

1-871 Equestrian Court, Oakville, ON L6L 6L7 Tel: 647-795-8153 / www.pecg.ca

# Memorandum

Date: October 1, 2024 Project #: 2100803

To: Tony Vella, Argo Sherwood Forrest Limited

- From: Carly Houghton and Austin Adams (Palmer)
  - cc: Dirk Janas (Palmer)
  - Re: Sherwood Forrest Circle Arborist Tree Preservation and Protection Report 1720 Sherwood Forrest Circle, City of Mississauga – Updated October 2024

## 1. Introduction and Background

This document represents the Arborist Report and Tree Preservation Plan prepared by Palmer for the proposed redevelopment at 1720 Sherwood Forrest Circle, City of Mississauga, Region of Peel (**Figure 1**). The Subject Property is approximately 11 acres (4.5 ha) and currently supports a building complex, maintained lawn with planted trees, and a forested valley slope.

This report has been developed to satisfy the City of Mississauga's *Private Tree Protection By-law 0021-2022* (City of Mississauga, 2022). The tree preservation and protection plan is intended to identify trees that can be retained, trees that may be require pruning to prevent injury, and trees that require removal. Tree protection measures for trees to be retained are provided as well as tree replacement requirements.

## 2. Guidance Documents

## City of Mississauga's Private Tree Protection By-law (0021-2022)

The removal of trees of private property must comply with the City's Private Tree Protection By-law (City of Mississauga, 2022). A permit is needed to injure, destroy or remove any individual tree greater than 15 cm in diameter at breast height (DBH). However, this Arborist Report has been prepared in support of a Development Application and Site Plan process. Tree removal as part of an approved Development Plan is an exempt activity under Part 7, Section 17(9) of the By-law.

As the proposed development requires an approval under the *Planning Act*, this Arborist Report provides the information and mitigation recommendations necessary to provide an exemption under Part 7 of the By-law. Regardless, replacement recommendations within this report are in keeping with the criteria of By-law 0021-2022.



## **City of Mississauga Official Plan**

The City of Mississauga's Official Plan (Chapter 19, Section 19.4, sub-section 19.4.5) states that an Arborist Report including Tree Survey/Tree Preservation Plan may be required as part of a complete application submission for an official plan amendment, rezoning, draft plan of subdivision, condominium, consent application or site plan application to supplement the development proposal (City of Mississauga, 2019).

#### Terms of Reference – Arborist Reports, Tree Inventory/Survey and Tree Preservation Plans

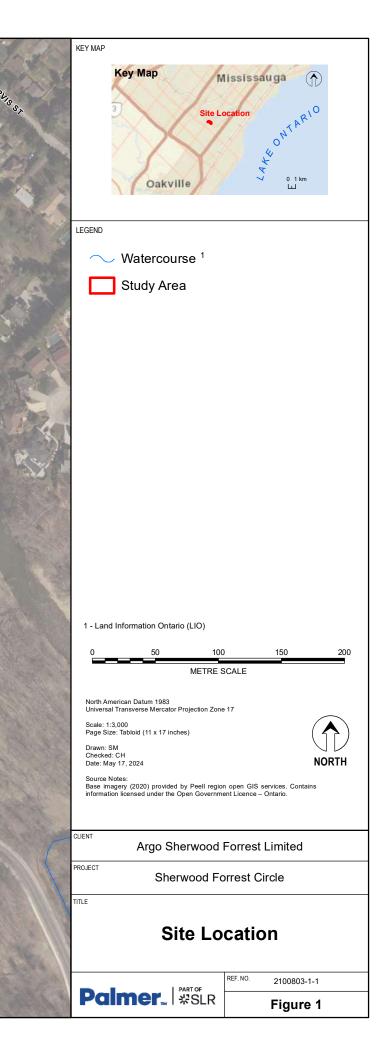
The City of Mississauga created a Terms of Reference for Arborist Reports to ensure "that the potential effects of proposed development on existing trees and vegetation and to ensure the proposal conforms to the relevant Official Plan policies, Urban Design Guidelines, standards and details of the City of Mississauga" (City of Mississauga, 2019). This document details the trees that should be inventoried for a report and the data to be collected, the content and format for an Arborist Report (including compensation ratios), and the content and format for the companion Tree Preservation Plan.

#### **Migratory Birds Convention Act**

The *Migratory Birds Convention Act (MBCA*), 1994 and Migratory Birds Regulations (MBR), 2014 protect most species of migratory birds and their nests and eggs anywhere they are found in Canada (Government of Canada, 1994). General prohibitions under the *MBCA* and MBR protect migratory birds, their nests and eggs and prohibit the deposition of harmful substances in waters / areas frequented by them. The MBR includes an additional prohibition against incidental take, which is the inadvertent harming or destruction of birds, nests or eggs.



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# 3. Methods

A tree inventory was completed for all trees ≥10 cm DBH within and adjacent to the Subject Property, in accordance with the City of Mississauga *Terms of Reference* (City of Mississauga, 2019). All trees on Subject Property and within 6 metres (m) to the proposed work areas were inventoried to establish Tree Protection Zones (TPZ). Information collected during the inventory includes species scientific and common names, tree tag number, DBH, location, crown spread, a general health assessment (structure, vigour and overall), and notes on tree trunk and canopy conditions. Where adjacent property access was not obtained, visual estimates were made. Notes on ownership and proposed actions including preservation techniques were made.

Trees located on the Subject Property were inventoried by an International Society of Arboriculture (ISA) certified arborist on August 22, 2017, and trees directly adjacent to the Subject Property were inventoried from the Subject Property on January 19, 2021. Trees adjacent to the Subject Property were assigned identification letters (i.e., AA – AZ and BA – BL) and were not physically tagged due to access limitation. On June 16, 2023 the general location and condition of the trees were verified to be similar to the 2017 inventory. Tree growth is variable between species; however, existing data was used as the new development plan generally provides for a discrete division between trees to retain versus requiring removal, regardless of size.

The TPZ for each tree was calculated using the City of Mississauga's *Tree Preservation and Protection Standards* (City of Mississauga, 2017) where the measured DBH of each tree corresponds to a predetermined minimum TPZ distance from the trunk of each tree (**Table 1**).

Trunk Diameter (cm)	Minimum Tree Protection Zone (TPZ) Distance from Trunk (m)	Minimum Tree Protection Zone (TPZ) Distance from Trunk (m) for trees in Open Spaces and Woodlands
<10 cm	1.2	2.4
10-20	1.5	2.4
21-30	1.8	3.6
31-40	2.4	4.8
41-50	3.0	6.0
51-60	3.6	7.2
61-70	4.2	8.4
71-80	4.8	9.6
81-90	5.4	10.8
91-100	6.0	12.0
>100	6 cm per 1 cm DBH	12 cm per 1 cm DBH

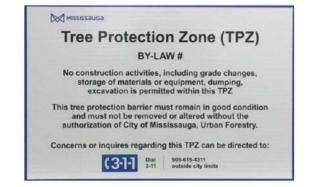
## Table 1. City of Mississauga's Tree Protection Zone

#### TREE PRESERVATION SPECIFICATIONS

#### TREE PROTECTION AND FENCING

• ALL EXISTING TREES, THAT ARE DESIGNATED TO REMAIN, MUST BE FULLY PROTECTED WITH TREE PROTECTION FENCING IN ACCORDANCE WITH CITY OF MISSISSAUGA DETAIL 02830-6, WHICH IS TO BE ERECTED BEYOND THE TREE PROTECTION ZONE.

• TREE PROTECTION ZONES ARE TO INCLUDE SIGNAGE (AS PER BELOW) AT REGULAR INTERVALS ON THE FENCING. THE SIGNS ARE TO BE 40.64 CM X 60.96 CM AND ON A WATERPROOF MATERIAL



 NO CONSTRUCTION EQUIPMENT OR MOTORIZED VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION ZONE AND ALL TREE PROTECTION ZONES MUST REMAIN UNDISTURBED AT ALL TIMES. THE FOLLOWING ACTIVITIES ARE ALSO PROHIBITED WITHIN THE TREE PROTECTION ZONES:

- CONSTRUCTION ACTIVITIES;

- STORAGE OF MATERIALS

- STORAGE OF EQUIPMENT

- EXCAVATION (UNLESS APPROVED FOR ROOT PRUNING)

- GRADE CHANGES

- CUTTING, TEARING, BREAKING TREE'S ROOTS, BRANCHES AN TRUNK - DUMPING

- PARKING

- STRINGING CABLES/WIRES

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#### TREE AND ROOT PRUNING

• PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, PRUNE LIMBS THAT MAY BE NEGATIVELY IMPACTED DURING CONSTRUCTION UTILIZING PRUNING SHEARS, PRUNING SAW, OR CHAIN SAW. PRUNE CLEANLY THE ROOTS OF EXISITING TREES THAT ARE ANTICIPATED TO BE DISTRUBED BY EXCAVATION. PRUNING SHOULD BE CARRIED OUT AS SPECIFIED BY AN ISA CERTIFIED ARBORIST

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• DO NOT STOCKPILE MATERIAL WITHIN THE DRIP LINE OF TREES OR SHRUBS TO BE RETAINED.

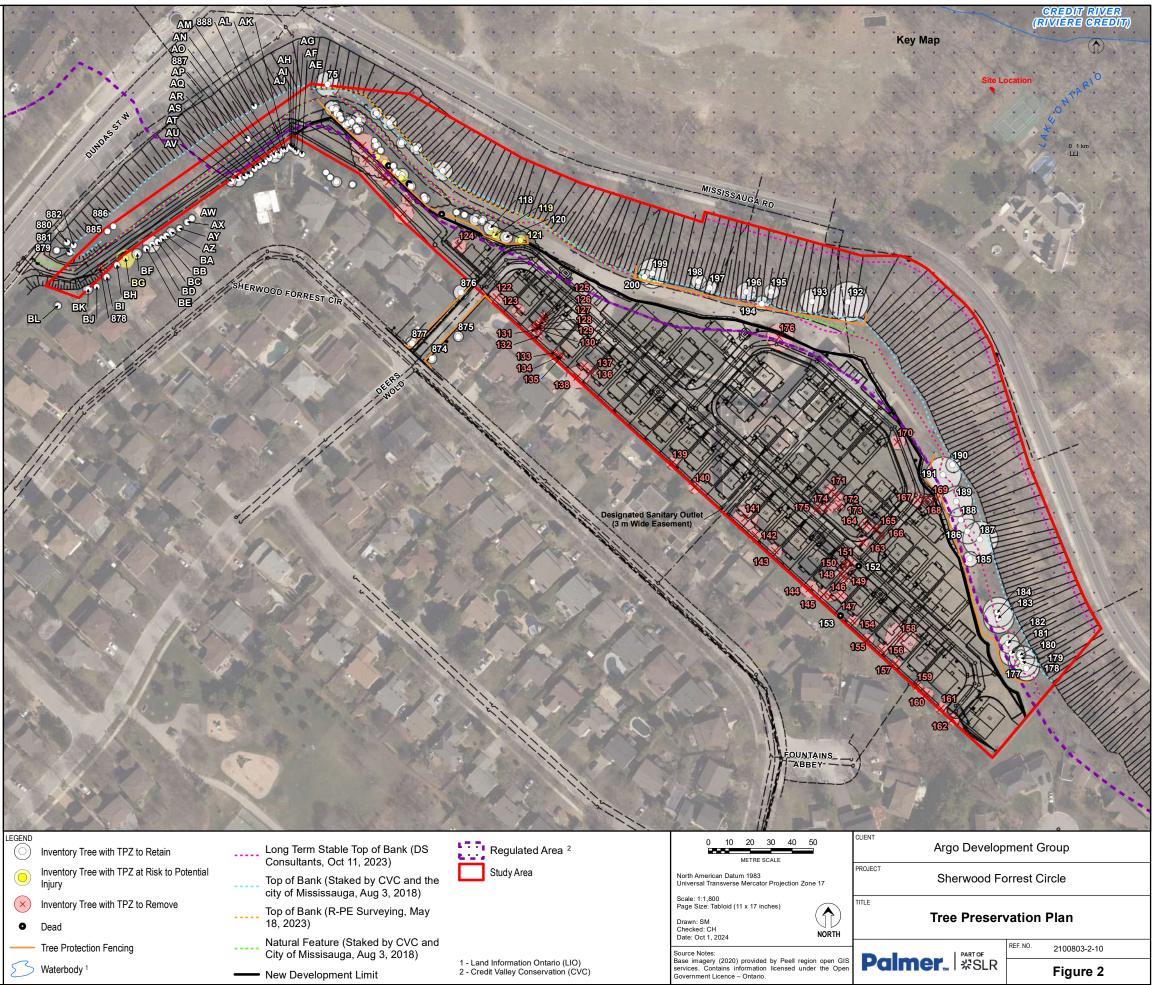
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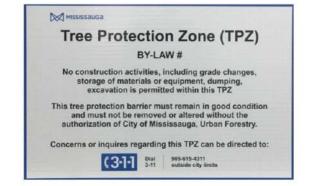
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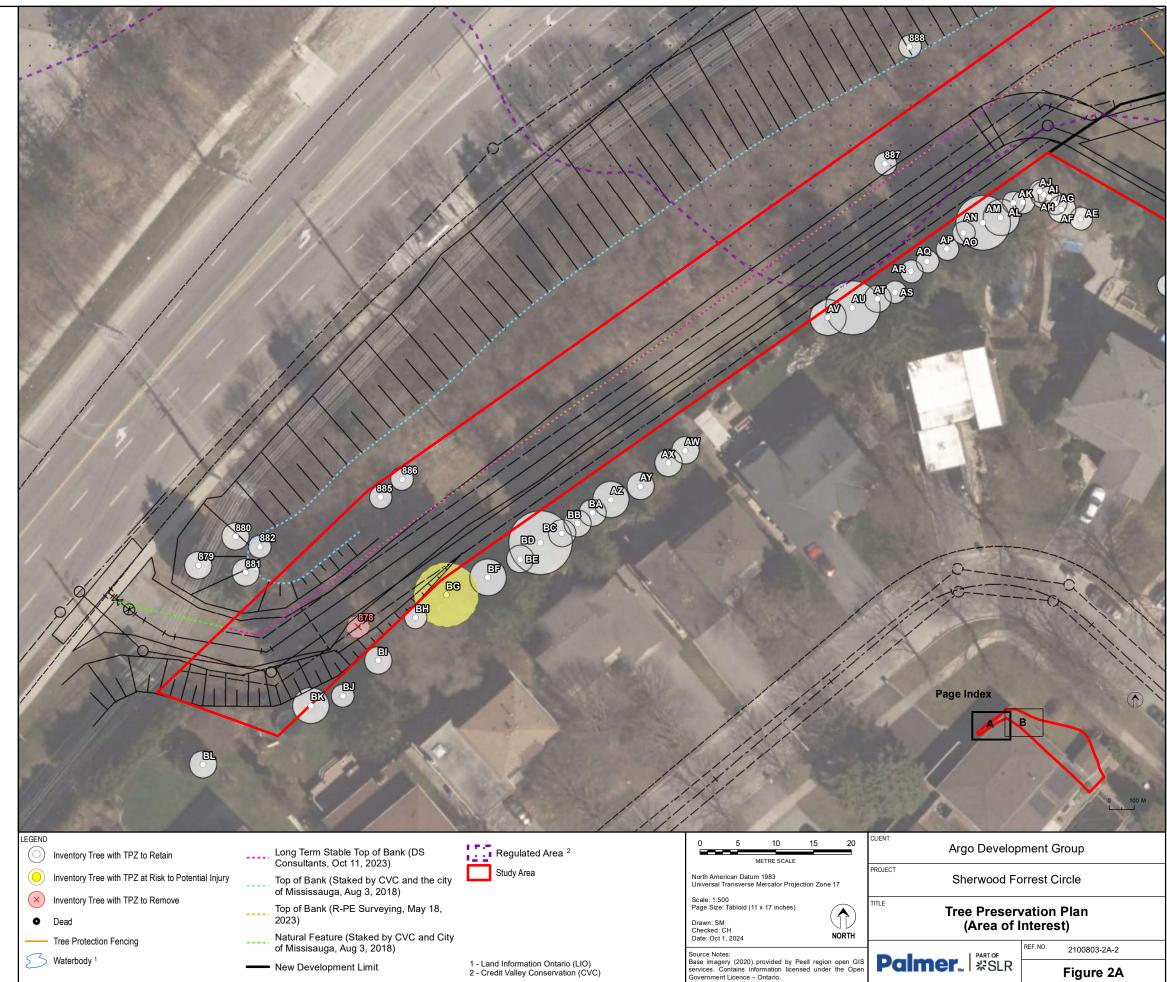
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LEGE	ND				0 5
C	Inventory Tree with TPZ to Retain		Long Term Stable Top of Bank (DS Consultants, Oct 11, 2023)	Regulated Area <sup>2</sup>	
	Inventory Tree with TPZ at Risk to Potential Injury		Top of Bank (Staked by CVC and the city of Mississauga, Aug 3, 2018)	Study Area	North American Dat Universal Transvers
6	Inventory Tree with TPZ to Remove		or Mississauga, Aug 5, 2016)		Scale: 1:500
			Top of Bank (R-PE Surveying, May 18,		Page Size: Tabloid
	Dead		2023)		Drawn: SM
-	Tree Protection Fencing		Natural Feature (Staked by CVC and City of Missisauga, Aug 3, 2018)		Checked: CH Date: Oct 1, 2024
	Z 104-1-1-1		or missisauga, Aug 5, 2010)		Source Notes:
15	> Waterbody <sup>1</sup>	_	New Development Limit	1 - Land Information Ontario (LIO)	Base imagery (2020

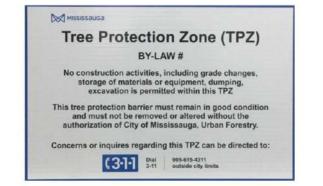
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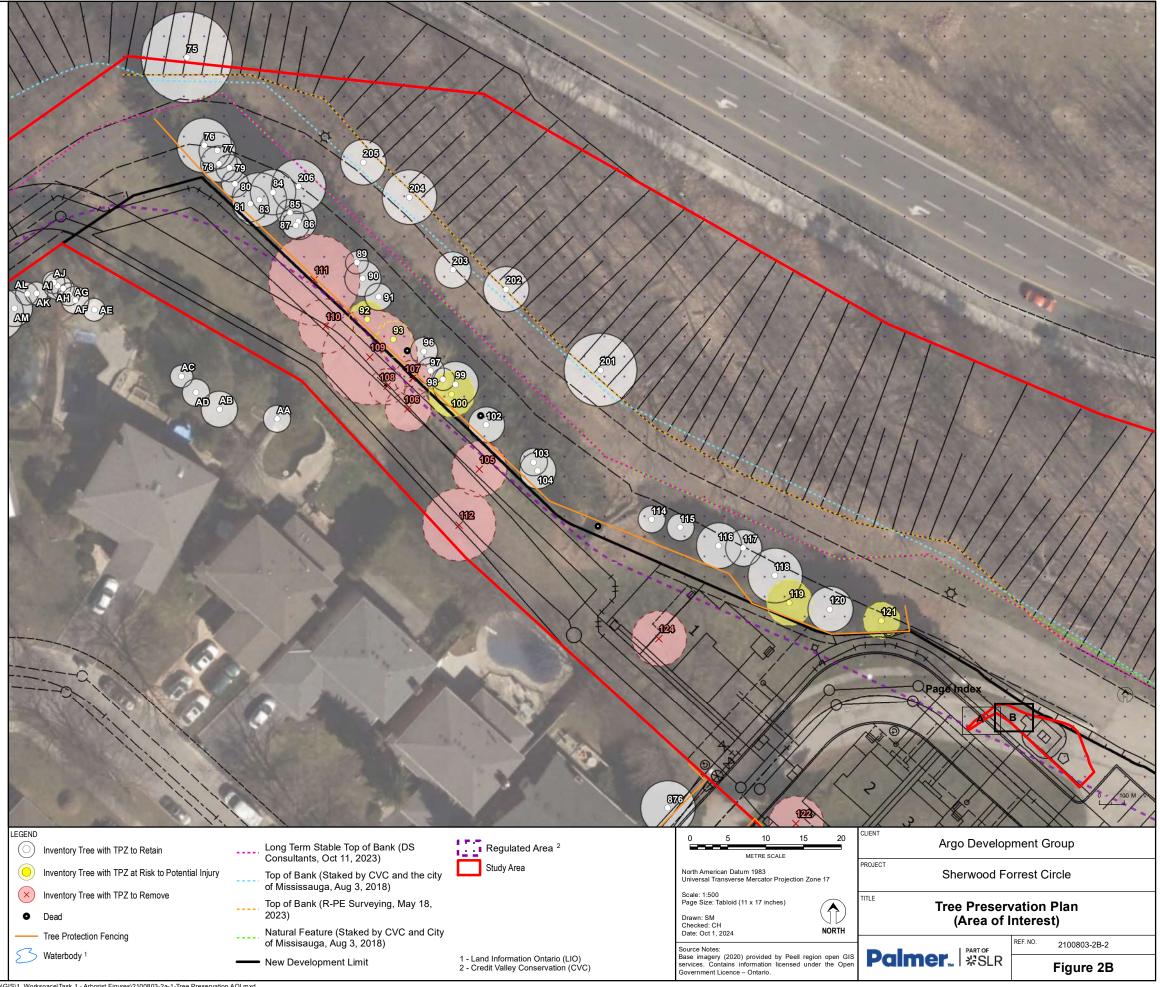
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## 4. Results

## **Tree Inventory**

A total of 183 tree were inventoried; however, five (5) trees have fallen due to strong winds following completion of the inventory. These trees are #95, 101, 113, 152, and 153, which are now considered deadfall and have been removed from the inventory. Thus, this report includes the findings of 178 trees in total (**Figures 2, 2A, 2B**). This includes 72 (40%) native trees, 103 (58%) non-native trees, and 3 (2%) which were identified to genus only (**Table 2**). A total of 73 inventoried trees are located within Credit Valley Conservation (CVC) regulated area.

Most of the inventoried trees within the Subject Property included non-native Norway Spruce (*Picea abies*) and native Eastern White Cedar (*Thuja occidentalis*). The majority of the inventoried trees located on the property tablelands have been planted and are largely comprised of non-native species. The trees inventoried along the edge of the woodland feature are mostly comprised of naturally occurring native species.

No Species at Risk (SAR) such as Butternut (*Juglans cinerea*) were observed or inventoried on the Subject Property. Two Green Ash (*Fraxinus pennsylvanica*), known to be at high risk of disease or infestation were recorded within the Subject Property. Based on the general health and condition of the trees, 171 (97%) trees are in fair to good health and condition, six (6) of trees are in poor condition, and one tree was dead. A full list of all the inventoried trees is provided in **Appendix A**.

Common Name	Scientific Name	Fair to Good Health	Poor Health and	Total
		and Condition	Condition	
American Basswood*	Tilia americana	3	0	3
Apple	<i>Malus</i> sp.	1	0	1
Black Cherry*	Prunus serotina	4	0	4
Black Walnut*	Juglans nigra	2	0	2
Bur Oak*	Quercus macrocarpa	1	0	1
Colorado Spruce	Picea pungens	17	1	18
Common Apple	Malus pumila	1	0	1
Eastern White Cedar*	Thuja occidentalis	23	1	24
Eastern White Pine*	Pinus strobus	11	0	11
English Walnut	Juglans regia	1	1	2
Freeman's Maple*	Acer freemanii	1	1 0	
Green Ash*	Fraxinus pennsylvanica	0	1 poor, 1 dead	2
Honey Locust	Gleditsia triacanthos	1	0	1
Northern Catalpa	Catalpa speciosa	1	0	1
Norway Maple	Acer platanoides	8	0	8
Norway Spruce	Picea abies	54	1	55
Pine	Pinus sp.	1	0	1
Red Maple*	Acer rubrum	2	0	2

## Table 2.Summary of Tree Inventory

#### Memorandum

Common Name	Scientific Name	Scientific Name Fair to Good Health and Condition		Total
Red Oak*	Quercus rubra	5	0	5
Red Pine*	Pinus resinosa	1	0	1
Scots Pine	Pinus sylvestris	14	1	15
Siberian Elm	Ulmus pumila	1	0	1
Sugar Maple*	Acer saccharum	10	0	10
Weeping Willow	Salix babylonica	1	0	1
White Spruce*	Picea glauca	6	0	6
Willow	illow Salix sp.		0	1
Total		171	7	178

\*Native species

#### Trees to be Retained

An assessment of trees to be retained has been completed based on the proposed grading and development plans. A total of 111 of the inventoried trees are identified to be retained (**Table 3**). This includes 107 trees in fair to good health and condition and four (4) trees in poor health and condition. The majority of trees to be retained (72 trees, 65%) are non-native species, most of which are Norway Spruce. Additionally, CVC planted 179 individual tree saplings and shrubs along the top edge of the FOD5-3 to prevent erosion. These plantings are proposed to be retained or replanted within the 10 m development buffer to the degree feasible.

#### Table 3.Trees to be Retained

Common Name	Common Name Scientific Name		Poor Health and	Total
		and Condition	Condition	
American Basswood*	Tilia americana	3	0	3
Apple	Malus sp.	1	0	1
Black Cherry*	Prunus serotina	4	0	4
Black Walnut*	Juglans nigra	1	0	1
Bur Oak*	Quercus macrocarpa	1	0	1
Colorado Spruce	Picea pungens	6	1	7
Eastern White Cedar*	Thuja occidentalis	6	0	6
Eastern White Pine*	Pinus strobus	3	0	3
Green Ash*	Fraxinus pennsylvanica	us pennsylvanica 0 1 poor, 1 dead		2
Northern Catalpa	Catalpa speciosa	1	0	1
Norway Maple	Acer platanoides	5	0	5
Norway Spruce	Picea abies	46	1	47
Pine	<i>Pinus</i> sp.	1	0	1
Red Oak*	Quercus rubra	5	0	5
Red Pine*	Pinus resinosa	1	0	1
Scots Pine	Pinus sylvestris	11	0	11



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Sugar Maple*	Acer saccharum	9	0	9
White Spruce*	Picea glauca	2	0	2
Willow	<i>Salix</i> sp.	1	0	1
Total		107	4	111

\*Native species

#### **Potential Tree Injury**

For trees near construction areas, 'injury' is defined as encroachment into the identified TPZ. This arborist report provides recommendations for appropriate treatment of trees that will be retained and protected but may suffer injury due to encroachment into their respective TPZs (**Figure 2**). Tree injury may occur where a TPZ will be reduced and construction activity will impact roots and/or branches. In general, pruning of branches and roots up to 25-30% of a TPZ will result in tree injury, but may be retainable considering tree health and appropriate mitigation treatments.

Given their location, five trees may have damage to the roots or branches through grading, compaction and works of machinery (**Table 4**). With appropriate mitigation measures outlined in **Section 5** including tree protection fencing, these trees are not anticipated to experience significant tree decline, mortality, or loss of rooting stability, and are considered retainable.

#### Table 4. Trees with Potential for Injury due to TPZ Reduction

Common Name	Scientific Name	Tag Number	Good to Fair Health	Poor Health	Total Count
Eastern White Cedar*	Thuja occidentalis	119, 121	2	0	2
Norway Spruce	Picea abies	92, 100	2	0	2
Siberian Elm	Ulmus pumila	BG	1	0	1
Total T	rees with potential	injury	5	0	5

\*Native species

#### Trees to be Removed

A total of 62 trees will need to be removed to accommodate the proposed development (**Table 5**). This includes 59 trees in fair to good health and condition and three (3) trees in poor health and condition. All of the trees proposed to be removed are located within the proposed grading area for the development works (**Figure 2**). Additionally, certain trees within the proposed Open Space Land Use/Natural Heritage System (**Figure 2B**) are proposed for removal due to watermain and forcemain servicing route, which will also be used as temporary access during construction, using the existing access at that location. This access route and area will be part of a restoration plan post-construction; see the Environmental Impact Study for the project for further details.

Just over half the trees proposed to be removed are native species (33 trees, 53%), most of which are Eastern White Cedar. Some trees along the southern property boundary may partially be located on an

adjacent private residential property. If any part of the tree trunk is located on more than one lot, written consent of the impacted property will be required.

Common Name	Scientific Name	ientific Name Fair to Good Health and Condition		Total
Black Walnut*	Juglans nigra	1	0	1
Colorado Spruce	Picea pungens	11	0	11
Common Apple	Malus pumila	1	0	1
Eastern White Cedar*	Thuja occidentalis	15	1	16
Eastern White Pine*	Pinus strobus	8	0	8
English Walnut	Juglans regia	1	1	2
Freeman's Maple*	Acer freemanii	1	0	1
Honey Locust	Gleditsia triacanthos	1	0	1
Norway Maple	Acer platanoides	3	0	3
Norway Spruce	Picea abies	6	0	6
Red Maple*	Acer rubrum	2	0	2
Scots Pine	Pinus sylvestris	3	1	4
Sugar Maple	Acer saccharum	1	0	1
Weeping Willow	Salix babylonica	1	0	1
White Spruce*	Spruce* Picea glauca		0	4
Total		59	3	62

Table 5.	Trees to be Removed
rubic 0.	

\*Native species

## 5. Tree Protection Plan

General and tree-specific tree protection measures are outlined below. The specifications for protection of retained trees are detailed on the Tree Protection Plan (**Figure 2**), including the locations of required tree protection fencing. The Tree Protection Plan is intended to act in concert with this Arborist Report; it is expected that the recommendations of both instruments be implemented for the project. Trees proposed to be retained will be primarily protected by tree protection fencing, as per the City's *Tree Preservation Hoarding* Specification (**Appendix B**).

## Demolition

As it extends from Dundas Street, the entire abandoned asphalt laneway will be removed with low-impact methods/machinery (e.g., hand tools where feasible) to maximize root retention and limit disturbance. However, the first extent of the access from Dundas to the SWM tank location will be retained for rare access for tank maintenance. The access will be shifted slightly outside the natural feature extent and be graveled, which will increase permeability. Soil amendments will be required prior to restoration in places where the existing lane will no longer be used.

Additionally, there will be minor fill placement in certain areas of the woodland setback ( $\sim 0 - 30$  cm) to allow for matching of existing to built grades. This fill will be naturalized per the restoration plan outlined in the



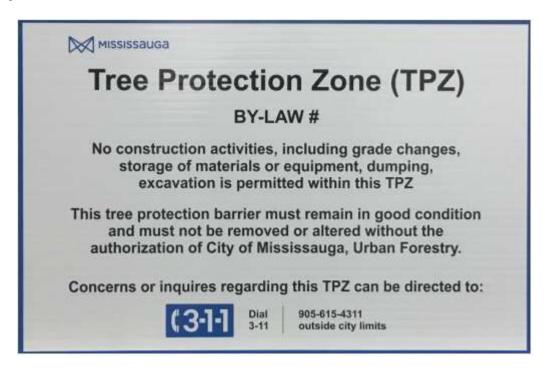
EIS. This amount of fill is not predicted to create appreciable differences to the health of well-established trees in that area.

## **Tree Protection Fencing**

Certain trees to be retained are located in close proximity to the limits of development or on adjacent private property. The implementation of tree protection measures is recommended to protect tree limbs from mechanical damage and the root systems from compaction during construction activities.

Framed hoarding is to be installed and inspected to the satisfaction of the Urban Forestry section encompasses the entire dripline area (**Figure 2**). The tree protection fencing should be installed per The City's Detail 02830-6 for plastic snow fence framed hoarding, and signage should be displayed (**Appendix B**). The plastic snow fence framed hoarding is to consist of 1.2 m high plastic orange snow fence secured to steel T-bars with wire ties and 2" x 4" timber rails along the top and bottom.

Signage measuring 40 cm x 60 cm to be mounted to the construction side of each TPZ barrier (**Photo 1**). Signage to indicate that work including grading, construction access and material storage is prohibited within the boundaries of the TPZ. No other signage is permitted to be fixed onto any tree protection hoarding.



## Photo 1: Example of TPZ signage

For a City Tree hoarding inspection, please contact Ryan Cormier at 905-615-3200 x 4580. No construction activity is permitted within the tree preservation zones (TPZ). Should you need to remove or alter the hoarding at any time during construction, please advise City of Mississauga Forestry prior to doing so. All



tree protection measures must be implemented and installed prior to the commencement of construction and maintained until all construction related activities are complete.

#### **Felling and Grinding**

Trees to be removed will be felled into the Subject Property by a qualified arborist using good arboricultural practices. Tree protection fencing shall be installed for trees to be retained prior to tree removal unless the fencing will directly interfere with undertaking of approved tree removal.

For removals adjacent to trees to be retained, it is recommended that they be stumped and grinded as required rather than root removal (e.g., stump pulling), as root pulling has the potential to adversely affect trees to be retained.

#### Pruning

Pruning is not anticipated to be required for this project, as removals are to occur on discrete tablelands. However, any roots or limbs of trees to be retained that extend beyond the tree protection fencing may require pruning. Pruning should be carried out as specified by an ISA certified arborist.

Trees can typically withstand up to 30% encroachment into their TPZ. The City of Mississauga prohibits many activates within the TPZ but may approve excavation for root pruning. Any pruning of tree roots and branches of trees necessary to accommodate the fencing or nearby construction work should be completed by a qualified arborist using best arboricultural practices. Various methods are deemed acceptable (i.e., Air Spade) by the City and must be either conducted or supervised by a Certified Arborist.

Prune limbs utilizing pruning shears, pruning saw, or chain saw. Root systems of protected trees that are exposed or damaged by construction work, shall be trimmed neatly by a Qualified Arborist in accordance to good arboricultural practices and the area is to be back filled with appropriate material to maintain moisture/prevent desiccation. Roots should be excavated using a low pressure airspade. Roots should be pruned in a similar fashion as branches, taking care to maintain the integrity of the root bark ridge, where present.

## Oak Wilt

Oak wilt is a disease caused by fungus, resulting in tree death within a single season. Red Oaks are particularly susceptible and due to the presence of Bur Oak and Red Oak within the Subject Property, the Canadian Food Inspection Agency recommends avoiding pruning Oak trees between April and November (Government of Canada, 2023).

## 6. Management and Monitoring Phase

## **Pre-Construction Phase**

To avoid an offence under the *Migratory Bird Convention Act, 1994 (MBCA)* for the destruction of active nests and/or eggs during bird nesting periods, it is recommended that all vegetation (including tree) removal works are conducted between September 1 and March 31 of any given year. Should tree removal during



bird nesting season be unavoidable, a qualified biologist should conduct a nesting survey immediately before any vegetation removal is conducted, as defined by the *Act*.

To avoid potential negative impacts to SAR bats, tree removals should occur between April 1 to September 30. Avoid any damage to Oak trees between April 1 - October 31 to avoid the potential spread of Oak Wilt, which has recently been detected in Southern Ontario. This timing window is from the Canadian Food Inspection Agency (CFIA). The hired contractor performing the removals should be familiar with tree diseases, including Oak Wilt, and report any suspicious trees to the CFIA and Community Services/Forestry.

The erection of tree protection fencing (**Figure 2**) as per the Site Plan is to be conducted under the supervision of an ISA Certified Arborist, prior to the commencement of site clearance, demolition, or any other type of construction. Any pruning or trimming of trees to accommodate the fencing will be completed by a Certified Arborist using best industry practices. All trees to be removed will be felled into the proposed development area as to avoid damage to the adjacent trees. Fencing must remain intact through the completion of construction.

#### **Construction Phase**

Tree protection fencing will be regularly inspected for damage and proper function by construction personnel. Any damage will be reported to the construction supervisor and repaired immediately. Protective fencing shall remain in place throughout the duration of construction and shall not allow traffic, vehicles, foot traffic or equipment to compact soil within the TPZ. Any build up of sediments at tree bases will be removed as part of fencing repairs. To avoid sediment build ups, Erosion and Sediment Control (ESC) fencing (Drawing C401, provided separately) should be integrated with the tree protection fencing, and would largely avoid the movement of sediment into the natural heritage system.

Periodic monitoring of the Site during demolition, excavation and construction may be required to ensure tree protection measures are performed or remain in place throughout the duration of the construction. If required, monitoring will be performed by the developer's Consulting Arborist.

#### **Post-Construction Phase**

The removal of tree protection barriers will only be initiated once all construction activities have been completed and landscaping has been implemented. The TPZ barriers and any additional tree care measures must remain in place until approval is given by the City of Mississauga.

Planting of trees as per Section 7 will be initiated as part of landscaping and be completed by nursery professionals or a Certified Arborist. Planting will occur solely during the spring or fall planting seasons; being April 15 - July 1, and September 15 – November 15, respectively.

Monitoring of tree establishment should be completed for a minimum of two growing seasons post-planting. Monitoring will be designed to assess the growth and establishment of the planted trees, ensuring that the conditions any nursery guarantees are met.



# 7. Replacement Trees

The City's by-law states that replacement plantings are required when individual healthy trees (good to fair condition) which are greater than 15 cm DBH, including both native and non-native species. A tree replacement is required for every 15 cm (6 inches) of diameter of the tree removed (City of Mississauga, 2023).

Of the inventoried trees to be removed, three (3) trees are in poor condition and one (1) tree is below 15 cm DBH and will not require replacement. The trees proposed to be removed range between 15 and 124 cm DBH, thus requiring a wide range of replacement trees (**Table 6**). Three (3) trees are to be removed within Credit Valley Conservation regulated lands (CVC, 2020), which have specific replacement requirements (**Table 7**). A total of 261 trees must be planted in compensation for the removal of the 62 trees on the Subject Property.

#### Trees 60 – Trees 105- Trees 120-Trees Trees Trees Trees 90-Total Trees 15-29 30-44 45-59 74 cm 75-89 104 cm 119 cm 134 cm cm DBH cm DBH (4:1) cm DBH DBH (6:1) DBH (7:1) DBH (8:1) cm (1:1) DBH DBH (5:1) (2:1) (3:1) Total number of 9 20 18 3 2 1 1 1 55 removals Total number of 9 40 54 12 10 6 7 8 146 replacement trees

## Table 6. Tree Replacement Requirement for City of Mississauga

## Table 7. Tree Replacement Requirement for Credit Valley Conservation

	Trees >5 - 10 cm DBH (1:1)	Trees 10.1 – 20 cm DBH (3:1)	Trees 20.1 – 30 cm DBH (10:1)	Trees 30.1 - 40 cm DBH (15:1)	Trees 40.1 – 50 cm DBH (20:1)	Trees 50.1 – 60 cm DBH (30:1)	Trees 60.1 - 70 cm DBH (40:1)	Trees 70.1 + cm DBH (50:1)	Total
Total number of removals	0	0	0	1	0	0	0	2	3
Total number of replacement trees	0	0	0	15	0	0	0	100	115

Compensation trees to replace the ones removed (261 total), their sizes, locations, and quantities are to be reviewed by City of Mississauga Community Services and Forestry. All replacement trees must be native and common the Credit River Watershed. The replacement trees must be at least 1.8 m tall for a coniferous tree or at least 6 cm in diameter for a deciduous tree in accordance with the City's By-law (City of



Mississauga, 2023). Compensation planting opportunities are limited within the property due to the stormwater tank location. The stormwater tank location and adjacent open areas will be naturalized and can be planted with shrubs, otherwise Cash in lieu must be pursued.

Note that the CVC planted 179 individual tree saplings and shrubs along the top edge of the FOD5-3. These plantings are to be integrated into the setback restoration plan, as feasible per the Environmental Impact Study (EIS) for this development. Approximately one third of the plantings were observed to be dead or poor condition in 2023. Therefore, there may be opportunities to replace saplings that are dead.

The Credit Valley Conservation Authority (CVC) has previously completed restoration plantings on the Subject Property. To continue this relationship, Argo Sherwood Forrest Limited proposes to continue to work with CVC to provide for the appropriate compensation plantings. Once servicing is installed, the replacement plantings are proposed to first target the abandoned lane on the north side of the Subject Property. The species and locations will be determined by a Landscape Architect.

# 8. Conclusion

In summary, a total of 183 trees were inventoried, although 178 trees are currently present and assessed in this report due to the natural falling of five trees (deadfall). Of these, 72 (40%) are native species, and 103 (57%) are non-native species, and three identified to genus only. It is estimated that 62 trees are proposed to be removed within the redevelopment area, five are proposed to be retained but may be injured and 111 trees are proposed to be retained.

The trees to be retained should be protected by pruning overhanging limbs (where applicable such as tree in close proximity to the construction works), by pruning exposed roots, and installing tree protection fencing around the limit of development and/or beyond the tree protection zone of the tree.

A total of 62 trees are to be replaced with 261 replacement trees. Replacement plantings should solely be comprised of species that are native to the Credit River watershed.

**Memorandum** Page 15 | October 1, 2024 Sherwood Forrest Circle Arborist Tree Preservation and Protection Report



# 9. Certification

This memorandum was prepared and reviewed by the undersigned:

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l'alp Haylote

Carly Houghton, B.E.S. Ecologist, ISA Certified Arborist ON-2346A

**Reviewed By:** 

- Adams

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# **Appendix A**

**Tree Inventory** 



Appendix A:	Tree	Inventory
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Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
75	Norway Spruce	Picea abies	42	42		F	3	Retain
76	Norway Spruce	Picea abies	51	51		F	3.6	Retain
77	Norway Spruce	Picea abies	34.4	34.4		F	2.4	Retain
78	Norway Spruce	Picea abies	38	38		F	2.4	Retain
79	Norway Spruce	Picea abies	20.8	20.8		F	1.8	Retain
80	Norway Spruce	Picea abies	28	28		F	1.8	Retain
81	Norway Spruce	Picea abies	34.5	34.5		F	2.4	Retain
82	Norway Spruce	Picea abies	38.2	38.2		F	2.4	Retain
83	Norway Spruce	Picea abies	52	52		F	3.6	Retain
84	Norway Spruce	Picea abies	42.5	42.5		F	3	Retain
85	Norway Spruce	Picea abies	23.4	23.4		F	1.8	Retain
86	Norway Spruce	Picea abies	33.6	33.6		F	2.4	Retain
87	Norway Spruce	Picea abies	21	21		F	1.8	Retain
88	Norway Spruce	Picea abies	36.7	36.7		F	2.4	Retain
89	Norway Spruce	Picea abies	18.2	18.2		F	1.5	Retain
90	Norway Spruce	Picea abies	30.4	30.4		F	2.4	Retain
91	Norway Spruce	Picea abies	22.8	22.8		F	1.8	Retain
92	Norway Spruce	Picea abies	14.2, 11.2, 26.5	32		F	2.4	Injure
93	Norway Spruce	Picea abies	30.8	30.8		F	2.4	Retain
94	Norway Spruce	Picea abies	21.5	21.5		F	2.4	Retain
95	Deadfall tree							
96	Norway Spruce	Picea abies	23.4	22		F	1.8	Retain
97	Norway Spruce	Picea abies	16	23.4		F	1.8	Retain
98	Norway Spruce	Picea abies	40.7	16		F	1.5	Retain



Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
99	Norway Spruce	Picea abies	22	40.7		F	3	Retain
100	Norway Spruce	Picea abies	40.2	40.2		F	3	Injure
101	Deadfall tree	·		·	<u>.</u>		<u>.</u>	
102	Norway Spruce	Picea abies	37.9	37.9		F	2.4	Retain
103	Norway Spruce	Picea abies	26.8	26.8		F	1.8	Retain
104	Norway Spruce	Picea abies	37	37		Р	2.4	Retain
105	Norway Spruce	Picea abies	51	51		F	3.6	Remove
106	Scots Pine	Pinus sylvestris	49.7	49.7		Р	3	Remove
107	Scots Pine	Pinus sylvestris	39	39		F	2.4	Remove
108	Norway Spruce	Picea abies	35.5	35.5		F	2.4	Remove
109	Weeping Willow	Salix babylonica	105	105		F	6.3	Remove
110	English Walnut	Juglans regia	52	52		F	3.6	Remove
111	English Walnut	Juglans regia	92	92		Р	6	Remove
112	Sugar Maple	Acer saccharum	36, 35.2, 48.9, 24, 19.6	77		G	4.8	Remove
113	Deadfall tree							
114	Eastern White Cedar	Thuja occidentalis	6.5, 7, 8.5, 10.4, 16, 7, 10, 19.3, 10, 8, 8.3	30		F	1.8	Retain
115	Eastern White Cedar	Thuja occidentalis	16.5, 8.4, 20, 8, 9, 10	30		F	1.8	Retain
116	Eastern White Cedar	Thuja occidentalis	28, 26.6, 16, 7, 8	43		F	3	Retain
117	Eastern White Cedar	Thuja occidentalis	10, 6.5, 13,16.7, 22, 5, 20.5, 5, 4, 4, 17, 5, 19, 9.4, 4, 3, 7, 7	39		F	2.4	Retain



Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
118	Eastern White Cedar	Thuja occidentalis	37, 16, 27, 7, 22, 18.5, 8, 7, 22.6, 9, 15, 12, 22, 5, 5, 5, 5, 5, 5, 7.5, 13, 18	55		G	3.6	Retain
119	Eastern White Cedar	Thuja occidentalis	5, 14.5, 5, 18.6, 22, 18.3, 30, 4, 5, 6, 3, 22.5	48		F	3	Injure
120	Eastern White Cedar	Thuja occidentalis	20, 4, 12, 18, 6, 6, 21, 6, 5.3, 16.6, 14, 3, 3, 5, 6, 17, 22, 16	42		F	3	Retain
121	Eastern White Cedar	Thuja occidentalis	20, 6, 13, 5, 11, 5, 18, 14, 19, 6.5, 19	40		F	2.4	Injure
122	Eastern White Pine	Pinus strobus	51	51		G	3.6	Remove
123	Norway Maple	Acer platanoides	45.4	45.4		G	3	Remove
124	Honey Locust	Gleditsia triacanthos	51	51		F	3.6	Remove
125	Eastern White Cedar	Thuja occidentalis	20.5, 14	25		F	1.8	Remove
126	Eastern White Cedar	Thuja occidentalis	17.5, 9.5, 15, 10	27		G	1.8	Remove
127	Eastern White Cedar	Thuja occidentalis	15.5, 20, 18.5, 7, 15.5	36		G	2.4	Remove
128	Eastern White Cedar	Thuja occidentalis	18, 11, 16, 12, 20	49		G	3	Remove
129	Eastern White Cedar	Thuja occidentalis	15.5	15.5		F	1.5	Remove
130	Eastern White Cedar	Thuja occidentalis	28	28		G	1.8	Remove
131	Eastern White Cedar	Thuja occidentalis	19.5, 35,16, 18	47		G	3	Remove
132	Eastern White Cedar	Thuja occidentalis	16	16		G	1.5	Remove
133	Eastern White Cedar	Thuja occidentalis	17	17		G	1.5	Remove
134	Eastern White Cedar	Thuja occidentalis	17.5	17.5		G	1.5	Remove
135	Eastern White Cedar	Thuja occidentalis	16	16		G	1.5	Remove
136	Eastern White Cedar	Thuja occidentalis	16, 17, 16.5, 7, 7, 17, 5.8, 12, 5, 6, 16.5	37		F	2.4	Remove



Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
137	Eastern White Cedar	Thuja occidentalis	8, 15, 18.5, 10.6, 20, 6, 3, 5, 16, 9.2	34		F	2.4	Remove
138	Red Maple	Acer rubrum	46.5, 32.5, 50, 48	89		F	5.4	Remove
139	Scots Pine	Pinus sylvestris	50	50		F	3	Remove
140	Scots Pine	Pinus sylvestris	43	43		F	3	Remove
141	Norway Spruce	Picea abies	91	91		G	6	Remove
142	Norway Spruce	Picea abies	52	52		G	3.6	Remove
143	Norway Spruce	Picea abies	60	60		G	3.6	Remove
144	Norway Spruce	Picea abies	66.5	66.5		G	4.2	Remove
145	Eastern White Pine	Pinus strobus	40.2	40.2		F	3	Remove
146	Eastern White Pine	Pinus strobus	35	35		G	2.4	Remove
147	Eastern White Pine	Pinus strobus	50	50		G	3	Remove
148	Eastern White Pine	Pinus strobus	42.7	42.7		F	3	Remove
149	Eastern White Pine	Pinus strobus	50	50		G	3	Remove
150	Eastern White Pine	Pinus strobus	40.5	40.5		F	3	Remove
151	Eastern White Pine	Pinus strobus	34	34		F	2.4	Remove
152	Deadfall tree	- <b>'</b>						•
153	Deadfall tree							
154	Colorado Spruce	Picea pungens	32.8, 35	48		G	3	Remove
155	White Spruce	Picea glauca	30, 31	43		G	3	Remove
156	Colorado Spruce	Picea pungens	42	42		G	3	Remove
157	Colorado Spruce	Picea pungens	30.3	30.3		G	2.4	Remove
158	Freeman's Maple	Acer freemanii	124	124		F	7.4	Remove
159	Colorado Spruce	Picea pungens	40	40		G	2.4	Remove
160	Colorado Spruce	Picea pungens	50	50		G	3	Remove
161	White Spruce	Picea glauca	40.5	40.5		G	3	Remove
162	Colorado Spruce	Picea pungens	40.1	40.1		G	3	Remove
163	Common Apple	Malus pumila	43.5	43.5		G	3	Remove



Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
164	Eastern White Cedar	Thuja occidentalis	41, 30.6, 22.4	56		F	3.6	Remove
165	Eastern White Cedar	Thuja occidentalis	21.1	21.1		F	1.8	Remove
166	Eastern White Cedar	Thuja occidentalis	50, 26.7	57		Р	3.6	Remove
167	Black Walnut	Juglans nigra	60	60		F	3.6	Remove
168	White Spruce	Picea glauca	38.6	38.6		F	2.4	Remove
169	White Spruce	Picea glauca	50	50		F	3	Remove
170	Red Maple	Acer rubrum	51	51		F	3.6	Remove
171	Colorado Spruce	Picea pungens	49	49		G	3	Remove
172	Colorado Spruce	Picea pungens	39.4	39.4		G	2.4	Remove
173	Colorado Spruce	Picea pungens	44	44		G	3	Remove
174	Colorado Spruce	Picea pungens	41	41		G	3	Remove
175	Colorado Spruce	Picea pungens	49.2	49.2		G	3	Remove
176	Norway Maple	Acer platanoides	108	108		F	6.5	Remove
177	Black Cherry	Prunus serotina	43.8	43.8	6	G	3	Retain
178	Red Oak	Quercus rubra	51	51	12	G	3.6	Retain
179	Bur Oak	Quercus macrocarpa	45	45	8	F	3	Retain
180	Red Oak	Quercus rubra	18.8	18.8	6	G	1.5	Retain
181	Black Cherry	Prunus serotina	33.2, 37.9	50	8	F	3	Retain
182	Black Cherry	Prunus serotina	33	33	8	F	2.4	Retain
183	Eastern White Pine	Pinus strobus	51.5	51.5	4	G	3.6	Retain
184	Black Cherry	Prunus serotina	45.8, 28.8	54	6	F	3.6	Retain
185	American Basswood	Tilia americana	55	55	6	F	3.6	Retain
186	Norway Spruce	Picea abies	49	49	3.5	G	3	Retain
187	American Basswood	Tilia americana	14.2, 31.8, 35.7, 34	61	5	G	4.2	Retain
188	Norway Maple	Acer platanoides	41.7	41.7	5	F	3	Retain
189	Norway Spruce	Picea abies	52	52	5	G	3.6	Retain
190	Norway Spruce	Picea abies	25.5	25.5	3	F	1.8	Retain
191	Red Oak	Quercus rubra	62	62	6	F	8.4	Retain



Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
192	Red Oak	Quercus rubra	52, 56	76	11	F	4.8	Retain
193	Black Walnut	Juglans nigra	43.2	43.2	9	F	3	Retain
194	Colorado Spruce	Picea pungens	25.4	25.4	0.5	Р	1.8	Retain
195	Sugar Maple	Acer saccharum	56	56	6	F	3.6	Retain
196	White Spruce	Picea glauca	31.6	31.6	2.5	F	2.4	Retain
197	Colorado Spruce	Picea pungens	26	26	3	F	1.8	Retain
198	Sugar Maple	Acer saccharum	24.5	24.5	6	F	1.8	Retain
199	Red Oak	Quercus rubra	46.5, 27.9	55	7	F	3.6	Retain
200	Colorado Spruce	Picea pungens	21.7, 11.9	25	2	F	1.8	Retain
201	Sugar Maple	Acer saccharum	76	76	12	G	4.8	Retain
202	Sugar Maple	Acer saccharum	46.2	46.2	9	G	3	Retain
203	Sugar Maple	Acer saccharum	36.5	36.5	9	F	2.4	Retain
204	Sugar Maple	Acer saccharum	24, 49.5	55	8	G	3.6	Retain
205	American Basswood	Tilia americana	44.7, 11.6	47	6	G	3	Retain
206	Sugar Maple	Acer saccharum	50.5	50.5	7	G	3.6	Retain
874	Norway Maple	Acer platanoides	40	40	5	g	2.4	Retain
875	Willow	<i>Salix</i> sp.	21,18,17	32	3	F	2.4	Retain
876	White Spruce	Picea glauca	51	51	5	F	3.6	Retain
877	Norway Maple	Acer platanoides	48	48	7	G	3	Retain
878	Norway Maple	Acer platanoides	14	14	3	F	1.5	Remove
879	Colorado Spruce	Picea pungens	30	30	2	F	1.8	Retain
880	Colorado Spruce	Picea pungens	24	24	2	F	1.8	Retain
881	Colorado Spruce	Picea pungens	30	30	2	F	1.8	Retain
882	Colorado Spruce	Picea pungens	16	16	2	F	1.5	Retain
885	Sugar Maple	Acer saccharum	10	10	3	F	1.5	Retain
886	Sugar Maple	Acer saccharum	12	12	3	F	1.5	Retain
887	Northern Catalpa	Catalpa speciosa	10	10	2	F	1.5	Retain



Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
888	Green Ash	Fraxinus pennsylvanica	19	19	2	Dead	1.5	Retain
AA	Red pine	Pinus resinosa	30	30	3	G	1.8	Retain
AB	Scots Pine	Pinus sylvestris	35	35	3	G	2.4	Retain
AC	Scots Pine	Pinus sylvestris	20	20	3	G	1.5	Retain
AD	Scots Pine	Pinus sylvestris	25	25	3	G	1.8	Retain
AE	Scots Pine	Pinus sylvestris	20	20	2	G	1.5	Retain
AF	Scots Pine	Pinus sylvestris	22	22	4	G	1.8	Retain
AG	Scots Pine	Pinus sylvestris	18	18	2	G	1.5	Retain
AH	Norway Maple	Acer platanoides	15	15	4	G	1.5	Retain
AI	Scots Pine	Pinus sylvestris	23	23	3	G	1.8	Retain
AJ	Green Ash	Fraxinus pennsylvanica	15	15	4	Р	1.5	Retain
AK	Scots Pine	Pinus sylvestris	10	10	4	G	1.5	Retain
AL	Scots Pine	Pinus sylvestris	20	20	3	G	1.5	Retain
AM	Norway Spruce	Picea abies	40	40	5	G	2.4	Retain
AN	Norway Spruce	Picea abies	55	55	5	G	3.6	Retain
AO	Norway Spruce	Picea abies	15	15	3	G	1.5	Retain
AP	Scots Pine	Pinus sylvestris	20	20	4	G	1.5	Retain
AQ	Scots Pine	Pinus sylvestris	20	20	2	F	1.5	Retain
AR	Eastern White Pine	Pinus strobus	10	10	2	G	1.5	Retain
AS	Eastern White Pine	Pinus strobus	20	20	3	G	1.5	Retain
AT	Pine	Pinus sp.	30	30	2	G	1.8	Retain
AU	Norway Spruce	Picea abies	60	60	5	G	3.6	Retain
AV	Norway Spruce	Picea abies	40	40	5	G	2.4	Retain
AW	Apple	Malus sp.	25	25	7	F	1.8	Retain
AX	Norway Spruce	Picea abies	30	30	3	F	1.8	Retain
AY	Norway Spruce	Picea abies	25	25	1	F	1.8	Retain
AZ	Norway Spruce	Picea abies	40	40	3	F	2.4	Retain



Tree ID	Common Name	Scientific Name	DBH (cm)	Effective DBH (cm)	Dripline (m)	Condition Rating (Good/Fair/Poor)	TPZ (m)	Retain / Remove
BA	Norway Spruce	Picea abies	30	30	2	F	1.8	Retain
BB	Norway Spruce	Picea abies	30	30	3	F	1.8	Retain
BC	Norway Spruce	Picea abies	25	25	3	F	1.8	Retain
BD	Norway Spruce	Picea abies	70	70	6	F	4.2	Retain
BE	Norway Spruce	Picea abies	25	25	4	F	1.8	Retain
BF	Norway Spruce	Picea abies	35	35	4	F	2.4	Retain
BG	Siberian Elm	Ulmus pumila	70	70	6	F	4.2	Injure
BH	Norway Spruce	Picea abies	15	15	3	F	1.5	Retain
BI	Norway Spruce	Picea abies	30	30	4	F	1.8	Retain
BJ	Norway Spruce	Picea abies	15	15	3	F	1.5	Retain
ВК	Norway Spruce	Picea abies	40	40	5	F	2.4	Retain
BL	Norway Maple	Acer platanoides	25	25	4	G	1.8	Retain

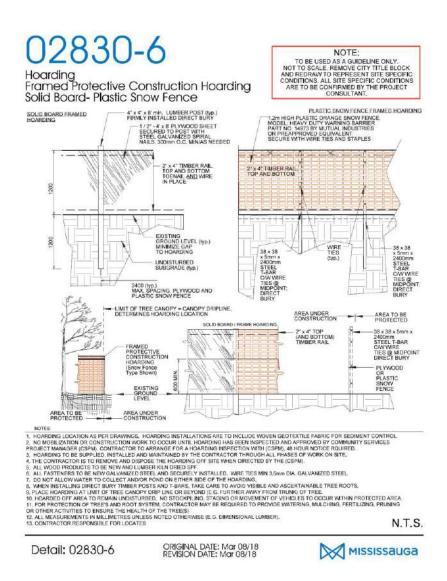




# Tree Preservation Fencing (Detail 02830-6) and Approved Tree Preservation Sign Specification

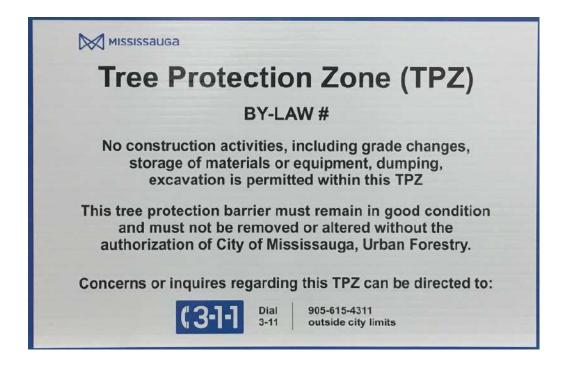
# TREE PRESERVATION FENCING, CONSTRUCTION, SIGNAGE, AND TREE PROTECTION MEASURES

Below are the City of Mississauga's Approved Tree Preservation Fencing Specifications. All other fencing construction methods and material must be pre-approved by The City of Mississauga in advance of construction. All details are available in PDF format from Mississauga Forestry.



## **Approved Tree Preservation Sign Specification**

Below is the approved tree preservation sign template. Tree preservation signs are to be 16 inches by 24 inches or 40.64 cm by 60.96 cm and on a waterproof material. Installation of the signs is mandatory, and all associated costs of the signage are the sole responsibility of the applicant. No other signage is permitted to be fixed onto any tree protection hoarding.



# **PROHIBITED ACTIVITIES WITHIN TREE PROTECTION ZONES**

Except where authorized by Mississauga Forestry the following activities, including, but not limited to, are prohibited within the TPZ:

- Construction activities
- Storage of materials
- Storage of equipment
- Excavation
- Grade changes
- Cutting, tearing, breaking tree's roots, branches and trunk
- Dumping
- Parking
- Stringing Cables/Wires