

Livable by Design Manual (Part C): Site Design and Development Standards
 Proposed Modifications based on PDC Motion (January 16, 2017)

Notes to assist in interpretation:

- Language added to the standard is identified with ***italics, bold and underline*** text
- Language removed from the standard is identified in ~~**bold and strike-through**~~ text

Planning and Development Council (January 16, 2017 Meeting)

4. Livable by Design Manual (Part C): Site Design and Development Standards for Oakville

- Report from Planning Services Department, December 12, 2016

1. That the design document entitled *Livable by Design Manual (Part C) – Site Design and Development Standards for Oakville*, be endorsed and staff be directed to implement; and
2. That staff be requested to:
 - a. incorporate a commonly understood and implementable standard identifying maximum soil compaction limits associated with tree plantings; and
 - b. incorporate additional standards requiring the protection of new and existing trees during snow removal and snow storage activities, including, but not limited to, the use of distance separations, barriers, and/or other techniques which have regard for the objectives of the design manual.

ACTION TAKEN:

Section 2.2.	Original Text	13. Typical tree plantings within a soft landscape environment are recommended to incorporate the following:
		<ol style="list-style-type: none"> 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 comprised of a loosened soil area to a depth of 400 mm to 500 mm and with a compaction rating between 80 to 85% Standard Proctor Density (SPD)
	Proposed Changes	<p>13. Typical tree plantings within a soft landscape environment are recommended to incorporate the following:</p> <ol style="list-style-type: none"> 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 comprised of a loosened soil area to a depth of 400 mm to 500 mm and with a compaction rating between 80 to 85% Standard Proctor Density (SPD). c. <u>non-compacted soils within the expanded tree pit and root habitat preservation zone.</u> <p><u>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.</u></p>
	Rationale	To make the standard more implementable, to estimate maximum soil compaction limits a commonly understood penetration resistance measurement was added,

<p>Proposed Text [V.02.2017]</p>	<p>which requires the use of simple tools, in lieu of only referring to the Proctor test which requires specialized instruments and training.</p> <p>13. Typical tree plantings within a soft landscape environment are recommended to incorporate the following:</p> <ol style="list-style-type: none"> 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. <p>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.</p>
<p>Section 2.5</p> <p>Proposed Changes</p> <p>Rational</p> <p>Proposed Text [V.02.2017]</p>	<p>8. <i>All planted landscape areas should consist of loosened soil with a compaction rating between 80% and 85% Standard Proctor Density (SPD).</i></p> <p>8. <u>All planted landscape areas should consist of loosened soil with a compaction rating between 80% and 85% Standard Proctor Density (SPD). All soft landscape areas should consist of non-compacted soils.</u></p> <p><u>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.</u></p> <p>To make the standard more implementable, to estimate maximum soil compaction limits a commonly understood penetration resistance measurement was added, which requires the use of simple tools, in lieu of only referring to the Proctor test which requires specialized instruments and training.</p> <p>8. All soft landscape areas should consist of non-compacted soils.</p> <p>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.</p>
<p>Section 4.4</p> <p>Proposed Changes</p> <p>Rationale</p>	<p>1. <i>Snow should not be placed or stored in a location or manner that may damage private or public property.</i></p> <p>1. <i>Snow should not be placed or stored in a manner that may damage private or public property, <u>including, but not limited to, trees, hedges, shrubs and other groundcover, walls and other structures, and fencing.</u></i></p> <p>To provide additional tree protection standards, standard modified to highlight that private or public property includes trees and other typical landscape items.</p>

Proposed Text [V.02.2017]	1. <i>Snow should not be placed or stored in a manner that may damage private or public property</i> , including, but not limited to, trees, hedges, shrubs and other groundcover, walls and other structures, and fencing.
Original Text	3. <i>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 2.6 m by 1.5 m.</i>
Proposed Changes	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 2.6 4.5 m by 1.5 m.
Rationale	To provide additional tree protection, minimum size of snow storage area is increased.
Proposed Text [V.02.2017]	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.
Original Text	5. <i>Snow storage should not occur upon/within:</i> <i>a. any parking spaces, drive aisles or landscape areas, as required by Town of Oakville Zoning By-laws, as amended</i> <i>b. exterior paths of travel</i> <i>c. municipal rights of way, adjacent publically-owned lands and/or private property</i> <i>d. immediate vicinity of vehicular and pedestrian site access points</i> <i>e. stormwater management features, such as ponds, swales, etc.</i> <i>f. a 3 m radius of any existing or proposed tree</i> <i>g. other on-site locations with configurations or attributes that may not tolerate the storage of snow</i>
Proposed Changes	5. Snow storage should not occur upon/within: a. <u>any barrier free parking space</u> 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, <u>including emergency vehicular entrances</u> f. <u>fire hydrants</u> g. stormwater management features, such as ponds, swales, etc. h. a 3 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
Rationale	With regards to item h, the setback distance was reduced in light of the additional protection measures proposed in this section and practical realities of snow clearing operations. Though not directly related to the protection of trees, items a, e, and f were added to provide further protection to these sensitive site features.

<p>Proposed Text [V.02.2017]</p>	<p>5. Snow storage should not occur upon/within:</p> <ol style="list-style-type: none"> 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
<p>Original Text</p> <p>Proposed Changes</p> <p>Rationale</p> <p>Proposed Text [V.02.2017]</p>	<p>6. <i>Landscape material that may not tolerate snow loads should not be located in areas where snow storage is likely to occur, such as the ends of drive aisles.</i></p> <p>6. Landscape material that may not tolerate snow loads should not be located in areas where snow storage is likely to occur, such as the ends of drive aisles. <u>Snow storage areas located on soft landscaping, should only contain sod or plant material that dies back annually.</u></p> <p>To provide additional tree protection, trees are now excluded from snow storage areas.</p> <p>6. Snow storage areas located on soft landscaping, should only contain sod or plant material that dies back annually.</p>
<p>Original Text</p> <p>Proposed Changes</p> <p>Rationale</p>	<p>New standard, no original text.</p> <p>7. <u>Trees and soft landscape areas should be protected from damage caused by typical snow plowing operations by:</u></p> <ol style="list-style-type: none"> a. <u>providing continuous 150 mm high barrier curb where soft landscape area abuts vehicular hard surfaces</u> b. <u>providing a minimum setback of 1.5 m between trees and vehicular hard surfaces</u> c. <u>providing additional protection measures for trees that, due to site constraints, are located in close proximity to snow storage areas</u> <p><u>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.</u></p> <p><u>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.</u></p> <p>To provide additional tree protection, section 3.2.24's requirement for barrier curbing between soft landscape and vehicular areas is reiterated, to avoid contact with snow plows trees are to be setback at least 1.5 m from vehicular areas, and where trees</p>

<p>Proposed Text [V.02.2017]</p>	<p>are located near snow storage areas bollards or other suitable barrier are to be installed.</p> <p>7. Trees and soft landscape areas should be protected from damage caused by typical snow plowing operations by:</p> <ol style="list-style-type: none"> 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 <p>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.</p> <p>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.</p>
<p>Original Text</p>	<p>New standard, no original text.</p>
<p>Proposed Changes</p>	<p>8. <u>Incorporating shrub planting beds in lieu of sod is recommended in soft landscape areas where snow storage is not appropriate.</u></p>
<p>Rationale</p>	<p>To provide additional tree protection shrub planting in landscape areas is encouraged. Shrubs are generally viewed as intolerant of snow storage which may deter the piling of snow in areas where they are present.</p>
<p>Proposed Text [V.02.2017]</p>	<p>8. Incorporating shrub planting beds in lieu of sod is recommended in soft landscape areas where snow storage is not appropriate.</p>
<p>Original Text</p>	<p>7. <i>During winter months, the boundaries of designated snow storage areas should be identified with markers that are installed and visible during winter conditions.</i></p>
<p>Proposed Changes</p>	<p>7. <u>9.</u> During winter months, the boundaries of designated snow storage areas should be identified with markers that are installed and visible during winter conditions.</p>
<p>Rationale</p>	<p>Standard renumbered to accommodate new standards.</p>
<p>Proposed Text [V.02.2017]</p>	<p>9. During winter months, the boundaries of designated snow storage areas should be identified with markers that are installed and visible during winter conditions.</p>