



October 16, 2019
RS# 2017-014

Muskoka D & M Corp.

C/O Victoria Lemieux
Planner/Planning Technician
Innovative Planning Solutions
150 Dunlop St. E, Suite 201
Barrie, Ontario
L4M1B1

via email to: viemieux@ipsconsultinginc.com

**SUBJECT: Tree Inventory and Preservation Plan, 233 and 246 Dunlop St. West,
City of Barrie**

1 BACKGROUND

RiverStone Environmental Solutions Inc. (hereafter, "RiverStone") was retained to prepare a *Tree Inventory and Preservation Plan* as required by the City for the approval of a residential condominium structure in the City of Barrie (hereafter, "the Town"). The condominium structure is to be constructed on two (2) parcels (hereafter, "Subject Property") located at 233 and 245 Dunlop Street west (**Figure 1**). It is understood that these two lots will be merged to facilitate the proposed development across the properties.

Currently, Schedule A ("Land-use") of the Town's Official Plan (OP; office consolidation April 26, 2017), has the Subject Properties designated as "Residential". The Subject Property is also within a Defined Policy area per Schedule C of the OP. The Subject Properties are currently zoned Residential Multiple Dwelling Second Density (RM2) per Zoning By-law 2009-141 and is proposed to be rezoned to meet requirements of the Zoning By-law. At present the lot at 233 Dunlop St. is vacant and the existing residential dwellings at 245 Dunlop St. will be demolished as part of the site development plan.

It is our understanding that the requirement for a *Tree Inventory and Preservation Plan* is triggered by By-law No. 2015-120 which protects trees greater than 10 cm diameter at breast height (DBH) on lands within the City of Barrie. Riverstone's on-site tree inventory was therefore conducted in a manner consistent with this By-law. A previous Scoped Environmental Impact Study was prepared by Azimuth Environmental Consulting, Inc. (February 2013) to address Species at Risk potential and Hazzard lands on the property.

2 APPROACH AND METHODS

2.1 Site Investigation

A preliminary tree inventory and health assessment were carried out on October 2, 2017, by T. Knight (Ecologist/Botanist/ISA-certified Arborist) with an additional site visit to expand the tree inventory on July 17, 2019, by C. Mann (Ecologist/ISA-certified Arborist). All trees 10 cm diameter at breast height (DBH) or greater (including multi-stemmed trees where total DBH exceeded 10 cm) and located within approximately 6 m of the limit of disturbance (within the Subject Properties), were inventoried and assessed. It is understood that the portion of subject property south of the top of slope has been transferred to the City of Barrie and was not included as part of the tree inventory. As such, trees within the subject property were: (1) inventoried and labelled using metal number-stamped tags, (2) identified to species, (3) measured at approximately 1.37 metres above ground with tree calipers, (4) assessed for defects and indicators of decline (e.g., open wounds, broken branches, etc.), and 5) digitized with a high-accuracy GPS receiver. The locations of all tagged and assessed trees > 10 cm DBH are shown in **Figure 2**. Based on the information collected, an overall visual assessment of tree health and structural integrity is provided, supported by preservation/removal direction based on their health, other attributes, and location on the Subject Properties. Notwithstanding the above, it must be recognized that all trees (in good health or otherwise) have the potential for failure given adverse weather, damage due to mechanical injury, or other factors that cause stress. A general assessment of trees that occur on adjacent lands within 6 m of Subject Properties boundaries also occurred during the tree inventory.

2.2 Impact Assessment

Trees may be negatively impacted during grading, construction, and other activities associated with implementation of the proposed development plan via the following pathways:

- Direct tree removal in areas where trees conflict with the development envelopes or areas of site alteration (e.g., grading, etc.);
- Mechanical injury to the trunk, roots, branches, and/or foliage during construction activities;
- Soil compaction within the rooting zone; and
- Smothering or exposure of roots due to changes in grade.

A graphic depicting the proposed medium density, multi residence building was provided to RiverStone by Innovative Planning Solutions (“Site Plan” produced by ISM Architects, dated August 11, 2017). Based on this figure, RiverStone has illustrated the proposed development plan graphically in **Figure 3**. Presently there is only one structure on the subject property, that will be removed. RiverStone has assessed the potential for impacts to trees based on the proposed development plan and trees potentially impacted by grading.

2.3 Applicable Tree Protection Policies

This study has been conducted in accordance with the City of Barrie’s Tree Preservation By-law (2015-120) as outlined in the City of Barrie Tree Protection Manual (v.4, Revised Jan. 2019) which protects trees during the development approvals process. Section 4 of the By-law requires that the injury or destruction of any tree on private property needs to be permitted under this bylaw.

3 TREE INVENTORY AND HEALTH ASSESSMENT

The results of the tree inventory and health assessment are provided in **Appendix 1**. The locations of all tagged and assessed trees > 10 cm DBH are shown in **Figure 2**. Representative photographs of on-site conditions are provided in **Appendix 2**.

Eighty-five (85) trees were tagged and assessed; tree composition and abundance within the Subject Properties is summarized below in **Table 1**. Manitoba Maple (*Acer negundo*) was the most abundant trees assessed at 50%. All but six (6) Manitoba Maples are considered to be in poor to fair structural health (e.g., leaning, poor attachments, etc.), however the large majority were observed to be in good health (i.e., high live crown ratio, etc.) and are not considered to be hazardous. American Elm and White Spruce both have eight (8) trees tagged on the subject property. All American Elm were assessed as being fair to good structural condition and overall tree health with the largest diameter tree on the subject property being an American Elm of 72 cm DBH. All but three (3) of the tagged White Spruce trees were assessed as having good structure and tree health with one (1) tree being fair and two (2) trees being in poor health. Even though the majority of these trees are in fair to good structural and overall tree health, defects that potentially cause decline that include root constriction, leaf blotch, trunk abrasion, severe lean and branch dieback was identified on the majority of trees.

The remaining trees on the subject property comprise of both native and non-native species that are relatively young in age with DBH ranging in size from 10 cm to 23 cm with the exception of a Sugar Maple at 38 cm, Scots Pine at 34 cm and a Catalpa at 54 cm. All of these individuals are of fair to good structure and overall. That being said the majority of trees exhibit a range of defects that have potential to cause premature failure of trunk or branches.

Based on the City of Barrie Tree Protection Manual all trees on the subject property have a low or medium preservation value except one (1) American Elm and one (1) Black Walnut and two (2) White Spruce with a preservation value of high.

Table 1. Composition and Abundance of Trees > 10 cm DBH within and/or adjacent to the Areas of Disturbance.

Species	Total Assessed	Percentage of Total
Manitoba Maple (<i>Acer negundo</i>)	43	50
Siberian Elm (<i>Ulmus pumila</i>)	9	10
American Elm (<i>Ulmus americana</i>)	8	9
White Spruce (<i>Picea glauca</i>)	8	9
Sugar Maple (<i>Acer saccharum</i>)	4	5
Black Walnut (<i>Juglans nigra</i>)	3	4
Black Locust (<i>Robinia pseudoacacia</i>)	3	4
Scots Pine (<i>Pinus sylvestris</i>)	2	4
Honey Locust (<i>Gleditsia triacanthos</i>)	2	2
Little Leaf Linden (<i>Tilia cordata</i>)	2	2
Catalpa species (<i>Catalpa</i> sp.)	1	1
TOTAL		100

4 IMPACT ASSESSMENT AND RECOMMENDATIONS

The assessment of tree impacts provided herein is based on the drawing of the proposed development plan provided to RiverStone (ISM Architects Inc., updated September 09, 2019). RiverStone has illustrated the proposed development plan graphically alongside the results of the tree inventory on

Figure 3. The proposed development plan involves the construction of a condominium with associated parking and amenities. To facilitate construction and to meet requirements set out by the City of Barrie for stormwater management and parking, existing trees within the Subject Property may be negatively impacted during grading, construction, and other activities associated with implementation of the development via the following pathways:

- Direct tree removal in areas where trees conflict with building envelopes or areas of site alteration (e.g., grading, etc.);
- Mechanical injury to the trunk, roots, branches, and/or foliage during construction activities;
- Soil compaction within the rooting zone; and
- Smothering or exposure of roots as a result of changes in grade.

As outlined in **Appendix 1, Figure 3** provides an overlay of the proposed development plan with RiverStone's tree preservation/removal direction. Based on this overlay, RiverStone anticipates that a significant portion of the existing vegetation (including both assessed trees and other vegetation) will require removal in order to facilitate the proposed development. As no grading limit was specifically defined, it was assumed that all trees within the development area and within 3 m of the development are would be removed, trees to be removed and retained are shown on **Figure 3**.

All trees that were inventoried were given a tree protection value as outlined in the City of Barrie Tree Protection Manual. Based on Step 9 of the manual, there are no Endangered species and/or habitat or heritage trees on the subject property; however, there are Twenty (20) trees located along the east, south and southwest boundaries with neighbouring residences. These bordering trees either have part or all of the tree trunk growing on or overhanging the subject property. Adjacent property owners on the south and southwest have been contacted and written consent from these property owners have been acquired for either removal or maintenance of boundary trees. . .

Of the remaining trees, forty-five (45) will require removal for construction of the proposed development. These include Manitoba Maple, Siberian Elm, American Elm, Black Locust, Honey Locust, Black Walnut, Little Leaf Linden, Black Walnut, White Spruce, and Sugar Maple trees. All of the required removal trees are of low or medium preservation value and either no protection value or a value of 3. In the case of Siberian Elm, Little Leaf Linden and Black Locust these species are not native to Ontario and Manitoba Maple are known to be invasive and typically prone to failure; therefore, these species are not required to be retained. The preservation values of the identified American Elm are primarily in the medium range, with one (1) individual classified as having a low value. Branch dieback and leaf blotch was noted on most of the American Elm trees and since this species is highly susceptible to Dutch Elm disease, it is likely these trees will continue to decline.

Located adjacent to the south top of bank and in the vicinity of the storm water outlet, sixteen (16) of the tagged trees are anticipated to be retained. These trees consist al of Manitoba Maple and do not contribute greater to aesthetic or wildlife values.

Trees located in the south portion of the property are included as part of the woodland as shown on **Figure 3**. Removal of trees from this area requires a tree removal permit issued by the City of Barrie.

Along the east property boundary, the majority of boundary trees will be retained. Trees # 465, 466 and 474 are to undergo maintenance with the removal of deadwood and large branching to improve health and structure. Trees #464, 467, 468, 469, 470, 471 and 472 with be retained under conditional preservation. Will trees with have protection measures installed, any maintenance completed with dead

branches removed and proactive pruning for clearance. These trees will be monitored for damage and health during and post construction with maintenance or remove completed to any poor health or damaged trees once construction is complete.

Trees located in the south portion of the property are included as part of the woodland as shown on **Figure 3**. Removal of trees from this area requires a tree removal permit issued by the City of Barrie.

As a means to protect trees recommended for retention as shown on **Figure 3**, RiverStone recommends the following measures:

- **Should trees need to be removed from the woodland along the southern portion of the property adjacent to the valley, A permit will be required from the City of Barrie.**
- **At a minimum, tree preservation fencing is to be installed at the limit of the tree protection zone as indicated on Figure 3.**
- **Fencing is to be installed in accordance with Appendix 2 of the City of Barrie Tree Protection Manual (drawing BSD23-A) as far from the base of the tree as possible. It is recognized that there will only be a limited amount of room between the trees and protection fencing along the east property boundary. The majority of these trees were originally proposed to be removed and are now being retained a conditional preservation trees.**
- **No site alteration activities (e.g., grading, etc.), machinery movement, or storage of any equipment or materials should occur within the tree protection fencing.**
- **Where tree preservation fence cannot be installed at the limit of the tree protection zone for certain trees, tree protection fence should be established as far from the tree as practicable. A further assessment of such trees by a qualified Arborist may be necessary at the detailed design stage to demonstrate that protection can be accommodated.**
- **Tree preservation is to be inspected regularly and a bi-monthly report provided to the city.**
- **Removal of tree protection fencing is only to occur once a final inspection has been completed by city staff.**
- **In the event of mechanical injury to any trees recommended for retention and trees indicated for conditional preservation and/or maintenance and/or their branches, or if pruning is required to provide clearance for construction machinery, the following actions are recommended:**
 - **Prune damaged limbs cleanly and according to standard arboricultural practices.**
 - **Prune damaged roots that have been exposed cleanly and according to standard arboricultural practices.**
 - **Trim loose bark but avoid enlarging any open wounds.**
- **Tree or vegetation removal and other disturbances outside of the development envelopes should be minimized to the extent possible.**
- **Any necessary tree or vegetation removal should be completed outside of the primary breeding bird nesting window (i.e., between April 1 and August 31). If vegetation removal occurs during this period, a nest survey should be conducted by a qualified biologist within 5 days of commencement of construction activities to identify and locate active nests of bird species (where present) covered by the federal *Migratory Bird Convention Act, 1994* or provincial *Fish***

and Wildlife Conservation Act, 1997. If a nest is located or evidence of breeding noted, a mitigation plan should be developed to avoid any potential impacts on birds or their active nests. Mitigation may require establishing appropriate buffers around active nests or delaying construction activities until the conclusion of the nesting season.

- **Any necessary replacement tree plantings should consist of native species suitable to site conditions (e.g., light, moisture, etc.). Some examples of tree species suitable for replanting on-site include (but are not limited to) Sugar Maple, White Spruce, Black Walnut and Honey Locust.**

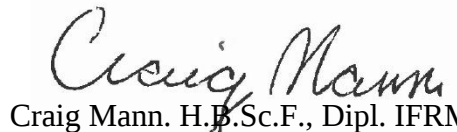
5 TOWN OF BARRIE TREE PRESERVATION BY-LAW NO. 2005-120

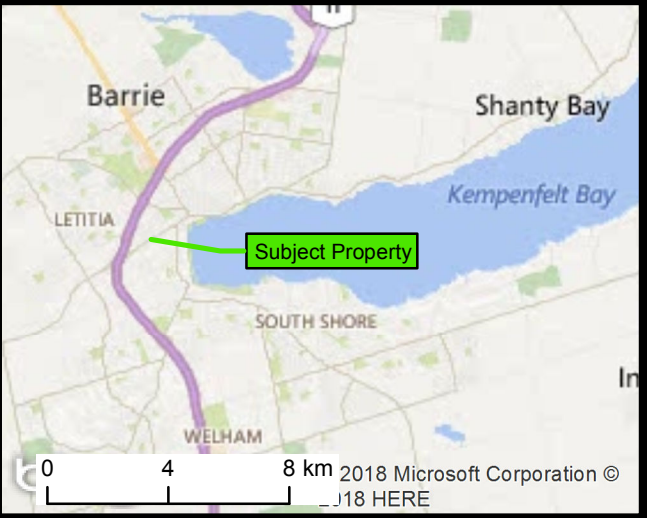
Provided that RiverStone's proposed recommendations and mitigation measures outlined in **Section 4** are implemented in full, we believe that this tree inventory and preservation plan meets the requirements of the City of Barrie Tree Preservation Guidelines.

Please contact us if there are any questions regarding the report, or if further information is required.

Best regards,
RiverStone Environmental Solutions Inc.


Al Shaw, M.Sc.
Senior Ecologist/Principal


Craig Mann, H.B.Sc.F., Dipl. IFRM
Ecologist/certified Arborist (ON-2369A)



Legend

Ontario Base Mapping (OBM)

Planning Boundaries

 Subject Property

Orthorectified aerial photo - spring 2016

Scale	RS Project No.	Date Last Updated	By
1:2,000	2017-014	Feb 13, 2018	JG

03060 Metres

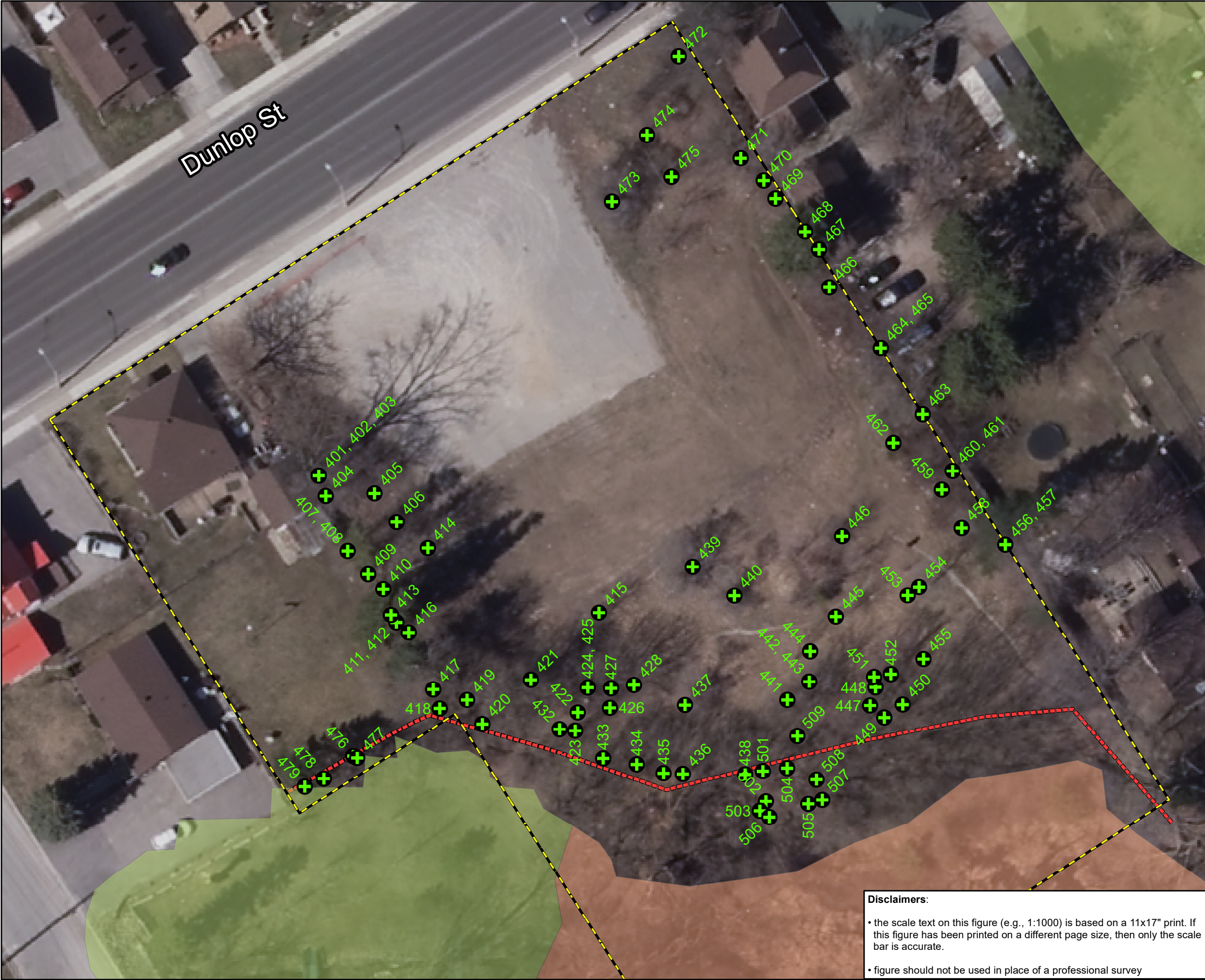


Figure 1. Location of the Subject Property:
233 and 245 Dunlop Street west, City of Barrie

Prepared for: Muskoka DM Barrie Environmental

Disclaimers:

- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- figure should not be used in place of a professional survey



Legend
Ontario Base Mapping (OBM)
Planning Boundaries
Subject Property
Features with Recognized High Natural Heritage Value - City of Barrie Official Plan (Schedule H)
Level 1 Natural Heritage Resource
Level 1 Natural Heritage Resource (With Existing Development Designation)
Features Taken from Existing Survey
Existing Top of Bank
Tree Inventory
Trees Assessed for Inventory

Orthorectified aerial photo - spring 2016

Scale	RS Project No.	Date Last Updated	By
1:400	2017-014	Oct 16, 2019	JG

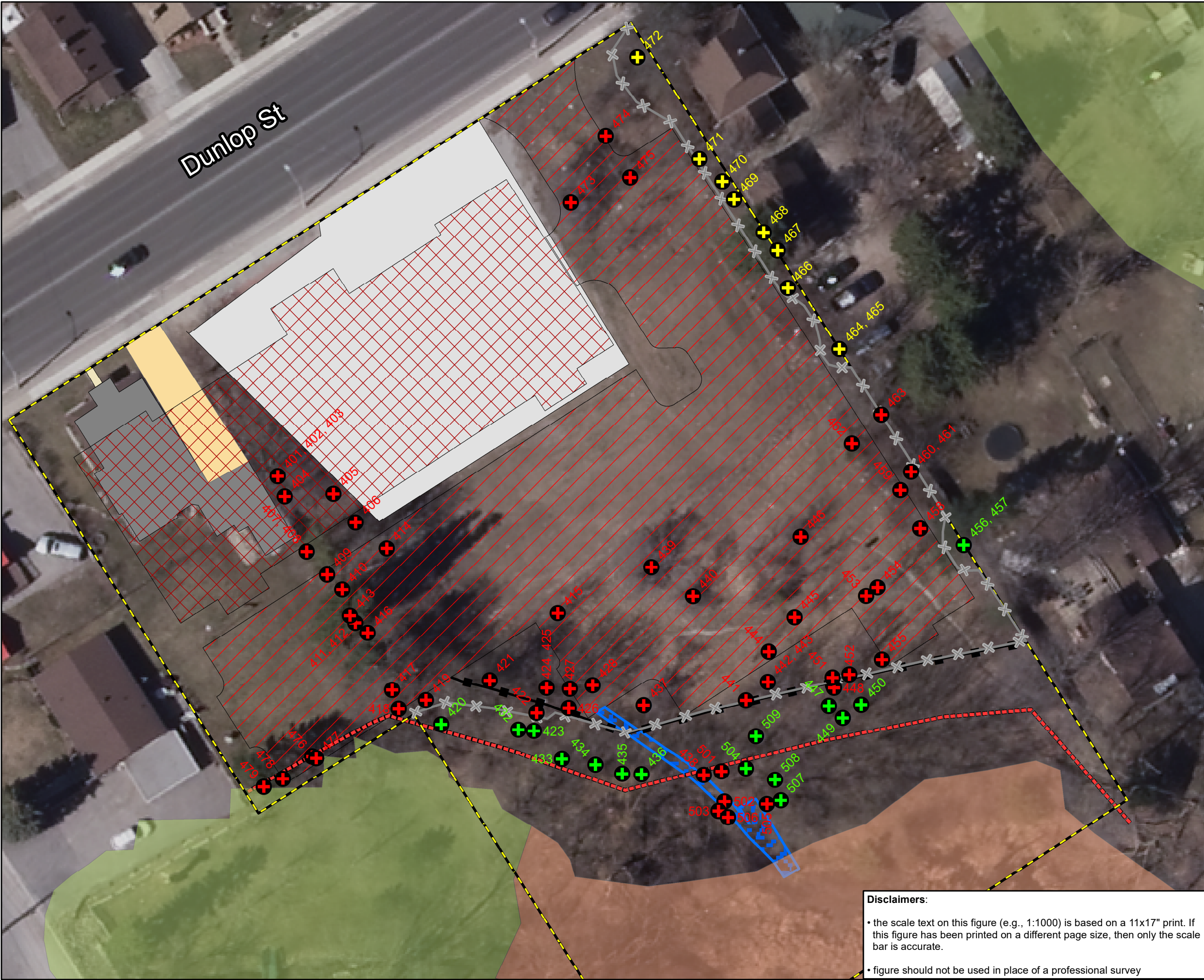
0612 Metres

Figure 2. Tree Inventory:
233 and 245 Dunlop Street west, City of Barrie

Prepared for: Muskoka DM Barrie Environmental

Disclaimers:

- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- figure should not be used in place of a professional survey



N

Legend

Planning Boundaries

Subject Property

Features with Recognized High Natural Heritage Value - City of Barrie Official Plan (Schedule H)

Level 1 Natural Heritage Resource

Level 1 Natural Heritage Resource (With Existing Development Designation)

Features Taken from Existing Survey

Existing Top of Bank

Gravel Parking Lot

Driveway

Walkway

Dwelling Footprint

Tree Preservation Plan

Conditional Preservation/Maintenance

Remove

Retain

Measures Recommended by RiverStone to Prevent and/or Reduce Impacts

Tree Protection Fencing

Proposed Development and Site Alteration

Chain Link Fence

Building Envelope

Parking Lot

Storm Water Management System

Orthorectified aerial photo - spring 2016

Scale	RS Project No.	Date Last Updated	By
1:400	2017-014	Oct 16, 2019	JG

0612 Metres

RIVERSTONE

ENVIRONMENTAL SOLUTIONS INC.

Figure 3. Tree Preservation Plan:

Site Features, Proposed Development, Constraints, Recommendations.

233 and 245 Dunlop Street west, City of Barrie

Prepared for: Muskoka DM Barrie Environmental

Disclaimers:

• the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.

• figure should not be used in place of a professional survey

Appendix 1. Tree Inventory and Health Assessment.

Tag No.	Common Name	Scientific Name	DBH (cm)	Crown Radius (m)	Tree Health	Structural Condition	Defects and Decline Indicators	Preservation Value ¹	Protection Level ¹
401	American Elm	<i>Ulmus americana</i>	72	7	fair/good	fair/good	included bark, bacterial ooze, roots constricted, growing in fill, leaf botch, abrasion with fence	Medium	3
402	Sugar Maple	<i>Acer saccharum</i>	14	3	fair/good	fair	roots constricted, crown constricted, growing in fill, poor stem attachment	Medium	3
403	American Elm	<i>Ulmus americana</i>	25	6	fair/good	fair	bacterial ooze, roots constricted, growing in fill, leaf botch, abrasion with fence	Medium	3
404	Sugar Maple	<i>Acer saccharum</i>	38	5	good	fair/good	growing through fence, roots constricted	Medium	3
405	Black Walnut	<i>Juglans nigra</i>	23	3	good	good	leaf spot	Medium	3
406	Manitoba Maple	<i>Acer negundo</i>	21	3	poor	poor	severe lean, "tree" is actually a scaffold branch since main stem has fallen over	Low	n/a
407	White Spruce	<i>Picea glauca</i>	21	2	poor	poor	dead branches in crown, small crown, chipped bark revealing disease, abrasion against wood pile	Low	n/a
408	Manitoba Maple	<i>Acer negundo</i>	32, 27	4	fair	poor	severe lean, included bark at base of both stems	Low	n/a
409	White Spruce	<i>Picea glauca</i>	20	2	poor	poor	severe lean, included bark at base of both stems, open wound	Low	n/a
410	Manitoba Maple	<i>Acer negundo</i>	32	4	poor	poor	severe lean, growing through fence, base bulging	Low	n/a
411	White Spruce	<i>Picea glauca</i>	32, 28	3	good	good	stems connected	Medium	3
412	White Spruce	<i>Picea glauca</i>	31	2	good	good		Medium	3
413	Manitoba Maple	<i>Acer negundo</i>	18	3	good	poor	severe lean, poor branch attachment	Low	n/a
414	Little-leaf Linden	<i>Tilia cordata</i>	10	3	good	good		Medium	3
415	Manitoba Maple	<i>Acer negundo</i>	16	4	good	fair	slight lean, basal sprouts	Low	n/a
416	Manitoba Maple	<i>Acer negundo</i>	17	2	fair	poor	severe lean, stem cracked, epicormics, abrasion with fence	Low	n/a
417	White Spruce	<i>Picea glauca</i>	32	3	good	good	abrasion with fence	Medium	3
418	Manitoba Maple	<i>Acer negundo</i>	20	2	fair	good	severe lean, epicormics, broken branches	Low	n/a
419	Manitoba Maple	<i>Acer negundo</i>	49, 42	8	fair	poor	included bark, broken branches, overextended limbs, callused wound, stem splitting	Low	n/a
420	Manitoba Maple	<i>Acer negundo</i>	50, 42	13	fair	poor	included bark, broken branches, overextended limbs, callused wound, stem splitting	Low	n/a
421	Manitoba Maple	<i>Acer negundo</i>	18	3	fair	poor	severe lean, poor branch attachment	Low	n/a
422	Manitoba Maple	<i>Acer negundo</i>	11	2	good	fair	poor stem attachment	Low	n/a
423	Manitoba Maple	<i>Acer negundo</i>	13	2	good	good		Low	n/a
424	Manitoba Maple	<i>Acer negundo</i>	17, 11	3	good	fair	poor stem attachment	Low	n/a
425	Manitoba Maple	<i>Acer negundo</i>	12	2	good	fair	poor stem attachment	Low	n/a
426	American Elm	<i>Ulmus americana</i>	13	2	good	good		Low	n/a
427	Manitoba Maple	<i>Acer negundo</i>	13	2	good	poor	severe lean, poor stem attachment	Low	n/a
428	Manitoba Maple	<i>Acer negundo</i>	13	2	good	poor	severe lean, poor stem attachment	Low	n/a
429									
430									
431									
432	Manitoba Maple	<i>Acer negundo</i>	13	2	good	poor	severe lean poor stem attachment	Low	n/a
433	Manitoba Maple	<i>Acer negundo</i>	12	2	good	poor	lean, poor stem attachment	Low	n/a
434	Manitoba Maple	<i>Acer negundo</i>	14	2	good	fair	lean	Low	n/a
435	Manitoba Maple	<i>Acer negundo</i>	15	3	good	poor	severe lean, poor stem attachment	Low	n/a
436	Manitoba Maple	<i>Acer negundo</i>	14	2	good	fair	poor stem attachment	Low	n/a
437	Siberian Elm	<i>Ulmus pumila</i>	15, 15, 12, 11	4	good	fair	broken branches, poor stem attachment, leaf spot	Low	n/a
438	Manitoba Maple	<i>Acer negundo</i>	10	2	fair	fair	dead branches, lean	Low	n/a
439	Siberian Elm	<i>Ulmus pumila</i>	21, 19, 18	4	fair	fair	thinning canopy, broken branches, poor stem attachment, leaf spot	Low	n/a
440	Siberian Elm	<i>Ulmus pumila</i>	15	3	fair/good	fair/good	broken branches, leaf spot	Low	n/a
441	Manitoba Maple	<i>Acer negundo</i>	12, 16, 14	4	good	poor	poor stem attachment	Low	n/a
442	Manitoba Maple	<i>Acer negundo</i>	11	3	good	fair	poor stem attachment, epicormics	Low	n/a
443	Manitoba Maple	<i>Acer negundo</i>	12	2	fair	poor	poor stem attachment, thinning crown, lean	Low	n/a
444	Manitoba Maple	<i>Acer negundo</i>	10	2	good	good		Low	n/a
445	Manitoba Maple	<i>Acer negundo</i>	10	3	fair	fair	branch dieback, open wound	Low	n/a
446	Siberian Elm	<i>Ulmus americana</i>	11, 11	3	good	fair	included bark	Low	n/a
447	Manitoba Maple	<i>Acer negundo</i>	16	4	good	good		Low	n/a
448	Manitoba Maple	<i>Acer negundo</i>	12, 10	4	good	fair	poor stem attachment	Low	n/a
449	American Elm	<i>Ulmus americana</i>	10	2	good	fair/good	abrasion against adjacent tree, roots constricted	Medium	3

450	Manitoba Maple	<i>Acer negundo</i>	12	4	fair/good	fair	epicormics, poor stem attachment	Low	n/a
451	Manitoba Maple	<i>Acer negundo</i>	12	3	good	fair	poor stem attachment	Low	n/a
452	Siberian Elm	<i>Ulmus pumila</i>	16	2	good	fair	included bark	Low	n/a
453	American Elm	<i>Ulmus americana</i>	10	2	fair/good	good	branch dieback	Medium	3
454	Siberian Elm	<i>Ulmus pumila</i>	19	3	good	good		Low	n/a
455	American Elm	<i>Ulmus americana</i>	14	4	fair	good	abundant epicormics	Medium	3
456	Scots Pine	<i>Pinus sylvestris</i>	21	3	fair/good	fair/good	sapsucker damage, rope tied around stem, abrasion with fence	Low	n/a (shared with consent)
457	Scots Pine	<i>Pinus sylvestris</i>	34	4	good	good	abrasion with fence	Low	n/a (shared with consent)
458	American Elm	<i>Ulmus americana</i>	14	4	good	good		Medium	3
459	Black Locust	<i>Robinia pseudoacacia</i>	10	2	good	good		Low	n/a
460	Black Locust	<i>Robinia pseudoacacia</i>	12, 14, 13, 11	6	good	fair	poor stem attachment	Low	n/a
461	Black Locust	<i>Robinia pseudoacacia</i>	13, 10	4	good	good		Low	n/a
462	Little-leaf Linden	<i>Tilia cordata</i>	12	3	good	good		Medium	3
463	Manitoba Maple	<i>Acer negundo</i>	42	9	poor	poor	basal conks (<i>Ganoderma</i>), dead branches and twigs, open wound, likely shared	Low	n/a
464	Black Walnut	<i>Juglans nigra</i>	20	5	good	good	competition with Grapevine (<i>Vitis riparia</i>)	Medium	3 (shared with consent)
465	Catalpa	<i>Catalpa speciosa</i>	54	6	good	fair/poor	stem twisted and split but somewhat callused, rot visible	Low	n/a (shared with consent)
466	Manitoba Maple	<i>Acer negundo</i>	17, 18	5	good	poor	severe lean, poor stem attachment	Low	n/a (shared with consent)
467	White Spruce	<i>Picea glauca</i>	53	4	good	good		High	2 (shared with consent)
468	Black Walnut	<i>Juglans nigra</i>	13	4	good	good		High	2 (shared with consent)
469	Sugar Maple	<i>Acer saccharum</i>	30	6	good	good		Medium	3 (shared with consent)
470	Sugar Maple	<i>Acer saccharum</i>	28	7	good	good	callused wound, bike locked to tree	High	2 (shared with consent)
471	Manitoba Maple	<i>Acer negundo</i>	38	7	fair	poor	severe lean, epicormics, rope girdling tree	Low	n/a (shared with consent)
472	Honey Locust	<i>Gleditsia triacanthos</i>	49	6	good	good	pruned, dead branches	Medium	3 (shared with consent)
473	Siberian Elm	<i>Ulmus pumila</i>	14, 23, 18, 20	4	good	fair	poor stem attachment	Low	n/a
474	Honey Locust	<i>Gleditsia triacanthos</i>	11	2	fair/good	fair/good	dead branches, broken leader	Medium	3
475	Manitoba Maple	<i>Acer negundo</i>	10, 10, 11	4	good	fair	poor stem attachment	Low	n/a
476	Manitoba Maple	<i>Acer negundo</i>	50	4	fair	fair	lean, pruned leader, epicormics, shared, open wound	Low	n/a
477	American Elm	<i>Ulmus americana</i>	18	3	good	good		High	2
478	White Spruce	<i>Picea glauca</i>	23	3	fair	fair	several leaders snapped, crown small	Low	n/a
479	White Spruce	<i>Picea glauca</i>	28	3	good	good	pruned	High	2
501	Manitoba Maple	<i>Acer negundo</i>	10.1	2	good	fair	shared stem	Medium	3
502	Manitoba Maple	<i>Acer negundo</i>	10.5	2	good	fair	shared stump	Medium	3
503	Manitoba Maple	<i>Acer negundo</i>	11.8	3	good	fair	shared stump	Medium	3
504	Manitoba Maple	<i>Acer negundo</i>	10.5	4	good	poor	sever lean	Low	n/a
505	Manitoba Maple	<i>Acer negundo</i>	13	4	good	poor	sever lean	Low	n/a
506	Siberian Elm	<i>Ulmus pumila</i>	12.5	3	fair	good	insect damaged on leaves	Medium	3
507	Manitoba Maple	<i>Acer negundo</i>	12.5	3	good	poor	stem wound at 2 and 3 m	Low	n/a
508	Manitoba Maple	<i>Acer negundo</i>	13.5	3	good	poor	sever lean	Low	n/a
509	Siberian Elm	<i>Ulmus pumila</i>	10	3	good	fair	insect damaged on leaves	Medium	3

¹per City of Barrie Tree Protection Manual (Version 4, Revised January 2019)

Appendix 2. Representative Photographs.





Photo 1. Strip of trees running between vacant lot and residential dwelling on subject property (October 2, 2017).



Photo 2. Strip of trees located along the east property boundary between vacant lot and adjacent residence (October 2, 2017).



Photo 3. Back of vacant lot at top of bank, younger, likely second growth vegetation (October 2, 2017).



Photo 4. Fence along the east property boundary showing attachment to trees along boundary (October 2, 2017).



Photo 5. Fungal growth at base of tree showing example of poor quality possibly hazard tree (October 2, 2017).



Photo 6. Stems split at base with potential weak point; example of poor quality possibly hazard tree (October 2, 2017).