

403 COX MILL ROAD RESIDENTIAL DEVELOPMENT

TREE INVENTORY, ANALYSIS, PRESERVATION REPORT



403 COX MILL ROAD, BARRIE
ONTARIO, COUNTY OF SIMCOE

DECEMBER 2018

OUR FILE: LA 362-18

PREPARED BY:



LANDSCAPE ARCHITECTURE & CONSULTING ARBORISTS

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1.0 Scope/Assignment:

The Landmark Environmental Group Ltd. (LEG) (Jim Hosick, OALA, ISA Arborist # 1098A) was retained by Mr. Dusko Jankov to provide Consulting Arboricultural services to lands generally on the east side of Cox Mill Road, north of Tollendal Mill Road within the City of Barrie. The subject site is municipally known as 403 Cox Mill Road. The assignment is to prepare a Tree Inventory, Analysis and Preservation Report and Plan (TIPP) in support of a residential redevelopment. LEG is requested to create a tree inventory, assessment and preservation report to assess the existing trees on the subject site, indicate those trees that can be preserved and the methods for protecting the same. Further, those trees that cannot be preserved either by poor or declining health, structural deficiencies or to facilitate the proposed development on the site, are indicated to be removed.

Specifically, LEG was assigned to provide the following services:

- Review site data including survey, proposed site plan drawings and to provide for a site visit and correspond with City staff and the Lake Simcoe Region Conservation Authority (LSRCA) as applicable;
- Conduct a field review to inventory tree specimens, tree groupings, boundary trees visually assessing and identifying the type, location, size and quality of any trees on site within the developable area and indicating the presence of any Butternut (in accordance with the *Endangered Species Act, 2007*);
- Provide a Tree Inventory, Analysis and Preservation Report that sets out the methodology, observations, criteria, analysis and conclusions of our review and area conditions;
- Indicate on a Tree Inventory and Protection Plan, those trees that are suitable for preservation or removal and providing the methods of protecting the same.

It is the intent in the undertaking of this Report, to comply with the City of Barrie tree preservation policies and requirements of the Lake Simcoe Region Conservation Authority.

2.0 Proposed Development:

The subject site is located on the east side of Cox Mill Road and legally described as Plan 321, Part Lots 1 and 2, RP 51R41028 Part 2 in the City of Barrie, Ontario. The existing lot size is 1181.4 m² total in area and the Owner is proposing to construct two new dwellings on a site that currently has a single residential structure. The proposed development layout can be seen on the **Site Plan for the Subject Site** as shown in **Appendix A**. The development is subject to an approval for a zoning amendment application with the City of Barrie.

The limits of the Arborist study were confined to the entire subject lot including boundary trees which originate outside the property that cross over the fenceline of the subject lot that may be affected as a result of the proposed development.

This TPP Report is submitted in support of and intended to accompany the proposed Zoning Amendment application submitted to the City of Barrie for their approval for the development of the site.

Below, is an air photo illustrating the location of the subject site (black lines show the site boundaries):



Figure 1 Airphoto of Subject Site (Boundary Highlighted) and Surrounding Area (Simcoe County GIS)

3.0 Method:

A summary of the inventory, observations and assessments that were determined in the field can be found in **Appendix C** at the end of this Report.

The tree assessments were identified in accordance with the detailed typical criteria used in best arboricultural practices to indicate the merits of tree preservation including the species (Latin and common names), size diameter at breast height (dbh), maturity, biological health, structural concerns (if any), condition rating and recommendations for preservation or removal of existing specimen trees.

Condition ratings applied to overall tree assessments using the above-noted criteria range from 1 (poor) to 5 (excellent). Typically, those trees being assessed a condition rating of 1-3 are recommended for removal while those trees being assessed a condition rating of 4-5 are recommended for preservation unless there are extenuating circumstances regarding the development of the site. The criterion is also applied to assist in assessment of their potential for survival in-situ post construction.

For the purposes of this Report, only those trees over 10cm dbh were captured. No shrubs or low understory perennials were captured in the data.

Each tree was assigned a key number (1-16) and observations relating to each tree were tabulated in the Tree Inventory (**Appendix C**). Each tree was also located on a Tree Inventory and Preservation Map corresponding to the number assigned and can be seen in the Tree Inventory, Assessment and Preservation Plan (ARB-1) as shown in **Appendix B**.

4.0 Observations

On November 20, 2018, LEGroup staff (J. Hosick) who is a Landscape Architect (Full member OALA) and a qualified Arborist (ISA), visited the subject site to meet with the Owner and to review the proposed development. Subsequently, on November 27, 2018, LEGroup staff (D. Owen and J. Russell) attended the site with the intent to provide an inventory and assessment of existing individual tree species present. LEGroup staff also made a cursory review of existing trees exterior to the subject property to visually assess the quality of the vegetation. The description below is a culmination of observations obtained from both site visits.

LEGroup staff noted that the site ground was relatively flat to gentle sloping with a northerly aspect toward (Lake Simcoe).

The following woody plant species were observed on the subject site during fieldwork that gives an indication of the species make-up of the site:

Latin name	Common Name	% of Total Trees
<i>Acer saccharum</i>	Sugar Maple	25%
<i>Fraxinus americana</i>	White Ash	12.5%
<i>Juglans nigra</i>	Black Walnut	6.2%
<i>Picea pungens glauca</i>	Colorado Blue Spruce	25%
<i>Thuja occidentalis</i>	Eastern White Cedar	31.2%
Total Trees (subject to rounding)		100%

Table 1 List of Observed Woody Plant Species on the Subject Site

A total of 16 trees were observed at a DBH (diameter breast height) greater than 10cm on the subject site and are recorded in **Appendix C**. With the exception of the Colorado Blue Spruce, all trees cited are considered to be native and indigenous to the area.

LEGroup staff observed that the highest occurrence of trees on the site were Eastern White Cedar (Tree Nos. 3, 6, 9, 11 & 15) with #15 being a hedge along the common south boundary line. All cedars appeared to be in marginal health. Two cedars (Tree Nos. 9 & 11) were observed to be large and multi-trunked. The cedar hedge along the south boundary line appeared to be pruned but in healthy condition (**see Photo C, Appendix D**). Two cedars (Tree Nos. 3 & 6) were smaller calipre trees located in the front yard (**see Photo A, Appendix D**).

The next frequent tree species observed at the subject site were Sugar Maples (Tree Nos. 4, 5, 7 & 16) and Colorado Blue Spruce (Tree Nos. 1, 2, 8 & 14). The Sugar Maples are mostly young specimens in the front yard area in poor to marginal condition. Tree No. 16 is a large calipre tree observed to be in poor condition with conks (fungus), internal decay and trunk cavities and appeared to be structurally unsafe (**see Photo B, Appendix B**). The Colorado Blue Spruce are observed to be in marginal to fair condition (**see Photo A & B, Appendix D**). These had had lower branches pruned up with some external sap bleed but otherwise healthy.

Two White Ash trees (Tree Nos. 11 & 13) are observed on the site as both being in marginal condition. There is evidence for infection of the Emerald Ash Borer (EAB) on both trees. In addition, the canopy on both trees appear narrow for the calipre size (dbh).

Lastly, the single largest calipre tree on site is a Black Walnut (Tree No. 10) and is observed to be in marginal health. This tree has dual trunks, common to many Black Walnut trees and appears to have bracing applied in an effort to keep the trunks from splitting. The Black Walnut also observed to have broken scaffold branching and trunk wounds.

Five trees exterior to the site are observed with canopy crossing the boundary of the subject site. They appear to be generally in good health. The location of these trees can be seen in Drawings **ARB-1**, **ARB-2** (with canopy) and **ARB-3 in Appendix B**.

LEGGroup staff did not identify any Butternut (*Juglans cinerea*) on the subject parcel during the on-site inventory in accordance with the requirements of the *Endangered Species Act, 2007*.

5.0 Study Criteria

Tree observations were recorded individually, as set out in the Tree Inventory and Assessment Table (**Appendix C**), in accordance with the criteria established by common arboricultural practice including:

- ✓ Latin/Common Name of tree;
- ✓ Size (mm cal);
- ✓ Condition/Comments; and
- ✓ Recommendation for Preservation or Removal

Tree locations on the Tree Inventory and Preservation Plan were recorded and adjusted however, the locations are approximate as shown on **Drawing ARB-1 in Appendix B**.

6.0 Analysis and Recommendations

The following analysis criteria were generally applied to measure the merits of tree preservation:

- Species (including native & non-native)
- Size/Maturity
- Structure
- Health
- Location
- Areas of proposed development.

These criteria were applied to the tree assessments to determine the extent of preservation and removal. In addition, the criterion is applied to assess of their potential for survival in-situ post construction.

We note that Tree Nos. 1, 2, 8 & 14 are in conflict with the proposed development and recommend that these be removed.

We note that Tree Nos. 3-7 appear to be very close together and it is recommended that Eastern White Cedars (Tree Nos. 3 & 6) be removed to thin the tree grouping and provide a stronger opportunity for the Sugar Maples (Tree Nos. 4 & 5) to thrive in full sunlight.

The large Sugar Maple (Tree No. 16) is in poor health and structurally unsound and it is recommended that this tree be removed. Alternatively, this tree will need to be monitored annually for structural decline and removed when deemed a hazard tree.

The remaining nine (9) trees (Tree Nos. 5, 6, 7, 9, 10, 11, 12, 13, & 15) can be retained and preserved in-situ and protected in accordance with tree preservation notes and preservation fencing (**see Detail D1 in Appendix B**). We note that the canopy for Tree No. 10 extends into the footprint of the proposed new home. LEGGroup staff recommend that this tree be monitored for health and structural stability on a bi-annual basis by a qualified professional arborist.

It is also recommended that existing tree branching and exposed roots that conflict with the development works be lightly pruned by qualified personnel.

All trees exterior to the site whose canopy and roots extend into the subject site can be preserved and protected within the tree preservation fencing proposed since they are deemed to be sufficiently setback to avoid damage due to construction. A Consent to Harm Agreement will be required to be signed between the Owner of the subject site and by the Owner of the adjacent property to the north.

6.1 Summary and Recommendations

In summary, as a result of a zoning amendment application for the above-noted 403 Cox Mill Road residential development, the City of Barrie is requiring that the Owner submit a Tree Inventory, Assessment and Preservation Report and Plan recommendations for their review.

The summarized recommendations are as follows:

- Seven (7) trees are recommended to be removed that are in conflict with the proposed development or are in poor health including Tree No. 16 noted above. The remaining nine (9) of the existing trees are recommended to be preserved and protected in-situ with preservation fencing;
- Provide tree preservation fencing at the dripline of each tree and hedge which represents the tree preservation zone. Where tree preservation fencing cannot be established at the dripline, the tree preservation fence should be installed as far as practical from the trunk;
- Should Tree No. 16 not be permitted to be removed, LEGroup recommend monitoring this tree on an annual basis for declining health and structural integrity;
- That boundary trees exterior to the site be protected within the proposed tree preservation fencing. A Consent to Harm Agreement to be executed between the Owner of the subject site and the Owner of the site to the north;
- No equipment storage or refueling is to take place within the tree preservation zone as established by the preservation fencing;
- Tree preservation fencing is to be removed only after construction on the site is complete and equipment has been removed;
- Existing tree branching or roots that conflicts with the development works may be lightly pruned by qualified personnel;
- For other preservation methods, please refer to the Tree Preservation Notes on drawing D-1 in Appendix B.

With the recommendations above, this Report is intended show that many of the existing trees are to be preserved to the extent possible, those trees within the developable area or are in poor health are to be removed to facilitate development. Any trees that were assessed with structural concerns are asked to be reviewed at the Owner's earliest convenience.

Arborist's Declaration

It is the policy of Landmark Environmental Group Ltd to attach the following clause regarding the limitations:

The Consulting Arborist's visual assessment and recommendations, made in this Report, have been completed based on accepted arboricultural practices and represents a fair and accurate assessment of the number, type, size and condition of trees on the subject property. Such visual assessments of all tree components could include scars, bark damage, external decay, insect infestations, discoloured foliage, crown dieback, an excessive degree of lean from the vertical and above-ground root defects. In addition, environmental conditions, which could affect overall health of the trees such as damaging maintenance practices, have also been taken into consideration where appropriate. However, no tree was dissected, cored or rooting systems assessed through excavation.

I hereby certify that I, Jim Hosick have:

- Personally performed a visual inspection of the trees and property referred to in this letter report and have stated my findings accurately in accordance with accepted arboricultural practices without personal interest or bias;
- No current or prospective interest in the property that is the subject of this Report and have no personal interest or bias with respect to the parties involved;
- That my analysis, opinions and conclusions stated are my own and based on commonly accepted arboricultural practices;
- That my compensation is not contingent on the reporting of a predetermined conclusion that favours the client; and
- That I am a member in good standing with the International Society of Arboriculture (ISA), the American Association of Consulting Arborists (ASCA) and the Ontario Association of Landscape Architects (OALA).

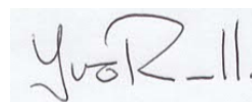
I trust the above-noted recommendations are of assistance. If there are any questions regarding the 403 Cox Mill Road Tree Inventory, Analysis, Preservation Report please do not hesitate to contact our Firm at (705) 796-1122.

Prepared by,



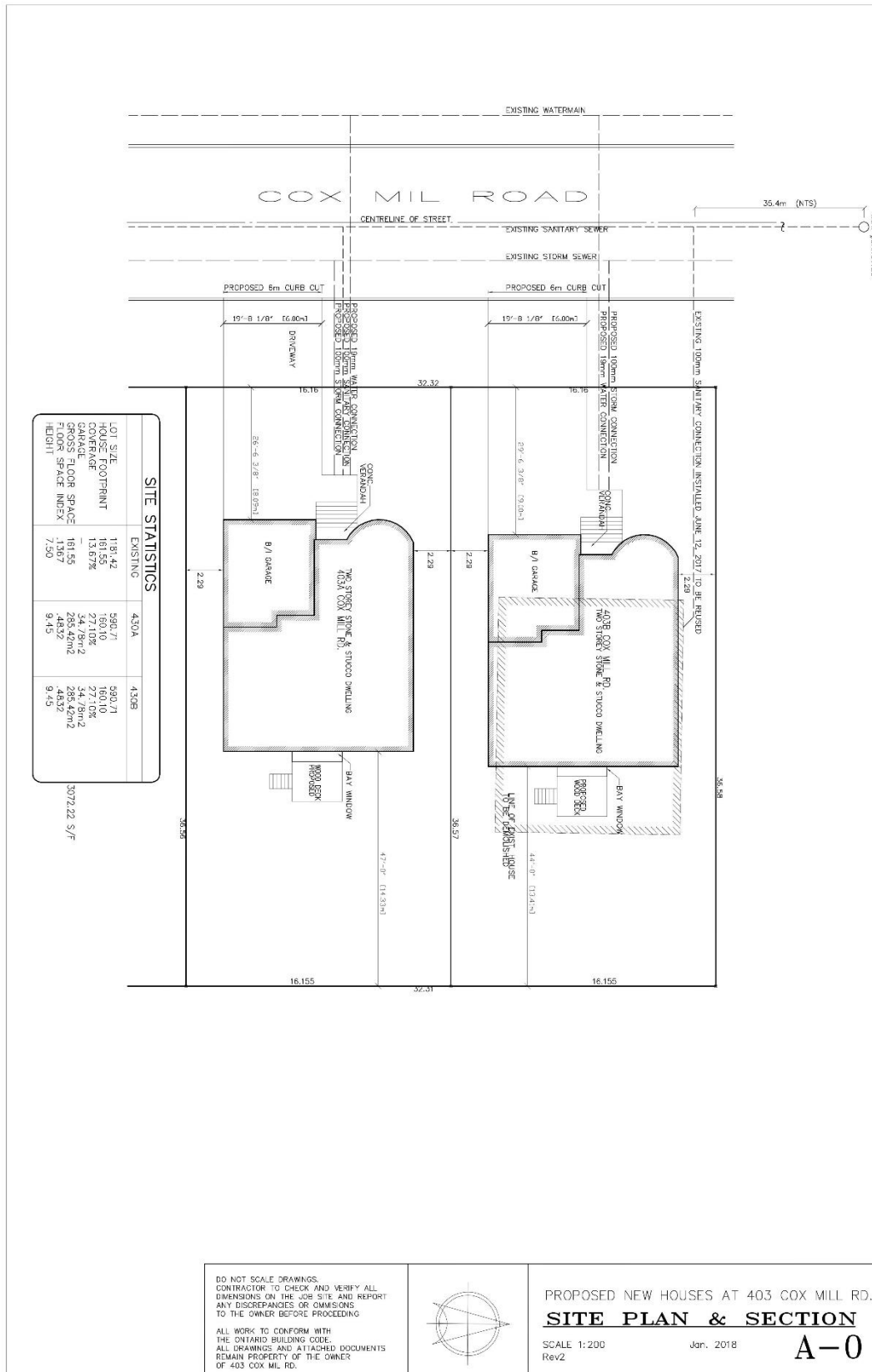
Jim Hosick, MSc, OALA, RPP
Landscape Architect-Principal,
ISA Certified Arborist No. 1098-A
Member, American Association of Consulting Arborists
MNR Butternut Health Assessor # 451
Landmark Environmental Group Ltd

Prepared by

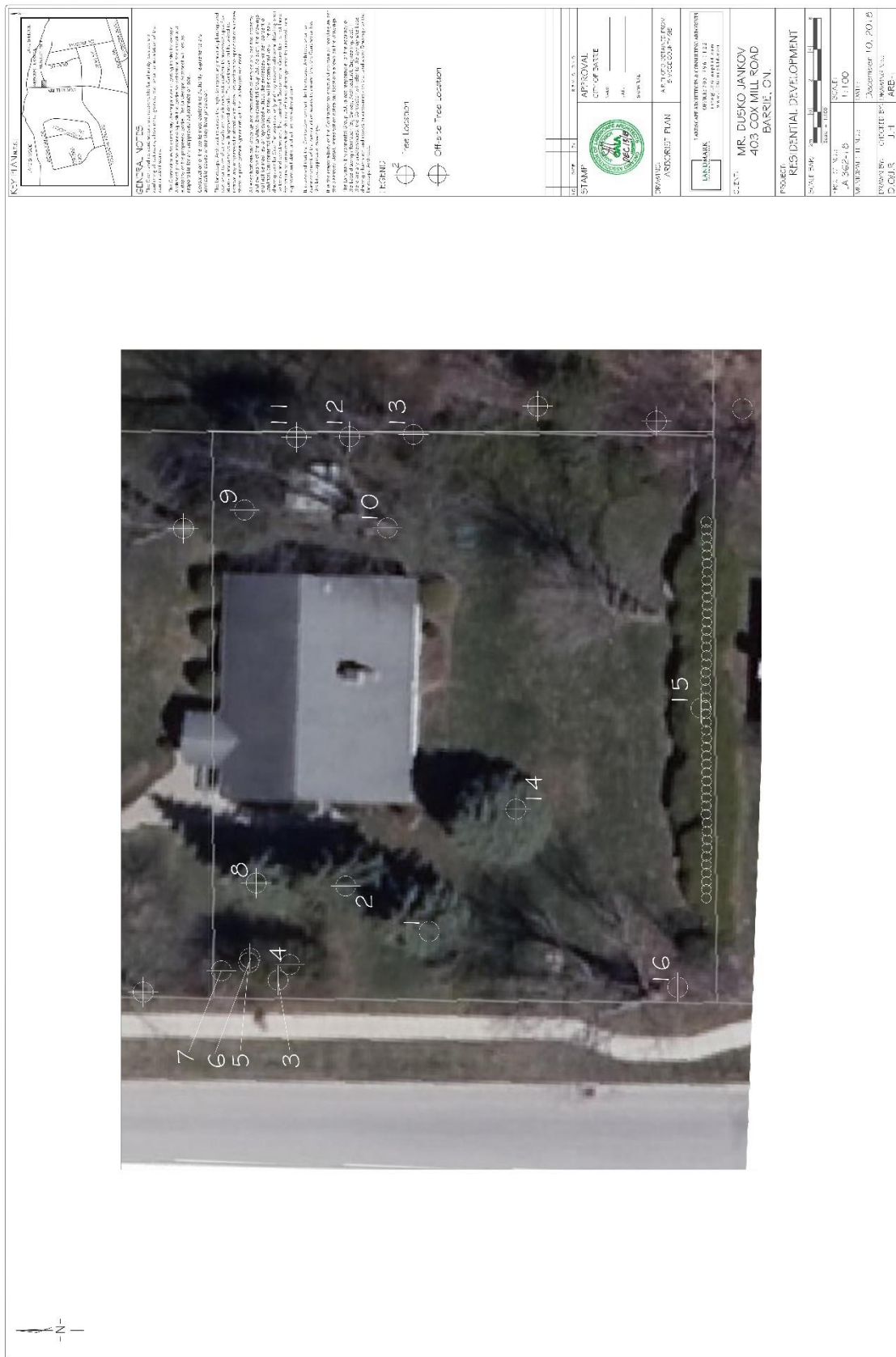


Joshua Russell BLA
Landscape Architect Intern
Landmark Environmental Group Ltd

Appendix A: Site Plan for the Subject Site



Appendix B: Tree Inventory, Preservation and Detail (ARB-1, ARB-2, ARB-3, D-1)



LEGEND

Tree Location

Tree to be Removed

Off-site Tree Location

Off-site Tree Canopy

Off-site Tree Canopy

Tree Preservation or Fencing

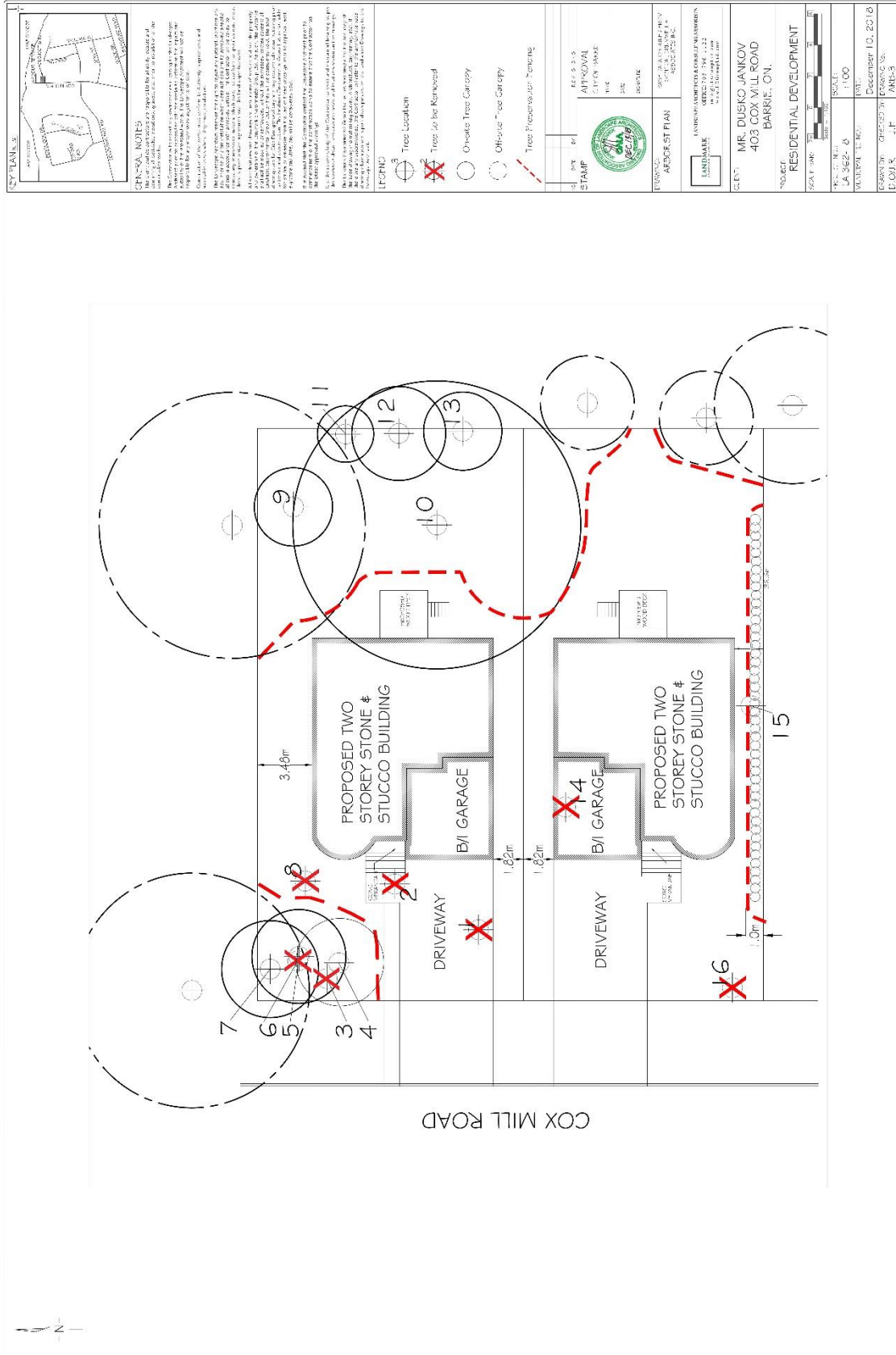
PROJECT INFORMATION

PROJECT NAME: MR. DUSKO JANKOV
 ADDRESS: 403 COX MILL ROAD, BARRIE, ON.

TABLE

Tree Location	Tree Status
1	Remove (X)
2	Remove (X)
3	Remove (X)
4	Remove (X)
5	Remove (X)
6	Remove (X)
7	Remove (X)
8	Remove (X)
9	Remove (X)
10	Remove (X)
11	Remove (X)
12	Remove (X)
13	Remove (X)
14	Remove (X)
15	Preserve (P)

Tree Inventory, Preservation, Layover Site Plan (ARB-3)



Tree Planting & Preservation Details (D-1)

[illegible][illegible][illegible]

TREE PRESERVATION NOTES

- [illegible]

Appendix C: Tree Inventory and Assessment Table

Key	Latin Name	Common Name	Tree DIA (cm dbh)	Notes	Assessment	Canopy Radius (m)	Preserve/ Remove
1	<i>Picea pungens glauca</i>	Colorado Blue Spruce	37.4	moderate corrected lean, pruning	2 Marginal	4.2	Remove
2	<i>Picea pungens glauca</i>	Colorado Blue Spruce	37.5	mechanical damage, lower branch dieback, pruning, deadwood branching	2 Marginal	3.1	Remove
3	<i>Thuja occidentalis</i>	Eastern White Cedar	10.8	mechanical damage, pruning, one sided branching	2 Marginal	1.6	Remove
4	<i>Acer saccharum</i>	Sugar Maple	10.9	included bark, dual leader	2 Marginal	2.8	Preserve
5	<i>Acer saccharum</i>	Sugar Maple	9	dual leader, minor corrected lean, trunk wound, bent trunk	2 Marginal	3	Preserve
6	<i>Thuja occidentalis</i>	Eastern White Cedar	12.1	corrected lean minor, one sided branching, deadwood branching, trunk wounds	2 Marginal	1.5	Remove
7	<i>Acer saccharum</i>	Sugar Maple	12.1, 9.0	dual trunk, included bark, basal trunk wound, trunk wounds, winding trunk, dual leader	1 Poor	3.1	Preserve
8	<i>Picea pungens glauca</i>	Colorado Blue Spruce	30.9	trunk wounds, pruning, moderate corrected lean, lower branch dieback	2 Marginal	3.5	Remove
9	<i>Thuja occidentalis</i>	Eastern White Cedar	43.9, 18	dual trunk, dual leader, boundary tree	2 Marginal	4	Preserve
10	<i>Juglans nigra</i>	Black Walnut	95.3	dual trunk, dual leaders, broken scaffold branch, trunk wounds, epicormic shoots, braced	2 Marginal	9.2	Preserve
11	<i>Fraxinus americana</i>	White Ash	20.3	boundary tree, corrected lean minor, EAB infected, one sided branching	2 Marginal	3	Preserve
12	<i>Thuja occidentalis</i>	Eastern White Cedar	19, 19.8, 12.1	dual trunk, dual leader, boundary tree, corrected lean,	2 Marginal	1.8	Preserve
13	<i>Fraxinus americana</i>	White Ash	14	lower branch dieback, one sided branching, EAB infected, corrected lean, winding trunk, boundary tree	2 Marginal	2.5	Preserve
14	<i>Picea pungens glauca</i>	Colorado Blue Spruce	34.7	pruning, trunk wounds	3 Fair	3	Remove
15	<i>Thuja occidentalis</i>	Eastern White Cedar	10.2	pruning, boundary tree	2 Marginal	1	Preserve
16	<i>Acer saccharum</i>	Sugar Maple	85.3	fungal conk, suspected interior decay, significant trunk cavities, trunk wound	1 Poor	8.2	Remove

Appendix D: Selected Site Photos



Photo A: Photo of Tree Nos. 4-7 in the front yard area Tree Nos. 1 & 14 in the rear of the photo.



Photo B: Photo of Tree No. 16 along street frontage-fungal conk, suspected interior decay, significant trunk cavities
403 Cox Mill Road, Barrie, ON
Landmark Environmental Group Ltd.

December 12, 2018



Photo C: Photo showing area east of the subject site.



Photo D: Cedar hedge row, Tree No. 15 along south property line
403 Cox Mill Road, Barrie, ON
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Photo E: Photo of tree No.10, bracing structure in canopy, otherwise healthy and in good condition

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December 12, 2018
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