development proposal, the authorization set out below must be completed.

**Authorization of Owner for Agent
to Make the Application**

I, _____, am the owner of the land that is the subject of this development proposal and I authorize _____ to act as my agent in this matter and to make this application on my behalf and to provide any of my personal information that will be included in this application or collected during the processing of this application.

Date

Signature of Owner



APPLICATION FOR PRE-CONSULTATION

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February 2015

4.2 Application for Site Plan Control Approval (form)

APPLICATION FOR SITE PLAN CONTROL APPROVAL

(under Section 41 of the Planning Act as amended)

This application form must be typed or printed in black or blue ink, completed entirely and signed.

This form can be found online at:

www.brantford.ca/Business/LandUseAndDevelopment/Pages/ApplicationFees.aspx

Pre-consultation:

This application form must be filed with the City of Brantford Planning Department accompanied by the application fee and required materials. Unless waived by the Director of Planning, a pre-consultation meeting with City Staff is required.

Has a pre-consultation meeting been held? Yes, Date _____
 No

OFFICE USE ONLY	
File No.:	_____
Related file:	_____
Fees submitted:	_____
Application submitted:	_____
Assessment Roll No.:	_____
Area:	_____

PART I – APPLICANT INFORMATION

1. Name of Applicant¹	_____	Phone	_____
Address	_____	Fax	_____
City, Postal Code	_____	E-mail	_____
<small>¹ If the applicant is a numbered company, also provide the name of a principal of the company.</small>			
2. Name of Agent	_____	Phone	_____
Address	_____	Fax	_____
City, Postal Code	_____	E-mail	_____
3. Name of Property Owner²	_____	Phone	_____
Address	_____	Fax	_____
City, Postal Code	_____	E-mail	_____

When was the property acquired by the owner? _____

² It is the responsibility of the owner or applicant to notify the Planning Department of any changes in ownership within 30 days of such a change.

All correspondence, notices, etc. in respect of this development application will be forwarded to the Applicant, Agent and Owner.

PART II – GENERAL PROPERTY DESCRIPTION

1. Municipal Address:	_____		
2. Legal Description (fill in the parts that are applicable):	_____		
Registered Plan No.	_____	Lot(s)/Block(s)	_____
Reference Plan No.	_____	Part(s)	_____
Former Township	_____	Concession	_____ Lot(s) _____



APPLICATION FOR SITE PLAN CONTROL APPROVAL

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January 2015

3. Is there an existing site plan or related agreement applicable to the property? Yes No Unknown

If "Yes", File number: _____ Status: _____

5. Particulars of Property (in metric units)

Frontage/Width (m) _____ Depth (m) _____ Area (m²/ha) _____

6. Encumbrances

Are there any mortgages, easements or restrictive covenants affecting the subject land? Yes No

If yes, provide names and addresses of the holders of any mortgages, charges or other encumbrances in respect of the subject lands: _____

7. Existing Use of Property

Agricultural Commercial Industrial Institutional Residential Vacant Other(s)

How long have the lands been used/employed for these uses(s)? _____

8. Previous Use of Property

Agricultural Commercial Industrial Institutional Residential Vacant Other(s)

If Industrial or Commercial, specify use: _____

Details of Previous Uses	Yes	No	Unknown
Has the grading of the subject land been changed by adding earth or other material, i.e. has filling occurred?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has a gas station been located on the subject land or adjacent lands at any time?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has there been petroleum or other fuel stored on the subject land or adjacent lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there or have there ever been underground storage tanks or buried waste on the subject land or adjacent lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have the lands or adjacent lands ever been used as an agricultural operation where cyanide products may have been used as pesticides and/or sewage sludge was applied to the lands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have the lands or adjacent lands ever been used as a weapons firing range?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the nearest boundary line of the subject lands within 500 metres (1,640 feet) of the fill area of an operational/non-operational landfill or dump?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there are existing or previously existing buildings, are there any building materials remaining on site which are potentially hazardous to public health (i.e., asbestos, PCB's)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there reason to believe the subject land may have been contaminated by former uses on the site or adjacent sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What information did you use to determine the answers to 6 above?

If previous use of property is industrial or commercial or if YES to any of Section 6, a previous use inventory showing all former uses of the subject land, or if appropriate, the land adjacent to the subject land is required.

Is the previous use inventory attached? Yes No



9. List any Existing Buildings or Structures on the Property

Type of Building or Structure	All Yard Setbacks (m)				Building Dimensions (m)	Ground Floor Area (m ²)	Height (m)	Year Built	To Be Retained	To Be Removed/ Demolished
	Front	Rear	Side	Side						
1.										
2.										
3.										

If existing dwelling units are proposed to be removed, a separate application and fee are required under the Demolition Control Bylaw.

10. Heritage Features

Are the subject lands within or adjacent to an area considered a Heritage Landscape? Yes No

Are there any buildings or structures on the subject lands that are subject to a Heritage Easement or have been designated under Part IV or Part V of the Ontario Heritage Act? Yes No

Are there any buildings or structures on *the abutting lands* that are subject to a Heritage Easement or have been designated under Part IV or Part V of the Ontario Heritage Act? Yes No

If yes to either of the above, a Heritage Impact Assessment may be required. Is a Heritage Impact Assessment attached? Yes No

11. Servicing, Drainage and Access

Indicate what services are available:

Water Supply

- Municipal water
- Communal wells
- Individual wells
- Other (describe below)

Sewage Treatment

- Municipal sewers
- Communal system
- Septic tank and tile bed
- Other (describe below)

Storm Drainage

- Storm sewers
- Open ditches
- Other (describe below)

If other, describe: _____

Indicate what services are proposed:

Water Supply

- Municipal water
- Communal wells
- Individual wells
- Other (describe below)

Sewage Treatment

- Municipal sewers
- Communal system
- Septic tank and tile bed
- Other (describe below)

Storm Drainage

- Storm sewers
- Open ditches
- Other (describe below)

If other, describe: _____

Has the existing drainage on the subject lands been altered?

Yes No

Does a legal and adequate outlet for storm drainage exist?

Yes No Unknown



Are the subject lands within an area that is subject to the regulations of the Grand River Conservation Authority (GRCA)?
 Yes No

Have you pre-consulted with GRCA?
 Yes No

Existing or proposed access to subject lands:

- Unopened Road Provincial Highway
- Municipal Road Other (describe below)

If other, describe: _____

Name of road/street: _____

PART III – DETAILS OF THE PROPOSAL

1. Provide a complete written description of the application with details of the proposed development including, but not limited to: proposed use(s), development details (i.e. height/storeys, floor area(s), number of parking/loading spaces, lot coverage, landscape area, etc). Indicate type of business proposed including the proposed number of employees. If additional space is needed, attach a separate page.

2. (a) If this application has the effect of increasing the number of residential dwelling units on the subject lands, please complete the following:

Total Area _____ (hectares) (Net)¹

Total Number of Residential Dwelling Units existing _____ and Proposed _____

Proposed Density _____ (units/net hectare)

Are the subject lands located within the Built Boundary as indicated in the Official Plan? Yes No

¹Net Residential Hectare means that portion of the lands utilized for residential dwelling units, including the lot area.

- (b) With respect to commercial or industrial uses, please complete the following:

Total number of existing business before development _____

Total number of business after development _____



3. List any *Proposed Buildings or Structures on the Property*

Proposed Buildings or Structures	All yard Setbacks (m)				Building Dimensions	Ground Floor Area (m ²)	Total Floor Area (m ²)	Building Height (m) and No. of Storeys
	Front	Rear	Side	Side				
1.								
2.								
3.								

4. Does your proposal involve:

	Yes	No	N/A
(a) [*] Demolition of existing building(s)			
(b) Renovation of existing buildings(s)			
(c) Addition to existing building(s)			
(d) Construction of a new building			

^{*} Refer to the Demolition Control Bylaw 26-91

5.

(a) If a building(s) exists, is it occupied? Yes No

(b) If yes, what type of occupancy?

- Commercial Institutional Other (please specify) _____
- Industrial Residential

6. Significant Features

All applications under the Planning Act are subject to review for regard to the Provincial Policy Statement issued by the Province of Ontario. Complete the following table and be advised of the potential information requirements in the noted section. If the information is not submitted, it may not be possible to do a complete and proper planning evaluation.



TABLE – SIGNIFICANT FEATURE CHECKLIST

Use or Feature	Is it on site or within 500 m?		Specify Distance In Metres	Potential Information Needs
	Yes	No		
Class 1 industry ¹				Assess development for residential and other sensitive uses within 70 metres
Class 2 industry ²				Assess development for residential and other sensitive uses within 300 metres
Class 3 industry ³ within 1000 metres				Assess development for residential and other sensitive uses within 1000 metres
Landfill Site				Address possible leachate, odour, vermin and other impacts
Sewage Treatment Plant				Assess the need for a feasibility study for residential and other sensitive land uses
Waste Stabilization Pond				Assess the need for a feasibility study for residential and other sensitive land uses
Active Railway Line				Evaluate impacts within 100 metres Noise study prepared? Consultation with CN?
Controlled access highways or freeways, including designated future routes				Evaluate impacts within 100 metres
Electric transformer station				Determine possible impacts within 200 metres
High voltage electric transmission line				Consult Brantford Power
Transportation and infrastructure corridors				Will the corridor be protected? Noise study prepared?
Mineral aggregate resource areas				Will development hinder access to the resource or the establishment of new resource operations? Noise & dust study completed?
Existing Pits and Quarries				Will development hinder continued operation or extraction? Noise and dust study completed?
Mineral and petroleum resource areas				Will development hinder access to the resource or the establishment of new resource operations?
Significant wetlands or potentially significant wetlands				Development is not permitted within Provincially Significant Wetlands. Provide Environmental Impact Study
Significant portions of habitat of endangered species & threatened species				Provide Environmental Impact Study
Significant fish habitat, woodlands, valley lands, areas of natural and scientific interest, wildlife habitat				Provide Environmental Impact Study. Tree Inventory? Tree Preservation Plan?
Significant groundwater recharge areas, headwaters and aquifers				Demonstrate that these features will be protected
Significant landscapes, vistas, significant cultural heritage landscapes, designated heritage resources and easements				Development should conserve significant landscapes, vistas, significant built heritage resources and cultural heritage landscapes
Significant archaeological resources (web link to be provided for map of areas of archaeological potential)				Assess development proposed in areas of medium and high potential for significant archaeological resources. These resources are to be studied and preserved, or, where appropriate, removed, catalogued and analyzed prior to development.
Abandoned landfill sites				Which category? Investigation/remedial measures
Erosion hazards				Determine feasibility within the 100 year erosion limits of ravines, river valleys and streams
Floodplains, Floodway Policy Area Special Policy Area (SPA1), (SPA2)				Must meet the Official Plan policies
Hazardous sites ⁴				Demonstrate that hazards can be addressed (slope study, flood line study)
Contaminated sites				Inventory of previous uses in areas of possible soil contamination, record of site condition, affidavit
Agricultural Operations				Development to comply with the minimum distance separation formulae and Official Plan policies

- 1 Class 1 industry: Small scale, self-contained plant, no outside storage, low probability of fugitive emissions and daytime operations only.
- 2 Class 2 industry: Medium scale processing and manufacturing with outdoor storage, periodic output of emissions, shift operations and daytime truck traffic.
- 3 Class 3 industry: Indicate if within 1000 metres. Processing and manufacturing with frequent and intense off-site impacts and a high probability of fugitive emissions.
- 4 Hazardous sites: property or lands that could be unsafe for development or alteration due to naturally occurring hazard. These hazards may include unstable soils, unstable bedrock, or steep slopes.



7. Endangered Species Act Requirements

The Ministry of Natural Resources recommends that municipalities advise proponents to undertake a preliminary ecological site assessment for Species at Risk and their habitat. It is important that you, as the applicant, be aware of the Endangered Species Act and how it may affect your development application. It will be at your discretion to undertake an informal assessment of your property to get a better understanding of the type of species that inhabit your property and if any of these species are classified as species at risk. This will help you to determine if there is a need for a formal assessment to accompany your development application. Further information is attached in Appendix A of this form, and you can also consult Planning Staff, the MNR district office at 519-826-4255 or the MNR SAR website at www.Ontario.ca/SpeciesAtRisk.

Are you aware of any species at risk in your property? Yes No

If so, have you undertaken an informal assessment? Yes No

Is a formal assessment necessary? Yes No

PART IV – OTHER DEVELOPMENT APPROVALS

1. Are any other types of planning approval under the Planning Act required for this project? Yes No

2. If yes, which type(s)?

- | | | |
|--|--------------------|---------------|
| <input type="checkbox"/> Official Plan Amendment | File number: _____ | Status: _____ |
| <input type="checkbox"/> Zoning Amendment | File number: _____ | Status: _____ |
| <input type="checkbox"/> Plan of Subdivision | File number: _____ | Status: _____ |
| <input type="checkbox"/> Plan of Condominium | File number: _____ | Status: _____ |
| <input type="checkbox"/> Minor Variance | File number: _____ | Status: _____ |
| <input type="checkbox"/> Severance | File number: _____ | Status: _____ |
| <input type="checkbox"/> Part Lot Control | File number: _____ | Status: _____ |

Have submission(s) been made for the other application(s)? Yes No

PART V – SUBMISSION REQUIREMENTS

1. Check the following list to ensure each requirement is met, submissions not meeting these requirements will be returned to the applicant, and processing of the application will not begin until these requirements are satisfied:

1. All drawings must be individually folded to sizes not greater than 8.5" x 14" with title blocks shown on the outside.
2. Drawings must not be folded inside each other.
3. All materials must be assembled into sets; grouping copies of the same drawing into a set is not acceptable.
4. Each set of materials must be individually bound (by rubber bands or paper clips etc.).
5. Provide 12 sets of materials according to the requirements provided in the Pre-consultation Comments.
6. All information submitted for the application (i.e. forms, reports, studies, drawings, etc.) must also be provided at time of application in electronic form (e.g. PDF format), on a digital media or via email to the City Staff in charge of the application.
7. Each drawing must include a title block showing the address of the site, title of the drawing, the name of the professional or company preparing the drawing, scale, north arrow, the original date of preparation and a list of revisions and their dates.
8. All drawings must be in metric and to scale.
9. A printed drawing must match the scale of the drawing and be of a size in which details of the drawing are legible.
10. The stamps of qualified professionals such as an engineer, architect or landscape architect preparing the drawings must be affixed to the drawings.



2. Required Information / Materials Checklist

1. Application form – 1 copy

2. Survey Plan (2 copies) of the site including the following information:

- a. Total lot area
- b. Property bearings, dimensions and stakes
- c. Location and size of existing water mains, hydro poles, vaults, etc.
- d. Location and type of closest existing fire hydrants
- e. Location, species and size of existing trees
- f. Encroachments and easements
- g. Topographic information, e.g. contours, spot elevation.

3. Site Plan (12 copies) including the following information:

Key map showing location of the site

Site Statistics

- a. Total lot area
- b. Building coverage
- c. Gross floor area
- d. Building height proposed and permitted
- e. Number of units (for residential development)
- f. Number of parking spaces proposed and required
- g. Number of loading spaces proposed and required
- h. Area of landscaped areas proposed and required
- i. Amenity space proposed and required
- j. A Building Code Matrix, or notations on whether the building will be sprinklered or have a standpipe and how many streets it is required to face under the Ontario Building Code

Site Elements

- a. Property boundaries including front, side and rear lot lines, minimum yard requirements
- b. Footprints of existing and proposed buildings and structures including locations and dimensions
- c. Outline of existing buildings on adjacent properties
- d. Location of existing and proposed hydro poles, vaults, transformers and fire hydrants
- e. Traffic circulation and Fire Route signs, pavement markings
- f. Fire Access Routes as required by the Fire Department and Ontario Building Code
- g. Building setbacks
- h. Parking area layout and dimensions of drive aisle and parking spaces
- i. Driveway width and radius
- j. Locations of building entrances
- k. Landscape areas, curbs, fences and their types and heights, retaining walls
- l. Existing vegetation with drip lines
- m. Road widening (if applicable)
- n. Adjacent street names, road ways and traffic islands where applicable
- o. Garbage enclosure
- p. Easement and right of way
- q. Outlines of development areas and phases
- r. Locations of signs and exterior light stands
- s. Visibility triangles at driveway entrances
- t. Sidewalks with barrier free curb ramps from the barrier free parking area to the barrier free entrance(s)
- u. Designation of entrances that are required to be barrier free as per the Ontario Building Code
- v. Water courses, wet lands, flood plains

Minimum Grading Information

- a. Description of the geodetic bench mark used to establish all elevations
- b. Existing and proposed elevations on the subject and adjacent lands to show the existing and proposed drainage patterns
- c. Locations of all existing and proposed catch basins, swales, retaining walls, berms, drainage courses, etc.
- d. Ground floor elevation of buildings
- e. Indication of how the roof leaders of the existing and proposed buildings drain, either overland or directly into the storm sewer system
- f. Preliminary storm water management details, e.g. location and types of storage facilities, etc.



Mandatory Notes to be put on the Site Plan (where applicable)

- a. All works involved in the construction, relocation and repair of municipal services for the proposed development shall be to the satisfaction of the General Manager of Public Works.
 - b. Street Excavation Permits are required for any work in City right of way by any contractor.
 - c. Private owner/developer is responsible for all servicing, utilities and costs.
 - d. Remove curb and pour new curb for any new driveways or driveways to be abandoned.
 - e. Storm water drainage must not have a negative impact on adjacent properties.
 - f. Driveway slopes must be 8% maximum, and sidewalk cross fall 2% to 4% maximum.
 - g. A 5.0 m driveway visibility triangle on either side of the driveways projected from where the property lines meets the driveway is required where no plant material/structure greater than 0.6m is to be planted within this area.
 - h. No person shall cause or permit alteration of a site in the municipality, without having first obtained a Site Alteration Permit in accordance with By-law Number 28-2011.
 - i. Rooftop equipment shall be screened from street view.
 - j. No person shall construct or demolish a building or cause a building to be constructed or demolished (including site servicing) unless a building permit has been issued therefore by the Chief Building Official.
4. **Building Elevations (3 copies) showing the following information:**
- a. 4 sides of the building and structure
 - b. Notation of building materials and colours
 - c. Hatch patterns to represent different building materials, e.g. brick, siding, shingle, etc.

5. **Studies determined to be necessary in pre-consultation**3. **Application Fees**

The fees are determined in the pre-consultation comments to the applicant. If not certain, please consult Planning Staff. Check applicable fees submitted in the following table:

Application Fees – Effective January 1, 2014	Fee submitted
Pre-Consultation (refundable or credited to original applicant if site plan application submitted within 1 year of pre-consultation meeting)	\$400
Major Application	\$8,127
Minor Application	\$3,051
Engineering Review (mandatory)	\$1,200
Additional fees where applicable	
Site plan review per addition circulation beyond 2 circulations	\$250
Site plan agreement per additional agreement (e.g. phased development)	\$750
Amendment to an approved site plan	\$1,525
GRCA plan review fee as required	To be paid separately to the GRCA

Application meeting the following criteria are subject to the Minor Site Plan Application fee; otherwise the Major Site Plan Application fee will apply.

1. To facilitate a development directly related to the functions or activities of a registered non-profit agency.
2. To facilitate developments containing a minimum of 25% affordable housing units subject to satisfying the requirements of the City to ensure the affordable units are affordable upon development.
3. No supporting reports are required for review (eg. traffic impact, environmental impact, noise, storm water management reports etc.).
4. No change in use is proposed and no alteration to grades required.
5. The change in land use involves the creation of 3 or less dwelling units.
6. Consultation with external departments/agencies is limited to less than three.
7. Minor additions to existing buildings equivalent to 20% of the existing structure, to a maximum of 500 m² (5382 ft²).



PART VI – ACKNOWLEDGEMENT

I/we hereby submit an application for Site Plan Control Approval pursuant to Section 41 of the Planning Act R.S.O. 1990 (as amended), and enclose the required fee of \$ _____.

1. PERMISSION TO ENTER SUBJECT LANDS

Permission is hereby granted to City of Brantford Staff and their consultants to enter the premises subject to this development application for the purposes of making inspections associated with this application, during normal and reasonable working hours.

_____ Date _____ Signature of Owner

2. FREEDOM OF INFORMATION

Application information is collected under the authority of the Planning Act, R.S.O. 1990, c.P.13. In accordance with that Act, it is the policy of the City of Brantford to provide public access to all Planning Act applications and supporting documentation submitted to the City.

I, _____, the Owner, hereby agree and acknowledge
(Print name of Owner)

That the information contained in this application and any documentation, including reports, studies and drawings, provided in support of the application, by myself, my agents, consultants and solicitors, constitutes public information and will become part of the public record. As such, and in accordance with the provisions of the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c.M.56, I hereby consent to the City of Brantford making this application and its supporting documentation available to the general public, including copying and disclosing the application and its supporting documentation to any third party upon their request.

_____ Date _____ Signature of Owner

3. ACKNOWLEDGEMENT CLAUSES

- a. I hereby apply for site plan approval. I understand that site plan approval is required before a building permit can be issued.
- b. I acknowledge that the City of Brantford is not responsible for identification and remediation of contamination on the property, which is the subject of this Application – by reason of its approval to this Application.

_____ Applicant Signature _____ Date

_____ Agent Signature _____ Date



4. AUTHORIZATION

If the applicant is not the owner of the land that is the subject of this application, the authorization set out below must be completed.

**Authorization of Owner for Agent
to Make the Application**

I, _____, am the owner of the land that is the subject of this application and I authorize _____ to act as my agent in this matter and to make this application on my behalf and to provide any of my personal information that will be included in this application or collected during the processing of this application.

Date

Signature of Owner

5. AFFIDAVIT OR SWORN DECLARATION

I, _____, of the _____ in the _____ make oath and say (or solemnly declare) that the information contained in this application is true and that the information contained in the documents that accompany this application is true.

Sworn (or declared) before me

at the _____

in the _____

this _____ day of _____, _____

Signature of Owner Applicant Agent

Signature of a Commissioner, etc.

Notice of Collection of Personal Information

Personal information on this form is collected under the authority of Section 41 of the *Planning Act*, R.S.O. 1990 and Sections 8(1) and 10 of the *Municipal Act, 2001*, as amended and will be used to contact the owner, applicant and / or agent regarding the Site Plan Application. Questions about this collection should be directed to the Manager of Current Planning, Planning Department, City of Brantford, 100 Wellington Square, Brantford, Ontario, N3T 2M2, 519-759-4150 ext. 5434.



APPLICATION FOR SITE PLAN CONTROL APPROVAL

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APPENDIX "A"

Endangered Species Act Requirements

What is the Endangered Species Act? The Endangered Species Act, 2007 (ESA) is a new Act that replaces the old ESA. The new ESA protects three times as many species as the old Act; uses science-based decision-making for status assessment of species at risk, protects both species and habitat; recognizes the importance of private land stewardship activities; recognizes Aboriginal interests and includes "flexibility tools" – permits, agreements, for a range of activities otherwise prohibited under the act. These tools enable activities that would not otherwise be permitted, as long as the intent is stewardship, protection, or rehabilitation of the species.

There are a range of municipal activities which potentially affect the Endangered Species Act and Species at Risk (SAR) and their habitats. These are:

- Planning and development application review;
- Infrastructure projects such as roads and buildings;
- Maintenance activities such as rights of way and drains.

The Endangered Species Act and the Provincial Policy Statement (PPS) each provide for the protection of Species at Risk and their habitats, but there are some key differences. The intent is for the definition of significant habitat (PPS 2005) and general habitat (ESA 2007) to protect the same habitat. The Ministry of Natural Resources (MNR) has authority to update significant habitat under the PPS as new information becomes available. The Ministry of Natural Resources will work closely with the planning authority and the Ministry of Municipal Affairs and Housing (MMAH) to help achieve coordination of Endangered Species Act 2007 and Planning Act (PA) processes. The Ministry of Natural Resources will advise municipalities and proponents on matters related to the Endangered Species Act.

There are four ways in which endangered species can be classified:

- Special Concern
- Threatened
- Endangered
- Extirpated

Once species are classified "at risk", they are added to the Species at Risk in Ontario (SARO) List.

What does this mean to you, the applicant?

It is important that you be aware of the foregoing information and educate yourself on the Endangered Species Act and how it may affect your development application. As the applicant, it will be at your discretion to undertake an informal assessment of your property to get a better understanding of the type of species that inhabit your property and if any of these species are classified as species at risk, as noted above. This will then help you to determine if there is a need for a formal assessment to accompany your development application. For further clarification you can speak to one of the Planners in the Planning Department or contact the MNR District Office Species at Risk Biologist or District Planner or visit the MNR SAR website: www.Ontario.ca/speciesatrisk

The Ministry of Natural Resources recommends that municipalities advise proponents to undertake a preliminary ecological site assessment for Species at Risk and their habitat. Proponents seeking approvals under the Planning Act are responsible for ensuring they follow all relevant laws in Ontario, including the Endangered Species Act. Proponents should continue to follow early consultation and application procedures in place for the One Window Planning Service and Municipal Plan Review. Proponents should consult with the municipality/Conservation Authority and MNR as appropriate, to determine what Endangered and Threatened species information is available. The Species at Risk (SARO) list is the primary source of information about the status of species at risk in Ontario. MNR's Natural Heritage Information Centre is the central provincial database for species at risk occurrence information.



4.3 Standard Conditions for Site Plan Approval

Outlined below are examples of standard conditions which must be fulfilled to the City's satisfaction before final site plan approval (as applicable).

Planning Department

1. Consistency

All plans submitted to fulfill the Site Plan Conditions must be consistent with the redlined site plan and commentary notes that form part of the conditional site plan approval.

2. Complete Submission

In order to ensure consistency, all required plans and studies must be submitted at the same time in a complete package. Separate plans submitted at different time are not acceptable.

3. Retention of Consultants

To retain a Professional Engineer to prepare the grading and drainage control plan, the site servicing plan, the storm water management plan, the electrical site plan, the lighting plan, the traffic impact study and the noise study to be submitted to the satisfaction of the General Manager of Public Works; and

To retain a Professional Landscape Architect or other qualified landscape professional acceptable to the City to prepare the Landscape Plan and Tree Management Plan to be submitted to the satisfaction of the Director of Planning, Community Services; and

To retain a professional electrical engineer to prepare the lighting plan to be submitted to the satisfaction of the General Manager of Public Works.

To retain other qualified professionals as applicable to prepare technical studies and reports.

The said consultants' professional stamps must be affixed to the relevant plans.

4. Site Plan

To submit a revised Site Plan in accordance with the redlined conditionally approved Site Plan and commentary notes, to the satisfaction of the Director of Planning, Community Services.

5. Tree Management Plan

To prepare a Tree Management Plan as part of the required Landscape Plan showing the location of drip lines, edges and existing plantings, the location, species, size and condition of all existing trees, which trees are to be removed or retained, and the method to be employed in retaining trees required to be protected, to the satisfaction of the Director of Planning, Community Services.

6. Landscape Plan

To prepare a Landscape Plan showing planting and surfacing details on all areas not covered by buildings, structures, loading areas or parking areas, to the satisfaction of the Director of Planning, Community Services.

7. Development Phasing Plan

To indicate on the required Site Plan or on a separate plan the phasing scheme of the proposed development, to the satisfaction of the Director of Planning, Community Services.

8. Outdoor Garbage Storage

To show on the Site Plan and Landscape Plan, the location of any outdoor garbage storage and details of a supporting concrete pad and enclosure, to the satisfaction of the Director of Planning, Community Services.

9. Fencing and Visual Barriers

To show the location and construction details (including cross-sections where applicable) of all fencing and visual barriers and retaining walls as indicated on the Site Plan and Landscape Plan, to the satisfaction of the Director of Planning, Community Services.

10. Boulevard Sodding

To show on the required Landscape Plan, planting and surfacing details for the portion of all adjacent public property located between the sidewalks, curbs or streets and the Owner's property line so as to ensure a contiguous landscape area between the public streets and the Owner's proposed development, to the satisfaction of the Director of Planning, Community Services.

11. Treatment of Future Development Areas

To make provision on the required Landscape Plan for the surface treatment of areas intended for future development so as to prevent the occurrence of noxious weeds and all forms of erosion (water and wind), to the satisfaction of the Director of Planning, Community Services.

12. Pedestrian Amenities and Bicycle and Transit Facilities

To show on the Site Plan and Landscape Plan, the locations and construction details of any pedestrian walkways, connections, ramps, patios, outdoor amenity spaces and bicycle and transit facilities (where applicable), to the satisfaction of the Director of Planning, Community Services, the Chief Building Official and the Director of Engineering.

13. Building Elevations

To submit building elevation drawings, to the satisfaction of the Director of Planning, Community Services.

14. Signage

To show locations, details and elevations of proposed signs on the required Site Plan or on a separate plan, to the satisfaction of the Director of Planning, Community Services.

15. CPTED (Crime Prevention Through Environmental Design)

The site layout and design as indicated on the required Site Plan and Landscape Plan should follow CPTED principles, to the satisfaction of the Director of Planning, Community Services.

16. Accessibility Design

The site layout and design as indicated on the required Site Plan and Landscape Plan shall comply with DOPS (Design of Public Spaces Standard - Integrated Accessibility

Standards Regulation Guidelines), to the satisfaction of the Director of Planning, Community Services.

17. Other Studies

To submit a Shadow Study, an Urban Design Analysis, or an Archaeological Assessment, prepared by qualified professionals, to the satisfaction of the Director of Planning, Community Services.

18. Cost Estimate

To provide a cost estimate for 100% of the total cost of all on-site and off-site development works, to the satisfaction of the General Manager of Public Works and the Director of Planning. The Cost Estimate must include materials, removals, installations, restorations and contingency. The Cost Estimate must list cost item by item and unit prices.

On-site development works include but are not limited to storm water management facilities, grading, curbing, sidewalk, lighting, paving of driveways and parking areas, plant materials, and landscaping such as fencing, screen wall, retaining wall, garbage enclosure, sodding and seeding. Off-site development works may include such elements as driveway ramps, planting, signage and street furniture within the public property adjacent to the subject site as required by the City.

19. Insurance Certificate

To provide an insurance certificate as required by the site plan agreement, to the satisfaction of the Manager, Insurance & Risk Management Services.

20. Cash in lieu of Parkland

To pay the City of Brantford the required cash in lieu of parkland contribution.

21. Securities

To provide a certified cheque or a Letter of Credit for the amount of securities required by the City, to the satisfaction of the Manager of Finance, Corporate Services.

22. Site Plan Agreement and Registration Fee

To pay this fee (\$150) to the satisfaction of the Director of Planning, Community Services.

23. Boulevard Tree Contribution

To pay this contribution as required by the City to the satisfaction of the Director of Planning, Community Services.

24. Site Plan Agreement

To enter into a Site Plan Agreement with the City of Brantford and register it on title of the subject property, to the satisfaction of the Director of Planning, Community Services and the Director of Legal and Real Estate Services.

Engineering Department

25. Erosion and Siltation Control Plan

To show all erosion and siltation control features in detail on a Grading and Drainage Control Plan to the satisfaction of the General Manager of Public Works and / or the GRCA.

26. Grading and Drainage Control Plan

To prepare a detailed Grading and Drainage Control Plan, including infiltration of rooftop runoff where soil conditions permit, showing drainage details for the subject property, abutting properties and public right-of-way so as to ensure compatible drainage, and to show all existing and proposed connections to the municipal storm sewer, and all detailed erosion and siltation control features, all to the satisfaction of the General Manager of Public Works and or the GRCA.

27. Storm Water Management Plan

To submit a detailed engineering plan for storm water management prepared by a qualified professional engineer, to the satisfaction of the General Manager of Public Works and / or the GRCA.

28. Site Servicing Plan

To submit to the satisfaction of the General Manager of Public Works a detailed engineering plan for water and sanitary sewage servicing prepared by a qualified professional engineer.

29. Lighting & Photometric Plan

To submit a Lighting Plan (including site lighting and abutting street lighting where applicable) and a Photometric Plan prepared by a qualified professional electrical engineer who certifies on this plan that the lighting design is in compliance with the City of Brantford Lighting Design Standards, to the satisfaction of the General Manager of Public Works.

The proposed lights (all poles and wall packs) must not cause any glare to any of the adjacent properties and no light sources may be visible from any adjacent properties with residential use. The lighting engineer must confirm that these requirements are achieved on the proposed plans and will be required to certify the completed works before the release of site plan securities. The proposed location of the light poles also must take into consideration the location of already existing trees on site and cannot be in conflict with any proposed tree protection measures. The lighting plan and the landscape plan must also be coordinated, so the location of the proposed light standards is not in conflict with the proposed tree locations. If applicable, details of all proposed light standard bases must be included in the Lighting and Electrical Plan, and all concrete bases must be decorative architectural concrete.

30. Traffic Control Plan

To prepare a Traffic Control Plan showing all required traffic signals, signs and markings, including directional, parking and accessible parking signs, visibility triangles, vehicle turning radii, abutting streets, traffic islands (where applicable) and pavement markings, all to the satisfaction of the General Manager of Public Works.

31. Bylaw Sign Diagram

To provide a diagram identifying on the approved site plan the types and locations of the fire route and accessible parking signs where applicable to be incorporated into the By-law.

32. Engineering Studies

To submit a Traffic Impact Study, a Parking Study, a Storm Water Management Report, a Geotechnical Report and a Noise or Vibration Study, prepared by qualified professionals, to the satisfaction of the General Manager of Public Works and / or the GRCA.

33. Functional Servicing Report and Modeling

To provide, at no cost to the municipality, a Functional Servicing Report (FSR), prepared, signed and stamped by a qualified Professional Engineer in good standing with the Professional Engineers of Ontario (PEO), and in accordance with the recommendations of the said report, implement at no cost to the municipality, all necessary works

34. Site Alteration Permit

To obtain a Site Alteration Permit from Engineering Services.

35. Utility Easements

To grant the City of Brantford, without cost and free of encumbrance, the easement(s) as indicated on the Site Plan.

36. Road Widening

To convey to the City of Brantford, without cost and free of encumbrance, the road widening and reserve and or day-lighting triangles as indicated on the Site Plan.

37. Encroachment Agreement

To enter into any Encroachment Agreement with the City of Brantford if required, to the satisfaction of the Director of Planning, Community Services and the Assistant Solicitor, Corporate Services.

Brantford Power**38. Electrical Plan**

To prepare, by a qualified electrical engineer, a detailed design of the electrical facilities on and adjacent to the subject site, to the satisfaction of Brantford Power.

Fire Department**39. Fire Route Plan**

To prepare a detailed emergency fire route plan showing any required emergency fire routes and associated signage and fire hydrants and connections to the satisfaction of the Fire Chief and the Chief Building Official.

Building Department**40. Demolition Permit**

To obtain a Demolition Permit from Building Services if required and provide a copy to the Director of Planning, Community Services.

41. Building Matrix

To submit a Building Matrix Form to the satisfaction of the Chief Building Official.

External Agencies

42. Canada Post

To show the location and construction details of the concrete pad for the Canada Post Community Mail Box on the required Site Plan and Landscape Plan, to the satisfaction of Canada Post.

43. GRCA Permit

To obtain a permit from the Grand River Conservation Authority in regard to proposed placement, removal or re-grading of fill, construction, reconstruction, erection or placing of a building or structure, any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure or alteration to waterways, and provide the City with a copy of this permit.

44. Environmental Impact Study

To submit an Environmental Impact Study, prepared by qualified professionals, to the satisfaction of the GRCA.

45. Ministry of Transportation

When the subject site resides within the Ministry of Transportation Permit Control Area, the applicant is required to obtain Building and Land Use, Sign, Entrance and Encroachment permits from The Ministry of Transportation and provide the City with a copy.

46. Ministry of Culture

To obtain a written clearance from the Ministry of Culture regarding any archaeological potential issues if applicable to the site and provide the City with a copy.

47. CN Rail

To obtain from CN Rail written confirmation that its requirements have been satisfied regarding the registration of easements and warning clauses and provide the City with copies of these documents. Mandatory notes regarding particular requirements (e.g. noise attenuating windows and walls) must be included in the required Site Plan and Building Elevations.

48. Brant County

To obtain from the Brant County written confirmation that its requirements regarding developments abutting the County have been satisfied.

Special Conditions

49. Special conditions if required

4.4 Standard Template for Letter of Credit

- *Bank Letter Head* -

Date of Issue: _____

Beneficiary:

The Corporation of the City of Brantford
100 Wellington Square
Brantford, ON, N3T 2M3
Tel. (519) 759-4150 ext. 4300

Applicant:

AMOUNT: CAD \$ _____ (in words)

IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____

We hereby authorize you to draw on (NAME OF BANK, ADDRESS, POSTAL CODE) for the account of (NAME OF CUSTOMER) up to an aggregate amount of (AMOUNT of Securities as specified in Site Plan Agreement, in number and words) Canadian Dollars available on demand as follows:

Pursuant to the request of our customer, the said (NAME OF CUSTOMER), we the (NAME OF BANK), hereby establish and give to you this Unconditional Irrevocable Letter of Credit in your favour in the total amount of (\$AMOUNT) in Canadian Dollars which may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you, which demand we shall honour without enquiring whether you have the right as between yourself and the said customer to make such demand and without recognizing any claim of our said customer, or objection by it to payment by us.

Provided however, that you are to deliver to us at such time a written demand for payment made upon us, signed by you agreeing and/or confirming that monies drawn pursuant to this Letter of Credit are to be retained to meet obligations in connection with those Site Plan Requirements and/or financial obligations set out in the Site Plan Agreement (file number) between the customer and the Municipality and referred as (NAME OF PROJECT). Partial drawings are permitted.

The amount of this Letter of Credit shall be reduced from time to time as advised by notice in writing given to us from time to time by you. Partial drawings are permitted.

This Letter of Credit will continue to the (EXPIRY DATE) and will expire at the close of business on that date. You may call for payment of the full amount outstanding under this Letter of Credit at any time up to the close of business on that date.

Special Condition:

It is a condition of this Letter of Credit that it shall be deemed to be automatically extended without amendment from year to year from the present or any future expiration date hereof, unless at least 30 days prior to the present or any future expiration date, we notify you in writing by registered mail that we elect not to consider this letter of credit to be renewable for any additional period.

We hereby agree that drawings under this Letter of Credit will be duly honoured upon presentation, and shall state that they are drawn under (NAME OF BANK, ADDRESS, POSTAL CODE, Letter of Credit Number and date).

This Standby Letter of Credit is subject to the "Uniform Customs and Practice for Documentary Credit (2007 Revision), International Chamber of Commerce, Publication No. 600" and engages in accordance with the terms thereof.

Dated at _____, this _____ day of _____, for

(Name of Bank)

(Authorized Signature)

(Print Name and Title)

4.5 Site Development Works Certification Forms

SITE DEVELOPMENT WORKS CERTIFICATION FORM **FOR PROFESSIONAL ENGINEER/CONSULTANT**

~ GRADING, PAVING, ROAD WORKS, SERVICING AND STORMWATER MANAGEMENT ~

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the grading, paving/road works, servicing, storm water management and site development works have been developed in general conformity with the approved plans and reports and are functioning as designed. I furthermore certify that:

1. The first floor elevation and top of foundation are in general conformity with the approved grading and servicing/stormwater management plan(s).
2. The on-site final elevations and surface works are in general conformity with the approved grading and servicing/stormwater management plan(s) and all disturbed areas have been finalized.
3. The required oil grit separators, orifice pipes and/or plates have been installed and are functioning in accordance with the approved plan(s).
4. All storm manholes, catchbasins and sewers are clean, functioning, have been installed as per the OPSS, City standards and the approved plan(s).
5. All surface stormwater facilities, including curbing, appurtenances, ponding areas and overland flow routes have been installed and are operational in accordance with the approved grading and servicing/stormwater management plan(s).
6. (If applicable) The on-site stormwater management facility (indicate type) has been constructed and is functioning in accordance with the approved stormwater management plan(s) and report. Furthermore, the facility has been surveyed and the storage volume is as per the approved plan(s) and report.

Please list all outstanding items:

Please note all deviations from the design drawings below (e.g. increase in paved areas, shortage of pond volumes, roof drains, orifice installation, grade elevations at road right-of-way, etc). Additional details may be required prior to the City accepting the certification.

Professional Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

- cc: Owner
- Acoustical Engineer/Consultant
- Landscape Architect/Consultant
- Lighting Engineer /Consultant

PLEASE NOTE:

The Professional Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the engineering plans approved by the City.

This document is to be submitted on the Professional Engineer/Consultant’s letterhead.

**SITE DEVELOPMENT WORKS CERTIFICATION FORM
FOR PROFESSIONAL ENGINEER/CONSULTANT
~ GRADING ~**

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the building construction and lot grading is in general conformity with the approved grading plan. I furthermore certify that:

1. All adjacent properties will not be negatively impacted,
2. Where manholes and catch basins are present on the property, all have been raised to the final grade, are uncovered and in clean condition.

Please list all outstanding items:

Please note all deviations from the design drawings below (e.g. changes in grade elevations at road right-of-way, etc). Additional details may be required prior to the City accepting the certification.

Professional Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

- cc: Owner
- Acoustical Engineer/Consultant
- Landscape Architect/Consultant
- Lighting Engineer /Consultant

PLEASE NOTE:

The Professional Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the engineering plans approved by the City.

This document is to be submitted on the Professional Engineer/Consultant's letterhead.

**SITE DEVELOPMENT WORKS CERTIFICATION FORM
FOR LANDSCAPE ARCHITECT/DESIGNER**

NOTE: The Site Development Works Certification Form for Professional Engineer/Consultant must be submitted prior to the submission of this form.

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the site development works have been completed and maintained in accordance with the approved landscape drawings. The landscaping provisions, materials and workmanship, as shown on the plans have been strictly adhered to and all the plants are healthy and in vigorous growth condition.

Please list all outstanding items:

Please note all deviations from the design drawings below (all deviations to City approved plans are to be listed, i.e. change in layout of the plant material, type and layout of the fencing, type and layout of retaining wall, or any other item that has not been constructed in accordance with the City approved drawings and reports.) Please note if the deviation maintains the intent/integrity of the approved landscape plans. Additional details may be required prior to the City accepting the certification.

Landscape Architect/Consultant

Signature: _____

AFFIX SEAL

Date: _____

- cc: Owner
- Acoustical Engineer/Consultant
- Lighting Engineer /Consultant
- SWM/Grading Engineer/Consultant

PLEASE NOTE:

The Landscape Architect/Designer certifying the site development works must be the same Landscape Architect/Designer that prepared the landscape plans approved by the City.

This document is to be submitted on the Landscape Architect/Designer’s letterhead.

Final acceptance by the City of the installation of plant material, sodding or seeding may not be carried out when site works are not clearly visible due to snow cover and/or the landscaping cannot be fully inspected due to the plants being in a dormant state.

**SITE DEVELOPMENT WORKS CERTIFICATION FORM
FOR LIGHTING ENGINEER/CONSULTANT**

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the all outdoor lighting fixtures for this development have been installed and maintained in accordance with the City approved plans.

I further certify that:

- a) no additional outdoor lights have been installed.
- b) the illumination levels and uniformity ratios on site have been satisfied within generally accepted tolerances of the above noted plan.
- c) the lighting distribution pattern has not caused any veiling luminance (disability glare).
- d) there is no significant encroachment of light (0.5 Foot-candles or greater) or objectionable glare upon any adjacent property and no light sources are visible from any adjacent residential site.

Please note all deviations from the design drawings below (all deviations to City approved plans are to be listed, i.e. change in mounting height, light source type, model number, aiming direction, distribution patterns, location of poles). Additional details may be required prior to the City accepting the certification.

Lighting Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

- cc: Owner
- Acoustical Engineer /Consultant
- Landscape Architect/Consultant
- SWM/Grading Engineer/Consultant

PLEASE NOTE:

The Lighting Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the lighting plans approved by the City.

This document is to be submitted on the Lighting Engineer/Consultant's letterhead.

**SITE DEVELOPMENT WORKS CERTIFICATION FORM
FOR ACOUSTICAL ENGINEER/CONSULTANT**

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the recommendations/findings of the noise study submitted in support of the site plan application and accepted by the Municipality, have been implemented.

All required noise mitigation measures required by the noise study have been installed correctly and are functioning as designed.

Please note all deviations from the recommendations/findings of the noise study below (all deviations to the noise study are to be listed, i.e. change in berm height, change in noise attenuation fence height, type or location, etc.). Additional details may be required prior to the City accepting the certification.

Acoustical Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

- cc: Owner
- Landscape Architect/Consultant
- Lighting Engineer /Consultant
- SWM/Grading Engineer/Consultant

PLEASE NOTE:

The Acoustical Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the noise study submitted in support of the site plan application.

This document is to be submitted on the Acoustical Engineer/Consultant's letterhead.

SITE DEVELOPMENT WORKS CERTIFICATION FORM

~ RELEASE OF MATERIALS AND WORKMANSHIP GUARANTEE ~

FOR PROFESSIONAL ENGINEER/CONSULTANT

~ GRADING, PAVING, ROAD WORKS, SERVICING AND STORMWATER MANAGEMENT ~

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the grading, paving/road works, servicing, stormwater management facilities and site development works have been maintained in accordance with the approved plans and reports, that no failures occurred during the maintenance period and all are still functioning as designed.

Please note all failures/changes that occurred during the maintenance period (all changes are to be listed, i.e. slope failures, retaining wall failures, pavement settlement, cracked concrete, ponding, etc.). Additional details may be required prior to the City accepting the certification.

Professional Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

- cc: Owner
- Acoustical Engineer/Consultant
- Landscape Architect/Consultant
- Lighting Engineer /Consultant

PLEASE NOTE:
The Professional Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the engineering plans approved by the City.
This document is to be submitted on the Professional Engineer/Consultant's letterhead.

SITE DEVELOPMENT WORKS CERTIFICATION FORM
~ RELEASE OF MATERIALS AND WORKMANSHIP GUARANTEE ~
FOR PROFESSIONAL ENGINEER/CONSULTANT
~ GRADING ~

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify
to the City of Brantford that the building construction and lot grading have been maintained
in accordance with the approved plans and reports, that no failures occurred during the
maintenance period and all are functioning as designed.

Professional Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

cc: Owner
Acoustical Engineer/Consultant
Landscape Architect/Consultant
Lighting Engineer /Consultant

PLEASE NOTE:

The Professional Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the engineering plans approved by the City.

This document is to be submitted on the Professional Engineer/Consultant's letterhead.

SITE DEVELOPMENT WORKS CERTIFICATION FORM
~ RELEASE OF MATERIALS AND WORKMANSHIP GUARANTEE ~
FOR LANDSCAPE ARCHITECT/DESIGNER

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the site development works have been maintained in accordance with the approved landscape drawings, no failures occurred during the maintenance period and the plants continue to be healthy and in vigorous growth condition.

Please note all failures/changes that occurred during the maintenance period (all changes are to be listed, i.e. plants dying or in poor health; areas of dying sod; tree stakes not removed; leaning fence posts; retaining wall failures, etc.) Additional details may be required prior to the City accepting the certification.

Landscape Architect/Consultant

Signature: _____

AFFIX SEAL

Date: _____

cc: Owner
Acoustical Engineer/Consultant
Lighting Engineer /Consultant
SWM/Grading Engineer/Consultant

PLEASE NOTE:

The Landscape Architect/Designer certifying the site development works must be the same Landscape Architect/Designer that prepared the landscape plans approved by the City.

This document is to be submitted on the Landscape Architect/Designer's letterhead.

Final acceptance by the City of the installation of plant material, sodding or seeding may not be carried out when site works are not clearly visible due to snow cover and/or the landscaping cannot be fully inspected due to the plants being in a dormant state.

SITE DEVELOPMENT WORKS CERTIFICATION FORM
~ RELEASE OF MATERIALS AND WORKMANSHIP GUARANTEE ~
FOR LIGHTING ENGINEER/CONSULTANT

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that the all outdoor lighting fixtures for this development have been maintained in accordance with the approved plans and reports, that no failures occurred during the maintenance period and all are still functioning as designed.

Please note all failures/changes that occurred during the maintenance period. Additional details may be required prior to the City accepting the certification.

Lighting Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

cc: Owner
Acoustical Engineer /Consultant
Landscape Architect/Consultant
SWM/Grading Engineer/Consultant

PLEASE NOTE:

The Lighting Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the lighting plans approved by the City.

This document is to be submitted on the Lighting Engineer/Consultant's letterhead.

SITE DEVELOPMENT WORKS CERTIFICATION FORM
~ RELEASE OF MATERIALS AND WORKMANSHIP GUARANTEE ~
FOR ACOUSTICAL ENGINEER/CONSULTANT

Date of Final Inspection: _____

Site Address: _____

Municipal Project Number: _____

Project Name: _____

Owners Name: _____

I _____ of _____ certify to the City of Brantford that noise mitigation measures have been maintained in accordance with the approved plans and reports, that no failures occurred during the maintenance period and all are still functioning as designed.

Please note all failures/changes that occurred during the maintenance period. Additional details may be required prior to the City accepting the certification.

Acoustical Engineer/Consultant

Signature: _____

AFFIX SEAL

Date: _____

cc: Owner
Landscape Architect/Consultant
Lighting Engineer /Consultant
SWM/Grading Engineer/Consultant

PLEASE NOTE:

The Acoustical Engineer/Consultant certifying the site development works must be the same Engineer/Consultant that prepared the noise study submitted in support of the site plan application.

This document is to be submitted on the Acoustical Engineer/Consultant's letterhead.

4.6 Links to Other Documents

Urban Design and Urban Design Guidelines:

<http://www.brantford.ca/business/LandUseAndDevelopment/Pages/UrbanDesign.aspx>

Site plan application forms:

<http://www.brantford.ca/business/LandUseAndDevelopment/Pages/ApplicationFees.aspx>

Development Review meeting calendar:

http://www.brantford.ca/business/LandUseAndDevelopment/Pages/Development_Review.aspx

4.7 Guidelines for Noise and Vibration Study

Purpose

A Noise and Vibration Study is a technical document that evaluates the impact of noise and vibration on sensitive land uses, and determines the appropriate layout, design and noise control measures for a proposed development that generates or is impacted by noise and vibration.

Who should prepare the study

The study should be prepared by a registered professional engineer qualified in acoustic engineering and experienced in the preparation of such studies.

Where the study is required

A noise study will be generally required for any residential and/or institutional development within 300 metres of any rail corridor, 500 metres of a provincial highway, or adjacent to an arterial road. In addition, noise studies will be generally required for new or redeveloped residential properties abutting existing commercial, industrial, and institutional uses, or for new or redeveloped commercial, industrial, or institutional uses abutting existing or approved residential uses.

Standards

The study should provide details of assessment methods, summarize the results and recommend the required outdoor and indoor noise control measures which will meet Ministry of the Environment standards. The following should be included:

Site Condition

- description of the subject site and the proposed development
- location/context map
- identification of the noise source(s)
- description of the sound level guidelines/standards applied

Environmental Noise (and Vibration) Assessment

- noise sources and noise level forecasts (e.g. tables showing ultimate road traffic and predicted unmitigated sound energy exposures outdoors)
- environmental noise guidelines
- noise impact assessment (including low frequency noise impacts)
- vibration assessment, if applicable

Noise (and Vibration) Mitigation Requirements

- indoors: architectural requirements, ventilation requirements
- outdoors: at source requirements, sound barriers (i.e. description and site plan with noise mitigation)
- warning clauses

Technical Information

- Base Noise Level Calculations (Noise Source Data)
- Sample Sound Exposure Calculation

4.8 Guidelines for Shadow Study

Purpose

A shadow study is a technical document that evaluates the impact of shadows at various times of the day throughout the year cast by a proposed development on neighbouring sites, buildings, streets, parks and public and private open space.

Where the study is required

A shadow study is generally required for a proposed structure which is higher than 5 storeys (or 17m) and is in close proximity to shadow sensitive areas such as windows and balconies of an adjacent building, outdoor amenity and open spaces, and will likely cause undue shadow on the subject lands and surrounding areas.

Standards

A shadow study should be prepared according to the following standards:

Diagram and Report

The shadow study should include a diagram and a report. A typical shadow diagram should include all streets, blocks, parks, open spaces and buildings to an adequate distance to show the shadow impacts during requested times. The diagram should show both the existing situation and the proposed development in its context. The diagram should be plotted to a standard metric scale, and should include a north arrow. The report should provide a summary of how the shadow impact criteria are met and mitigating features to be incorporated into site and building design.

Test Times

Shadow Studies should be conducted for the following dates:

- June 21
- September 21 or March 21
- December 21

and at the following times:

- Solar Noon
- Hourly intervals before and after Solar Noon, up to and including 1.5 hours after sunrise and 1.5 hours before sunset

Evaluation Criteria

Residential private outdoor amenity spaces:

To maximise the use of private residential amenity spaces during spring, summer and fall, shadow impacts from proposed developments should not exceed one hour in duration on areas such as private rear yards, decks, patios and pools of surrounding residential dwellings on each of the following dates:

- June 21
- September 21 or March 21

Communal outdoor amenity areas:

These areas include children's play areas, school yards, tot lots, and park features such as sandboxes, wading pools etc., and outdoor amenity areas used by seniors and those associated with commercial and employment areas during spring, summer, fall and winter. Shadows from proposed developments should allow for full sun on the above places at least half the time, or 50% sun coverage all the time, on each of the following dates:

- June 21
- September 21 or March 21
- December 21

Building faces:

Shadow impacts from proposed developments should not exceed one hour in duration on the roofs, front, rear and exterior side walls of adjacent low rise (one to four storeys) residential buildings including townhouses, detached and semi-detached dwellings on September 21 or March 21.

4.9 Guidelines for Transportation Impact Study

Refer to the “Transportation Impact Assessment Guidelines” accessible through the City’s website:

http://www.brantford.ca/Projects%20%20Initiatives%20%20Transportation%20Master%20Plan/TransportationMasterPlanUpdate_Appendix4_TransportationImpactAssessmentGuidelines.pdf

4.10 Terms of Reference for Urban Design Brief



URBAN DESIGN BRIEF

Terms of Reference

Purpose

An Urban Design Brief (UDB) is intended to describe and illustrate proposed designs for new development projects and demonstrate how the City's Urban Design Guidelines and other City policies have been considered as part of the site design. The UDB will provide the design rationale for site, building and landscape design elements within the proposal, in addition to how the proposed development is compatible and complimentary with the existing neighbourhood. The scope and level of detail expected in the UDB will depend on the scale, site, nature, and complexity of the development proposal. **The Urban Design Brief must be prepared and signed by a qualified professional.**

The City of Brantford Planning Department Staff will use the UDB to help assess the urban design aspects of development applications to ensure high quality design is achieved in the public and private realm. The City encourages the design of complete and sustainably built environments that are consistent with Brantford's character and vision for the future as outlined in the City's Official Plan and Urban Design Guidelines.

The Urban Design Brief should not be a description of the proposed development layout, nor, does it replace the requirement for a Planning Justification Report. The UDB should explain why the proposed development represents the most effective design to meet the intent of the City's Urban Design Guidelines. The UDB should also provide Planning Department Staff with an overview of the design rationale for the site and why design decisions were made.

The Terms of Reference has been drafted to standardize the City's expectation for Urban Design Brief submissions to allow for efficient preparation and review.

When is an Urban Design Brief Required

An UDB will be submitted as part of a development application for an intensification proposal that includes an Official Plan Amendment, Zoning Bylaw Amendment, Draft Plan of Subdivision/Condominium, and/or Site Plan when identified as being required through pre-consultation.



URBAN DESIGN BRIEF Terms of Reference

1.0 Background/Existing Conditions

The Urban Design Brief should provide a description and analysis of the site and surrounding context (at least 400 metre radius from the site) noting any attributes and considerations including, but not limited to:

- Existing natural features, topography, and vegetation;
- Existing buildings and structures on the subject site;
- lot fabric (including frontage and depth);
- Street/block pattern (including block lengths);
- Built form character of the surrounding area;
- Surrounding land uses;
- View and vistas to and from the site;
- Existing or planned landmarks or gateways;
- Existing or planned transportation networks (including vehicular, cycling, pedestrian, transit, etc); and
- Existing linkages to open space.

A context map showing the subject site in relation to the neighbourhood and photographs of the existing context should be included. See example provided as Appendix 'A'.

2.0 Policy Context

The Urban Design Brief should provide a summary and analysis of the relevant planning documents and guidelines, including a description of how the proposed design accounts for, and implements the City of Brantford's vision/principles/goals as established in:

- City of Brantford Strategic Plan;
- City of Brantford Official Plan and applicable Secondary/Neighbourhood Plans;
- City of Brantford Urban Design Guidelines for Intensification Proposals; and
- Applicable policies, design guidelines, and design directions for specific areas (i.e. Waterfront Master Plan, Downtown Master Plan etc).



3.0 Design Considerations

The Urban Design Brief should demonstrate how the City's design guidelines and policies have guided the design of the site through written descriptions, plans, elevations, diagrams, and/or photographs. The applicant should explain how the design proposal addresses the following design considerations:

- Urban/Community Structure (i.e. Urban Growth Centre, Intensification Corridors, Stable Residential Neighbourhoods);
- Street and block pattern (i.e. connectivity, pedestrian access);
- Lot sizes;
- Building orientation and site layout;
- Built form, height, scale, and massing;
- Building articulation and detailing;
- Building materials;
- Setbacks from adjacent properties and the street;
- Building step-back (if applicable);
- Building transition to adjacent neighbourhoods;
- Heritage considerations (if applicable);
- Location of parking (surface or underground), driveways, ramps, drop-off areas;
- Access to transit;
- Bicycle parking/storage;
- Location of servicing, garbage collection, and loading areas;
- Streetscape elements (boulevard design, landscaping, street furniture, public art, signage, lighting, etc.);
- On-site landscaping and buffering; and
- Linkages to semi-private and public spaces (i.e. natural heritage features, parks, multi-use trails, courtyards and open space).



URBAN DESIGN BRIEF Terms of Reference

4.0 Project Design Analysis

Provide an overview of the urban design objectives/principles for the proposed development at the neighbourhood scale, indicating how the development integrates within the existing conditions and how it contributes to creating a unique sense of place through the proposed design considerations. Provide an analysis on the following points:

- How does the proposal comply with the applicable design guidelines;
- How does the proposal address the existing condition;
- How does the proposal enhance the function and aesthetics of the existing neighbourhood and future development; and
- How do constraints (i.e. lot size, grading, natural heritage) impact and influence the design of the development.

5.0 Submission Requirements

As part of the Urban Design Brief, written explanations and descriptions should be provided in addition to drawings, analysis, diagrams and/or illustrations to support the proposed development. Depending on the nature and scale of the development, these could include, but are not limited to, the following:

- Context drawing showing the location of the subject property within the broader community (400 metres)
- Site Plan;
- Elevation drawings;
- Floor Plans;
- Landscape Plan;
- Circulation Plan (vehicular and pedestrian);
- 3D coloured perspectives of the site and surrounding area;
- Streetscape elevations (showing existing streetscape);
- Photographs; and
- Sun/shadow analysis drawings.



**URBAN DESIGN BRIEF
Terms of Reference**

For more information please contact:

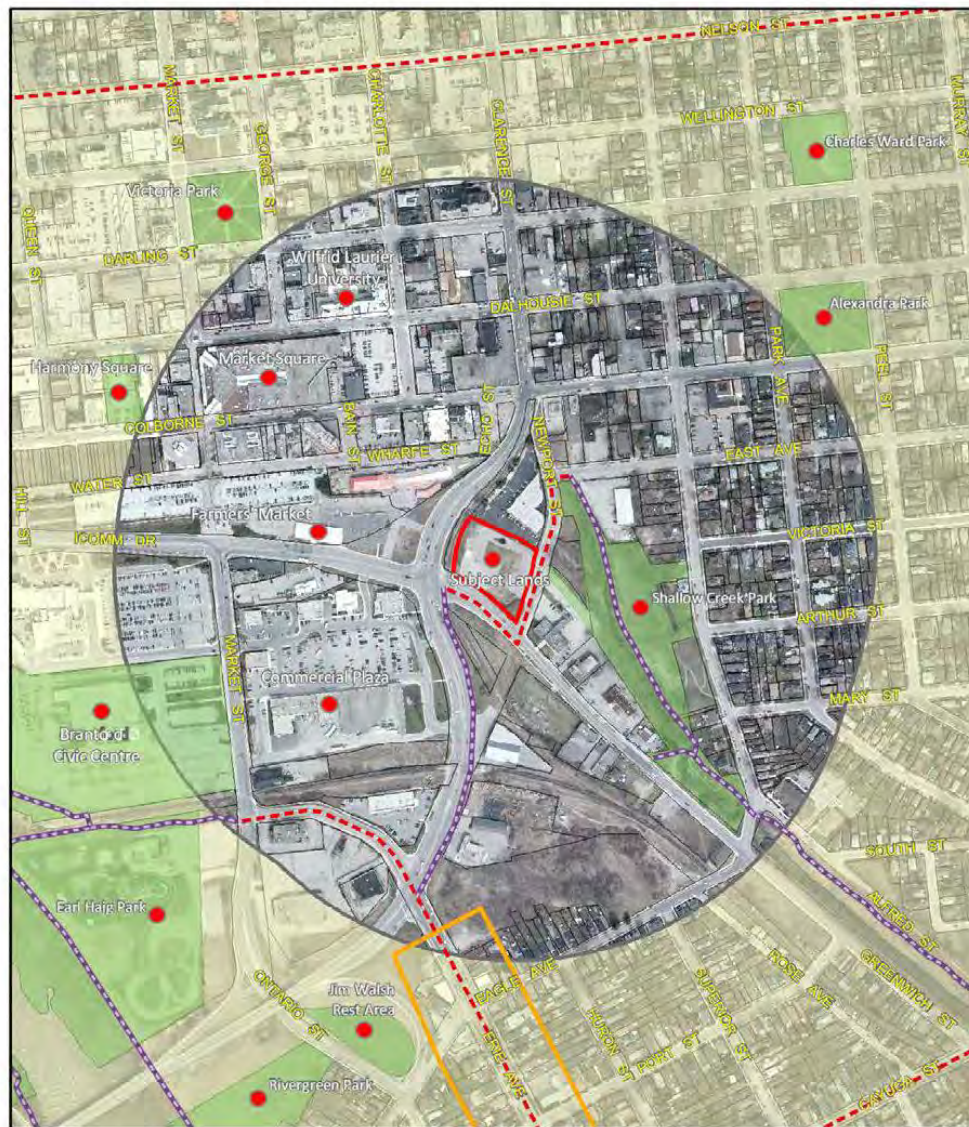
Yuli Siao
Senior Current Development Planner
City of Brantford
Planning Department
100 Wellington Square
(519) 759-4150
Extension 5712



**URBAN DESIGN BRIEF
Terms of Reference**

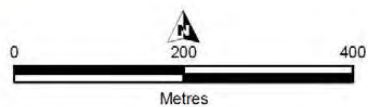
Appendix A

COMMUNITY CONTEXT MAP



LEGEND

- SUBJECT LAND (166-176 Greenwich Street)
- 400m Buffer
- Intensification Corridor
- Park
- Trails**
- Multi-use trail
- On-road Connection



4.11 Fire Route Sign Requirements

Fire Routes on Private Roadways

City Of Brantford Bylaw # 144-88

PART V

In order for your property to be included within the scope of this bylaw, the building owner must:

- A) Provide a site plan on paper measuring 8 1/2" x 11" showing location of the building's internal roads and fire hydrants and identifying the required fire access routes for the subject property to the Fire Department along with a fee of \$169.50.
- B) Required access routes will be verified by the Fire Department.
- C) One copy will be returned to owner to identify the Fire Department Access Route and location of signs.
- D) Owner(s) of the property will be required at their expense to place signs to comply with the following criteria on the Fire Department access routes identified by the Brantford Fire Department.
 - i) All signs must comply with the requirements of the Highway Traffic Act (see back of sheet for design).
 - ii) The signs with arrows pointing to areas designated as fire routes are to be provided at the Entrance and Exit to the property as close to the property line as possible (single arrow) and alternately every 30 m thereof along the designated fire route between Entrance and Exit (double arrow) to the property facing the Fire Department Access Route.
 - iii) The signs are to be mounted facing the Fire Route 2 m to 3 m to the bottom of the sign.
- E) When signs are installed the owner must contact the Brantford Fire Department at 519.752.0540 for a review of the Fire Department Access Route and sign location, which must reflect the drawing reviewed and approved by the Fire Department.
- F) When the Fire Department is satisfied that the Fire Department route complies with the drawings approved and a cheque for \$169.50, made out to The City of Brantford has been submitted to the Fire Department, a copy of the drawing will be forwarded to the Engineering Department @ City Hall for Council approval and inclusion to Schedule 27 of Bylaw #144-88.
- G) When council includes the Fire Access Route in Schedule #27 of Bylaw #144-88 a copy of the drawing will be forwarded to Brantford City Police for their enforcement.
- H) The property owner is responsible for maintenance of the Fire Route signs.

FIRE ROUTE SIGNS ARE AVAILABLE FROM LOCAL SIGN COMPANIES.

Please refer to the yellow pages in the phone book.



Signs must comply with the City of Brantford Bylaw and the Highway Traffic Act.

Ontario Highway Traffic Act - <http://www.e-laws.gov.on.ca/>

General Requirements for Fire Route Signage

1. Owner(s) of the property will be required at their expense to place signs to comply with the following criteria on the Fire Department access routes identified by the Brantford Fire Department.
 - i) All signs must comply with the requirements of the Highway Traffic Act, (see attached sheet for design),
 - ii) The signs with arrows pointing to areas designated as fire routes are to be provided on both sides of the Entrance and Exit to the property as close to the property line as possible (single arrow pointing inward) and (double arrow signs) alternating every 30m thereof along the designated fire route between Entrance and Exit,
 - iii) The signs are to be mounted facing the Fire Route 2m to 3m to the bottom of the sign.
2. When signs are installed the owner must contact the Brantford Fire Department at 519.752.0540 for a review of the Fire Department Access Route and sign location, which must reflect the drawing reviewed and approved by the Fire Department.
3. The property owner is responsible for maintenance of the Fire Route signs.

FIRE ROUTE SIGNS ARE AVAILABLE FROM LOCAL SIGN COMPANIES.

Please refer to the yellow pages in the phone book.

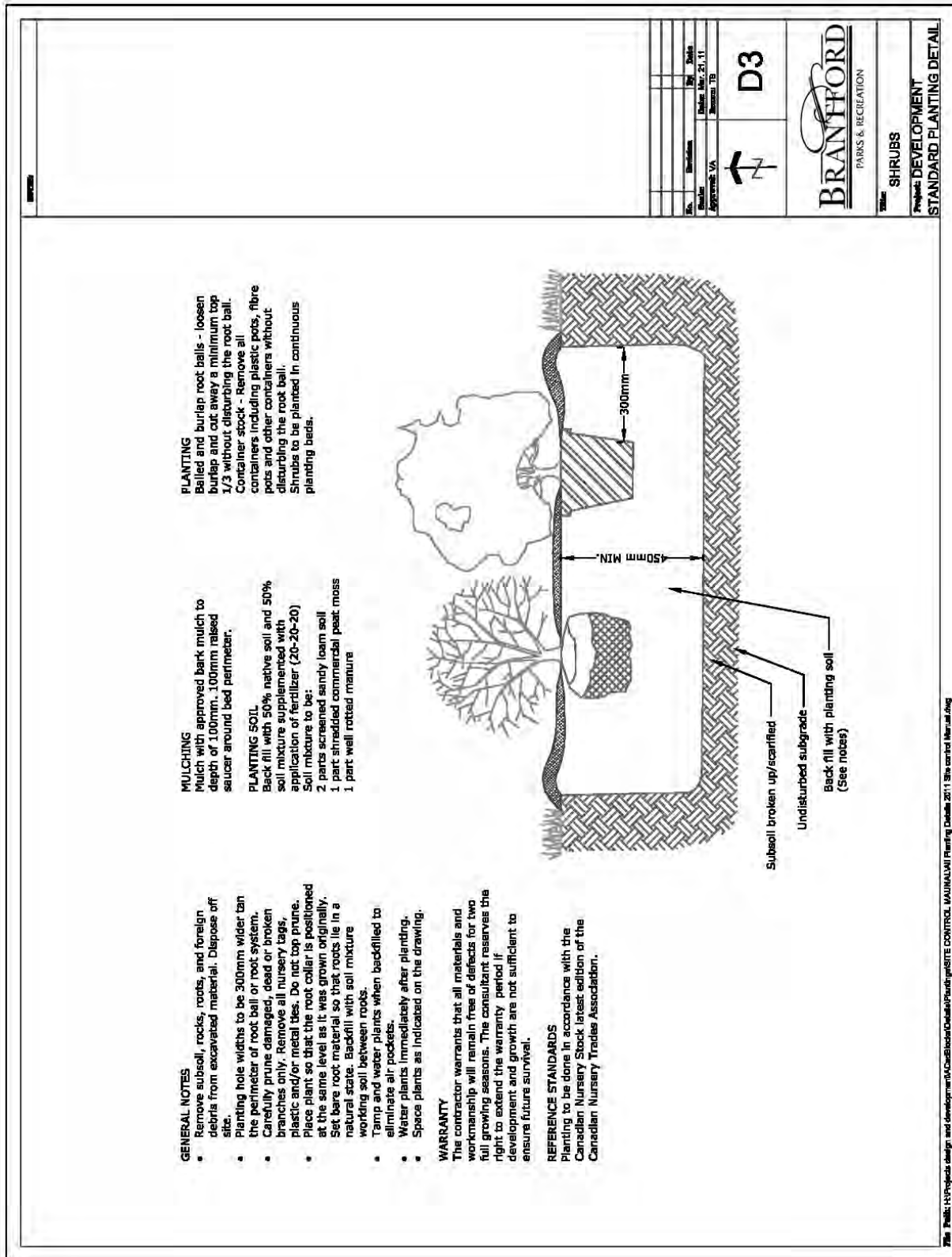
Signs must comply with the City of Brantford Bylaw and the Highway Traffic Act.

Ontario Highway Traffic Act - <http://www.e-laws.gov.on.ca/>



<p>GENERAL NOTES</p> <ul style="list-style-type: none"> • Remove subsoil, rocks, roots, and foreign debris from excavated material. Dispose off site. • Tree hole widths to be 300mm wider than the perimeter of root ball or root system. • Tree hole depths to be no deeper than the root ball. In heavy clay or poorly drained soil, place so that root collar is positioned 75mm higher than surrounding grade. Otherwise position root collar at finished grade level. • Scarify soil preparation area (5x dia. of root ball) to a depth of 300mm for aeration. • Hole to be back filled, tamped (in 150mm lifts), and watered to eliminate air pockets. • Saucers shall be soaked with water and mulched immediately following planting. <p>MULCHING</p> <p>Mulch with approved shredded bark mulch to depth of 100mm. Keep mulch 150mm away from trunk. 100mm high raised saucer (except in bed areas).</p> <p>WARRANTY</p> <p>The contractor warrants that all materials and workmanship will remain free of defects for two full growing seasons. The consultant reserves the right to extend the warranty period if development and growth are not sufficient to ensure future survival. Stakes and ties to be removed at end of warranty period.</p> <p>REFERENCE STANDARDS</p> <p>Planting to be done in accordance with the Canadian Nursery Stock latest edition of the Canadian Nursery Trades Association.</p>	<p>PLANTING SOIL</p> <p>Back fill with 50% native soil and 50% soil mixture supplemented with application of fertilizer (20-20-20)</p> <p>Soil mixture to be:</p> <ol style="list-style-type: none"> 2 parts screened sandy loam soil 1 part shredded commercial peat moss 1 part well rotted manure <p>PRUNING</p> <p>Prune at planting to carefully remove dead, broken, damaged branches only. Do not cut leader.</p> <p>ROOT BALL: Burlap, Twine</p> <p>Cut and remove all wire, burlap and twine from around trunk and top $\frac{1}{3}$ of root ball. Remove all non-biodegradable ties from this zone.</p> <p>STAKES</p> <p>Stake immediately. Use 2 number 1 spruce stakes, 38 x 38 x 2400mm (2 x 2" x 8'). Stakes to be driven beside and below root ball 300mm.</p> <p>Stakes to have above grade height of 1500mm free and clear of all branches. Tie tree to stakes with biodegradable heavy duty lute material (binder twine). Place stakes to avoid damage to root ball, trunk and branches. Remove all tags, plastic and metal ties.</p> <p>WATERING</p> <p>Ensure trees are thoroughly watered at planting and as required during warranty period.</p> <p>TREE GUARD (as approved)</p> <p>To be supplied and installed by Contractor.</p> <p>Back fill with planting soil. (see notes)</p> <p>Perforated drain tile if specified.</p> <p>Planting hole should only be deep enough to accommodate the root ball depth. Subsoil broken up/scarified.</p>	<p>NOTE:</p> <p>Steel "I" stakes may be acceptable in some instances but must be removed at the end of the warranty period.</p>
<p>BRANTFORD PARKS & RECREATION</p> <p>DECIDUOUS TREE</p> <p>Project: DEVELOPMENT STANDARD PLANTING DETAIL</p>		
<p>Scale: 1:20</p> <p>North Arrow: N</p> <p>Revision: 1</p> <p>Author: [Redacted]</p> <p>Check: [Redacted]</p> <p>Date: Mar. 27, 11</p> <p>Project: D2</p>		

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GENERAL NOTES

- Remove subsoil, rocks, roots, and foreign debris from excavated material. Dispose off site.
- Tree hole widths to be 300mm wider than the perimeter of root ball or root system.
- Tree hole depths to be no deeper than the root ball. In heavy clay or poorly drained soil, place so that root collar is positioned 75mm higher than surrounding grade. Otherwise position root collar at finished grade level.
- Scarify sides of planting hole.
- Scarify soil preparation area (6x dia. of root ball) to a depth of 300mm for aeration.
- Hole to be back filled, tamped (in 150mm lifts), and watered to eliminate air pockets.
- Saucer shall be soaked with water and mulched immediately following planting.

MULCHING
Mulch with approved shredded bark mulch to depth of 100mm. Keep mulch 150mm away from trunk. 100mm high raised saucer (except in bed areas).

WARRANTY
The contractor warrants that all materials and workmanship will remain free of defects for two full growing seasons. The consultant reserves the right to extend the warranty period if development and growth are not sufficient to ensure future survival. Stakes and ties to be removed at end of warranty period.

REFERENCE STANDARDS
Planting to be done in accordance with the Canadian Nursery Stock latest edition of the Canadian Nursery Trades Association.

PLANTING SOIL
Back fill with 50% native soil and 50% soil mixture supplemented with application of fertilizer (20-20-20)
Soil mixture to be:
2 parts screened sandy loam soil
1 part shredded commercial peat moss
1 part well rotted manure

PRUNING
Prune at planting to carefully remove dead, broken, damaged branches only. Do not cut leader.

ROOT BALL: Burlap, Twine
Out and remove all wire, burlap and twine from around trunk and top 1/3 of root ball. Remove all non-biodegradable ties from this zone.

STAKES
Stake Immediately. Use 2 number 1 spruce stakes, 38 x 38 x 2400mm (2 x 2" x 8"). Stakes to be driven beside and below root ball 300mm.
Stakes to have above grade height of 1500mm free and clear of all branches. Tie tree to stakes with biodegradable heavy duty jute material (binder twine). Place stakes to avoid damage to root ball, trunk and branches.
Remove all tags, plastic and metal ties.

WATERING
Ensure trees are thoroughly watered at planting and as required during warranty period.

TREE GUARD (as approved)
To be supplied and installed by Contractor.
Back fill with planting soil. (see notes)
Planting hole should only be deep enough to accommodate the root ball depth.
Subsoil broken up/scarified.

NOTE:
Steel "m" stakes may be acceptable in some instances but must be removed at the end of the warranty period.

BRANTFORD
PARKS & RECREATION

CONIFEROUS TREE ON SLOPE

PROPOSED DEVELOPMENT

STANDARD PLANTING DETAIL

D4

GENERAL NOTES

- Remove subsoil, rocks, roots, and foreign debris from excavated material. Dispose off site.
- Tree hole widths to be 300mm wider than the perimeter of root ball or root system.
- Tree hole depths to be no deeper than the root ball. In heavy clay or poorly drained soil, place so that root collar is positioned 75mm higher than surrounding grade. Otherwise position root collar at finished grade level.
- Scarify soil preparation area (5x dia. of root ball) to a depth of 300mm for aeration.
- Hole to be back filled, tamped (in 150mm lifts), and watered to eliminate air pockets.
- Saucer shall be soaked with water and mulched immediately following planting.

MULCHING
Mulch with approved shredded bark mulch to depth of 100mm. Keep mulch 150mm away from trunk. 100mm high raised saucer (except in bed areas).

WARRANTY
The contractor warrants that all materials and workmanship will remain free of defects for two full growing seasons. The consultant reserves the right to extend the warranty period in development and growth are not sufficient to ensure future survival. Stakes and ties to be removed at end of warranty period.

REFERENCE STANDARDS
Planting to be done in accordance with the Canadian Nursery Stock latest edition of the Canadian Nursery Trades Association.

PLANTING SOIL
Back fill with 50% native soil and 50% soil mixture supplemented with application of fertilizer (20-20-20)
Soil mixture to be:
2 parts screened sandy loam soil
1 part shredded commercial peat moss
1 part well rotted manure

PRUNING
Prune at planting to carefully remove dead, broken, damaged branches only. Do not cut leader.

ROOT BALL: Burlap, Twine
Cut and remove all wire, burlap and twine from around trunk and top 1/2 of root ball. Remove all non-biodegradable ties from this zone.

STAKES
Stake immediately. Use 2 number 1 spruce stakes, 38 x 38 x 2400mm (2 x 2" x 8'). Stakes to be driven beside and below root ball 300mm.
Stakes to have above grade height of 1500mm tree and clear of all branches. Tie tree to stakes with biodegradable heavy duty jute material (biander twine). Place stakes to avoid damage to root ball, trunk and branches.
Remove all tags, plastic and metal ties.

WATERING
Ensure trees are thoroughly watered at planting and as required during warranty period.

TREE GUARD (as approved)
To be supplied and installed by Contractor.
Back fill with planting soil. (see notes)
Planting hole should only be deep enough to accommodate the root ball depth.
Subsoil broken up/scarified.

NOTE:
Steel T" stakes may be acceptable in some instances but must be removed at the end of the warranty period.

Scale	1" = 1'
Author	DATE
Approvers	DATE
Checked	DATE
Drawn	DATE
Revised	DATE
Project No.	2011-01
Sheet No.	11
Revision	
Scale	D5

BRANTFORD
Parks & Recreation

DECIDUOUS TREE ON SLOPE

STANDARD PLANTING DETAIL

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MULCHING
Mulch with approved bark mulch to depth of 100mm. 100mm raised saucer around bed perimeter.

PLANTING SOIL
Back fill with 50% native soil and 50% soil mixture supplemented with application of fertilizer (20-20-20)
Soil mixture to be:
2 parts screened sandy loam soil
1 part shredded commercial peat moss
1 part well rotted manure

PLANTING
Balled and burlap root balls - loosen burlap and cut away a minimum top 1/3 without disturbing the root ball.
Container stock - Remove all containers including plastic pots, fibre pots and other containers without disturbing the root ball.
Shrubs to be planted in continuous planting beds.

No.	Description	Qty	Unit	Date	Scale
Approved by: _____					
Checked by: _____					
Date: Mar. 21, 11					
Revision: TB					

D6

BRANTFORD
PARKS & RECREATION

SHRUB ON SLOPE

PROJECT DEVELOPMENT
STANDARD PLANTING DETAIL

GENERAL NOTES

- Remove subsoil, rocks, roots, and foreign debris from excavated material. Dispose off site.
- Planting hole widths to be 300mm wider than the perimeter of root ball or root system.
- Carefully prune damaged, dead or broken branches only. Remove all nursery tags, plastic and/or metal ties. Do not top prune.
- Place plant so that the root collar is positioned at the same level as it was grown originally. Set bare root material so that roots lie in a natural state. Backfill with soil mixture working soil between roots.
- Tamp and water plants when backfilled to eliminate air pockets.
- Water plants immediately after planting.
- Space plants as indicated on the drawing.

WARRANTY
The contractor warrants that all materials and workmanship will remain free of defects for two full growing seasons. The consultant reserves the right to extend the warranty period if development and growth are not sufficient to ensure future survival.

REFERENCE STANDARDS
Planting to be done in accordance with the Canadian Nursery Stock latest edition of the Canadian Nursery Trades Association.

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4.13 Specifications for Tree Protection

1. TREE PRESERVATION NOTES:

1. TREE PRESERVATION FENCING SHALL BE ERRECTED PRIOR TO COMMENCING CONSTRUCTION AND MAINTAURED THROUGHOUT CONSTRUCTION.
2. ALL TREE PRESERVATION FENCING AND PROTECTION DEVICES SHALL BE INSTALLED AS APPROVED BY THE CITY REPRESENTATIVE.
3. THE CONTRACTOR SHALL MAINTAIN TREE PRESERVATION FENCING AND PROTECTION DEVICES THROUGHOUT CONSTRUCTION AND NOT REMOVE THE FENCING WITHOUT WRITTEN APPROVAL FROM THE CITY REPRESENTATIVE.
4. DURING CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN TREE PRESERVATION FENCING AND PROTECTION DEVICES.
5. THE CONTRACTOR SHALL NOT PERMIT ANY ACTIVITY NEAR THE PROTECTED TREES INCLUDING, BUT NOT LIMITED TO: THE USE OF EXCAVATORS, BACKHOES, SUPPLIES, EXCAVATION MATERIALS, CONCRETE WASHOUT, DISPOSAL OF FUELS, SOLVENTS, OR CHEMICALS, OR CAUSING DISTURBANCE OF ANY SOILS OR VEGETATION WITHIN THE PROTECTED AREAS.
6. NO DAMAGING ATTACHMENTS, WIRDS, SIGNS, OR PERMITS ARE TO BE FASTENED TO ANY PROTECTED TREE AROUND THE PROTECTED EXISTING TREES AND VEGETATION.
7. THE CONTRACTOR SHALL RETAIN THE EXISTING GRADE AROUND THE PROTECTED EXISTING TREES AND VEGETATION.
8. PROTECTIVE FENCING SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND OTHER LANDSCAPE WORK IS COMPLETE.
9. THE CONTRACTOR SHALL INROAD THE CITY REPRESENTATIVE OF ANY DAMAGE DONE TO EXISTING TREES, GRASSES, TRUNKS, OR ROOT SYSTEMS AND REPAIR AS DIRECTED.
10. ROOTS EXTENDING BEYOND THE PROTECTED AREA AND ARE EXPOSED DURING CONSTRUCTION SHALL BE CUT CLEARLY.
11. THE CONTRACTOR SHALL WATER TREES WITHIN THE PROTECTED AREA DURING DROUGHT PERIODS.
12. SIGNS (ALUMINIUM BLANK .064 THICKNESS, VINYL CUT LETTERS OR DIGITAL PRINT-OUT, LAMINATED 12" X 18") SHALL BE INSTALLED AT A MINIMUM OF 450mm FROM THE TREE TRUNK AT A MAXIMUM SPACING OF 450m. THE SIGN MUST BE MAINTAINED IN GOOD CONDITION FOR THE DURATION OF CONSTRUCTION.

1. WORDS:

No.	Symbol	By	Date
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2. NOTES:

EXISTING TREE CROWN

EXISTING DAPLINE OF TREE

T-BAR IRON STAKE, 2440mm LONG BY 38mm DIAMETER, TO BE LOCATED NO LESS THAN ONE METRE OUTSIDE DAPLINE

UNDISTURBED VEGETATION (INCLUDING TREES, SAPLINGS, SHRUBS AND GRASSES) AND SOIL

1200mm HIGH PARGE WIRE FENCE SECURED TO T-BAR STAKES

TEMPORARY PROTECTIVE FENCING PRESERVATION OF EXISTING TREES & VEGETATION

N.T.S.

PREPARED BY THE CITY OF BRANTFORD

BRANTFORD
PARKS & RECREATION

TITLE
TREE MANAGEMENT POLICY

PROJECT
TREE PRESERVATION

4.14 Standard Chain link Fence Detail

FENCE DETAIL

END, CORNER, STRAINING OR GATE POST 90mm O.D. GALVANIZED SCHEDULE 40. SEE NOTES

3.0m BACK PANEL

3.0m

42.8mm O.D. GALVANIZED PIPE RAIL, SCHEDULE 40 Knuckled top edge SEE NOTES

STEEL STRETCHER BAR 6 x 19mm MIN. SEE NOTES

50mm Galv Wire mesh 6 gauge nominal see note

80mm O.D. GALV. LINE POST SCHEDULE 40 SEE NOTES

1.52m

STRETCHER BAR BANDS 300mm C.C. STEEL 3 x 19mm MIN. ALUMINUM 5 x 19mm SEE NOTES

80mm clearance

KNUCKLED BOTTOM EDGE Single strand tension wire 8 Gauge fastened 450mm C.C. SEE NOTES

SCHEDULE 40 60mm O.D. GALV. LINE POST SEE NOTES

FASTENERS 8 GAUGE ALUMINUM OR HEAVIER 300mm C.C.

SLOPE TO DRAIN

FOOTING DETAILS SEE BELOW.

DESCRIPTION	LENGTH		
	O.D. (mm)	STANDARD (m)	RETAINING WALLS (m)
LINE	80.3	2.5	2.0
END, CORNER, STRAINING AND GATES WITH OPENINGS 5.5m MAX.	98.8	2.7	2.3
GATES WITH OPENINGS 10.0 MAX.	114.3	2.7	--

NOTES:

- 1) All dimensions in mm except as noted otherwise
- 2) All fence fabric, post caps, braces, rails, bars, fasteners shall be coated with black vinyl or powder coat paint treatment.
- 3) Wire mesh gauge as specified
- 4) Fabric on park side of fence

FOOTING DETAIL

TOPS OF FOOTINGS TO BE DOMED. (TYP.)

END, CORNER, STRAINING OR GATE POST.

200mm

GROUND LINE

1.2m

155

1.06m min.

155

15 MPa CONCRETE

300 min.

300 min.

A. IN EARTH

END, CORNER, STRAINING OR GATE POST.

480 max.

GROUND LINE

OVERBURDEN

ROCK LINE

380

CEMENT GROUT OR HOT Poured SULPHUR.

OD +25

B. IN SOLD ROCK (Overburden less than 450mm)

END, CORNER, STRAINING OR GATE POST.

CONCRETE

150

GROUND LINE

OVERBURDEN

ROCK LINE

840mm min.

50

IF DRILLED - CEMENT GROUT OR HOT Poured SULPHUR.

IF EXCAVATED OR BLASTED - CONCRETE

OD +25

X

C. IN SHALE, LOOSE OR FRIABLE OR SOLID ROCK (Overburden more than 450mm)

END, CORNER, STRAINING OR GATE POST.

25mm CEMENT GROUT CAPPING

GROUND LINE

485

380

CEMENT GROUT OR HOT Poured SULPHUR.

CEMENT GROUT TO BE USED IN SETTING PIPE TO GRADE.

STEEL PLATE CAP 5.1mm OR BETTER WELDED TO SLEEVE.

D. ON RETAINING WALL

POST DETAILS

LEGEND:

* THE FOLLOWING NOTES SHALL BE READ IN CONNECTION WITH THE NOTES ON ALL OTHER DRAWING DETAILS AND WRITTEN SPECIFICATIONS.

NOTES:

* THE FOLLOWING NOTES SHALL BE READ IN CONNECTION WITH THE NOTES ON ALL OTHER DRAWING DETAILS AND WRITTEN SPECIFICATIONS.

BRANTFORD
PARKS & RECREATION

CHAIN LINK SECURITY FENCE - BLACK VINYL DETAIL

No. _____ Revision _____ By _____ Date _____
 Name: N.T.S. Date: 04-28-09
 Design: _____ Drawn: L.F.
 Survey: _____ Book: _____
 Approval: _____

4.15 List of City Approved Noise Wall Suppliers

Updated: October 15, 2007

Alcuf International Inc.
5350 Canotek Road, Unit #20
Gloucester (Ottawa) Ontario K1J 9E2

Tel: 613-749-9393

Fax: 613-749-5463

Homeland Vinyl Fence Limited
75 Stafford Drive
Brampton, Ontario L6W 1L3

Tel: 905-790-3400

Fax: 905-790-3401

Durisol Inc.
67 Frid Street
Hamilton, Ontario L8P 4M3

Tel: 905-521-0999

Fax: 905-521-8658

National Vinyl Products
P.O. Box 520
Burlington, Ontario L7R 3Y3

Design Concrete Systems Ltd.
P.O. Box 839, 56 Birch Street
Seaforth, Ontario N0K 1W0

Tel: 519-527-0397

Fax: 519-527-2325

4.16 Street Tree Planting Guidelines

INTRODUCTION:

Street tree planning is an important first step in urban forest management. Planting the “**right tree in the right place**” is key to not only a healthy tree but also to reduced future conflicts with the many other utilities and amenities in a streetscape. Strategically placed and selected trees significantly enhance the urban environment and create long-term satisfaction for residents, neighbourhoods and communities. Through careful planning, maintenance requirements and long-term costs can be reduced and public safety is enhanced. **These guidelines are to be used as a reference tool for the creation and implementation of Street Tree Planting Plans in the City of Brantford.**

PLAN SUBMISSION REQUIREMENTS:

All plans and written documents are to be submitted to the City of Brantford Parks and Recreation Department, attention Urban Forestry Coordinator / Design and Development Coordinator. Any and all tree species substitutions are to be submitted in writing for review and approval by the City of Brantford prior to planting.

All tree planting plans must be prepared by a certified Landscape Architect or other approved professional with proven expertise in Arboriculture.

- ☑ Two copies of the Street Tree Planting Plan are to be submitted for review and approval. Work may not proceed unless plan approval has been received in writing from the City.
- ☑ Two copies of the final revised and approved plan are to be submitted for file.
- ☑ Two copies of an “as-built” plan showing tree species substitutions, tree location changes, utility/service revisions etc. are to be submitted for file.
- ☑ All plans must be submitted folded to a maximum size of 21.6 x 35.6 cm (legal-size).

DRAWING REQUIREMENTS:

Tree planting shall not proceed unless the City of Brantford has approved a Street Tree Planting Plan. **The following items shall be included on all Street Tree Planting Plans:**

- ☑ Location of site servicing systems including water, hydro, sanitary, gas, fire hydrants, communication lines, poles (including type/height), transformers, vaults, catch basins, valves.
- ☑ Municipal street names.
- ☑ Location of existing street trees, if applicable
- ☑ Location of proposed street trees. In consideration of the City of Brantford’s commitment to attain 40% tree canopy cover, symbols for each tree shall be to scale including **two circular symbols for each tree**. A 0.75m radius shape in a dark colour shall indicate the crown size at installation; an offset shape in a lighter colour will indicate the mature size of the tree. Mature size radii shall be in accordance with the tree size classification in the Approved Species List: Large 10m radius, Medium 5m radius, Small or Columnar 2m radius.
- ☑ Plant list using a key system for proposed trees, indicating the quantity, full botanical name, common name, caliper (50mm size minimum), root type (eg: ball & burlap), and any special remarks.
- ☑ Tree planting detail and specifications outlining method of installation and staking.
- ☑ Title block to contain the full name, address, and contact numbers of plan supplier.

- ☑ Plan to be drawn to an accepted metric scale with north arrow, project name, date, revision notes, civic address of private properties/lots, and other sufficient documentation to clearly identify the site.

LOCATION CRITERIA:

The increased use of native tree species is encouraged, especially in proximity to natural areas where the potential for invasion by non-native species is high. Always select for as much species diversity as possible on the streetscape. Consideration should be given to the maintenance needs of any species and the anticipated level of maintenance available. Select the largest tree (at maturity) that the site will accommodate since large trees make the greatest environmental contribution.

When planning street tree locations, consider the following:

- ☑ Select tree species suited to soils and growing conditions of the site.
- ☑ Allow for clearances from underground and aboveground utilities.
- ☑ Allow for clearances from overhead utilities for mature tree canopy development.
- ☑ Follow utility restrictions on tree planting.
- ☑ Consider sight lines for traffic and public safety.
- ☑ Preference shall be given to providing 1 tree for every residence whenever possible. It may occur that two residences share a boulevard with space for only 1 tree. This may require planting 1 tree on the boulevard and 1 tree on the private front lawn.
- ☑ Where more than 1 tree will fit at 10m spacing (including buffers –see below), plant as many trees as will fit the street frontage (example: corner lot).
- ☑ Identify trees in areas vulnerable to street maintenance i.e. snow loading.
- ☑ Ensure that native tree species are selected along the frontage of all parks, open-space, woodlots, storm-water retention facilities, and natural areas.
- ☑ Enhance species diversity on the streetscape as a disease preventative measure; avoid grouping trees of the same species together. Subject areas may not exceed 50% of any one Family, 25% of any one Genus, and 10% of any one species. (Note: where the tree planting plan includes less than 25 trees, the stated minimum proportions may not be attainable)

SPACING & BUFFERS:

When choosing street tree locations, consider the following space requirements and buffers:

- ☑ 10 metre minimum distance between trees
- ☑ 1.5 metre minimum boulevard width for tree planting
- ☑ 2 metres from driveways
- ☑ 5 metres from street lights
- ☑ 15 metres from stop signs
- ☑ 20 metres from main traffic intersections
- ☑ 20 metres from secondary traffic intersections
- ☑ 3 metres from fire hydrants and underground vaults
- ☑ 2 metres from communication pedestals
- ☑ 3 metres from pad-mount transformers
- ☑ 2 metres from community mailboxes
- ☑ No invasive trees may be planted within 250 metres of natural areas

STANDARDS & QUALITY:

The City may inspect all trees and require replacement of any trees that do not meet the following standards. All trees shall meet or exceed the Canadian Standards for Nursery Stock as published by the Canadian Nursery Trades Association (most recent Edition).

Trees must be true to species and variety specified, and of the size and form typical of the species & cultivar. Trees with multiple leaders (not typical of the species) will be rejected. All trees will be free of insects (eggs and larvae), disease, and physical damage to the crown, trunk and root system. Trees will not be trunk wrapped or be installed with any packing/shipping material remaining attached to them. Trees that meet the physical measurements but do not possess a normal balance of height, spread and root development will not be accepted. **The City may delay acceptance of substantial completion until acceptable tree quality and standards have been met.**

TIMING & WARRANTY

Street tree planting shall take place in a coordinated, continuous manner following completion of all major road works, construction of curbs, and at such time as the boulevard and/or lawn areas identified for tree planting are topsoiled, fine-graded, and sodded. Tree planting shall occur in the early spring or late fall, as per arboricultural best practices.

The City may review the locations of all trees (staked in the field) prior to planting and shall reserve the right to make minor adjustments to such locations as deemed necessary. In subdivision areas or areas where multiple/numerous trees are proposed, the Urban Forestry Coordinator will verify the date of substantial completion for the purpose of accepting the start of the warranty period only after all (or greater than 90%) of the street tree plantings as identified on the approved planting plan(s) have been installed **and** following written confirmation from the Landscape Architect that all works have been completed according to the approved plan(s). Note it is not the responsibility of the Urban Forestry Coordinator to keep track of the planting schedule or warranty period(s).

- Multiple warranty periods and planting schedules for a particular phase of the/any development is not acceptable.
- All trees will be guaranteed for a period of two years from the date of substantial completion of the tree planting as verified by the City.
- Guarantee does not cover vandalized trees.
- Unacceptable trees will be identified as any tree that fails to meet the Canadian Nursery Trades Specifications for the minimum number of live branches in the crown.
- At least 6 months and not more than 12 months prior to end of guarantee period, trees are to be inspected & documented by the developer or assign(s) for quality & health. At this time the tree stakes shall be removed. Dead and poor quality trees are to be replaced prior to end of guarantee period.
- Replacement trees are to be of same species and meet the quality standards as stated. Any changes must be approved by the City in writing.

CONFLICTS

To avoid disputes with homeowners regarding tree locations and or species, street tree plantings must be identified on all lot plans, sales agreements, and/or marketing materials. Homeowners shall be provided with written notification of the tree planting schedule a minimum of three weeks prior to the installation date.

If trees are proposed to be planted on private property due to space /utility restrictions, **the homeowner shall be provided with written notification of such in advance (as noted above) of planting works occurring and provided with a plan illustrating the location of the tree on their lot.** If the homeowner is opposed to the tree being planted, the tree shall be planted in another location within the general vicinity as approved by the City of

Brantford. Requests for alternate species should be considered utilizing the approved tree species list and according to site conditions and criteria noted herein.

TREE SELECTION:

All trees must be 50mm caliper or larger with a single trunk; see Standards & Quality for further information. The following tree species have been selected for their performance in urban conditions. Any additions must be approved by the City of Brantford.

Native	Small Growing Selections	These trees are suitable for confined areas such as under high voltage hydro lines, and low soil volume areas.
Invasive		
I	Amur maple	Acer ginnala
	Tartarian maple	<i>Acer tartaricum</i>
N	Downy serviceberry	<i>Amelanchier arborea</i>
	Ivory Silk tree lilac	<i>Syringa reticulata</i> "Ivory Silk"
	Japanese Cherry "Kwanzan"	<i>Prunus serrulata</i> 'Kwanzan'
	European hornbeam	<i>Carpinus betula</i>
	Golden chain tree	<i>Labernum x watereri</i>
N	Eastern redbud	<i>Cercis canadensis</i>
	Medium Growing Selections	These trees are suitable for less confined areas such as moderate sized boulevards, and areas adjacent to streetlights, and small front lawns.
	Hedge Maple	Acer campestre
	Chanticleer Pear	<i>Pyrus calleryana</i> 'Chanticleer'
	Turkish hazel	<i>Corylus collurna</i>
	Columnar Selections	These trees are suited to areas where overhead space is confined laterally.
I	Columnar Norway maple	Acer platanoides 'Columnare'
	Columnar European beech	<i>Fagus sylvatica</i> 'Fastigiata'
	Princeton Sentry Ginkgo	<i>Ginkgo biloba</i> 'Princeton Sentry'
	Columnar European hornbeam	<i>Carpinus betulus</i> 'Fastigiata'

	Columnar English oak	<i>Quercus robur 'Fastigiata'</i>
	Large Growing Selections - Boulevards	These trees may also be used on lawns.
N	Skyline honeylocust	Gleditsia tricanthos var. inermis 'Skycole'
N	Northern hackberry	<i>Celtis occidentalis</i>
	Homestead elm	<i>Ulmus x 'Homestead'</i>
I	Crimson King Norway maple	<i>Acer platanoides 'Crimson King'</i>
	Bloodgood London plane tree	<i>Platanus x acerifolia 'Bloodgood'</i>
	Japanese zelkova	<i>Zelkova serrata 'Green Vase'</i>
	Hardy rubber tree	<i>Eucommia ulmoides</i>
	Silver Linden	<i>Tilia tomentosa 'Sterling Silver'</i>
N	Bur Oak	<i>Quercus macrocarpa</i>
N	Ohio buckeye	<i>Aesculus glabra</i>
	Ginkgo	<i>Ginkgo biloba</i>
Native Invasive	Large Growing Selections - Lawns	These trees may not be used on boulevards.
N	Katsura-tree	Cercidiphyllum japonica
N	Red oak	Quercus rubra
N	White oak	<i>Quercus alba</i>
N	Tulip tree	<i>Liriodendron tulipifera</i>
N	Sugar maple	<i>Acer saccharum</i>
	Amur cork tree	<i>Phellodendron amurense</i>
I	Scholar tree	<i>Sophora japonica</i>
N	Kentucky coffee tree	<i>Gymnocladus dioicus</i>
N	Native red maple	<i>Acer rubrum</i>

TREE INSTALLATION:

Consult the *Reference Guide for Developing Planting Details*, produced by Landscape Ontario, Horticultural Trades Association.

1. Materials

- a. Topsoil must be a sandy loam material, free of rocks, lumps of clay or subsoil and chemical/pesticide contamination. Topsoil must have a minimum of 5% organic component; pH must be between 6-7. Soil shall be free of subsoil, roots, vegetation, noxious weeds, debris, toxic material, stones, and any extraneous matter over 25mm diameter.
- b. Verification of topsoil suitability for use may be required at the discretion of the City Representative. If required, the topsoil intended for use must be tested by a certified agency/laboratory and the test results and report submitted for review. The soil-testing agency shall be informed of the intended use of the soil and the current City of Brantford standards. The report must identify any/all deficiencies, whether the soil is suitable for use and include recommendations with respect to soil improvement. All soil improvement measures must be undertaken or another more suitable topsoil source must be used.
- c. Mulch must be coarse softwood or hardwood mulch as approved upon submission of sample to the City. Mulch that is very light in colour, malodorous, or decayed will not be accepted.
- d. Water must be potable and free of minerals that would be detrimental to plant growth.
- e. Wooden stakes must be 38 x 38 x 2400mm (2x2" x 8') Number 1 spruce stakes; **metal tree stakes will not be accepted.**
- f. Tree ties shall be a biodegradable jute material such as binder twine; sample and method of installation shall be approved by the City Representative. The biodegradable twine shall not last more than 2 years when installed.

2. Installation Timing & Organization

- a. The root ball will be protected at all times from freezing and desiccation.
- b. All planting holes will be dug by hand or by the use of a tree spade. No auguring of planting holes will be permitted.
- c. All trees are to be supported by two 2" X 2" X 8' Number 1 spruce stakes, oriented parallel with the road. Stakes shall be driven into undisturbed soil. All trees will be tied using binder twine type natural jute material, as approved. An anti-chafing material (eg. Hose) may be used to prevent bark damage.
- d. **Planting holes will be a minimum of 60 cm (24 inches) wider** than the soil ball and the same depth as the soil ball. No excavation will take place deeper than the root ball.
- e. All sod removed at planting site will be removed and disposed of by the contractor.
- f. Existing soil may be used to within 10 cm. (4 inches) of the natural grade of the soil. The top 10 cm. of the planting hole and the water retention ring at the perimeter of the planting hole shall be good quality topsoil. The tree well will be installed at least 75 cm across and 10 cm high.
- g. All trees will be planted at the same grade at which they were grown in the nursery. Soil is to be firmly and carefully replaced around the roots as to remove air pockets.
- h. **During planting, the top rings of the wire basket and all ropes and burlap**

must be removed from the top 20 cm of the root ball.

- i. Trees will be tied at approximately 1.5 m. (4.5 feet) above the ground and affixed to the stake in such a manner that they will not come loose over the course of their usefulness.
- j. No crown reduction or root pruning is to be performed. Pruning will be limited to the removal of broken branches, trunk suckers and damaged roots. Pruning cuts, where necessary, will be performed using sharp and well-maintained tools, according to accepted standards.
- k. All planting sites will be left in a clean, tidy and safe condition with all surplus materials removed. Caution will be taken not to damage turf, sidewalks, curbs, roads, etc. Any damage will be the responsibility of the contractor to repair. No planting sites will be left unattended or incomplete at the end of a workday.
- l. A thorough watering shall be done at the time of planting.
- m. The contractor will deliver to each household a tree care doortag immediately following planting works (sample attached).
- n. All trees planted in sodded boulevards will be mulched for the full area inside the tree well to a depth of at least 10 cm with coarse wood chips, though no closer than 10 cm to the stem.
- o. A tree guard will be installed on each tree, sample to be approved by City

NOTICE TO RESIDENTS

Please use the following structured text when printing Tree Planting Notices for residents. This information is a minimum requirement; more information may be added. **Please ensure that the notices are deliverable to homes without mailboxes** (eg: door-hanger style, etc.)

DEVELOPER has planted a tree adjacent to your home. This tree will be under guarantee for 2 years, but we appreciate your help looking after it.

The tree was watered when it was planted, but **please water the tree** on a weekly basis when possible. Allow a hose to run slowly until soil is deeply saturated. Please follow the restrictions of the water conservation bylaw.

Please protect your tree from damage by lawn mowers and grass trimmers.

New trees should only be staked for 1 year. The jute twine will decay after one year; please do not replace the twine.

If after the first few months your tree does not seem healthy, please call the Developer.

Example of door-hanger issued by the City of Brantford:

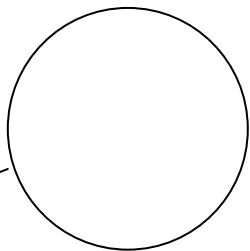


Tree Planting Bulletin

Questions or concerns?

519-756-1500

www.brantford.ca



Parks and Recreation has planted a tree adjacent to your home. This tree will be under guarantee for 2 years, but we appreciate your help looking after it.

The tree was watered when it was planted, but **please water the tree** on a weekly basis when possible. Allow a hose to run slowly until soil is deeply saturated. Please follow the restrictions of the water conservation bylaw.

Please protect your tree from damage by lawn mowers and grass trimmers.

New trees should only be staked for 1 year. The jute twine will decay after one year; please do not replace the twine.

If after the first few months your tree does not seem healthy, please call Parks and Recreation
519-756-1500

4.17 Northwest Industrial Area Supplemental Site Plan Requirements

The Northwest Area of the City supports many significant natural features. The use of portions of the Northwest Area for industrial activities must include safeguards to protect these natural features. In order to ensure that these safeguards are implemented on an individual lot basis, the Northwest Industrial Area has been declared a Site Plan Control Area by Bylaw No. 44-2000.

This Appendix is structured as two separate sections. The first section is titled “Supplemental Site Plan Design Guidelines.” In addition to the standard Design Guidelines of Section 7.0 of this Manual, these supplemental guidelines will also be used in evaluating site plans submitted to the City for approval in the Northwest Industrial Subdivision.

In addition to the physical protections and safeguards for the environment that are provided by the design guidelines through Site Plan Approval, caution must also be exercised to prevent potential pollution and spills from occurring as a result of the industrial activities. The second section of this Appendix is titled “Operational Practices” that outlines good housekeeping, product-specific and spill response practices that the City encourages industries to follow to protect the natural features in this area. These “Operational Practices” will be attached to the approved site plans, with a requirement that they be distributed to the operators of the industrial uses to be located on the lands.

SECTION 1 – SUPPLEMENTAL SITE PLAN DESIGN GUIDELINES

In addition to the standard Design Guidelines outlined in Section 7.0 of this Manual, the following supplemental design guidelines shall also apply to the lands within the “Industrial” Zones located in the Northwest Industrial Area:

G1 BUILDING SETBACK, MASSING AND FAÇADE (FIGURE G.1)

G.1.1 ALL LOTS

a) Foundations

In general, the undisturbed native soils at the site are considered suitable to support conventional spread foundations. Where the footing levels of the buildings will be above existing native mineral soil grade, structural fill will probably be used. Building footings constructed on undisturbed native soil or approved structural fill may be proportioned for preliminary design using a net allowable bearing pressure of 200kPa.

b) Concrete Slabs-on-Concrete

The floor slabs for the proposed industrial buildings may be constructed using conventional slab-on grade techniques, provided that the area beneath the buildings are prepared in accordance with the recommendations given in the report titled “Geotechnical Investigation Northwest Industrial Subdivision,” dated September 1999, prepared by Naylor Engineering Associates Ltd. Special care should be taken to ensure that there are no variances of support in the floor areas. A modulus of subgrade reaction, k , of 50MPa/m may be used for design of the floor slabs.

G1.2 LOTS WITHIN THE M2-10 AND M3 ZONES

- a) For those sites located within the M2-10 and M3 Zones within the City of Brantford Comprehensive Zoning Bylaw, the buildings shall employ high quality material and shall be designed with particular emphasis on the façades facing the public streets.
- b) All mechanical and service equipment shall be located so that they are not visible or are screened from the public streets.
- c) Notwithstanding the minimum sideyard and rear yard requirements, as indicated in the City of Brantford Comprehensive Zoning Bylaw, all the buildings within the M2-10 and M3 Zones with a frontage along Oak Park Road and Hardy Road shall be encouraged to be sited to create a strong and attractive street edge definition. This could be achieved by siting the building façades within a 15-20 metre setback from the streetline along Oak Park Road and Hardy Road.

G1.3 LOTS WITHIN THE M3-2 ZONE

- a) The overall building design shall proceed along a contemporary architectural theme with emphasis on the use of modern building materials such as tinted or reflective glazing materials, in combination with the architectural panels of either precast, metal or brick. The intention is to create a variety of attractive modern commercial façades within the M3-2 Zones.
- b) Building materials shall be uniform on all façades of the structure. Emphasis must be placed on design and details visible to the public or from adjacent properties. Specific building designs and finishing materials shall be approved on an individual basis.
- c) All mechanical and service equipment shall be designed as an integral part of the built form or screened from the streets.
- d) Particular attention shall be put onto the visual impact of the building façades visible from the access ramps of Highway 403.
- e) Notwithstanding the minimum side yard and rear yard requirements, as indicated in the City of Brantford Comprehensive Zoning Bylaw, in order to create a consistent and attractive street frontage along Oak Park Road, all the buildings within the M3-2 Zone shall be encouraged to be sited to have their building façades located within a 15-20 metre setback from the street line along Oak Park Road.

G2 LANDSCAPE DESIGN (FIGURES G.2 AND G.3)**G2.1 ALL LOTS**

- a) Notwithstanding the planting strip and landscape open space requirements indicated in the City of Brantford Comprehensive Zoning Bylaw, all the sites within the Northwest Industrial Area shall be encouraged to adopt the following minimum planting strip requirements for yards along public streets.

ZONES	YARDS ALONG MAJOR COLLECTOR ROADS AND HARDY ROAD	YARDS ALONG OAK PARK ROAD
M3	6m	6m
M2	3m	6m

- b) The landscape design shall provide a setting for each individual building and all landscape elements must help to integrate the building into the site.
- c) All lots are to be landscaped in a “savannah” theme through the use of certain plant species for landscaping purposes.
- d) In areas along Oak Park Road, Hardy Road, and major collector roads, a formal boulevard treatment with regularly spaced deciduous trees of limited species (see Table G.2) is encouraged. In other areas, a less formal and naturalized theme should be considered. The actual design concept will be left to each individual landscape architect and shall be reviewed on an individual basis.
- e) Feature planting and focal landscape elements are to be provided at major entry points, intersections and site entrances using plant material from Tables G.2 and G.3.
- f) Low-scale foundation and accent planting is to be encouraged in front yard areas of individual sites to provide visual interest and allow for a degree of business identity within the overall site context.
- g) Parking areas are to be buffered from view along Oak Park Road and Hardy Road to the greatest extent possible. Coniferous materials from Table G.4, and lot walls are to be considered to ensure year-round screening.
- h) A more informal landscape character is to be promoted in buffer/amenity areas between adjacent developments, and along the yards adjacent to areas in the “OS3” Zone of the Comprehensive Zoning Bylaw. Within these landscape areas, the planting of native species compatible with the local plant communities is encouraged. Tables G.1 to G.4 provide recommended species and Table 10.5 lists species to be excluded.

G3 VEHICULAR CIRCULATION, PARKING AND LOADING AREAS (FIGURE G.4)

G3.1 ALL LOTS

- a) Access drives from streets shall be easily visible and will be denoted with a street number sign.
- b) Joint access shall be encouraged so as to reduce the number of access points onto the roadway system. If joint drives are compatible with neighbouring developments, the approved agreement or rights-of-way are to be registered on title.
- c) Within the areas zoned M3-2, any two-way access points shall feature a median strip.
- d) In large parking lots, the expanse of paving shall be encouraged to be broken down into smaller sections through the use of islands and medians. If feasible, the space shall be large enough to accommodate planting. The plant material specified for the islands shall be both shrubs and trees taken from Tables G.1 to G.4. If the island or median is also a main pedestrian link between the parking lot and the buildings, special attention must be made to accommodate both plantings and a walkway.

- e) Parking shall be arranged so that pedestrian access from the parking area to the building will be practical and safe. This can be done through the use of walkways or by the alignment of the parking bays.
- f) Loading and service facilities shall be screened from the streets. Any screen walls required to reduce the visual impact of these areas shall be constructed of material compatible with the building structure.
- g) From the sites immediately adjacent to the access ramps from and to Highway 403 within the M3-2 Zone areas, all the loading areas and parking areas shall be screened by the use of generous planting strips, berming and/or screening fences (see also Figure G.4).

G4 SIGNAGE AND SITE IDENTIFICATION (FIGURE G.5)

G4.1 ALL LOTS

- a) A major sign shall be located on each property at the main vehicular entrance to the site. This sign shall note the name of the building, street number and provide any directions if necessary.
- b) Signs on the site shall be kept to a minimum. When direction signs are needed to facilitate movement, it is preferable to have more than one direction per sign.
- c) In multiple occupancy developments, a directory board shall be required. This board shall be wall or ground mounted and it shall list the individual businesses located within. Wherever possible, the street number and company name should also be located on the individual door of each unit. This treatment shall be uniform throughout and all numbers and names shall be placed in identical locations.
- d) No temporary advertising and business signs shall be mounted within the front yards or the public rights-of-way along Oak Park Road and Hardy Road.

G5 PEDESTRIAN CIRCULATION, ENTRANCE AREAS AND LIGHTING (FIGURE G.5)

G5.1 ALL LOTS

- a) All entrances into the buildings must be clearly defined and protected by an overhead cover. The entrance cover shall project past the building line and will thus help to protect the walks approaching the actual building entrance.
- b) The use of interlocking paving in all pedestrian areas will be encouraged. The type and colour of the stone will be determined on an individual basis.
- c) Consistent with the proposed architectural theme within the M3-2 Zone areas, lighting shall also be contemporary. The light standards within the front yards and pedestrian areas shall be low in height to create a comfortable street scale. They shall also highlight landscape features or architectural details within the site.

G6 INTERFACE WITH THE NATURAL SLOPE AND OPEN SPACE AREAS**G6.1 LOTS ADJACENT TO LANDS IN THE “OS3” ZONE**

- a) All site grading work shall be undertaken to avoid any disturbance to the existing slope and vegetation with the OS3 areas.
- b) A buffer strip of minimum 15.0m shall be provided along the grading limits abutting lands in the OS3 Zone.
- c) This buffer strip shall be planted with native species (see Tables G.1 to G.4) compatible with the local plant communities.
- d) A fence shall be provided along any mutual lot line with lands in the “OS3” Zone.

G7 STORMWATER MANAGEMENT AND GRADING**G7.1 ALL LOTS**

- a) Stormwater infiltration practices are to be implemented in the overall stormwater management plan to maintain the existing groundwater regime, and to protect groundwater dependent natural features adjacent to the Northwest Industrial Area.
- b) Stormwater management measures (parking and rooftop storage) must effectively reduce the magnitude of peakflows by 50%. This applies to 2-year to 100-year precipitation events (based on City of Brantford rainfall records).
- c) Oil/grit separators, or equivalent devices, should be incorporated into the site drainage system. All resultant stormwater runoff from the site must be routed through these device(s) prior to leaving the site. Level 1 protection (as per the Ministry of Environment’s Stormwater Management Practices and Planning Manual, June 1994) is to be used in sizing the device(s).
- d) An erosion and sediment control plan must be included in the Stormwater Management Plan which illustrates the following:
 - all environmentally significant features to be protected prior to, during and after construction activities;
 - methods of keeping soil on site (a priority during all phases of site development);
 - trapping of sediments by various means such as cut-off swale, sediment traps, rock check dams, silt fence, etc;
 - maintenance aspects to ensure that all erosion and sediment control devices function as intended.
 - the erosion and sediment control plan should also include appropriate notes, information, etc., as required by the Grand River Conservation Authority.

TABLE G.1 – POSSIBLE PLANT SPECIES FOR USE IN BRANTFORD NORTHWEST

SPECIFIC NAME	COMMON NAME	FORB	GRASS-LIKE
<i>Andropogon gerardii</i>	Big Bluestern		X
<i>Anemone cylindrica</i>	Long-fruited Anemone	X	
<i>Asclepias tuberosa</i>	Butterfly-weed	X	
<i>Aster ericoides</i>	Heath Aster	X	
<i>Aster laevis</i>	Smooth Aster	X	
<i>Aster oolentangiensis</i>	Azure Aster	X	
<i>Aster urophyllus</i>	Arrow-leaved Aster	X	
<i>Carex pensylvanica</i>	Pennsylvania Sedge		X
<i>Desmodium canadense</i>	Showy Tick-trefoil	X	
<i>Elymus canadensis</i>	Canada Wild-rye		X
<i>Hellanthus divaricatus</i>	Woodland Sunflower	X	
<i>Lespedeza capitata</i>	Round-headed Bush-clover	X	
<i>Monarda fistulosa</i>	Wild Bergamot	X	
<i>Schizachyrium scapanium</i>	Little Bluestem		X
<i>Solidago juncea</i>	Early Goldenrod	X	
<i>Solidago nemoralis</i>	Grey Goldenrod	X	
<i>Solidago rigida</i>	Rigid Goldenrod	X	
<i>Sorghastrum nutans</i>	Indian Grass		X
<i>Sporobolus cryptandrus fusciculus</i>	Sand Dropseed		X
<i>Taenidia integemma</i>	Yellow Pimpernel	X	
<i>Verben stricta</i>	Hoary Vervain	X	

Table G.2 – Recommended Dominant Landscape Tree Species

SCIENTIFIC NAME	COMMON NAME
<i>Quercus macrocarpa</i>	Bur Oak
<i>Quercus Alba</i>	White Oak
<i>Quercus Valutina</i>	Black Oak

Table G.3 – Other Possible Locally Native Tree Species

SCIENTIFIC NAME	COMMON NAME
<i>Ptatanus occidentalis</i>	Sycamore
<i>Sasafras albidum</i>	Sassafras
<i>Celtis occidentalis</i>	Hackberry
<i>Quercus rubra</i>	Red Oak

Depending on availability

Table G.4 – Recommended Conifers for Screening Plantings

SCIENTIFIC NAME	COMMON NAME
<i>Thuja occidentalis</i>	White Cedar
<i>Pinus strobus</i>	White Pine
<i>Picea gaucha</i>	White Spruce
Salt sensitive	

Table G.5 – Non-Native and Invasive Species

SCIENTIFIC NAME	COMMON NAME
<i>Rhamnus spp.</i>	Common Buckthorn
<i>Lonicera tatarica</i>	Tatarian Honeysuckle
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Hesperis matronalis</i>	Dame's Rocket
<i>Ligustrum spp.</i>	Privets
<i>Syringa spp.</i>	Lilac spp.
<i>Acer platanoides</i>	Norway Maple
<i>Forestiera spp.</i>	Autumn and Russian Olives
<i>Lythium salicaria</i>	Purple Loosestrife

SECTION 2 – OPERATIONAL PRACTICES

1) GOOD HOUSEKEEPING PRACTICES

Post and Report: For any individual site, the telephone numbers for the City of Brantford and the Ministry of Environment & Energy Spill Centre must be clearly posted so that spills can be reported promptly.

Minimize Materials: An effort will be made to store only enough material required to do the job.

Storage: All materials stored on site will be stored in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not possible, the materials will be covered with polyethylene or polypropylene sheeting to protect them from the elements.

Labeling: Products will be kept in their original containers with the original manufacturer's label affixed to each container.

Mixing: Substances will not be mixed with one another unless recommended by the manufacturer.

Disposal: Whenever possible, all of a product will be used prior to disposal of the container. Manufacturers' recommendations for proper use and disposal will be followed:

Inspections: City staff will inspect the site occasionally to ensure proper use and disposal of materials on site.

Spoil Materials: Any excavated earth that will not be used for fill material and all demolished pavement will be hauled off site immediately and will be disposed of properly.

2) **PRODUCT-SPECIFIC PRACTICES:**

Petroleum Products: All on-site vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the chance of leakage. If petroleum products will be present at the site, they will be stored in tightly sealed containers, which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturers' recommendations.

Cleaning Fluids: All cleaning or degreasing fluids must be stored in suitable sealed containers both before and after use. Used cleaning fluids must also be stored and identified in appropriate sealed containers and disposed of according to manufacturers' instructions. Records will be kept and made available to City staff showing inventory, delivery and disposal.

Concrete Trucks: Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water at the site.

Paints: All containers will be tightly sealed and stored when not required for use. Excess paint will not be poured into the storm sewer system, but will be properly disposed of according to manufacturers' instructions or provincial and local regulations.

Fertilizers: Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. The fertilizer will be stored in a covered area and any partially used bags will be transferred to a sealable plastic bin to avoid spills.

3) **SPILL RESPONSE PRACTICES**

The owner shall be provided with and acknowledge receipt of the City's Spill Response Procedure.

Figure G.1 Building Setback, Massing and Façade

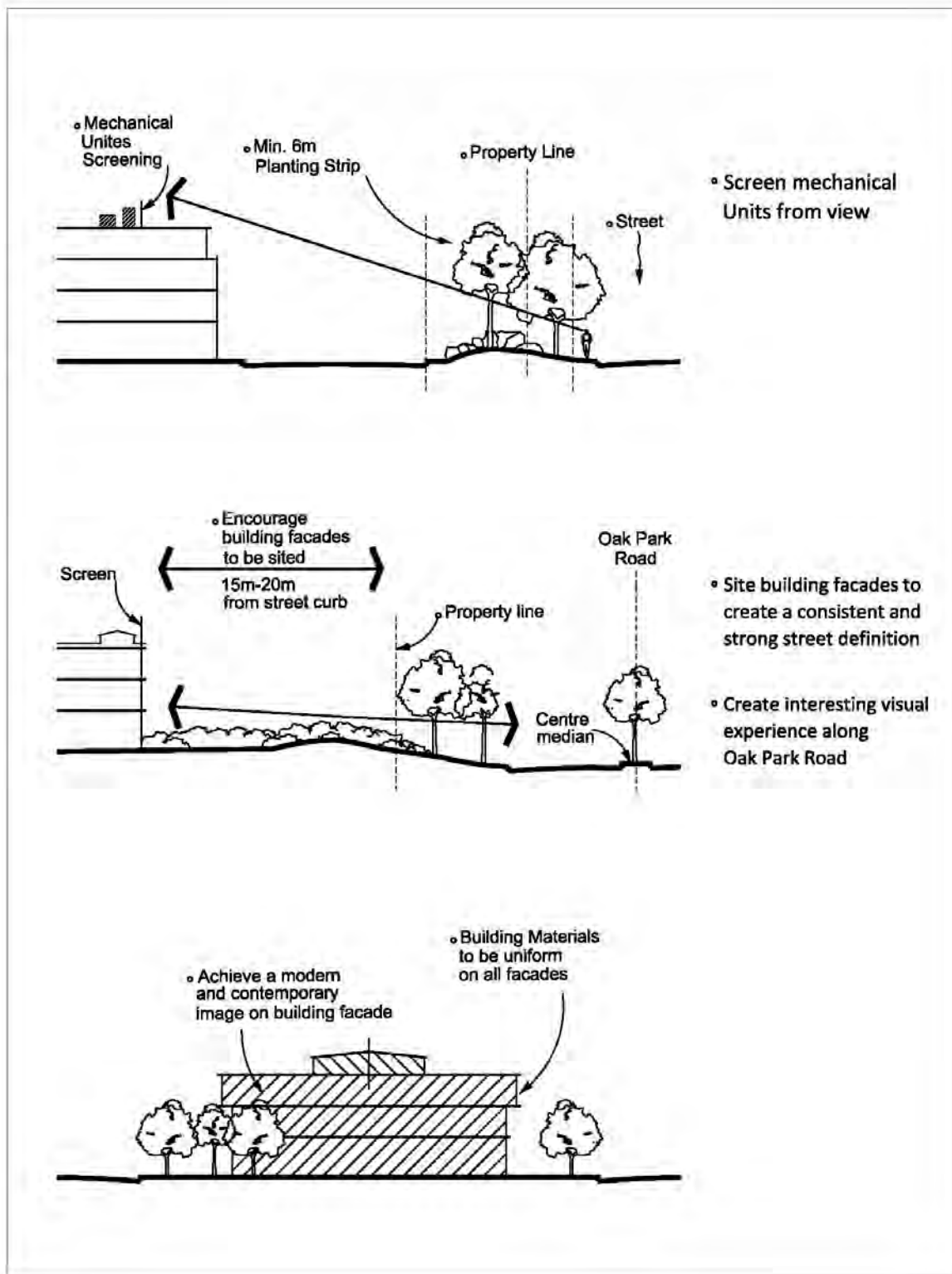


Figure G.2 Landscape Design

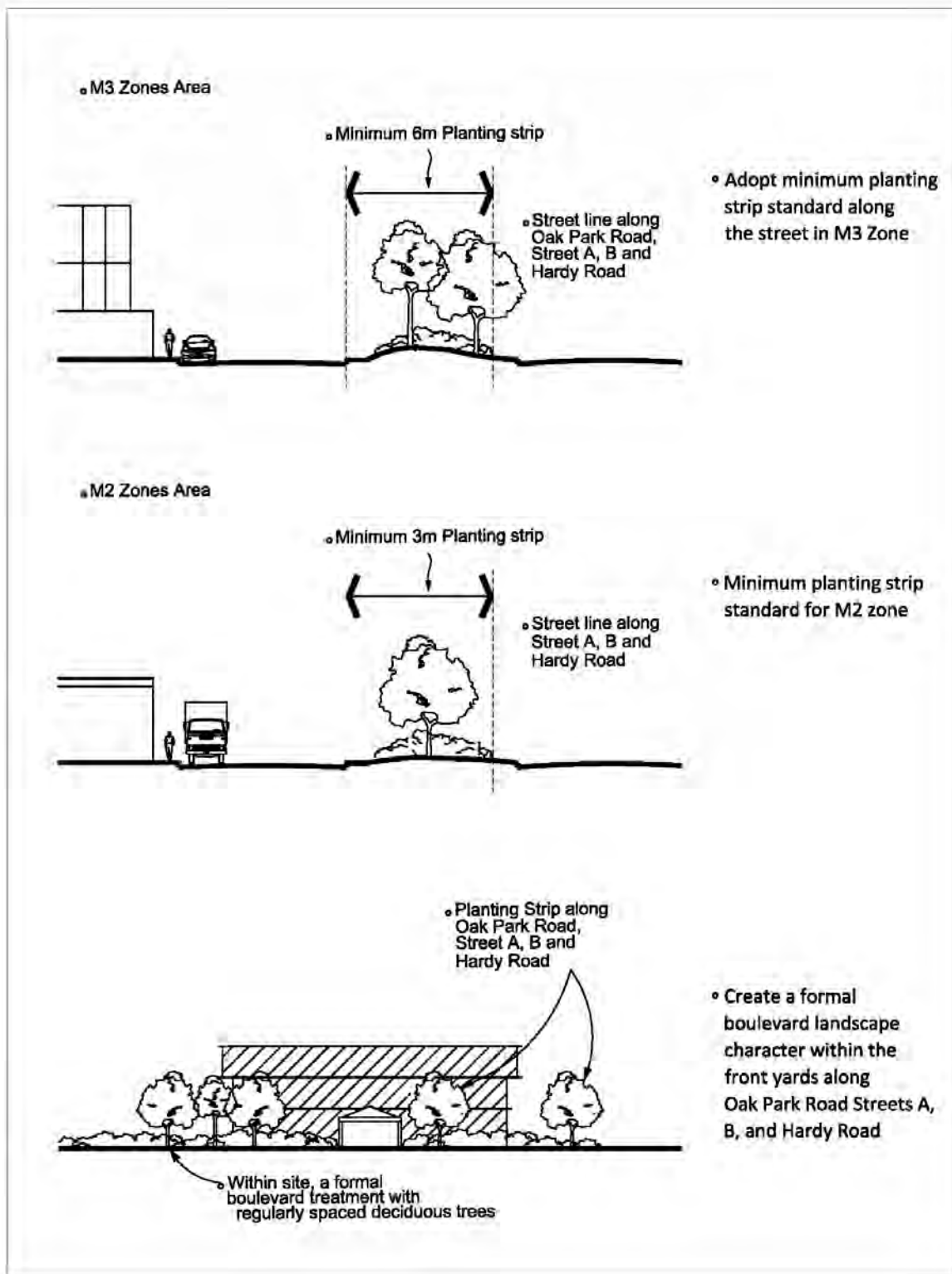


Figure G.3 Landscape Design

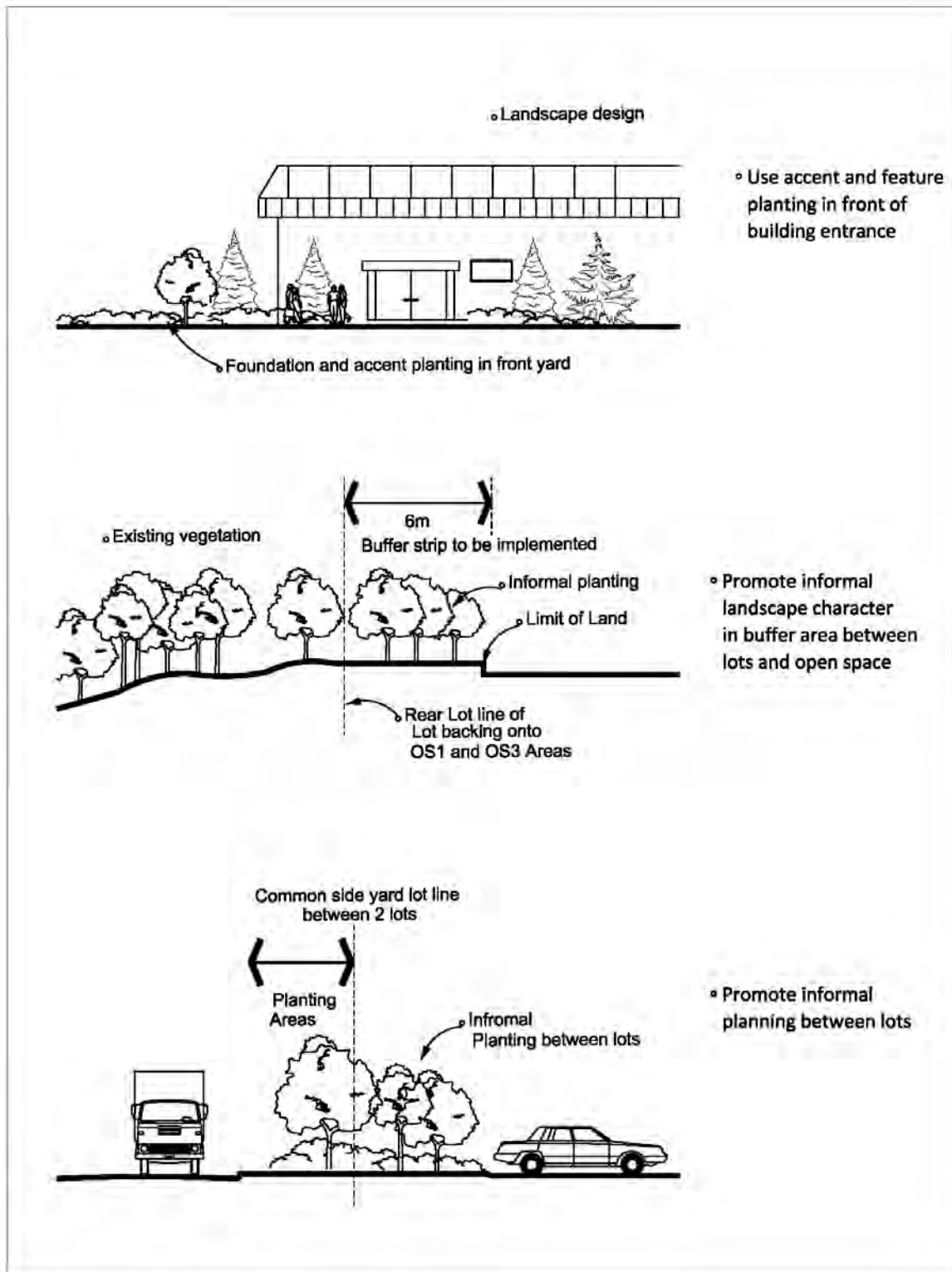


Figure G.4 Vehicular Circulation, Parking and Loading Areas

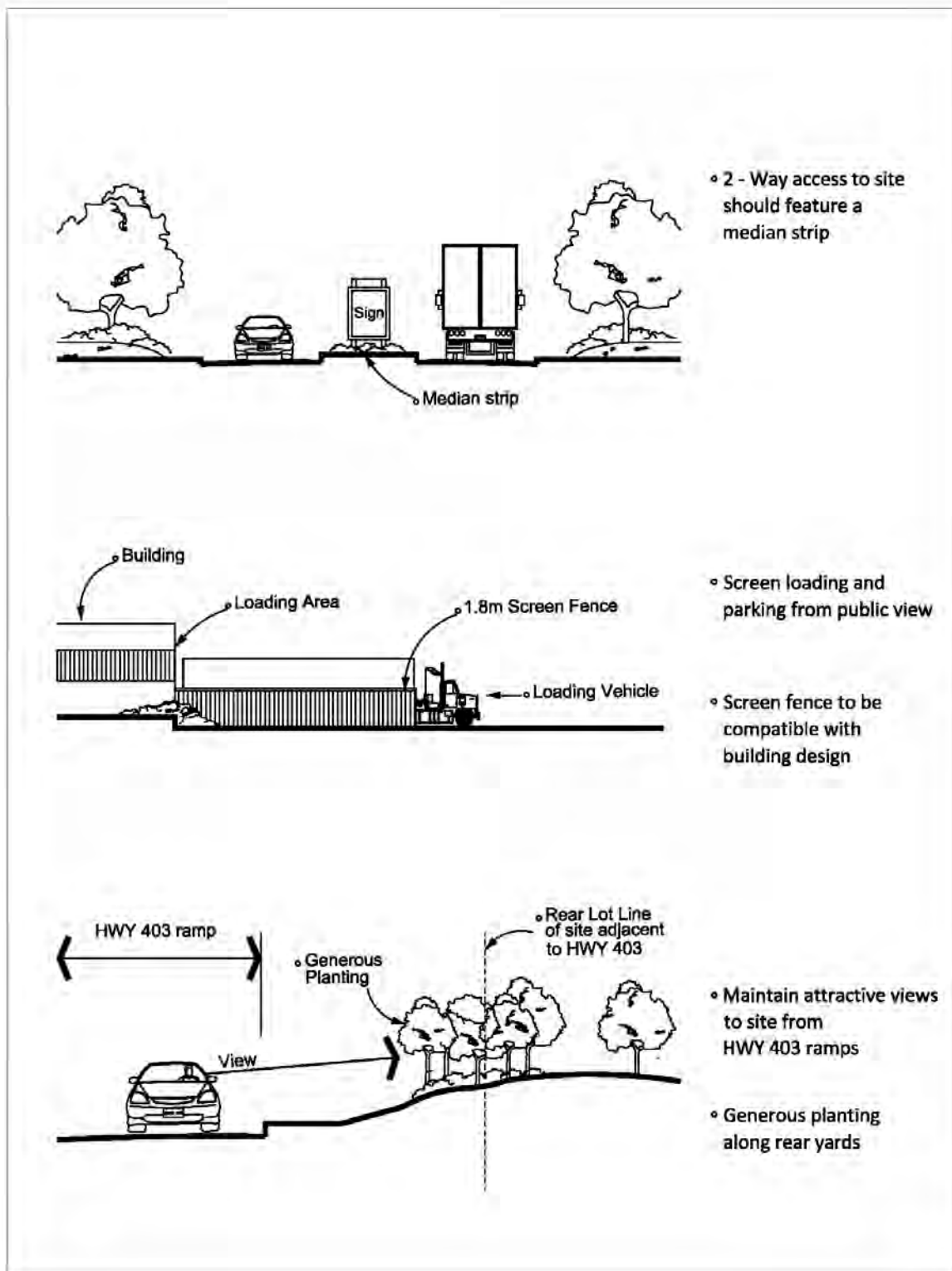
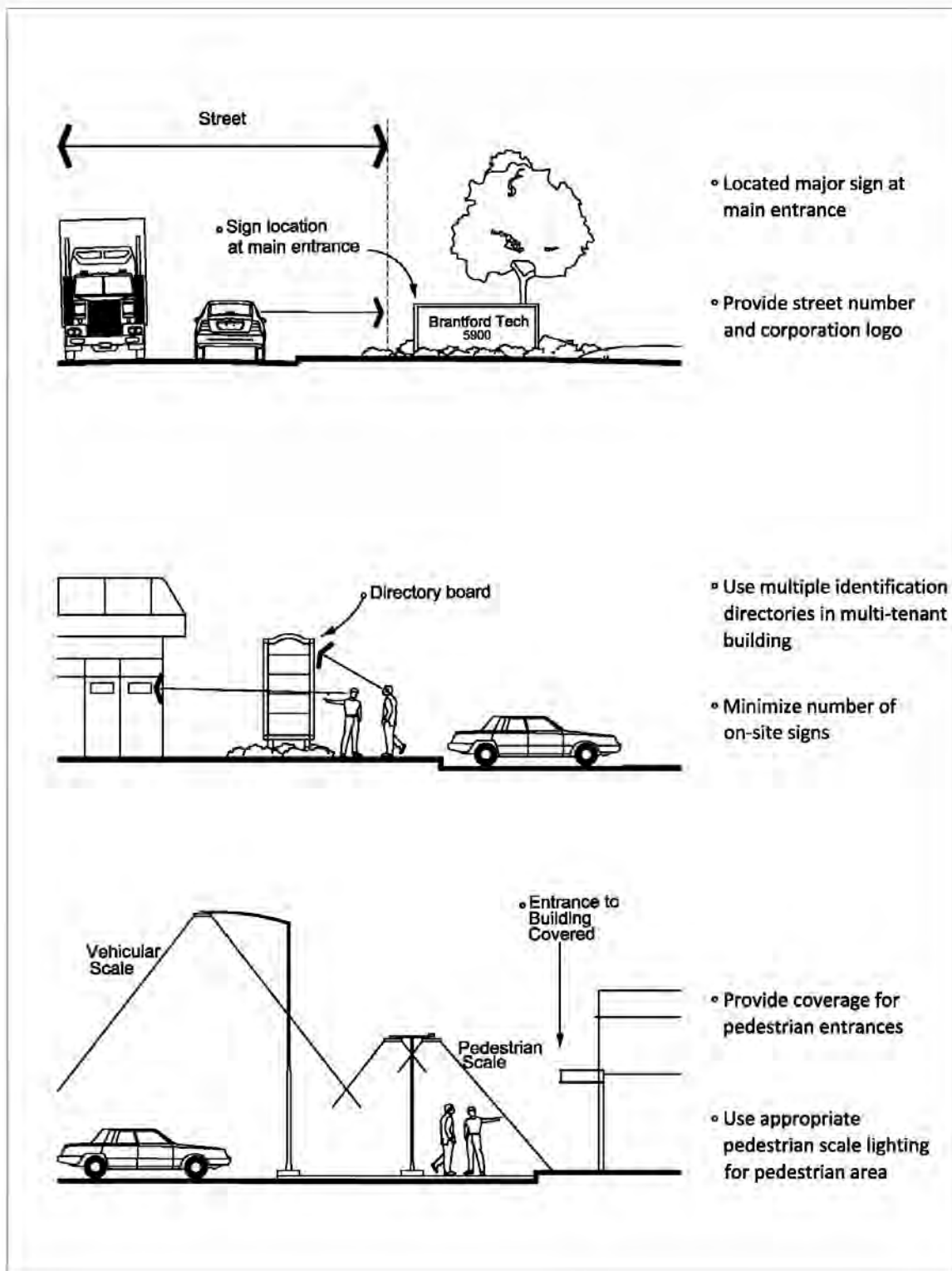


Figure G.5 Pedestrian Circulation, Entrance Areas and Lighting



- Located major sign at main entrance

- Provide street number and corporation logo

- Use multiple identification directories in multi-tenant building

- Minimize number of on-site signs

- Provide coverage for pedestrian entrances

- Use appropriate pedestrian scale lighting for pedestrian area

4.18 Example of Hydro One General Requirements

The following is an example of general requirements applicable to a development within or adjacent to a Hydro One property or easement. The applicant shall contact Hydro One before the site plan application submission to confirm site specific requirements.

“Please be advised that Hydro One Networks Inc. (“HONI”) has reviewed the proposed site plan. As the proposed facility is encroaching on a Hydro One high voltage transmission easement, the following conditions should be included in the site plan control agreement.

The conditions detailed herein do not constitute an endorsement of any element of this proposed site plan development, nor do they grant permission to proceed with works on the HONI transmission easement. The proponent **must** contact Jim Oriotis, Senior Real Estate Coordinator, to begin the process of acquiring an encroachment agreement. Jim may be reached at (905) 946-6261.

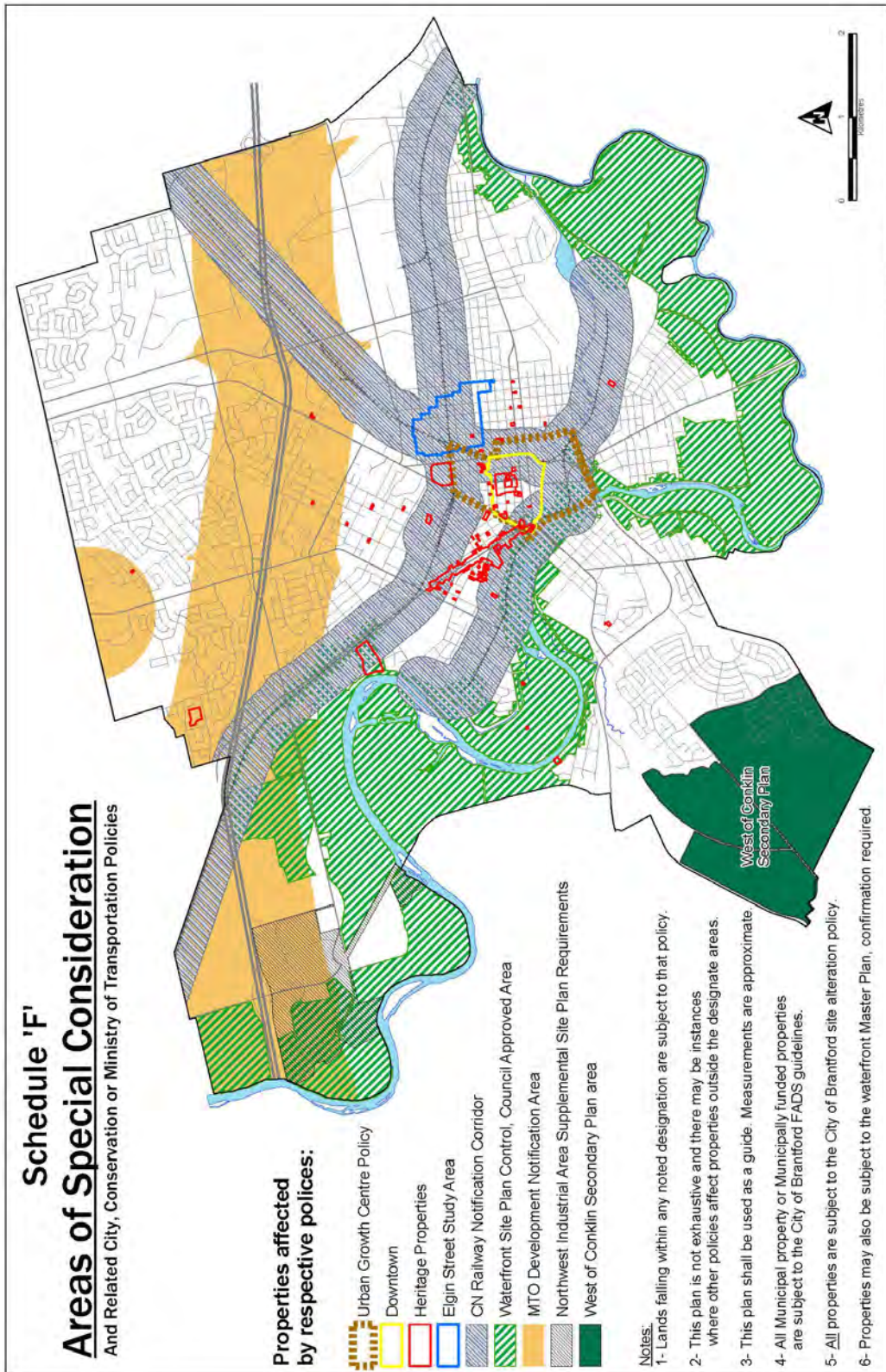
1. Any development in conjunction with the proposed site plan must not block vehicular access to any Hydro One facilities located on the right of way. During construction, there will be no storage of materials or mounding of earth, snow or other debris on the right-of-way.
2. Prior to final approval, a copy of the lot grading and drainage plan, showing existing and final grades, must be submitted to HONI for review and approval.
3. The costs of any relocations or revisions to Hydro One facilities which are necessary to accommodate this site plan would be borne by the developer.
4. The easement rights of Hydro One and its legal predecessors are to be protected and maintained at all items.
5. If your property is in close proximity to a Transmission or Distribution station the following clause applies:

Some noise from the existing Transformer/Distribution Station, which is in close proximity, may interfere with the proposed development/site. An acoustic assessment should be undertaken at the developer's expense. If noise abatement (eg. walls, berms, etc.) are required to meet applicable Ministry of the Environment or Municipal criteria, the costs involved will be the sole responsibility of the developer/builder. Hydro One Networks Inc. (HONI) **will not** be responsible for any costs involved. Please relay this to the appropriate parties.

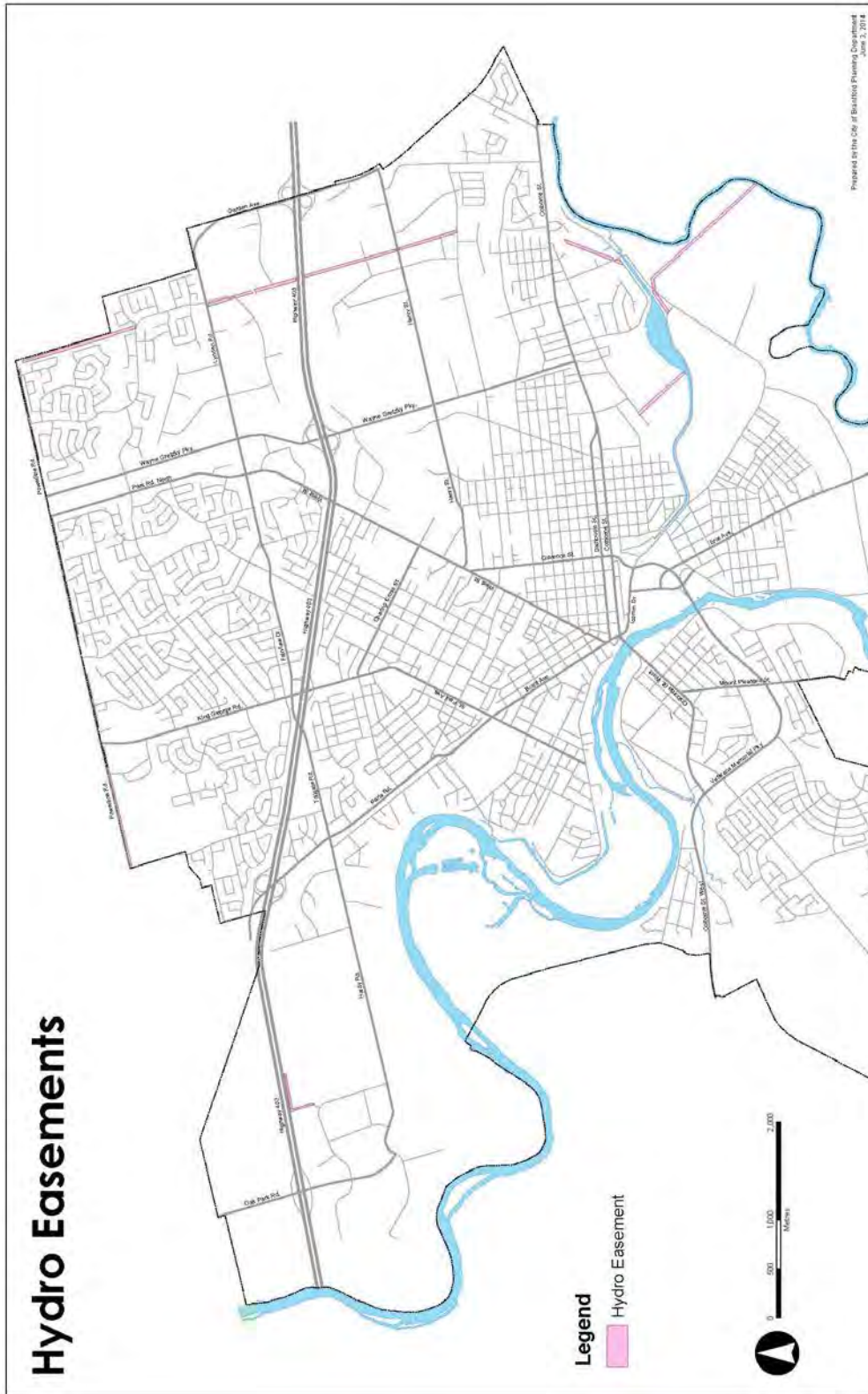
In addition, the following information should be conveyed to the developer as a precaution:

1. The transmission lines abutting this development operate at either 500,000, 230,000 or 115.00 volts. Section 188 – Proximity – of the Regulations for Construction Projects in the *Occupational Health and Safety Act*, require that no object be brought closer than 6 metres (20 feet) to the energized 500 kV conductor. The distance for a 230 kV conductor is 4.5 metres (15 feet), and for 115 kV conductors it is 3 metres (10 feet). It is the proponent's responsibility to be aware, and to make all personnel on site aware, that all equipment and personnel must come no closer than the distance specified in the *Act*. They should also be aware that the conductors can raise and lower without warning, depending on the electrical demand placed on the line.”

4.19 Areas of Special Consideration Map



4.20 Hydro Easements Map



4.21 Contact Information

City of Brantford

- Planning Department: 519-759-4150 ext 5546
- Building Department: 519-759-4150 ext 5542
- Development Engineering: 519-759-4150 ext 5539
- Transportation Engineering: 519-759-4150 ext 5467
- Fire Department: 519-752-0540, Fire Prevention Division
- Brantford Power: 519-751-3522 ext 5180

Agencies

- Ministry of Transportation (MTO): 519-873-4203
- Grand River Conservation Authority (GRCA): 519-621-2761
- CN Rail: 514-399-7627
- Hydro One: 905-946-6235