Tree Inventory and Preservation Plan Report
13247 and 13233 Nunnville Road
Caledon, Ontario

prepared for

Sam Morra
13247 and 13233 Nunnville Road
Caledon, Ontario L7E 2Z9

prepared by

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7 August 2019, revised 30 December 2019 and 24 January 2020

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28 January 2020

Sam Morra
13247 and 13233 Nunnville Road
Caledon, ON L7E 2Z9

RE: Revised Tree Inventory and Preservation Plan, 13247 and 13233 Nunnville Road, Caledon

Kuntz Forestry Consulting Inc. (KFCI) was retained by Sam Morra to complete a Tree Inventory and Preservation Plan Report in support of a development application for the properties at 13247 and 13233 Nunnville Road in the Town of Caledon, Ontario. The report was revised as of 24 January 2020 to address questions and comments provided by various agencies based on their review. The follow revisions have been made:

- Tree preservation fence has been added to grading plan (master comment #47)
- Town standard detail 707 was replaced with standard detail 606 in Tree Preservation Plan (master comment #74)
- Town standard detail 710 and 711 are included in Tree Preservation Plan (master comment #75)
- Town staff inspection is included in Tree Inventory and Preservation Plan report on page 3 (master comment #78)
- Tree removal restriction is included in Tree Inventory and Preservation Plan report on page 3 (master comment #79)
- Tree compensation is included in Tree Inventory and Preservation Plan report on page 4 (master comment #80)
- Tree removal on neighbouring properties is included Tree Inventory and Preservation Plan report on page 4 (master comment #81)
- Trees 6, 8, 9, 122, and 210 can be retained as requested by the Town; however, Tree 7, 106, 123-125, 211, and P108 have to be removed (master comment #82)
- Trees 100-103, 107, 208, and 209 can be retained as requested by the Town. The proposed property fence will be placed around the trees (master comment #83)
- This comment is the same as comment #79, but included in Tree Inventory and Preservation Plan report (master comment #113)
- Tree Inventory and Preservation Plan (TIPP) report is prepared by Kuntz Forestry Consulting Inc. as requested (master comment #123)

- A certification letter from a Certified Arborist is required after the completion of tree removal. Additional certification letter from a Certified Arborist is required, that confirms any long-term requirements and recommendations in the report (master comment #124)

- The phrase that the owner is responsible for the maintenance and repair of tree preservation fencing is included in Tree Inventory and Preservation Plan report on page 3 (master comment #125)

Please feel free to contact at 416-827-7304 or 289-837-1871 ext. 22 with any inquiries.

Respectfully Submitted,
Kuntz Forestry Consulting Inc.

Kaho Hayashi

Kaho Hayashi, B.Sc., M.Sc.F.
Associate Forest Ecologist
ISA Certified Arborist #ON-2153A

Introduction

Kuntz Forestry Consulting Inc. was retained by Sam Morra to complete a Tree Inventory and Preservation Plan Report in support of a development application for the properties at 13247 and 13233 Nunnville Road in the Town of Caledon, Ontario. The subject properties are located on the southeast side of Nunnville Road and Old King Road, within a residential area

The work plan for this study included the following:

- Prepare inventory of the tree resources over 10cm on and within six metres of the proposed development;
- Evaluate tree saving opportunities based on proposed site plans and grading; and,
- Document the findings in a Tree Inventory and Preservation Plan report.

Trees included were visually assessed for condition utilizing the following parameters:

Tree # - number assigned to trees that corresponds to Figure 1.
Species - common and botanical names provided in the inventory table.
DBH - diameter (centimeters) at breast height, measured at 1.4 m above the ground.
Condition - condition of tree considering trunk integrity (TI), crown structure (CS) and crown vigor (CV). Condition ratings include poor (P), fair (F), and good (G);
Crown Die Back – Percentage of dead branches within the crown.
Drip Line - Crown radius; and
Comments – Any other relevant tree condition information.

The results of the evaluation are provided below.

Methodology

Trees measuring over 10cm DBH on and within six metres of the proposed development were identified included in the tree inventory. Trees were located using a handheld GPS unit (Trimble GeoExplorer® 6000 series) accurate to ±1m. Trees included in the inventory were identified with numbers 1-211. Tree locations are shown on Figure 1. See Table 1 for the results of the inventory.

Existing Site Conditions

The subject property is currently occupied by two rural residential dwellings and associated amenity areas. There is a woodlot on the north side of 13247 Nunnville Road. Tree resources exist in the form of landscape trees and natural generations. Refer to Figure 1 for the existing site conditions.

Individual Tree Resources

The tree inventory was conducted on 15 May 2019. The inventory documented 211 trees on and within six metres of the proposed development. The existing woodlot on the north side of 13247 Nunnville Road will be preserved with 10 metre buffer and not included in this study. Refer to Table 1 for the full tree inventory and Figure 1 for the location of tree reported in the tree inventory.

Tree resources included in the inventory are Balsam Fir (*Abies balsamea*), Manitoba Maple (*Acer negundo*), Silver Maple (*Acer saccharinum*), Weeping Nootka Cypress (*Chamaecyparis nootkatensis 'Pendula'*), Russian Olive (*Elaeanus angustifolia*), Green Ash (*Fraxinus*

pennsylvanica), Black Walnut (*Juglans nigra*), Eastern Red Cedar (*Juniperus virginiana*), Apple Species (*Malus spp*.), Norway Spruce (*Picea abies*), White Spruce (*Picea glauca*), Blue Spruce (*Picea pungens*), Austrian Pine (*Pinus nigra*), White Pine (*Pinus strobus*), Scots Pine (*Pinus sylvestris*), Eastern Cottonwood (*Populus deltoides*), Pear Species (*Pyrus spp*.), Black Locust (*Robinia pseudoacacia*), Weeping Willow (*Salix babylonica*), Eastern White Cedar (*Thuja occidentalis*), Basswood (*Tilia americana*), and White Elm (*Ulmus americana*).

Proposed Development

The proposed development includes the demolition of the existing dwellings and the construction of 35 detached dwellings and a driveway. New fences will be installed along the property boundary. The existing woodlot on the north side of 13247 Nunnville Road will be preserved with 10 metre buffer. Refer to Figure 1 for the proposed development.

Discussion

The following sections provide a discussion and analysis of development impacts, tree removal requirements and tree preservation relative to the proposed development.

Development Impacts/Tree Removals

The removal of 147 trees is required to accommodate the proposed development. Required tree removals include Trees 1-5, 7, 10-99, 106, P108, 115-120, 123-157, 195-200, 206, and 211.

The removal of Trees 110 and 111 is recommended regardless of the site plan due to poor condition. Tree 110 is an Eastern Cottonwood with 40% crown-die-back and Tree 111 is a Green Ash with 30% crown-die-back due to Emerald Ash Borer. Trees 110 and 111 are situated on the neighbouring property or property boundary; written consent from the owner of the neighbouring property will be required prior to their removal. Consent must be provided to the Town prior to the removal of any trees. Additionally, a number of dead trees (mostly ash trees) were identified on the subject property. The removal of all dead trees is recommended. Refer to Figure 1 for the location of the proposed tree removals.

During the construction and prior to the final approval by the Town of Caledon, KFCI staff along with appropriate Town staff shall inspect the entire site. Any noted hazardous trees must be identified and removed prior to final approval. No additional hazard tree monitoring will be required as all hazard trees should be removed prior to the proposed development. All tree removals must be conducted outside of the bird breeding season (April 1st – August 1st).

The owner must retain the same Certified Arborist to carry out the recommendations in TIPP report to the satisfaction of the Town. A certification letter will be provided by a Certified Arborist that tree removals have been completed as per the approved TIPP report. An additional certification letter from the same Arborist that confirms any long-term requirements and recommendations in the report have been carried out.

The owner is solely responsible for ongoing maintenance and repairs to tree protection fencing throughout the proposed development.

Tree Preservation

The preservation of the remaining 62 trees will be possible with appropriate tree protection measures. Recommended tree preservation includes Trees 6, 8, 9, 100-105, 107, 109, 112-114,

121, 122, 158-194, 201-205, and 207-210. Sediment and erosion control fencing should be sufficient as tree protection fencing. Refer to Figure 1 for the location of prescribed tree preservation fencing, further tree preservation plan notes and the tree protection fencing detail.

Trees 101-105, 158-194, and 201-210
Encroachment into the dripline of Trees 101-105, 158-194, and 201-210 will be required to accommodate the proposed fence along the property boundary. The new fence must be placed around the existing trees. Excavation will be required for fence posts; when large structural roots are encountered during the drilling for fence posts, the post location should be relocated to preserve structural roots. Given that pruning of structural roots will not be required, long-term adverse effects are not anticipated to the trees.

Tree Compensation

The Town of Caledon requires tree compensation for all tree removal at 2:1 ratio of plantings to removals. The removal of 147 trees is proposed to accommodate the proposed site plan. As such, a total of 294 replacement plantings is required. Any compensation trees that cannot be accommodated in the subject property due to space limitation, financial compensation will be provided to the Town of Caledon. Refer to Landscape Plan for the planting plan.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Sam Morra to complete a Tree Inventory and Preservation Plan in support of a development application for the properties located at 13247 and 13233 Nunnville Road in Caledon, Ontario. A tree inventory was conducted and reviewed in the context of the proposed development plan.

The findings of the study indicate a total of 211 trees on and within six metres of the proposed development. The removal of 147 trees is required to accommodate the proposed development. The removal of additional 2 trees is recommended regardless of the site plan due to poor condition. The preservation of the remaining 62 trees will be possible with appropriate tree protection measures.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for additional Tree Protection Plan Notes and tree preservation fence detail.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.

- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Branches that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree branches must be in accordance with Good Arboricultural Standards.

- Site visits, pre, during and post construction is recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree

protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,
Kuntz Forestry Consulting Inc.

Kaho Hayashi

Kaho Hayashi, B.Sc., M.Sc.F.
Associate Forest Ecologist
ISA Certified Arborist #ON-2153A

Table 1. Tree Inventory

Location: 13233 and 13247 Nunnville Road, Caledon Date: 15 May 2019 Surveyors: KH

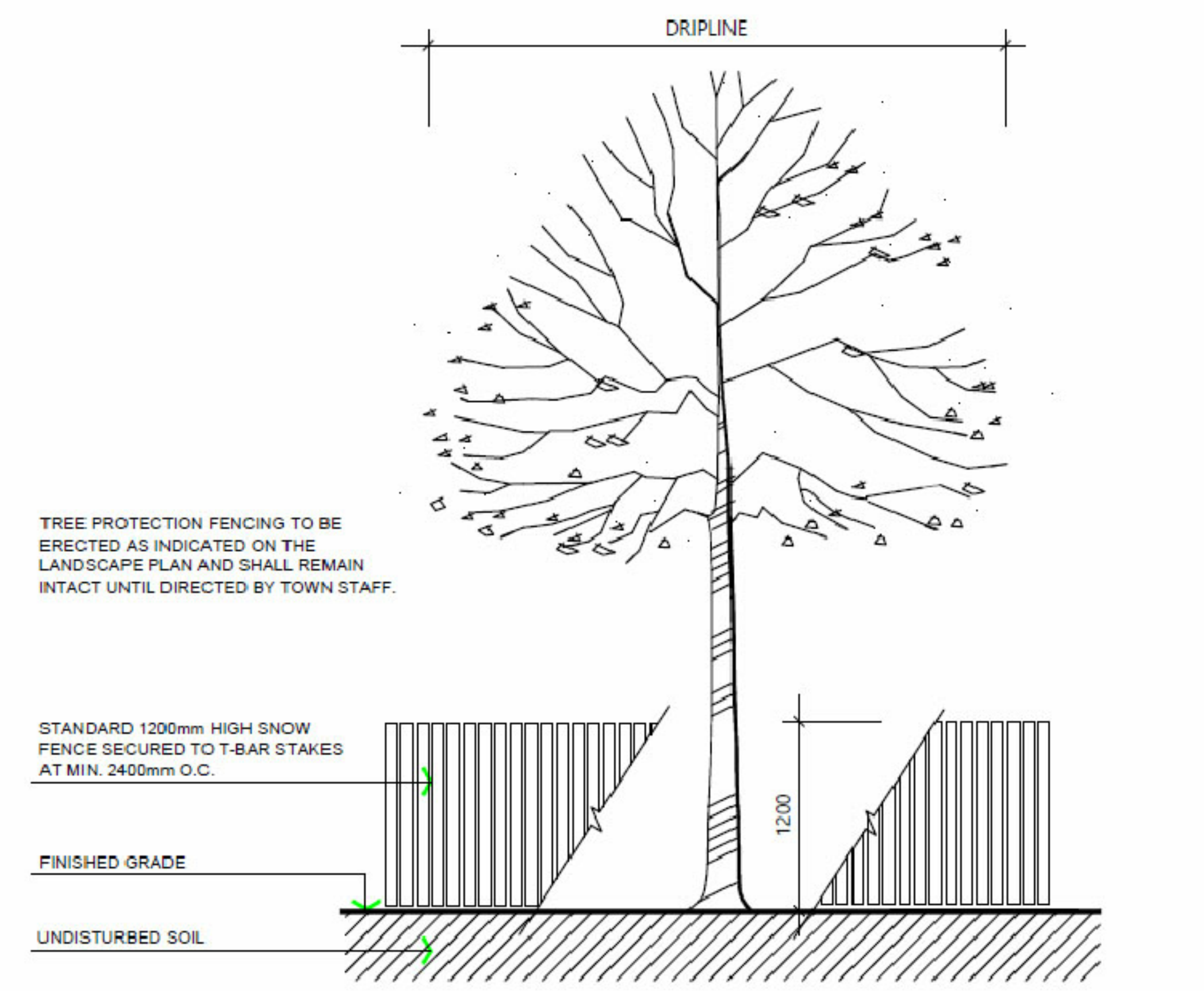
Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Action
1	Austrian Pine	*Pinus nigra*	46.0	G	G	F/G		8.0		Remove
2	Austrian Pine	*Pinus nigra*	35.5	G	G	P/F	20	5.0	Asymmetrical crown (M), sparse crown (M)	Remove
3	Austrian Pine	*Pinus nigra*	35.5	G	G	F		6.0		Remove
4	Austrian Pine	*Pinus nigra*	30.5	G	G	F		6.0		Remove
5	Austrian Pine	*Pinus nigra*	31.5	G	G	P/F	20	5.0	Asymmetrical crown (M), sparse crown (M)	Remove
6	White Spruce	*Picea glauca*	47.0	G	G	G		8.0		Preserve
7	White Spruce	*Picea glauca*	38.0	G	G	F/G		8.0		Remove
8	White Spruce	*Picea glauca*	42.0	G	G	F/G		8.0		Preserve
9	White Spruce	*Picea glauca*	41.0	G	G	F/G		8.0		Preserve
10	Apple Species	*Malus spp.*	28.0	G	G	F/G		6.0	Epicormic branches (H)	Remove
11	Weeping Nootka Cypress	*Chamaecyparis nootkatensis 'Pendula'*	~15	F/G	G	F/G		3.0	Lean (L)	Remove
12	White Spruce	*Picea glauca*	41.0	G	G	F/G		6.0	Exposed roots (L)	Remove
13	Blue Spruce	*Picea pungens*	20.0	G	F	P	40	4.0	Sparse crown (M), dead branches (M)	Remove
14	Silver Maple	*Acer saccharinum*	48.5	F	F	F	40	8.0	Co-dominance at 2m, lean (L), exposed roots (L), broken branches (L), epicormic branches (M)	Remove
15	Silver Maple	*Acer saccharinum*	33.0	F	F	F	10	6.0	Co-dominance at 1.5m with included bark (M), broken branches (M)	Remove
16	Silver Maple	*Acer saccharinum*	64.5	F	F	F		8.0	Co-dominance at 1.8m (3 stems), exposed roots (M), epicormic branches (M)	Remove
17	White Spruce	*Picea glauca*	33.0	F/G	G	F/G		5.0	Co-dominacne at 3m with included bark (L)	Remove
18	Black Locust	*Robinia pseudoacacia*	23.0	F/G	F/G	F	15	4.0	Sweep (L), asymmetrical crown (M), broken branches (L)	Remove
19	Black Locust	*Robinia pseudoacacia*	23, 14	F/G	F	F		4.0	Union at 1m with included bark (M), bow (L), asymmetrical crown (M)	Remove
20	Black Locust	*Robinia pseudoacacia*	33, 18	F/G	F	F	10	5.0	Union at 0.3m and 1.6m (3 stems), bow (L), dead branches (L)	Remove
21	Black Locust	*Robinia pseudoacacia*	23, 12	F/G	F/G	F		4.0	Union at 0.6m, bow (L), asymmetrical crown (M)	Remove
22	Black Walnut	*Juglans nigra*	22.0	G	G	F/G		5.0		Remove
23	Black Locust	*Robinia pseudoacacia*	~45, 38, 13	F	F	F		5.0	Union at 0.6m, crook (M)	Remove
24	Black Locust	*Robinia pseudoacacia*	19.0	F	F	F		4.0	Lean (L), bow (L), asymmetrical crown (M)	Remove
25	Black Locust	*Robinia pseudoacacia*	22.0	F	F	F		4.0	Crook (M), asymmetrical crown (M)	Remove
26	Black Locust	*Robinia pseudoacacia*	19.5	F	F	F		3.0	Crook (M), small crown, stem wounds (L)	Remove
27	Black Locust	*Robinia pseudoacacia*	20, 18	F	F	F		4.0	Co-dominance at 0.5m with included bark (M), epicormic branches (M)	Remove
28	Black Locust	*Robinia pseudoacacia*	22.0	F	F	F		5.0	Bow (M)	Remove
29	Black Locust	*Robinia pseudoacacia*	29.5	F/G	G	F		3.0	Stem wounds (L), crook (L), dead branches (L)	Remove
30	Black Locust	*Robinia pseudoacacia*	29.0	G	G	F		4.0		Remove
31	Black Locust	*Robinia pseudoacacia*	32.5	F	F	F		4.0	Co-dominance at 1.5m with included bark (M), broken branches (M), epicormic branches (M)	Remove
32	Black Locust	*Robinia pseudoacacia*	19.5	F	F	F		4.0	Crook (M), broken branches (L)	Remove
33	Black Locust	*Robinia pseudoacacia*	18.5	F/G	F	F		4.0	Crook (L), stem wounds (L), asymmetrical crown (M)	Remove
34	Basswood	*Tilia americana*	23.0	G	G	F/G		4.0	Crook (L), epicormic branches (H)	Remove
35	Black Locust	*Robinia pseudoacacia*	16.0	G	G	F/G		3.0	Crook (L)	Remove
36	White Spruce	*Picea glauca*	18.0	G	G	G		4.0		Remove
37	Black Locust	*Robinia pseudoacacia*	17.0	G	G	F/G		3.0	Stem wounds (L) at base, crook (L)	Remove
38	Silver Maple	*Acer saccharinum*	23, 10	F/G	G	F/G		5.0	Union at 0.4m with included bark (L)	Remove
39	Black Locust	*Robinia pseudoacacia*	~35, 35	P	P/F	P	50	4.0	Co-dominance at 0.6m with included bark (M), crack, loose bark, dead branches (M)	Remove
40	Silver Maple	*Acer saccharinum*	23, 20	F/G	F/G	F/G		5.0	Co-dominance at 0.8m with included bark (M)	Remove
41	Silver Maple	*Acer saccharinum*	25, 10	F/G	G	F/G		5.0	Union at 0.6m, lean (L), broken branches (L), epicormic branches (M)	Remove
42	Black Locust	*Robinia pseudoacacia*	16, 12, 9	F	F	F		4.0	Union at 0.3m, crook (M), spiral stems	Remove
43	Black Walnut	*Juglans nigra*	18.5	G	G	G		4.0		Remove
44	Black Locust	*Robinia pseudoacacia*	19.5	F/G	G	F/G		4.0	Crook (M)	Remove
45	Black Locust	*Robinia pseudoacacia*	~16, 15	F	F	F	15	4.0	Co-dominance at 0.2m with included bark (M), crook (M), dead branches (L)	Remove
46	Black Locust	*Robinia pseudoacacia*	16.0	F	F	F	25	4.0	Co-dominance in crown, crook (M), dead branches (M)	Remove
47	Black Locust	*Robinia pseudoacacia*	15.0	F/G	G	F	15	4.0	Crook (M), dead branches (L)	Remove
48	Black Locust	*Robinia pseudoacacia*	20.0	G	G	F/G		4.0		Remove
49	Black Locust	*Robinia pseudoacacia*	22.0	G	F/G	F/G		4.0	Asymmetrical crown (M)	Remove
50	Black Locust	*Robinia pseudoacacia*	22.0	G	G	F/G		4.0		Remove
51	Black Locust	*Robinia pseudoacacia*	18, 15	F/G	G	F	15	5.0	Union at base, dead branches (L)	Remove
52	Black Locust	*Robinia pseudoacacia*	19.0	G	F	P/F	30	4.0	Asymmetrical crown (M)	Remove
53	Black Locust	*Robinia pseudoacacia*	19, 14	F/G	F/G	F		4.0	Union at 0.3m with included bark (M)	Remove

54	Black Locust	*Robinia pseudoacacia*	23.5	P	P/F	P	40	4.0	Stem wound (H) at base, crack, dead branches (M)	Remove
55	Black Locust	*Robinia pseudoacacia*	27.5	F/G	G	F	15	4.0	Stem wounds (L), crook (L)	Remove
56	Black Locust	*Robinia pseudoacacia*	16.0	F/G	G	F/G		3.0	Crook (L)	Remove
57	Black Locust	*Robinia pseudoacacia*	18.5	F/G	G	F/G		3.0	Crook (L)	Remove
58	Black Locust	*Robinia pseudoacacia*	15.5	P	F	F		3.0	Stem wound (H)	Remove
59	Black Locust	*Robinia pseudoacacia*	15.5	G	P	P	60	3.0		Remove
60	Black Locust	*Robinia pseudoacacia*	18.5	P/F	F	F	10	4.0	Stem wound (H) at base with cavity	Remove
61	Black Locust	*Robinia pseudoacacia*	18.0	G	G	F/G		4.0	Crook (L)	Remove
62	Basswood	*Tilia americana*	27.0	F/G	F/G	F/G		4.0	Growing with #63, bow (L)	Remove
63	Black Locust	*Robinia pseudoacacia*	24.0	F/G	G	F/G		4.0	Growing with #62, crook (L)	Remove
64	Basswood	*Tilia americana*	42.5	F/G	F/G	F/G		6.0	Asymmetrical crown (M), epicormic branches (L)	Remove
65	Black Locust	*Robinia pseudoacacia*	28.0	G	G	F/G		5.0	Exposed roots (L)	Remove
66	Silver Maple	*Acer saccharinum*	21.5, 15	F	F	F		6.0	Union at 0.5m with included bark (M), bow (L), broken branches (L), epicormic branches (H)	Remove
67	Silver Maple	*Acer saccharinum*	54.5	F/G	G	F/G		8.0	Co-dominance at 2m (3 stems), exposed roots (L), broken branches (L), epicormic branches (H)	Remove
68	Silver Maple	*Acer saccharinum*	25, 29, 19	F	F/G	F/G		10.0	Union at 0.6m, lean (M), crook (L)	Remove
69	Silver Maple	*Acer saccharinum*	23, 12	F	F	F		8.0	Union at 0.2m with included bark (M), crook (M), poor form, bow (L)	Remove
70	Silver Maple	*Acer saccharinum*	21.0	F/G	F/G	F/G		6.0	Crook (L)	Remove
71	Silver Maple	*Acer saccharinum*	18, 14	F	F	F		8.0	Union at 0.3m with included bark (M), poor form, crook (M), sparse crown (M)	Remove
72	Apple Species	*Malus spp.*	22, 20, 10	F	F	F		7.0	Union at 0.6m and 1.4m, epicormic branches (H)	Remove
73	Apple Species	*Malus spp.*	14-23 (avg. 20)	F	F	F		8.0	Union at 0.6m (4 stems), epicormic branches (H)	Remove
74	Silver Maple	*Acer saccharinum*	24.0	F	F	F		7.0	Burl, bow 9M), broken branches (M), epicormic branches (H)	Remove
75	Silver Maple	*Acer saccharinum*	56.0	P/F	F	F		8.0	Lean (M), co-dominancea t 1.8m with included bark (H), broken branches (M), epicormic branches (H)	Remove
76	Weeping Willow	*Salix babylonica*	58.0	F	F/G	F/G		10.0	Union at 2.5m, lean (L), sweep (L), broken branches (L), epicormic branches (M)	Remove
77	Weeping Willow	*Salix babylonica*	67.0	F/G	F	F/G		10.0	Crook (L), bow (L), broken branches (M), epicormic branches (H)	Remove
78	Green Ash	*Fraxinus pennsylvanica*	17.0	G	F	F	15	4.0	Emerald Ash Borer (M), epicormic branches (H)	Remove
79	Green Ash	*Fraxinus pennsylvanica*	24.0	F/G	F	F	10	5.0	Co-dominance at 1.8m, sweep (L), epicormic branches (L)	Remove
80	Silver Maple	*Acer saccharinum*	30.0	F	F	F		6.0	Bow (L), crook (M), poor form, broken branches (L), epicormic branches (H)	Remove
81	Basswood	*Tilia americana*	31.5	F	F/G	F		5.0	Lean (L), sweep (L), crook (L), small crown	Remove
82	Basswood	*Tilia americana*	18, 14, 10, 9, 7	F	F	F		5.0	Union at base (5 stems), lean (L), sweep (L)	Remove
83	Silver Maple	*Acer saccharinum*	17, 11, 10	P/F	F	F		5.0	Union at 0.2m and 0.6m, poor form, crook (H), epicormic branches (H)	Remove
84	Eastern Red Cedar (Juniper)	*Juniperus virginiana*	~26	G	G	F/G		5.0		Remove
85	Eastern Red Cedar (Juniper)	*Juniperus virginiana*	~22	G	G	F		5.0		Remove
86	Silver Maple	*Acer saccharinum*	17, 13	P/F	F	F		5.0	Union at 0.3m with included bark (L), bow (M), crook (M)	Remove
87	White Spruce	*Picea glauca*	21.0	G	G	F/G		4.0		Remove
88	White Pine	*Pinus strobus*	33.0	G	G	G		6.0		Remove
89	White Spruce	*Picea glauca*	22.0	G	G	F/G		4.0		Remove
90	White Pine	*Pinus strobus*	19.0	F/G	F/G	F		3.0	Crook (M), small crown	Remove
91	Austrian Pine	*Pinus nigra*	23.0	G	F/G	F/G		3.0	Small crown	Remove
92	White Pine	*Pinus strobus*	20.0	F	F	F		3.0	Crook (M), small crown	Remove
93	White Pine	*Pinus strobus*	20.0	G	F/G	F/G		3.0	Small crown	Remove
94	White Pine	*Pinus strobus*	19.0	G	F/G	F/G		3.0	Small crown	Remove
95	Austrian Pine	*Pinus nigra*	24.0	G	G	F/G		4.0		Remove
96	Silver Maple	*Acer saccharinum*	18, 17	F	F	F		5.0	Union at 0.5m with included bark (M), bow (M), broken branches (M), epicormic branches (H)	Remove
97	White Spruce	*Picea glauca*	21.0	G	F/G	F/G		4.0	Asymmetrical crown (M)	Remove
98	White Spruce	*Picea glauca*	22.0	G	F/G	F/G		4.0		Remove
99	White Spruce	*Picea glauca*	17.0	G	F/G	F/G		3.0		Remove
100	White Spruce	*Picea glauca*	~16	G	G	F/G		5.0		Preserve
101	White Elm	*Ulmus americana*	~23	F/G	G	F/G		3.0	Co-dominance at 4m	Preserve
102	White Spruce	*Picea glauca*	~23	G	G	F/G		4.0		Preserve
103	White Spruce	*Picea glauca*	~24	G	G	G		4.0		Preserve
104	Silver Maple	*Acer saccharinum*	~60	F/G	G	F/G		8.0	Co-dominance at 2m	Preserve
105	Balsam Fir	*Abies balsamea*	~15	G	G	G		3.0		Preserve
106	Balsam Fir	*Abies balsamea*	~17	G	G	G		4.0		Remove
107	Silver Maple	*Acer saccharinum*	~55	F/G	G	F/G		8.0	Co-dominance at 4m	Preserve

P108	Eastern White Cedar	*Thuja occidentalis*	3-18 (avg. 10)	F/G	G	F/G		2.0	~30 trees in row	Remove
109	Balsam Fir	*Abies balsamea*	~22	F/G	G	F/G		2.0	Lean (L)	Preserve
110	Eastern Cottonwood	*Populus deltoides*	~75	F/G	F/G	P/F	40	8.0	Co-dominance in crown, dead branches (L) over the subject property	Remove (condition)
111	Green Ash	*Fraxinus pennsylvanica*	~28	F/G	F	F	30	6.0	Sweep (L), asymmetrical crown (M)	Remove (condition)
112	White Spruce	*Picea glauca*	~15	G	G	F/G		4.0		Preserve
113	White Spruce	*Picea glauca*	~23	F/G	F/G	F		6.0	Lean (L), crook (L), exposed roots (H)	Preserve
P114	White Spruce	*Picea glauca*	15-40 (avg. 30)	G	G	F/G		5.0	12 trees, 1 tree uprooting	Preserve
	Austrian Pine	*Pinus nigra*	15-25 (avg. 20)	G	G	F/G		5.0	14 trees	
115	Green Ash	*Fraxinus pennsylvanica*	13, 11	F/G	F/G	F		3.0	Union at 0.1m	Remove
116	White Pine	*Pinus strobus*	26.0	G	G	G		6.0		Remove
117	Blue Spruce	*Picea pungens*	27.5	F/G	F	P	50	4.0	Sweep (L), epicormic branches (M)	Remove
118	Blue Spruce	*Picea pungens*	24.5	G	F	P	50	4.0	Epicormic branches (M)	Remove
119	Blue Spruce	*Picea pungens*	18.0	F/G	F	P	60	4.0	Sweep (L), epicormic branches (M)	Remove
120	Russian Olive	*Elaeanus angustifolia*	23.0	F	F	F		5.0	Sweep (M), crook (M), epicormic branches (H)	Remove
121	Pear Species	*Pyrus spp.*	22, 17	F/G	F/G	F/G		6.0	Union at 0.8m, sweep (L)	Preserve
122	White Pine	*Pinus strobus*	29.0	G	G	G		6.0		Preserve
123	Norway Spruce	*Picea abies*	26.0	G	G	G		5.0		Remove
124	White Pine	*Pinus strobus*	~22	G	G	G		5.0		Remove
125	Norway Spruce	*Picea abies*	~22, 20	F/G	G	F/G		5.0	Co-dominance at 0.2m	Remove
126	White Pine	*Pinus strobus*	~23	G	G	F/G		5.0	Crook (L)	Remove
127	Norway Spruce	*Picea abies*	~22	G	G	G		5.0		Remove
128	White Pine	*Pinus strobus*	~42	G	G	G		5.0		Remove
129	White Spruce	*Picea glauca*	~16	G	G	G		3.0		Remove
130	Scots Pine	*Pinus sylvestris*	~17	G	G	F/G		3.0		Remove
131	Scots Pine	*Pinus sylvestris*	16.5	F/G	G	F/G		3.0	Sweep (L), crook (L)	Remove
132	White Spruce	*Picea glauca*	15.0	G	G	F/G		3.0		Remove
133	White Spruce	*Picea glauca*	~17	F/G	G	F/G		4.0	Sweep (L), exposed roots (M)	Remove
134	White Pine	*Pinus strobus*	20.0	G	G	F/G		4.0		Remove
135	Silver Maple	*Acer saccharinum*	26, 22	F/G	F/G	F		6.0	Co-dominance at 0.6m with included bark (L), epicormic branches (H)	Remove
136	Austrian Pine	*Pinus nigra*	25, 22	F	F	F		5.0	Union at 0.5m, sweep (M), asymmetrical crown (M)	Remove
137	Austrian Pine	*Pinus nigra*	32.0	F	F	F/G		5.0	Lean (M) to west, pruning wounds (M), asymmetrical crown (M)	Remove
138	Austrian Pine	*Pinus nigra*	26.5	G	G	F/G		5.0	Pruning wounds (L)	Remove
139	Austrian Pine	*Pinus nigra*	28.0	F/G	F/G	F/G		5.0	Bow (L), pruning wounds (L)	Remove
140	Austrian Pine	*Pinus nigra*	25.0	F/G	F/G	F		5.0	Lean (L), crook (L), sparse crown (M)	Remove
141	White Elm	*Ulmus americana*	29, 28	F/G	F/G	F		7.0	Co-dominance at 0.3m, epicormic branches (M), overhead utility wire in crown	Remove
142	Austrian Pine	*Pinus nigra*	25, 15	F/G	G	F/G		5.0	Sweep (L)	Remove
143	Silver Maple	*Acer saccharinum*	28.5, 27	F/G	F/G	F/G		8.0	Co-dominance at 0.8m with included bark (H), exposed roots (H), epicormic branches (M)	Remove
144	Weeping Willow	*Salix babylonica*	59.5	F/G	G	F/G		10.0	Lean (VL), exposed roots (M), epicormic branches (M)	Remove
145	Weeping Willow	*Salix babylonica*	75.0	F/G	G	F/G		10.0	Co-dominance at 2.5m (3 stems), exposed roots (M), broken branches (L), epicormic branches (H)	Remove
146	White Spruce	*Picea glauca*	21.5	F/G	F/G	F/G		3.0	Sweep (VL), pruning wounds (M), spiral stem	Remove
147	Norway Spruce	*Picea abies*	33.0	F/G	G	F/G		5.0	Sweep (L)	Remove
148	Austrian Pine	*Pinus nigra*	23.5	G	G	F		4.0	Crook (L)	Remove
149	Eastern White Cedar	*Thuja occidentalis*	~15, 10	F/G	G	G		3.0	Union at base	Remove
150	Silver Maple	*Acer saccharinum*	42.5	F	F	F		6.0	Exposed roots (M), pruning wounds (H), crook (L), epicormic branches (H)	Remove
151	Black Locust	*Robinia pseudoacacia*	21.0	F/G	G	G		4.0	Co-dominance at 2m	Remove
152	Green Ash	*Fraxinus pennsylvanica*	17.0	F	F	P/F	20	4.0	Co-dominance at 3m, Emerald Ash Borer (M), pruning wounds (L)	Remove
153	Manitoba Maple	*Acer negundo*	16, 15	F	F	F/G		5.0	Union at 0.2m with included bark (M), lean (M)	Remove
154	Silver Maple	*Acer saccharinum*	15.0	G	G	F/G		4.0	Crook (L)	Remove
155	Silver Maple	*Acer saccharinum*	15.5	G	G	G		4.0		Remove
156	Silver Maple	*Acer saccharinum*	35, 33	P	F	F		8.0	Union at 0.3m, exposed roots (L), stem wounds (H), broken branches (L), epicormic branches (H)	Remove
157	Apple Species	*Malus spp.*	~26, 25, 17	F	F	F		6.0	Union at base, epicormic branches (H)	Remove
158	White Spruce	*Picea glauca*	16.0	G	G	F		3.0	Lean (VL), epicormic branches (M)	Preserve
159	White Spruce	*Picea glauca*	17.0	G	G	F		4.0	Pruning wounds (L), epicormic branches (L)	Preserve
160	White Spruce	*Picea glauca*	15.0	G	G	F		4.0	Pruning wounds (L), epicormic branches (L)	Preserve
161	White Spruce	*Picea glauca*	22.0	G	G	F		5.0	Lean (L), pruning wounds (L), epicormic branches (L)	Preserve
162	White Spruce	*Picea glauca*	15.0	G	G	F		4.0	Pruning wounds (L), epicormic branches (L)	Preserve
163	White Spruce	*Picea glauca*	20.0	G	G	F		5.0	Pruning wounds (L), epicormic branches (L)	Preserve

164	White Spruce	*Picea glauca*	16.0	F/G	G	F		4.0	Lean (L), pruning wounds (L), epicormic branches (L)	Preserve
165	White Spruce	*Picea glauca*	18.0	F	G	F		4.0	Lean (M), pruning wounds (L), epicormic branches (L)	Preserve
166	White Spruce	*Picea glauca*	19.0	G	G	F		4.0	Pruning wounds (L), epicormic branches (L)	Preserve
167	White Spruce	*Picea glauca*	18.0	F/G	G	F		4.0	Lean (L), pruning wounds (L), epicormic branches (L)	Preserve
168	Austrian Pine	*Pinus nigra*	35.0	F/G	G	F/G		5.0	Co-dominance at 3m	Preserve
169	Austrian Pine	*Pinus nigra*	26.0	G	G	F/G		4.0	Crook (L)	Preserve
170	Austrian Pine	*Pinus nigra*	29.5	F/G	G	F/G		5.0	Co-dominance in crown	Preserve
171	Austrian Pine	*Pinus nigra*	30.5	G	G	F/G		5.0		Preserve
172	White Spruce	*Picea glauca*	26.0	G	G	F/G		5.0		Preserve
173	Scots Pine	*Pinus sylvestris*	23.0	F/G	G	F/G		4.0	Crook (L)	Preserve
174	White Spruce	*Picea glauca*	25.0	G	G	F/G		5.0		Preserve
175	Scots Pine	*Pinus sylvestris*	22.5	F/G	G	F/G		4.0	Crook (L)	Preserve
176	White Spruce	*Picea glauca*	24.5	G	G	F/G		5.0		Preserve
177	Scots Pine	*Pinus sylvestris*	27.0	F/G	F/G	F		5.0	Lean (L) to south, crook (L)	Preserve
178	Balsam Fir	*Abies balsamea*	23.0	G	G	F/G		4.0	Lean (VL)	Preserve
179	Scots Pine	*Pinus sylvestris*	20.0	F/G	F/G	F/G		4.0	Crook (L), bow (L), asymmetrical crown (M)	Preserve
180	Scots Pine	*Pinus sylvestris*	31.0	F/G	G	F/G		6.0	Lean (L), crook (L)	Preserve
181	Scots Pine	*Pinus sylvestris*	21.5	G	G	F/G		5.0	Crook (L)	Preserve
182	Scots Pine	*Pinus sylvestris*	23.0	G	G	F/G		5.0		Preserve
183	Eastern White Cedar	*Thuja occidentalis*	15.0	G	G	G		3.0		Preserve
184	White Elm	*Ulmus americana*	26.0	F/G	G	F/G		5.0	Exposed roots (L), co-dominance at 4m, pruning wounds (L)	Preserve
185	Austrian Pine	*Pinus nigra*	28.0	F	F/G	F/G	15	4.0	Crook (L), co-dominance at 6m but 1 stem dead	Preserve
186	Norway Spruce	*Picea abies*	19.5	F/G	F/G	F/G		4.0	Sweep (L), exposed roots (L)	Preserve
187	Austrian Pine	*Pinus nigra*	32.5	G	G	G		5.0		Preserve
188	White Spruce	*Picea glauca*	21.5	G	G	F/G		5.0	Pruning wounds (L)	Preserve
189	Austrian Pine	*Pinus nigra*	32.5	G	G	F/G		5.0		Preserve
190	White Spruce	*Picea glauca*	26.5	G	G	F/G		5.0		Preserve
191	Austrian Pine	*Pinus nigra*	30.0	F	F/G	F/G		5.0	Sweep (L), crook (L), co-dominance at 4m, poor form	Preserve
192	White Spruce	*Picea glauca*	23.0	G	G	F/G		5.0	Exposed roots (L)	Preserve
193	White Spruce	*Picea glauca*	27.5	G	G	F/G		5.0	Exposed roots (M), pruning wounds (L)	Preserve
194	Manitoba Maple	*Acer negundo*	~40	F/G	G	F/G		10.0	Co-dominance at 2m, pruning wounds (L)	Preserve
195	Blue Spruce	*Picea pungens*	25.0	F/G	G	F/G		5.0	Sweep (L), pruning wounds (L)	Remove
196	Silver Maple	*Acer saccharinum*	15, 13.5, 12.5	F	G	F/G		5.0	Union at 0.6m and 1m with included bark (M)	Remove
197	Norway Spruce	*Picea abies*	23.0	F	F	P/F	30	4.0	Sweep (M)	Remove
198	Silver Maple	*Acer saccharinum*	31, 24.5	F/G	G	F/G		10.0	Co-dominance at 0.6m with included bark (M)	Remove
199	White Spruce	*Picea glauca*	19.5	G	G	F/G		4.0		Remove
200	Norway Spruce	*Picea abies*	29.5	G	G	F/G		5.0	Exposed roots (L), pruning wounds (L)	Remove
201	White Spruce	*Picea glauca*	~22	G	G	G		6.0		Preserve
202	White Spruce	*Picea glauca*	~22	G	G	G		6.0		Preserve
203	White Spruce	*Picea glauca*	~18	G	G	G		6.0		Preserve
204	White Spruce	*Picea glauca*	~21	G	G	G		6.0		Preserve
205	Silver Maple	*Acer saccharinum*	~28	F/G	G	F/G		8.0	Co-dominance in crown	Preserve
206	White Spruce	*Picea glauca*	~16	G	G	G		4.0		Remove
207	White Spruce	*Picea glauca*	~24	G	G	G		6.0		Preserve
208	White Spruce	*Picea glauca*	~25	G	G	G		6.0		Preserve
209	White Spruce	*Picea glauca*	~20	G	G	G		6.0		Preserve
210	Silver Maple	*Acer saccharinum*	~45	F	F/G	F/G		6.0	Lean (M) to east, union at 3m, sweep (L)	Preserve
211	White Spruce	*Picea glauca*	~16	G	G	G		4.0		Remove

Codes		
DBH	Diameter at Breast	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
CDB	Crown Die Back	(%)
DL	Dripline	(m)
~ = estimate; (L) = light; (M) = moderate; (H) = heavy		



SPECIFICATIONS FOR THE PROTECTION AND PRESERVATION OF EXISTING VEGETATION:

1. PRIOR TO ISSUANCE OF THE GRADING AND SERVICING OR BUILDING PERMIT, ALL EXISTING TREES THAT ARE TO BE PRESERVED SHALL BE FULLY PROTECTED WITH HOARDING (IE SNOW FENCING) OUTSIDE THEIR 'DRIPLINES', OR AS DIRECTED THROUGH ADDITIONAL GOVERNING DOCUMENTS,TO THE SATISFACTION OF THE TOWN.
2. GROUPS OF TREES AND OTHER EXISTING PLANTINGS TO BE PROTECTED SHALL BE TREATED IN A LIKE MANNER WITH HOARDING AROUND THE ENTIRE CLUMP(S).
3. TREE PRESERVATION FENCE IS TO BE INSPECTED BY THE CONSULTING ARBORIST OR LANDSCAPE ARCHITECT AND APPROVED BY THE TOWN PRIOR TO CONSTRUCTION COMMENCING.
4. SILTATION CONTROL FENCING MAY BE USED AS A TREE PRESERVATION FENCING SUBSTITUTE IF REQUIRED BY ENGINEERING AT THE DISCRETION OF THE TOWN.
5. AREAS WITHIN PROTECTIVE FENCING SHALL REMAIN UNDISTURBED AND SHALL NOT BE USED FOR THE STORAGE OF BUILDING MATERIALS OR EQUIPMENT. NO CONTAMINANTS SHALL BE DUMPED OR FLUSHED WHERE FEEDER ROOTS OF TREES EXIST. NO GARBAGE OR BUILDING MATERIALS ARE TO BE PLACED ON OR AGAINST THE TREE PRESERVATION FENCE.
6. PRUNE BRANCHES TO REMOVE DAMAGED LIMBS ONLY. DO NOT DAMAGE LEADERS. ALL CUTS OVER 25mm SHALL BE TREATED IN ACCORDANCE WITH APPROPRIATE HORTICULTURAL PRACTICES AS APPROVED BY THE TOWN. NO MORE THAN 20% OF THE TREE SHALL BE PRUNED UNLESS DIRECTED BY THE TOWN.
7. CUTTING OF ROOTS OR CHANGING OF GRADES AROUND EXISTING TREES TO BE PRESERVED WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENT.
8. IF TREES ARE BEING ADVERSELY AFFECTED BY CONSTRUCTION, A WATERING AND FERTILIZING PROGRAM IS TO BE SET UP TO THE SATISFACTION OF THE TOWN.
9. PRIOR TO FINAL APPROVAL TREES THAT HAVE DIED OR HAVE BEEN DAMAGED BEYOND REPAIR PRIOR DURING OR POST CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH TREES OF A SIZE AND SPECIES APPROVED BY THE TOWN, AT THE SOLE COST OF THE DEVELOPER.

TOWN OF CALEDON

TREE PRESERVATION

NO.	REVISION	APR'D	DATE
3	STANDARD 707 NOW 606		JAN 18
2	STANDARD No. 1135 NOW 707, NOTES EDIT		JUNE 08
1	NOTE NO. 9 ADDED		MARCH 08

APR'D: C.C. DATE: JUNE 08
DRAWN: abal SCALE: NTS

STANDARD No. 606

SPECIFICATIONS

A. General

The following Tree Preservation and Protection Measures will be undertaken to help eliminate and/or significantly reduce construction injury to all trees recommended for preservation. All temporary tree protection measures cited for retained trees must comply with the Town of Caledon Tree Protection Specifications and Details. Any variation from the standard tree protection measures must be approved in writing by the Town of Caledon.

B. Pre-Construction Phase

1. Prior to construction, the trees to be preserved shall be protected with a Tree Protection Barrier. The barrier shall consist of 1.2m (4ft) high orange plastic snow fence wired to T-bars (see Town of Caledon Tree Preservation Fencing, STD 606).
2. If applicable, attach a filter cloth 600mm high to the construction side of the hoarding to act as sediment control. Sediment control fencing shall meet or exceed OPSD-219.110, and be installed to the satisfaction of the Town of Caledon.
3. All supports and bracing used to safely secure the barrier should be located outside the Tree Protection Zone (TPZ). All supports and bracing should minimize damage to roots.
4. The TPZ fence is to be installed along the edge of the tree protection zones. This hoarding is to remain in place and remain in good condition throughout the entire duration of the project. Dismantling the tree protection barrier prior to approval by the Town of Caledon staff may constitute a contravention.
5. The applicant shall notify the Town of Caledon and the consulting certified arborist or landscape architect to confirm that the tree protection barriers are in place.
6. Where fill or excavated material must be temporarily located near a TPZ, a wooden barrier must be used to ensure no material enters the TPZ.
7. Remove any garbage and foreign debris from the tree protection zones, daily.
8. For the trees that were recommended for removal and/or crown pruning that are within the TPZ limits, these activities are to be performed by a qualified ISA certified arborist prior to the installation of the Tree Protection Zone barriers and prior to the commencement of any construction activities. Install the Tree Protection Zone barrier as per Tree Preservation Fencing, STD 606 at the limits shown on the tree inventory and protection plan after the tree removal, whichever is greater, and crown pruning activities are completed.
9. A **Tree Protection Zone** sign must be mounted on all sides of the tree protection barrier for the duration of site construction. The sign should be a minimum of 40cm x 60cm and made of white gator board or equivalent material.
10. The sign must be similar to the illustration shown below, or as directed by the Town of Caledon.

TREE PROTECTION ZONE

No work is permitted in the Tree Protection Zone

This includes construction works, grading, storage of trash or materials.

The tree protection barrier must not be removed without written authorization of the Town of Caledon.

11. All contractors and site visitors should be informed of the tree preservation and protection measures at a pre-construction meeting.

specifications continued on next panel...

TOWN OF CALEDON

TREE PRESERVATION
STANDARD NOTES - PART 1

NO.	REVISION	APR'D	DATE

APR'D: B.B. DATE: AUGUST 17
DRAWN: B.M. SCALE: NTS

STANDARD No. 710

SPECIFICATIONS continued from previous panel

C. During Construction Phase

1. All areas within the TPZ shall remain undisturbed for the duration of construction. There will be no grade changes, dumping, and storage of any materials, structures or equipment within these areas. The Tree Protection Barrier must not be removed without the written authorization of the Town of Caledon.
2. Minor grading works will be permitted at the edge of the preservation zone as required to correct localized depressions, and blend to existing grades.This work to be undertaken under the direct supervision of an ISA certified arborist.
3. A certified ISA arborist will undertake proper root pruning in accordance with acceptable arboriculture practices when and if roots of retained trees are to be exposed, damaged, or severed by construction work. The exposed roots will be backfilled with appropriate material as soon as possible to prevent desiccation. Root pruning prior to excavation will help prevent necessary damage to tree roots.The use of low pressure hydrovac to expose roots is recommended, at no additional cost.
4. The Town of Caledon must be notified for all work that impacts the TPZ for temporary removal of a section of hoarding to gain access for fine grading or other works. All works are to be supervised by the Town of Caledon.
5. No cables, wire or ropes of any kind shall be wrapped around or installed in trees to be preserved.
6. No contaminants will be dumped or flushed in the TPZ areas or where feeder roots of trees exist (generally beyond the TPZ areas).
7. Irrigate tree protection zones during drought conditions, June to September to reduce drought stress.
8. Inspect the site daily to ensure hoarding is in place and in good condition. Inspect trees to monitor condition.

D. Post Construction Phase

1. Following the completion of all site works including landscaping, and after review and approval by the Town of Caledon staff, the protective hoarding may be removed.
2. After removal of the protective hoarding, the Tree Preservation Zones shall be inspected by the Town of Caledon staff. Any remaining dead, diseased, or hazardous limbs or trees are to be removed by an ISA certified arborist as directed by the consulting arborist or Town of Caledon staff.

end of specifications

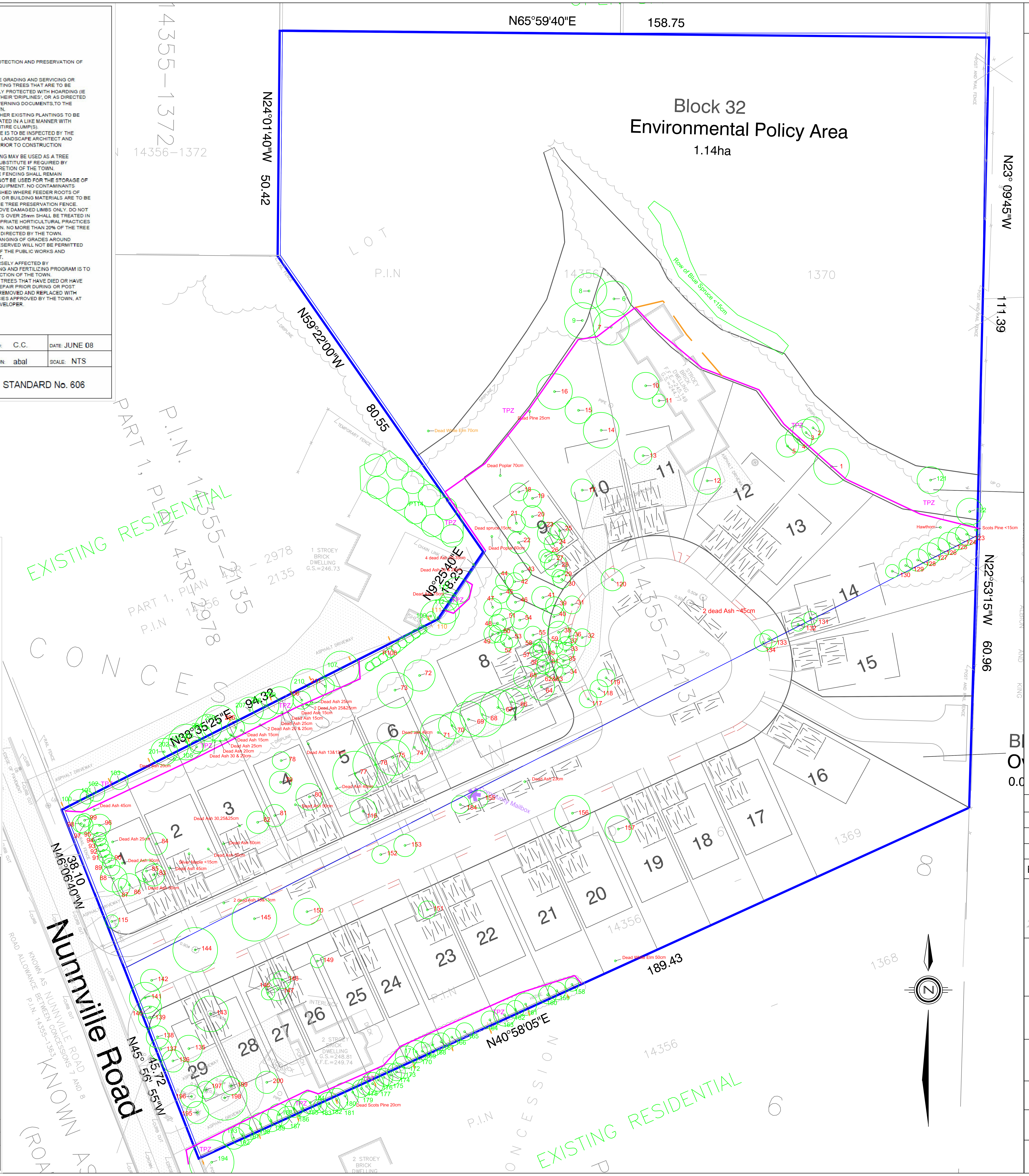
TOWN OF CALEDON

TREE PRESERVATION
STANDARD NOTES - PART 2

NO.	REVISION	APR'D	DATE

APR'D: B.B. DATE: AUGUST 17
DRAWN: B.M. SCALE: NTS

STANDARD No. 711



LEGEND

Tree Inventory

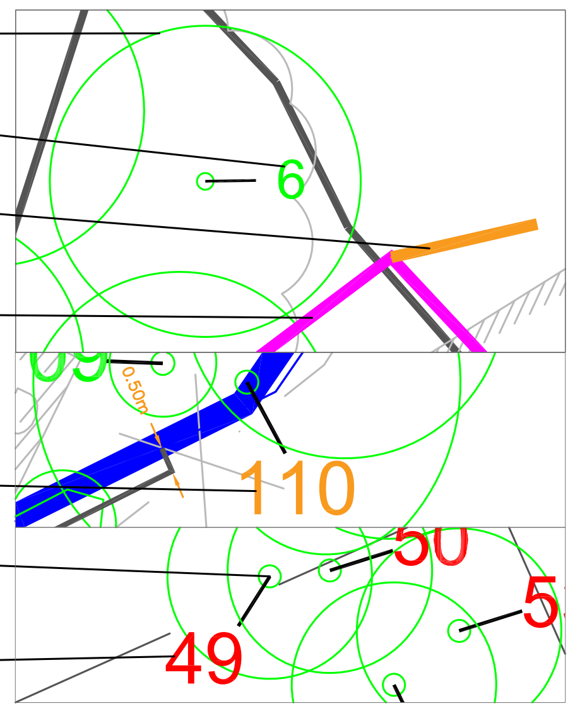
Refer to Table 1 of report dated 7 August 2019, revised 30 December 2019 and 24 January 2020. Trees greater than 10cm DBH on and within 6 metres of the subject property, and trees of all sizes within the road right-of-way were included in the inventory.

Tree Removals

The removal of 147 trees is required to accommodate the proposed development as indicated with RED Labels. The removal of additional 2 trees is recommended regardless of the site plan due to poor condition as indicated with ORANGE labels.

Tree Preservation

Preservation of remaining 62 trees will be possible with appropriate tree protection measures. Trees identified for preservation are indicated with GREEN labels. Tree protection measures will have to be implemented prior to the construction phase (earth works). Minimum tree preservation zones and required tree preservation fencing is indicated in MAGENTA. Refer to Tree Protection Plan Notes for preservation details.



No.	Issue/Revisions	Date	By
1	Report Submission	7 Aug. '19	KH
2	Report Revision	30 Dec. '19	KH
3	Report Revision	24 Jan. '20	KH

Base Data:R. PE Surveying Ltd. (topo)

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Client
Sam Morra
13247 and 13233 Nunnville Road
Caledon, Ontario L7E 2Z9

Property
13247 and 13233 Nunnville Road
Caledon, Ontario

Existing Conditions, Proposed Site Plan
Tree Inventory and Preservation Plan

Project P2100
Date 7 August 2019
Scale 1:600
Figure 1