

## 2.2 Proposed Planting

### Species selection

1. Species variation will depend on the amount of trees to be planted:
  - a. if more than 10 trees are proposed, a mix of tree types should be selected
  - b. if 20 to 40 trees are proposed, no more than 25% of the trees should be of the same genus
  - c. if more than 40 trees are proposed, no more than 10% of the trees should be of the same genus
2. A minimum of 30% of the trees planted on a site should be native tree species. Refer to Conservation Halton Landscaping and Tree Preservation guidelines for a list of permitted native species. Locally rare native species may be accepted on a case by case basis. Cultivars of native trees will not be credited towards the minimum 30% requirement.
3. Invasive species shall not be planted. Refer to Conservation Halton Landscaping and Tree Preservation guidelines for a list of prohibited invasive species.
4. Species selection should reflect the site conditions, such as soil and light conditions, drainage, slope, aspect, moisture level and salt exposure. Use of locally sourced plant material is recommended.
5. Species selection and arrangement should provide visual interest through diversity and seasonal variety.
6. Artificial plant materials are not recommended.

### Size and spacing

7. The minimum acceptable size for plant material should be:
  - a. for deciduous trees, 60 mm caliper and 3.0 to 3.5 m in height
  - b. for coniferous trees, 1.75 m in height
  - c. for shrubs, 600 mm in height and spread
  - d. for perennials, 1 gallon pot

#### Town policy:

Landscaping design and treatments should enhance the visual appeal and human scale of development; create an attractive environment for pedestrian movement; frame desired views or focal objects; define and demarcate various functions within a development; and, provide seasonal variation in form, colour, and texture.

*(Livable Oakville 6.10.1)*

Development should preserve and enhance the urban forest by integrating a diverse mix of native plant species.

*(Livable Oakville 6.10.2 e))*

Landscaping shall enhance natural areas and open space features by incorporating native and non-invasive species. *(Livable Oakville 6.10.5)*

#### Related documents:

For a complete listing of related documents and links, refer to Section 1.5

8. Tree spacing should reflect the projected canopy size based on the species selected and its growing environment:
  - a. small stature trees (3.0 m to 9.0 m spread), should be spaced 3.0 m to 9.0 m on centre
  - b. medium stature trees (10.0 m – 13.0 m spread), should be spaced 10.0 m to 13.0 m on centre
  - c. large stature trees (14.0 m or greater spread), should be spaced 14.0 m on centre
9. To avoid overcrowded or sparse planting beds, the spacing of shrub, perennial, and ornamental grasses should reflect the mature size of the plant.
10. For naturalization plantings a variety of sizes and successional species should be included to accelerate establishment. Refer to Conservation Halton Landscaping and Tree Preservation guidelines when planning these types of environments for further design direction.

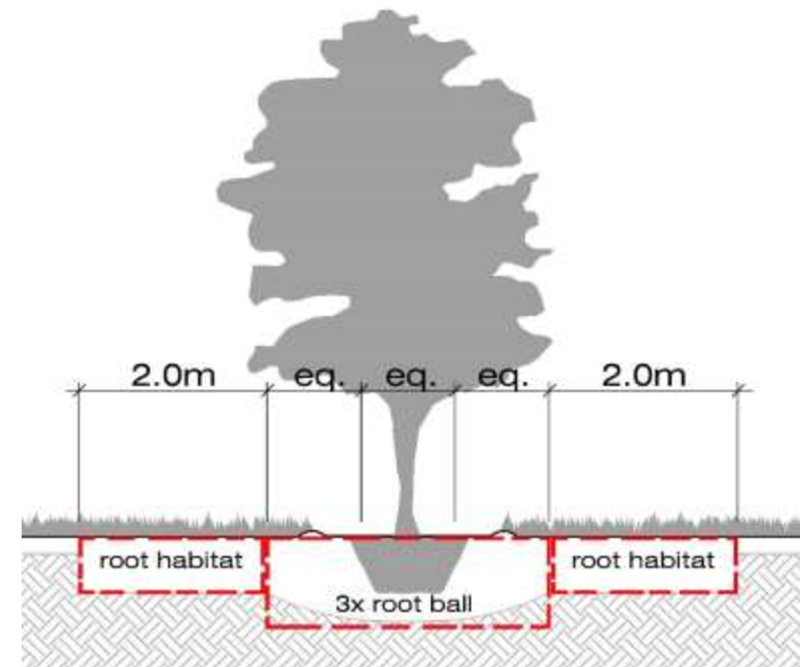
## Nursery standards

11. All plant material should conform to the Canadian Nursery Landscape Association specifications and standards.
12. All sod should conform to the Nursery Sod Growers Association of Ontario specifications.

## Installation

13. Typical tree plantings within a soft landscape environment are recommended to incorporate the following:
  - a. a tree pit diameter three times (3x) the root ball diameter
  - b. a root habitat preservation zone encircling the edge of the tree pit with a minimum width of 2.0 m to a depth of 400 mm to 500 mm
  - c. non-compacted soils within the expanded tree pit and root habitat preservation zone.

Soils with a penetration resistance above 300 psi, measured with a penetrometer while the soil contains average moisture (field capacity), may indicate the presence of compacted soils. In these instances further analysis is warranted, with a bulk density assessment or Proctor test (up to 80 to 85% SPD), to determine whether compaction levels in the soil can support healthy plant growth.



14. Trees are recommended to be planted at or slightly above ground level, not mounded or depressed. Shrubs planted slightly above ground level, by no more than 25 mm, is recommended.
15. Services and utilities, such as lighting standards, fire hydrants, and hydro ducts, should not conflict with planting materials, both above and below ground.
16. Services and utilities should not encroach into the soil volume required for new tree plantings.
17. All shrubs should be planted in continuous planting beds.
18. Mulch should be placed on all planting beds to aid in weed suppression and moisture retention.
19. For the purpose of ensuring installation performance, all tree planting should have a two-year warranty period from substantial completion of the development. A longer warranty period, to a maximum of 4 years, may be required in limited instances where challenging growing environments bring the long term survivability of the tree into question.
20. All substitutions to an approved species list shall be discussed with and approved by Town of Oakville staff.

## Setbacks

When siting plant material, adequate space should be provided to accommodate normal long term growth both above and below ground. Consider the potential negative impacts of providing insufficient space, such as injury to pedestrians, damage to property, increased maintenance expenses, and poor landscape performance.



*Plant material screens transformer while not interfering with access or maintenance (2.2.15)*



*Shrubs in continuous planting bed (2.2.17)*



21. To accommodate the base of the tree, space should be provided for tree openings that are at least:
  - a. 3.0 m wide for a large stature tree
  - b. 2.5 m wide for a medium stature tree
  - c. 2.0 m wide for a small stature tree

These minimums could be reduced if enhanced rooting techniques are employed that mitigate possible damage to the surrounding landscape while providing for the long term growth of the tree.

22. Where underground services or utilities are present/proposed, consider the potential negative impacts to the base of the tree should future maintenance require soil excavation in close proximity to the tree. To mitigate this and other risks, trees should not be planted within:
  - a. 1.0 m of the edge of a utility or service easement that is 3.0 m in width or greater
  - b. 2.5 m of any underground utility or service, where space permits. However, at a main and lateral intersection a 2.0 m setback shall be maintained
  - c. 3.0 m of a transformer or hydrant

Local utility companies shall be contacted for further information when planting, or proposing other works, near utilities.

23. To respect the crown of the tree, trees should not be planted:
  - a. within 7.0 m of a stop sign or other traffic control signage
  - b. in locations where the growing canopy may come into contact with buildings, structures, or fencing
  - c. in locations where growing canopy may come within 3.0 m of a primary powerline or within 1.0 m of a secondary powerline or communication asset.
  - d. overhanging pedestrian areas if it is a species that drop fruit or seed pods
24. Shrubs should not be placed within 600 mm of a curb adjacent to vehicular parking and not within 3.0 m of the opening side of a transformer or 1.5 m on all other sides.



*Tree planting within wide planting bed (2.2.21)*



*Appropriate tree form for growing environment (2.2.23)*

## 2.5 Soil

### Volume

1. For new tree plantings, 30.0 m<sup>3</sup> of good quality topsoil, with a minimum depth of 750 mm to a maximum depth of 900 mm, should be provided. Trees in common planting areas may share soil volume to a maximum of 15.0 m<sup>3</sup> each.
2. In tree planting areas with less than 30.0 m<sup>3</sup> of good quality topsoil, break-out zones should be provided to allow the roots to access additional soil. Break-out zones should be incorporated that are a minimum of 3.0 m wide by 625 mm deep and constructed with engineered soil or soil cell(s).
3. Enhanced rooting environment techniques, such as engineered soils or soil cell(s), are recommended to attain the required soil volume in compact urban conditions or within hard surface paving areas. Due to the large amount of aggregate contained in engineered soil, only 20% of its total volume will be credited towards the minimum soil volume requirement as per standard 2.5.1.

### Depth

4. A minimum topsoil depth of 200 mm should be provided in all landscape areas. In landscape areas with tree plantings, the soil depth should be increased to meet the volume requirement, as per standard 2.5.1.
5. Landscape areas located on an underground structure roof slab should maintain the following minimum topsoil depth of cover:
  - a. 900 mm for tree plantings
  - b. 600 mm for shrub plantings
  - c. 400 mm for sodded areas

### Quality

6. Topsoil quality should be as per Town of Oakville requirements as outlined in the *Development Engineering Procedures and Guidelines Manual*.

#### Town policy:

The general objectives for sustainability are . . . to maintain the existing urban forest; and to progressively increase the urban forest to achieve a canopy cover of 40% Town-wide ...  
(*Livable Oakville 10.1.1 ff*)

Development should preserve and enhance the urban forest by . . . providing suitable growing environments.  
(*Livable Oakville 6.10.2 b*)

#### Related documents:

For a complete listing of related documents and links, refer to Section 1.5

7. Good quality native soil should be retained on site. Poor quality soil is recommended to be remediated on site in lieu of replacing the soil.
8. All soft landscape areas should consist of non-compacted soils.

Soils with a penetration resistance above 300 psi, measured with a penetrometer while the soil contains average moisture (field capacity), may indicate the presence of compacted soils. In these instances further analysis is warranted, with a bulk density assessment or Proctor test (up to 80 to 85% SPD), to determine whether compaction levels in the soil can support healthy plant growth.

## 4.4 Snow Storage Areas

The storage of snow must be considered and addressed in order to achieve a site design that functions well year round and to minimize potential negative impacts to soft landscape features and to neighbouring properties.

1. Snow should not be placed or stored in a manner that may damage private or public property, including, but not limited to, trees, hedges, shrubs and other groundcover, walls and other structures, and fencing.
2. The storage of snow should be accommodated within the site. Where and when there is insufficient on-site snow storage, all snow cleared from hard surface areas must be removed from the site and is the sole responsibility of the owners/tenants.
3. The size of a designated snow storage area or areas should be equal to 15%, at a minimum, of all hard surface areas on the site, including access ramps and driveways, parking and loading areas, drive aisles, and pedestrian areas. Each snow storage area should be a minimum of 4.5 m by 1.5 m.
4. Wherever possible, designated snow storage areas should be located in close proximity to catch basins to facilitate drainage and to prevent ice formation due to freezing of run-off.
5. Snow storage should not occur upon/within:
  - a. any barrier free parking space
  - b. any parking spaces, drive aisles or landscape areas, as required by Town of Oakville Zoning By-laws, as amended
  - c. exterior paths of travel
  - d. municipal rights of way, adjacent publically-owned lands and/or private property
  - e. immediate vicinity of vehicular and pedestrian site access points, including emergency vehicular entrances
  - f. fire hydrants
  - g. stormwater management features, such as ponds, swales, etc.
  - h. a 1.5 m radius of any existing or proposed tree
  - i. other on-site locations with configurations or attributes that may not tolerate the storage of snow



*Designated snow storage area located outside of required soft landscape areas and required parking spaces (4.4.5)*

6. Snow storage areas located on soft landscaping, should only contain sod or plant material that dies back annually.
7. Trees and soft landscape areas should be protected from damage caused by typical snow plowing operations by:
  - a. providing continuous 150 mm high barrier curb where soft landscape area abuts vehicular hard surfaces
  - b. providing a minimum setback of 1.5 m between trees and vehicular hard surfaces
  - c. providing additional protection measures for trees that, due to site constraints, are located in close proximity to snow storage areas

It is recommended the additional protection consists of a solid bollard, at least 1.2 m in height, appropriately positioned between the tree and the vehicular hard surface area.

Other protection measures will be considered provided they are visible to snow plow operators and robust to withstand typical snow plowing operations. Barriers should be aesthetically pleasing and compatible with other site elements and activities.

8. Incorporating shrub planting beds in lieu of sod is recommended in soft landscape areas where snow storage is not appropriate.
9. During winter months, the boundaries of designated snow storage areas should be identified with markers that are installed and visible during winter conditions.