Tree Inventory and Preservation Plan
&
Ravine Rehabilitation Stewardship Plan Report
2570 – 2590 Argyle Road
Mississauga, Ontario

prepared for

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prepared by

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KUNTZ FORESTRY CONSULTING INC. Project P3714

Introduction

Kuntz Forestry Consulting Inc. was retained by STUDIO tla to complete a Tree Inventory and Preservation Plan & Ravine Rehabilitation Stewardship Plan Report as part of the proposed development and ravine rehabilitation stewardship efforts for the subject site located at 2570 – 2590 Argyle Road in the City of Mississauga, Ontario. The subject site is located on the southwest side of Argyle Road, southeast of Dundas Street West, within a residential area. A ravine area exists at the southwest limit of the subject site, bordering Mary Fix Creek.

The work plan for this tree preservation study included the following:

- Prepare inventory of the tree and large shrub resources within the ravine area of the subject site, tree resources 10cm diameter at breast height (DBH) and greater on and within six metres of the subject site outside of the ravine area, and trees resources of all sizes within the adjacent road right-of-way;
- Evaluate tree saving opportunities based on proposed development plans;
- Identify and recommend removal of invasive species of trees and shrubs within the ravine area; and,
- Document the findings in a Tree Inventory and Preservation Plan & Ravine Rehabilitation Stewardship Plan Report.

The results of the evaluation are provided below.

Methodology

Tree Inventory

Tree and large shrub resources within the ravine area of the subject site, tree resources 10cm DBH and greater on and within six metres of the subject site outside of the ravine area, and tree resources of all sizes within the adjacent road right-of-way were included in the inventory. Tree / shrub resources were located using the topographic survey provided for the subject site and estimations made from known points in-field. Tree and shrub resources were identified as Trees / Polygons 100 – 132, 134 – 138, 481 – 500, 1350 – 1398, and A – N. Where trees / shrubs existed in groups, they were inventoried as polygons and denoted with a “P” before their identification number / letter.

Individually inventoried tree and shrub resources, and polygons comprised of a single species were inventoried using the following parameters:

Tree # – Number assigned to trees that corresponds to Figure 1.
Species – Common and botanical names provided in the inventory table.
DBH – Diameter (cm) at breast height, measured at 1.4m above the ground.
Condition – Condition of tree considering trunk integrity (TI), crown structure (CS) and crown vigor (CV). Condition ratings include poor (P), fair (F), and good (G).
Crown Dieback – Percentage of dead branches within the crown.
Dripline – Crown radius (m).
Comments – Any other relevant tree condition information.

Where polygons were comprised of multiple species, including Polygons P1360 and PL, tree resources were inventoried using a 100% tally analysis by species, size class, and quality. Trees with a DBH of 10cm or greater were included in the stand tally analysis.

Trees within Polygons P1360 and PL were assessed utilizing the following parameters:

Species – Common and botanical names provided in the inventory table.
Size Class (DBH) – 10cm – 15cm, 16cm – 30cm, 31cm – 45cm, and 46cm and above
Quality Class: Acceptable Growing Stock (AGS), Unacceptable Growing Stock (UGS)

Trees classified as AGS are trees with no major defects in the bole and a relatively good crown structure and vigour. Trees classified as UGS are trees with a major defect in the bole and / or those exhibiting a relatively poor crown structure or vigour.

Refer to Table 1 and Table 2 for the detailed inventory and Figure 1 for the locations of the trees / shrubs and polygons. See Appendix A for site photographs.

Tree Valuation

A valuation was calculated for trees located within the road right-of-way. The value was calculated using the Trunk Formula Technique. This method is described in the Guide for Plant Appraisal, 10th Edition (CTLA 2018). The Ontario Supplement (2021) provides regionally relevant data pertaining to species-specific basic costs for trees.

Trunk Formula Technique

This method is used for trees that are larger than what is commonly available for transplant from a nursery. The Unit Tree Cost of the replacement tree is derived from a survey of nurseries or supplied by the Regional Plant Appraisal Council and published within the Ontario Supplement (2021). For Ontario, the species-specific Unit Tree Costs have been calculated and included in the Ontario Supplement (2021).

The Basic Tree Cost is calculated by multiplying the Unit Tree Cost by the cross-sectional area of the subject tree. For multi-stemmed trees, the appraised trunk area considers the cross-sectional area of all stems. The Appraised Value is calculated by multiplying the Basic Reproduction Cost by the three depreciation factors (Condition Rating, Functional Limitation Rating, and External Limitation Rating, as described in the Guide).

The appraised value is therefore calculated using the following equation:

Basic Tree Cost = Appraised Tree Trunk Area X Unit Tree Cost

Appraised Value = Basic Tree Cost X Condition Rating X Functional Limitation Rating X External Limitation Rating

Functional Limitation Ratings and External Limitation Ratings are calculated according to the methods outlined in the guide. Condition Ratings were calculated based on the assessed condition of the trees on the site and in accordance with the guide. The final values were rounded to the nearest $100 for values greater than $2000, and to the nearest $5 for values less than $2000.

Refer to Table 3 for the individual tree value computation.

Existing Site Conditions

Within the non-ravine area of the subject site there exists two 12-storey residential buildings, associated driveways, parking areas, and outdoor amenity areas. Tree resources within the non-ravine areas of the subject site exist in the form of landscape trees and natural regeneration.

The ravine area located at the southwest limit of the subject site, bordering Mary Fix Creek, is currently an unmanaged, riparian feature. Tree and shrub resources within the ravine area exist in the form of natural regeneration.

Refer to Figure 1 for the existing site conditions.

Tree Resources

The tree inventory for the ravine area was conducted on 4 October 2021 while the inventory for the remaining portion of the subject site was conducted on 20 April 2023. The inventory documented a total of 112 trees / shrubs and nine polygons on and adjacent to the subject site.

Tree and large shrub resources were comprised of Apple species (*Malus sp.*), Austrian Pine (*Pinus nigra*), Basswood (*Tilia americana*), Blue Spruce (*Picea pungens*), Bur Oak (*Quercus macrocarpa*), Cherry species (*Prunus sp.*), Common Buckthorn (*Rhamnus cathartica*), Dogwood species (*Cornus sp.*), Douglas Fir (*Pseudotsuga menziesii*), Eastern Red Cedar (Juniper) (*Juniperus virginiana*), Eastern White Cedar (*Thuja occidentalis*), Green Ash (*Fraxinus pennsylvanica*), Honey Locust (*Gleditsia triacanthos*), Little-leaf Linden (*Tilia cordata*), Manitoba Maple (*Acer negundo*), Norway Spruce (*Picea abies*), Morrow Honeysuckle (*Lonicera morrowii*), Norway Maple (*Acer platanoides*), Prickly Ash (*Xanthoxylum americanum*), Siberian Elm (*Ulmus pumila*), Weeping White Mulberry (*Morus alba* 'Pendula'), White Ash (*Fraxinus americana*), White Elm (*Ulmus americana*), White Mulberry (*Morus alba*), and Yew species (*Taxus sp.*).

Refer to Table 1 and Table 2 for the detailed inventory and Figure 1 for the location of trees and large shrubs reported in the inventory.

Proposed Development

The proposed development includes the retention of the two existing residential buildings and the construction of an additional 14-storey residential building. A subsurface parking garage, as well as the reconfiguration of pedestrian walkways, vehicular laneways, and surface parking areas is proposed for the subject site. A stormwater pipe with an outlet to Mary Fix Creek is proposed within the ravine area. The ravine area is subject to ravine rehabilitation stewardship efforts (i.e. removal of invasive / dead / poor condition trees and shrubs). Refer to Figure 1 for the proposed site plan.

Discussion

The following sections provide a discussion and analysis of tree impacts, and tree preservation relative to the existing conditions, the proposed development, and ravine rehabilitation stewardship efforts.

Development Impacts / Tree and Shrub Removals

Tree Inventory and Preservation Plan – Removals Due to the Proposed Development and Poor Condition

The removal of 29 trees and one polygon is required to accommodate the proposed development. Trees / polygons identified for removal include Trees 120, 121, 126, 481 – 483, 488, 489, 1359, 1365 – 1379, 1381, 1382, 1389, J, and K, and Polygon P1360.

The removal of three additional trees is recommended regardless of the proposed development due to their poor condition. Trees identified for removal due to their condition include Trees 484, 494, and 1351.

Ravine Rehabilitation Stewardship Plan – Invasive Species and Dead Tree Removals

A total of ten trees / shrubs and six polygons are considered invasive species and as such, their removal is recommended as part of the ravine rehabilitation stewardship efforts. The recommended removals include Trees 104, 105, 115, 117, 118, 122 – 125, and 1364, and Polygons P102, P103, P107, P129, P131, and P134.

Several dead trees that were not included in the inventory but are noted on Figure 1 are also recommended for removal as part of the ravine rehabilitation stewardship efforts.

Bylaw-Protected Trees

Trees 117, 122, 481 – 484, 488, 489, 494, 1351, 1359, 1364 – 1370, 1372 – 1379, 1381, 1382, 1389, J, and K are 15cm DBH or greater. Additionally, within Polygon P1360 there exist 43 trees that are 15cm DBH or greater. As such, these trees are protected by the City of Mississauga's Private Tree By-law.

Neighbouring Trees

Trees 1365, 1376 – 1379, J, and K are located fully or partially on neighbouring properties and as such, written permission from the respective neighbouring property owners will be required prior to the removal of these trees.

Refer to Figure 1 for the locations of the proposed tree / shrub and polygon removals.

Tree Preservation

The remaining 70 trees / shrubs and two polygons can be preserved in the context of the proposed development and the ravine rehabilitation stewardship efforts with the use of appropriate tree protection measures. The trees / shrubs and polygons identified for preservation include Trees 100, 101, 106, 108 – 114, 116, 119, 127, 128, 130, 132, 135, 137, 138, 485 – 487, 490 – 493, 495 – 500, 1350, 1352 – 1358, 1361 – 1363, 1380, 1383 – 1388, 1390 – 1398, A – I, M, and N, and Polygons P136 and PL.

Tree Inventory and Preservation Plan – Injury Due to the Proposed Development

Where the minimum tree protection zones (mTPZs) of trees / shrubs and polygons cannot be fully respected due to the proposed development, including for Trees 106, 116, 127, 487, 490, 495, 1357, 1358, 1361, 1363, 1390, 1396, and 1398, and Polygon PL, special mitigation measures have been prescribed and are outlined below.

Trees 106, 116, 127, 490, 495, 1357, 1358, 1361, 1363, 1390, 1396, and 1398

Encroachment into the mTPZs of Trees 106, 116, 127, 490, 495, 1357, 1358, 1361, 1363, 1390, 1396, and 1398 will be required to accommodate the removal of existing hardscape (i.e. asphalt surface parking areas and walkways), and in some areas, the removal and replacement of existing hardscape. If the following mitigation measures are employed, long-term adverse effects are not anticipated for these trees.

1. Prior to the commencement of the proposed works, tree preservation fencing is to be installed as depicted in Figure 1. For Trees 1357, 1358, 1390, 1396, and 1398, the prescribed tree protection fencing may be temporarily adjusted to accommodate the removal of the hardscape surfaces but must be reinstalled as depicted in Figure 1 immediately after the completion of the removal of the surfaces.
2. The existing hardscape surfaces are to be removed carefully using small machinery or by hand. Any roots encountered in the subsurface material are to be left intact. No machinery use will be permitted within the mTPZs of these trees at any time once the existing hardscape has been removed.
3. Where new hardscape surfaces are to be installed in the area from which the old hardscape surfaces have been removed, including for Trees 490, 495, 1357, and 1358, the new surfaces are to be installed using the existing subsurface material.
4. Any softscaping within the mTPZs of these trees should occur by hand.
5. Any works to occur within the mTPZs of these trees should be supervised by a Certified Arborist in accordance with Good Arboricultural Standards.
6. Branches that extend into the proposed development and require pruning should be pruned by a Certified Arborist or other tree professional in accordance with Good Arboricultural Standards.

Trees 487 and 490

Encroachment into the mTPZs of Trees 487 and 490 will be required to accommodate the installation of new curbs and surface parking area / laneway. If the following mitigation measures are employed, long-term adverse effects are not anticipated for these trees.

1. Prior to the commencement of the proposed works, tree preservation fencing is to be installed as depicted in Figure 1.
2. Air-spade or low-pressure hydro-vac technology should be used to excavate trenches in the locations indicated on Figure 1 with solid cyan. The depth of the trenches will depend on the depth of excavation required to install the proposed curbs and surface parking area / laneway.
3. Any roots encountered within the trenches are to be pruned by a Certified Arborist in accordance with Good Arboricultural Standards.
4. The trenches are to be backfilled with clean topsoil.

5. Branches that extend into the proposed development and require pruning should be pruned by a Certified Arborist or other tree professional in accordance with Good Arboricultural Standards.

Tree 1363

Encroachment into the mTPZ of Tree 1363 will be required to install the proposed stormwater pipe within the ravine area. The excavation to occur within the mTPZ of this tree should occur under the supervision of a Certified Arborist. Any roots exposed during the excavation process are to be pruned by a Certified Arborist in accordance with Good Arboricultural Standards.

Tree 1398 and Polygon PL

Encroachment into the mTPZs of Tree 1398 and Polygon PL will be required to accommodate alterations in grading. If the following mitigation measures are employed, long-term adverse effects are not anticipated for this tree and polygon.

1. Prior to the commencement of the proposed works, tree preservation fencing is to be installed as depicted in Figure 1. During the final grading stage, the prescribed tree protection fencing may be temporarily adjusted to accommodate the required grading alterations but must be reinstalled as depicted in Figure 1 immediately after the completion of the grading within the mTPZs of this tree and polygon.
2. The addition of fill within the mTPZs of this tree and polygon should occur by hand.
3. Any softscaping within the mTPZs of this tree and polygon should occur by hand.
4. Branches that extend into the proposed development and require pruning should be pruned by a Certified Arborist or other tree professional in accordance with Good Arboricultural Standards.

Ravine Rehabilitation Stewardship Plan – Injury Due to Ravine Rehabilitation Stewardship Efforts

It should be noted that all restoration activities including invasive species management and planting should occur by hand within the ravine area to avoid impacts to trees and shrubs identified for preservation.

Tree Valuation

A valuation was calculated for trees located within the adjacent road right-of-way, including Trees 1388, A, and B. The total appraised value of the City-owned trees was calculated at $3,435.00. Refer to Table 3 for the individual tree value computation.

Replacement Plantings

The City of Mississauga requires replacement plantings to compensate for the removal of public and private trees. The ratio of the required replacement plantings per tree is below:

DBH of Tree to be Removed (cm)	Number of Replacement Plantings
6 – 15	1
16 – 30	2
31 – 45	3
46 – 60	4
61 – 75	5
76 – 90	6
91– 105	7
106 – 120	8
>120	9

A total of 214 replacement plantings are required on the subject site to compensate for the individual private trees and polygons identified for removal related to the proposed development. Trees / shrubs and polygons identified for removal as part of ravine rehabilitation stewardship efforts have not been considered in the compensation calculation. See Table 1 for the number of replacement plantings required for each individual tree and polygon identified for removal.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by STUDIO tla to complete a Tree Inventory and Preservation Plan & Ravine Rehabilitation Stewardship Plan Report as part of the proposed development and ravine rehabilitation stewardship efforts for the subject site located at 2570 – 2590 Argyle Road in the City of Mississauga, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 112 trees / shrubs and nine polygons on and adjacent to the subject site.

With respect to the proposed development, the removal of 29 trees and one polygon is required to accommodate the proposed works. The removal of an additional three trees is recommended regardless of the proposed works due to their poor condition. With respect to the ravine rehabilitation stewardship efforts, the removal of ten trees / shrubs and six polygons from within the ravine area is recommended.

The remaining trees / shrubs and polygons can be preserved in the context of the proposed development and the ravine rehabilitation stewardship efforts with the use of appropriate tree protection measures.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for tree protection fencing locations and general Tree Protection Plan Notes and tree preservation fence details.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.

- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Special mitigation measures have been prescribed for select trees / shrubs and polygons, as outlined in the *Tree Preservation* section of this report.

- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.

- Site visits pre, during, and post construction are recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,

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Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (ie. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

Table 1. Tree Inventory

Location: 2570 – 2590 Argyle Road, Mississauga Date: 4 October 2021 and 20 April 2023 Surveyors: KNH

Tree #	Common Name	Scientific Name	DBH	Multistem DBH	TI	CS	CV	CDB	DL	mTPZ	Comments	Ownership	Action	Rep.
100	Cherry species	*Prunus sp.*	15	-	FG	G	G		4	1.5	Lean (L), crook (L)	Subject Site	Preserve	-
101	Basswood	*Tilia americana*	<5	-	FG	FG	G		2	1.2	Six stems, union at base	Subject Site	Preserve	-
P102	Common Buckthorn	*Rhamnus cathartica*	<5	-	FG	FG	G		1.5	1.2	Approximately ten shrubs, lean (L)	Subject Site	Remove (RRSP - Invasive)	-
P103	Common Buckthorn	*Rhamnus cathartica*	~3 - 9	-	FG	FG	FG		2.5	1.2	Approximately seven shrubs, average DBH = 4cm	Subject Site	Remove (RRSP - Invasive)	-
104	Morrow Honeysuckle	*Lonicera morrowii*	<5	-	G	G	G		1	1.2	Multistem, union at base	Subject Site	Remove (RRSP - Invasive)	-
105	Morrow Honeysuckle	*Lonicera morrowii*	<5	-	G	G	G		1	1.2	Multistem, union at base	Subject Site	Remove (RRSP - Invasive)	-
106	Prickly Ash	*Xanthoxylum americanum*	<5	-	G	G	G		1	1.2		Subject Site	Injure (TIPP - Development)	-
P107	Common Buckthorn	*Rhamnus cathartica*	~3 - 11	-	FG	FG	FG		1.5	1.5	Approximately 28 shrubs, average DBH = 6cm	Subject Site	Remove (RRSP - Invasive)	-
108	Basswood	*Tilia americana*	15, 4	15.5	FG	FG	G		3	1.5	Union at base, sweep (L)	Subject Site	Preserve	-
109	Cherry species	*Prunus sp.*	16.5	-	FG	G	G		3	1.5	Lean (L), crook (L)	Subject Site	Preserve	-
110	Bur Oak	*Quercus macrocarpa*	8	-	FG	G	G		1.5	1.2	Bow (L)	Subject Site	Preserve	-
111	Basswood	*Tilia americana*	10	-	FG	G	G		1.5	1.5	Sweep (L)	Subject Site	Preserve	-
112	Apple species	*Malus sp.*	~12.5	-	F	FG	F		4	1.5	Epicormic branching (H), bow (M)	Subject Site	Preserve	-
113	Bur Oak	*Quercus macrocarpa*	11.5	-	FG	G	FG		3	1.5	Bow (L), epicormic branching (L)	Subject Site	Preserve	-
114	Bur Oak	*Quercus macrocarpa*	10.5	-	FG	FG	FG		2	1.5	Bow (L), epicormic branching (L), asymmetrical crown (L)	Subject Site	Preserve	-
115	Morrow Honeysuckle	*Lonicera morrowii*	<5	-	F	F	F	35	1.5	1.2	Deadwood (M), multistem	Subject Site	Remove (RRSP - Invasive)	-
116	Apple species	*Malus sp.*	10.5, 10	14.5	F	FG	G		2.5	1.5	Union at base, bow (M) in one stem, bow (L) in one stem	Subject Site	Injure (TIPP - Development)	-
117	Manitoba Maple	*Acer negundo*	15.5	-	P	PF	P	80	3	1.5	V-union at 0.5m with included bark, one stem dead, fruiting bodies, deadwood (H)	Subject Site	Remove (RRSP - Invasive)	-
118	Common Buckthorn	*Rhamnus cathartica*	~3 - 10	-	FG	FG	FG		2	1.5	Approximately 12 shrubs	Subject Site	Remove (RRSP - Invasive)	-
119	Bur Oak	*Quercus macrocarpa*	10	-	FG	G	G		2.5	1.5	Bow (L)	Subject Site	Preserve	-
120	Bur Oak	*Quercus macrocarpa*	10.5	-	FG	G	G		2.5	1.5	Crook (L)	Subject Site	Remove (TIPP – Development)	1
121	Apple species	*Malus sp.*	9.5, 11	14.5	FG	FG	FG		4	1.5	Union at base, epicormic branching (L), asymmetrical crown (L)	Subject Site	Remove (TIPP - Development)	1
122	Norway Maple	*Acer platanoides*	16	-	F	FG	G		4	1.5	Asphalt in root zone, sweep (L), crook (L), asymmetrical crown (L)	Subject Site	Remove (RRSP - Invasive)	-
123	Norway Maple	*Acer platanoides*	12	-	F	FG	G		3	1.5	Sweep (L), crook (L), stem wounds (L)	Subject Site	Remove (RRSP - Invasive)	-
124	Manitoba Maple	*Acer negundo*	12	-	F	FG	FG		2	1.5	Bow (L), epicormic branching (L), fruiting bodies	Subject Site	Remove (RRSP - Invasive)	-
125	Norway Maple	*Acer platanoides*	7	-	FG	G	G		2	1.2	Lean (L)	Subject Site	Remove (RRSP - Invasive)	-
126	Apple species	*Malus sp.*	13	-	FG	FG	G		2.5	1.5	Sweep (M)	Subject Site	Remove (TIPP – Development)	1
127	Apple species	*Malus sp.*	~12, 8	~14.5	FG	F	F		2	1.5	Union at base, seam (L), bow (L), epicormic branching (M)	Subject Site	Injure (TIPP - Development)	-
128	Dogwood species	*Cornus sp.*	<5	-	PF	PF	G		2	1.2	Bow (H)	Subject Site	Preserve	-

P129	Common Buckthorn	*Rhamnus cathartica*	~3 - 11	-	FG	FG	FG		2	1.5	Approximately 11 shrubs, average DBH = 9cm	Subject Site	Remove (RRSP - Invasive)	-
130	Siberian Elm	*Ulmus pumila*	18.5, 18	26	FG	G	G		3	1.8	Union at 1m (co-dominance)	Subject Site	Preserve	-
P131	Common Buckthorn	*Rhamnus cathartica*	~5 - 14	-	FG	FG	FG		2	1.5	Approximately six shrubs, average DBH = 5cm	Subject Site	Remove (RRSP - Invasive)	-
132	White Elm	*Ulmus americana*	14	-	G	FG	F	20	2	1.5	Deadwood (L)	Subject Site	Preserve	-
P134	Common Buckthorn	*Rhamnus cathartica*	~3 - 10	-	FG	FG	FG		2	1.5	Approximately 18 shrubs, average DBH = 5cm	Subject Site	Remove (RRSP - Invasive)	-
135	Cherry species	*Prunus sp.*	14.5	-	FG	FG	FG		2	1.5	Sweep (L), broken branches (L)	Subject Site	Preserve	-
P136	White Ash	*Fraxinus americana*	~3 - 8	-	FG	FG	F		1.5	1.2	Four trees, Emerald Ash Borer, average DBH = 6cm	Subject Site	Preserve	-
137	White Ash	*Fraxinus americana*	11	-	G	FG	FG		2	1.5	Emerald Ash Borer	Subject Site	Preserve	-
138	White Ash	*Fraxinus americana*	10	-	FG	FG	FG		2	1.5	Emerald Ash Borer	Subject Site	Preserve	-
481	Siberian Elm	*Ulmus pumila*	70	-	FG	F	F	10	5	4.2	Lean (L), epicormic branching (L), branch fused in crown, broken branches (L), deadwood (L)	Subject Site	Remove (TIPP - Development)	5
482	Siberian Elm	*Ulmus pumila*	64	-	F	F	F	10	5	4.2	Stem wounds (M), girdling roots (L), lean (L), epicormic branching (M), deadwood (L), broken branches (L)	Subject Site	Remove (TIPP - Development)	5
483	Siberian Elm	*Ulmus pumila*	52, 34	62	PF	F	F	20	6	4.2	V-union at 0.5m with included bark and one leader cut at union, v-union at 2.5m with included bark, deadwood (L), epicormic branching (L)	Subject Site	Remove (TIPP - Development)	5
484	Green Ash	*Fraxinus pennsylvanica*	36	-	P	P	P	90	5	2.4	Deadwood (H), lean (L), Emerald Ash Borer (H), moribund	Subject Site	Remove (TIPP - Condition)	3
485	Norway Maple	*Acer platanoides*	48	-	F	G	F		5	3.0	Lean (L), stem wounds (L)	Subject Site	Preserve	-
486	Norway Maple	*Acer platanoides*	50	-	PF	F	F	10	5	3.0	Girdling roots (M), deadwood (L), v-union at 2m with included bark, lean (L)	Subject Site	Preserve	-
487	Siberian Elm	*Ulmus pumila*	34	-	F	F	F		4	2.4	Lean (L), epicormic branching (M), crook (M) in crown, included (M) dead branch	Subject Site	Injure (TIPP - Development)	-
488	Siberian Elm	*Ulmus pumila*	57	-	F	F	F	20	7	3.6	Girdling roots (L), bow (L), epicormic branching (M), deadwood (L)	Subject Site	Remove (TIPP - Development)	4
489	Siberian Elm	*Ulmus pumila*	41, 38	56	PF	F	F	20	5	3.6	V-union at 1.3m with included bark and wetwood, epicormic branching (M), deadwood (L)	Subject Site	Remove (TIPP - Development)	4
490	Siberian Elm	*Ulmus pumila*	70	-	G	F	F	20	7	4.2	Epicormic branching (M)	Subject Site	Injure (TIPP - Development)	-
491	Blue Spruce	*Picea pungens*	34	-	G	FG	F	20	2	2.4	Deadwood (L)	Subject Site	Preserve	-
492	Yew species	*Taxus sp.*	~6 - 10	-	F	F	G		3	1.5	Average DBH = 6cm, broken branches (L), lean (L-H)	Subject Site	Preserve	-
493	Yew species	*Taxus sp.*	~18, 10	~20.5	FG	FG	G		3	1.5	V-union at base	Subject Site	Preserve	-
494	Weeping White Mulberry	*Morus alba* 'Pendula'	25	-	P	PF	PF	30	2	1.8	Decay (H) in trunk, cavities (H), deadwood (M), lean (H), poor form (M)	Subject Site	Remove (TIPP - Condition)	2
495	Siberian Elm	*Ulmus pumila*	81	-	FG	F	F	20	7	5.4	Epicormic branching (M), broken branches (M), pruning wounds (L), deadwood (L), bow (L)	Subject Site	Injure (TIPP - Development)	-
496	Eastern Red Cedar (Juniper)	*Juniperus virginiana*	25.5	-	F	G	FG		4	1.8	Lean (L), vine competition (M)	Subject Site	Preserve	-
497	Eastern Red Cedar (Juniper)	*Juniperus virginiana*	24	-	G	G	FG		3	1.8	Vine competition (M)	Subject Site	Preserve	-
498	Eastern White Cedar	*Thuja occidentalis*	20, 19, 16	32	F	FG	F	10	3	2.4	V-unions at 0.5m and 1.4m with included bark, lean (M), deadwood (L)	Subject Site	Preserve	-
499	Siberian Elm	*Ulmus pumila*	90	-	PF	F	PF	30	7	5.4	Epicormic branching (M), pruning wounds (M), deadwood (M), cavities (H)	Subject Site	Preserve	-
500	Siberian Elm	*Ulmus pumila*	45.5	-	PF	F	F	20	7	3.0	Lean (L), bow (L), stem wounds (L), deadwood (L), cavities (M), epicormic branching (M)	Subject Site	Preserve	-
1350	Siberian Elm	*Ulmus pumila*	70.5	-	PF	F	PF	30	7	4.2	Bow (L), cavities (M), epicormic branching (M), deadwood (M)	Subject Site	Preserve	-
1351	Siberian Elm	*Ulmus pumila*	68	-	P	F	PF	20	8	4.2	Lean (L), bow (M), crook (M), epicormic branching (M), deadwood (L), cavities (M), seam (M), decay (M) in trunk	Subject Site	Remove (TIPP - Condition)	5
1352	Siberian Elm	*Ulmus pumila*	79	-	PF	F	F	10	7	4.8	Bow (M), epicormic branching (M), crook (M), cavities (L), deadwood (L)	Subject Site	Preserve	-
1353	White Mulberry	*Morus alba*	11.5, 11	16	PF	F	F	10	2	1.5	V-union at 1m with included bark, stem wounds (L), decay (L) in trunk, stem wounds (L)	Shared (Subject Site / Neighbour)	Preserve	-

1354	Siberian Elm	*Ulmus pumila*	37	-	G	FG	F	10	5	2.4	Deadwood (L)	Shared (Subject Site / Neighbour)	Preserve	-
1355	Siberian Elm	*Ulmus pumila*	~16	-	F	F	F	10	2	1.5	Included (M) fence, epicormic branching (M), deadwood (L)	Shared (Subject Site / Neighbour)	Preserve	-
1356	Siberian Elm	*Ulmus pumila*	~32, 20	~37.5	PF	F	F	20	4	2.4	V-union at 0.5m with included bark, included (H) fence, deadwood (L), epicormic branching (L)	Shared (Subject Site / Neighbour)	Preserve	-
1357	Siberian Elm	*Ulmus pumila*	73	-	F	F	F	10	8	4.8	Deadwood (L), lean (M), epicormic branching (L), broken branches (H)	Subject Site	Injure (TIPP - Development)	-
1358	Siberian Elm	*Ulmus pumila*	77	-	F	F	F	10	8	4.8	Deadwood (L), lean (M), epicormic branching (L)	Subject Site	Injure (TIPP - Development)	-
1359	Siberian Elm	*Ulmus pumila*	57	-	PF	F	F	20	5	3.6	Deadwood (L), lean (L), epicormic branching (M), decay (M) in trunk	Subject Site	Remove (TIPP - Development)	4
P1360	See Table 2											Subject Site	Remove (TIPP - Development)	
1361	Siberian Elm	*Ulmus pumila*	53	-	F	FG	F	10	5	3.6	Lean (L), deadwood (L), stem wounds (L), epicormic branching (M), union at 1.5m and 2.5m	Subject Site	Injure (TIPP - Development)	-
1362	Bur Oak	*Quercus macrocarpa*	56, 58	80.5	F	F	FG		7	4.8	V-union at 1.2m with included bark (co-dominance), one stem broken in canopy, epicormic branching (L)	Subject Site	Preserve	-
1363	Siberian Elm	*Ulmus pumila*	41, 36.5	55	PF	F	F	15	6	3.6	Union at 1m, two stems pruned at 1m, one stem remaining, poor form (L), bow (M), deadwood (L)	Subject Site	Injure (TIPP - Development)	-
1364	Norway Maple	*Acer platanoides*	23	-	G	G	G		3	1.8		Subject Site	Remove (RRSP - Invasive)	-
1365	White Mulberry	*Morus alba*	~6 - 22	-	PF	F	F	10	3	1.8	Average DBH = 8cm, union at base, included (H) fence, v-union at 1.5m, epicormic branching (M), deadwood (L)	Shared (Subject Site / Neighbour)	Remove (TIPP - Development)	2
1366	White Elm	*Ulmus americana*	46	-	FG	F	F	10	4	3.0	Lean (L), epicormic branching (M), deadwood (L)	Subject Site	Remove (TIPP - Development)	4
1367	Siberian Elm	*Ulmus pumila*	~18, 16	~24	FG	FG	F		2	1.8	Union at 1m, included (L) fence	Subject Site	Remove (TIPP - Development)	2
1368	Siberian Elm	*Ulmus pumila*	78	-	PF	F	PF		7	4.8	Pruning wounds (M), epicormic branching (M), broken branches (M), decay (M) in trunk	Subject Site	Remove (TIPP - Development)	6
1369	Siberian Elm	*Ulmus pumila*	84	-	PF	FG	F		8	5.4	Cavities (M), damaged root (H), epicormic branching (M), lean (L), growth deficit (M)	Subject Site	Remove (TIPP - Development)	6
1370	White Mulberry	*Morus alba*	~12, 12, 10, 10, 8	~23.5	F	F	F		3	1.8	V-unions at base and 1m with included bark, epicormic branching (L)	Subject Site	Remove (TIPP - Development)	2
1371	Eastern Red Cedar (Juniper)	*Juniperus virginiana*	~6 - 14	-	F	F	FG		2	1.5	Average DBH = 8cm, union at base, lean (L-H)	Subject Site	Remove (TIPP - Development)	1
1372	Siberian Elm	*Ulmus pumila*	87	-	PF	OF	P	40	5	5.4	Decay (M) in trunk, v-union at 2m, pruning wounds (M), epicormic branching (M), deadwood (M)	Subject Site	Remove (TIPP - Development)	6
1373	Siberian Elm	*Ulmus pumila*	~94	-	PF	OF	P	70	5	6.0	Deadwood (H), epicormic branching (M), pruning wounds (M), burls (H), cavities (M)	Subject Site	Remove (TIPP - Development)	7
1374	Austrian Pine	*Pinus nigra*	39.5	-	G	F	F	10	3	2.4	Asymmetrical crown (M), deadwood (L)	Subject Site	Remove (TIPP - Development)	3
1375	Austrian Pine	*Pinus nigra*	16	-	F	FG	FG		1	1.5	Crook (M)	Subject Site	Remove (TIPP - Development)	2
1376	White Elm	*Ulmus americana*	22.5, 12	25.5	PF	PF	F		3	1.8	Fused to Tree 1377 at base, poor form (L), crook (M), suppressed by Tree 1378, v-union at 0.5m with included bark, decay (M) in smaller stem	Neighbour	Remove (TIPP - Development)	2
1377	Norway Maple	*Acer platanoides*	20.5	-	F	PF	F		3	1.5	Fused to Tree 1377 at base, poor form (L), crook (L), suppressed by Tree 1378	Neighbour	Remove (TIPP - Development)	2
1378	Siberian Elm	*Ulmus pumila*	~54, 52, 30	~80.5	PF	F	F	20	8	4.8	V-union at 1.2m with included bark, deadwood (L), cavities (L), stem wounds (L), epicormic branching (L)	Neighbour	Remove (TIPP - Development)	6
1379	Siberian Elm	*Ulmus pumila*	57	-	F	F	F	20	8	3.6	Lean (L), stem wounds (M), epicormic branching (M), deadwood (L)	Neighbour	Remove (TIPP - Development)	4
1380	Blue Spruce	*Picea pungens*	30	-	G	PF	PF	80	1	1.8	Deadwood (H)	Subject Site	Preserve	-
1381	Siberian Elm	*Ulmus pumila*	22, 22	31	F	F	F	10	4	2.4	Lean (L), v-union at 1m with included bark, deadwood (L)	Subject Site	Remove (TIPP - Development)	2
1382	Siberian Elm	*Ulmus pumila*	44	-	F	F	F		5	3.0	Pruning wounds (L), stem wounds (M) from torn out branch, epicormic branching (M), broken branches (M)	Subject Site	Remove (TIPP - Development)	3
1383	Blue Spruce	*Picea pungens*	25.5	-	FG	F	F	30	2	1.8	Deadwood (M), seam (L)	Subject Site	Preserve	-
1384	Blue Spruce	*Picea pungens*	42	-	G	PF	PF	40	2	3.0	Deadwood (M)	Subject Site	Preserve	-
1385	Blue Spruce	*Picea pungens*	29	-	G	PF	PF	40	2	1.8	Deadwood (M)	Subject Site	Preserve	-
1386	Blue Spruce	*Picea pungens*	34	-	G	F	F	30	2	2.4	Deadwood (M)	Subject Site	Preserve	-
1387	Blue Spruce	*Picea pungens*	32	-	G	F	F	20	2	2.4	Deadwood (L)	Subject Site	Preserve	-

1388	Blue Spruce	*Picea pungens*	34	-	G	FG	F	10	2	2.4	Deadwood (L)	City (Right-of Way)	Preserve	-
1389	Siberian Elm	*Ulmus pumila*	58	-	F	F	F	20	6	3.6	V-union at 3m with included bark, lean (L), pruning wounds (L), deadwood (L), epicormic branching (L)	Subject Site	Remove (TIPP - Development)	4
1390	Douglas Fir	*Pseudotsuga menziesii*	35	-	F	F	F	20	3	2.4	Lean (L), deadwood (L), stem wounds (L)	Subject Site	Injure (TIPP - Development)	-
1391	Douglas Fir	*Pseudotsuga menziesii*	30	-	FG	PF	PF	50	2	1.8	Lean (L), deadwood (M)	Subject Site	Preserve	-
1392	Douglas Fir	*Pseudotsuga menziesii*	32.5, 28	43	FG	F	F	20	2	3.0	Lean (L), deadwood (L), union at base	Subject Site	Preserve	-
1393	Douglas Fir	*Pseudotsuga menziesii*	23.5	-	F	F	F	20	2	1.8	Lean (L), deadwood (L), crook (M)	Subject Site	Preserve	-
1394	Honey Locust	*Gleditsia triacanthos*	49.5	-	PF	PF	PF		4	3.0	Burls (H), pruning wounds (M), epicormic branching (M), asymmetrical crown (M)	Subject Site	Preserve	-
1395	Siberian Elm	*Ulmus pumila*	84.5	-	PF	F	F	20	5	5.4	Stem wounds (H), pruning wounds (M), deadwood (L), epicormic branching (L)	Subject Site	Preserve	-
1396	Siberian Elm	*Ulmus pumila*	45	-	G	F	F	20	4	3.0	Deadwood (L), epicormic branching (M)	Subject Site	Injure (TIPP - Development)	-
1397	Norway Spruce	*Picea abies*	45	-	PF	G	F		3	3.0	Decay (M) in trunk, lean (L), growth deficit (M)	Subject Site	Preserve	-
1398	Siberian Elm	*Ulmus pumila*	49, 47	68	PF	F	F	30	7	4.2	V-union at 0.5m with included bark, epicormic branching (M), deadwood (M), lean (L), growth deficit (M)	Subject Site	Injure (TIPP – Development)	-
A	Apple species	*Malus sp.*	23	-	P	F	PF	30	2	1.8	Decay (H) in trunk, epicormic branching (L), deadwood (M)	City (Right-of Way)	Preserve	-
B	Siberian Elm	*Ulmus pumila*	29	-	PF	PF	F		3	1.8	Sweep (M), epicormic branching (M), pruning wounds (M), sustained pruning for hydro line clearing	City (Right-of Way)	Preserve	-
C	White Mulberry	*Morus alba*	~14, 10, 10, 8	~21.5	PF	F	F	10	2	1.8	V-union at base with included bark, included (M) fence, epicormic branching (M), deadwood (L)	Shared (Subject Site / Neighbour)	Preserve	-
D	Siberian Elm	*Ulmus pumila*	~30	-	F	F	F	10	3	1.8	Crook (M), poor from (L), epicormic branching (M), lean (L)	Neighbour	Preserve	-
E	Siberian Elm	*Ulmus pumila*	~60	-	PF	F	PF	30	3	3.6	Burls (H), deadwood (M), epicormic branching (M), lean (L)	Neighbour	Preserve	-
F	Siberian Elm	*Ulmus pumila*	~56, 56, 24	~82.5	PF	PF	F	10	7	5.4	Union at base with fused leaders at 2m and 3m, lean (M), bow (M), deadwood (L), epicormic branching (M)	Neighbour	Preserve	-
G	Siberian Elm	*Ulmus pumila*	~54, 40	~67	PF	PF	PF	30	6	4.2	Union at base, crook (L-H), epicormic branching (M), deadwood (M)	Neighbour	Preserve	-
H	Little-leaf Linden	*Tilia cordata*	~38	-	G	FG	F		4	2.4	Epicormic branching (L)	Neighbour	Preserve	-
I	Little-leaf Linden	*Tilia cordata*	~40	-	F	OF	F		4	2.4	Multiple branch attachments, poor branch unions, epicormic branching (L)	Neighbour	Preserve	-
J	White Mulberry	*Morus alba*	~20	-	G	FG	FG		2	1.5	Asymmetrical crown (L)	Neighbour	Remove (TIPP - Development)	2
K	Norway Maple	*Acer platanoides*	~18	-	FG	G	G		2	1.5	Lean (L)	Neighbour	Remove (TIPP - Development)	2
PL	See Table 2											Neighbour	Injure (TIPP - Development)	
M	Blue Spruce	*Picea pungens*	~32	-	F	PF	PF	30	2	2.4	V-union at 2m with include bark, deadwood (M)	Neighbour	Preserve	-
N	Norway Maple	*Acer platanoides*	~40	-	F	F	PF	30	4	2.4	Lean (L), stem (H), cavities (L), deadwood (M), poor branch unions	Neighbour	Preserve	-

Codes		
DBH	Diameter at Breast Height	*(cm)*
TI	Trunk Integrity	*(G, F, P)*
CS	Crown Structure	*(G, F, P)*
CV	Crown Vigor	*(G, F, P)*
CDB	Crown Dieback	*(%)*
DL	Dripline (Radius)	*(m)*
mTPZ	Minimum Tree Protection Zone (Radius, as Measured from Edge of Stem)	*(m)*
Ownership	Ownership of Tree / Shrub or Polygon	*Subject Site, City, Neighbour, Shared, etc.*
Rep.	Replacement Plantings Required	*# of Trees*
~ = estimate; (L) = light; (M) = moderate; (H) = heavy; G = good; F = fair; P = poor		

Table 2. Stand Tally Analyses of Polygons P1360 and PL

P1360 - Stand Tally Analysis

Tree Size Class >	10cm - 15cm		16cm - 30cm		31cm - 45cm		46cm +		Total All Sizes	
Species	***AGS***	***UGS***	***AGS***	***UGS***	***AGS***	***UGS***	***AGS***	***UGS***	***AGS***	***UGS***
Siberian Elm (*Ulmus pumila*)	7	10	5	24	1	6	0	0	***13***	***40***
Manitoba Maple (*Acer negundo*)	0	1	0	2	0	0	0	0	***0***	***3***
White Mulberry (*Morus alba*)	0	0	0	0	0	2	0	0	***0***	***2***
Norway Maple (*Acer platanoides*)	0	2	0	0	0	0	0	0	***0***	***2***
Total Number of Trees	***7***	***13***	***5***	***26***	***1***	***8***	***0***	***0***	***13***	***47***

Additional Notes: *A total of 43 trees with a DBH of 15cm+ exist within this polygon.*

PL - Stand Tally Analysis

Tree Size Class >	10cm - 15cm		16cm - 30cm		31cm - 45cm		46cm +		Total All Sizes	
Species	***AGS***	***UGS***	***AGS***	***UGS***	***AGS***	***UGS***	***AGS***	***UGS***	***AGS***	***UGS***
Douglas Fir (*Pseudotsuga menziesii*)	0	0	0	2	0	0	0	0	***0***	***2***
Norway Maple (*Acer platanoides*)	1	4	3	2	0	0	0	0	***4***	***6***
White Mulberry (*Morus alba*)	0	0	0	2	0	2	0	0	***0***	***4***
Total Number of Trees	***1***	***4***	***3***	***6***	***0***	***2***	***0***	***0***	***4***	***12***

Additional Notes: *A total of 11 trees with a DBH of 15cm+ exist within this polygon.*

Table 3. City Tree Valuation

Location: 2570 - 2590 Argyle Road, Mississauga

Tree #	Common Name	Scientific Name	DBH	OC	*Appraised Trunk Area (cm^2)*	*Unit Tree Cost (RPAC) ($/$cm^2$)*	*Basic Tree Cost ($)*	Depreciation: *Condition Rating (%)*	Depreciation: *Functional Limitation Rating (%)*	Depreciation: *External Limitation Rating (%)*	***Appraised Tree Value***	***Adjusted Tree Value***
1388	Blue Spruce	*Picea pungens*	64	F	3217	5.33	17146.60	0.55	0.7	0.5	$ 3,300.72	$ 3,300.00
A	Apple species	*Malus sp.*	23	P	415	6.26	2600.88	0.2	0.2	0.3	$ 31.21	$ 30.00
B	Siberian Elm	*Ulmus pumila*	29	PF	661	7.18	4742.54	0.375	0.2	0.3	$ 106.71	$ 105.00
											Total	**$ 3,435.00**

Appendix A: Site Photographs

Image 1. Trees 481 (left) and 482 (right)

Image 2. Trees 483 (far) and 484 (near)


Image 3. Trees 485 (right) and 486 (left)


Image 4. Tree 487


Image 5. From left to right, Trees 490, 488, and 489


Image 6. Tree 491


Image 7. From right to left, Trees 492 – 494


Image 8. Tree 495


Image 9. Trees 496 (right) and 497 (left)


Image 10. Tree 498


Image 11. From left to right, Trees 499, 500, 1350 – 1352


Image 12. Trees 1353 (right) and 1354 (left)


Image 13. Trees 1355 (right) and 1356 (left)


Image 14. Trees 1357 (left) and 1358 (right)


Image 15. Tree 1359

Image 16. Polygon P1360

Image 17. Tree 1361


Image 18. Tree 1362


Image 19. Tree 1363


Image 20. Tree 1364


Image 21. Tree 1365


Image 22. Tree 1366


Image 23. Tree 1367


Image 24. Tree 1368


Image 25. Tree 1369

Image 26. Trees 1370 (right) and 1371 (left)

Image 27. Trees 1372 (near) and 1373 (far)


Image 28. Trees 1374 (right) and 1375 (left)


Image 29. From right to left, Trees 1382, 1381, 1380, 1383, 1384, 1385


Image 30. From near to far, Trees 1386 – 1388


Image 31. Tree 1389

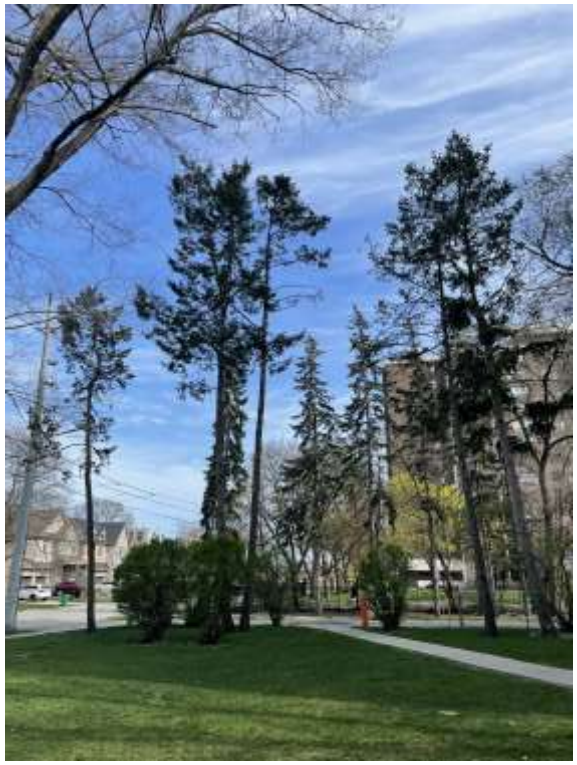
Image 32. From right to left, Trees 1390 – 1393


Image 33. Trees 1394 (left) and 1395 (right)


Image 34. Tree 1396


Image 35. Trees 1397 (left) and 1398 (right)


Image 36. Trees A (left) and B (right)


Image 37. Tree C


Image 38. Facing towards Trees D – G

Image 39. Trees H (right) and I (left)

Image 40. Trees J (right) and K (left)

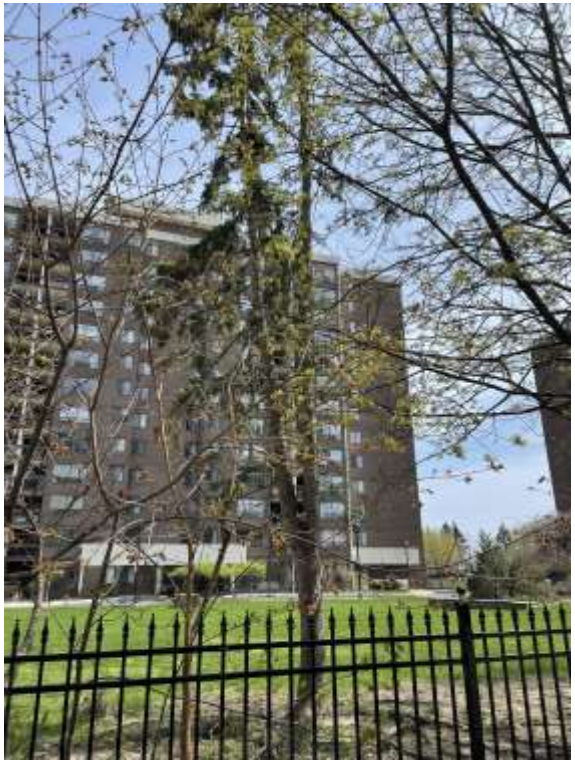
Image 41. Tree M


Image 42. Tree N