

Arborist Report and Tree Preservation Plan

For:

LDGI

Regarding:

401-417 Martha Street Burlington

Prepared by:
Shayne Plowman
ISA Certified Arborist
ON-0425A

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Arborist Report and Tree Preservation Plan

LDGI
401 – 417 Martha Street, Burlington ON.

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SUMMARY

This project concerns the amalgamation of five properties along Martha Street in Burlington, and the demolition of the houses thereon, followed by the construction of an eleven-storey multi-unit residential building.

Client-owned Private Trees

The tree population on the combined site consists mostly of Ash, with one Norway Maple, one Black Walnut and a few small ornamentals. All the Ash are infested with Emerald Ash Borer (EAB) and are unsalvageable. The remaining trees are unremarkable in form or condition, having poor growth habit (lean) and much accumulated dead wood in the canopy. It is the opinion of this arborist that the site and its environs would benefit from the removal of the existing trees, and replanting with appropriate native species.

Neighbor-owned Private Trees

There is only one private tree on neighboring land, and although it is very close to the proposed build, it is physically separated, being on the upward side of a large retaining wall. Regardless of proximity, if this retaining wall remains intact there will be no damage to the root system of this tree. Some provision may be required for pruning, however.

Municipal Trees

Because of the nature and extent of the proposed construction, several Municipal trees – both along the road allowance, and in one case, within the Park to the north, will be compromised.

INTRODUCTION

Assignment

The arborist was retained in April 2020 to prepare an Arborist Report and Tree Preservation Plan for the properties located at 401 - 417 Martha Street for submission to Burlington Forestry Department as required by the City of Burlington tree protection by-laws.
The report is to include an inventory and location (tree survey) including rating and comments (where required) regarding the current Health and Soundness of each subject tree. Plan drawings showing proposed construction and tree preservation fencing.

Limits of the Assignment

Unless specifically noted, all trees are rated by Limited Visual Assessment (Ground-based), and no exploratory excavation was, or is to be, conducted to verify the presence or absence of tree roots in a given area.

Purpose and Use of This Report

This report is intended to outline all encroachments, tree injuries, and tree removals resulting from the proposed construction as outlined in subsequent sections. Additionally, this report shall outline and enumerate any needed tree

related Permits, for which the Client must apply to the City of Burlington. It should be noted that the waiver, exemption, or denial of Permits rests strictly with the relevant forestry jurisdiction.

Methodology

Location

Unless otherwise specified, this Tree Survey is based upon Land Survey drawings for tree locations. Where additional trees are located, by the arborist, the locations of these trees are approximate only, to within 30cm. This dilution of precision is sufficient for most Tree Preservation requirements but should not be used to determine ownership of the subject tree.

Measurements

The Tree Survey (inventory and location) will encompass any trees on the client site having a DBH of 10cm or greater; trees of any size on adjacent municipal lands and situated within 6m of the client site, or zone of construction; trees having a DBH of 10cm or greater on adjacent private lands and situated within 6m of the client site. Trunk diameters are measured using a diameter tape and rounded upwards to the nearest centimeter. In the case of a multi-stemmed tree, an effective DBH will be assigned according to the formulae required by Burlington Forestry Department
Canopy diameters are representative of the greatest distance from canopy edge to trunk, and should be accurate to ±50cm, unless otherwise specified.
Where applicable, Height (measured by clinometer), Trunk Lean (measured by angle protractor, with compass direction, and Canopy Offset, may also be recorded for some or all of the subject trees.

Condition

Unless otherwise specified, tree condition is determined by Limited Visual Assessment (ground based). Condition is determined, on site, as separate Health, and Structural score according to the following rating system:

Health of the tree is rated on a scale of 0 to 5 as follows:

0. Dead
1. Mostly Dead
2. Declining with Several Pathogens Present
3. Good Health with Major Problems or Poor Health with no Pathogens present
4. Good Health with Minor Problems
5. Excellent Health.

Soundness of the tree is rated on a scale of 0 to 5 as follows:

0. Collapsed
1. Structural Failure Imminent
2. Major Rot or Cavities
3. Rot Evident (not major) and No Cavities in Trunk
4. No Cavities. Some decay at branch stubs only.
5. No Visible Decay

Overall Condition Rating is the Harmonic Mean of the Health Rating and the Soundness Rating, expressed as a Percentage.

Drawings

Based upon the information obtained in the tree survey, the trees are to be plotted, to scale, overlaying a Site Plan drawing of the proposed construction. The drawing(s) will show, at minimum:
TPR-1xx series

- All surveyed trees, with Tree Number, Species, DBH, Minimum TPZ, and Canopy extents plotted.
- Any trees which are proposed to be removed.
- Any trees which will potentially be subject to Injury as a result of the proposed construction.
- Locations for prescribed Tree Protection Fencing.

TPR-9xx series

- Photo Reference Drawings, providing photo records of each tree.

SITE

Forestry Jurisdiction

For purposes of this Arborist Report and Tree Preservation Plan, the subject site falls entirely under the jurisdiction of The City of Burlington.

Current Site Characteristics

The combined sites (401-417 Martha Street) currently consist of 5 detached residential dwellings and one vacant lot – the last having been cleared prior to the arborist's involvement in this project.
The property is bounded on the south by a condominium/apartment (Martha Terrace), and to the north by a municipal park/trail (Centennial Bikeway). The property is bounded on the east (rear) by Rambo Creek.

Proposed Construction

The above 5 residential sites are proposed for and amalgamation of land into one parcel with the building of an 11-storey multi-residential building, with new landscaping including the planting of new trees.

Construction Phases and Anticipated Injury to Encroachment Ratios

Driveway

Encroachment Type: Asphalt Driveway
Benchmark: Local (Below or above local grade)
Initial Assumptions Regarding Proposed Work
Maximum Excavation Depth (m): 0.5
Maximum Build Height or Clearance (m): 0
Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 0.75
Canopy: 0

Municipal Sidewalk Refurbishment

Encroachment Type: Hard Landscaping
Benchmark: Local (Below or above local grade)
Initial Assumptions Regarding Proposed Work
Maximum Excavation Depth (m): 0
Maximum Build Height or Clearance (m): 0
Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 0.5
Canopy: 0

Foundation and Underground Parking

Encroachment Type: Full Foundation
Benchmark: Local (Below or above local grade)
Initial Assumptions Regarding Proposed Work
Maximum Excavation Depth (m): 15
Maximum Build Height or Clearance (m): 36
Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 1
Canopy: 1

Tree Population

Overview

Nineteen (19) trees were inventoried within the scope of this survey, all of which are deemed 'significant' for purposes of the City of Burlington Private Tree By-law (City of Burlington By-law 02-2020), or the City of Burlington Public Tree By-law (City of Burlington By-law 068-2013).
These trees fall solely under the jurisdiction of the above-named by-law(s). The following outlines the distribution of these significant trees according to their deemed ownership (location):

Client Tree	10
Municipal tree in Park or Naturalized Area	4
Municipal tree on Municipal Road Allowance	4
Neighbor owned tree	1

Species Distribution

Species distribution, average DBH, and count are as follows:

Norway Maple *(Acer platanoides)*	3	@AvDBH: 50.0cm
Sugar Maple *(Acer saccharinum)*	1	@AvDBH: 104.0
White Ash *(Fraxinus americana)*	6	@AvDBH: 34.0
Black Walnut *(Juglans nigra)*	4	@AvDBH: 47.0
White Mulberry *(Morus alba)*	2	@AvDBH: 22.0
Tree Lilac *(Syringa reticulata)*	2	@AvDBH: 13.0
Cedar *(Thuja occidentalis)*	2	@AvDBH: 10.0

TREE INVENTORY SUMMARY

There are Nineteen (19) trees of significant size (DBH of 10cm or greater) located on, or adjacent to the client site within the area of the Burlington Forestry Department, and within the scope of this project.
Of these:

The following sections list those trees of significant size which will incur encroachment or injury due to the proposed construction.

Trees Incurring Encroachment or Injury

LIST OF INJURED TREES WITH PERMIT REQUIREMENTS

Tree # Species Ownership	DBH (cm) Canopy Dia. (m)	Comments Regarding Injury	Permit Requirements
001 Norway Maple *(Acer platanoides)* Municipal Tree	63 cm 14 m	This tree will potentially incur a minor encroachment into its Critical Root Zone due to driveway excavation. No encroachment is anticipated to the Minimum Tree Protection Zone.	Injury (minor encroachment on CRZ only)
002 Norway Maple *(Acer platanoides)* Neighbor Tree	33 cm 10 m	This tree is isolated by a deep retaining wall along the property line. If this wall remains undisturbed there will be no actual encroachment on the root system (technical encroachment only). Some canopy pruning may be required however.	Injury (possible pruning required)
018 Black Walnut *(Juglans nigra)* Municipal Tree	74 cm 12 m	This tree will incur an encroachment upon its Minimum Tree Protection Zone due to excavation for the building. Additionally, some canopy pruning may be required to accommodate vertical clearance.	Injury (due to foundation excavation within MTPZ)

Please see subsequent section of this report for a detailed analysis of all of the above proposed injuries, as well as recommendations for the minimization of damages in these areas.

Trees Requiring Removal

This section lists all trees under the jurisdiction of City of Burlington Private and/or Public Tree By-laws which are scheduled, or recommended, for removal as a result of the proposed construction activities.
Trees located on Municipal land may be removed only with the consent of City of Burlington, and may be subject to additional fees at the discretion of, the Municipality.
Additionally, any tree requiring a Permit to Remove may be subject to a Tree Replacement Requirement specifying a number of replacement trees to be planted on the site, or in some case, 'cash-in-lieu' where such planting would be infeasible.

LIST OF TREE REMOVALS WITH PERMIT REQUIREMENTS

Tree # Species Ownership	DBH (cm) Canopy Dia. (m)	Comments Regarding Removal	Permit Requirements
003 White Cedar *(Thuja occidentalis)* Client Tree	10 cm 2.0 m	Within building footprint	Exempt (size)
004 White Ash *(Fraxinus americana)* Client Tree	26 cm 8.0 m	Within excavation allowance. Exemption requested due to Emerald Ash Borer.	Exemption Requested 02-2020 5.3(b) Terminal (EAB)
005 White Ash *(Fraxinus americana)* Client Tree	29 cm 8.0 m	Within excavation allowance. Exemption requested due to Emerald Ash Borer.	Exemption Requested 02-2020 5.3(b) Terminal (EAB)
006 White Ash *(Fraxinus americana)* Client Tree	30 cm 8.0 m	Outside of construction. Removal requested. Exemption requested due to Emerald Ash Borer.	Exemption Requested 02-2020 5.3(b) Terminal (EAB)
007 White Ash *(Fraxinus americana)* Client Tree	55 cm 6.0 m	Outside of construction. Removal requested. Exemption requested due to Emerald Ash Borer.	Exemption Requested 02-2020 5.3(b) Terminal (EAB)
008 White Ash *(Fraxinus americana)* Client Tree	51 cm 6.0 m	Outside of construction. Removal requested. Exemption requested due to Emerald Ash Borer.	Exemption Requested 02-2020 5.3(b) Terminal (EAB)
009 Norway Maple (*Acer platanoides)* Client Tree	54 cm 12.0 m	Leaning over creek and too near to excavation.	Permit to Remove
010 White Mulberry (*Morus alba)* Client Tree	18 cm 6.0 m	Within building footprint.	Exempt (size)
011 Japanese Tree Lilac *(Syringa reticulata)* Municipal tree on Municipal Road Allowance	9 cm 2.0 m	Within building/driveway footprint.	Request Permit to Remove Municipal Tree.

Tree # Species Ownership	DBH (cm) Canopy Dia. (m)	Comments Regarding Removal	Permit Requirements
012 Black Walnut (*Juglans nigra)* Client Tree	40 cm 14.0 m	Within building footprint.	Exemption Requested 02-2020 5.3(c) Within 2m of Occupied Building
013 Silver Maple *(Acer saccharinum)* Municipal tree on Municipal Road Allowance	104 cm 16.0 m	Within Excavation allowance and sidewalk refurbishment area.	Request Permit to Remove Municipal Tree.
014 White Ash *(Fraxinus americana)* Client Tree	13 cm 4.0 m	Within building footprint	Exemption Requested 02-2020 5.3(b) Terminal (EAB)
015 Japanese Tree Lilac *(Syringa reticulata)* Municipal tree on Municipal Road Allowance	17 cm 6.0 m	Within excavation allowance and sidewalk refurbishment area.	Request Permit to Remove Municipal Tree.
017 Black Walnut *(Juglans nigra)* Municipal tree in Park	40cm 8.0 m	Proximity to foundation excavation causes in excess of 30% injury within MTPZ.	Request Permit to Remove Municipal Tree.

ARBORIST COMMENTS AND ANALYSIS

Because of the nature of the proposed construction – a multi-unit residential building with underground parking – the tree population on the site cannot reasonably be preserved. Additionally, of the ten trees located on the client site, six are White Ash and are in various stages of decline due to Emerald Ash Borer. The remaining client-owned trees are will be located within, or in unreasonable proximity to, the excavation.

It is the opinion of this arborist that there are no trees located on the client property for which preservation is warranted. Instead, all efforts on this site should be placed towards replanting with good quality trees of species suitable to the City of Burlington.

Municipal Tree Removals

Likewise, it does not seem to be possible to retain the three (3) Municipal trees located along the Martha Street road allowance. Of these, two are relatively young Silk Lilac trees, which can easily be replaced.

Of concern is the large Silver Maple (Tree #009) located in front of #409 Martha Street. It is regrettable to have to remove this tree, but between the building excavation and the proposed sidewalk replacement, this root system of this tree will be completely compromised.

Additionally, one tree (Tree #017) in the Centennial Bikeway Park to the North appears to be on (or very near) the client property line. Given the extent of the excavation, this tree will likewise be compromised.

Both trees are in reasonable (Fair) condition, and there is no structural or health issues which would require their removal however, the construction will not allow for their retention.

It is entirely within the purview of the City of Burlington to stipulate the compensation requirements – replanting and/or monetary – for these two trees.

Tree Injuries – Municipal Trees

There are two (2) Municipally owned trees (#001 and #018) which will require work within their respective protected root zones.

Tree #001

In the case of Tree #001, the encroachment should be very minor (<3%), involving the creation of a driveway at the south end of the property. We do not anticipate and long-term detriment to the health or structural soundness of this tree. With that said, an Arborist should be present during any excavation in this area to ensure that no significant roots are damaged.

Tree #018

This tree will incur an encroachment of slightly less than 18% to its Minimum Tree Protection Zone due to excavation for the underground parking in this area.

Tree Injuries – Private Property Trees

There is one (1) Privately owned tree to the south of the client site (Tree #002). Because of its location beyond and atop a high retaining wall (on neighboring property), this tree will not incur any actual damage to its root system. Some pruning of this tree may be required however, to accommodate the above-grade portions of the proposed structure. We anticipate not more than 10% canopy loss as a result of this pruning.

ARBORIST MINIMZATION OF DAMAGE RECOMMENDATIONS

The following presents the recommendations for the minimization of damages during construction activities proposed to occur within protected root areas (MTPZ's and/or CRZ's) as discussed in the preceding sections of this report. Further, this section presents some recommendations for prior to construction commencement, as well as recommendations for post construction.

Pre-Construction Phase

Prior to the commencement of construction, tree preservation hoarding, as well as arboricultural work with regards to any removals and any required pruning for construction, should be implemented as follows:

1. All Tree Preservation Hoarding is to be erected and placed as per the location presented on the attached Tree Preservation Plan Drawing: TPR 101.
   Note: Tree Protection Hoarding must be installed upon approval of the tree preservation plan, and prior to release of the permits regarding tree injury. Upon approval of the Arborist Report and Tree Preservation Plan, and conditions of permit release being sent to the client, the hoarding is to be marked and erected.
2. Silt fencing is proposed to be installed on the site, as per the location on the provided site plan.
   Regarding Silt Fencing, it is the recommendation of this arborist that the silt fencing be placed following the tree protection hoarding areas on the construction side of the tree protection hoarding, as shown in the attached arborist drawing TPR-101.
   However, if it is determined by engineering that the silt fence must be placed in a tree protection zone area it is recommended that the silt fence not be dug in, but instead have a minimal amount of clear stone placed at the base. This will allow for the prevention of silt movement beyond the silt fence while preventing the need for digging in the silt fence base within tree protection zone areas.
3. All tree protection hoarding, and silt fencing, is to be inspected for correct construction and placement, as per the approved Tree Preservation Plan Drawing and Site Plan, by a Certified Arborist or other approved consultant (as approved by the City of Burlington), or by the City of Burlington Staff. If inspected by other than the City of Burlington staff, the consultant will provide written certification to the City that all protective hoarding and sediment control measures have been satisfactorily installed.
4. Any removal of trees, as approved and permitted by the City of Burlington should occur during this phase. No removals may occur until such time as tree removals permits have been released and are present on site.
5. Any pruning required is to be done by a Certified Arborist, or Certified Tree Worker, and is to be in accordance with proper and best arboricultural practices (ANSI A300). It is anticipated that any pruning required would only be to the branches of tree #002 requiring pruning of a minimal portion of canopy extent that comes close to the proposed building/excavation area. As such any pruning required is anticipated to be minimal.

Construction Phase

The following is recommended to be adhered to during the construction phase of the project, in order to minimize the damages to trees where an encroachment on a trees MTPZ or the CRZ is anticipated.

Minimization of Damage –Excavation Area for Foundation/Underground Parking Construction Impacting Tree #018

- A Certified Arborist as approved by the City of Burlington must be present to treat roots discovered within the areas of excavation that encroach upon the MTPZ or CRZ of trees to be preserved.
- The Zone of Construction/Excavation as shown on the attached Arborist Sketch TPR-101, must be strictly enforced. No excavation is allowed outside of the area shown as Zone of Construction/Demolition/Excavation on the attached Arborist Sketch TPR-101. The excavation allowance allotted for the dwelling foundation in this area is as follows:
    - An excavation allowance of 1.2m from the extent of the proposed foundation wall on the side of these trees has been allotted within this area of confliction with the protected root zone. This must be strictly adhered to. Any reduction in this allowance will reduce impact, and is recommend
- Excavation activities for the foundation/underground parking construction within the area of the protected root zone confliction is to be conducted with care using excavation equipment. It is the recommendation of this arborist that the initial 1m of excavation depth be done using light equipment under the direct supervision of the on-site arborist, in order to expose roots for proper root assessment, severance, and treatment.
- Any roots discovered within the excavation area must be cut cleanly by the on-site arborist and protected as well as possible from dehydration while exposed.
- No roots of significant structural size (8cm dia. or greater) or significant structural masses of smaller roots (as discerned by the on-site arborist) are to be severed. If such roots are found and require severance, they must first be assessed by the on-site arborist to ensure stability of the specimen will not be compromised.
- Any construction aggregate used must be of neutral pH, so as not to alter the pH of the surrounding existing site soil.
- Any fill soil (back fill) used should be of high quality and should be of approximately the same texture as the site soil. Further, this soil should be placed in direct contact with the existing site soil wherever possible.
- If construction is to occur during the summer months, provisions must be made to supply adequate watering in the absence of regular rainfall levels

Minimization of Damage – Driveway Construction (Road Allowance Portion)

- A Certified Arborist, as approved by the City of Burlington must be present to assess and treat any roots discovered during the excavation activities required for the driveway entrance construction in the area of Tree #001's protection zone encroachment
- The Zone of Construction, as shown on the attached arborist drawing TPR 101, for the proposed driveway area must be strictly adhered to. An allowance for excavation/construction of the driveway of 0.15m (15cm) has been allotted in the areas of the protected root zone encroachment.
- Excavation activities in the areas of protected root zone confliction are to be conducted using hand/light equipment only in this area. This excavation must be kept to the minimum depth required for a stable driveway foundation.
- During excavation of the driveway area, efforts should be made to preserve roots of size (greater than fibrous/feeder) discovered in the area of the protected root zone encroachment. This will require careful excavation of the driveway area to ensure no damage occurs to those roots at the bottom of the excavation depth. Where these roots are preserved, construction aggregate should be placed on top of and surrounding these roots, and the driveway surface constructed on top. Although this will present a compaction impact to preserved roots (as well as those below the excavation depth), this will be preferable to root severance, and present less overall impact.
- A Certified Arborist shall be present to assess and treat any roots discovered during the excavation activities. This will ensure any root cuts that are required are properly made, and that all cut roots exposed are protected from desiccation where exposed for prolonged periods.
- No roots of significant structural size, or significant structural masses of smaller roots (as discerned by the on-site arborist) are to be severed. If such roots are found and require severance, they must first be assessed by the on-site arborist to ensure stability of the specimen will not be compromised.
- Any construction aggregate used must be of neutral pH, so as not to alter the adjacent soil pH through leaching of minerals over time
- If construction is to occur during the summer months' provisions must be made to supply adequate watering.

Post-Construction

Upon completion of the construction on the site, it is recommended that the following be undertaken to promote health and vigor of trees on the site as they recover from construction impacts.

1. Upon completion of construction and approval of such from the City of Burlington, tree protection hoarding may be removed from the site.
2. Areas proposed for finish grading in preparation for turf installation/garden bed/plant installation is to occur. In regard to this finish grading work and soft landscaping the following is recommended:
    a. Finish Grading/Soft Landscaping is not to commence until all aspects of primary construction, landscape construction, and swale/berm creation (including access) are completed.
    b. Upon completion of the construction phases, with the only phase remaining being that of the finish grading and soft landscaping (planting/installation of turf grass), the tree protection hoarding may be removed to allow for finish grading/soft landscaping in these areas to occur.
    c. All finish grading/soft landscaping in areas of protected root zones should be done using hand equipment only.
    d. All finish grading/soft landscaping in areas of tree protection zones should be done by foot access only
3. Compensation Tree Plantings, where required for tree removals, and as per the approved Compensation Planting Plan, are to be conducted. Any tree/shrub planting should be conducted in the next planting season post construction completion as follows:
    a. If construction completion occurs in the fall/winter, compensation planting is recommended to occur in the first spring season post completion.
    b. If construction completion occurs in the spring/summer, compensation planting is recommended to occur in the first fall season post construction completion.
4. Post construction monitoring of trees impacted by the construction and preserved is recommended to be done by a qualified professional (Certified Arborist, Registered Professional Forester, Horticulturist, Botanist) semiannually, with visits in the mid-spring, and mid to late summer. Special attention should be paid to the recovery, growth rate, and health of trees recovering from construction encroachments, with recommendations made where required regarding continued maintenance.

GENERAL TREE PROTECTION GUIDELINES

Except as specifically stated in this report, all tree protection policies and zones are to be maintained in accordance with City of Burlington Tree Protection Policy and Specifications. A copy of this document is included as an Appendix to this report. There are trees situated on City property within the scope of this project (which includes all areas within 10m of the construction envelope). One of these trees is proposed for removal as discussed in a preceding section of this report.

Tree Protection Zones

All tree protection zones are to be implemented as shown in the arborist drawing. Tree protection barriers are shown and to be constructed not closer than specified in the table: Appendix I – Tree Inventory – (Minimum TPZ radius). Where practicable (and this cannot be anticipated in the drawing phase), these barriers may be increased in size up to the Recommended TPZ radius as described in that same table.

No construction activity including grade changes, surface treatments or excavations of any kind is permitted within the area identified on the plan as a Tree Protection Zone (TPZ). No root cutting is permitted. No storage of materials or fill is permitted within the TPZ. The areas identified as Tree Protection Zones must remain undisturbed at all times.

Tree Protection Barriers

Tree protection barriers should be constructed of solid plywood or equivalent, to a height of 1.2m around the front and sides of the construction envelope. In areas where visibility is of concern poly fencing may be used as a suitable tree protection-hoarding substitute. This will provide adequate tree protection while allowing for ample visibility.

All tree protection hoarding must be erected as shown in the attached arborist sketch TPR – 101.

General Note

Prior to the commencement of any site activity the tree protection barriers specified herein must be installed and written notice provided to City of Burlington. The tree protection barriers must remain in effective condition until all site activities including landscaping are complete. A sign as specified in Tree Protection Policy and Specification for Construction Near Trees must be attached to all sides of the barrier and at regular intervals for lengthy barriers. Written notice must be provided to Burlington Forestry Department prior to the removal of the tree protection barriers.

Arboricultural Work

Any roots or branches extending beyond the tree protection zones indicated in this report and its associated drawings, which require pruning, must be pruned by a Qualified Arborist or other tree professional as approved by Burlington Forestry Department. All pruning of tree roots and branches must be in accordance with good arboricultural standards. The Arborist must contact the Burlington Forestry Department no less than 48 hours prior to conducting any specified work.

APPENDIX I – TREE INVENTORY AND SUMMARY TABLES

Tree Inventory

Tree Num / Owner	Botanical/ Common Name	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max Taper (M)	TPZ Radius (M) MTPZ	TPZ Radius (M) CRZ	Condition: Health	Condition: Soundness	Condition: Condition % Overall	Comments – Condition Related / Comments – Construction Related	Construction / Demolition / Access Phase	Minimum Distance From Phase (M)	TPZ Encroachment (Area/Area) MTPZ	TPZ Encroachment (Area/Area) CRZ	Anticipated Injury From Encroachment % MTPZ	Anticipated Injury From Encroachment % CRZ	Status / Permits
001	Acer platanoides Norway Maple	63		14.0	3.0	4.52	7.31	4	2	53%	Cavity in trunk, interior likely hollow. Decay in branches.	Driveway	6.0		3.8%		2.8%	Injure (significant size)
	Municipal tree on Municipal Road Allowance										Driveway excavations encroach upon the CRZ to a very small degree.	Foundation and Underground Parking	6.8		0.0%		0.0%	Injure
												Totals:			3.8%		2.8%	
002	Acer platanoides Norway Maple	33		10.0	2.1	2.57	4.16	4	4	80%	Tree root system is protected by a large retaining wall. If this wall remains undisturbed there will be no actual encroachment or injury to the root system. Some injury may be required for pruning to accommodate above-ground structures.	Foundation and Underground Parking	2.2	4.1%	23.7%	0.0%	0.0%	Injure (significant size)
	Neighbor owned tree											• *No impact to MTPZ or CRZ due to presence of retaining wall to remain intact. Technical Encroachment Only* • *Some pruning may be required (>10% of total canopy anticipated)*						Injure
003	Thuja occidentalis White Cedar	10		2.0	1.2	1.85	1.85	4	4	80%	Hedge of 6 trees	Foundation and Underground Parking	1.1	16.7%		16.7%		Remove (not significant size - within zone)
	Client Tree										Within building footprint	Totals:		16.7%	0.0%	16.7%	0.0%	
																		Exempt - Size
004	Fraxinus americana White Ash	26		8.0	1.9	2.53	4.13	1	1	20%	EAB - dead or dying.	Foundation and Underground Parking	0.8	32.3%	38.7%	32.3%	38.7%	Remove (health or soundness)
	Client Tree										Within excavation allowance. Exemption requested due to Emerald Ash Borer.	Totals:		32.3%	38.7%	32.3%	38.7%	
																		Remove – Fee Exemption requested

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max Taper (M)	TPZ Radius (M)		Condition			Comments – Condition Related / Comments – Construction Related	Construction / Demolition / Access Phase	Minimum Distance From Phase (M)	TPZ Encroachment (Area/Area)		Anticipated Injury From Encroachment %		Status / Permits
						MTPZ	CRZ	Health	Soundness	Condition % Overall				MTPZ	CRZ	MTPZ	CRZ	
005	Fraxinus americana White Ash	29		8.0	2.0	2.55	4.15	1	1	20%	EAB - dead or dying.	Foundation and Underground Parking	0.7	33.4%	39.3%	33.4%	39.3%	Remove (health or soundness)
	Client Tree										Within excavation allowance. Exemption requested due to Emerald Ash Borer.	Totals:		33.4%	39.3%	33.4%	39.3%	Remove – Fee Exemption requested
006	Fraxinus americana White Ash	30		8.0	2.0	2.55	4.15	1	1	20%	(formerly not numbered) EAB - dead or dying.	Foundation and Underground Parking	3.1		2.0%		2.0%	Remove (health or soundness)
	Client Tree										Outside of construction. Removal requested. Exemption requested due to Emerald Ash Borer.	Totals:		0.0%	2.0%	0.0%	2.0%	Remove – Fee Exemption requested
007	Fraxinus americana White Ash	55		6.0	2.8	3.88	6.28	1	1	20%	EAB - dead or dying.	Foundation and Underground Parking	2.4	12.1%	5.4%	12.1%	5.4%	Remove (health or soundness)
	Client Tree										Outside of construction. Removal requested. Exemption requested due to Emerald Ash Borer.	Totals:		12.1%	5.4%	12.1%	5.4%	Remove – Fee Exemption requested
008	Fraxinus americana White Ash	51		6.0	2.7	3.86	6.26	1	1	20%	EAB - dead or dying.	Foundation and Underground Parking	1.4	27.7%	21.7%	27.7%	21.7%	Remove (health or soundness)
	Client Tree										Outside of construction. Removal requested. Exemption requested due to Emerald Ash Borer.	Totals:		27.7%	21.7%	27.7%	21.7%	Remove – Fee Exemption requested
009	Acer platanoides Norway Maple	54		12.0	2.7	3.87	6.27	4	3	69%	Canopy decay and deadwood.	Foundation and Underground Parking	3.2	4.4%	17.9%	4.4%	17.9%	Remove (health or soundness)
	Client Tree										Leaning over creek and too near to excavation.	Totals:		4.4%	17.9%	4.4%	17.9%	Remove
010	Morus alba White Mulberry	18		6.0	1.6	2.49	4.09	4	3	69%		Foundation and Underground Parking	0.0	100.0%	100.0%	100.0%	100.0%	Remove (within zone of construction)
	Client Tree										Within building footprint.	Totals:		100.0%	100.0%	100.0%	100.0%	Remove

Tree Num	Botanical/ Common Name Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max Taper (M)	TPZ Radius (M)		Condition			Comments – Condition Related Comments – Construction Related	Construction / Demolition / Access Phase	Minimum Distance From Phase (M)	TPZ Encroachment (Area/Area)		Anticipated Injury From Encroachment %		Status Permits
						MTPZ	CRZ	Health	Soundness	Condition % Overall				MTPZ	CRZ	MTPZ	CRZ	
011	Syringa reticulata Japanese Tree Lilac Municipal tree on Municipal Road Allowance	9		2.0	1.1	1.85	1.85	4	4	80%	(formerly tree #012) Within proposed driveway.	Driveway	0.0	55.4%	59.9%	41.6%	0.0%	Remove (within zone of construction) Remove – Municipal Tree
												Foundation and Underground Parking	0.2	44.5%	39.9%	44.5%	39.9%	
												Totals:		99.9%	99.9%	86.1%	39.9%	
012	Juglans nigra Black Walnut Client Tree	40		14.0	2.4	2.60	4.20	3	3	60%	(formerly tree #013) Deadwood in canopy. Within building footprint.	Foundation and Underground Parking	0.0	100.0%	100.0%	100.0%	100.0%	Remove (within zone of construction) Remove
												Totals:		100.0%	100.0%	100.0%	100.0%	
013	Acer saccharinum Silver Maple Municipal tree on Municipal Road Allowance	104		16.0	3.8	6.76	10.5	2	2	40%	(formerly tree #030) Advanced decay and cavity. Within Excavation allowance and sidewalk refurbishment area.	Foundation and Underground Parking	0.0	60.0%	58.5%	60.0%	58.5%	Remove (within zone of construction) Remove – Municipal Tree
												Municipal Sidewalk Refurbishment	1.1	24.0%	20.8%	12.0%	0.0%	
												Totals:		84.1%	79.3%	72.0%	58.5%	
014	Fraxinus americana White Ash Client Tree	13		4.0	1.3	2.47	4.07	3	3	60%	(formerly tree #031) Growing through/in barrel-stave pot. Within building footprint	Foundation and Underground Parking	0.0	100.0%	100.0%	100.0%	100.0%	Remove (within zone of construction) Remove – Fee Exemption requested
												Totals:		100.0%	100.0%	100.0%	100.0%	
015	Syringa reticulata Japanese Tree Lilac Municipal tree on Municipal Road Allowance	17		6.0	1.5	2.49	4.09	4	4	80%	(formerly tree #044) Within excavation allowance and sidewalk refurbishment area.	Foundation and Underground Parking	0.0	63.6%	61.3%	63.6%	61.3%	Remove (within zone of construction) Remove – Municipal Tree
												Municipal Sidewalk Refurbishment	0.6	36.4%	38.7%	18.2%	0.0%	
												Totals:		100.0%	100.0%	81.8%	61.3%	
016	Juglans nigra Black Walnut Municipal tree in Park or Naturalized Area	34		6.0	2.2	2.57	4.17	3	3	60%	(formerly tree #040)	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None

Tree Num	Botanical/ Common Name Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max Taper (M)	TPZ Radius (M)		Condition			Comments – Condition Related Comments – Construction Related	Construction / Demolition / Access Phase	Minimum Distance From Phase (M)	TPZ Encroachment (Area/Area)		Anticipated Injury From Encroachment %		Status Permits
						MTPZ	CRZ	Health	Soundness	Condition % Overall				MTPZ	CRZ	MTPZ	CRZ	
017	Juglans nigra Black Walnut Municipal tree in Park or Naturalized Area	40		8.0	2.4	2.60	4.20	3	3	60%	(formerly tree #041)	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Remove (within zone of construction) Remove – Municipal Tree
018	Juglans nigra Black Walnut Municipal tree in Park or Naturalized Area	74		12.0	3.2	5.17	8.37	3	3	60%	(formerly tree #042) The canopy of this tree is very close to existing power lines. Foundation excavation within the Minimum TPZ of this tree. Arborist must be present during excavation to document and cut cleanly, any roots discovered.	Municipal Sidewalk Refurbishment	4.2	1.3%	2.9%	0.6%	0.1%	Injured (minor encroachment on BTPZ) Injure – Municipal Tree.
												Foundation and Underground Parking	2.7	17.3%	19.6%	17.3%	3.9%	
019	Morus alba White Mulberry Municipal tree in Park or Naturalized Area	26		6.0	1.9	2.53	4.13	3	3	60%	(formerly tree #043) Essentially growing out of the base of #017	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None

APPENDIX X – ARBORIST'S DECLARATIONS

This report represents a fair and accurate assessment of the number, type, size, and condition of the tree(s) on the aforementioned property.

Certificate of Performance

I, Shayne Plowman, certify that:

- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately. The extent of the evaluation or appraisal is stated in the attached report and the Terms of Assignment.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within this report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.
- I further certify that I am a member in good standing of the International Society of Arboriculture, and that I carry the designation of ISA Certified Arborist ON-0425A. I have been involved in the field of Arboriculture in a full-time capacity for a period of more than 30 years.



Shayne Plowman
ISA Certified Arborist
ON-0425A

6 May 2020

Assumptions and Limiting Conditions

- Any legal description provided to the consultant is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
- Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
- The consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
- Loss or alteration of any part of this report invalidates the entire report.
- Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written consent or verbal consent of the consultant.
- Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designations conferred upon the consultant as stated in his qualifications.
- This report and values expressed herein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
- Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
- Unless expressed otherwise:
    1. Information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and
    2. The inspection is limited to visual examination of accessible items without dissection, excavation, probing or cutting.
    3. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

Disclaimer

This report is based upon Land Survey drawings (with tree locations marked) provided by the client and prepared by a professional Land Surveyor. No grading information was provided at the time of preparation of this report.
The arborist is not a professional Land Surveyor, and as such can make no claim as to the accuracy of the provided drawings.

6 May 2020



Shayne Plowman
ISA Certified Arborist
ON-0425A

Private Tree Permit Application

Subject Property **401-417 Martha Street** **Application Date**

Applicant Information

Tree Information

Existing Tree Information							Condition Factors		Replacement Tree Information		
Tree No.	Common Name	DBH (cm)	Condition Rating (%)		Avg Condition Rating (Health & Structure)	Comments	Injury/ Removal	Injury Factor (%) (See Below)[1]	Total cm to Replace[2]	# of 30 mm trees required[3]	Compensation Value[4]
			Health	Structure							
1	Norway Maple †	63	80%	40%	60%	CRZ ONLY D/T DRIVEWAY	Injury	26%	10	1	$ 400.00
2	Norway Maple	33	80%	80%	80%	Up side of Retaining wall	Injury	10%	3	0	$ -
3	Cedar Hedge	10	80%	80%	80%	Exempt - small size	Removal	100%	8	1	$ 400.00
4	White Ash	26	20%	20%	20%	Exempt - Em. Ash Borer	Removal	100%	5	1	$ 400.00
5	White Ash	29	20%	20%	20%	Exempt - Em. Ash Borer	Removal	100%	6	1	$ 400.00
6	White Ash	30	20%	20%	20%	Exempt - Em. Ash Borer	Removal	100%	6	1	$ 400.00
7	White Ash	55	20%	20%	20%	Exempt - Em. Ash Borer	Removal	100%	11	1	$ 400.00
8	White Ash	51	20%	20%	20%	Exempt - Em. Ash Borer	Removal	100%	10	1	$ 400.00
9	Norway Maple	54	80%	60%	70%	Too near excavation	Removal	100%	38	4	$ 1,600.00
10	White Mulberry	18	80%	60%	70%	Within excvavation	Removal	100%	13	1	$ 400.00
11	Japanese Tree Lilac †	9	80%	80%	80%	Within excvavation	Removal	100%	7	1	$ 400.00
12	Black Walnut	40	60%	60%	60%	Within excvavation	Removal	100%	24	2	$ 800.00
13	Silver Maple †	104	40%	40%	40%	Within excvavation	Removal	100%	42	4	$ 1,600.00
14	White Ash	13	60%	60%	60%	Within excvavation	Removal	100%	8	1	$ 400.00
15	Japanese Tree Lilac †	17	80%	80%	80%	Within excvavation	Removal	100%	14	1	$ 400.00
16	Black Walnut †	34	60%	60%	60%	Protected		0%	0	0	$ -
17	Black Walnut †	40	60%	60%	60%	Too near excavation	Removal	100%	24	2	$ 800.00
18	Black Walnut †	74	60%	60%	60%	MTPZ DUE TO EXCAVATION	Injury	80%	36	4	$ 1,600.00
19	White Mulberry †	26	60%	60%	60%	Protected		0%	0	0	$ -
20					0%			0%	0	0	$ -
21					0%			0%	0	0	$ -
22					0%			0%	0	0	$ -
23					0%			0%	0	0	$ -
24					0%			0%	0	0	$ -
25					0%			0%	0	0	$ -
26					0%			0%	0	0	$ -
27					0%			0%	0	0	$ -
28					0%			0%	0	0	$ -
29					0%			0%	0	0	$ -
30					0%			0%	0	0	$ -

† Municipal Tree on Road Allowance or in Park - Removal at discretion of City of Burlington.

Total $ 10,800.00

Notes:

1. Removal Considered 100% Injury Factor
2. DBH (cm) X Avg. Condition Rating X Injury Factor
3. Total cm to replace / 10cm = # of trees req. to replace
4. # of trees req. to replace X $400 (cost of replacement)

*Security is rounded to the nearest $100.

**Security Spreadsheet used at risk 100% for removals.

Tree Condition Considerations

Based on Tree Condition Assessment in GIS Inventory and Observations during Site Visit

Rating:	Factor:
Excellent	90-100%
Good	70-89%
Fair	50-69%
Poor	25-49%
Very Poor	0-24%

Injury Factor

Construction risk to trees
is assessed by
considering the following

Low Risk Factor (0-25% of Assessed Value):
- No work inside TPZ or CRZ (including grading, excavation, servicing, etc);
- No risk from construction traffic in CRZ;
- Hoarding shown on plan and installed as per SS12.
- Sliding scale based on proximity of tree (TPZ and CRZ) to construction area.

Medium Risk Factor (26-50% of Assessed Value):
- No work inside TPZ (including grading, excavation, servicing, etc);
- Minimal work occurring within the CRZ (impacting less than 10% of the CRZ area, including grading, excavation, servicing, etc)*;
- Risk from construction traffic/works within CRZ*;
- Hoarding shown on plan and installed as per SS12.

Medium-High Risk Factor (51-75% of Assessed Value):
- No work inside TPZ (including grading, excavation, servicing, etc);
- Work occurring within CRZ (impacting more than 10% of the CRZ including grading, excavation, servicing, etc)*;
- Risk from construction traffic/works within CRZ*;
- Arborist report not required but provided;
- Hoarding shown on plan and installed as per SS12.

High Risk Factor (76-100% of Assessed Value):
- Work inside TPZ (including grading, excavation, servicing, etc; only occurring under supervision of qualified ISA Certified Arborist
- Risk from construction traffic/works within TPZ and CRZ*;
- Arborist report required and provided;
- Hoarding shown on plan and installed outside of SS12 specification, with confirmation from City Arborist or Applicant's Certified Arborist.
- Tree removal is considered 100%

*Injury factors can be reduced through use of mitigating actions (eg. Greater tree hoarding area to encompass remaining CRZ; Pre-Construction Root Pruning in the CRZ performed under the supervision of a Certified Arborist; Providing 2-4" of mulch placed on a geotextile sheet to protect soils in the CRZ from compaction caused by construction equipment and material storage).

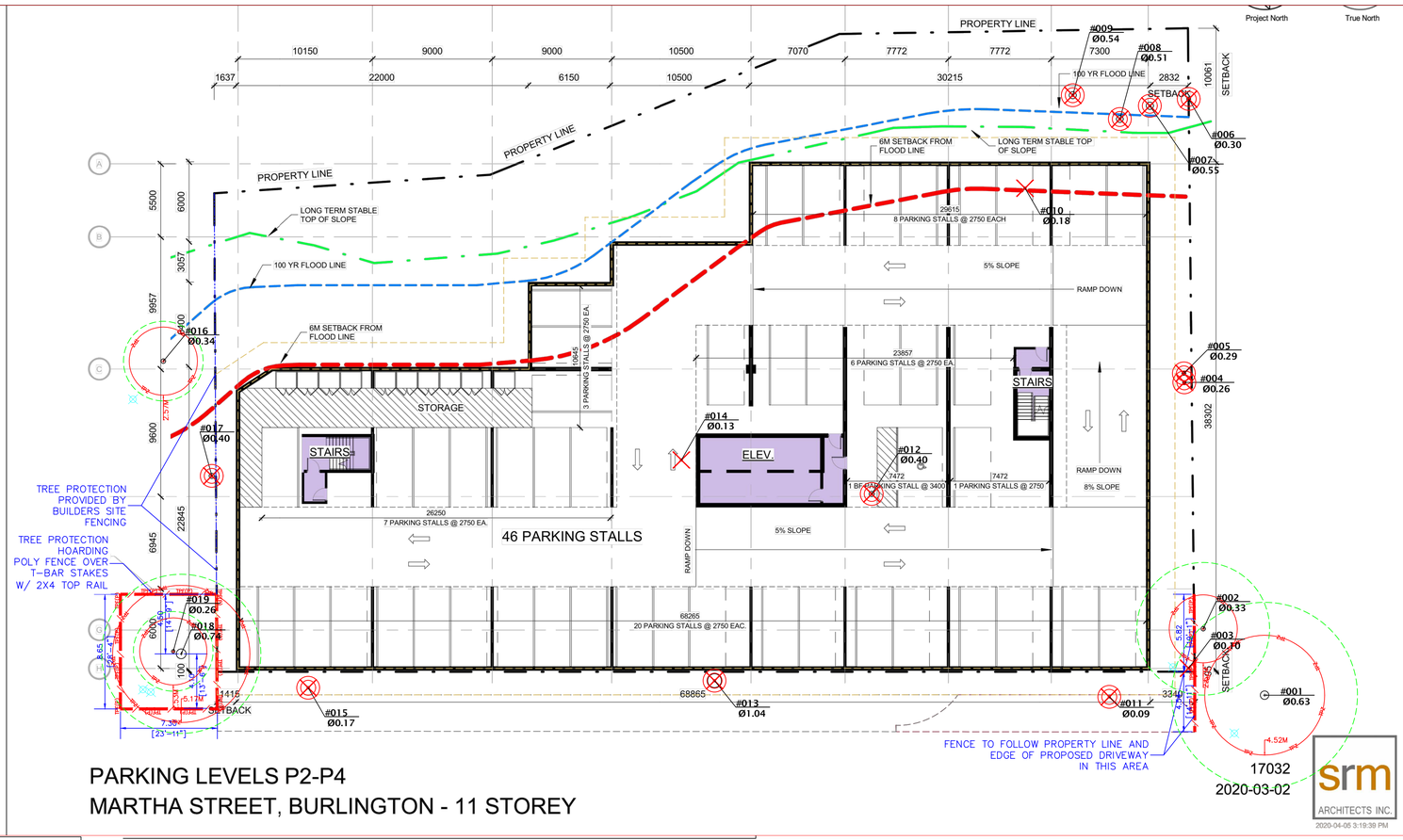
CRZ – Critical Root Zone
MTPZ – Minimum Tree Protection Zone
Injury
Removal

ARBORIST DRAWING – LEGEND

- MINIMUM TREE PROTECTION ZONE (TREE BYLAW)
- CANOPY LIMIT
- TREE PROTECTION FENCE – (POLY MESH) – MIN 1.2M HT PRIMARY CONSTRUCTION (EXCAVATION) PHASE
- TREE PROTECTION FENCE – (POLY MESH) – MIN 1.2M HT SECONDARY CONSTRUCTION (HARDSCAPE) PHASE ONLY
- TREE PROTECTION FENCE (POLY) 1.2M HT
- BUILDER INSTALLED MODU-LOCK TYPE FENCE (~2M HT)
- BUILDER INSTALLED WOOD FRAME FENCE (1.2M HT)
- ZONE OF CONSTRUCTION / DEMOLITION / EXCAVATION
- AREA OF TREE PROTECTION ZONE ENCROACHMENT EXCAVATION WHICH MAY REQUIRE ROOT PRUNING. ARBORIST MUST BE PRESENT DURING ANY EXCAVATION IN THESE AREAS. HAND EQUIPMENT ONLY.
- TREE PROTECTION ZONE

TREE BLOCK SYMBOLS

- TREE TO BE PRESERVED/RETAINED
- CANOPY EXTENT
- # Ø0.20 DBH (TRUNK DIAMETER AT 1.4M ABOVE GRADE)
- MINIMUM TREE PROTECTION ZONE RADIUS
- # Ø0.20 TREE TO BE REMOVED PERMIT REQUIRED
- # Ø0.20 TREE TO BE REMOVED NO PERMIT REQUIRED/SMALL SIZE
- TREE DOES NOT EXIST OR PREVIOUSLY REMOVED

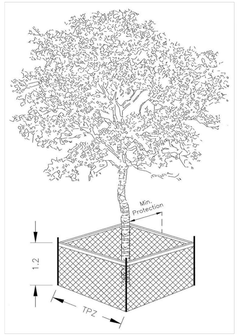


PARKING LEVELS P2-P4
MARTHA STREET, BURLINGTON - 11 STOREY

17032
2020-03-02

srm ARCHITECTS INC.
2020-04-05 3:19:39 PM

Tree Protection and Preservation Specification No.: SS12A



Detail TP-1 – Tree Protection Detail.

Trunk Diameter (DBH) [2]	Minimum Tree Protection Zone (MTPZ) Distances Required [3]	Critical Root Zone (CRZ) Distances Required [3&4]
< 10 cm	1.8 m	1.8 m
11 - 40 cm	2.4 m	4.0 m
41 - 50 cm	3.0 m	5.0 m
51 - 60 cm	3.6 m	6.0 m
61 - 70 cm	4.2 m	7.0 m
71 - 80 cm	4.8 m	8.0 m
81 - 90 cm	5.4 m	9.0 m
91 - 100+ cm	6.0 m	10.0 m

NOTES:

[1] The roots of a tree can extend from the trunk to approximately 2-3 times the distance of the drip line.
[2] Diameter at breast height (DBH) is the measurement of tree trunk taken at 1.4 metres above ground.
[3] Minimum Tree Protection Zone and Critical Root Zone distances are to be measured from the outside edge of the tree base towards the drip line and may be limited by an existing paved surface, provided the existing paved surface remains intact throughout the construction work and is subject to Section 6 of this specification.
[4] Where work is being performed beyond the Minimum Tree Protection Zone but within the Critical Root Zone the works are subject to Section 8 of this specification.

TREE PROTECTION BARRIER

1. The required barrier is a 1.2 metre (4 ft) high orange plastic web snow fencing on 2" x 4" frame. Where orange plastic web snow fencing crentes a restriction to sightlines, page wire fencing with reflective tape can be used.
2. Tree protection barriers are to be erected prior to the commencement of any construction or grading activities on the site and are to remain in place throughout the entire duration of the project. The barriers shall be maintained erect and in good repair throughout the duration of construction operations with breaks and unsupported sections repaired immediately. Tree protection may be not be removed prior to the completion of construction without written authorization from the City Arborist.
3. All supports and bracing used to safely secure the barrier should be located outside the MTPZ. All supports and bracing should minimize damage to roots.
4. Where some fill or excavated material must be temporarily located near a MTPZ, a wooden barrier with silt fencing must be used to ensure no material enters the MTPZ.
5. No materials or fill may be stored within the MTPZ.
6. Equipment or vehicles shall not be operated, parked, repaired, or refueled within the MTPZ.
7. No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the MTPZ without written authorization from the City Arborist.
8. A laminated Minimum Tree Protection Zone sign (See Detail TP-3 – Minimum Tree Protection Zone Sign) must be attached to the side of the Tree Protection where it will be visible by persons entering the site. Minimum size must be 10"x14".

TREE INVENTORY TABLE

TREE #	SPECIES		DBH	CONDITION	OWNERSHIP	ACTION	REASON
	COMMON NAME	BOTANICAL NAME	(cm)	(%)			
001	NORWAY MAPLE	ACER PLATANOIDES	63	53	MUNICIPAL	iNJURE	MINOR ENCROACHMENT TO CRZ
002	NORWAY MAPLE	ACER PLATANOIDES	33	80	NEIGHBOR	PRESERVE	PROTECTED BY RETAINING WALL
003	WHITE CEDAR	THUJA OCCIDENTALIS	10	80	CLIENT	REMOVE	WITHIN BUILDING FOOTPRINT
004	WHITE ASH	FRAXINUS AMERICANA	26	20	CLIENT	REMOVE	EAB + WITHIN EXCAVATION ALLOWANCE
005	WHITE ASH	FRAXINUS AMERICANA	29	20	CLIENT	REMOVE	EAB + WITHIN EXCAVATION ALLOWANCE
006	WHITE ASH	FRAXINUS AMERICANA	30	20	CLIENT	REMOVE	EAB
007	WHITE ASH	FRAXINUS AMERICANA	55	20	CLIENT	REMOVE	EAB
008	WHITE ASH	FRAXINUS AMERICANA	51	20	CLIENT	REMOVE	EAB
009	NORWAY MAPLE	ACER PLATANOIDES	54	68	CLIENT	REMOVE	LEANING + TOO NEAR TO EXCAVATION
010	WHITE MULBERRY	MORUS ALBA	18	68	CLIENT	REMOVE	WITHIN BUILDING FOOTPRINT
011	TREE LILAC	SYRINGA RETICULATA	9	80	MUNICIPAL	REMOVE	WITHIN DRIVEWAY
012	BLACK WALNUT	JUGLANS NIGRA	40	59	CLIENT	REMOVE	WITHIN BUILDING FOOTPRINT
013	SILVER MAPLE	ACER SACCHARINUM	104	40	MUNICIPAL	REMOVE	BORDERING ON EXCAVATION ALLOWANCE
014	WHITE ASH	FRAXINUS AMERICANA	13	59	CLIENT	REMOVE	WITHIN BUILDING FOOTPRINT
015	TREE LILAC	SYRINGA RETICULATA	17	80	MUNICIPAL	REMOVE	
016	BLACK WALNUT	JUGLANS NIGRA	34	59	MUNICIPAL	PRESERVE	
017	BLACK WALNUT	JUGLANS NIGRA	40	59	MUNICIPAL	REMOVE	TOO NEAR EXCAVATION
018	BLACK WALNUT	JUGLANS NIGRA	74	59	MUNICIPAL	iNJURE	ENCROACHMENT ON MTPZ (EXCAVATION)
019	WHITE MULBERRY	MORUS ALBA	26	59	MUNICIPAL	PRESERVE	

General Notes

TREE PROTECTION PLAN NOTES

PRIOR TO SITE DISTURBANCE THE OWNER MUST CONFIRM THAT NO MIGRATORY BIRDS ARE MAKING USE OF THE SITE FOR NESTING. THE OWNER MUST ENSURE THAT THE WORKS ARE IN CONFORMANCE WITH THE MIGRATORY BIRD CONVENTION ACT AND THAT NO MIGRATORY BIRD NESTS WILL BE IMPACTED BY THE PROPOSED WORK.
IT IS THE APPLICANTS RESPONSIBILITY TO DISCUSS POTENTIAL TREE INJURY OF TREES ON SHARED PROPERTY LINES WITH THEIR NEIGHBOURS. SHOULD SUCH TREES BE INJURED TO THE POINT OF INSTABILITY OR DEATH THE APPLICANT MAY BE HELD RESPONSIBLE FOR REMOVAL AND SUCH ISSUES WOULD BE DEALT WITH IN CIVIL COURT OR THROUGH NEGOTIATION. THE APPLICANT WOULD BE REQUIRED TO REPLACE SUCH TREES TO THE SATISFACTION OF URBAN FORESTRY.

TREE PROTECTION ZONE(S):
NO CONSTRUCTION ACTIVITY INCLUDING GRADE CHANGES, SURFACE TREATMENTS OR EXCAVATIONS OF ANY KIND IS PERMITTED WITHIN THE AREA IDENTIFIED ON THE TREE PROTECTION PLAN OR SITE PLAN AS A TREE PROTECTION ZONE (TPZ). NO ROOT CUTTING IS PERMITTED. NO STORAGE OF MATERIALS OR FILL IS PERMITTED WITHIN THE TPZ. NO MOVEMENT OR STORAGE OF VEHICLES OR EQUIPMENT IS PERMITTED WITHIN THE TPZ. THE AREA(S) IDENTIFIED AS A TPZ MUST REMAIN UNDISTURBED AT ALL TIMES.

TREE PROTECTION BARRIERS:
FOR CITY-OWNED TREES:
TREE PROTECTION BARRIERS FOR TREES SITUATED ON THE CITY ROAD ALLOWANCE WHERE VISIBILITY MUST BE MAINTAINED, CAN BE 1.2M (4FT.) HIGH AND CONSIST OF PAGE WIRE, OR ORANGE PLASTIC WEB SNOW FENCING ON A 2" X 4" WOOD FRAME. ALL SUPPORTS AND BRACING USED TO SECURE THE BARRIER SHOULD BE LOCATED OUTSIDE THE TPZ. ALL SUPPORTS AND BRACING SHOULD MINIMIZE DAMAGE TO ROOTS OUTSIDE THE TPZ.
WHERE SOME FILL OR EXCAVATE HAS TO BE TEMPORARILY LOCATED NEAR A TREE PROTECTION BARRIER, PLYWOOD MUST BE USED TO ENSURE NO MATERIAL ENTERS THE TPZ.
IF THE TPZ NEEDS TO BE REDUCED TO FACILITATE CONSTRUCTION ACCESS, THE TREE PROTECTION BARRIER MUST BE MAINTAINED AT A LESSER DISTANCE AND THE EXPOSED TPZ PROTECTED WITH PLYWOOD AND WOOD CHIPS. THIS MUST FIRST BE APPROVED BY URBAN FORESTRY.

FOR TREES ON PRIVATE PROPERTY SITUATED ON OR ADJACENT TO CONSTRUCTION SITES:
TREE PROTECTION BARRIERS MUST BE INSTALLED AROUND TREES TO BE PROTECTED USING PLYWOOD CLAD HOARDING OR AN EQUIVALENT APPROVED BY URBAN FORESTRY. ALL SUPPORTS AND BRACING TO SAFELY SECURE THE BARRIER SHOULD BE OUTSIDE THE TPZ. ALL SUCH SUPPORTS AND BRACING SHOULD MINIMIZE DAMAGE TO ROOTS OUTSIDE THE TPZ.

GENERAL NOTE:
PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY THE TREE PROTECTION BARRIERS SPECIFIED ON THIS PLAN MUST BE INSTALLED AND WRITTEN NOTICE PROVIDED TO URBAN FORESTRY. THE TREE PROTECTION BARRIERS MUST REMAIN IN EFFECTIVE CONDITION UNTIL ALL SITE ACTIVITIES INCLUDING LANDSCAPING ARE COMPLETE. WHERE REQUIRED, SIGNS AS SPECIFIED IN SECTION 4 "TREE PROTECTION SIGNAGE" MUST BE ATTACHED TO ALL SIDES OF THE BARRIER.
WRITTEN NOTICE MUST BE PROVIDED TO URBAN FORESTRY PRIOR TO THE REMOVAL OF THE TREE PROTECTION BARRIERS.

ARBORICULTURAL WORK:
ANY ROOTS OR BRANCHES WHICH EXTEND BEYOND THE TPZ INDICATED ON THIS PLAN WHICH REQUIRE PRUNING, MUST BE PRUNED BY A QUALIFIED ARBORIST OR OTHER TREE PROFESSIONAL AS APPROVED BY URBAN FORESTRY. ALL PRUNING OF TREE ROOTS AND BRANCHES MUST BE IN ACCORDANCE WITH GOOD ARBORICULTURAL STANDARDS. ROOTS LOCATED OUTSIDE THE TPZ THAT HAVE RECEIVED APPROVAL FROM URBAN FORESTRY TO BE PRUNED MUST FIRST BE EXPOSED BY HAND DIGGING OR BY USING A LOW PRESSURE HYDRO VAC METHOD. THIS WILL ALLOW A PROPER PRUNING CUT AND MINIMIZE TEARING OF THE ROOTS. THE ARBORIST/TREE PROFESSIONAL RETAINED TO CARRY OUT CROWN OR ROOT PRUNING MUST CONTACT URBAN FORESTRY NO LESS THAN 48 HOURS PRIOR TO CONDUCTING ANY SPECIFIED WORK.

Project North
True North

No.	Revision/Issue	Date

CERTIFIED ARBORIST ISA
S. PLOWMAN ON-0425A

GLN FARM & FOREST RESEARCH CO. LTD.
2511 BRIDGE ROAD
OAKVILLE, ON L6L 2H3
TEL: 905-827-1134

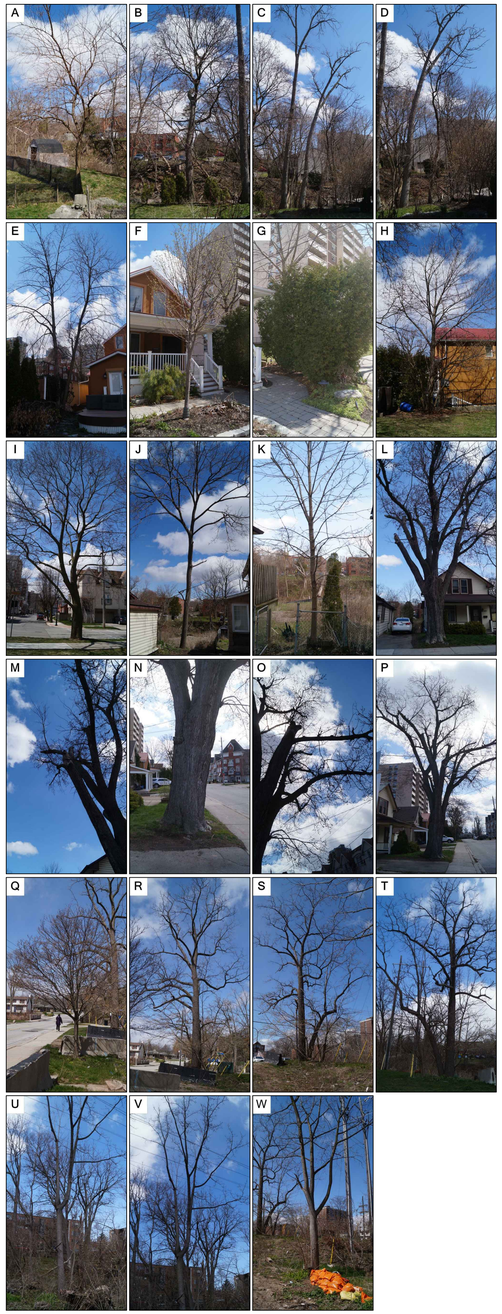
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LDGI

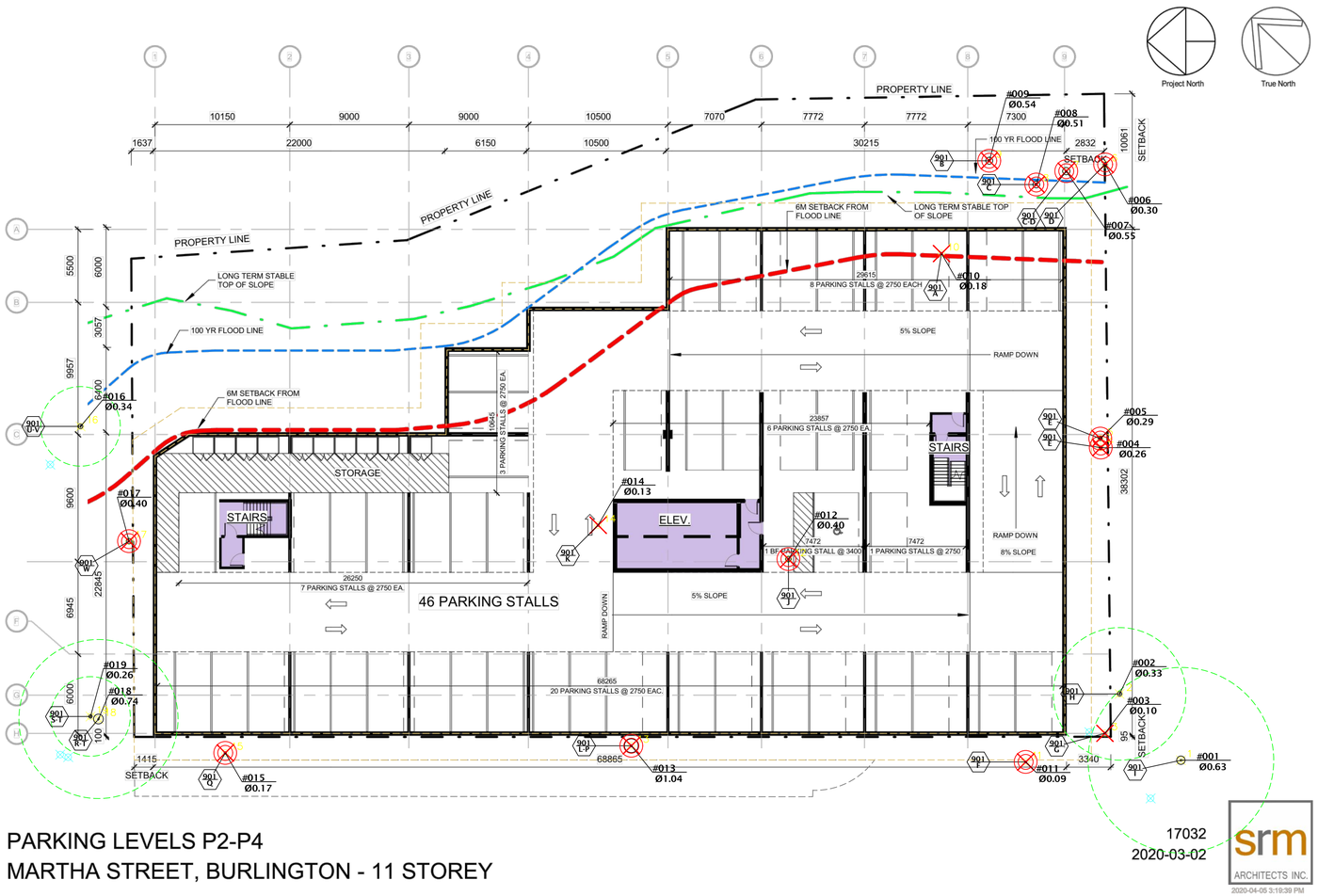
401-417 MARTHA ST BURLINGTON

Drawing Title:
TREE PRESERVATION AREAS AND HOARDING DETAILS

Date: 6-May-20	Project: LDGMARTHA2020
Scale: 1:200	
Drawn By: SP	Sheet: TPR-101
Tree Survey Date: 23 APR 2020	
Total Drawings: 1 of 2	

FILE NAME
02 AUG 2011
GLN





PARKING LEVELS P2-P4
MARTHA STREET, BURLINGTON - 11 STOREY

17032
2020-03-02

srm ARCHITECTS INC.
2020-04-05 3:19:39 PM

General Notes

No.	Revision/Issue	Date

CERTIFIED ARBORIST ISA
S. PLOWMAN ON-0425A

GLN FARM & FOREST RESEARCH CO. LTD.
2511 BRIDGE ROAD
OAKVILLE, ON L6L 2H3
TEL: 905-827-1134

Client:
LDGI

401-417 MARTHA ST BURLINGTON

Drawing Title:
TREE INVENTORY AND PHOTO REFERENCES

Date: 6-May-20	Project: LDGMARTHA2020
Scale: 1:200	
Drawn By: SP	Sheet: TPR-901
Tree Survey Date: 23 APR 2020	
Total Drawings: 2 of 2	