Arborist Report and Tree Preservation Plan

For:

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c/o Millington & Associates

Regarding:

338 Johnston Drive, Burlington ON.

Prepared by:
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GLN Farm and Forest Research Co Ltd.
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Arborist Report and Tree Preservation Plan

338 Johnston Drive, Burlington ON.

Contents

REGARDING THIS REVISION

This revision has been prepared to address the following post discussions with/comments from the City of Burlington regarding the site application/arborist reporting:

1. The arborist report and drawings have been revised to include the fence removal agreement made between the client and the City of Burlington to remove portions of the fence located outside of that removed to perform grading operations as per specifications/requirements as stated in the agreement from the City of Burlington (as relayed to the arborist via email). Minimization of damage recommendations for the areas are included in the report and drawings. Further, these areas are shown on the attached arborist drawings.
   Work relating to the fence is discussion in individual and separate sections of this report.
2. Tree #007 – Formerly Identified in arborist reporting as Juglans spp. (Walnut species) and Identified by the City of Burlington representative as a Juglans cinerea (Butternut), has had a butternut health assessment performed as per the requirements of the MECP. This BHA has concluded that this tree is a Butternut and within Category 1 as a result of canker extent and presence on the trunk, and the reporting (BHA) has been submitted to Species at Risk Ontario and the MECP for review as of Friday December 4th. As review of the BHA prepared is subject to the 30-day wait period as per the policy of Species at Risk Ontario Submissions, response from the MECP is to be forthcoming at that time.

SUMMARY

The property is proposed severance into multiple parts (parts 1 through 4) as follows:

- Part 1: 7.5m easement severance beyond the floodplain/top of bank area proposed for Conservation Halton
- Parts 2 and 4: Proposed private property sites for future development
- Part 3: Severance of the "Creek Block" (rear most area of property within flood plain area) to the City of Burlington

The severance proposed will require the demolition of the existing structure (church building), as well as the removal and remediation of the driveway/parking areas. Additionally, regarding as per the requirements of Conservation Halton is required to occur in portions of the area of the side yards of the property, as well as along the area of the slope to the rear of the existing driveway/parking area. Further, in preparation for the future development of parts 2 and 4, public side service laterals (SAN and Water) are proposed to be installed for the sites.

The above activities, specifically the grading required to satisfy the conservation Halton requirements for the site, will require the removal of multiple trees within the areas of both private and public lands.

As per the meetings and discussions with the City of Burlington regarding the application, the City of Burlington has determined that the Private Tree Bylaw is not to be considered with regard to permitting requirements/fees/compensation for trees within the private property areas for trees to be removed or impacted, however, these trees are included for purpose of inventory of the trees located on and directly adjacent the site. Further to this, although not required for permitting purposes within this application, those private trees proposed to be impacted and preserved (namely trees #003 and #004 – impacted by driveway removal and remediation) are discussed and minimization of damage recommendations for the area has been included.

In addition to the above, regardless of the condition of trees as assessed by the arborist, any trees not impacted by the work proposed are listed as to be preserved for purpose of this report.

It should be noted that prior to this report, previous reporting regarding the Butternut specimen located on the 338 Johnston Drive property was prepared, including that of a Butternut Health Assessment, for consideration and review by the Ministry of the Environment, Conservation and Parks (MECP). Within the previous reporting this this tree was numbered as Tree #001; however, it should be noted that this tree is now numbered in this report as Tree #009.

This butternut health assessment categorized this tree as a category 1 specimen and has been approved by the MECP. As such, this tree is not considered to require protection or Notice of Activity approval under the Endangered Species Act. The Butternut Health Assessment (BHA) has been included for reference/records as an appendix to this report, and it is the understanding of the arborist that the MECP has already contacted the City of Burlington regarding the approval of the BHA for this tree.

In addition to the above, and as per the revision notes, removal of portions of the existing chain link fence in the park area adjacent the site, is to occur. Further, a new property fence for the proposed private lots is also proposed to be installed. This work is discussed in its' own section of this report, in which the specifics of the agreement are listed.

INTRODUCTION

Assignment

The arborist was retained in October/November 2020 to prepare an Arborist Report and Tree Preservation Plan for the property located at 338 Johnston Drive for submission to Burlington Forestry Department as required by the City of Burlington Public Tree protection by-laws. Further to this, the reporting is to include the private trees for reference of removals/impacts/inventory records although the private tree bylaw requirements do not pertain to this application. 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, as well as plan drawings showing (but not limited to) the tree locations, protection zone(s), proposed construction, encroachments/impact areas, removals, 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 City of Burlington.

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 accepted by the City of Burlington.

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.
- Hatching to clearly identify areas of Tree Protection Zone encroachment by the proposed construction.
- Locations for prescribed Tree Protection Fencing.

TPR-9xx series

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

If required, additional drawings may be rendered.

SITE

The subject site falls entirely under the jurisdiction of the City of Burlington Public and Private Tree Bylaws. For purposes of this arborist report and tree preservation plan, and the current application, only the City of Burlington Public Tree Bylaw is to be considered regarding tree protection permit requirements.
Private trees have been included for reference/records within the inventory and drawings, and where private trees are proposed to be removed, they have been included for reference. Further, where private trees are proposed for retention with encroachment within the MTPZ/CRZ areas, minimization of damage recommendations have been included for these areas.

Current Site Characteristics

The site currently consists of a church property with church and parking area/driveway. Additionally, there is a slab area/former slab area of a previous shed in the rear currently present at the rear of the parking area.

Proposed Construction

The property is proposed severance into multiple parts (parts 1 through 4) as follows:

- Part 1: 7.5m easement severance beyond the floodplain area to Conservation Halton
- Parts 2 and 4: Proposed private property sites for future development
- Part 3: Severance of the "Creek Block" (rear most area of property within flood plain area) to the City of Burlington

The severance proposed will require the demolition of the existing structure (church building), as well as the removal and remediation of the driveway/parking areas. Additionally, regarding as per the requirements of Conservation Halton is required to occur in portions of the area of the side yards of the property, as well as along the area of the slope to the rear of the existing driveway/parking area.
Further, in preparation for the future development of parts 2 and 4, public side service laterals (SAN and Water) are proposed to be installed for the sites.
The above activities, specifically the grading required to satisfy the conservation Halton requirements for the site, will require the removal of multiple trees within the areas of both private and public lands.
In addition to the above, the property line fence that separates the site at 338 Johnston from the parkland area as well as at the rear of the 338 Johnston property is to be removed as per the agreement made between the owner and the City of Burlington, this agreement and the specific requirements of fence removal are discussed further in the sectioning pertaining to this work.

Construction Phases and Anticipated Injury to Encroachment Ratios

Grading - Fill

Initial Assumptions Regarding Proposed Work

Encroachment Type: Grading (Major Fill)
Maximum Excavation Depth (m): 0
Maximum Fill Height (m): 0.1 – 1.0+

Assumed Ratio of Injury to Encroachment

(Injury = Ratio x Encroachment)
Root Zone: 0.5 – 1.0 **Canopy:** 0

Grading – Cut Areas

Initial Assumptions Regarding Proposed Work
Encroachment Type: Grading (Major Cut)
Maximum Excavation Depth (m): 1
Maximum Build Height or Clearance (m): 0

Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 0.5 – 1.0 **Canopy:** 0

Removal and Remediation of Existing Driveway/Parking Area

Initial Assumptions Regarding Proposed Work
Encroachment Type: Area Reclaimed to Lawn or Garden
Maximum Excavation Depth (m): 0.3
Maximum Build Height or Clearance (m): 0

Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 0.1 **Canopy:** 0

Demolition of Existing Structures

Initial Assumptions Regarding Proposed Work
Encroachment Type: Demolition Above and Below Grade
Maximum Excavation Depth (m): 3
Maximum Build Height or Clearance (m): 8

Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 0.25 **Canopy:** 0

Service Laterals Proposed (Public Side – Water/SAN)

Initial Assumptions Regarding Proposed Work
Encroachment Type: General Zone of Construction
Maximum Excavation Depth (m): 3
Maximum Build Height or Clearance (m): 0

Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 1 **Canopy:** 0

Chain Link Fence Removal via Foot Access and Hand Equipment Only

Initial Assumptions Regarding Proposed Work
Encroachment Type: Demolition
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 **Canopy:** 0

New Property Chain Link Fence Installation

Initial Assumptions Regarding Proposed Work
Encroachment Type: Fence Installation
Maximum Excavation Depth (m): 1 (fence post footings)/ 0 (above grade portions)

Maximum Build Height or Clearance (m): 3

Assumed Ratio of Injury to Encroachment
(Injury = Ratio x Encroachment)
Root Zone: 0 (above grade portions) / 1 (post holes) **Canopy:** 0

TREE INVENTORY SUMMARY

Tree Population

Overview

There was a total of Sixty-Seven (67) trees inventoried within the scope of this survey.
Of these, fourteen (14) trees are located on public land and considered significant within this reporting (for application under Private tree Bylaw only). It should be noted that although the City of Burlington is to take control/ownership of the severed Part 3 area (area at rear of existing site containing grove of trees) at this time this area is private land owned by the client, and as such trees within the area are listed as client trees for purposes of this reporting.
The following outlines the distribution of all trees on the site according to their deemed ownership (location):

Ownership

Client Tree	41
Client/Neighbor Shared Ownership Tree	2
Municipal tree in Park or Naturalized Area	12
Municipal tree on Municipal Road Allowance	2
Neighbor owned tree	10

Species Distribution

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

(Acer rubrum)	1	@AvDBH: 18.0cm
(Acer platanoides)	4	@AvDBH: 4.5
(Ailanthus altissima)	1	@AvDBH: 20.0
(Betula papyrifera)	2	@AvDBH: 34.0
(Fraxinus americana)	17	@AvDBH: 30.2
(Fraxinus spp)*	1	@AvDBH: 12.0
(Juglans cinerea)	2	@AvDBH: 12.5
(Juglans nigra)	26	@AvDBH: 39.8
(Morus alba)	4	@AvDBH: 21.3
(Picea glauca)	1	@AvDBH: 7.0
(Prunus serotina)	1	@AvDBH: 20.0
(Thuja occidentalis)**	1	@AvDBH: 30.0
(Tilia americana)	5	@AvDBH: 31.2
(Ulmus rubra)	1	@AvDBH: 25.0

**Note: Identification of these trees to genus only as a result of condition (dead tree(s)).*
***Note: Represents a Cedar Hedge. Largest stem of hedge used as DBH of hedge row for protection radii allocation for hedge.*

Regarding the Condition of Trees Within/Adjacent to the Park Land Areas Located Along the Chain Link Fence Row Bordering the Client Site.

Currently many of the trees located within the park area, as well as those on the client property, that are adjacent/growing through the park area chain link fence are in very poor conditions, ranging from declining health conditions, through mostly dead or dead. Many of these trees are declining or are mostly dead as a result of the growth of vines along the chain link fence that has climbed these trees and covered (in part or completely) the canopies of these trees along the fence row. This vine is not limited to only those small stature specimens directly adjacent or growing though the fence itself but is also climbing the trunks and affecting the conditions of multiple large stature specimens within the rear area of the site adjacent this chain link fence.

Of greatest impact from the vine growth over trees, is that of trees #005 through #011 (excluding #009 which has no vine growth), as well as tree #019. These trees are declining and/or mostly dead as a direct result of the vine itself in the opinion of this arborist and are beyond the point at which vine removal and treatment/maintenance could allow for increased health of the specimens. It should be noted that trees in this area (excluding trees #010, #011 and #019) are proposed for removal due to the grading required.

For the remainder of the trees along the fence row area, including some located on the client site adjacent the fence, this vine is causing declining health conditions to trees, affecting portions of canopy where it has covered canopy branches. Further to this, many large trees with the vine present growing on/over portions of them will be subjected to girdling of stems by the vine if left to continue to grow on these specimens. With that said, it is the opinion of this arborist that many of these affected trees in this area (those beyond #011 along the fence row area – excluding #019) could have their health condition improved with careful removal and destruction of the vine that covers them in part, as well as some general tree maintenance and care in the area post vine removal.

Regarding the Condition of Ash Trees within/adjacent to the Client Site

Many of the Ash trees present on the site (outside of those covered in vine as per the previous section) are in various states of decline or are dead as a result of Emerald Ash Borer presence. Of greatest concern with regard to this is the mature grouping of Ash trees located in the rear area of the site directly adjacent/on the boundary line with the neighbor property rear yard. These Ash trees are currently dead as a direct result of EAB in the opinion of this arborist.

In addition to this, many other ash specimens on/adjacent to the site are also infested with EAB, and the arborist noted that additional Ash trees in the area surrounding the property and outside of the scope of the inventory (on neighboring property and well removed from the client property) are also in varying states of decline with some appearing to be mostly dead or dead. Although not fully inspected as they were outside of the scope of the inventory, these Ash outside of the scope are likely in these states of repair as a result of the same insect infestation (EAB) in the opinion of this arborist.

Trees Receiving Encroachment or Requiring Removal

This section lists all trees on the property which are proposed for encroachment/injury or require removal as a result of the proposed development activities. For this application, only those trees located on public land (subject to the Public Tree Bylaw) require permit application, however, private trees to be removed, or to receive encroachment have been included. The City of Burlington must approve a Permit to Injure or Permit to Remove, where construction activities (including access) are to take place within the Minimum Tree Protection Zone (MTPZ) and/or Critical Tree Protection Zone (CRZ) of a tree which is:

A tree of any size, which is located on Municipal/Public land.

Where construction activities (including construction access) encroach upon the Minimum Tree Protection Zone, and/or Critical Root Zone of a public tree, compensation and/or damage deposits may be required at the discretion of the City of Burlington Tree Inventory and Compensation Form.
The following tables list all trees which have encroachments on their Minimum Tree Protection Zone (MTPZ) or Critical Root Zone (CRZ), as well as those that are to be applied for removal, their permit requirements (where applicable) and computed compensation values as per the City of Burlington Public Tree Inventory and Compensation Form as provided by the City of Burlington.

Note: Trees proposed for encroachment (public/private) from the fence removal operations/fence reconstruction operations, are listed in a separate subsequent section pertaining to those operations only.

Trees Proposed for Encroachment (Private Trees – Not including Fence Agreement Operations)

Tree # Species Ownership	DBH (cm) Canopy Dia. (m)	Comments Regarding Injury	Permit Requirements	Compensation Value ($) -or- Replacement (30mm Caliper)
003 **Paper Birch {Betula papyrifera)** Client Tree	24 cm 6.0 M	Existing driveway area removal and remediation will encroach on MTPZ/ CRZ area.	N/A for this application	N/A for this application
004 **Paper Birch {Betula papyrifera)** Client Tree	44 cm 12.0 M	Existing driveway area removal and remediation will encroach on MTPZ/ CRZ area.	N/A for this application	N/A for this application

Public Trees Requiring/Recommended for Removal (Not including Fence Agreement Operations)

Tree # Species Ownership	DBH (cm) Canopy Dia. (m)	Comments Regarding Removal	Permit Requirements	Compensation Value ($)
005 **White Mulberry {Morus alba)** Municipal tree in Park or Naturalized Area	14 3.0	Located within the area of required grading to satisfy conservation Halton requirements. Not anticipated to tolerate grading work in area.	Permit to Remove	$700.00

Tree # Species Ownership	DBH (cm) Canopy Dia. (m)	Comments Regarding Removal	Permit Requirements	Compensation Value ($)
006 **White Mulberry {Morus alba)** Municipal tree in Park or Naturalized Area	24 6.0	Located within the area of required grading to satisfy conservation Halton requirements. Not anticipated to tolerate grading work in area.	Permit to Remove	$1200.00
007 **Walnut Species {Juglans spp)** Municipal tree in Park or Naturalized Area	12 3.0	Located within the area of required grading to satisfy conservation Halton requirements. Not anticipated to tolerate grading work in area. Further, the vine covering has resulted in death of majority of the specimen.	Permit to Remove	$360.00
008 **White Ash {Fraxinus americana)** Municipal tree in Park or Naturalized Area	14 3.0	Located within the area of required grading to satisfy conservation Halton requirements. Not anticipated to tolerate grading work in area. Further, the vine covering has resulted in death of majority of the specimen.	Permit to Remove	$420.00

Please refer to the City of Burlington Public Tree Inventory and Compensation Form included as appendix to this report for the details regarding compensation required for the injury and/or removal of public trees on the site.

Private Trees Requiring/Recommended for Removal (Not including Fence Agreement Operations)

The following trees are those located on private property that will require removal as a result of the impact resulting from the grading work required to satisfy the requirements of conservation Halton for the site. These trees are either located within areas of cut and fill grading proposed where removal is required to accommodate the grading or are not anticipated to tolerate the grading changes proposed to occur. It should be noted that those trees located on neighboring private land/co-owned by neighbors and the client (boundary trees) will require neighbor approval to remove.

Tree # Species Ownership	DBH (cm) Canopy Dia. (m)	Permit/Compensation Requirements
009 **Butternut {Juglans cinerea)** Client Tree	13 7.0	N/A
057 **White Mulberry {Morus alba)** Neighbor owned tree	23 6.0	N/A However, Neighbor Approval Required.
058 **White Mulberry {Morus alba)** Neighbor owned tree	24 6.0	N/A However, Neighbor Approval Required.

059 **Norway Maple {Acer platanoides)** Neighbor owned tree	6 3.0	N/A However, Neighbor Approval Required.
060 **White Ash {Fraxinus americana)** Neighbor owned tree	23 6.0	N/A However, Neighbor Approval Required.
061 **White Ash {Fraxinus americana)** Neighbor owned tree	25 5.0	N/A However, Neighbor Approval Required.
062 **White Ash {Fraxinus americana)** Client/Neighbor Shared Ownership Tree	5 2.0	N/A However, Neighbor Approval Required.
063 **White Ash {Fraxinus americana)** Client Tree	15 4.0	N/A
064 **Norway Maple {Acer platanoides)** Client tree	5 2.0	N/A
0645 **Norway Maple {Acer platanoides)** Client tree	5 2.0	N/A
066 **Norway Maple {Acer platanoides)** Client tree	2 2.0	N/A
067 **American Basswood {Tilia americana)** Client Tree	12 3.0	N/A

For the listing of trees requiring encroachment and/or removals as a result of the fence removal agreement activities please refer to the subsequent section(s) of this report regarding the fence agreement specifically.

ARBORIST COMMENTS AND IMPACT ANALYSIS

As per the requirements of this application, the site is only subject to the Public Tree Bylaw and only public trees are required to receive permit for injury or removal. However, although private trees are not subject to the requirements of the private tree bylaw for this application only, any future application post severance for the site(s) will require application under the private tree bylaw. Further to the above, it is the recommendation of this arborist that the private trees proposed to receive encroachment have care taken during work in their root zones in order to minimize the impact to their health and vigor that may result from the of the proposed work. As such, the following provides impact analysis and recommendations for minimizing impact to the trees proposed to receive encroachment from the demolition/severance activities proposed for the site.

Existing Driveway Removal and Remediation

Impacted Trees: #003 - Paper Birch / #004 - Paper Birch /

The removal and remediation of the existing driveway area is highly recommended to be done only after all other aspects of demolition/grading/service installations, and access of equipment are completed. This will allow the existing driveway surface to remain intact through construction greatly reducing if not preventing the occurrence of damage to the rooting area of these trees that would be present below the driveway area. Once remediation activities begin in the area, they are to be done with care to preserve all roots of size found within the aggregate of the driveway, as well as below. To achieve this removal of the surface will need to be done with care cutting the surface in sections and lifting with hand/light equipment. Further, the aggregate beneath is to be removed with care using hand equipment only in the area of protected root zone confliction. Where aggregate removal cannot occur without the destruction of roots of size (transport or larger) it is to be left in the area and fill upon to preserve said roots.
It is understood that some fibrous/feeder root damage will occur, however, with care taken it is the opinion of this arborist that this work can be done with only minimal impact. As such it is anticipated that the impact of the driveway remediation will be 10% of the encroachment.
The following presents the encroachment on the MTPZ and CRZ areas for these trees, and the total impact they are anticipated to receive.

Tree #	Encroachment (area/area)	Anticipated Injury
#003: paper birch {Betula papyrifera) 24cm DBH	18.44% (MTPZ) 26.2% (CRZ – *incl. MTPZ area*)	2.6%
#004: paper birch {Betula papyrifera) 44cm DBH	24.97% (MTPZ) 30.0% (CRZ – *incl. MTPZ area*)	3.0%

This level of impact is well below the recommended maximum impact of 30% (Coder et. al.) and is considered a minimal impact not anticipated cause any significant detriment to this tree beyond that of a potential reduction in growth rate while it recovers. With that said, care should be taken in the area to ensure that roots of size are preserved where possible, and that no undue damage occurs during the remediation work in the area. Assuming that the recommendations presented in the subsequent sections are adhered to, it is this arborists opinion that these trees can tolerate the proposed remediation work in area.

Regarding the Fence Agreement Operations

The following describes the agreement re the fence removal and documents the trees that will receive encroachment from work and/or require removal (if and where required) to allow for the removal of the fence and access related to the fence removal/replacement. This agreement regarding the fence is as follows (as relayed via email by the City of Burlington):

Fence Removals

- The fence fabric from the front of the property to the start of the grading will be removed and replaced with new fence fabric. The applicant will be required to replace the last post with a terminal post and cross support.
- The fence from the start of the grading area to the back of the lot line (section running north south) will be removed.
    - The applicant will remove the existing posts by cutting them off below grade and covering over with soil to the satisfaction of the City.
    - The removal of fabric and posts will be done by hand without equipment (e.g., bobcat).
    - The existing posts and fabric will be moved to the existing lot by hand for disposal.
    - Care must be given to avoid damage to all trees remaining during the cutting and removal operation.
    - The applicant's arborist will amend their current report to include the fence removal and proposed methods as part of the scope of work to be undertaken by the applicant; and
    - This method of fence removal for the back end of the lot will not require compensation so long as the trees remaining are not damaged.

- A black chain link fence to City standards will be constructed in the area of grading to the new property line. The fence will continue across the rear property to separate the new properties and land to be conveyed to the City. The City will provide this detail.

All work identified above are identified as conditions of approval for this application

Further to the above, the exact locations of this work as clarified by the City of Burlington via email is as follows:

"Michael,
the pink hatched area is the area where the fence is to be removed by hand with no machinery such as a bobcat.
The green box is the approximate area of the two trees the applicant has requested removed for grading and subject to Council approval.
The fence outlined in a blue box represents where the fence posts will remain, and new fence fabric will be installed
I trust this helps your understanding of the action items."

Note: A sketch showing these locations was provided by the City via email and has been used to denote the areas on the arborist drawings TPR 101 and 901. It should be noted that the pink hatched area as provided hatches the rear lot line area (where a fence is on private property on neighbor land) even though the notes state only the north-south section of fence in this area is to be removed. As such, it is

assumed that the notes pertaining to the north-south section of fence being removed are correct, and the full hatch along the southern property extent is greater than required (as part of this fence area is on private land). To the best of this arborists ability to determine, the fence along the rear lot line of the property is split in ownership as follows:
Pin 07045-0076: City of Burlington Owned Lands
Pin 07045-0142: Private Lands (owner unknown) of 3211 Spruce Avenue
As a result of this, for purpose of this reporting regarding the fence removal operations in the area, only fence removal operations of fence areas on public land are being removed. This includes the north-south fence line abutting 338 Johnston Drive, as well as a small portion of the east west fence along the rear lot line that separates the rear of 338 Johnston Drive from the City owned lands of Pin 07045-0076. The pink hatched area on the arborist drawing has had a note added to reflect to public fence removal areas and private fence retention area.
The fence separating 338 Johnston Drive from the Private Lands of Pin 07045-0142 is to remain (fence on private land of 3211 Spruce Avenue in this area).

Trees Subject to Encroachment from Fence Agreement Operations
In order to perform the ex. fence removal/mesh removal and replacement operations the following trees will be subject to foot access traversing the protected root zone areas (MTPZ and/or CRZ). As per the agreement, only foot access is permitted in the areas required for fence agreement operations that are located outside of the grading area (as denoted on arborist drawing TPR 101). Further, no equipment beyond that of hand tools may be used for fence/post removals or mesh replacements where located outside of the area of grading.

Trees within Area of Fence Mesh Removal and Replacement Only (Posts to be Re-used)

Tree # **Species** **Ownership**	**DBH (cm)** **Canopy Dia. (m)**	**Comments re Fence Removal**
002 **Tree of Heaven {Ailanthus altissima** Municipal Tree on Road Allowance Area	20 cm 6.0 M	Area of Mesh Removal and Replacement Only (Posts to Remain). Tree grows through mesh of ex. fence – to prevent impact, mesh is to be cut on carefully on both sides of trunk where tree has grown around it, and portion in tree is to be left for tree to continue growing around. Although above method will allow for preservation with no impact during fence mesh removal and replacement, this may not be an acceptable solution for the City of Burlington as this tree may ultimately grow through the new fence mesh installed adjacent its' trunk. If such is the case and the City would rather this tree be removed so as not to conflict with the new fence mesh in the future, such should be undertaken. This report however assumes preservation of this tree as it is possible to be done with the mesh removal and replacement activities required.
003 **Paper Birch {Betula papyrifera}** Client Tree	24 cm 6.0 M	Mesh Removal and Replacement Only by foot access and hand tools only will present no impact.
004 **Paper Birch {Betula papyrifera}** Client Tree	44 cm 12.0 M	

Trees within Area of Full Fence Removal (north/south lot line fence section – grading area to rear lot extent not including trees directly affected by grading - mesh to be removed/posts to be cut just below grade and covered with soil)		
Tree # **Species** **Ownership**	**DBH (cm)** **Canopy Dia. (m)**	**Comments re Fence Removal**
010 **White Ash {Fraxinus americana} Municipal** tree in Park or Naturalized Area	16 4.0	Full Fence removal via foot access and hand tools only will present no impact to these trees.
011 **White Ash {Fraxinus americana} Municipal** tree in Park or Naturalized Area	10 2.0	
012 **Black Cherry {Prunus serotina}** Municipal tree in Park or Naturalized Area	20 6.0	
013 **White Ash {Fraxinus americana}** Municipal tree in Park or Naturalized Area	40 6.0	Foot access and hand tools only will present no impact to tis tree. Full Fence removal must be done with care in this area – mesh to be cut on both sides of trunk if/where tree has grown around it.
014 **Ash species {Fraxinus spp}** Municipal tree in Park or Naturalized Area	12 1.0	Dead Tree.
015 **Red Elm {Ulmus rubra}** Municipal tree in Park or Naturalized Area	25 3.0	Foot access for fence removal using hand tools only will present no impact to these trees. Full Fence removal must be done with care in this area – mesh to be cut on both sides of trunk if/where tree has grown around it.
016 **Basswood {Tilia americana}** Municipal tree in Park or Naturalized Area	26 7.0	
017 **White Ash {Fraxinus americana} Client** Tree	51 10.0	Full Fence removal via foot access and hand tools only will present no impact to these trees.
018 **Black Walnut {Juglans nigra}** Client Tree	35 10.0	
019 **White Ash {Fraxinus americana} Municipal** tree in Park or Naturalized Area	13 3.0	
020 **Black Walnut {Juglans nigra}** Client Tree	72 16.0	
021 **Black Walnut {Juglans nigra}** Client Tree	33 6.0	
022 **Black Walnut {Juglans nigra}** Client Tree	81 26.0	
023 **Black Walnut {Juglans nigra}** Client Tree	46 8.0	
024 **Black Walnut {Juglans nigra}** Client Tree	62 12.0	

Regarding Access for Fence Removal Operations

Primarily, encroachments on the above listed trees (all trees listed subject to access encroachment) are that of the foot access for purpose of removing the fence, which if done by foot only and using hand tools only as per the agreement, will result in no impact to the root system as a result (no compaction from equipment/access). As such, the access in these areas should be considered to present a technical encroachment across the protected root zone areas only. With that said, all access in the areas of fence removal (outside that of the grading work area) must be done by foot access only.

Trees Growing Through/Directly Abutting and Touching the Fence

Of greatest concern in the areas of fence removal will be that of the mesh removal and replacement in the area of tree #002, as well as the mesh/fence removals in the areas of trees #013, #015, and #016. These trees have grown to either directly abut and touch the fence (#013 and #016) or have grown right through/partially through the chain link fence (#002 and #015).

It is the opinion of this arborist that with care taken to carefully cut the chain link fence mesh adjacent to any areas where trees have grown through or around the mesh (using hand tools only) to remove the mesh on either side, this work of mesh/fence removal can be done without damage to the tree itself. Where trees are growing directly abutting the mesh/fence, care to gently remove any meshes/cross braces/top bars in the areas are to be taken using only hand methods while preventing leverage/twisting that may result in twisting mesh or cross braces putting pressure against or presenting mechanical impact to the trunks of trees.

Although it is this arborists opinion that the above trees can be preserved and will receive no actual impact with care taken during the fence removal operations (as per each areas requirement, and the subsequent recommendations of this report) it will require the leaving of chain link fence mesh present within the trunks of some of these trees (#002 and #015). Further to this, the new mesh placed in the area of tree #002 although able to be installed around the tree, may ultimately have this tree grow through it as well. As this may not be a suitable solution for the City of Burlington due to the fence mesh remaining within trees preserved/impact of keeping tree #002 on new fence mesh in future, if such is the case on review of this report, these trees (or portions thereof) should be removed as the City requests. It should be noted that if requested to be removed by the City of Burlington these trees may be subject to compensation requirements at the sole discretion of the City of Burlington.

For purpose of this report, these trees are shown as to be preserved, as such is possible with care taken in the area.

Fence Post Removals

As per the agreement made with the City of Burlington the area specified for full fence removal is to have the existing fence posts cut at just below the grade and the areas covered with soil. This work, done using hand equipment only, will present no impact to the root zones of these trees in the opinion of this arborist, assuming that the work is done with care taken, and that the cut below grade occurs just at/below the existing soil surface (no excavations to occur). Further, all fill soil placed to cover the posts cut is to be done using high quality topsoil only and is to be placed by hand to the minimum required to cover the posts. No excessive fill or grading is to occur in any areas located outside of the required grading area.

Assuming that the requirements of the agreement, as well as the subsequent recommendations regarding the fence post removal are adhered to, it is the opinion of this arborist that no actual impact is anticipated to occur to trees from these activities, and the encroachment should be considered to be technical only.

Regarding New Chain Link Fence

The installation of the new chain link fence (includes new terminal post at end of area of fence mesh replacement as per agreement) will be located outside of all protected root zone areas of trees not proposed for removal due to the grading work required. As such, no impacts to trees will occur from the new fence installation required in the area of grading as well as along the rear property line proposed (new property line of sites).

Regarding Compensation for Fence Removal Encroachments

Although it is this arborists opinion that the fence removal by hand, including access by foot, will not present any impact to the health or stability of the trees located along the fence row if done with care as per the agreements and the subsequent recommendations for minimization of damage in these areas, any compensation required for work/access in this area is at the sole discretion of the City of Burlington.

Please refer to the subsequent sections regarding minimization of damages during construction for requirements and recommendations to prevent impact to trees in the areas of fence removal.

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 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 erected.
2. If it is determined by engineering that silt fencing be required for the site to prevent silt movement, it is the recommendation of the arborist that the silt fencing be placed following and on the construction side of tree protection hoarding.
   If silt fencing is deemed required within hoarded areas of tree protection, it is not be dug in in this area, but instead have a minimal amount of clear stone placed at the base. This will prevent impact to tree roots in area from the digging in of the silt fence base, while still allowing for the prevention of silt movement beyond the silt fence.
3. All tree protection hoarding, and silt fencing (if required), 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, or by a member 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 (if/where required) 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 removal permits have been released and are present on site.

Demolition/Construction Phase

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

Minimization of Damage – Removal and Remediation of the Existing Driveway

- Upon completion of all primary demolition and construction activities, including those outside of protected root zone areas (building demolition, grading work, installation of services, etc.), with the only construction activities remaining being that of the driveway removal, the existing driveway area is to be removed and remediated to soft landscape. This work is recommended to be done only once all required equipment access in the driveway area to the site is completed.
- The Zone of Construction (as shown in the attached arborist drawing TPR 101) in this area must be strictly adhered to. No allowance for excavations beyond the extent of the driveway surface in the area of protected root zones encroachments is permitted. This must be strictly adhered to
- In the area of driveway removal within tree protection zones, no excavation beyond the removal of the surface, and careful removal of the underlayment where possible without root destruction and by hand, is recommended. It is understood that some fibrous/feeder roots may be damaged during surface removal activities.
- Removal of the existing surface(s) should be done with hand/light equipment only (cut in small sections and removed by hand only/light equipment for lifting only) in the areas of protected root zone confliction.
- Removal of the underlayment where possible is also to be done using hand equipment only. No excavation equipment is permitted in this area of protected root zone confliction once the surface has been removed (hand equipment only from that point on).
- The aggregate under the driveway surface may be removed using hand equipment (rakes/brushes/hoes), where root destruction of roots greater than fibrous/feeder will not occur. If roots of size are discovered in these areas, they are to be preserved within the aggregate and should be filled upon with soil used for remediation.
- In the areas of remediation, soil used for remediation is to be of high quality and is to be of the that of a high-quality topsoil. Further, this soil should be placed in direct contact with the existing site soil wherever possible.

Fence Removal Phase

Minimization of Damage – Removal of Existing Fence as per Agreement

Requirements of Agreement (as per City of Burlington notes provided)
Fence Removals

- The fence fabric from the front of the property to the start of the grading will be removed and replaced with new fence fabric. The applicant will be required to replace the last post with a terminal post and cross support.
- The fence from the start of the grading area to the back of the lot line (section running north south) will be removed.
    - The applicant will remove the existing posts by cutting them off below grade and covering over with soil to the satisfaction of the City.
    - The removal of fabric and posts will be done by hand without equipment (e.g., bobcat).
    - The existing posts and fabric will be moved to the existing lot by hand for disposal.
    - Care must be given to avoid damage to all trees remaining during the cutting and removal operation.
    - The applicant's arborist will amend their current report to include the fence removal and proposed methods as part of the scope of work to be undertaken by the applicant; and
    - This method of fence removal for the back end of the lot will not require compensation so long as the trees remaining are not damaged.

A black chain link fence to City standards will be constructed in the area of grading to the new property line. The fence will continue across the rear property to separate the new properties and land to be conveyed to the City. The City will provide this detail.

Arborist Recommendations Regarding Fence Removal Areas

Access for Fence Removals (all areas outside of Grading Area)

- Tree Protection Hoarding (vertical) is recommended to form a corridor along the north-south fence area beyond the grading area proposed is to be installed to prevent access outside of areas required to allow for fence removal by hand. The corridor also includes the small public fence area at the rear lot line of the fence area separating Pin 07045-0076 from 338 Johnston Dr.
- The corridor hoarding, as above, is to connect with the primary tree protection fence at the extent of the grading area, as well as the existing fence along the southern rear lot line area, as shown in the attached arborist drawing TPR 102 regarding fence removal
- All Access for purpose of removal of the fence areas (all areas) is to be done by foot access only as per the agreement. This must be strictly adhered to.

- All access to and from the fence areas for purpose of fence removals must be conducted from the client property area.

Fence Mesh Removal and Replacement Only Area

- In the area of fence mesh removal and replacement (posts to remain – area north of grading area required). All mesh removal is to be done by hand equipment only (hand tools only).
- The fence mesh is to be removed from the area after cutting in to small manageable sections by foot access only.
- All mesh removed is to be brought from the fence to the area of the client property for disposal.
- In the area of tree #002, to preserve this tree the fence mesh that the tree has grown in to is to remain in this tree. This will require carefully cutting the mesh of the fence in this area on both side of the tree (as close to trunk as possible without damage to trunk) as well as just above where the tree has grown through the fence, to allow for removal of the mesh surrounding this tree while not damaging the tree itself.
- Replacement of the mesh in this area is to be done using hand equipment only and is to reuse the existing posts. In the area of tree #002, the fence mesh is to be installed carefully around this tree by hand only.
- All work in the area of tree #002 for fence mesh removal and replacement is to be done under the direct supervision of/with assistance from a Certified Arborist, as approved by the City of Burlington.

Note: As per the previous section pertaining to the fence removal work, if the City of Burlington is not satisfied with preservation of this tree with the portion of fence mesh remaining in the tree/the new nesh directly adjacent, this tree should be removed at their request. This is solely at the discretion of the City of Burlington, as it is possible to preserve this tree in this area in this arborist's opinion (albeit with some mesh required to remain in the tree). Further, if the City deems they would like this tree (#002) removed for the fence mesh removal and replacement, any compensations required are at the sole discretion of, and are to be relayed to the owner by, the City of Burlington.

Full Fence Removal Section (grading area to rear lot extent, not including trees directly affected by grading area)

- In the area of full fence removal and replacement (mesh and post removal – area south of grading area required). All fence removal is to be done by hand equipment only (hand tools only).
- The fence mesh is to be removed from the area after cutting in to small manageable sections by foot access only.
- All mesh removed is to be brought from the fence to the area of the client property for disposal.
- In the area of tree #015, to preserve this tree the fence mesh that the tree has grown in to is to remain in this tree. This will require carefully cutting the mesh of the fence in this area on both side of the tree (as close to trunk as possible without damage to trunk) as well as just above where the tree has grown through the fence, to allow for removal of the mesh surrounding this tree while not damaging the tree itself.

- Fence Mesh/Cross braces/Top bars of the fence that are directly adjacent/potentially abutting any trees (such as #015), are to be carefully cut in to small sections and removed by hand. Care to gently remove any meshes/cross braces/top bars in the areas is to be taken using only hand methods while preventing leverage/twisting that may result in twisting mesh or cross braces putting pressure against or presenting mechanical impact to the trunks of trees.
- All fence posts being removed are to be cut at just below the soil surface by hand tools only. No excavations in the area of fence removal are to occur to remove the fence post footings or allow for fence posts to be cut by hand.
- Where posts are cut, these posts are to be covered with soil. All soil for covering the areas of post cuts is to be of high-quality topsoil and is to be placed in direct contact with the existing site soil. This soil should be limited in depth to cover the cut posts while not presenting any significant grading changes (no excessive fill) and is recommended to be done to the minimum required and to the satisfaction of the City of Burlington. It is anticipated that no more than 1-2 inches (~2.5cm-5cm) will be required for this purpose.
- All mesh and post removal from the area must be conducted by hand, and by foot access only, and is to be done on the client property only following the corridor provided to the area of open demolition/development occurring (area of ex parking/driveway) for removal from the site.
- It is recommended that during the mesh and post removal phase of the fence removal in this area, that a Certified Arborist as approved by the City of Burlington be present to supervise and assist in the removal of mesh and posts, to ensure no mechanical damage occurs to trees where the mesh/posts are located directly adjacent or within the trunk (tree #015 in this area).

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. Regarding 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 demolition/construction, service installations, and all grading work required (including access) are completed.
    b. Upon completion of the demolition/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 as required.
    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 an 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. It is recommended that these visits include general monitoring of all trees for continued health and structural condition.

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.

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, poly fencing, 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 the 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 the City of Burlington 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 the City of Burlington. All pruning of tree roots and branches must be in accordance with good arboricultural standards. The Arborist must contact the City of Burlington 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	Diameter (M) Canopy	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	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	Picea glauca White Spruce	7		2.0	1.0	1.84	1.84	4	4	80%	Likely planted by the former property/church owners, however as it is located on the municipal road allowance it is deemed to be a municipal tree.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Municipal tree on Municipal Road Allowance										Located outside of construction.							None
002	Ailanthus altissima Tree of Heaven	20		6.0	1.7	2.50	4.00	3	3	60%	Growing through chain link fence. Invasive species.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size)
	Municipal tree on Municipal Road Allowance										Located outside of construction/grading proposed.							None
003	Betula papyrifera Paper Birch	24		6.0	1.8	2.52	4.00	2	2	40%	Dieback through upper canopy area (declining health). Cavity present in trunk, and decay present throughout trunk with a portion hollow near the cavity. Decay in branches. Deadwood.	Remediation	1.4	18.4%	26.2%	1.8%	2.6%	Injured (encroachment on MTPZ)
	Client Tree										Existing Driveway Area removal and Remediation will encroach.	Totals:		18.4%	26.2%	1.8%	2.6%	N/A – Private Tree Bylaw not applicable for this application
												Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						
004	Betula papyrifera Paper Birch	44		12.0	2.5	3.22	5.00	3	2	48%	Decay present through branches and trunk area. Some deadwood in canopy.	Remediation	1.4	25.0%	29.9%	2.5%	3.0%	Injured (encroachment on BTPZ)
	Client Tree										Existing Driveway Area removal and Remediation will encroach.	Totals:		25.0%	29.9%	2.5%	3.0%	N/A – Private Tree Bylaw not applicable for this application
												Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
005	Morus alba White Mulberry Municipal tree in Park or Naturalized Area	14		3.0	1.4	2.47	4.00	2	3	48%	Growing through fence/from base of fence. Dieback and decline in canopy branches from vine covering portions of canopy. Located within the area of required grading to satisfy conservation Halton requirements. Not Anticipated to tolerate grading work in area.	Grading - Fill	0.0	59.6%	90.6%	29.8%	0.0%	Remove (within zone of construction) Remove
												Totals:		59.6%	90.6%	29.8%	0.0%	
006	Morus alba White Mulberry Municipal tree in Park or Naturalized Area	24		6.0	1.8	2.52	4.00	2	3	48%	Effective DBH = 24cm (square root of total sum of square root of stem dbh's) Growing through fence/from base of fence. Dieback and decline in canopy branches from vine covering portions of canopy. Located within the area of required grading to satisfy conservation Halton requirements. Not Anticipated to tolerate grading work in area.	Grading - Fill	0.0	80.1%	76.0%	40.1%	0.0%	Remove (within zone of construction) Remove
												Totals:		80.1%	76.0%	40.1%	0.0%	

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
007	Juglans spp Walnut Species Municipal tree in Park or Naturalized Area	12		3.0	1.3	2.46	4.00	1	2	27%	Thought to be a hybrid walnut species - vine covering canopy has killed all but one or two small branches. Small whips growing up in basal area (thought to be Norway maple and mulberry whips) Mostly dead due to vine covering majority of canopy area. Located within the area of required grading to satisfy conservation Halton requirements. Not Anticipated to tolerate grading work in area. Further, the vine covering has resulted in death of majority of the specimen.	Grading - Fill	0.0	100.0%	100.0%	50.0%	0.0%	Remove (within zone of construction) Remove
												Totals:		100.0%	100.0%	50.0%	0.0%	
008	Fraxinus americana White Ash Municipal tree in Park or Naturalized Area	14		3.0	1.4	2.47	4.00	1	2	27%	Vine covering canopy. Mostly dead due to vine. Located within the area of required grading to satisfy conservation Halton requirements. Not Anticipated to tolerate grading work in area. Further, the vine covering has resulted in death of majority of the specimen.	Grading - CutAreaasProposed	0.9	27.8%	16.1%	27.8%	0.0%	Remove (within zone of construction) Remove
												Grading - Fill	1.7	5.3%		2.7%		
												Totals:		33.1%	16.1%	30.4%	0.0%	

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
009	Juglans cinerea Butternut Client Tree	13		7.0	1.3	2.47	4.00	3	3	60%	Canker present on trunk. Decay present in basal area. Appears in fair health at this time considering the canker presence, however this canker will be terminal to the tree. Grading work as will present encroachment within both the MTPZ and CRZ areas of this tree. Due to the condition -as reported in the Butternut Health Assessment report prepared for this tree (Category 1), this tree is recommended for removal due to grading proposed	Grading - CutAreaasProposed	1.2	20.4%	27.0%	20.4%	27.0%	Remove (not significant size - within zone) N/A – Private Tree Bylaw not applicable for this application
												Totals:		20.4%	27.0%	20.4%	27.0%	
010	Fraxinus americana White Ash Municipal tree in Park or Naturalized Area	16		4.0	1.5	2.48	4.00	1	2	27%	Vine covering canopy. Mostly dead due to vine. Located outside of all grading work/construction activities proposed - protected. Note: Mostly dead due to vine coverage.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
011	Fraxinus americana White Ash Municipal tree in Park or Naturalized Area	10		2.0	1.2	1.85	4.00	1	2	27%	Vine covering canopy. Mostly dead due to vine. Located outside of all grading work/construction activities proposed - protected. Note: Mostly dead due to vine coverage.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ)		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	
012	Prunus serotina Black Cherry Municipal tree in Park or Naturalized Area	20		6.0	1.7	2.50	4.00	3	3	60%	Some vine covering portions of canopy. Fair health otherwise. Vine should be removed from canopy area if possible Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
013	Fraxinus americana White Ash Municipal tree in Park or Naturalized Area	40		6.0	2.4	2.60	4.00	2	3	48%	Vine covering significant portions of canopy - decline and dieback in these areas. Some deadwood present in canopy. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
014	Fraxinus spp Ash Species Municipal tree in Park or Naturalized Area	12		1.0	1.3	2.46	4.00	0	1	0%	Dead Tree - Identification unknown - Thought to be a dead ash. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
015	Ulmus rubra Red Elm Municipal tree in Park or Naturalized Area	25		6.0	1.9	2.53	4.00	3	3	60%	Some vine growing in portions of canopy. Otherwise in fair health. Vine should be removed if possible. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
016	Tilia americana American Basswood Municipal tree in Park or Naturalized Area	26		7.0	1.9	2.53	4.00	4	4	80%	Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
017	Fraxinus americana White Ash Client Tree	51		10.0	2.7	3.86	6.00	1	1	20%	Effective DBH = 51cm, (square root of total sum of square stem dbh's) Mostly dead. Canopy covered in vine growth. EAB present through tree. Tree should be removed due to EAB presence Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
018	Juglans nigra Black Walnut Client Tree	35		10.0	2.2	2.58	4.00	2	3	48%	Vine growing up trunk and through canopy, causing branch dieback and girdling in specimen. Some deadwood in canopy as well as branch decay sites. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
019	Fraxinus americana White Ash Municipal tree in Park or Naturalized Area	13		3.0	1.3	2.47	4.00	1	2	27%	Covered in vine growth. Mostly dead as a result. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
020	Juglans nigra Black Walnut Client Tree	72		16.0	3.2	5.16	8.00	2	3	48%	Trunk covered in vine, as well as a significant portion of canopy area. Deadwood and decay in canopy area, decline likely due to vine covered/girdled canopy branches. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
021	Juglans nigra Black Walnut Client Tree	33		6.0	2.1	2.57	4.00	2	3	48%	Specimen covered in vine growth. Occluded by larger specimens (#20 and #22). Deadwood through canopy. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
022	Juglans nigra Black Walnut Client Tree	81		26.0	3.4	5.81	9.0	3	2	48%	Select branches with vine growth covering them and causing some girdling. Vine present through canopy area causing some dieback of affected portions. Deadwood. Significant decay present through primary/secondary branches Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
023	Juglans nigra Black Walnut Client Tree	46		8.0	2.5	3.23	5.00	3	3	60%	Some deadwood and decay sites present in canopy area. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None
024	Juglans nigra Black Walnut Client Tree	62		12.0	2.9	4.51	7.00	3	3	60%	Some deadwood and decay sites present in canopy area. Located outside of all grading work/construction activities proposed - protected.	Note: Fence Removal Agreement will require foot access encroachment across tpz areas to allow for fence removal in area. See Report Sections pertaining to fence removal for details.						Protected (significant size) None

Tree Num / Owner	Botanical/ Common Name	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
025	Juglans nigra Black Walnut	18		4.0	1.6	2.49	4.00	3	4	69%	Occluded by larger specimens adjacent.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (not significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
026	Juglans nigra Black Walnut	40		8.0	2.4	2.60	4.00	3	3	60%	Some deadwood. Canopy offset over neighbor property	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Neighbor owned tree										Located outside of all grading work/construction activities proposed - protected.							None
027	Fraxinus americana White Ash	65		8.0	3.0	4.53	7.00	0	1	0%	Dead Tree - Likely from EAB.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
028	Tilia americana American Basswood	36		6.0	2.2	2.58	4.00	4	3	69%	Form a bit odd due to occlusion from other trees. Otherwise, good health.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
029	Juglans nigra Black Walnut	27		2.0	1.9	2.54	4.00	1	1	20%	Mostly dead tree, deadwood and decay throughout specimen.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
030	Juglans nigra Black Walnut	40		8.0	2.4	2.60	4.00	3	3	60%	Some deadwood present through canopy area.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ)		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	
031	Juglans nigra Black Walnut Client Tree	21		6.0	1.7	2.51	4.00	3	3	60%	Some deadwood. Occluded. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
032	Juglans nigra Black Walnut Client Tree	49		8.0	2.6	3.25	5.00	3	4	69%	Some deadwood in canopy as well as some minor decay sites. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
033	Juglans nigra Black Walnut Client Tree	20		6.0	1.7	2.50	4.00	3	4	69%	Some min deadwood due to occlusion but otherwise fair - good condition. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
034	Juglans nigra Black Walnut Client Tree	25		8.0	1.9	2.53	4.00	3	4	69%	Some min deadwood due to occlusion but otherwise fair - good condition. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
035	Juglans nigra Black Walnut Client Tree	55		14.0	2.8	3.88	6.00	3	3	60%	Deadwood in canopy as well as some minor decay sites. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None

Tree Num / Owner	Botanical/ Common Name	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
036	Juglans nigra Black Walnut	58		16.0	2.8	3.89	6.00	2	2	40%	Significant decay sites throughout canopy branches and in trunk. Hollow areas/cavities present in specimen.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
037	Tilia americana American Basswood	36		8.0	2.2	2.58	4.00	3	2	48%	Decay sites present through primary leader and canopy area. Some deadwood.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
038	Juglans nigra Black Walnut	30		6.0	2.0	2.55	4.00	3	3	60%	Some deadwood present in canopy.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
039	Juglans nigra Black Walnut	16		2.0	1.5	2.48	4.00	3	3	60%	A bit weak from occlusion.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (not significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected.							None
040	Acer rubrum Red Maple	18		5.0	1.6	2.49	4.00	3	3	60%		Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Neighbor owned tree										Located outside of all grading work/construction activities proposed - protected.							None

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
041	Juglans nigra Black Walnut Neighbor owned tree	45		10.0	2.5	3.23	5.00	3	3	60%	Some min deadwood. Canopy offset over neighboring property. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
042	Juglans nigra Black Walnut Client Tree	29		7.0	2.0	2.55	4.00	3	3	60%	Some deadwood and canopy branch decay Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
043	Juglans nigra Black Walnut Client Tree	55		12.0	2.8	3.88	6.00	3	3	60%	Some deadwood and canopy branch decay Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
044	Juglans nigra Black Walnut Client Tree	31		8.0	2.1	2.56	4.00	3	3	60%	Some deadwood and canopy branch decay Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
045	Juglans nigra Black Walnut Client Tree	44		10.0	2.5	3.22	5.00	3	3	60%	Some deadwood and canopy branch decay Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
046	Juglans nigra Black Walnut Client Tree	56		14.0	2.8	3.88	6.00	3	3	60%	Some deadwood and canopy branch decay Located outside of all grading work/construction activities proposed - protected.	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 Radius (M)	TPZ Radius (MTPZ/ CRZ)		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	
047	Tilia americana American Basswood Client/Neighbor Shared Ownership Tree	46		12.0	2.5	3.23	5.00	3	2	48%	Effective DBH =46 (square root of total sum of square stem dbh's) Deadwood and decay through canopy. Decay sites present through trunk. Canopy offset over neighbor site. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
048	Juglans nigra Black Walnut Client Tree	15		5.0	1.4	2.48	4.00	3	3	60%	Occluded Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (not significant size) None
049	Juglans nigra Black Walnut Client Tree	33		6.0	2.1	2.57	4.00	3	3	60%	Some deadwood in canopy. Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
050	Fraxinus americana White Ash Client Tree	23		4.0	1.8	2.52	4.00	0	1	0%	Dead as a result of EAB (emerald ash borer) Located outside of all grading work/construction activities proposed - protected. Note: this tree is dead.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
051	Thuja occidentalis White Cedar Neighbor owned tree	30		4.0	2.0	2.55	4.00	3	4	69%	Cedar hedge Located outside of all grading work/construction activities proposed - protected.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None

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052	Fraxinus americana White Ash Neighbor owned tree	49		8.0	2.6	3.25	5.00	0	1	0%	Effective DBH = 49cm (Square root of total sum of square stem dbh's) Dead as a result of EAB (emerald ash borer) Located outside of all grading work/construction activities proposed - protected. Note: this tree is dead.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
053	Fraxinus americana White Ash Client Tree	41		8.0	2.4	3.21	5.00	0	1	0%	Effective DBH = 41cm (Square root of total sum of square stem dbh's) Dead as a result of EAB (emerald ash borer) Located outside of all grading work/construction activities proposed - protected. Note: this tree is dead.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
054	Fraxinus americana White Ash Client Tree	23		6.0	1.8	2.52	4.00	0	1	0%	Dead as a result of EAB (emerald ash borer) Located outside of all grading work/construction activities proposed - protected. Note: this tree is dead.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None
055	Fraxinus americana White Ash Client Tree	39		8.0	2.3	2.60	4.00	0	1	0%	Dead as a result of EAB (emerald ash borer) Located outside of all grading work/construction activities proposed - protected. Note: this tree is dead.	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size) None

Tree Num / Owner	Botanical/ Common Name	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	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
056	Fraxinus americana White Ash	36		8.0	2.2	2.58	4.00	0	1	0%	Dead as a result of EAB (emerald ash borer)	Construction activities (including access) do not encroach upon the protected root zone, or crown of this tree.						Protected (significant size)
	Client Tree										Located outside of all grading work/construction activities proposed - protected. Note: this tree is dead.							None
057	Morus alba White Mulberry	23		6.0	1.8	2.52	4.00	3	3	60%	Effective DBH = 23cm (Square root of total sum of square stem dbh's) Growing from base of fence	Grading - Fill	1.9	7.1%	11.7%	3.5%	11.7%	Remove (within zone of construction)
	Neighbor owned tree										Impacted by grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Totals:		7.1%	11.7%	3.5%	11.7%	N/A – Private Tree Bylaw not applicable for this application
058	Morus alba White Mulberry	24		6.0	1.8	2.52	4.00	3	3	60%	Effective DBH = 24cm (Square root of total sum of square stem dbh's) Growing from base of fence	Grading - Fill	0.5	35.8%	37.0%	17.9%	37.0%	Remove (within zone of construction)
	Neighbor owned tree										Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Totals:		35.8%	37.0%	17.9%	37.0%	N/A – Private Tree Bylaw not applicable for this application

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059	Acer platanoides Norway Maple Neighbor owned tree	6		3.0	0.9	1.83	1.83	4	4	80%	Small Norway Maple whip growing up from base of fence due to no maintenance of area by owner Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill	0.0	89.7%	96.1%	44.8%	96.1%	Remove (not significant size - within zone) N/A – Private Tree Bylaw not applicable for this application
												Totals:		89.7%	96.1%	44.8%	96.1%	
060	Fraxinus americana White Ash Neighbor owned tree	23		6.0	1.8	2.52	4.00	3	3	60%	Effective DBH = 23cm (Square root of total sum of square stem dbh's) Growing from base of fence. Some deadwood. Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill	0.0	96.9%	90.9%	48.4%	90.9%	Remove (within zone of construction) N/A – Private Tree Bylaw not applicable for this application
												Totals:		96.9%	90.9%	48.4%	90.9%	
061	Fraxinus americana White Ash Neighbor owned tree	25		5.0	1.9	2.53	4.00	2	2	40%	Bark breakdown/delamination in areas (possibly from EAB presence) Declining Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill	0.0	100.0%	100.0%	50.0%	100.0%	Remove (within zone of construction) N/A – Private Tree Bylaw not applicable for this application
												Totals:		100.0%	100.0%	50.0%	100.0%	

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
062	Fraxinus americana White Ash Client/Neighbor Shared Ownership Tree	5		2.0	0.8	1.83	1.83	3	3	60%	Small whip/sucker growing from base of fence due to no maintenance of area Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill Totals:	0.0	100.0% 100.0%	100.0% 100.0%	50.0% 50.0%	100.0% 100.0%	Remove (not significant size - within zone) N/A – Private Tree Bylaw not applicable for this application
063	Fraxinus americana White Ash Client Tree	15		4.0	1.4	2.48	4.00	3	3	60%	Growing from base of fence Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill Totals:	0.0	72.3% 72.3%	77.4% 77.4%	36.2% 36.2%	77.4% 77.4%	Remove (not significant size - within zone) N/A – Private Tree Bylaw not applicable for this application
064	Acer platanoides Norway Maple Client Tree	5		2.0	0.8	1.83	1.83	3	3	60%	Small whip/sucker growing from base of fence due to no maintenance of area Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill Totals:	0.0	74.3% 74.3%	91.4% 91.4%	37.1% 37.1%	91.4% 91.4%	Remove (not significant size - within zone) N/A – Private Tree Bylaw not applicable for this application

Tree Num	Botanical/ Common Name / Owner	DBH (cm)	Trunk Lean and Direction	Canopy Diameter (M)	Zone of Max. Taper Radius (M)	TPZ Radius (MTPZ/ CRZ) MTPZ	TPZ Radius (MTPZ/ CRZ) CRZ	Condition Health	Condition Soundness	Condition Overall Condition %	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
065	Acer platanoides Norway Maple Client Tree	5		2.0	0.8	1.83	1.83	3	3	60%	Small whip/sucker growing from base of fence due to no maintenance of area Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill	0.0	79.7%	97.9%	39.8%	97.9%	Remove (not significant size - within zone) N/A – Private Tree Bylaw not applicable for this application
												Totals:		79.7%	97.9%	39.8%	97.9%	
066	Acer platanoides Norway Maple Client Tree	2		1.0	0.5	1.81	1.81	3	3	60%	Small whip/sucker growing from base of fence due to no maintenance of area Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill	0.0	60.8%	90.6%	30.4%	90.6%	Remove (not significant size - within zone) N/A – Private Tree Bylaw not applicable for this application
												Totals:		60.8%	90.6%	30.4%	90.6%	
067	Tilia americana American Basswood Client Tree	12		3.0	1.3	2.46	4.00	4	3	69%	Not anticipated to tolerate grading required to satisfy conservation Halton requirements. As per agreement with neighbor re trees along fence impacted by grading work, this tree is to be removed.	Grading - Fill	0.9	27.3%	15.8%	13.7%	15.8%	Remove (not significant size - within zone) Exempt Other
												Totals:		27.3%	15.8%	15.6%	15.8%	

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, Michael 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-1118A. I have been involved in the field of Arboriculture in a full-time capacity for a period of more than 13 years.

Michael R. Plowman
Assoc. Dipl. Horticulture
ISA Certified Arborist: ON-1118A

GLN Farm and Forest Research Co Ltd
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905 599 1290 – cell
mrplowman@glnconsulting.com
mrplowman.glnconsulting@gmail.com

7 December 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.

7 December 2020

Michael R. Plowman
Assoc. Dipl. Horticulture
ISA Certified Arborist: ON-1118A

GLN Farm and Forest Research Co Ltd
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mrplowman@glnconsulting.com
mrplowman.glnconsulting@gmail.com

Site:	338 Johnston Drive

Existing Tree Information - Public Trees Only						Replacement Tree Information		Condition Factors		
Tree Number	Common Name	DBH (cm)	Condition Rating (%)		Comments	# of 50 mm trees required	Prelim tree security Value	Avg Condition Rating (Health & Structure)	Construction Risk Factor (see below)	Compensation
			Health	Structure						
1	White Spruce	7	80%	80%	Protected	1	$ 700.00	80%	0%	$ -
2	Tree of Heaven	20	60%	60%	Foot access for fence agreement - no impact	4	$ 2,000.00	60%	0%	$ -
5	White Mulberry	14	40%	60%	Remove due to grading required	3	$ 1,400.00	50%	100%	$ 700.00
6	White Mulberry	24	40%	60%	Remove due to grading required	5	$ 2,400.00	50%	100%	$ 1,200.00
7	Butternut (Category 1 as per BHA)	12	20%	40%	Remove due to grading required	2	$ 1,200.00	30%	100%	$ 360.00
8	White Ash (Mostly dead)	14	20%	40%	Remove due to grading required	3	$ 1,400.00	30%	100%	$ 420.00
10	White Ash (Mostly dead)	16	20%	40%	Foot access for fence agreement - no impact	3	$ 1,600.00	30%	0%	$ -
11	White Ash (Mostly dead)	10	20%	40%	Foot access for fence agreement - no impact	2	$ 1,000.00	30%	0%	$ -
12	Black Cherry	20	60%	60%	Foot access for fence agreement - no impact	4	$ 2,000.00	60%	0%	$ -
13	White Ash	40	40%	60%	Foot access for fence agreement - no impact	8	$ 4,000.00	50%	0%	$ -
14	Ash Species (Dead Tree)	12	0%	20%	Foot access for fence agreement - no impact	2	$ 1,200.00	10%	0%	$ -
15	Red Elm	25	60%	60%	Foot access for fence agreement - no impact	5	$ 2,500.00	60%	0%	$ -
16	Basswood	26	80%	80%	Foot access for fence agreement - no impact	5	$ 2,600.00	80%	0%	$ -
19	White Ash (Mostly dead)	13	20%	40%	Foot access for fence agreement - no impact	3	$ 1,300.00	30%	0%	$ -
0	0	0	0%	0%		0	$ -	0%	0%	$ -

$ 2,700.00

Compensation: (Aggregate Caliper Formula)

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%

Construction Risk to Trees

Construction risk to trees is assessed by considering the following on a site by site basis: materials storage, existing and proposed utility and services

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.

*Risk can be reduced through use of mitigating actions (eg. Greater tree hoarding area to encompass remaining CRZ; Pre-Construction Root Pruning in the

CRZ – Critical Root Zone
MTPZ – Minimum Tree Protection Zone

- Please refer to the City of Burlington Tree Protection and Preservation Specification SS12A, available on-line for further information and tree protection requirements.
- Please refer to the City of Burlington Public Tree Bylaw 68-2013 for further information on your responsibility to protect city trees.

BHA Report Template – Version March 2015

Note to BHAs:

This BHA Report template identifies where you need to insert customized text in blue. Do **not** edit or delete black text.

Insert your cover letter to the client here and include the list of enclosures.

Enclosures:

1. Information from the Ministry of Natural Resources and Forestry about Butternut and the *Endangered Species Act, 2007*
2. Butternut Health Assessor's Report
3. Original data forms
4. Electronic and printed copies of the Excel data spreadsheet (BHA Tree Analysis)

Ministry of Natural Resources and Forestry

Species At Risk
P.O. Box 7000, 300 Water Street
Peterborough ON K9J 8M5

Ministère des Richesses naturelles et des Forêts

Espèces en péril
C.P. 7000, 300, rue Water
Peterborough ON K9J 8M5

The enclosed Butternut Health Assessor's Report documents the results of the Butternut health assessment that was conducted by the designated Butternut Health Assessor (BHA) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be affected by the activity and they are not identified in the enclosed BHA Report, they too must be assessed by a designated BHA.

Butternut is listed as an endangered species on the Species at Risk in Ontario List, and as such, it is protected under the *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. If you are planning to undertake an activity that may affect Butternut, you may be eligible to follow the requirements set out in section 23.7 of Ontario Regulation 242/08 under the ESA, or you may need to seek an authorization under the ESA (e.g., a permit).

Please visit e-laws at the link provided below for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled. Information about Butternut is also available at: http://www.ontario.ca/environment-and-energy/butternut-trees-your-property.

If you are eligible to kill, harm or take Butternut under section 23.7 of the regulation, your first step is to submit the BHA Report and the original data forms enclosed in this package to the local Ministry of Natural Resources and Forestry (MNRF) District Manager. Note that MNRF cannot accept photocopies or scanned electronic copies of the data forms.

Note regarding changes:

If the enclosed BHA Report does not identify which Butternut tree(s) are proposed to be killed, harmed, or taken in Table 1 (i.e., if "unknown" is indicated in the second last column of Table 1), or, if the information in the last two columns of Table 1 has changed since the date this BHA Report was produced, **do not make any edits to the BHA Report**. Instead, please attach a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed, or taken (by referencing the tree identification numbers) when you submit the enclosed BHA Report to the local MNRF District Manager.

The BHA Report must be submitted at least 30 days prior to registering an eligible activity to kill, harm, or remove a Butternut tree. During this 30 day period, no Butternut trees (of any category) may be killed, harmed, or removed, and MNRF may contact you for an opportunity to examine the trees. If MNRF chooses to examine the trees, a representative of MNRF will contact you using the information you supplied when you submitted the BHA Report.

If you are eligible to follow the rules in regulation under section 23.7, you may register your activity using the "Notice of Butternut Impact" form on the MNRF Registry **after the 30 day period has elapsed**.

If you are **not** eligible to follow the rules in regulation under section 23.7, please contact the local MNRF district office to determine whether you will need to seek an authorization (e.g., a permit). A link to the directory of MNRF offices is provided below.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this information and a copy of the BHA Report (including copies of all data forms) for your records, along with any other documentation you may receive from MNRF should an examination of the trees occur. If you have any questions, please contact your local MNRF district office.

Links:

Endangered Species Act, 2007:
http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_07e06_e.htm

Ontario Regulation 242/08 (refer to section 23.7):
http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm

MNRF Office Locations:
https://www.ontario.ca/government/ministry-natural-resources-and-forestry-regional-and-district-offices

Butternut Health Assessor's Report Number: 591-003/20

Peter Wynnyczuk, #591
40 Brillinger Street
Richmond Hill, Ontario
L4C 8Y4
416 399 4490
peter@paurbanforestryconsulting.com

Mr. Harb Kalhon + Mr. Gurmit Kalhon
338 Johnston Drive
Burlington, Ontario
L7N 1V6
gurmitkahlon@hotmail.com
Site location: 338 Johnston Drive, Oakville

Date(s) of Butternut health assessment: October 30, 2020)
Date BHA Report prepared: October 30, 2020

Map datum used: ☐ NAD83 X☐ WGS84

Total number of trees assessed in this BHA Report: 1

The assessed trees were numbered on site using Location description on this former church lot as rear yard, 10m W. Parking Lot, 2m S. Fence The numbers at the site correspond to the tree numbers referenced in this report.

This BHA Report includes the following tables:

- Table 1: Butternut Trees Assessed
- Table 2: Trees Determined by BHA to be Butternut Hybrids
- Table 3: Summary of Assessment Results

Note to BHAs: add/remove table rows as necessary

Table 1: Butternut Trees Assessed

Tree #	UTM coordinates	Category[1] *(1, 2, or 3[2])*	dbh[3] (cm)	Cultivated? *(Y/N)*	Proposed to be: *(enter one: unknown[4], killed, harmed or taken)*	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
1	17 599257.42E, 4799526.48N	1	12	Y	killed	Concerns over tree health and future development

[1] The extent to which the tree is affected by Butternut Canker is presented in the Excel document titled, "BHA Tree Analysis" that accompanies this BHA Report.
[2] Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08.
[3] dbh: diameter at breast height, rounded to nearest cm (if tree is shorter than breast height, enter zero)
[4] In this column, "unknown" indicates that at the time of assessment, there are no proposals to kill, harm or take this tree that are known to the BHA.

Tree #	UTM coordinates	Category[1] *(1, 2, or 3[2])*	dbh[3] (cm)	Cultivated? *(Y/N)*	Proposed to be: *(enter one: unknown[4], killed, harmed or taken)*	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
						proposal

Table 2: Trees Determined by BHA to be Butternut Hybrids

Tree #	UTM coordinates	Method used (genetic testing or field identification):

Table 3: Summary of Assessment Results

Result:	**Total #:**	**Important information for persons planning activities that may affect Butternut:**
Category 1	1	• A Category 1 tree is one that is affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut in the area in which the tree is located; and is considered "non-retainable". • During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. • Category 1 trees may be killed, harmed or taken **after** the 30 day period that follows submission of this BHA Report to the MNRF District Manager, unless the results of an MNRF examination indicate that the assessment has not been conducted in accordance with the document entitled "Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the *Endangered Species Act, 2007"*.
Category 2	0	• A Category 2 tree is one that is not affected by Butternut Canker, or is affected by Butternut Canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of butternut in the area in which the tree is located, and is considered "retainable". • During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken,

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
		and MNRF may contact you for an opportunity to examine the trees. • Activities that may kill, harm or take up to a **maximum of ten (10)** Category 2 trees may be eligible to follow the rules in section 23.7 of Ontario Regulation 242/08, in accordance with the conditions and requirements set out in the regulation. • Refer to e-Laws for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled: http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm • Activities that may kill, harm or take more than ten (10) Category 2 trees are not eligible to follow the rules in section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization (e.g., a permit) or consider an alternative that would be eligible for the regulation.
Category 3	0	• A Category 3 tree is one that may be useful in determining sources of resistance to Butternut Canker, and is considered "archivable". • Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08. • Contact the local MNRF district office for information on how to seek an ESA authorization, or consider an alternative that will avoid killing, harming or taking any Category 3 trees.
Cultivated		• An activity that involves killing, harming, or taking a cultivated Butternut tree that was not required to be planted to fulfill a condition of an ESA permit or a condition of a regulation, may be eligible for the exemption provided by subsection 23.7 (11) of O. Reg. 242/08. • Prior to undertaking the activity, the owner or occupier of the land on which the Butternut is located (or person acting on their behalf) will need to determine whether the exemption for cultivated trees is applicable by determining whether or not the tree was cultivated as a result of the requirements for an exemption under O. Reg. 242/08 or a condition of a permit issued under the ESA. This information can be accessed by contacting the local MNRF district office. • The owner or occupier of the land on which the Butternut is located (or person acting on their behalf) is encouraged to append the details regarding whether the tree was planted to satisfy a requirement (e.g., the permit number or registration number) to this BHA Report for their records.
Hybrid	0	• Hybrid Butternut trees are not protected under the ESA, but their removal may be subject to municipal by-laws and other legislation.

Butternut Health Assessor's Comments:

It appears by the nature of the site being a former church property for many years it appears to be planted. Based on planting location in relation to the property line it appears human influence has placed the tree there.

This concludes the summary of the BHA Report. A complete BHA Report must also include:

1. All original (hard copy) data forms (i.e., all completed sets of Form 1 and Form 2), and
2. Electronic and printed copies of the Excel data analysis spreadsheet.

Picture 1. From South overview of tree in relation to slope. Parking lot on right just out of picture.

Picture 2. From South, tree in proximity to fence. Stubs visible.

Picture 3. From South, what appears to be a graft line of the two remaining leaders, weak crotch and stub of 3rd leader.

Picture 4. From North West showing bark missing at base and sooty areas.

Picture 5. From North East showing extent of missing bark and poor leader connection structure.

Picture 6. From north East showing lower sooty areas

BHA Tree Analysis (version: December 2013)

This table is to be completed by a designated Butternut Health Assessor (BHA).

BHA Report #	3	Assessment Date(s)	30-Oct-20	Total # Butternut Trees in BHA Report	1
BHA ID #	591	BHA Name	Peter Wynnyczuk		
Landowner / Client Name			Mr. Gurmit Kahlon and Mr. Harb Kahlon		
Property Location			338 Johnston Drive, Burlington		

input field data										automatic calculations from field data						Categories: 1: non-retainable, 2: retainable, 3: archivable				
			# bole cankers				# root flare (RF) cankers													
Tree #	Live Crown %	Tree dbh (cm)	sooty (S) (will be assigned 2.5 cm per canker)		open (O) (will be assigned 5 cm per canker)				<40 m from cankered tree? (Y or N)	Circ. (cm) = Pi x dbh	total bole canker width (sooty x 2.5 + open x 5)	total RF canker width (sooty x 2.5 + open x 5)	bole canker % of circ.	RF canker % of circ.	total bole & root canker % of 2xCirc	LC% >/= 50 & BC% = 0	LC% >70 & BRC % <20	LC% >70 & BC % <20	Preliminary tree call	FINAL TREE CALL a Cat 2, dbh>20cm <40m from a Cat 1
			S <2 m	S >2 m	O <2 m	O >2 m	RF S	RF O		Circ (cm)	BC (cm)	RC (cm)	BC%	RC%	BRC%					
1	95	12	11	2	0	1	0	1		37.68	37.5	5.0	99.5	13.3	56.4	1	1	1	1	1
2										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
3										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
4										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
5										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
6										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
7										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
8										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
9										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
10										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
11										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
12										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
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Butternut Data Collection Form 1 - 2010 Edition

Surveyor ID or BHA #: 0591

(PLEASE USE BLOCK LETTERS)

Date (dd/mm/yyyy): 30 - 10 - 2020

Shaded fields are mandatory for Butternut Health Assessments

Surveyor Contact

First: PETER

Last: WYWLYCZUK

Email: info@paurbanforestry.com

Telephone: (416) 399-4990

Telephone Other: ( ) - x

Property Owner *(check if same as surveyor)* ☐

First: GURMIT

Last: KAHLON

or Company:

Email: Gurmitkahlon@hotmail.com

Telephone: ( ) -

Telephone Other: ( ) - x

Property Owner's Mailing address

Address: 338 JOHNSTON DRIVE

Postal Code: L7W 1V6

Prov.: ON

City: BURLINGTON

Tree Location *(if different from mailing address)*

Address/(911#):

Township:

Lot:

Con:

City:

Directions

☒ Yes ☐ No Can Share Location Information with other Butternut Recovery Organizations?

☒ Yes ☐ No Site visits OK? (prior arrangments will always be made for a site vist)

> (Greater than)
< (Less than)

Butternut Trees Tally by Diameter Class

(Do a dot tally in blank space; write total# in box for each)

Tree Condition	< 3 cm	3-15 cm	16-30cm	>30 cm
Vigorous: > 50% Live Crown Minor or no cankers		1		
Poor Vigor: <50% Live Crown or >50% Live Crown + heavily cankered stem				
Dead				

Historically, do some trees produce seeds? ☐ Y ☐ N ☐ Unkown

Estimated area containing butternut for properties > 1 acre (0.4 hectares): NA ☐ Acres ☐ Hectares

Overall Property Description (area(s) containing Butternut)

☐ Rolling Upland ☐ Bottomland
☐ Valley Slope ☒ Variable
☐ Tableland ☐ Unknown

Vegetation Community/ies

☐ Open ☐ Fencerow
☐ Shrubland ☐ Roadside
☐ DeciduousForest ☐ Quary
☐ ConiferForest ☒ UrbanYard
☐ MixedForest ☐ UrbanPark

Other

Soil Drainage

☐ Well Drained
☐ Moderately Drained
☐ Poorly Drained
☒ Unknown

Soil Depth

☐ > 1metre
☐ 30 - 99cm
☐ < 30cm
☐ Variable
☒ Unknown

Soil Texture

☐ Clay ☐ Sand
☐ Clay Loam ☐ Variable
☐ Loam ☒ Unknown
☐ Loamy Sand

Please enter matching numerical page link code on forms 1 and 2

Page Link: 01

(Contact information follows all applicable privacy policies and guidelines)

Please return forms to:
Forest Gene Conservation Association
Suite 233, 266 Charlotte St.
Peterborough, ON, K9J 2V4
www.fgca.net

49731

Butternut Data Collection FORM 2 (2010 Edition)

(PLEASE USE BLOCK LETTERS)

Fill when Form 1 indicates canker is well established. The information opn Form 2 must be filled out for all trees when doing a Butternut Health Assessment.

Shaded fields are mandatory for Butternut Health Assessments

Site Code(A,B,...Z, AA...) | Surveyor ID or BHA # 059

Surveyor Last Name WYNNYCHUK

Date (dd/mm/yyyy) 30 - 10 - 2020

Tree ID Numbering: 1,2,3,...Starting from 1 for each site

Tree 1

Tree # 001 | Zone 17 | Easting 599257 | Northing 4799526

Crown Class 4 | Live Crown % 50 | Main Stem Length(m) Below crown 02

Twig Dieback | Branch Dieback | Defoliation (2) | Discolouration

#Stems 1 | DBH(cm) 21 19

Butternut Origin: Natural | Planted (4) | Unknown

Seed Signs: Male Flowers | Female Flowers | Seed Set | None (5)

Assess below live crown: #Epic-Live 0 | #Epic-Dead 0 | Bark Type | # Callused Wounds 0

	#Open	#Sooty
Root	1	0
=<2m	1	1
>2m	0	2

Metres from badly cankered tree: < 40 | > 40 | None Found (X)

Competing Species: ASH | WALNUT

APPEARS GRAFTED & LIKELY PLANTED MULTI STEM TREE

Tree 2

Tree # | Zone 17 | Easting | Northing

Crown Class | Live Crown % | Main Stem Length(m) Below crown | Seed Signs

Twig Dieback | Branch Dieback | Defoliation | Discolouration | #Stems | DBH(cm)

Butternut Origin: Natural | Planted | Unknown

Seed Signs: Male Flowers | Female Flowers | Seed Set | None

Assess below live crown: #Epic-Live | #Epic-Dead | Bark Type | # Callused Wounds

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: < 40 | > 40 | None Found

Competing Species

Tree 3

Tree # | Zone 17 | Easting | Northing

Crown Class | Live Crown % | Main Stem Length(m) Below crown | Seed Signs

Twig Dieback | Branch Dieback | Defoliation | Discolouration | #Stems | DBH(cm)

Butternut Origin: Natural | Planted | Unknown

Seed Signs: Male Flowers | Female Flowers | Seed Set | None

Assess below live crown: #Epic-Live | #Epic-Dead | Bark Type | # Callused Wounds

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: < 40 | > 40 | None Found

Competing Species

Tree 4

Tree # | Zone 17 | Easting | Northing

Crown Class | Live Crown % | Main Stem Length(m) Below crown | Seed Signs

Twig Dieback | #Stems

Defoliation | Discolouration | DBH(cm)

Butternut Origin: Planted | Unknown

Seed Signs: Male Flowers | Seed Set | None

Assess below live crown: #Epic-Dead | Bark Type | Wounds

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: < 40 | > 40 | None Found

Competing Species

Tree 5

Class | Crown % | Below crown | Seed Signs

Twig Dieback | #Stems

Defoliation | Discolouration | DBH(cm)

Butternut Origin: Unknown | None

Seed Signs: Male Flowers

Assess below live crown: #Epic-Dead | Bark Type

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: < 40 | > 40 | None Found

Competing Species

Please enter matching page link codes on forms 1 and 2

Page Link 02

Please return forms to:
Forest Gene Conservation Association
Suite 233, 286 Charlotte St

49731

BHA Report Template – Version March 2015

Note to BHAs:

This BHA Report template identifies where you need to insert customized text in blue. Do **not** edit or delete black text.

Insert your cover letter to the client here and include the list of enclosures.

Enclosures:

1. Information from the Ministry of Natural Resources and Forestry about Butternut and the *Endangered Species Act, 2007*
2. Butternut Health Assessor's Report
3. Original data forms
4. Electronic and printed copies of the Excel data spreadsheet (BHA Tree Analysis)

Ministry of Natural Resources and Forestry

Species At Risk
P.O. Box 7000, 300 Water Street
Peterborough ON K9J 8M5

Ministère des Richesses naturelles et des Forêts

Espèces en péril
C.P. 7000, 300, rue Water
Peterborough ON K9J 8M5

The enclosed Butternut Health Assessor's Report documents the results of the Butternut health assessment that was conducted by the designated Butternut Health Assessor (BHA) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be affected by the activity and they are not identified in the enclosed BHA Report, they too must be assessed by a designated BHA.

Butternut is listed as an endangered species on the Species at Risk in Ontario List, and as such, it is protected under the *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. If you are planning to undertake an activity that may affect Butternut, you may be eligible to follow the requirements set out in section 23.7 of Ontario Regulation 242/08 under the ESA, or you may need to seek an authorization under the ESA (e.g., a permit).

Please visit e-laws at the link provided below for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled. Information about Butternut is also available at: http://www.ontario.ca/environment-and-energy/butternut-trees-your-property.

If you are eligible to kill, harm or take Butternut under section 23.7 of the regulation, your first step is to submit the BHA Report and the original data forms enclosed in this package to the local Ministry of Natural Resources and Forestry (MNRF) District Manager. Note that MNRF cannot accept photocopies or scanned electronic copies of the data forms.

Note regarding changes:

If the enclosed BHA Report does not identify which Butternut tree(s) are proposed to be killed, harmed, or taken in Table 1 (i.e., if "unknown" is indicated in the second last column of Table 1), or, if the information in the last two columns of Table 1 has changed since the date this BHA Report was produced, **do not make any edits to the BHA Report**. Instead, please attach a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed, or taken (by referencing the tree identification numbers) when you submit the enclosed BHA Report to the local MNRF District Manager.

The BHA Report must be submitted at least 30 days prior to registering an eligible activity to kill, harm, or remove a Butternut tree. During this 30 day period, no Butternut trees (of any category) may be killed, harmed, or removed, and MNRF may contact you for an opportunity to examine the trees. If MNRF chooses to examine the trees, a representative of MNRF will contact you using the information you supplied when you submitted the BHA Report.

If you are eligible to follow the rules in regulation under section 23.7, you may register your activity using the "Notice of Butternut Impact" form on the MNRF Registry **after the 30 day period has elapsed**.

If you are **not** eligible to follow the rules in regulation under section 23.7, please contact the local MNRF district office to determine whether you will need to seek an authorization (e.g., a permit). A link to the directory of MNRF offices is provided below.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this information and a copy of the BHA Report (including copies of all data forms) for your records, along with any other documentation you may receive from MNRF should an examination of the trees occur. If you have any questions, please contact your local MNRF district office.

Links:

Endangered Species Act, 2007:
http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_07e06_e.htm

Ontario Regulation 242/08 (refer to section 23.7):
http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm

MNRF Office Locations:
https://www.ontario.ca/government/ministry-natural-resources-and-forestry-regional-and-district-offices

Butternut Health Assessor's Report Number: 591-003/20

Peter Wynnyczuk, #591
40 Brillinger Street
Richmond Hill, Ontario
L4C 8Y4
416 399 4490
peter@paurbanforestryconsulting.com

Mr. Harb Kalhon + Mr. Gurmit Kalhon
338 Johnston Drive
Burlington, Ontario
L7N 1V6
gurmitkahlon@hotmail.com
Site location: 3250 New St., Burlington

Date(s) of Butternut health assessment: November 27, 2020)
Date BHA Report prepared: December 3, 2020

Map datum used: ☐ NAD83 X☐ WGS84

Total number of trees assessed in this BHA Report: 1

The assessed trees were numbered on site using Location. Stake in ground and flagging tape just north of fence of #338 Johnston Drive, 2/3 of way from front of church building and approx. 0.5m north of shared fence at #3250 New St., on New St. property side The numbers at the site correspond to the tree numbers referenced in this report.

This BHA Report includes the following tables:

- Table 1: Butternut Trees Assessed
- Table 2: Trees Determined by BHA to be Butternut Hybrids
- Table 3: Summary of Assessment Results

Note to BHAs: add/remove table rows as necessary

Table 1: Butternut Trees Assessed

Tree #	UTM coordinates	Category[1] *(1, 2, or 3[2])*	dbh[3] (cm)	Cultivated? *(Y/N)*	Proposed to be: *(enter one: unknown[4], killed, harmed or taken)*	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:
1	17 599264E, 4799545N	1	11	Y	killed	Regrading as required

[1] The extent to which the tree is affected by Butternut Canker is presented in the Excel document titled, "BHA Tree Analysis" that accompanies this BHA Report.
[2] Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08.
[3] dbh: diameter at breast height, rounded to nearest cm (if tree is shorter than breast height, enter zero)
[4] In this column, "unknown" indicates that at the time of assessment, there are no proposals to kill, harm or take this tree that are known to the BHA.

Tree #	UTM coordinates	Category[1] *(1, 2, or 3[2])*	dbh[3] (cm)	Cultivated? *(Y/N)*	Proposed to be: *(enter one: unknown[4], killed, harmed or taken)*	If tree is proposed to be killed, harmed, or taken, indicate reason tree is proposed to be killed, harmed or taken:

Table 2: Trees Determined by BHA to be Butternut Hybrids

Tree #	UTM coordinates	Method used (genetic testing or field identification):

Table 3: Summary of Assessment Results

Result:	**Total #:**	**Important information for persons planning activities that may affect Butternut:**
Category 1	1	• A Category 1 tree is one that is affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut in the area in which the tree is located; and is considered "non-retainable". • During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. • Category 1 trees may be killed, harmed or taken **after** the 30 day period that follows submission of this BHA Report to the MNRF District Manager, unless the results of an MNRF examination indicate that the assessment has not been conducted in accordance with the document entitled "Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the *Endangered Species Act, 2007*".
Category 2	0	• A Category 2 tree is one that is not affected by Butternut Canker, or is affected by Butternut Canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of butternut in the area in which the tree is located, and is considered "retainable". • During the 30 day period that follows your submission of this BHA Report to the MNRF District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MNRF may contact you for an opportunity to examine the trees. • Activities that may kill, harm or take up to a **maximum of ten (10)** Category 2 trees may be

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
		eligible to follow the rules in section 23.7 of Ontario Regulation 242/08, in accordance with the conditions and requirements set out in the regulation. • Refer to e-Laws for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled: http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm • Activities that may kill, harm or take more than ten (10) Category 2 trees are not eligible to follow the rules in section 23.7 of Ontario Regulation 242/08. Contact the local MNRF district office for information on how to seek an ESA authorization (e.g., a permit) or consider an alternative that would be eligible for the regulation.
Category 3	0	• A Category 3 tree is one that may be useful in determining sources of resistance to Butternut Canker, and is considered "archivable". • Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08. • Contact the local MNRF district office for information on how to seek an ESA authorization, or consider an alternative that will avoid killing, harming or taking any Category 3 trees.
Cultivated	0	• An activity that involves killing, harming, or taking a cultivated Butternut tree that was not required to be planted to fulfill a condition of an ESA permit or a condition of a regulation, may be eligible for the exemption provided by subsection 23.7 (11) of O. Reg. 242/08. • Prior to undertaking the activity, the owner or occupier of the land on which the Butternut is located (or person acting on their behalf) will need to determine whether the exemption for cultivated trees is applicable by determining whether or not the tree was cultivated as a result of the requirements for an exemption under O. Reg. 242/08 or a condition of a permit issued under the ESA. This information can be accessed by contacting the local MNRF district office. • The owner or occupier of the land on which the Butternut is located (or person acting on their behalf) is encouraged to append the details regarding whether the tree was planted to satisfy a requirement (e.g., the permit number or registration number) to this BHA Report for their records.
Hybrid	0	• Hybrid Butternut trees are not protected under the ESA, but their removal may be subject to municipal by-laws and other legislation.

Butternut Health Assessor's Comments:

Due to regrading requirements set out by regulatory authorities, this tree in proximity of a flood plain will be killed to address engineering requirements. The significant and mature vine in the area is dominating all vegetation in proximity to this fence which has provided support for the vine to grow.

The significant canker on the trunk is almost to a point that structurally the trunk may be compromised leading to potential failure if supporting vine/ash were cleared from the tree.

This concludes the summary of the BHA Report. A complete BHA Report must also include:

1. All original (hard copy) data forms (i.e., all completed sets of Form 1 and Form 2), and
2. Electronic and printed copies of the Excel data analysis spreadsheet.

BHA Tree Analysis (version: December 2013)

This table is to be completed by a designated Butternut Health Assessor (BHA).

BHA Report #	4	Assessment Date(s)	27-Nov-20	Total # Butternut Trees in BHA Report	1
BHA ID #	591	BHA Name	Peter Wynnyczuk		
Landowner / Client Name			Mr. Gurmit Kahlon and Mr. Harb Kahlon		
Property Location			338 Johnston Drive and 3250 New St, Burlington		

input field data										automatic calculations from field data						Categories: 1: non-retainable, 2: retainable, 3: archivable				
			# bole cankers				# root flare (RF) cankers													
Tree #	Live Crown %	Tree dbh (cm)	sooty (S) (will be assigned 2.5 cm per canker)		open (O) (will be assigned 5 cm per canker)				<40 m from cankered tree? (Y or N)	Circ. (cm) = Pi x dbh	total bole canker width (sooty x 2.5 + open x 5)	total RF canker width (sooty x 2.5 + open x 5)	bole canker % of circ.	RF canker % of circ.	total bole & root canker % of 2xCirc	LC% >/= 50 & BC% = 0	LC% >70 & BRC % <20	LC% >70 & BC % <20	Preliminary tree call	FINAL TREE CALL a Cat 2, dbh>20cm <40m from a Cat 1
			S <2 m	S >2 m	O <2 m	O >2 m	RF S	RF O		Circ (cm)	BC (cm)	RC (cm)	BC%	RC%	BRC%					
1	75	11	7	0	0	1	0	0		34.54	22.5	0.0	65.1	0.0	32.6	1	1	1	1	1
2										0	0.0	0.0	#####	#####	#####	####	###	###	##	#DIV/0!
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info@paurbanforestryconsulting.com

Picture 1. A. From North overview of tree in relation to fence and church. B. From East showing tree in proximity to significant vine on fence and in canopy. Parking lot over fence at #338 Johnston Drive.

Picture 2. From North looking up into canopy showing competing growth.

info@paurbanforestryconsulting.com


Picture 3. A. From North West showing lower trunk with canker bulge, and competing Ash growth. B. From East showing extent of trunk canker and decay and Ash conflict.


Picture 5. From North showing base of tree with competing Ash in conflict with the Butternut.

Butternut Data Collection Form 1 - 2010 Edition

Surveyor ID or BHA #: 0591

(PLEASE USE BLOCK LETTERS)

Date (dd/mm/yyyy): 27 - 11 - 2020

Shaded fields are mandatory for Butternut Health Assessments

Surveyor Contact

First: PETER Last: WYNNYCZUK

Email: info@pdurbanforestryconsulting.com

Telephone (416) 399-4490 Telephone Other ( ) x

Property Owner (check if same as surveyor) ☐

First: DURWIN Last: JOHNSTON

or Company:

Email: durwinkjohnston@ymail.com

Telephone ( ) Telephone Other ( ) x

Property Owner's Mailing address

Address: 739 SOUTH DEVON Postal Code: K9J 1V6 Prov.: ON

City: BURLINGTON

Tree Location (if different from mailing address)

Address/(911#): 3250 WBW ST

Township: Lot: Con:

City: BURLINGTON

Directions: ALONG LOWCLIFFE ABUTTING # 339 JOHNSTON

☒ Yes ☐ No Can Share Location Information with other Butternut Recovery Organizations?

☒ Yes ☐ No Site visits OK? (prior arrangments will always be made for a site vist)

> (Greater than)
< (Less than)

Butternut Trees Tally by Diameter Class

(Do a dot tally in blank space; write total# in box for each)

Tree Condition	< 3 cm	3-15 cm	16-30cm	>30 cm
Vigorous: > 50% Live Crown Minor or no cankers		01		
Poor Vigor: <50% Live Crown or >50% Live Crown + heavily cankered stem				
Dead				

Historically, do some trees produce seeds? ☐ Y ☐ N ☐ Unkown

Estimated area containing butternut for properties > 1 acre (0.4 hectares): N/A ☐ Acres ☐ Hectares

Overall Property Description (area(s) containing Butternut)

☐ Rolling Upland ☐ Bottomland
☐ Valley Slope ☒ Variable
☐ Tableland ☐ Unknown

Vegetation Community/ies

☐ Open ☒ Fencerow
☐ Shrubland ☐ Roadside
☐ DeciduousForest ☐ Quary
☐ ConiferForest ☐ UrbanYard
☐ MixedForest ☐ UrbanPark

Other: WOOD PRESERVE

Soil Drainage

☐ Well Drained
☐ Moderately Drained
☐ Poorly Drained
☒ Unknown

Soil Depth

☐ > 1metre
☐ 30 - 99cm
☐ < 30cm
☐ Variable
☒ Unknown

Soil Texture

☐ Clay ☐ Sand
☐ Clay Loam ☐ Variable
☐ Loam ☒ Unknown
☐ Loamy Sand

Please enter matching numerical page link code on forms 1 and 2

Page Link: 01

(Contact Information follows all applicable privacy policies and guidelines)

Please return forms to:
Forest Gene Conservation Association
Suite 233, 266 Charlotte St.
Peterborough, ON, K9J 2V4
www.fgca.net

49731

Butternut Data Collection FORM 2 (2010 Edition)

(PLEASE USE BLOCK LETTERS)

Shaded fields are mandatory for Butternut Health Assessments

Fill when Form 1 indicates canker is well established. The information opn Form 2 must be filled out for all trees when doing a Butternut Health Assessment.

Site Code(A,B,...Z, AA...):

Surveyor ID or BHA #: 0591

Date (dd/mm/yyyy): 27 - 11 - 2020

Surveyor Last Name: WYNNYCZUK

Tree ID Numbering: 1,2,3,...Starting from 1 for each site

Tree #: 002 Zone: 17 Easting: 599264 Northing: 4799545

Crown Class: Live Crown %: 70 Main Stem Length(m) Below crown: 02

☐ Twig Dieback
TRUNK- ☒ ~~Branch~~ Dieback
☐ Defoliation
☐ Discolouration

#Stems: 1

DBH(cm): 011

Butternut Origin: ☐ Natural ☐ Planted ☒ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☒ None

Assess below live crown:
#Epic-Live: 0
#Epic-Dead: 1
Bark Type:
Callused Wounds: 0

	#Open	#Sooty
Root	0	0
=<2m	1	7
>2m	8	0

Metres from badly cankered tree: ☒ < 40 ☐ > 40 ☐ None Found

Competing Species:
VINES
ASH

DOMINATED BY VINE & CROWDED BY ASH SUCKERS

Tree #: Zone: 1 Easting: Northing:

Crown Class: Live Crown %: Main Stem Length(m) Below crown:

☐ Twig Dieback
☐ Branch Dieback
☐ Defoliation
☐ Discolouration

#Stems:

DBH(cm):

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown:
#Epic-Live:
#Epic-Dead:
Bark Type:
Callused Wounds:

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: ☐ < 40 ☐ > 40 ☐ None Found

Competing Species:

Tree #: Zone: 1 Easting: Northing:

Crown Class: Live Crown %: Main Stem Length(m) Below crown:

☐ Twig Dieback
☐ Branch Dieback
☐ Defoliation
☐ Discolouration

#Stems:

DBH(cm):

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown:
#Epic-Live:
#Epic-Dead:
Bark Type:
Callused Wounds:

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: ☐ < 40 ☐ > 40 ☐ None Found

Competing Species:

Tree #: Zone: 1 Easting: Northing:

Crown Class: Live Crown %: Main Stem Length(m) Below crown:

☐ Twig Dieback
☐ Branch Dieback
☐ Defoliation
☐ Discolouration

#Stems:

DBH(cm):

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown:
#Epic-Live:
#Epic-Dead:
Bark Type:
Callused Wounds:

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: ☐ < 40 ☐ > 40 ☐ None Found

Competing Species:

Tree #: Zone: 1 Easting: Northing:

Crown Class: Live Crown %: Main Stem Length(m) Below crown:

☐ Twig Dieback
☐ Branch Dieback
☐ Defoliation
☐ Discolouration

#Stems:

DBH(cm):

Butternut Origin: ☐ Natural ☐ Planted ☐ Unknown

Seed Signs: ☐ Male Flowers ☐ Female Flowers ☐ Seed Set ☐ None

Assess below live crown:
#Epic-Live:
#Epic-Dead:
Bark Type:
Callused Wounds:

	#Open	#Sooty
Root		
=<2m		
>2m		

Metres from badly cankered tree: ☐ < 40 ☐ > 40 ☐ None Found

Competing Species:

Please enter matching page link code on forms 1 and 2

Page Link: 02

(Contact Information follows all applicable privacy policies and guidelines)

Please return forms to:
Forest Gene Conservation Association
Suite 233, 266 Charlotte St.
Peterborough, ON, K9J 2V4
www.fgca.net

49731

ARBORIST DRAWING LENGEND

- MINIMUM TREE PROTECTION ZONE (MTPZ AS PER BYLAW)
- CRITICAL ROOT ZONE (CRZ AS PER TREE BYLAW)
- CANOPY LIMIT
- TREE PROTECTION FENCE – (POLY MESH) – MIN 1.2M HT
- TREE PROTECTION FENCE – (POLY MESH) – MIN 1.2M HT OPTIONAL TREE PROTECTION HOARDING FOR SMALL SIZE/HEDGE/SHRUBS
- 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 TO BE PRESENT DURING ANY EXCAVATION IN THESE AREAS.
- TREE PROTECTION ZONE

TREE BLOCK SYMBOLS

TREE TO BE PRESERVED/RETAINED
- CANOPY EXTENT
- # Ø0.20 DBH (TRUNK DIAMETER AT 1.4M ABOVE GRADE)
- 1.80M MINIMUM TREE PROTECTION ZONE RADIUS

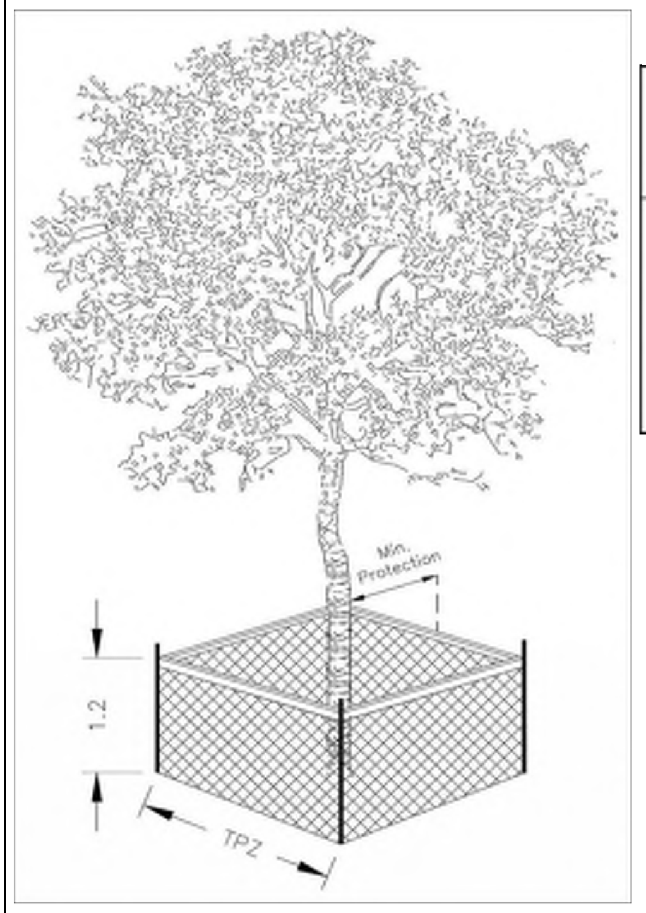
Ø0.20 TREE TO BE REMOVED PERMIT REQUIRED

Ø0.20 TREE TO BE REMOVED NO PERMIT REQUIRED/SMALL SIZE

TREE DOES NOT EXIST OR PREVIOUSLY REMOVED

HEDGE/SHRUB (SMALL SIZE PROTECTION OPTIONAL)

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 creates 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".

Page 6
February 2013

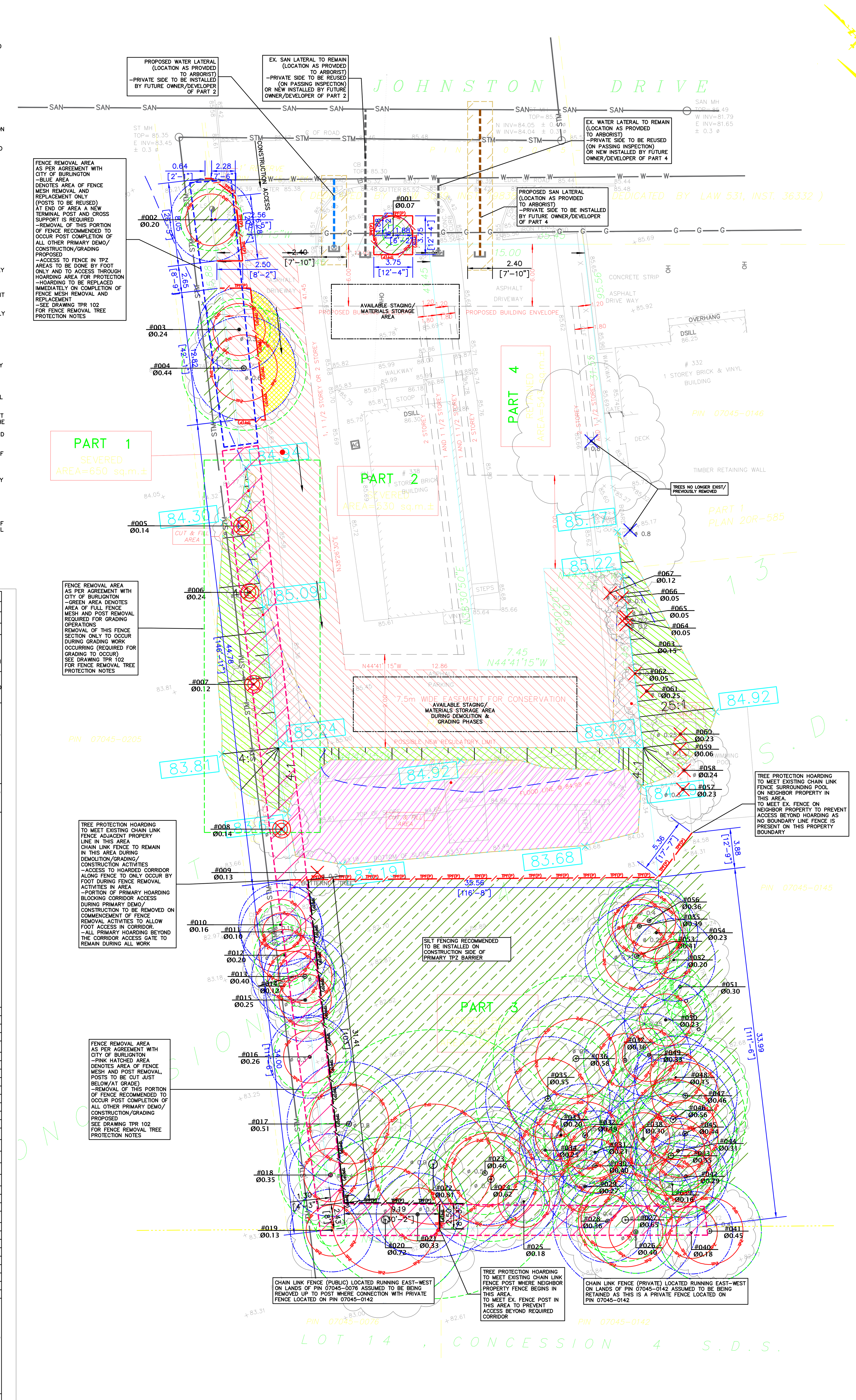
PRE-CONSTRUCTION PHASE
PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, TREE PRESERVATION HOARDING, AS WELL AS ARBORICULTURAL WORK WITH REGARDS TO ANY REMOVALS AND ANY REQUIRED PRUNING FOR CONSTRUCTION, SHOULD BE IMPLEMENTED AS FOLLOWS:

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. REGARDING SILT FENCING: IF/WHERE REQUIRED FOR THE DEVELOPMENT PROPOSED, 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 INSIDE 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 VERTICAL AND HORIZONTAL TREE PROTECTION HOARDING, AND SILT FENCING (IF REQUIRED), IS TO BE INSPECTED FOR CORRECT CONSTRUCTION AND PLACEMENT, AS PER THE APPROVED TREE PRESERVATION PLAN DRAWING AND SITE PLAN, BY CITY OF BURLINGTON STAFF, OR A CERTIFIED ARBORIST/ANOTHER APPROVED CONSULTANT AS APPROVED BY THE CITY OF BURLINGTON. IF INSPECTED BY OTHER THAN THE CITY OF BURLINGTON STAFF, THE CONSULTANT WILL PROVIDE WRITTEN CERTIFICATION TO THE CITY THAT ALL PROTECTIVE HOARDING AND/OR SEDIMENT CONTROL MEASURES HAVE BEEN SATISFACTORILY INSTALLED.

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/HEDGES WHERE AN ENCROACHMENT ON A PROTECTED ROOT ZONE AREA (MTPZ OR CRZ) IS ANTICIPATED

MINIMIZATION OF DAMAGE – GRADING WITHIN TPZ OF TREE #001

- TREE PROTECTION HOARDING FOR THIS TREE IS TO BE IN PLACE FOR ALL ASPECTS OF THE PRIMARY DEMOLITION/PARKING AREA REMOVAL. IT IS RECOMMENDED THAT ALL GRADING WORK IN THE AREA AROUND THIS TREE ONLY COMMENCE ON COMPLETION OF ALL OTHER ASPECTS OF DEMOLITION AND/OR CONSTRUCTION ON THIS SITE.
- A CERTIFIED ARBORIST AS APPROVED BY THE CITY OF BURLINGTON MUST BE PRESENT TO ASSESS AND TREAT ROOTS DURING GRADING WORK WITHIN THE PROTECTED ROOT ZONE AREAS (CRZ/MTPZ)
- UPON COMMENCEMENT OF THE GRADING WORK IN THE AREA THIS TREE, THE HOARDING MAY BE REMOVED TEMPORARILY TO ALLOW FOOT ACCESS FOR THE GRADING WORK TO OCCUR.
- ALL GRADING WITHIN THE AREAS TO PROTECTED ROOT ZONE (CRZ/MTPZ) MUST BE DONE USING HAND EQUIPMENT ONLY.
  - FOR THE AREA OF MTPZ AT THE BOTTOM OF SLOPE AREA, THIS CAN BE ACHIEVED THROUGH USE OF HARD RAKES/GRADING RAKES, FOR LEVELING/SLOPING AS NO SIGNIFICANT EXCAVATIONS ARE REQUIRED
  - FOR AREAS OF THE MID SLOPE TO TOP OF BANK WHERE GREATER EXCAVATION DEPTH IS REQUIRED WITHIN THE CRZ AREA, IT IS RECOMMENDED THAT EITHER HAND EQUIPMENT ONLY (SHOVEL/RAKES/HOES) OR ALTERNATIVELY HAND EQUIPMENT SUCH AS AN AIR SPADE BE USED SHOULD BE USED TO LOWER GRADE AS REQUIRED. THIS WILL EXPOSE ANY ROOTS PRESENT FOR PROPER PRUNING AND TREATMENT BY THE ONSITE ARBORIST.
- ANY ROOTS DISCOVERED DURING GRADING WORK THAT REQUIRE SEVERANCE ARE TO BE CUT CLEANLY AND PROTECTED FROM DESICCATION WHERE CUT ENDS ARE EXPOSED.
- ALL ROOTS THAT MAY BE PARTIALLY EXPOSED (LOCATED AT SURFACE OF SOIL OR BELOW WITH LOWERED GRADE) ARE TO BE PRESERVED. IF ROOTS ARE EXPOSED ON THE SOIL SURFACE FOR PROLONGED PERIODS PRIOR TO TOPSOIL BEING PLACED FOR TURF GRASS PLANTING/SODDING, THEY ARE TO BE PROTECTED FROM DESICCATION WHILE EXPOSED. THIS CAN BE ACHIEVED BY THE FOLLOWING:
  - BURLAP/EQUIVALENT SHOULD BE PLACED COVERING THE EXPOSED AREAS, AND A MINIMAL AMOUNT OF SOIL SHOULD BE PLACED ON TOP.
  - PROVISIONS MUST BE MADE TO SUPPLY ADEQUATE WATERING TO KEEP THIS AREA MOIST IF EXPOSED DURING SUMMER MONTHS OR IN THE ABSENCE OF REGULAR RAINFALL LEVELS.
  - IMMEDIATELY PRIOR TO TOPSOIL PLACEMENT AND PLANTING OF TURF GRASS/SODDING, THE BURLAP IS TO BE REMOVED FROM THE AREA.
- TOPSOIL PLACED IN PREPARATION FOR PLANTING OF TURF/SODDING IS TO BE OF HIGH QUALITY AND IS TO BE PLACED IN DIRECT CONTACT WITH THE EXISTING SITE SOIL. FURTHER, TOPSOIL IS TO BE FREE OF ANY CONTAMINANTS/CHEMICALS THAT MAY BE PRESENT IN SOILS RECLAIMED FROM AGRICULTURAL AREAS.
- UPON COMPLETION OF THE GRADING WORK IN THIS AREA THE TREE PROTECTION HOARDING IS TO BE REPLACED IN POSITION ON THE NEWLY GRADED AREA FOR PROTECTION OF THIS TREE DURING ANY REMAINING WORK OCCURRING ON SITE. FURTHER, IF THERE IS A DELAY BETWEEN GRADING, AND TOPSOIL PLACEMENT/SODDING OF THE AREA THE HOARDING IS TO BE RE PLACED IN POSITION DURING DELAYS BETWEEN ANY PHASES OF WORK IN THE AREA.



TREE INVENTORY TABLE

TREE #	SPECIES: COMMON NAME	SPECIES: BOTANICAL NAME	DBH (cm)	CONDITION (%)	OWNERSHIP	ACTION	REASON
001	WHITE SPRUCE	WHITE SPRUCE	7	80% (GOOD)	MUNICIPAL (ROAD ALLOWANCE)	PROTECTED	
002	TREE OF HEAVEN	AILANTHUS ALTIMISSIMA	20	60% (FAIR)	MUNICIPAL (ROAD ALLOWANCE)	PROTECTED FROM PRIMARY CONSTRUCTIONS/GRADING WORK. ACCESS ENCROACHMENT IN TO MTPZ/CRZ FOR FENCE REMOVAL OPERATIONS REQUIRED AS PER FENCE REMOVAL AGREEMENT	TECHNICAL ENCROACHMENT ONLY – NO IMPACT ANTICIPATED. ALL FENCE REMOVAL WORK MUST BE DONE BY HAND EQUIPMENT AND BY FOOT ACCESS ONLY AS PER AGREEMENT. CARE TO BE TAKEN IN AREA DURING FENCE MESH REMOVAL AND REPLACEMENT. AS THIS TREE IS GROWING THROUGH FENCE, IT IS RECOMMENDED THAT FENCE MESH BE CUT ON BOTH SIDES OF THE TRUNK AND THE TREE BE RETAINED.
003	WHITE BIRCH	BETULA PAPYRIFERA	24	40% (POOR)	CLIENT	ENCROAHCMENT (MTPZ/CRZ)	ENCROACHMENT FROM EX. DRIVEWAY REMOVAL AND REMEDIATION TO SOFT LANDSCAPE. ADDITIONALLY, FENCE MESH REMOVAL WILL REQUIRE ACCESS IN TO THE MTPZ/CRZ AREAS OF THESE TREES TO ALLOW FOR FENCE MESH REMOVAL. NO IMPACT TO THESE TREES FROM FOOT ACCESS OR MESH REMOVAL BY HAND EQUIPMENT.
004	WHITE BIRCH	BETULA PAPYRIFERA	44	47% (FAIR–POOR)	CLIENT	ENCROAHCMENT (MTPZ/CRZ)	
005	WHITE MULBERRY	MORUS ALBA	14	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR WITHIN THE AREA OF THESE TREES – NOT ANTICIPATED TO TOLERATE GRADING WORK. RECOMMENDED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITIES IN AREA.
006	WHITE MULBERRY	MORUS ALBA	24*	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
007	WALNUT SPECIES (Dead/Mostly Dead – vine throughout)	JUGLANS SPP.	12	26% (VERY POOR /MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
008	WHITE ASH	FRAXINUS AMERICANA	14	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
009	BUTTERNUT	JUGLANS CINEREA (Category 1 as per Butternut Health Assessment Obtained)	13*	60% (FAIR)**	CLIENT	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR ON THE SLOPED AREA ADJACENT THIS TREE. RECOMMENDED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITIES IN AREA.
010	WHITE ASH	FRAXINUS AMERICANA	16	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	PROTECTED FROM PRIMARY CONSTRUCTIONS/GRADING WORK. ACCESS ENCROACHMENT IN TO MTPZ/CRZ FOR FENCE REMOVAL OPERATIONS REQUIRED AS PER FENCE REMOVAL AGREEMENT	TECHNICAL ENCROACHMENT ONLY – NO IMPACT ANTICIPATED. ALL FENCE REMOVAL WORK MUST BE DONE BY HAND EQUIPMENT AND BY FOOT ACCESS ONLY AS PER AGREEMENT. CARE TO BE TAKEN IN AREAS WHERE TREES ARE WITHIN ACCESS CORRIDOR. FURTHER, WHERE TREES ARE GROWING THROUGH FENCE, IT IS RECOMMENDED THAT FENCE MUST BE CUT ON BOTH SIDES OF THE TRUNK AND THE TREE BE RETAINED.
011	WHITE ASH	FRAXINUS AMERICANA	10	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
012	BLACK CHERRY	PRUNUS SEROTINA	20	60% (FAIR)	MUNICIPAL (PARK AREA FENCE ROW)		
013	WHITE ASH	FRAXINUS AMERICANA	13	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)		
014	ASH SPECIES (DEAD TREE)	FRAXINUS SPP.	12	0% (DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
015	RED ELM	ULMUS RUBRA	25	60% (FAIR)	MUNICIPAL (PARK AREA FENCE ROW)		
016	BASSWOOD	TILIA AMERICANA	26	80% (GOOD)	MUNICIPAL (PARK AREA FENCE ROW)		
017	WHITE ASH	FRAXINUS AMERICANA	51*	20% (VERY POOR/ MOSTLY DEAD)	CLIENT		
018	BLACK WALNUT	JUGLANS NIGRA	35	47% (FAIR–POOR)	CLIENT		
019	WHITE ASH	FRAXINUS AMERICANA	13	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
020	BLACK WALNUT	JUGLANS NIGRA	72	47% (FAIR–POOR)	CLIENT		
021	BLACK WALNUT	JUGLANS NIGRA	33	47% (FAIR–POOR)	CLIENT		
022	BLACK WALNUT	JUGLANS NIGRA	81	47% (FAIR–POOR)	CLIENT		
023	BLACK WALNUT	JUGLANS NIGRA	46	60% (FAIR)	CLIENT		
024	BLACK WALNUT	JUGLANS NIGRA	62	60% (FAIR)	CLIENT		
025	BLACK WALNUT	JUGLANS NIGRA	18	68% (GOOD–FAIR)	CLIENT	PROTECTED	
026	BLACK WALNUT	JUGLANS NIGRA	40	60% (FAIR)	NEIGHBOR	PROTECTED	
027	WHITE ASH	FRAXINUS AMERICANA	65	0% (DEAD)	CLIENT	PROTECTED	
028	BASSWOOD	TILIA AMERICANA	36	68% (GOOD–FAIR)	CLIENT	PROTECTED	
029	BLACK WALNUT	JUGLANS NIGRA	27	20% (VERY POOR/MOSTLY DEAD)	CLIENT	PROTECTED	
030	BLACK WALNUT	JUGLANS NIGRA	40	60% (FAIR)	CLIENT	PROTECTED	
031	BLACK WALNUT	JUGLANS NIGRA	21	60% (FAIR)	CLIENT	PROTECTED	
032	BLACK WALNUT	JUGLANS NIGRA	49	68% (GOOD–FAIR)	CLIENT	PROTECTED	
033	BLACK WALNUT	JUGLANS NIGRA	20	68% (GOOD–FAIR)	CLIENT	PROTECTED	
034	BLACK WALNUT	JUGLANS NIGRA	25	68% (GOOD–FAIR)	CLIENT	PROTECTED	
035	BLACK WALNUT	JUGLANS NIGRA	55	60% (FAIR)	CLIENT	PROTECTED	
036	BLACK WALNUT	JUGLANS NIGRA	58	40% (POOR)	CLIENT	PROTECTED	
037	BASSWOOD	TILIA AMERICANA	36	47% (FAIR–POOR)	CLIENT	PROTECTED	
038	BLACK WALNUT	JUGLANS NIGRA	30	60% (FAIR)	CLIENT	PROTECTED	
039	BLACK WALNUT	JUGLANS NIGRA	16	60% (FAIR)	CLIENT	PROTECTED	
040	RED MAPLE	ACER RUBRUM	18	60% (FAIR)	NEIGHBOR	PROTECTED	
041	BLACK WALNUT	JUGLANS NIGRA	45	60% (FAIR)	NEIGHBOR	PROTECTED	
042	BLACK WALNUT	JUGLANS NIGRA	29	60% (FAIR)	CLIENT	PROTECTED	
043	BLACK WALNUT	JUGLANS NIGRA	55	60% (FAIR)	CLIENT	PROTECTED	
044	BLACK WALNUT	JUGLANS NIGRA	31	60% (FAIR)	CLIENT	PROTECTED	
045	BLACK WALNUT	JUGLANS NIGRA	44	60% (FAIR)	CLIENT	PROTECTED	
046	BLACK WALNUT	JUGLANS NIGRA	56	60% (FAIR)	CLIENT	PROTECTED	
047	BASSWOOD	TILIA AMERICANA	46*	47% (FAIR–POOR)	CLIENT/NEIGHBOR (BOUNDARY)	PROTECTED	
048	BLACK WALNUT	JUGLANS NIGRA	15	60% (FAIR)	CLIENT	PROTECTED	
049	BLACK WALNUT	JUGLANS NIGRA	33	60% (FAIR)	CLIENT	PROTECTED	
050	WHITE ASH	FRAXINUS AMERICANA	23	0% (DEAD)	CLIENT	PROTECTED	
051	WHITE CEDAR (HEDGE)	THUJA OCCIDENTALIS	30**	68% (GOOD–FAIR)	NEIGHBOR	PROTECTED	
052	WHITE ASH	FRAXINUS AMERICANA	49*	0% (DEAD)	NEIGHBOR	PROTECTED	
053	WHITE ASH	FRAXINUS AMERICANA	41*	0% (DEAD)	CLIENT	PROTECTED	
054	WHITE ASH	FRAXINUS AMERICANA	23	0% (DEAD)	CLIENT	PROTECTED	
055	WHITE ASH	FRAXINUS AMERICANA	39	0% (DEAD)	CLIENT	PROTECTED	
056	WHITE ASH	FRAXINUS AMERICANA	36	0% (DEAD)	CLIENT	PROTECTED	
057	WHITE MULBERRY	MORUS ALBA	23*	60% (FAIR)	NEIGHBOR	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR WITHIN THE AREA OF THESE TREES – NOT ANTICIPATED TO TOLERATE GRADING WORK. RECOMMENDED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITIES IN AREA.
058	WHITE MULBERRY	MORUS ALBA	24*	60% (FAIR)	NEIGHBOR	REMOVE	
059	NORWAY MAPLE	ACER PLATANOIDES	6	80% (GOOD)	NEIGHBOR	REMOVE	
060	WHITE ASH	FRAXINUS AMERICANA	23*	60% (FAIR)	NEIGHBOR	REMOVE	
061	WHITE ASH	FRAXINUS AMERICANA	25	40% POOR)	NEIGHBOR	REMOVE	
062	WHITE ASH	FRAXINUS AMERICANA	5	60% (FAIR)	CLIENT/NEIGHBOR (BOUNDARY)	REMOVE	
063	WHITE ASH	FRAXINUS AMERICANA	15	60% (FAIR)	CLIENT	REMOVE	
064	NORWAY MAPLE	ACER PLATANOIDES	5	60% (FAIR)	CLIENT	REMOVE	
065	NORWAY MAPLE	ACER PLATANOIDES	5	60% (FAIR)	CLIENT	REMOVE	
066	NORWAY MAPLE	ACER PLATANOIDES	2	60% (FAIR)	CLIENT	REMOVE	
067	BASSWOOD	TILIA AMERICANA	12	68% (GOOD–FAIR)	CLIENT	REMOVE	

* Effective DBH used. Effective DBH = Square root of total sum of square stem DBH's

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 CHAIN LINK, 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.

No.	Revision/Issue	Date
1	REVISED AS PER FENCE REMOVAL AGREEMENT & TREE 7 BHA ASSESSMENT (TPR 102 DRAWING ADDED)	7 DEC 2020

M.R. PLOWMAN ON-1118A

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Client:
MILLINGTON & ASSOCIATES
338 JOHNSTON DRIVE

Drawing Title:
TREE PRESERVATION PLAN AND HOARDING DETAILS

Date: 7–Dec–20
Scale: 1:250
Drawn By: mp
Tree Survey Date: 6 NOV 2020
Total Drawings: 1 of 3
Project: 338JOHNSTON
Sheet: TPR –101

GLN

ARBORIST DRAWING LENGEND

MINIMUM TREE PROTECTION ZONE (MTPZ AS PER BYLAW)

CRITICAL ROOT ZONE (CRZ AS PER TREE BYLAW)

CANOPY LIMIT

TREE PROTECTION FENCE – (POLY MESH) – MIN 1.2M HT

TREE PROTECTION FENCE – (POLY MESH) – MIN 1.2M HT OPTIONAL TREE PROTECTION HOARDING FOR SMALL SIZE/HEDGE/SHRUBS

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 TO BE PRESENT DURING ANY EXCAVATION IN THESE AREAS.

TREE PROTECTION ZONE

TREE BLOCK SYMBOLS

TREE TO BE PRESERVED/RETAINED

CANOPY EXTENT

DBH (TRUNK DIAMETER AT 1.4M ABOVE GRADE) — # Ø0.20

MINIMUM TREE PROTECTION ZONE RADIUS — 1.80M

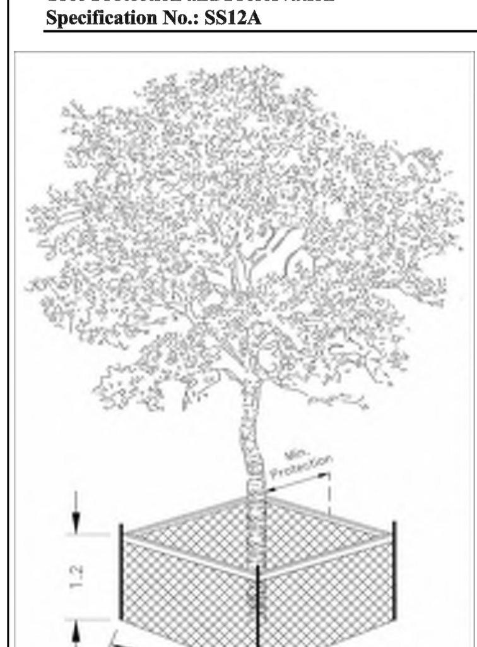
Ø0.20 TREE TO BE REMOVED PERMIT REQUIRED

Ø0.20 TREE TO BE REMOVED NO PERMIT REQUIRED/SMALL SIZE

TREE DOES NOT EXIST OR PREVIOUSLY REMOVED

HEDGE/SHRUB (SMALL SIZE PROTECTION OPTIONAL)

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 creates 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".

FENCE REMOVAL PHASE

MINIMIZATION OF DAMAGE - REMOVAL OF EXISTING FENCE AS PER AGREEMENT

REQUIREMENTS OF AGREEMENT (AS PER CITY OF BURLINGTON NOTES PROVIDED)

FENCE REMOVALS

- THE FENCE FABRIC FROM THE FRONT OF THE PROPERTY TO THE START OF THE GRADING WILL BE REMOVED AND REPLACED WITH NEW FENCE FABRIC. THE APPLICANT WILL BE REQUIRED TO REPLACE THE LAST POST WITH A TERMINAL POST AND CROSS SUPPORT.
- THE FENCE FROM THE START OF THE GRADING AREA TO THE BACK OF THE LOT LINE (SECTION RUNNING NORTH SOUTH) WILL BE REMOVED.
  - THE APPLICANT WILL REMOVE THE EXISTING POSTS BY CUTTING THEM OFF BELOW GRADE AND COVERING OVER WITH SOIL TO THE SATISFACTION OF THE CITY.
  - THE REMOVAL OF FABRIC AND POSTS WILL BE DONE BY HAND WITHOUT EQUIPMENT (E.G., BOBCAT).
  - THE EXISTING POSTS AND FABRIC WILL BE MOVED TO THE EXISTING LOT BY HAND FOR DISPOSAL.
  - CARE MUST BE GIVEN TO AVOID DAMAGE TO ALL TREES REMAINING DURING THE CUTTING AND REMOVAL OPERATION.
  - THE APPLICANT'S ARBORIST WILL AMEND THEIR CURRENT REPORT TO INCLUDE THE FENCE REMOVAL AND PROPOSED METHODS AS PART OF THE SCOPE OF WORK TO BE UNDERTAKEN BY THE APPLICANT; AND
  - THIS METHOD OF FENCE REMOVAL FOR THE BACK END OF THE LOT WILL NOT REQUIRE COMPENSATION SO LONG AS THE TREES REMAINING ARE NOT DAMAGED.
- A BLACK CHAIN LINK FENCE TO CITY STANDARDS WILL BE CONSTRUCTED IN THE AREA OF GRADING TO THE NEW PROPERTY LINE. THE FENCE WILL CONTINUE ACROSS THE REAR PROPERTY TO SEPARATE THE NEW PROPERTIES AND LAND TO BE CONVEYED TO THE CITY. THE CITY WILL PROVIDE THIS DETAIL.

ARBORIST RECOMMENDATIONS REGARDING FENCE REMOVAL AREAS

ACCESS FOR FENCE REMOVALS (ALL AREAS OUTSIDE OF GRADING AREA)

- TREE PROTECTION HOARDING (VERTICAL) IS RECOMMENDED TO FORM A CORRIDOR ALONG THE NORTH-SOUTH FENCE AREA AND BEYOND THE GRADING PROPOSED IS TO BE INSTALLED TO PREVENT ACCESS OUTSIDE OF AREAS REQUIRED TO ALLOW FOR FENCE REMOVAL BY HAND.
- THE CORRIDOR HOARDING, AS ABOVE, IS TO CONNECT WITH THE PRIMARY TREE PROTECTION FENCE AT THE EXTENT OF THE GRADING AREA, AS WELL AS THE EXISTING FENCE ALONG THE SOUTHERN REAR LOT LINE AREA, AS SHOWN IN THE ATTACHED ARBORIST DRAWING TPR 102 REGARDING FENCE REMOVAL
- ALL ACCESS FOR PURPOSE OF REMOVAL OF THE FENCE AREAS (ALL AREAS) IS TO BE DONE BY FOOT ACCESS ONLY AS PER THE AGREEMENT. THIS MUST BE STRICTLY ADHERED TO.
- ALL ACCESS TO AND FROM THE FENCE AREAS FOR PURPOSE OF FENCE REMOVALS MUST BE CONDUCTED FROM THE CLIENT PROPERTY AREA.

FENCE MESH REMOVAL AND REPLACEMENT ONLY AREA

- IN THE AREA OF FENCE MESH REMOVAL AND REPLACEMENT (POSTS TO REMAIN - AREA NORTH OF GRADING AREA REQUIRED). ALL MESH REMOVAL IS TO BE DONE BY HAND EQUIPMENT ONLY (HAND TOOLS ONLY).
- THE FENCE MESH IS TO BE REMOVED FROM THE AREA AFTER CUTTING IN TO SMALL MANAGEABLE SECTIONS BY FOOT ACCESS ONLY.
- ALL MESH REMOVED IS TO BE BROUGHT FROM THE FENCE TO THE AREA OF THE CLIENT PROPERTY FOR DISPOSAL.
- IN THE AREA OF TREE #002, TO PRESERVE THIS TREE THE FENCE MESH THAT THE TREE HAS GROWN IN TO IS TO REMAIN IN THIS TREE. THIS WILL REQUIRE CAREFULLY CUTTING THE MESH OF THE FENCE IN THIS AREA ON BOTH SIDE OF THE TREE (AS CLOSE TO TRUNK AS POSSIBLE WITHOUT DAMAGE TO TRUNK) AS WELL AS JUST ABOVE WHERE THE TREE HAS GROWN THROUGH THE FENCE, TO ALLOW FOR REMOVAL OF THE MESH SURROUNDING THIS TREE WHILE NOT DAMAGING THE TREE ITSELF.
- REPLACEMENT OF THE MESH IN THIS AREA IS TO BE DONE USING HAND EQUIPMENT ONLY AND IS TO REUSE THE EXISTING POSTS. IN THE AREA OF TREE #002, THE FENCE MESH IS TO BE INSTALLED CAREFULLY AROUND THIS TREE BY HAND ONLY.
- ALL WORK IN THE AREA OF TREE #002 FOR FENCE MESH REMOVAL AND REPLACEMENT IS TO BE DONE UNDER THE DIRECT SUPERVISION OF/WITH ASSISTANCE OF A CERTIFIED ARBORIST, AS APPROVED BY THE CITY OF BURLINGTON.

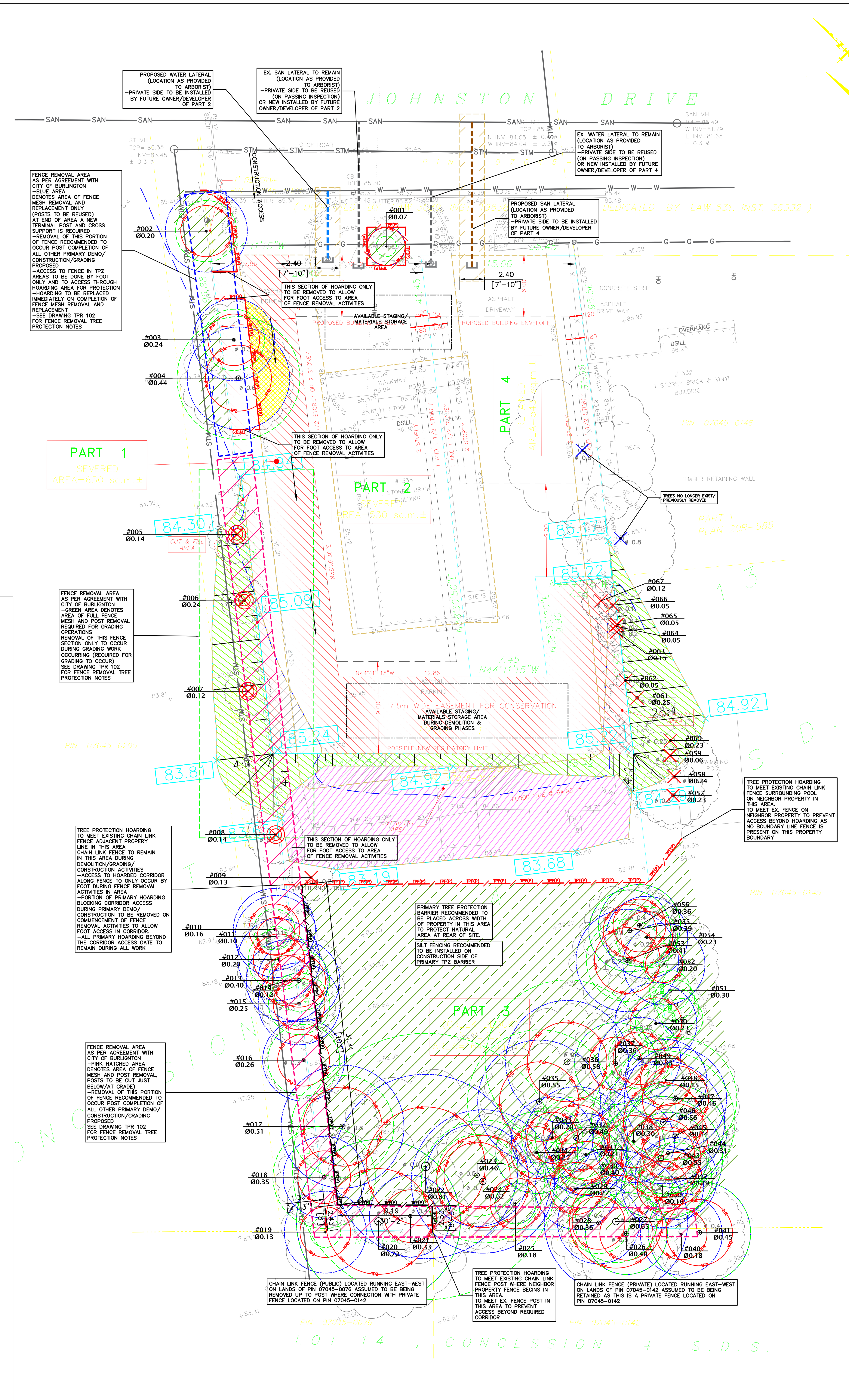
FULL FENCE REMOVAL SECTION (NORTH/SOUTH LOT LINE FENCE SECTION - GRADING AREA TO REAR LOT EXTENT NOT INCLUDING TREES DIRECTLY AFFECTED BY GRADING)

- IN THE AREA OF FULL FENCE REMOVAL AND REPLACEMENT (MESH AND POST REMOVAL - AREA SOUTH OF GRADING AREA REQUIRED). ALL FENCE REMOVAL IS TO BE DONE BY HAND EQUIPMENT ONLY (HAND TOOLS ONLY).
- THE FENCE MESH IS TO BE REMOVED FROM THE AREA AFTER CUTTING IN TO SMALL MANAGEABLE SECTIONS BY FOOT ACCESS ONLY.
- ALL MESH REMOVED IS TO BE BROUGHT FROM THE FENCE TO THE AREA OF THE CLIENT PROPERTY FOR DISPOSAL.
- IN THE AREA OF TREE #015, TO PRESERVE THIS TREE THE FENCE MESH THAT THE TREE HAS GROWN IN TO IS TO REMAIN IN THIS TREE. THIS WILL REQUIRE CAREFULLY CUTTING THE MESH OF THE FENCE IN THIS AREA ON BOTH SIDE OF THE TREE (AS CLOSE TO TRUNK AS POSSIBLE WITHOUT DAMAGE TO THE TREE) AS WELL AS JUST ABOVE WHERE THE TREE HAS GROWN THROUGH THE FENCE, TO ALLOW FOR REMOVAL OF THE MESH SURROUNDING THIS TREE WHILE NOT DAMAGING THE TREE ITSELF.
- FENCE MESH/CROSS BRACES/TOP BARS OF THE FENCE THAT ARE DIRECTLY ADJACENT/POTENTIALLY ABUTTING ANY TREES (SUCH AS #015), ARE TO BE CAREFULLY CUT IN TO SMALL SECTIONS AND REMOVED BY HAND. CARE TO GENTLY REMOVE ANY MESHES/CROSS BRACES/TOP BARS IN THE AREAS IS TO BE TAKEN USING ONLY HAND METHODS WHILE PREVENTING LEVERAGE/TWISTING THAT MAY RESULT IN TWISTING MESH OR CROSS BRACES PUTTING PRESSURE AGAINST OR PRESENTING MECHANICAL IMPACT TO THE TRUNKS OF TREES.
- ALL FENCE POSTS BEING REMOVED ARE TO BE CUT AT JUST BELOW THE SOIL SURFACE BY HAND TOOLS ONLY. NO EXCAVATIONS IN THE AREA OF FENCE REMOVAL ARE TO OCCUR TO REMOVE THE FENCE POST FOOTINGS OR ALLOW FOR FENCE POSTS TO BE CUT BY HAND.
- WHERE POSTS ARE CUT, THESE POSTS ARE TO BE COVERED WITH SOIL. ALL SOIL FOR COVERING THE AREAS OF POST CUTS IS TO BE OF HIGH-QUALITY TOPSOIL AND IS TO BE PLACED IN DIRECT CONTACT WITH THE EXISTING SITE SOIL. THIS SOIL SHOULD BE LIMITED IN DEPTH TO COVER THE CUT POSTS WHILE NOT PRESENTING ANY SIGNIFICANT GRADING CHANGES (NO EXCESSIVE FILL) AND IS RECOMMENDED TO BE DONE TO THE MINIMUM REQUIRED AND TO THE SATISFACTION OF THE CITY OF BURLINGTON. IT IS ANTICIPATED THAT NO MORE THAN 1-2 INCHES (~2.5CM-5CM) WILL BE REQUIRED FOR THIS PURPOSE.
- ALL MESH AND POST REMOVAL FROM THE AREA MUST BE CONDUCTED BY HAND, AND BY FOOT ACCESS ONLY, AND IS TO BE DONE ON THE CLIENT PROPERTY ONLY FOLLOWING THE CORRIDOR PROVIDED TO THE AREA OF OPEN DEMOLITION/DEVELOPMENT OCCURRING (AREA OF EX PARKING/DRIVEWAY) FOR REMOVAL FROM THE SITE.
- IT IS RECOMMENDED THAT DURING THE MESH AND POST REMOVAL PHASE OF THE FENCE REMOVAL IN THIS AREA, THAT A CERTIFIED ARBORIST AS APPROVED BY THE CITY OF BURLINGTON BE PRESENT TO SUPERVISE AND ASSIST IN THE REMOVAL OF MESH AND POSTS, TO ENSURE NO MECHANICAL DAMAGE OCCURS TO TREES WHERE THE MESH/POSTS ARE LOCATED DIRECTLY ADJACENT OR WITHIN THE TRUNK (TREE #015 IN THIS AREA).

TREE INVENTORY TABLE

TREE #	SPECIES – COMMON NAME	SPECIES – BOTANICAL NAME	DBH (cm)	CONDITION (%)	OWNERSHIP	ACTION	REASON
001	WHITE SPRUCE	WHITE SPRUCE	7	80% (GOOD)	MUNICIPAL (ROAD ALLOWANCE)	PROTECTED	
002	TREE OF HEAVEN	AILANTHUS ALTIMISSIMA	20	60% (FAIR)	MUNICIPAL (ROAD ALLOWANCE)	PROTECTED FROM PRIMARY CONSTRUCTIONS/GRADING WORK. ACCESS ENCROACHMENT IN TO MTPZ/CRZ FOR FENCE REMOVAL OPERATIONS REQUIRED AS PER FENCE REMOVAL AGREEMENT	TECHNICAL ENCROACHMENT ONLY – NO IMPACT ANTICIPATED. ALL FENCE REMOVAL WORK MUST BE DONE BY HAND EQUIPMENT AND BY FOOT ACCESS ONLY AS PER AGREEMENT. CARE TO BE TAKEN IN AREA DURING FENCE MESH REMOVAL AND REPLACEMENT. AS THIS TREE IS GROWING THROUGH FENCE, IT IS RECOMMENDED THAT FENCE MESH BE CUT ON BOTH SIDES OF THE TRUNK AND THE TREE BE RETAINED.
003	WHITE BIRCH	BETULA PAPYRIFERA	24	40% (POOR)	CLIENT	ENCROAHCMENT (MTPZ/CRZ)	ENCROACHMENT FROM EX. DRIVEWAY REMOVAL AND REMEDIATION TO SOFT LANDSCAPE. ADDITIONALLY, FENCE MESH REMOVAL WILL REQUIRE ACCESS IN TO THE MTPZ/CRZ AREAS OF THESE TREES TO ALLOW FOR FENCE MESH REMOVAL. NO IMPACT TO THESE TREES FROM FOOT ACCESS OR MESH REMOVAL BY HAND EQUIPMENT.
004	WHITE BIRCH	BETULA PAPYRIFERA	44	47% (FAIR–POOR)	CLIENT	ENCROAHCMENT (MTPZ/CRZ)	
005	WHITE MULBERRY	MORUS ALBA	14	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR WITHIN THE AREA OF THESE TREES – NOT ANTICIPATED TO TOLERATE GRADING WORK. RECOMMENDED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITIES IN AREA.
006	WHITE MULBERRY	MORUS ALBA	24*	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
007	WALNUT SPECIES (Dead/Mostly Dead – vine throughout)	JUGLANS SPP.	12	26% (VERY POOR /MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
008	WHITE ASH	FRAXINUS AMERICANA	14	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
009	BUTTERNUT	JUGLANS CINEREA (Category 1 as per Butternut Health Assessment Obtained)	13*	60% (FAIR)**	CLIENT	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR ON THE SLOPED AREA ADJACENT THIS TREE. RECOMMENDED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITIES IN AREA.
010	WHITE ASH	FRAXINUS AMERICANA	16	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	PROTECTED FROM PRIMARY CONSTRUCTIONS/GRADING WORK. ACCESS ENCROACHMENT IN TO MTPZ/CRZ FOR FENCE REMOVAL OPERATIONS REQUIRED AS PER FENCE REMOVAL AGREEMENT	TECHNICAL ENCROACHMENT ONLY – NO IMPACT ANTICIPATED. ALL FENCE REMOVAL WORK MUST BE DONE BY HAND EQUIPMENT AND BY FOOT ACCESS ONLY AS PER AGREEMENT. CARE TO BE TAKEN IN AREAS WHERE TREES ARE WITHIN ACCESS CORRIDOR. FURTHER, WHERE TREES ARE GROWING THROUGH FENCE, IT IS RECOMMENDED THAT FENCE MUST BE CUT ON BOTH SIDES OF THE TRUNK AND THE TREE BE RETAINED.
011	WHITE ASH	FRAXINUS AMERICANA	10	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
012	BLACK CHERRY	PRUNUS SEROTINA	20	60% (FAIR)	MUNICIPAL (PARK AREA FENCE ROW)		
013	WHITE ASH	FRAXINUS AMERICANA	13	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)		
014	ASH SPECIES (DEAD TREE)	FRAXINUS SPP.	12	0% (DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
015	RED ELM	ULMUS RUBRA	25	60% (FAIR)	MUNICIPAL (PARK AREA FENCE ROW)		
016	BASSWOOD	TILIA AMERICANA	26	80% (GOOD)	MUNICIPAL (PARK AREA FENCE ROW)		
017	WHITE ASH	FRAXINUS AMERICANA	51*	20% (VERY POOR/ MOSTLY DEAD)	CLIENT		
018	BLACK WALNUT	JUGLANS NIGRA	35	47% (FAIR–POOR)	CLIENT		
019	WHITE ASH	FRAXINUS AMERICANA	13	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
020	BLACK WALNUT	JUGLANS NIGRA	72	47% (FAIR–POOR)	CLIENT		
021	BLACK WALNUT	JUGLANS NIGRA	33	47% (FAIR–POOR)	CLIENT		
022	BLACK WALNUT	JUGLANS NIGRA	81	47% (FAIR–POOR)	CLIENT		
023	BLACK WALNUT	JUGLANS NIGRA	46	60% (FAIR)	CLIENT		
024	BLACK WALNUT	JUGLANS NIGRA	62	60% (FAIR)	CLIENT		
025	BLACK WALNUT	JUGLANS NIGRA	18	68% (GOOD–FAIR)	CLIENT	PROTECTED	
026	BLACK WALNUT	JUGLANS NIGRA	40	60% (FAIR)	NEIGHBOR	PROTECTED	
027	WHITE ASH	FRAXINUS AMERICANA	65	0% (DEAD)	CLIENT	PROTECTED	
028	BASSWOOD	TILIA AMERICANA	36	68% (GOOD–FAIR)	CLIENT	PROTECTED	
029	BLACK WALNUT	JUGLANS NIGRA	27	20% (VERY POOR/MOSTLY DEAD)	CLIENT	PROTECTED	
030	BLACK WALNUT	JUGLANS NIGRA	40	60% (FAIR)	CLIENT	PROTECTED	
031	BLACK WALNUT	JUGLANS NIGRA	21	60% (FAIR)	CLIENT	PROTECTED	
032	BLACK WALNUT	JUGLANS NIGRA	49	68% (GOOD–FAIR)	CLIENT	PROTECTED	
033	BLACK WALNUT	JUGLANS NIGRA	20	68% (GOOD–FAIR)	CLIENT	PROTECTED	
034	BLACK WALNUT	JUGLANS NIGRA	25	68% (GOOD–FAIR)	CLIENT	PROTECTED	
035	BLACK WALNUT	JUGLANS NIGRA	55	60% (FAIR)	CLIENT	PROTECTED	
036	BLACK WALNUT	JUGLANS NIGRA	58	40% (POOR)	CLIENT	PROTECTED	
037	BASSWOOD	TILIA AMERICANA	36	47% (FAIR–POOR)	CLIENT	PROTECTED	
038	BLACK WALNUT	JUGLANS NIGRA	30	60% (FAIR)	CLIENT	PROTECTED	
039	BLACK WALNUT	JUGLANS NIGRA	16	60% (FAIR)	CLIENT	PROTECTED	
040	RED MAPLE	ACER RUBRUM	18	60% (FAIR)	NEIGHBOR	PROTECTED	
041	BLACK WALNUT	JUGLANS NIGRA	45	60% (FAIR)	NEIGHBOR	PROTECTED	
042	BLACK WALNUT	JUGLANS NIGRA	29	60% (FAIR)	CLIENT	PROTECTED	
043	BLACK WALNUT	JUGLANS NIGRA	55	60% (FAIR)	CLIENT	PROTECTED	
044	BLACK WALNUT	JUGLANS NIGRA	31	60% (FAIR)	CLIENT	PROTECTED	
045	BLACK WALNUT	JUGLANS NIGRA	44	60% (FAIR)	CLIENT	PROTECTED	
046	BLACK WALNUT	JUGLANS NIGRA	56	60% (FAIR)	CLIENT	PROTECTED	
047	BASSWOOD	TILIA AMERICANA	46*	47% (FAIR–POOR)	CLIENT/NEIGHBOR (BOUNDARY)	PROTECTED	
048	BLACK WALNUT	JUGLANS NIGRA	15	60% (FAIR)	CLIENT	PROTECTED	
049	BLACK WALNUT	JUGLANS NIGRA	33	60% (FAIR)	CLIENT	PROTECTED	
050	WHITE ASH	FRAXINUS AMERICANA	23	0% (DEAD)	CLIENT	PROTECTED	
051	WHITE CEDAR (HEDGE)	THUJA OCCIDENTALIS	30**	68% (GOOD–FAIR)	NEIGHBOR	PROTECTED	
052	WHITE ASH	FRAXINUS AMERICANA	49*	0% (DEAD)	NEIGHBOR	PROTECTED	
053	WHITE ASH	FRAXINUS AMERICANA	41*	0% (DEAD)	CLIENT	PROTECTED	
054	WHITE ASH	FRAXINUS AMERICANA	23	0% (DEAD)	CLIENT	PROTECTED	
055	WHITE ASH	FRAXINUS AMERICANA	39	0% (DEAD)	CLIENT	PROTECTED	
056	WHITE ASH	FRAXINUS AMERICANA	36	0% (DEAD)	CLIENT	PROTECTED	
057	WHITE MULBERRY	MORUS ALBA	23*	60% (FAIR)	NEIGHBOR	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR WITHIN THE AREA OF THESE TREES – NOT ANTICIPATED TO TOLERATE GRADING WORK. RECOMMENDED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITIES IN AREA.
058	WHITE MULBERRY	MORUS ALBA	24*	60% (FAIR)	NEIGHBOR	REMOVE	
059	NORWAY MAPLE	ACER PLATANOIDES	6	80% (GOOD)	NEIGHBOR	REMOVE	
060	WHITE ASH	FRAXINUS AMERICANA	23*	60% (FAIR)	NEIGHBOR	REMOVE	
061	WHITE ASH	FRAXINUS AMERICANA	25	40% POOR)	NEIGHBOR	REMOVE	
062	WHITE ASH	FRAXINUS AMERICANA	5	60% (FAIR)	CLIENT/NEIGHBOR (BOUNDARY)	REMOVE	
063	WHITE ASH	FRAXINUS AMERICANA	15	60% (FAIR)	CLIENT	REMOVE	
064	NORWAY MAPLE	ACER PLATANOIDES	5	60% (FAIR)	CLIENT	REMOVE	
065	NORWAY MAPLE	ACER PLATANOIDES	5	60% (FAIR)	CLIENT	REMOVE	
066	NORWAY MAPLE	ACER PLATANOIDES	2	60% (FAIR)	CLIENT	REMOVE	
067	BASSWOOD	TILIA AMERICANA	12	68% (GOOD–FAIR)	CLIENT	REMOVE	

* Effective DBH used. Effective DBH = Square root of total sum of square stem DBH's



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 CHAIN LINK, 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.

No.	Revision/Issue	Date
1	REVISED AS PER FENCE REMOVAL AGREEMENT & TREE 7 BHA ASSESSMENT (TPR 102 DRAWING ADDED)	7 DEC 2020

CERTIFIED ARBORIST ISA
M.R. PLOWMAN ON-1118A

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

Client:
MILLINGTON & ASSOCIATES
338 JOHNSTON DRIVE

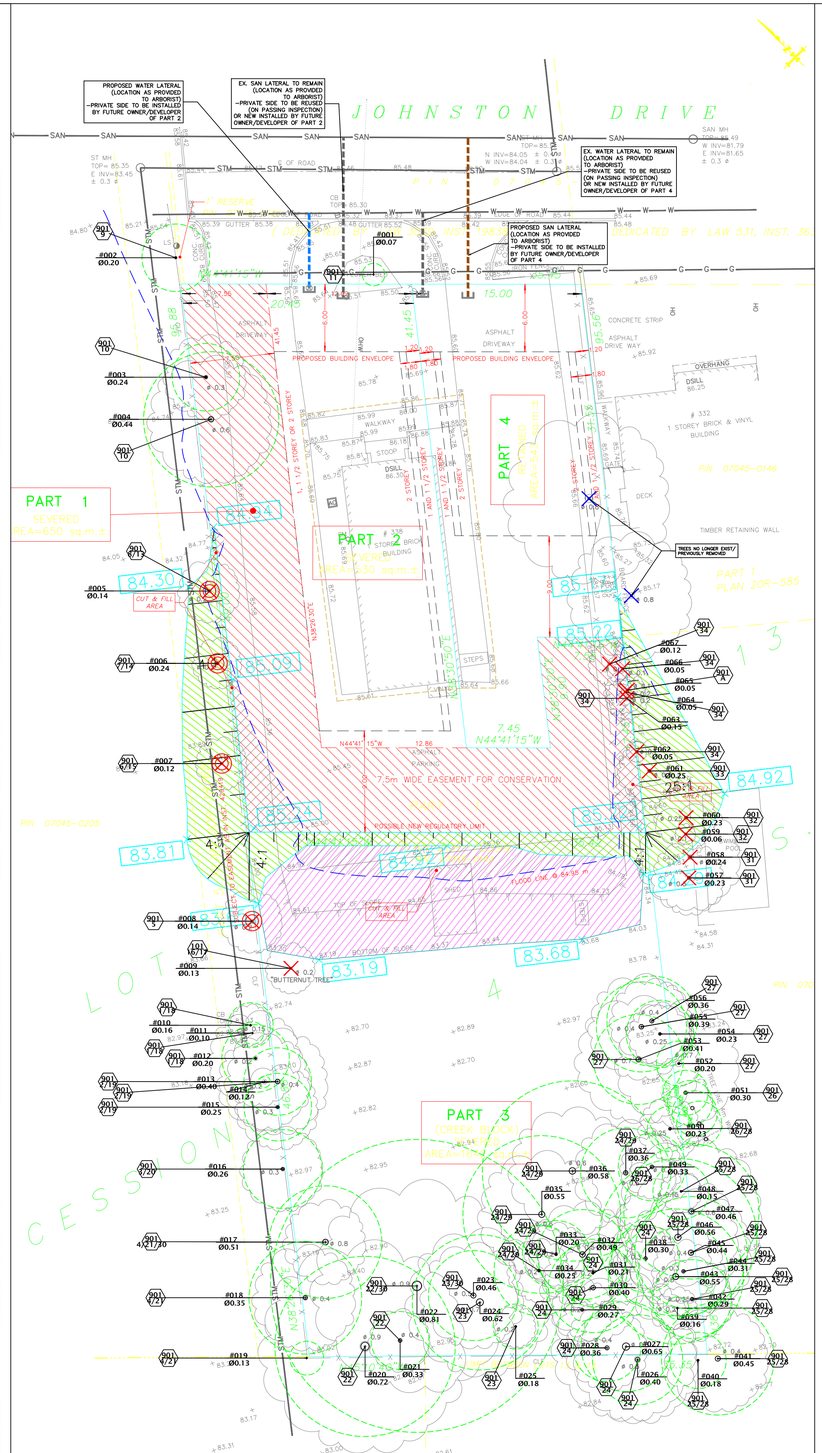
Drawing Title:
TREE PRESERVATION PLAN AND HOARDING DETAILS FENCE REMOVAL NOTES

Date: 7–Dec–20	Project: 338JOHNSTON
Scale: 1:250	
Drawn By: mp	Sheet: TPR-102
Tree Survey Date: 3/10 SEPT 2020	
Total Drawings: 2 of 3	

GLN

TREE INVENTORY TABLE

TREE #	SPECIES		DBH	CONDITION	OWNERSHIP	ACTION	REASON
	COMMON NAME	BOTANICAL NAME	(cm)	(%)			
001	WHITE SPRUCE	WHITE SPRUCE	7	80% (GOOD)	MUNICIPAL (ROAD ALLOWANCE)	PROTECTED	
002	TREE OF HEAVEN	AILANTHUS ALTMISSIMA	20	60% (FAIR)	MUNICIPAL (ROAD ALLOWANCE)	PROTECTED FROM PRIMARY CONSTRUCTIONS/GRADING WORK. ACCESS ENCROACHMENT IN TO MTP2/CR2 FOR FENCE REMOVAL OPERATIONS REQUIRED AS PER FENCE REMOVAL AGREEMENT	TECHNICAL ENCROACHMENT ONLY – NO IMPACT ANTICIPATED. ALL FENCE REMOVAL WORK MUST BE DONE BY HAND EQUIPMENT AND BY FOOT ACCESS ONLY AS PER AGREEMENT. CARE TO BE TAKEN IN AREA DURING FENCE MESH REMOVAL AND REPLACEMENT. AS THIS TREE IS GROWING THROUGH FENCE, IT IS RECOMMENDED THAT FENCE MESH BE CUT ON BOTH SIDES OF THE TRUNK AND THE TREE BE RETAINED.
003	WHITE BIRCH	BETULA PAPYRIFERA	24	40% (POOR)	CLIENT	ENCROAHCMENT (MTP2/CR2)	ENCROACHMENT FROM EX. DRIVEWAY REMOVAL AND REMEDIATION TO SOFT LANDSCAPE. ADDITIONALLY, FENCE MESH REMOVAL WILL REQUIRE ACCESS IN TO THE MTP2/CR2 AREAS OF THESE TREES TO ALLOW FOR FENCE MESH REMOVAL. NO IMPACT TO THESE TREES FROM FOOT ACCESS OR MESH REMOVAL BY HAND EQUIPMENT.
004	WHITE BIRCH	BETULA PAPYRIFERA	44	47% (FAIR–POOR)	CLIENT	ENCROAHCMENT (MTP2/CR2)	
005	WHITE MULBERRY	MORUS ALBA	14	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
006	WHITE MULBERRY	MORUS ALBA	24*	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR WITHIN THE AREA OF THESE TREES – NOT ANTICIPATED TO TOLERATE GRADING WORK. RECOMMENCED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITES IN AREA.
007	WALNUT SPECIES (Dead/Mostly Dead – vine throughout)	JUGLANS SPP.	12	26% (VERY POOR /MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
008	WHITE ASH	FRAXINUS AMERICANA	14	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	REMOVE	
009	BUTTERNUT	JUGLANS CINEREA (Category 1 as per Butternut Health Assessment Obtained)	13*	60% (FAIR)**	CLIENT	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR ON THE SLOPED AREA ADJACENT THIS TREE. RECOMMENCED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITES IN AREA.
010	WHITE ASH	FRAXINUS AMERICANA	16	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	PROTECTED FROM PRIMARY CONSTRUCTIONS/GRADING WORK. ACCESS ENCROACHMENT IN TO MTP2/CR2 FOR FENCE REMOVAL OPERATIONS REQUIRED AS PER FENCE REMOVAL AGREEMENT	TECHNICAL ENCROACHMENT ONLY – NO IMPACT ANTICIPATED. ALL FENCE REMOVAL WORK MUST BE DONE BY HAND EQUIPMENT AND BY FOOT ACCESS ONLY AS PER AGREEMENT. CARE TO BE TAKEN IN AREAS WHERE TREES ARE WITHIN ACCESS CORRIDOR. FURTHER, WHERE TREES ARE GROWING THROUGH FENCE, IT IS RECOMMENDED THAT FENCE MUST BE CUT ON BOTH SIDES OF THE TRUNK AND THE TREE BE RETAINED.
011	WHITE ASH	FRAXINUS AMERICANA	10	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
012	BLACK CHERRY	PRUNUS SEROTINA	20	60% (FAIR)	MUNICIPAL (PARK AREA FENCE ROW)		
013	WHITE ASH	FRAXINUS AMERICANA	13	47% (FAIR–POOR)	MUNICIPAL (PARK AREA FENCE ROW)		
014	ASH SPECIES (DEAD TREE)	FRAXINUS SPP.	12	0% (DEAD)	MUNICIPAL (PARK AREA FENCE ROW)		
015	RED ELM	ULMUS RUBRA	25	60% (FAIR)	MUNICIPAL (PARK AREA FENCE ROW)		
016	BASSWOOD	TILIA AMERICANA	26	80% (GOOD)	MUNICIPAL (PARK AREA FENCE ROW)		
017	WHITE ASH	FRAXINUS AMERICANA	51*	20% (VERY POOR/ MOSTLY DEAD)	CLIENT	PROTECTED	
018	BLACK WALNUT	JUGLANS NIGRA	35	47% (FAIR–POOR)	CLIENT	PROTECTED	
019	WHITE ASH	FRAXINUS AMERICANA	13	26% (VERY POOR/ MOSTLY DEAD)	MUNICIPAL (PARK AREA FENCE ROW)	PROTECTED	
020	BLACK WALNUT	JUGLANS NIGRA	72	47% (FAIR–POOR)	CLIENT	PROTECTED	
021	BLACK WALNUT	JUGLANS NIGRA	33	47% (FAIR–POOR)	CLIENT	PROTECTED	
022	BLACK WALNUT	JUGLANS NIGRA	81	47% (FAIR–POOR)	CLIENT	PROTECTED	
023	BLACK WALNUT	JUGLANS NIGRA	46	60% (FAIR)	CLIENT	PROTECTED	
024	BLACK WALNUT	JUGLANS NIGRA	62	60% (FAIR)	CLIENT	PROTECTED	
025	BLACK WALNUT	JUGLANS NIGRA	18	68% (GOOD–FAIR)	CLIENT	PROTECTED	
026	BLACK WALNUT	JUGLANS NIGRA	40	60% (FAIR)	NEIGHBOR	PROTECTED	
027	WHITE ASH	FRAXINUS AMERICANA	65	0% (DEAD)	CLIENT	PROTECTED	
028	BASSWOOD	TILIA AMERICANA	36	68% (GOOD–FAIR)	CLIENT	PROTECTED	
029	BLACK WALNUT	JUGLANS NIGRA	27	20% (VERY POOR/MOSTLY DEAD)	CLIENT	PROTECTED	
030	BLACK WALNUT	JUGLANS NIGRA	40	60% (FAIR)	CLIENT	PROTECTED	
031	BLACK WALNUT	JUGLANS NIGRA	21	60% (FAIR)	CLIENT	PROTECTED	
032	BLACK WALNUT	JUGLANS NIGRA	49	68% (GOOD–FAIR)	CLIENT	PROTECTED	
033	BLACK WALNUT	JUGLANS NIGRA	20	68% (GOOD–FAIR)	CLIENT	PROTECTED	
034	BLACK WALNUT	JUGLANS NIGRA	25	68% (GOOD–FAIR)	CLIENT	PROTECTED	
035	BLACK WALNUT	JUGLANS NIGRA	55	60% (FAIR)	CLIENT	PROTECTED	
036	BLACK WALNUT	JUGLANS NIGRA	58	40% (POOR)	CLIENT	PROTECTED	
037	BASSWOOD	TILIA AMERICANA	36	47% (FAIR–POOR)	CLIENT	PROTECTED	
038	BLACK WALNUT	JUGLANS NIGRA	30	60% (FAIR)	CLIENT	PROTECTED	
039	BLACK WALNUT	JUGLANS NIGRA	16	60% (FAIR)	CLIENT	PROTECTED	
040	RED MAPLE	ACER RUBRUM	18	60% (FAIR)	NEIGHBOR	PROTECTED	
041	BLACK WALNUT	JUGLANS NIGRA	45	60% (FAIR)	NEIGHBOR	PROTECTED	
042	BLACK WALNUT	JUGLANS NIGRA	29	60% (FAIR)	CLIENT	PROTECTED	
043	BLACK WALNUT	JUGLANS NIGRA	55	60% (FAIR)	CLIENT	PROTECTED	
044	BLACK WALNUT	JUGLANS NIGRA	31	60% (FAIR)	CLIENT	PROTECTED	
045	BLACK WALNUT	JUGLANS NIGRA	44	60% (FAIR)	CLIENT	PROTECTED	
046	BLACK WALNUT	JUGLANS NIGRA	56	60% (FAIR)	CLIENT	PROTECTED	
047	BASSWOOD	TILIA AMERICANA	46*	47% (FAIR–POOR)	CLIENT/NEIGHBOR (BOUNDARY)	PROTECTED	
048	BLACK WALNUT	JUGLANS NIGRA	15	60% (FAIR)	CLIENT	PROTECTED	
049	BLACK WALNUT	JUGLANS NIGRA	33	60% (FAIR)	CLIENT	PROTECTED	
050	WHITE ASH	FRAXINUS AMERICANA	23	0% (DEAD)	CLIENT	PROTECTED	
051	WHITE CEDAR (HEDGE)	THUJA OCCIDENTALIS	30**	68% (GOOD–FAIR)	NEIGHBOR	PROTECTED	
052	WHITE ASH	FRAXINUS AMERICANA	49*	0% (DEAD)	NEIGHBOR	PROTECTED	
053	WHITE ASH	FRAXINUS AMERICANA	41*	0% (DEAD)	CLIENT	PROTECTED	
054	WHITE ASH	FRAXINUS AMERICANA	23	0% (DEAD)	CLIENT	PROTECTED	
055	WHITE ASH	FRAXINUS AMERICANA	39	0% (DEAD)	CLIENT	PROTECTED	
056	WHITE ASH	FRAXINUS AMERICANA	36	0% (DEAD)	CLIENT	PROTECTED	
057	WHITE MULBERRY	MORUS ALBA	23*	60% (FAIR)	NEIGHBOR	REMOVE	
058	WHITE MULBERRY	MORUS ALBA	24*	60% (FAIR)	NEIGHBOR	REMOVE	
059	NORWAY MAPLE	ACER PLATANOIDES	6	80% (GOOD)	NEIGHBOR	REMOVE	
060	WHITE ASH	FRAXINUS AMERICANA	23*	60% (FAIR)	NEIGHBOR	REMOVE	
061	WHITE ASH	FRAXINUS AMERICANA	25	40% POOR)	NEIGHBOR	REMOVE	GRADING PLAN REQUIREMENTS FROM CONSERVATION HALTON REGARDING THE FLOOD PLAIN REQUIRE GRADING TO OCCUR WITHIN THE AREA OF THESE TREES – NOT ANTICIPATED TO TOLERATE GRADING WORK. RECOMMENCED FOR REMOVAL DUE TO IMPACT OF GRADING ACTIVITES IN AREA.
062	WHITE ASH	FRAXINUS AMERICANA	5	60% (FAIR)	CLIENT/NEIGHBOR (BOUNDARY)	REMOVE	
063	WHITE ASH	FRAXINUS AMERICANA	15	60% (FAIR)	CLIENT	REMOVE	
064	NORWAY MAPLE	ACER PLATANOIDES	5	60% (FAIR)	CLIENT	REMOVE	
065	NORWAY MAPLE	ACER PLATANOIDES	5	60% (FAIR)	CLIENT	REMOVE	
066	NORWAY MAPLE	ACER PLATANOIDES	2	60% (FAIR)	CLIENT	REMOVE	
067	BASSWOOD	TILIA AMERICANA	12	68% (GOOD–FAIR)	CLIENT	REMOVE	



General Notes

TREE BLOCK SYMBOLS

TREE TO BE PRESERVED/RETAINED
CANOPY EXTENT
DBH (TRUNK DIAMETER AT 1.4M ABOVE GRADE)
PHOTO REFERENCE CALLOUT
TREE TO BE REMOVED PERMIT REQUIRED
TREE TO BE REMOVED NO PERMIT REQUIRED/SMALL
TREE DOES NOT EXIST OR PREVIOUSLY REMOVED

No.	Revision/Issue	Date
1	REVISED AS PER FENCE REMOVAL AGREEMENT & TREE 7 BHA ASSESSMENT (TPR 102 DRAWING ADDED)	7 DEC 2020

M.R. PLOWMAN ON-1118A

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

Client:
MILLINGTON & ASSOCIATES
338 JOHNSTON DRIVE

Drawing Title:
TREE INVENTORY AND PHOTO REFERENCES

Date: 7-Dec-20	Project: 338JOHNSTON
Scale: 1:250	
Drawn By: mp	Sheet: TPR-901
Tree Survey Date: 6 NOV 2020	
Total Drawings: 3 of 3	