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# 1970-1980 BROCK RD., 1670-1680 KINGSTON RD., PICKERING **TREE INVENTORY REPORT AND PRESERVATION PLAN**

Issued/Revised: 23 November 2020



**EBA**

Project # 20-124-01  
Prepared by RF

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# 1 INTRODUCTION AND OVERVIEW

## 1.1 Scope of the Report

ERA was retained by Kanitz Properties Limited as the arborist consultant for the development of the property known municipally as 1670-1680 Kingston Road and 1970 Brock Road (the 'Subject Site'). This Tree Inventory Report and Preservation Plan prepared by Rui Felix, Certified Arborist ISA (ON-2005A), considers the impact of the proposal on existing trees on and adjacent to the Subject Site.

The purpose of this report is to:

- Prepare inventory of the individual tree resources over 15 cm diameter at breast height (DBH) on the Subject Site and those on adjoining lands that may be affected by the proposed redevelopment;
- Document tree species, size, health condition and whether they will be protected or removed
- Evaluate potential tree saving opportunities based on the proposed development plans;
- Report the tree removal compensation requirements; and,
- Document the findings in a Tree Inventory Report and Preservation Plan.

## 1.2 Site Description and Current Context

The Subject Site is located at the northwest corner of Brock Road and Kingston Road, in the City of Pickering. The Subject Site includes surface parking and four buildings:

- A 1½-storey stone house-form building, constructed in 1842-1843, which is oriented to Brock Road, and located within green space in a small parking lot;
- Three single-storey strip-mall-style brick commercial buildings, one north of the house (1980 Brock Road), and two west of the house (1670 and 1680 Kingston Road).

## 1.3 Development Proposal Description

The development proposal contemplates the Site's urbanization through a 34-storey tower on the northwest corner of Brock and Kingston Roads, and a 31-storey tower to its west, connected by a six-storey podium along Kingston Road.

A 12-storey building is proposed in the Site's centre, with 29 three-storey townhouses in an L-shape configuration along the Site's northwest corner.

## 2 METHODOLOGY

Field observations were made on September 22<sup>nd</sup>, 2020, and November 20<sup>th</sup>, 2020, by Rui Felix Certified Arborist ISA (ON-2005A). In total, 117 trees were inventoried and assessed, the tree inventory is provided in Appendix A. Trees included in this report include:

- Trees of all diameters situated on the Subject Site;
- Trees of all diameters on adjoining lands within 6 m of proposed construction activities;

Tree locations and property lines were recorded on a survey produced by R. Avis Surveying Inc., completed September 3<sup>rd</sup>, 2020.

Tree locations north of the Subject Site, along Condo Block 27229, were recorded on November 20<sup>th</sup>, 2020.

Tree locations west of the Subject Site, along Condo Block 27142, were not included in this report as the row of existing spruce trees were observed to be located approximately 9.7 m away from the nearest proposed construction activities, and will therefore not be affected by the proposed redevelopment.

Trunk diameters were measured using a calibrated diameter tape. The measurement was taken at the standard 1.5 m above ground or grade crown level, generally referred to as DBH.

Tree Preservation Plan drawing AR100 accompanies this report, dated November 23<sup>rd</sup>, 2020, and must be read in conjunction with this report.

The trees were assessed based on tree health and structural integrity at the time of analysis including, but not limited to:

- Obvious defects
- Decay
- Disfigured stem
- Broken roots
- Fungal conks
- Disease (biotic/abiotic/non-infectious)
- Chemical damage (pesticides/herbicides/fertilizers)
- Root conditions and stability
- Trunk soundness
- Decay/cavities
- Codominant stems
- Dead limbs

## 3 TREE INVENTORY AND PRESERVATION PLAN

This report documented a total of **117** trees. Of these 117 trees, **86** are located on the Subject Site and **31** in adjoining lands.

No trees were observed within the City's road allowance adjacent to the Subject Site.

### 3.1 Tree Removals

#### 3.1.1 Site Works

Although site works will avoid tree removal to the furthest extent possible, removal will be necessary to facilitate the proposed design. Recommendations for tree removal are based upon consideration of the anticipated impacts upon trees due to implementation of the proposed works, the immediate and forecasted health and structural condition of the tree, and the ability of the tree to make continued contributions to the newly modified landscape.

This report acknowledges the removal of **31** trees on the Subject Site as part of the proposed development site work, including:

##### Trees with DBH under 15 cm's:

- **6** trees (#'s 2, 4, 6, and 82 -84) are proposed for removal with DBH under 15 cm's.

##### Trees with DBH 15 cm's and greater:

- **25** trees (#'s 1, 3, 5, 7 - 9, 69 - 81, and 85-90) are proposed for removal with DBH 15 cm's and greater.

No trees in adjoining lands or within the City's road allowance are designated for removal.

#### 3.1.2 Condition

This report acknowledges the removal of the following trees for arboricultural reasons, unrelated to the proposed development site work:

- **2** trees (#'s 11 and 15) were observed dead and are recommended for removal.

## 3.2 Tree Preservation

All other trees addressed in this report are proposed for retention. This section outlines general tree preservation and protection measures for retained trees. Further tree protection recommendations are found in Section 5 - Tree Preservation Treatments.

### 3.2.1 Tree Protection

Retained trees in proximity to any future proposed works shall be protected through the implementation of the following tree protection methods:

- **Tree Protection Hoarding** shall be established at a specific distance from the base of the tree, as specified in the Tree Protection Plan drawing AR100. Hoarding must be established in advance of any works, including but not limited to material and equipment delivery, staging and storage, excavation and groundbreaking work. Specifications for protection hoarding are outlined further in Section 5 - Tree Preservation Treatments.
- **Root-Sensitive Excavation** - All groundbreaking activities within Tree Protection Zones shall be preceded by root-sensitive excavation utilizing hand-digging or pneumatic soil excavation (e.g., Airspade), as outlined in Section 5 - Tree Preservation Treatments. Excavations must be supervised by a Certified Arborist, who must be enabled to stop works if, during the course of excavation, significant structural or transport roots (greater than approximately 25 mm) are encountered, in order to properly prune the roots.

Tree specific guidance for the implementation of tree protection measures is provided below:

Trees # 10, 12 - 14, 16 - 28, 30 - 39, 47, 49 - 57, 59, 60, and 63, within the Subject Site, shall be protected by Tree Protection Hoarding at all times, including temporary hoarding during the removals phase, refer to AR100. Removal of the existing concrete barrier curb and asphalt, including granular base, will necessitate excavation within unprotected Tree Protection Zones. Root sensitive excavation will be required prior to any groundbreaking activities and be accompanied by proper root pruning by a Certified Arborist as necessary.

Trees #29, 40 - 46, 48, 58, 61, 62, and 64, within the Subject Site, shall be protected behind Tree Protection Hoarding. Construction impact is not anticipated.

Trees # 65, and 66 - 68, in adjoining lands, shall be protected behind construction fencing. Construction impact is not anticipated.

Trees # 91 - 117, in adjoining lands, shall be protected behind existing site fencing and Tree Protection Hoarding. Construction impact is not anticipated.

### 3.3 Tree Removal Compensation Requirements

As a condition of approval, compensation is required for the removal of all existing live trees with 15 cm DBH and greater, to be removed as part of the proposed development. Compensation shall be made in the form of replacement plantings or cash-in-lieu, to be paid to the City of Pickering. Multi-stemmed trees are compensated for by individual stem.

Existing trees DBH	No Compensation Required	1:1 Ratio	2:1 Ratio	3:1 Ratio	4:1 Ratio	Number of trees required
< 15 cm or dead	8					0
15 - 29 cm		10				10
30 - 49 cm			7			14
50 - 74 cm				7		21
> 75 cm					1	4
<b>Total trees required for compensation</b>						<b>49</b>

#### 1. Tree Removal Compensation Requirements

A total of **49 trees**, with a minimum caliper of 60 mm and/or coniferous trees with a minimum height of 1.8 m, will be required as compensation for the proposed removals. Any required boulevard tree planting for municipal right-of-ways will not be considered as part of the tree replacement compensation.

Replacement planting may be done on the development site or on publicly owned lands in proximity of the Subject Site that have been approved by the City of Pickering and with written authorization of the subject landowners(s).

The quantity and species of trees to be planted in compensation for tree removal and/or the cash-in-lieu amount shall be approved by the Director, Engineering Services.



### 3.4 Summary and Recommendations

ERA was retained by Kanitz Properties Limited to complete a Tree Inventory and Preservation Plan in support of the development of the Subject Site.

The findings of this report indicate a total of 117 trees on the Subject site and within 6 metres of proposed construction activities on adjoining lands.

The removal of 33 trees are proposed as part of the proposed development. Of those 33 trees, 25 are 15 cm DBH or greater, six (6) are under 15 cm DBH, and two (2) are considered dead.

All other tree resources can be saved provided appropriate tree protection measures are followed prior and during construction.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Section 5 - Tree Preservation Treatments for additional tree preservation notes:

- Tree protection hoarding is to be erected as specified in the Tree Preservation Plan AR100;
- Tree protection measures will have to be implemented prior to construction to ensure the trees identified for preservation are not impacted by the development;
- Branches and roots that extend past prescribed tree protection zones that require pruning must be pruned by a certified ISA Arborist. All pruning of tree roots and branches must be in accordance with good arboricultural standards;
- Site visits before, during and post construction are recommended by a certified consulting arborist to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other mitigation measures are implemented.

## 4 TREE PRESERVATION TREATMENTS

This section outlines specifications for tree protection, and not all recommendations may apply to the subject project. Refer to the main body of the Tree Inventory and Preservation Plan for tree-by-tree protection recommendations.

This section should be read in conjunction with the City of Pickering Standard Details P-1100 Tree Protection Fencing and P-1101 Tree Protection Notes, refer to Appendix B and C.

### 4.1 Pre-construction Protection

Four important tree protection measures should be undertaken on the project site if trees are to be preserved in a manner which will maintain their health over the long term. These include:

- Establishment of tree protection fencing and/or hoarding around adequately-sized Tree Protection Zones (TPZ's) prior to the commencement of any construction activity;
- Installation of root zone compaction protection where compaction may be caused by construction traffic or materials/equipment storage and staging;
- Implementation of root-sensitive excavation wherever Tree Protection Zones (TPZ's) or significant rooting areas may be encroached upon by excavation and/or grading, and;
- Root pruning in advance of conventional excavation, on an as-needed basis.

#### 4.1.1 Tree Protection Zones (TPZ's)

The purpose of a Tree Protection Zone (TPZ) is to prevent root damage, soil compaction and soil contamination, and workers and machinery must not encroach upon an TPZ in any way.

To prevent access and ensure that the TPZ is effective, the following steps shall be implemented in the establishment of TPZ fencing and/or hoarding:

- The locations of TPZ's should be clearly identified on the project Site Plan. Typically, TPZ's are to be shown as circles around tree location points, and are to be drawn to scale in accordance with the minimum required TPZ radius, as outlined in Appendix A - Tree Inventory.
- No groundbreaking activities or demolition should occur until all tree protection requirements have been met and the consulting arborist has confirmed the establishment of Tree Protection Zone fencing and/or hoarding.
- Hoarding shall consist of 4' x 8' sheets of plywood laid lengthwise and supported using triangular shaped supports to prevent root damage. Hoarding shall be affixed to the frame in such a manner as to prevent removal of individual sections or movement of the entire hoarding structure. Construction fencing can be used where pedestrian or motorist sightlines may be obscured by solid hoarding. Framed construction fencing can also be used to frame large Tree Protection Zones or tree groups, with expressed prior approval of City of Pickering staff. Framed fencing must be supported by a solid 2"x4" frame. Fencing and/or hoarding shall be maintained intact throughout the duration of the construction project, unless otherwise specified.

- Upon installation, all tree protection fencing and/or hoarding must be approved by a consulting arborist.
- All fencing and/or hoarding is to remain in place in good condition throughout the entire duration of the project. No fencing and/or hoarding is to be removed, relocated or otherwise altered from what is specified in the Tree Preservation Plan without the written permission of the City of Pickering.
- No grade change, excavation, or storage of fill, equipment or supplies is permitted within the TPZ at any time. Any encroachment of the TPZ shall not be undertaken without expressed written permission of the City of Pickering. TPZ encroachment may constitute Tree Injury as defined by various municipal tree protection policies and by-laws, and may subject the responsible parties to prescribed penalties.
- Signage similar to Figure 1, below, should be mounted on each side of TPZ fencing and/or hoarding immediately upon establishment and should be maintained for the duration of the project. Every sign should have minimum dimensions of 40 cm x 60 cm.
- All contractors and supervisors should be informed of the tree protection requirements including potential penalties, at a pre-construction meeting.
- Trees and TPZ's should be regularly monitored by a consulting arborist throughout the duration of the project.
- If TPZ encroachment should occur at any time during construction, the consulting arborist should evaluate the trees immediately so that appropriate treatment can be performed in a timely manner.

### **Tree Protection Zone (TPZ)**

**All construction related activities, including grade alteration, excavation, soil compaction, any materials or equipment storage, disposal of liquid and vehicular traffic are NOT permitted within this TPZ.**

**This tree protection barrier must remain in good condition and must not be removed or altered without authorization of City of Pickering.**

Figure 1: Sample TPZ information sign

## 4.1.2 Root Zone Compaction Protection

Where traffic or access through the root zone is anticipated, a Root Zone Compaction Protection treatment should be installed.

Light Root Zone Compaction Protection: where limited non-vehicular access the root zone is anticipated (e.g., occasional foot traffic, wheelbarrow), including:

- Installation of medium-weight non-woven geotextile fabric or landscape cloth over affected area;
- Installation of 150 mm wood chips over the fabric area;
- Installation of 1/2" plywood over wood chip mulch, and;
- Installation of appropriate covering material, if desired.

Moderate Root Zone Compaction: where moderate non-vehicular access across the root zone is anticipated (e.g., materials staging), including:

- Installation of medium-weight non-woven geotextile fabric or landscape cloth over affected area;
- Installation of 100 mm granular clear stone lain over fabric area;
- Installation of medium-weight non-woven geotextile fabric or landscape cloth over the stone;
- Installation of 150 mm of wood chips over fabric area, and;
- Installation of 1/2" plywood over wood chip mulch.

Horizontal Hoarding/Excavation Exclusion: where frequent non-vehicular access or longer-term materials storage in the root zone is anticipated, or in areas where additional measures must be implemented to ensure complete exclusion of excavation activity, including:

- Installation of medium-weight non-woven geotextile fabric or landscape cloth over affected area;
- Installation of 3 stacked and joined courses of 4" x 4" timbers around the area to be protected (including cross-members or joists, as required to maintain structural integrity);
- Installation of wood chips mulch in entire protected area, and;
- Installation of 2 layers of 3/4" plywood or 1 steel plate over the protected area.

Heavy Root Zone Compaction Protection: where vehicular access or severe potential root zone compaction are anticipated, such as site access roads, temporary parking areas or heavy machine staging areas, a more robust specification should be developed and implemented on a site-specific basis. Key elements of such a specification may include multiple steel plates over load-dissipating materials, or modular geocellular systems such as Permavoid ArborRaft.

### 4.1.3 Root-sensitive Excavation

Efforts should be made to exclude excavation or grade changes, including cutting or filling, from all TPZ's. Where this is not possible, and unless otherwise specified, excavation shall utilize a root-sensitive methodology such as hand-digging or pneumatic (e.g., AirSpade) soil excavation, as specified in the arborist report.

Root-sensitive excavation must be conducted in advance of excavation using conventional excavation machinery. The objective of root-sensitive excavation is twofold: 1) to determine whether roots will be present beneath areas to be excavated and therefore determine the likely extent of damage to trees to be retained, and 2) to enable proper root pruning, as described below.

Unless otherwise specified, root-sensitive excavation typically entails creating a trench approximately 200-300 mm wide between the subject tree (e.g., outside the established TPZ) and the area to be excavated, without damaging existing significant roots. Unless otherwise specified, root-sensitive excavation should be undertaken to a minimum depth of 800 mm, unless excavation is proposed to a shallower final depth. If excavation is for exploratory reasons and root pruning is not anticipated, equipment utilized during root-sensitive excavation should be operated at reduced pressures to prevent damage to root bark.

No excavation, whether undertaken by conventional or root-sensitive means shall take place within established TPZ's without expressed written permission of the City of Toronto; Parks, Forestry and Recreation; Urban Forestry Services.

### 4.1.4 Root Pruning

Root pruning can help reduce the stresses experienced by a tree with root damage, encourage the growth of new fine and feeder roots, and prevent the spread of decay. Root pruning should be undertaken in conjunction with root-sensitive excavation in advance of conventional excavation, or immediately afterwards if unexpected roots are encountered. Root pruning should only be undertaken by an ISA Certified Arborist, and in the manner outlined below:

- Roots that are severed, exposed or diseased and are greater than 2.0 cm in diameter should be pruned. All roots must be pruned with clean and sharp hand tools only. Shovels, picks or other construction tools shall not be used to prune roots. Wound dressings or pruning paint must not be used to cover the ends of any cut.
- Roots should be pruned in a similar fashion as branches, taking care to maintain the integrity of the root bark ridge. Root should be pruned back to native soil; root stubs must not be left upon completion of root pruning.
- Prolonged exposure of tree roots must be avoided - exposed roots should be covered and kept moist with soil, mulch, irrigation, or at least moistened burlap if they are exposed for longer than 3 hours. All cut roots should be covered with soil or excavated trenches should be backfilled with native material as soon as possible following root pruning.

## 4.2 During Construction Protection

### 4.2.1 Crown Pruning

During the course of project works, the branches of retained trees may be in conflict with construction, including machinery, infrastructure, and buildings. Clearance may require pruning of interfering tree branches. Where any project works may result in unavoidable conflict with and potential damage to a tree branches, clearance pruning should be performed. All necessary pruning must be conducted in an arboriculturally-correct manner by an ISA Certified Arborist; trades workers must not be involved in any tree-related work.

Any branches found to be in conflict with construction access should be tied back on a temporary basis, taking care to avoid construction knots and bark friction/stripping. If branches cannot be safely tied back without breaking, pruning should be performed by a Certified Arborist, as necessary.

## 4.3 Post-construction Care

### 4.3.1 Retained Trees

- Trees which have been retained through the construction process should be regularly monitored by an ISA Certified Arborist for signs of construction-induced stress, which may not be apparent until 3-6 years after site disturbance.
- Wherever possible, root zone amelioration including watering and mulching should be undertaken. However, treatments such as fertilization should be avoided unless directly specified by the project consulting arborist.
- Any physical damage to retained trees should be assessed by the project consulting arborist and properly mitigated, as required. If necessary, broken limbs or exposed roots should be pruned, damaged bark should be traced, and soil decompaction and/or decontamination should be undertaken by an ISA Certified Arborist. Stability of trees with significant root zone disturbance should be assessed, and advanced stability assessment or mitigation should be implemented if necessary.

### 4.3.2 New Trees

- All newly planted trees and shrubs should be provided with a bed of composted woodchip mulch 10-15 cm thick, extending to at least the dripline of the plant. Mulch should be periodically replaced as it decomposes, and weeds should be removed from the mulch bed manually. The mulch must not touch the bark of the tree and under no circumstances should it be mounded up against the stem in a “volcano” style. This is especially damaging for young trees with thin bark.

- All new plantings should be watered at least once per week during the growing season within the first two years after planting. Watering intensity should be increased during periods of drought. Watering should be deep and slow, ensuring that water penetrates to deep roots. Trees should not be watered directly adjacent to the trunk, but rather in a circular pattern extending from the trunk to at least the dripline. The soil should be allowed to dry in between watering periods to allow air to reach the roots.
- Minimal pruning should be undertaken in the first two years after planting. Foliage should be retained to allow for the roots to establish. Only dead, crossing and broken branches should be pruned back to an appropriate pruning point at the time of planting.
- New plantings should be inspected in the second year to assess health and condition. Dead or dying plants should be replaced in the next appropriate planting season.

Respectfully submitted by:



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## APPENDIX A - TREE INVENTORY



## Appendix A - Tree Inventory

Table 1: Inventory of trees at 1970 Brock Rd, Pickering, Ontario. Tree assessments are based upon field observations undertaken September 22nd and November 20th, 2020 by R. Felix (ISA Certified Arborist ON-2005A).

TREE #	BOTANICAL NAME	COMMON NAME	DBH (cm)	TI	CS	CV	TPZ (m)	LOC.	PROTECTION DESIGNATION	CONDITION
1	<i>Pinus nigra</i>	Austrian pine	36	G	G	G	N/A	S	Remove	11cm needles soft
2	<i>Picea abies</i>	Norway spruce	8	G	G	G	N/A	S	Remove	
3	<i>Picea abies</i>	Norway spruce	20	G	G	G	N/A	S	Remove	
4	<i>Picea abies</i>	Norway spruce	12	G	G	G	N/A	S	Remove	
5	<i>Picea abies</i>	Norway spruce	22	G	G	G	N/A	S	Remove	
6	<i>Picea abies</i>	Norway spruce	11	G	G	G	N/A	S	Remove	
7	<i>Picea abies</i>	Norway spruce	18	G	G	G	N/A	S	Remove	
8	<i>Picea abies</i>	Norway spruce	30	G	G	G	N/A	S	Remove	
9	<i>Picea abies</i>	Norway spruce	19	G	G	G	N/A	S	Remove	
10	<i>Picea abies</i>	Norway spruce	20	G	G	G	1.8	S	Preserve	
11	<i>Picea abies</i>	Norway spruce	10	N/A	N/A	N/A	N/A	S	Remove	Dead
12	<i>Pinus nigra</i>	Austrian pine	18	P	P	P	1.8	S	Preserve	Trunk topped at 2.5m from grade
13	<i>Pinus nigra</i>	Austrian pine	35	G	G	G	2.4	S	Preserve	
14	<i>Pinus nigra</i>	Austrian pine	23	F	P	F	1.8	S	Preserve	Trunk with 30 degree lean. Being crowded by adjacent Manitoba maple
15	<i>Pinus nigra</i>	Austrian pine	29	N/A	N/A	N/A	N/A	S	Remove	Dead. Crowded out by adjacent Manitoba maple
16	<i>Acer negundo</i>	Manitoba maple	18/18/15/18/ 5/5/5	F	F	G	1.8	S	Preserve	Majority of trunks are leaning
17	<i>Pinus nigra</i>	Austrian pine	28	G	G	P	1.8	S	Preserve	Dead branches up 3/4 of trunk height
18	<i>Pinus nigra</i>	Austrian pine	18	P	P	P	1.8	S	Preserve	Trunk topped at 1.8m from grade
19	<i>Pinus nigra</i>	Austrian pine	30	G	G	G	2.4	S	Preserve	
20	<i>Pinus nigra</i>	Austrian pine	33	G	G	F	2.4	S	Preserve	
21	<i>Pinus nigra</i>	Austrian pine	25	G	G	F	1.8	S	Preserve	
22	<i>Pinus nigra</i>	Austrian pine	32	G	G	F	2.4	S	Preserve	
23	<i>Pinus nigra</i>	Austrian pine	21/21	G	G	F	1.8	S	Preserve	

24	<i>Pinus nigra</i>	Austrian pine	26	G	G	F	1.8	S	Preserve	15 degree lean
25	<i>Pinus nigra</i>	Austrian pine	26	G	G	F	1.8	S	Preserve	
26	<i>Pinus nigra</i>	Austrian pine	27	G	G	F	1.8	S	Preserve	
27	<i>Pinus nigra</i>	Austrian pine	23	G	F	P	1.8	S	Preserve	15 degree lean
28	<i>Pinus nigra</i>	Austrian pine	36	G	G	F	2.4	S	Preserve	
29	<i>Picea abies</i>	Norway spruce	12	G	P	P	1.8	S	Preserve	
30	<i>Pinus nigra</i>	Austrian pine	24	G	G	F	1.8	S	Preserve	
31	<i>Picea abies</i>	Norway spruce	22	G	G	G	1.8	S	Preserve	
32	<i>Picea abies</i>	Norway spruce	19	G	G	F	1.8	S	Preserve	
33	<i>Pinus nigra</i>	Austrian pine	23	G	G	F	1.8	S	Preserve	
34	<i>Pinus nigra</i>	Austrian pine	22	G	G	F	1.8	S	Preserve	
35	<i>Picea abies</i>	Norway spruce	27	G	G	G	1.8	S	Preserve	
36	<i>Pinus nigra</i>	Austrian pine	23	F	F	F	1.8	S	Preserve	
37	<i>Pinus nigra</i>	Austrian pine	27	F	F	P	1.8	S	Preserve	25 degree lean
38	<i>Picea abies</i>	Norway spruce	21	G	G	G	1.8	S	Preserve	
39	<i>Pinus nigra</i>	Austrian pine	31	G	G	F	2.4	S	Preserve	
40	<i>Picea abies</i>	Norway spruce	26	G	G	G	1.8	S	Preserve	
41	<i>Picea abies</i>	Norway spruce	17	G	G	F	1.8	S	Preserve	
42	<i>Picea abies</i>	Norway spruce	16	G	G	F	1.8	S	Preserve	
43	<i>Picea abies</i>	Norway spruce	16	G	G	F	1.8	S	Preserve	
44	<i>Pinus nigra</i>	Austrian pine	19	G	G	P	1.8	S	Preserve	
45	<i>Pinus nigra</i>	Austrian pine	24	G	G	P	1.8	S	Preserve	
46	<i>Pinus nigra</i>	Austrian pine	23	G	G	P	1.8	S	Preserve	
47	<i>Pinus nigra</i>	Austrian pine	30	G	G	G	2.4	S	Preserve	
48	<i>Picea abies</i>	Norway spruce	25	G	G	G	1.8	S	Preserve	
49	<i>Pinus nigra</i>	Austrian pine	37	G	G	G	2.4	S	Preserve	

50	<i>Picea abies</i>	Norway spruce	22	G	G	G	1.8	S	Preserve	
51	<i>Picea abies</i>	Norway spruce	23	G	G	G	1.8	S	Preserve	
52	<i>Pinus nigra</i>	Austrian pine	34	G	G	G	2.4	S	Preserve	20 degree lean
53	<i>Pinus nigra</i>	Austrian pine	26	G	G	G	1.8	S	Preserve	20 degree lean
54	<i>Pinus nigra</i>	Austrian pine	25	G	G	G	1.8	S	Preserve	
55	<i>Pinus nigra</i>	Austrian pine	26	G	G	P	1.8	S	Preserve	
56	<i>Pinus nigra</i>	Austrian pine	22	G	G	G	1.8	S	Preserve	
57	<i>Pinus nigra</i>	Austrian pine	31	G	G	G	2.4	S	Preserve	20 degree lean
58	<i>Pinus nigra</i>	Austrian pine	29	G	G	G	1.8	S	Preserve	
59	<i>Pinus nigra</i>	Austrian pine	20	G	G	G	1.8	S	Preserve	
60	<i>Pinus nigra</i>	Austrian pine	30	G	G	G	2.4	S	Preserve	
61	<i>Picea abies</i>	Norway spruce	24	G	G	G	1.8	S	Preserve	
62	<i>Picea abies</i>	Norway spruce	22	G	G	G	1.8	S	Preserve	
63	<i>Picea abies</i>	Norway spruce	28	G	G	G	1.8	S	Preserve	
64	<i>Picea abies</i>	Norway spruce	32	G	G	G	2.4	S	Preserve	
65	<i>Robinia pseudoacacia</i>	Black locust	34/23/102	G	G	G	6.2	N	Preserve	
66	<i>Tilia americana</i>	Basswood	17	G	G	G	1.8	N	Preserve	
67	<i>Ulmus thomasii</i>	Rock elm	13	G	G	G	1.8	N	Preserve	
68	<i>Tilia americana</i>	Basswood	18	G	G	G	1.8	N	Preserve	
69	<i>Acer saccharinum</i>	Silver maple	33	G	G	F	N/A	S	Remove	10% deadwood
70	<i>Acer saccharinum</i>	Silver maple	39	G	G	F	N/A	S	Remove	
71	<i>Acer saccharinum</i>	Silver maple	33	G	G	F	N/A	S	Remove	10% deadwood
72	<i>Acer saccharinum</i>	Silver maple	43	G	G	G	N/A	S	Remove	
73	<i>Acer saccharinum</i>	Silver maple	21	G	G	F	N/A	S	Remove	10% deadwood
74	<i>Gleditsia triacanthos</i>	Honey locust	22	G	G	G	N/A	S	Remove	
75	<i>Gleditsia triacanthos</i>	Honey locust	23	G	G	F	N/A	S	Remove	

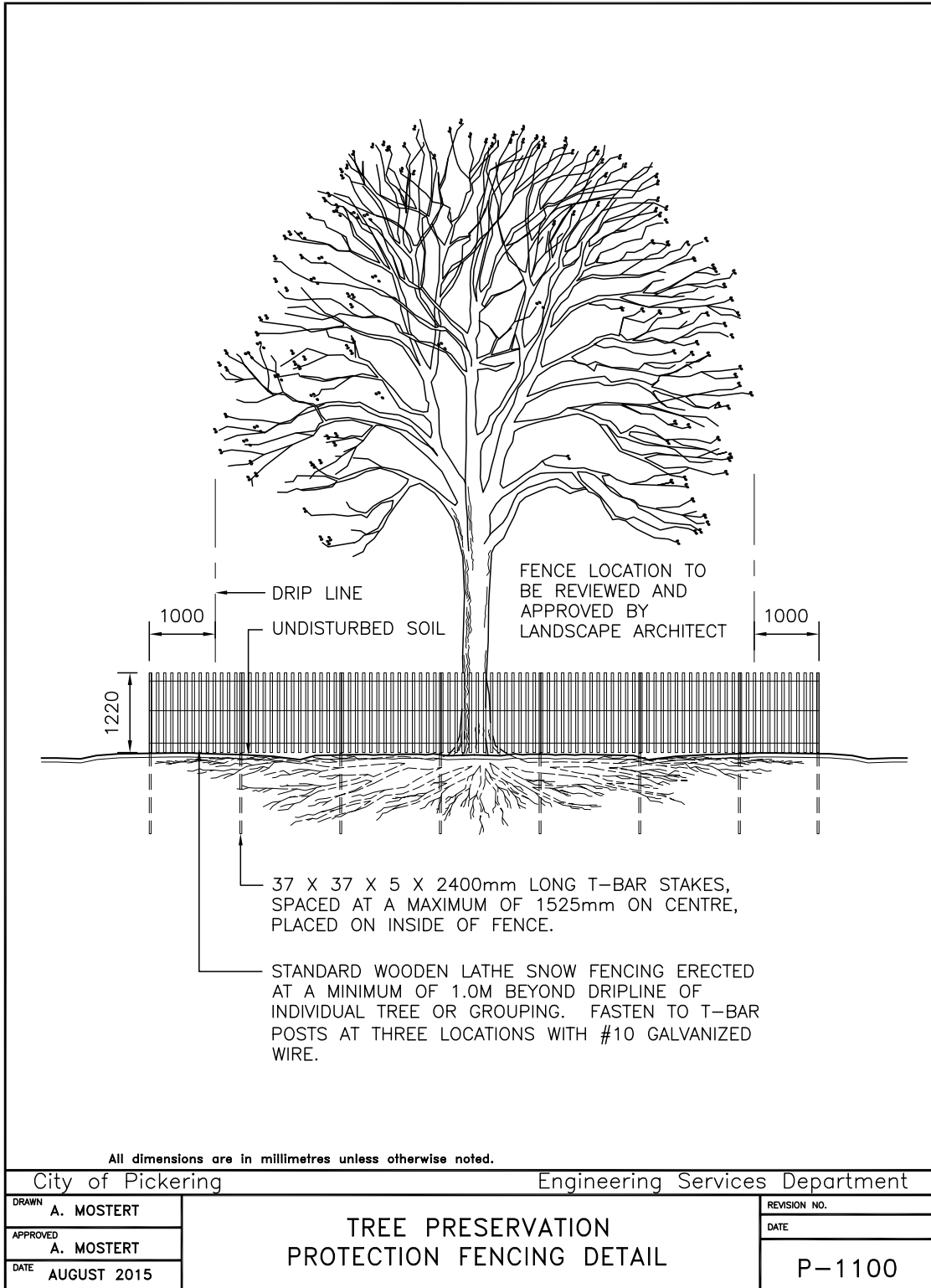
76	<i>Gleditsia triacanthos</i>	Honey locust	22	G	G	G	N/A	S	Remove	
77	<i>Pinus sylvestris</i>	Scots pine	51	G	G	G	N/A	S	Remove	
78	<i>Robinia pseudoacacia</i>	Black locust	59	G	F	F	N/A	S	Remove	10% deadwood
79	<i>Robinia pseudoacacia</i>	Black locust	57	P	P	P	N/A	S	Remove	90% deadwood, 40 degree lean
80	<i>Robinia pseudoacacia</i>	Black locust	103	F	F	F	N/A	S	Remove	30% deadwood
81	<i>Robinia pseudoacacia</i>	Black locust	60	P	P	P	N/A	S	Remove	40% deadwood, signs of decay along the trunk
82	<i>Quercus macrocarpa</i>	Bur oak	6	G	G	G	N/A	S	Remove	
83	<i>Quercus macrocarpa</i>	Bur oak	6	G	G	G	N/A	S	Remove	
84	<i>Quercus macrocarpa</i>	Bur oak	6	G	G	G	N/A	S	Remove	
85	<i>Gleditsia triacanthos</i>	Honey locust	68	G	G	G	N/A	S	Remove	
86	<i>Picea abies</i>	Norway spruce	68	G	G	G	N/A	S	Remove	
87	<i>Catalpa speciosa</i>	Northern catalpa	17/9/9/9/9/9	F	F	F	N/A	S	Remove	Signs of decay at lower trunk area. Old injury not healed properly
88	<i>Acer saccharum</i>	Sugar maple	16	G	G	G	N/A	S	Remove	
89	<i>Acer saccharinum</i>	Silver maple	50	G	G	G	N/A	S	Remove	
90	<i>Acer saccharinum</i>	Silver maple	40	F	G	G	N/A	S	Remove	
91	<i>Picea abies</i>	Norway spruce	38	G	G	G	2.4	N	Preserve	
92	<i>Acer sp.</i>	Maple	24	G	G	G	1.8	N	Preserve	
93	<i>Picea abies</i>	Norway spruce	36	G	G	G	2.4	N	Preserve	
94	<i>Picea abies</i>	Norway spruce	41	G	G	G	3	N	Preserve	
95	<i>Picea abies</i>	Norway spruce	38	G	G	G	2.4	N	Preserve	
96	<i>Picea abies</i>	Norway spruce	38	G	G	G	2.4	N	Preserve	
97	<i>Picea abies</i>	Norway spruce	44	G	G	G	3	N	Preserve	
98	<i>Picea abies</i>	Norway spruce	20	G	G	G	1.8	N	Preserve	
99	<i>Picea abies</i>	Norway spruce	45	G	G	G	3	N	Preserve	
100	<i>Picea abies</i>	Norway spruce	26	G	G	G	1.8	N	Preserve	
101	<i>Picea abies</i>	Norway spruce	32	G	G	G	2.4	N	Preserve	

102	<i>Picea abies</i>	Norway spruce	45	G	G	G	3	N	Preserve	
103	<i>Picea abies</i>	Norway spruce	35	G	G	G	2.4	N	Preserve	
104	<i>Picea abies</i>	Norway spruce	38	G	G	G	2.4	N	Preserve	
105	<i>Picea abies</i>	Norway spruce	18	G	G	G	1.8	N	Preserve	
106	<i>Picea abies</i>	Norway spruce	32	G	G	G	2.4	N	Preserve	
107	<i>Picea abies</i>	Norway spruce	20	G	G	G	1.8	N	Preserve	
108	<i>Picea abies</i>	Norway spruce	20	G	G	G	1.8	N	Preserve	
109	<i>Picea abies</i>	Norway spruce	18	G	G	G	1.8	N	Preserve	
110	<i>Acer saccharum</i>	Sugar maple	16	G	G	G	1.8	N	Preserve	
111	<i>Picea abies</i>	Norway spruce	15	G	G	G	1.8	N	Preserve	
112	<i>Picea abies</i>	Norway spruce	16	G	G	G	1.8	N	Preserve	
113	<i>Picea abies</i>	Norway spruce	16	G	G	G	1.8	N	Preserve	
114	<i>Picea abies</i>	Norway spruce	16	G	G	G	1.8	N	Preserve	
115	<i>Picea abies</i>	Norway spruce	35	G	G	G	2.4	N	Preserve	
116	<i>Picea abies</i>	Norway spruce	15	G	G	P	1.8	N	Preserve	
117	<i>Picea abies</i>	Norway spruce	33	G	G	G	2.4	N	Preserve	

**Tree Invent**

- Tag #** Physical tag on trees and identifi
- DBH** Diameter at Breast Height - diameter measured in centimetres at 1.4 m above grade
- CW** Canopy Width - estimation of the average diameter of the tree canopy measured in metres.
- TI** Trunk Integrity - an assessment of the tree's trunk for any externally-visible defects or weaknesses, rated on an ascending scale of poor-fair-good
- CS** Canopy Structure - an assessment of the tree's main scaffold branches and the canopy of the tree for defects or weaknesses visible from ground level, rated on an ascending scale of poor-fair-good.
- CV** Canopy Vitality - an assessment
- TPZ** Tree Protection Zone - measured in metres, as required by the City of Toronto, in accordance with the City of Toronto 'Tree Protection Policy and Specifications for Construction Near Trees' (July 2016 version)
- Loc.** The location of the tree relative to the subject site:
- S** Subject Site
  - N** Neighbouring property
  - M** Municipal property
  - B** Property boundary

# APPENDIX B



# APPENDIX C

1. ALL EXISTING TREES WHICH ARE TO REMAIN SHALL BE FULLY PROTECTED WITH SNOW FENCING OR SIMILAR STRUCTURES ERECTED OUTSIDE THE DRIP LINE OF THE TREES, PRIOR TO COMMENCEMENT OF CONSTRUCTION. GROUPS OF TREES AND OTHER EXISTING PLANTINGS TO BE PROTECTED SHALL BE DONE IN A LIKE MANNER WITH SNOW FENCING OR OTHER SIMILAR STRUCTURES AROUND THE ENTIRE CLUMP(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 AND SURPLUS SOIL, EQUIPMENT, DEBRIS OR MATERIALS SHALL NOT BE PLACED OVER THE ROOT SYSTEMS OF THE TREES WITHIN THE PROTECTIVE FENCING. NO CONTAMINANTS ARE TO BE DUMPED OR FLUSHED WHERE FEEDER ROOTS OF TREES EXIST.
3. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION NECESSARY TO PREVENT DAMAGE TO TREES OR SHRUBS TO BE RETAINED.
4. WHERE LIMBS OR PORTIONS OF TREES ARE REMOVED TO ACCOMMODATE CONSTRUCTION WORK, THEY WILL BE CLEANLY CUT IN ACCORDANCE WITH ACCEPTABLE ARBORICULTURAL PRACTICES.
5. WHERE ROOT SYSTEMS OF PROTECTIVE TREES ARE EXPOSED DIRECTLY ADJACENT TO OR DAMAGED BY CONSTRUCTION WORK, THEY SHALL BE TRIMMED NEATLY AND THE AREA BACK-FILLED WITH APPROPRIATE MATERIAL IN A TIMELY MANNER TO PREVENT DRYING.
6. WHERE NECESSARY, THE TREES SHALL BE GIVEN AN OVERALL PRUNING TO RESTORE THE BALANCE BETWEEN ROOTS AND TOP GROWTH OR TO RESTORE THE APPEARANCE OF THE TREE.
7. TREES SCHEDULED FOR PRESERVATION THAT HAVE DIED OR BEEN DAMAGED BEYOND REPAIR SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE BY TREES OF A SIMILAR SIZE AND SPECIES OR SUCH SIZE AND SPECIES AS APPROVED BY THE LANDSCAPE ARCHITECT.
8. IF GRADES AROUND TREES TO BE PROTECTED ARE LIKELY TO CHANGE, THE CONTRACTOR SHALL BE REQUIRED TO TAKE SUCH PRECAUTIONS AS DRY WELLING AND ROOT FEEDING TO THE SATISFACTION OF THE CITY OF PICKERING.
9. SHOULD A CONFLICT OCCUR BETWEEN TREES SCHEDULED FOR PRESERVATION AND THE PROPOSED CONSTRUCTION, APPROVAL SHALL BE OBTAINED IN WRITING FROM THE CITY OF PICKERING PRIOR TO PROCEEDING WITH THE REMOVAL OF SUCH.
10. ANY TREES DESIGNATED FOR REMOVAL SHALL BE REMOVED IN ENTIRETY INCLUDING ALL STUMPS AND ROOTS AND DISPOSED OF OFF SITE. NO BURYING OF TREE BRANCHES AND STUMPS WILL BE PERMITTED.

City of Pickering		Engineering Services Department	
<small>DRAWN</small> A. MOSTERT	<b>TREE PROTECTION NOTES</b>	<small>REVISION NO.</small>	
<small>APPROVED</small> A. MOSTERT		<small>DATE</small>	
<small>DATE</small> AUGUST 2015		<b>P-1101</b>	