

Tree Inventory & Protection Plan

Prepared for:

Fausto Cortese Architects

Subject Site:

57 Napier St, Vaughan, ON L4H 3N5

Prepared By:

The Urban Arborist Inc.

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November 29, 2023

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1.0 Introduction

1.1 Purpose of Assignment

The Urban Arborist Inc was retained by Fausto Cortese Architects to prepare a Tree Inventory & Protection Plan for a residential project. The purpose of the project is to build a new home.



Figure 1. Front of subject site at 57 Napier St, Vaughan, ON L4H 3N5

1.2 Existing Site Characteristics

The grade on the property from the back of the home slopes down to the eastern fence line. There are two adjacent lots. The neighbouring lot at 51 Napier Street is currently under construction.

2.0 *Methodology and Guidance*

All data used in this report is empirical in nature, unless stated otherwise. All measurements in this report utilize the metric system of measurement.

2.1 *Field Study*

Site inspection and data collection was initiated November 16 2023. All trees 20cm in diameter measured at base and greater within 6m of the subject site as well as all city owned trees adjacent to the property have been included in this report.

2.2 *Tree Locations*

The locations of all significant trees were surveyed and plotted on the Tree Inventory Protection Plan and shown on Tree Inventory Plan drawing TP-1 in appendix 2.

2.3 *Tree Conditions*

During field study a generalized assessment system was used to give each significant tree a rating based on structural condition and health condition.

The following 5 level assessment for health is listed below.

- Very Poor - Tree displays severe dieback of branches, canopy is extremely sparse. May exhibit extreme pathogen infestation or infection. Or tree is dead.
- Poor - Tree displays some dieback. Branches or canopy is sparse with little or no signs of new growth or vigour. Possible pathogen infestation or infection. Foliar canopy is sparse.
- Fair - Tree is developing in a manner typical to others in the area. Canopy is full.
- Good - New growth is vigorous as evidenced by stem elongation and colour. Canopy is dense.
- Very Good - In addition to the attributes of a good rating, tree is displaying extremely vigorous growth and trunk displays a pattern of vigour cracks or lines.

The following 5 level assessment for structural condition was as follows:

- Very Poor - Trunk has large pockets of decay, is bifurcated or has a severe lean. Limbs or branches are poorly attached or dead. Possible hazard.
- Poor - Limbs or branches are poorly attached or developed. Canopy is not symmetrical. Trunk has a lean.
- Fair - Trunk, limb and branch development though flawed is typical of this species.
- Good - Trunk is well developed with well attached limbs and branches; some flaws but are hardly visible.
- Very Good - In addition to attributes of a good rating, the tree exhibits a well developed root flare and a balanced canopy.

Factors Assessed were as follows:

Roots	Trunk	Foliage/Buds	Scaffold Branches	Small Branches/Twigs
· Collar/flare · Mechanical injury · Girdling roots · Insects/disease · Decay/fungi	· Cavities · Mechanical injury · Cracks · Swollen/sunken areas · Insects/disease · Fungi	· Size of foliage/buds · Foliage colour · Foliage injury · Dieback of buds/foilage · Insects/disease	· Attachments/included bark · Taper · Distribution · Decay/cavities · Deadwood · Insects/disease	· Vigour/growth rates · Distribution · Appearance · Insects/disease · Dieback

3.0 Tree Inventory

A total of 30 trees were inventoried. (See Tree Inventory Spreadsheet in appendix 1).

3.1 Trees to Preserve

The trees in this section have been evaluated suitable for preservation and fall under the Tree Preservation, Protection and Management guidelines in this report. Different approaches of Tree Preservation can be carried out following tree health and structure evaluation. The following describes the differences in approaches to Tree Preservation.

1. Preserve, Protect & Maintain

Includes protection with tree preservation hoarding, as well as pre and post-construction arboricultural works.

2. Preserve & Protect

Includes the installation of tree protection hoarding; no maintenance will be required unless specified in the recommendations in Appendix 1

3. Retain

No protection or maintenance measures are required. Installation of tree protection barriers is optional.

# of Trees evaluated as suitable for Preservation	29
# of Trees to use Method 1	n/a
# of Trees to use Method 2	All except #224
# of Trees to use Method 3	n/a

In the case of 57 Napier Street, all but 1 tree in this report can be preserved and protected. All trees will require tree protection barriers in the form of vertical or horizontal protection.

3.2 Trees to Remove

All trees scheduled for removal shall be removed prior to any construction, earthworks or installation of tree protection hoarding. Due to site or development, tree condition or location, retention is not warranted. A total of 1 tree is to be removed requiring a permit.

Total of number of Trees to Remove requiring a permit	1
Trees Proposed to be Removed	224

3.3 *Trees to Injure*

There are 5 trees that are to be injured due to encroachment of the minimum tree protection zone. 3 out of the 5 trees are next to existing asphalt pavement being used as the driveway. The impact to the trees next to the driveway will be minimal. See below for details:

Tree #219 - Next to existing asphalt pavement being used as the driveway. It is being proposed that an interlocking pathway to the front door will replace some of the existing driveway. A certified arborist must be present when removing pavement and installing interlocking.

Tree #220 - Next to existing asphalt pavement being used as the driveway. No work being proposed near tree.

Tree #223 - Next to existing asphalt pavement being used as the driveway. No work being proposed near tree.

Tree #1483 – A walkout patio is being proposed to be installed within the minimum tree protection zone. A certified arborist must be present when excavation to install patio is to begin construction.

Tree #1484 - A walkout patio is being proposed to be installed within the minimum tree protection zone. A certified arborist must be present when excavation to install patio is to begin construction.

3.4 *Trees to Replant (Replacement)*

A total of 2 trees are required to be planted back onto the site for the replacement of tree #222.

3.5 *Pruning*

No pruning is required based on proposed site plan.

4.0 ***Tree Preservation, Protection and Management***

4.1 *Tree Protection*

All trees scheduled to be preserved must be protected with Tree Protection Barriers as shown on the Tree Inventory Protection Plan Drawing TP-1 in appendix 2.

4.2 *Tree Protection Barriers*

The TPZ barriers must be installed to the specifications set out in the Toronto Tree Protection Detail TP-1 unless otherwise stated by Toronto Tree Protection Plan & Review and/or designs are approved

by the Tree Preservation Technician.

The existing driveway will remain as is. Where the minimum tree protection zone extends over the driveway, the driveway will be used as horizontal tree protection.

4.3 *Sensitive Root Excavation*

ROOT SENSITIVE EXCAVATION reduces root injuries to trees and involves trenching along the line of proposed excavation to the depth required for the proposed hardscaping, utility or site feature being installed, prior to mechanical excavation of the rest of the area. Location and dimensions of proposed root sensitive excavation are to be provided to Urban Forestry in advance for our review.

ROOT SENSITIVE EXCAVATION may use the following trenching methods: hand digging using shovels and bars; air spade (with vacuum preferred); low-pressure hydrovac.

All ROOT SENSITIVE EXCAVATION must be performed under the supervision of a qualified arborist. All roots exposed must be documented by the supervising arborist. Every effort should be made to preserve as many exposed roots as possible. Roots approved for pruning should be cleanly cut with a sharp, non-vibrating tool such as a handsaw, secateurs, chainsaw at face of trench such that no further disturbance of the roots are to be expected once mechanical excavation begins. All root pruning is to be performed by the arborist only, as per guidelines below.

When ROOT SENSITIVE EXCAVATION is performed, roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the Tree Protection Zone (TPZ) of bylaw trees they should be preserved and Urban Forestry must be notified to discuss the expected impacts of pruning such significant roots on the tree's health or stability. If any bylaw protected tree requires root pruning an Application to Injure the tree(s) must be submitted. If it is determined that any bylaw protected tree requires removal due to the effects of proposed root pruning, a completed Application to Destroy a Tree (including a suitable replanting plan) would be required.

5.0 Conclusions and Recommendations

Based on all data collected from on-site field work and review of all site plans the following conclusions and recommendations are made and correspond with Tree Inventory in Appendix 1:

Conclusions	Recommendations
5 trees are to be injured due to encroachment of the tree protection zone.	Submit tree permit application to injure 5 trees to the City of Vaughan.
1 tree is proposed to be removed requiring a permit to remove.	Submit tree permit application to remove 1 tree to the City of Vaughan.
All trees proposed to be preserved will require tree protection barriers installed.	Build tree protection as shown in TP-1 in appendix 2.

Attachments are as follows:

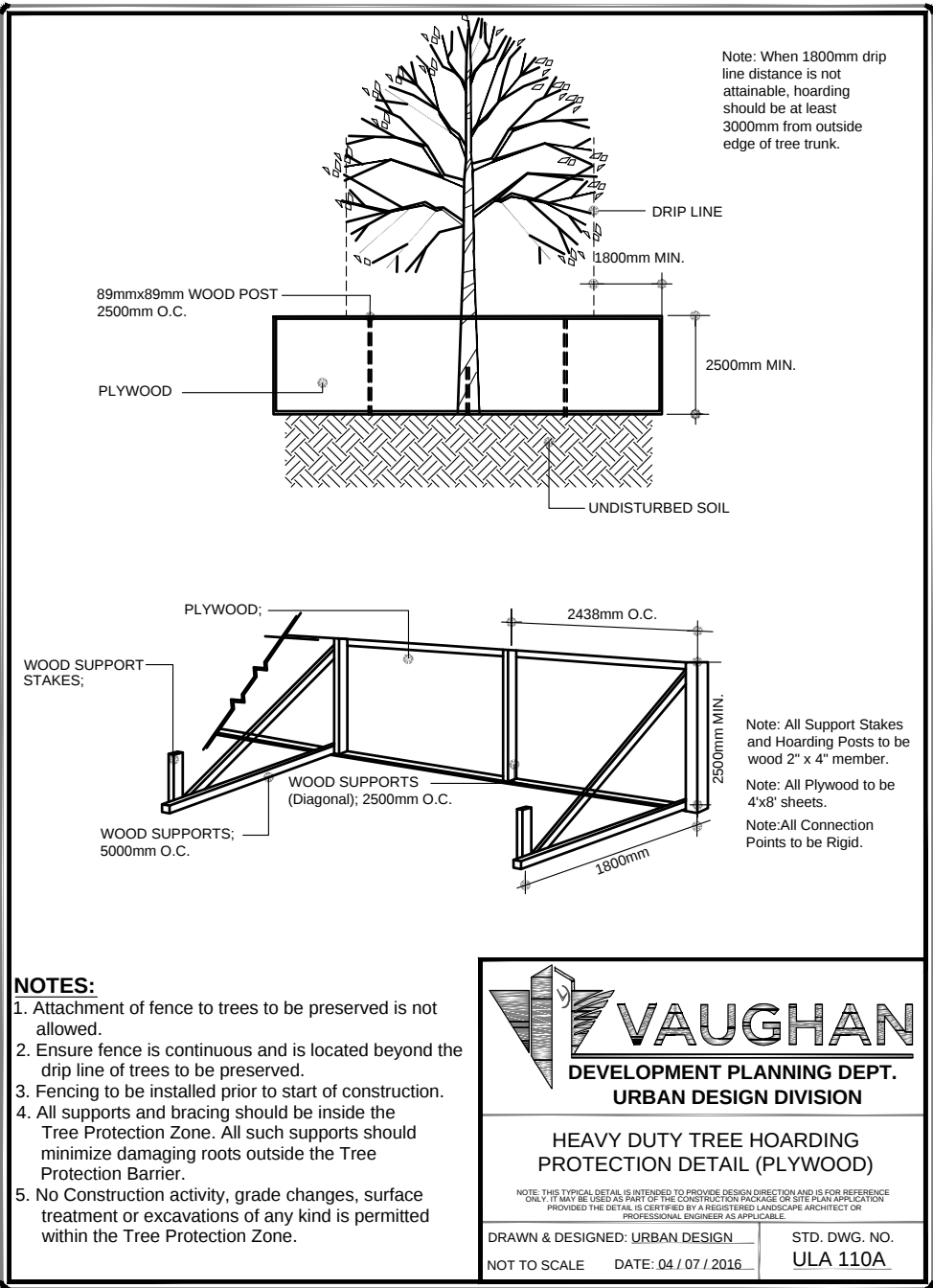
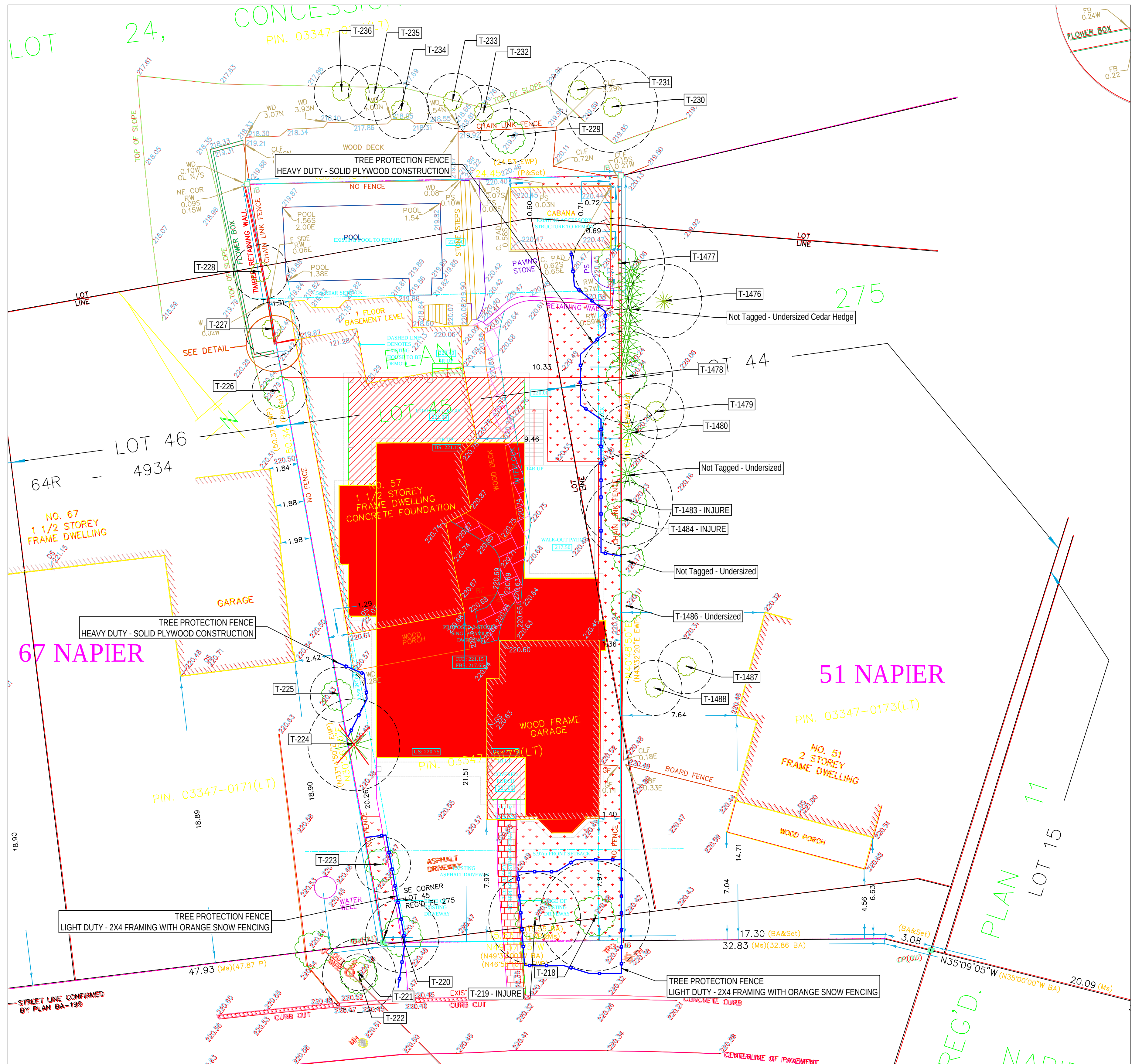
- Appendix 1 Tree Inventory
- Appendix 2 Site Plan / Tree Protection Plan Drawing TP-1
- Appendix 3 City of Vaughan Tree Planting Detail
- Appendix 4 City of Vaughan Hoarding Detail ULA110A
- Appendix 5 City of Vaughan Hoarding Detail ULA110A
- Appendix 6 Photographs

This 8 page Report was written by

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MTCU Qualified Arborist 18004025

57 Napier St, Vaughan, ON L4H 3N5. - Tree Inventory November 16, 2023

Tag #	Common Name	Botanical Name	Diameter @ Base (cm)	Diameter at Breast Height (cm)	Health Condition	Structural Condition	Notes	Recommendations Based on Site Plan	Minimum TPZ (m)	Proposed TPZ (m)	Replacement Ratio
218	Norway Maple	Acer platanoides	56	52	Fair	Poor	Co-dominant main union with bark inclusion and rope grown in tree.	Preserve & Protect	3.6	3.6	-
219	Norway Maple	Acer platanoides	43	43	Fair	Fair/Poor	Multi-stem union with co-dominant stems.	Preserve & Protect – INJURE	3	1.1	-
220	Norway Maple	Acer platanoides	36	37	Fair	Very Poor	Extremely large canker with decay at 1 meter from ground	Preserve & Protect – INJURE	2.4	2.4	-
221	Siberian Elm	Ulmus pumila	13	9	Fair	Fair	City tree	Preserve & Protect	1.2	1.2	-
222	Common Buckthorn	Rhamnus cathartica	30	15 x 19 x 6	Fair	Fair	City tree, growing under hydro and touching hydro.	Preserve & Protect	1.8	1.8	-
223	Norway Maple	Acer platanoides	25	21	Good	Good		Preserve & Protect – INJURE	1.8	1.8	-
224	Eastern White Cedar	Thuja occidentalis	70	46 x 46	Poor	Very Poor	Co-dominant with crack from union all the way to the ground. Decay in union and significant deadwood. Also both stems leaning in opposite directions of each other.	Remove	3	3	2
225	Red Maple	Acer rubrum	20	14	Fair	Fair	Prune with stubs remaining, irregular crown due to competing growth of adjacent tree.	Preserve & Protect	1.8	1.8	-
226	Siberian Elm	Ulmus pumila	64	20 x 22 x 11	Fair	Fair	2 stems cut at base	Preserve & Protect	1.8	1.8	-
227	Siberian Elm	Ulmus pumila	20	16	Fair	Fair	Co-dominant, grown in fence	Preserve & Protect	1.8	1.8	-
228	Black Walnut	Juglans nigra	29	19	Fair	Fair		Preserve & Protect	1.8	1.8	-
229	Common Buckthorn	Rhamnus cathartica	20	16	Fair/Poor	Fair/Poor	Significant deadwood and decay with crack from grade to first union, approximately 1.5 meters.	Preserve & Protect	1.8	1.8	-
230	Manitoba Maple	Acer negundo	33	24	Fair/Poor	Poor	5 meters from South East fence line and 3 meters away from top of bank.	Preserve & Protect	1.8	1.8	-
231	Manitoba Maple	Acer negundo	62	44 x 24	Fair	Fair	6 meters from South East fence line	Preserve & Protect	3	3	-
232	Black Walnut	Juglans nigra	24	20	Good	Good	1 meter from East fence line.	Preserve & Protect	1.8	1.8	-
233	Manitoba Maple	Acer negundo	25	21	Fair	Poor	Leaning heavy towards West. 2 meters from East fence line.	Preserve & Protect	1.8	1.8	-
234	Black Walnut	Juglans nigra	32	28	Good	Good	1 meter East of retaining wall.	Preserve & Protect	1.8	1.8	-
235	Manitoba Maple	Acer negundo	34	26	Fair	Very Poor	Large cavity with decay 1 meter from grade. 3 meters East of retaining wall.	Preserve & Protect	1.8	1.8	-
236	Eastern White Cedar	Thuja occidentalis	38	30	Fair	Fair/Poor	Large scar on western trunk base. 3 meters long from grade.	Preserve & Protect	2.4	2.4	-
1476	Colorado Spruce	Picea pungens	37	31	Poor	Average	top dying	Preserve & Protect	2.4	2.4	-
1477	Black Walnut	Juglans nigra	43	41	Good	Good	Neighbouring Property	Preserve & Protect	3	3	-
1478	Silver Maple	Acer saccharinum	53	47	Average	Average/Poor	Cavity at base	Preserve & Protect	3	3	-
1479	Colorado Spruce	Picea pungens	27	22	Poor	Poor	very sparse foliage	Preserve & Protect	1.8	1.8	-
1480	Colorado Spruce	Picea pungens	27	20	Poor	Poor	very sparse foliage	Preserve & Protect	1.8	1.8	-
1483	Silver Maple	Acer saccharinum	52	41	Average	Poor	Cavity at base	Preserve & Protect – INJURE	3	2.1	-
1484	Silver Maple	Acer saccharinum	42	35	Average	Poor	Cavity at base	Preserve & Protect – INJURE	2.4	1.7	-
1486	Honey Locust	Gleditsia triacanthos	18	14x11	Average	Average		Preserve & Protect	-	-	-
1487	White Spruce	Picea glauca	30	24	Average	Average		Preserve & Protect	1.8	1.8	-
1488	White Spruce	Picea glauca	39	29	Average	Average		Preserve & Protect	1.8	1.8	-
								Total Requirement of Replacement Trees =			2



- General Notes
- EXISTING DECIDUOUS TREE
 - EXISTING CONIFEROUS TREE
 - TREE TO REMOVE
 - MINIMUM TREE PROTECTION ZONE
 - TREE PROTECTION BARRIER



No.	Revision/Issue	Date
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Firm Name and Address

The Urban Arborist Inc.
P.O. Box 74525
Humbertown Centre
Etobicoke, ON
M9A 5E2

Project Name and Address

51 Napier Street
Vaughan, ON.
L4H 3N5

Project	Sheet
Tree Inventory Protection Plan	TP-1
Date	20-01-2023
Scale	1:200

NOTE:
ALL TREES NOT MEETING CITY OF
VAUGHAN REQUIREMENTS WILL BE
REMOVED AND REPLACED AT NO
EXPENSE TO THE CITY.

AT GRADE

100mm WOOD MULCH

1800mm MIN.
BRANCHING
HEIGHT

100mm



DO NOT DAMAGE OR CUT LEADER BRANCH
PRUNE DOMINANT LATERAL BRANCHES

TWO PLY REINFORCED RUBBER HOSE

2 - 2" x 2" WOOD STEAKS SECURED
WITH #4 ALUMINUM WIRE; LOCATE
STAKES AWAY FROM THE TRUNK,
ONE ON SIDE OF PREVAILING WIND,
THE OTHER AT THE OPPOSITE SIDE
(FOR TREES 75mm IN CALIPER OR LESS)
ANGLE STAKES 5 - 15 DEGREES

DRAIN PIPE 100mm DIA.;
450mm PLASTIC CORRUGATED

150mm SPACE

CROWN OF ROOT BALL

SOD

FINISH GRADE

CLEAN SHARP EDGE BETWEEN
SAUCER AND SOD / SEED

CREATE SAUCER AROUND TREE

AERATE AND SCARIFY SOIL SURROUNDING
PLANTING PIT AND BASE OF PIT

APPROVED SOIL MIXTURE

CUT AND REMOVE TOP 1/3 OF BURLAP;
REMOVE ALL SIDES OF WIRE BASKET
AND ALL TIES

SUBGRADE

EXCAVATE 100mm DEPTH FOR
MOUNDING INTO EXISTING SUBSOIL

CREATE SAUCER AROUND TREE

APPROVED SOIL
MIXTURE

FINISH GRADE

VARIES WITH SLOPE

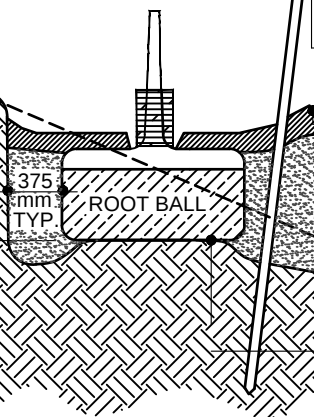
SLOPE PIT BOTTOM FOR DRAINAGE

SUBGRADE

ON A SLOPE

SOD

100mm



NOTES:

1. Position crown of root ball 50mm above finish grade to allow for settling.
2. Do corrective pruning to retain natural form of tree as directed by City Forestry Supervisor.
3. Water all plant material sufficiently to maintain vigorous, healthy growth from time of delivery/ installation until the end of the specified guarantee period.
4. Stake height shall be a minimum of 1.5 metres above finish grade.
5. For trees planted within planting or shrub beds, delete saucer around base of tree.
6. Remove all tree guards/ stakes 12 months after acceptance/ assumption or as specified.
7. No tree pits shall be left open overnight.
8. Do not allow air pockets when backfilling.
9. All dimensions are in millimeters.



VAUGHAN

DEVELOPMENT PLANNING DEPT.
URBAN DESIGN DIVISION

DECIDUOUS TREE PLANTING DETAIL FOR TREES UNDER 90mm IN CALIPER

NOTE: THIS TYPICAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR PROFESSIONAL ENGINEER AS APPLICABLE.

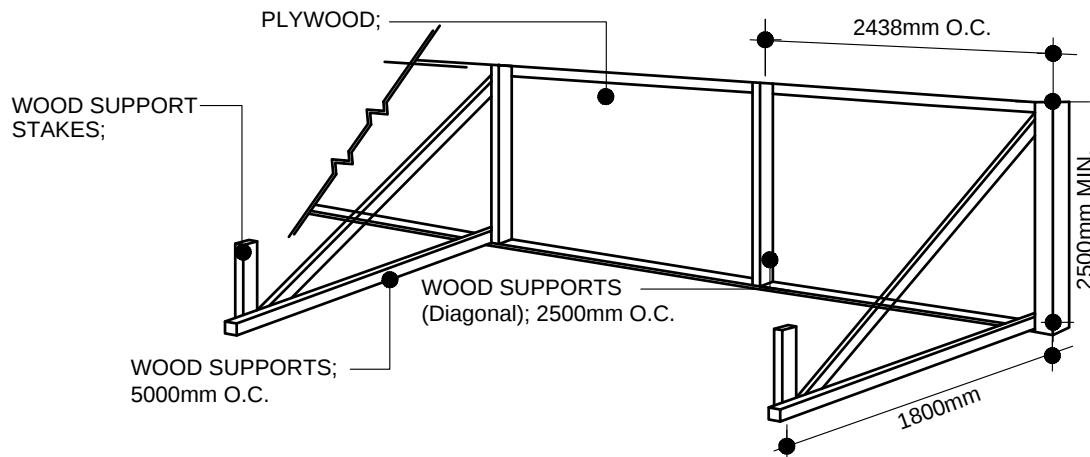
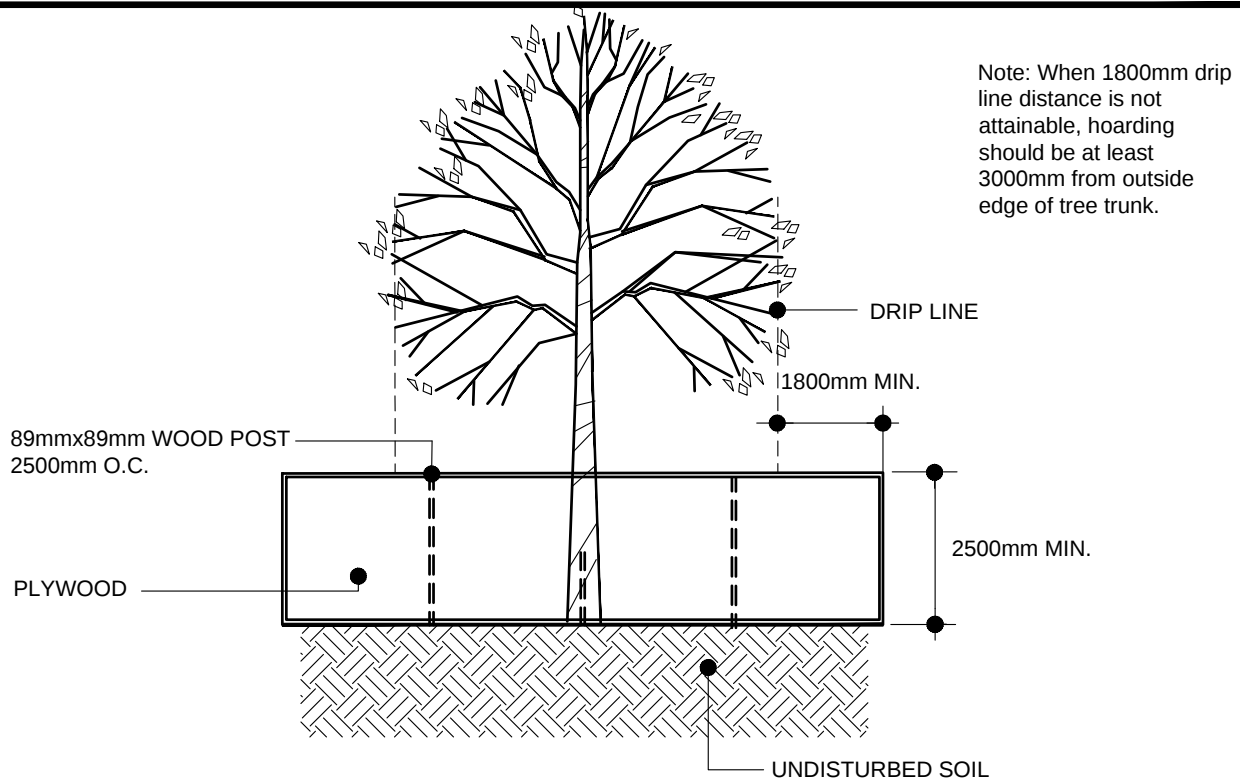
DRAWN & DESIGNED: URBAN DESIGN

STD. DWG. NO.

NOT TO SCALE

DATE: 03 / 01 / 2011

ULA 101



Note: All Support Stakes and Hoarding Posts to be wood 2" x 4" member.

Note: All Plywood to be 4'x8' sheets.

Note: All Connection Points to be Rigid.

NOTES:

1. Attachment of fence to trees to be preserved is not allowed.
2. Ensure fence is continuous and is located beyond the drip line of trees to be preserved.
3. Fencing to be installed prior to start of construction.
4. All supports and bracing should be inside the Tree Protection Zone. All such supports should minimize damaging roots outside the Tree Protection Barrier.
5. No Construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.



HEAVY DUTY TREE HOARDING PROTECTION DETAIL (PLYWOOD)

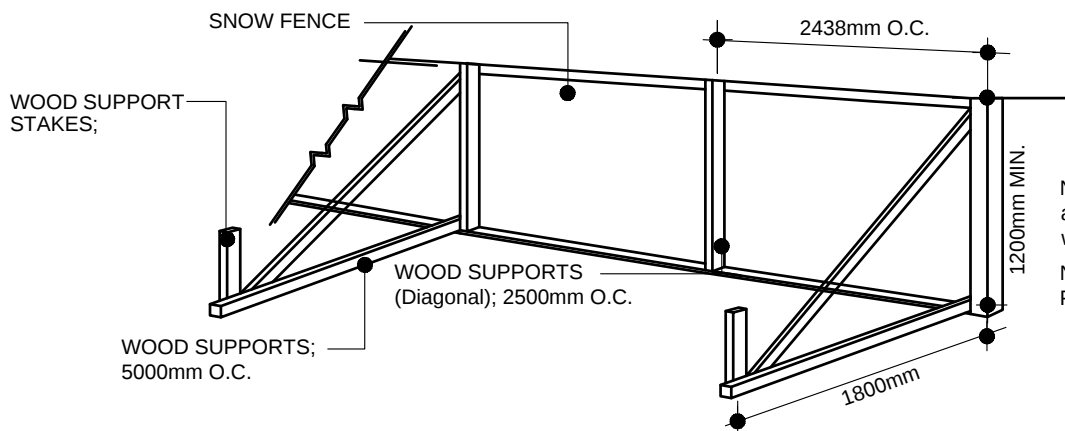
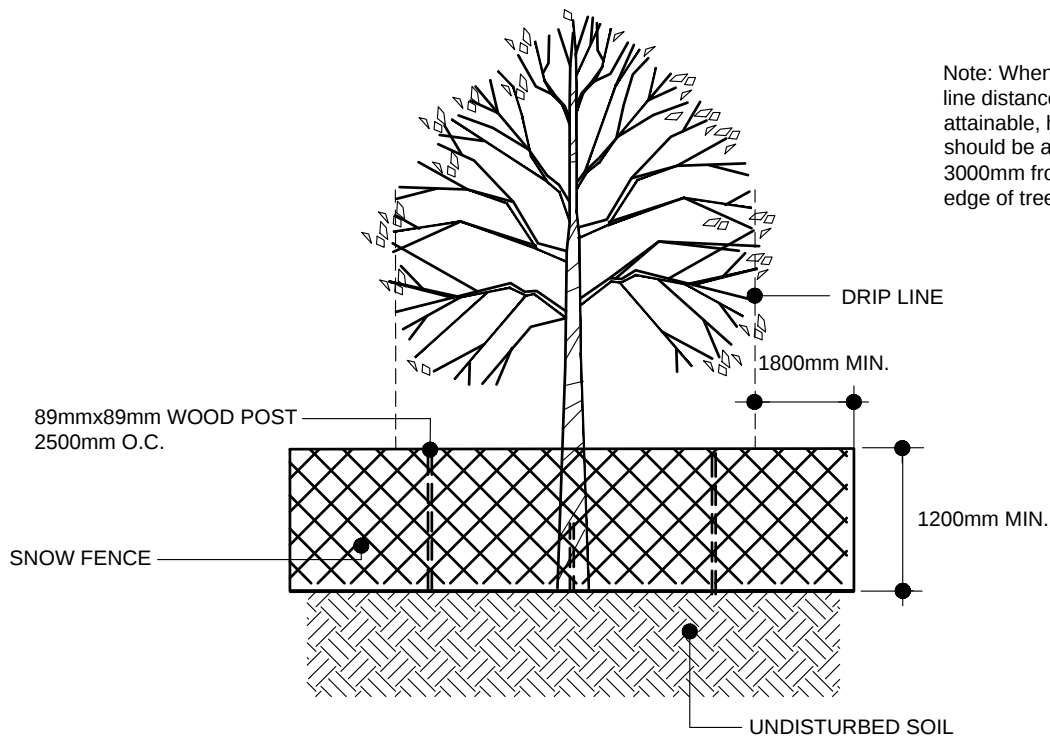
NOTE: THIS TYPICAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR PROFESSIONAL ENGINEER AS APPLICABLE.

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NOT TO SCALE DATE: 04 / 07 / 2016

STD. DWG. NO.

ULA 110A



Note: All Support Stakes and Hoarding Posts to be wood 2" x 4" member.

Note: All Connection Points to be Rigid.

NOTES:

1. Attachment of fence to trees to be preserved is not allowed.
2. Ensure fence is continuous and is located beyond the drip line of trees to be preserved.
3. Fencing to be installed prior to start of construction.
4. All supports and bracing should be inside the Tree Protection Zone. All such supports should minimize damaging roots outside the Tree Protection Barrier.
5. No Construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.



VAUGHAN

DEVELOPMENT PLANNING DEPT.
URBAN DESIGN DIVISION

LIGHT DUTY TREE HOARDING PROTECTION DETAIL (SNOW FENCE)

NOTE: THIS TYPICAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR PROFESSIONAL ENGINEER AS APPLICABLE.

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DATE: 04 / 07 / 2016

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ULA 110B









