Tree Inventory and Preservation Plan
Sixth Line & Burnhamthorpe Road West
Oakville, Ontario

prepared for

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prepared by

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KUNTZ FORESTRY CONSULTING INC Project P2601

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1.0 Introduction

Kuntz Forestry Consulting Inc. was retained by Star Oak Developments Limited to complete a Tree Inventory and Preservation Plan Report in support of a development application for the property located southwest of the Sixth Line and Burnhamthorpe Road West intersection in Oakville, ON. The subject property is located within an agricultural and residential area and contains two Natural Heritage Systems.

The work plan for the tree preservation study included the following:

- Prepare an inventory of tree resources over 15cm DBH occurring on and within six metres of the proposed development (excluding trees within the Natural Heritage Systems) and trees of all sizes on the road right-of-way;
- Prepare a detailed assessment of two specimen Shagbark Hickory trees;
- Conduct a hazard tree assessment and mark trees within striking distance of the proposed open space;
- Prepare a tree valuation of all Town-owned trees included in the inventory;
- Evaluate potential tree saving opportunities based on proposed development plans; and
- Document the findings in a Tree Inventory and Preservation Plan Report.

2.0 Methodology

Tree Inventory and Preservation Plan

Field assessments for the tree inventory were conducted on 17 December 2020 and 21 December 2020. Trees measuring over 15cm DBH on and within six metres of the proposed development (excluding trees within the Natural Heritage Systems) and trees of all sizes on the road right-of-way were identified in the tree inventory. Trees were located using a handheld GPS unit (Trimble GeoExplorer® Series) accurate to ±1 metre, aerial imagery, and estimates made in the field. Trees on the subject property were tagged with the numbers 99 – 178. Trees on neighbouring properties or within the road right-of-way were labelled N1 – N27.

All individual tree resources included in the inventory were visually assessed for condition utilizing the following parameters:

Tree # - number assigned to tree that corresponds to Figure 1 – Figure 3.
Species - common and botanical names provided in the inventory table.
DBH - diameter (centimetres) at breast height, measured at 1.4 metres above the ground.
Condition - condition of tree considering trunk integrity, crown structure, and crown vigour. Condition ratings include poor (P), fair (F) and good (G).
Drip Line – Crown radius; and
Comments - additional relevant detail.

Where trees were situated in groups and could not be deciphered by aerial imagery, they were inventoried in tree polygons. Trees within a tree polygon were inventoried using a 100% tally analysis by species, size class, and quality. On private property, trees with a DBH of 15cm or greater were included in the stand tally analysis. Within the road right-of-

way, trees of all sizes were included in the stand tally analysis. Trees were assessed for condition utilizing the following parameters.

Species: Common and botanical names provided in the inventory table
Size Class (DBH): less than 15 cm, 15 – 24 cm, 26 – 36 cm, 38 – 48 cm, 50 cm and above
Quality Class: Acceptable Growing Stock (AGS), Unacceptable Growing Stock (UGS)

Trees classified as AGS are trees with no major defects in the bole and a relatively good crown structure and vigour. Trees classified as UGS are trees with a major defect in the bole and / or those exhibiting a relatively poor crown structure or vigour. Refer to Table 1 and Table 2 for the detailed tree inventory.

Hazard Tree Assessment

The hazard tree assessment was conducted on 21 December 2020. An assessment of hazard trees (not included in the tree inventory) within striking distance of the proposed development (open space) was completed. Hazard trees identified were marked with orange spray paint (at breast height and at the stump) and their species, size, and location were noted. Refer to Figure 1 – Figure 3 for the locations of hazard trees identified in the assessment.

Tree Valuation

A tree valuation was calculated for all Town-owned trees based on the information obtained from the tree inventory conducted in the field. A tree valuation of P158 was not conducted, as this tree polygon consisted solely of tree regeneration, the majority of which was White Ash. The value was calculated using the Reproduction Cost Method – Trunk Formula Technique as described in the Guide for Plant Appraisal, 10th Edition (CTLA, 2019). The value was calculated using the Trunk Formula Technique. This method is described in the Guide for Plant Appraisal, 10th Edition (CTLA 2018). The Ontario Supplement (2003) provides regionally relevant data pertaining to basic costs for trees.

Trunk Formula Technique

This method is used for trees that are larger than what is commonly available for transplant from a nursery. The Unit Tree Cost of the replacement tree is derived from a survey of nurseries or supplied by the Regional Plant Appraisal Council and published within the Ontario Supplement (2003). For Ontario, the unit tree cost has been set at \$6.51/cm^2 within the Supplement and this value has been used for the calculation. For trees that were small enough in size to be replaced with nursery stock, the price of the nursery stock was obtained through wholesale price quotes from multiple nurseries throughout southern Ontario.

The Basic Tree Cost is calculated by multiplying the unit tree cost by the cross-sectional area of the subject tree. For multi-stemmed trees, the appraised trunk area considers the cross-sectional area of all stems. The Appraised Value is calculated by multiplying the Basic Reproduction Cost by the three depreciation factors (Condition Rating, Functional Limitation Rating, and External Limitation Rating, as described in the Guide).

The appraised value of trees is therefore calculated using the following equation:

Basic Tree Cost = Appraised Tree Trunk Area X Unit Tree Cost

Appraised Value = Basic Tree Cost X Condition Rating X Functional Limitation Rating X External Limitation Rating

Functional Limitation Ratings and External Limitation Ratings were calculated according to the methods outlined in the guide. Condition ratings were calculated based on the assessed condition of the trees on the site and in accordance with the guide. For trees with appraisal values less than $744.00 (Town of Oakville's minimum value per tree), their values were set to $744.00.

3.0 Existing Site Conditions

The subject area is currently occupied by agricultural land, multiple wetlands, and a woodlot located in the northeast section of the property. The properties located at 14, 30, 38, and 62 Burnhamthorpe Road West are not part of the subject area. Tree resources exist in the form of landscape trees, woodland trees, and natural regeneration. Refer to Figure 1 – Figure 3 for the existing site conditions.

4.0 Individual Tree Resources

The tree inventory documented 99 trees and seven tree polygons on and within six metres of the proposed development and within the road right-of-way. Tree resources are composed of White Elm (*Ulmus americana*), Manitoba Maple (*Acer negundo*), Cherry species (*Prunus* sp.), White Mulberry (*Morus alba*), Pear species (*Pyrus* sp.), Red Oak (*Quercus macrocarpa*), White Oak (*Quercus alba*), Bur Oak (*Quercus macrocarpa*), Shagbark Hickory (*Carya ovata*), White Ash (*Fraxinus americana*), Green Ash (*Fraxinus pennsylvanica*), White Pine (*Pinus strobus*), Sugar Maple (*Acer saccharum*), Ironwood (*Ostrya virginiana*), American Beech (*Fagus grandifolia*), White Birch (*Betula papyrifera*), Silver Maple (*Acer saccharinum*), Apple species (*Malus* sp.), Basswood (*Tilia americana*), and Black Walnut (*Juglans nigra*). Refer to Table 1 and Table 2 for the full tree inventory and Figure 1 – Figure 3 for the location of trees reported in the tree inventory.

5.0 Proposed Works

The proposed development includes the construction of a residential subdivision with single detached dwellings, townhomes, multiple roadways, a stormwater management pond, and a Natural Heritage System. The existing woodlot will be preserved as a Natural Heritage System. The widening of Sixth Line is also being proposed. Refer to Figure 1 – Figure 3 for the existing conditions and proposed site plan.

6.0 Discussion

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

Development Impacts / Tree Removals

The removal of Trees 99 – P138, 140 – P159, 162, P166, 167, and N1 – N20 will be required to accommodate the proposed development. Trees P105 – 112, 137, P138, and N3 – N6

conflict with the proposed stormwater management pond. Trees 103 and 104 are located close to the proposed stormwater management pond such that they would be impacted by its construction. Trees 154, 156, and 157 are located close to the proposed trails such that their roots and / or crown would be significantly by construction. Trees 113 – 119, 124 – 132, 134, 149, P151, 153, 155, P159, P166, N7 – N9, and N17 conflict with the proposed townhomes and residential units. Trees 167, N19 and N20 are located close to the proposed residential units such that their roots and / or crown would be significantly impacted by construction. P158 will need to be removed to provide access to the proposed residential units in Block 89. Trees 120 – 123, 133, 135, 136, 140 – 147, P152, N14 – N16, and N18 conflict with the proposed subdivision roads. Trees 148, 150, and N10 – N13 are located close to the proposed roads such that their roots and / or crowns would be significantly impacted by construction. Trees 99 – 102 and N2 conflict with the proposed channel within Block 92. Tree N1 conflicts with the proposed widening of Sixth Line.

Trees 103, 104, 109 – 111, 113 – 115, 117, 118, 120 – 122, 132, 134, 137, 140, 147, 153, 154, 156, 162, 171 – 175, N4, N5, N7, N10 – N12, N19, N20, and some trees within P105, P138, P151, P152, P159, and P166 are in poor or hazardous condition and their removal is advised regardless of the site plan.

Trees 99 – P138, 140 – P159, 162, P166, 167, 171 – 175, and N1 – N20 are greater than 15cm DBH, however, these trees do not require a permit, as they are satisfying a condition to the approval of a plan of subdivision. P158 is located within the road right-of-way and a permit is required prior to the removal of the trees within this polygon. Trees 103, 104, P105, 109, 116, 142, P151, P152, and N1 – N20 are located on neighbouring properties or on a shared boundary and written permission from the respective landowners will be required prior to the removal of these trees.

Tree Preservation

Preservation of Trees 139, 160, 161, 163 – 165, 168, 169, 171, 176 – 178, N21 – N27, and trees within the Natural Heritage System (not inventoried) will be possible with the use of appropriate tree protection measures as indicated on Figure 1 – Figure 3. Tree protection measures must be implemented prior to the proposed work to ensure tree resources designated for retention are not impacted by the proposed development. Tree protection fencing should be placed *minimally* at the dripline of all trees along the edge of the Natural Heritage System. Refer to Figure 1 – Figure 3 for the location of required tree preservation fencing and general Tree Protection Plan Notes. Refer to Appendix A for tree preservation fencing details.

Shagbark Hickory (Trees 139 and 156) Assessment

A detailed assessment of two specimen Shagbark Hickory trees was conducted on 17 December 2020 and 21 December 2020. Refer to Appendix B for photographs of both Shagbark Hickory trees.

Tree 139 is a Shagbark Hickory tree with a diameter of 50 cm and dripline of 6 metres. This tree is located slightly south of the woodlot and therefore partially exposed to the elements. It is exhibiting fair to good trunk integrity, fair to good crown structure, and fair vigour. The tree branches from a single stem into multiple stems at 6 metres. Tree 139 has moderate amounts of deadwood in its crown and approximately 15% crown dieback. The tree has a slightly sparse crown, and it was noted that there were multiple small broken branches

around its base. The tree has grown a noticeable number of epicormic branches, indicating that it is under some stress. The trunk of Tree 139 is situated 9.5 metres north of the proposed street. Given that this tree's minimum Tree Protection Zone (mTPZ) is 3 metres and its dripline is 6 metres, its root system will not be impacted by the road construction. As such, Tree 139 is recommended for retention. It is recommended that the tree protection fencing is placed minimally at the dripline of Tree 139 to provide it with additional protection during construction. Deadwood pruning of Tree 139 prior to construction by a Certified Arborist in accordance with Good Arboricultural Standards may also help improve the overall crown structure and vigour of this tree.

Tree 156 has previously been assessed by Kuntz Forestry Consulting Inc. in 2015 and 2019 and was recommended for removal due to poor condition. This tree is a Shagbark Hickory tree with a diameter of 44 cm and dripline of 6 metres. This tree is located slightly south of the woodlot and therefore partially exposed to the elements. It is exhibiting fair to good trunk integrity, fair crown structure, and poor crown vigour. The tree branches from a single stem into multiple stems at 3 metres. Tree 156 has significant amounts of deadwood and approximately 50% crown dieback. The tree has moderate amounts of broken branches scattered under its crown. The tree is exhibiting top-down dieback, which is often an indicator of damage, decay, or dieback within the root system. Significant amounts of epicormic branches were observed in the tree's crown, indicating that it is under considerable stress. Since Kuntz Forestry Consulting Inc.'s initial assessment of Tree 156, it has not shown signs of recovery or increased vigour. As such, it is likely that this tree is in a state of decline. The development includes a proposed trail within the mTPZ of Tree 156 and it is anticipated that the tree will respond poorly to the impacts of this work. It is therefore recommended that this tree is removed.

Hazard Tree Assessment

Twenty-seven (27) hazard trees were identified within striking distance of the proposed development. These trees were not included in the tree inventory, as they are greater than six metres from the proposed development. Trees identified as hazardous that were within six metres of the proposed development are advised for removal in the Tree Inventory and Preservation Plan and as such, are not included in the hazard tree assessment. Trees were marked for removal with orange spray paint (at breast height and at the stem) in the field.

Hazard trees recommended for removal must be located within the woodlot by the contractor to match the table below. Trees to be felled should be bucked into 2 – 3 meter lengths and the tree-tops (slash) should be reduced to a maximum of 1 meter in height and left on the forest floor. Refer to Table 3 for details of the hazard tree assessment and Figure 1 – Figure 3 for the approximate locations of the hazard trees.

Tree Valuation

Refer to Table 4 for the details and results of the tree valuation. The total appraised value of all Town-owned trees is $10,267.45.

7.0 Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Star Oak Developments Limited to complete a Tree Inventory and Preservation Plan Report in support of a development application for the property located southwest of the Sixth Line and Burnhamthorpe Road West intersection

in Oakville, ON. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 99 trees and seven tree polygons on and within six metres of the proposed development and within the road right-of-way. The removal of 81 trees and seven tree polygons will be required to accommodate the proposed site plan. Twenty-seven (27) hazard trees were identified within striking distance of the proposed open space and are advised for removal. All other trees can be saved provided appropriate tree protection measures are installed prior to development.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 – Figure 3 for the location of the required tree protection fencing and general Tree Protection Plan Notes. Refer to Appendix A for tree preservation fencing details.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1 – Figure 3. 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 – Figure 3 as a tree protection zone (TPZ) at any time during or after construction.

- Branches and roots 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 roots and 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,
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8.0 References

Council of Tree & Landscape Appraisers, 2019. Guide for Plant Appraisal, 10th Edition.

Ontario Supplement to the Guide for Plant Appraisal – 8th Edition, 2003. ISA Ontario. International Society of Arboriculture, Champaign, Illinois. 26 pp. Updated 2003.

Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (i.e. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

Table 1. Tree Inventory

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	mTPZ	A. mTPZ	Oakville Tree No.	Comments	Ownership	Action
99	White Elm	*Ulmus americana*	20, 10	F-G	F	P-F	10	2.5	2.4	-	-	Co-dominant stems at 0.5 metres and 1.5 metres, epicormic branching (H)	Private	Remove
100	White Elm	*Ulmus americana*	22, 13, 12	F-G	P-F	F		2.5	2.4	-	-	Epicormic branching (M), multi-stem at base, included bark (M), deadwood (M)	Private	Remove
101	White Elm	*Ulmus americana*	13, 12	G	F	P-F		2	2.4	-	-	Bark peeling (M), co-dominant stems at 0.75 metres, epicormic branching (H), deadwood (M)	Private	Remove
102	Manitoba Maple	*Acer negundo*	28	F-G	G	F-G		4	2.4	-	-	Seam (L) from base to 0.5 metres, epicormic branching (M)	Private	Remove
103	Cherry species	*Prunus* sp.	19	P-F	F	P	50	3	-	-	-	Deadwood (H), bark peeling (H), multi-stem at 1.5 metres, epicormic branching (H)	Private	Remove (Condition)
104	White Mulberry	*Morus alba*	16, 14, 13	P	P-F	F		3	-	-	-	Wetwood (H), multi-stem at 0.5 metres, stem wound (M) at 1 metre, broken branches (H), pruning wounds (M), epicormic branching (H), deadwood (L)	Private	Remove (Condition)
P105	Refer to Table 2												Shared	Remove
106	White Elm	*Ulmus americana*	18, 11, 8	F	F	P-F	25	3	-	-	-	Bark peeling (M), deadwood (M), asymmetrical crown (M)	Private	Remove
107	White Elm	*Ulmus americana*	15	F-G	F	F	15	3.5	-	-	-	Sweep (M), epicormic branching (M), deadwood (M)	Private	Remove
108	White Elm	*Ulmus americana*	19	F-G	F-G	F-G		3	-	-	-	Epicormic branching (L), co-dominant stems at 2 metres	Private	Remove
109	White Elm	*Ulmus americana*	30	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
110	White Elm	*Ulmus americana*	25	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
111	White Elm	*Ulmus americana*	13, 13	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
112	Pear species	*Pyrus* sp.	10 - 20	P-F	P	P		3	-	-	-	Included bark (H), epicormic branching (H), coppice growth (H), three stems	Private	Remove
113	White Elm	*Ulmus americana*	50	-	-	-	-	-	-	-	-	Dead with decay --> hazard	Private	Remove (Condition)
114	White Elm	*Ulmus americana*	30	-	-	-	-	-	-	-	-	Dead with decay --> hazard	Private	Remove (Condition)
115	Pear species	*Pyrus* sp.	10 - 45	P	F	P-F		4.5	-	-	-	Co-dominant stems at base, four stems, fungal fruiting body between stems, epicormic branching (H)	Private	Remove (Condition)
116	White Elm	*Ulmus americana*	7 - 15	F-G	P-F	F-G		4	-	-	-	Multi-stem at base with six stems, epicormic branching (M), asymmetrical crown (L)	Private	Remove
117	Red Oak	*Quercus rubra*	69, 32	P	P-F	P-F		7	-	-	-	Lost leader, decay column (H) in large stem, epicormic branching (H), deadwood (H) --> hazard	Private	Remove (Condition)
118	Red Oak	*Quercus rubra*	88	P-F	F	P-F		7	-	-	-	Fungal fruiting body on branch, co-dominant stems at 1 metre, top-down dieback, large branch and stem dead, epicormic branching (H)	Private	Remove (Condition)
119	Red Oak	*Quercus rubra*	16	G	F-G	F-G		2	-	-	-	Bow (L), suppressed	Private	Remove
120	White Elm	*Ulmus americana*	35	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
121	White Elm	*Ulmus americana*	25	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
122	White Elm	*Ulmus americana*	25	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
123	White Oak	*Quercus alba*	136	F	F-G	P		8	-	-	-	Co-dominant stems at 0.5 metres, included bark (H), epicormic branching (H), declining	Private	Remove
124	Bur Oak	*Quercus macrocarpa*	78	F-G	G	P-F		9	-	-	-	Broken branches (L), epicormic branching (H), asymmetrical crown (M), declining	Private	Remove
125	Bur Oak	*Quercus macrocarpa*	80	F	G	P	20	9	-	-	-	Epicormic branching (H), broken branches (M), deadwood (M), asymmetrical crown (M)	Private	Remove
126	White Oak	*Quercus alba*	115	F	F-G	P		10	-	-	-	Epicormic branching (H), crack (M) from base to 2 metres with good response growth, broken branches (M), cavity (L) at base, declining	Private	Remove
127	Bur Oak	*Quercus macrocarpa*	124	F-G	F	P	10	9	-	-	-	Co-dominant stems at base, included bark (H), epicormic branching (H), top-down dieback, declining	Private	Remove

128	Shagbark Hickory	*Carya ovata*	39	P-F	P-F	P-F		4	-	-	-	Broken top, deadwood (M)	Private	Remove
129	Bur Oak	*Quercus macrocarpa*	80, 25	G	F-G	P-F		9	-	-	-	Co-dominant stems at base, epicormic branching (H)	Private	Remove
130	Shagbark Hickory	*Carya ovata*	30	F-G	F	F-G		3.5	-	-	-	Co-dominant stems at 3 metres, bark peeling (L)	Private	Remove
131	Red Oak	*Quercus rubra*	60	P-F	F-G	F		8	-	-	-	Included wire fence at 0.75 metres, fungal fruiting body at base, asymmetrical crown (M), epicormic branching (M), deadwood (L), broken branches (M)	Private	Remove
132	Bur Oak	*Quercus macrocarpa*	35, 35, 30	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
133	Shagbark Hickory	*Carya ovata*	68	F-G	F-G	F	10	6	-	-	-	Epicormic branching (M), co-dominant stems at 1 metre, included bark (M), co-dominant stems at 1.75 metres, deadwood (L), bow (L), broken branches (H)	Private	Remove
134	White Ash	*Fraxinus americana*	35	P	F-G	P	80	4	-	-	-	EAB present	Private	Remove (Condition)
135	Pear species	*Pyrus* sp.	50	P-F	P-F	P-F		3.5	-	-	-	Broken branches (H), stem failure at 5 metres, bow (M), asymmetrical crown (M), epicormic branching (M), deadwood (L)	Private	Remove
136	Pear species	*Pyrus* sp.	20, 10	F	F	F		2	-	-	-	Vine competition (H), co-dominant stems at 1 metre	Private	Remove
137	Pear species	*Pyrus* sp.	25	P-F	P-F	P	15	3	-	-	-	Sweep (H), previous co-dominant stem failure at base, epicormic branching (H), deadwood (H), cavity (L) at base	Private	Remove (Condition)
P138	Refer to Table 2												Private	Remove
139	Shagbark Hickory	*Carya ovata*	50	F-G	F-G	F	15	6	3		-	Deadwood (M), epicormic branching (H), multi-stem at 6 metres, broken branches (L), sparse crown (L), asymmetrical crown (L)	Private	Retain
140	White Oak	*Quercus alba*	78	F-G	G	P	75	8	-	-	-	Deadwood (H), epicormic branching (M), declining	Private	Remove (Condition)
141	Bur Oak	*Quercus macrocarpa*	40	F	G	P		4	-	-	-	Epicormic branching (H), suppressed	Private	Remove
142	Bur Oak	*Quercus macrocarpa*	63, 40	G	F	P		9	-	-	-	Co-dominant stems at base, epicormic branching (H), bow (L) on small stem, declining	Private	Remove
143	Bur Oak	*Quercus macrocarpa*	30	P-F	P-F	P		4	-	-	-	Asymmetrical crown (H), fused to Tree 144, crooks (M), epicormic branching (H)	Private	Remove
144	Red Oak	*Quercus rubra*	45	F	F	F-G		6	-	-	-	Fused to Tree 143 at base, included wire fence, bow (L), crooks (M)	Private	Remove
145	Bur Oak	*Quercus macrocarpa*	68	F-G	F-G	P		9	-	-	-	Deadwood (L), epicormic branching (H), broken branches (M)	Private	Remove
146	Pear species	*Pyrus* sp.	30, 15	F	F	F		3	-	-	-	Broken branches (H), co-dominant stems at base, deadwood (M)	Private	Remove
147	White Ash	*Fraxinus americana*	15	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
148	White Pine	*Pinus strobus*	25	G	G	G		3	2.4	-	-		Private	Remove
149	Bur Oak	*Quercus macrocarpa*	52	F	F-G	P	25	9				Broken branches (H) at top of tree, epicormic branching (H), deadwood (M)	Private	Remove
150	Bur Oak	*Quercus macrocarpa*	18	G	F-G	F		2	2.4	-	-	Epicormic branching (M), bow (L)	Private	Remove
P151	Refer to Table 2												Private	Remove
P152	Refer to Table 2												Shared	Remove
153	White Pine	*Pinus strobus*	54, 47	P	P-F	F		5	-	-	-	Co-dominant stems at 0.25 metres, large stem failure at 3 metres	Private	Remove (Condition)
154	Manitoba Maple	*Acer negundo*	10 - 45	P-F	P	P		4	3.6	3.6	-	Epicormic branching (H), included bark (H), deadwood (M)	Private	Remove (Condition)
155	Shagbark Hickory	*Carya ovata*	57	F	F	F		5	-	-	-	Co-dominant stems at 1.5 metres, pruning wounds (M), epicormic branching (M), deadwood (L), branch cracks (M)	Private	Remove
156	Shagbark Hickory	*Carya ovata*	44	F-G	F	P	50	6	3		-	Epicormic branching (H), multi-stem at 3 metres, top-down dieback, deadwood (H), broken branches (M), declining	Private	Remove (Condition)
157	Bur Oak	*Quercus macrocarpa*	24	G	G	F-G		2	2.4	2.4	-	Epicormic branching (L)	Private	Remove
P158	Refer to Table 2												Town	Remove
P159	Refer to Table 2												Private	Remove
160	Sugar Maple	*Acer saccharum*	25	G	G	G		3	2.4	2.4	-		Private	Retain
161	Shagbark Hickory	*Carya ovata*	30	F	F-G	F-G		3	2.4	2.4	-	Girdling trunk (L) at 3 metres	Private	Retain
162	Sugar Maple	*Acer saccharum*	24	P-F	P-F	F		3	-	-	-	Broken top	Private	Remove (Condition)
163	Sugar Maple	*Acer saccharum*	40	F	F-G	P-F	30	4	3	3	-	Deadwood (H) --> prune deadwood	Private	Retain
164	Sugar Maple	*Acer saccharum*	33	G	F-G	F-G		3	3	3	-	Deadwood (L)	Private	Retain
165	Shagbark Hickory	*Carya ovata*	31	F-G	F	F		5	3	3	-	Asymmetrical crown (M), epicormic branching (M), co-dominant stems in crown	Private	Retain
P166	Refer to Table 2												Private	Remove
167	Ironwood	*Ostrya virginiana*	19	F	F	F	25	2.5	2.4	-	-	Co-dominant stems at 3 metres, small stem dead	Private	Remove

168	Shagbark Hickory	*Carya ovata*	24	G	F-G	F-G		2	2.4	2.4	-	Bow (L), asymmetrical crown (M)	Private	Retain
169	White Elm	*Ulmus americana*	34	G	F-G	G	10	4	3	3	-	Deadwood (L)	Private	Retain
170	American Beech	*Fagus grandifolia*	29, 23	F-G	F	F		4	3	-	-	Deadwood (M), broken branches (M)	Private	Retain
171	American Beech	*Fagus grandifolia*	20	P-F	F-G	G		3	-	-	-	Cavity (H) at base	Private	Remove (Condition)
172	American Beech	*Fagus grandifolia*	21	P-F	F	P-F		2	-	-	-	Decay (M) at base, stem wounds (M)	Private	Remove (Condition)
173	American Beech	*Fagus grandifolia*	15	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
174	American Beech	*Fagus grandifolia*	17	P	F	P	90	3	-	-	-	Decay (H) at base	Private	Remove (Condition)
175	American Beech	*Fagus grandifolia*	21	P	F	P	75	3	-	-	-	Decay (H) at base	Private	Remove (Condition)
176	Ironwood	*Ostrya virginiana*	23	F-G	F-G	F	15	3	2.4	2.4	-	Deadwood (M), epicormic branching (M)	Private	Retain
177	White Birch	*Betula papyrifera*	23, 22, 19	F	P-F	F-G	10	6	3	3	-	Multi-stem at base, overextending branches over property --> prune	Private	Retain
178	Ironwood	*Ostrya virginiana*	15, 14, 10	P-F	P-F	F-G		4	2.4	2.4	-	Multi-stem at base, cavity (M) at base	Private	Retain
N1	Pear species	*Pyrus* sp.	45	F	F	P-F		2.5	3			Coppice growth (H), epicormic branching (H), included bark (L), cavities (M), pruning wounds (L)	Neighbour	Remove
N2	Manitoba Maple	*Acer negundo*	20, 13	F-G	F	G		3	2.4			Co-dominant stems at 1 metre, asymmetrical crown (M), epicormic branching (L), pruning wounds (L)	Neighbour	Remove
N3	Cherry species	*Prunus* sp.	10 - 25	P-F	P-F	F		3.5	-	-	-	Included bark (H), multi-stem at 0.5 metres, six stems, pruning wounds (M), stems wounds (M), epicormic branching (H)	Neighbour	Remove
N4	White Elm	*Ulmus americana*	55, 40	-	-	-	-	-	-	-	-	Dead with decay --> hazard	Neighbour	Remove (Condition)
N5	White Elm	*Ulmus americana*	30, 30	-	-	-	-	-	-	-	-	Dead --> hazard	Neighbour	Remove (Condition)
N6	Silver Maple	*Acer saccharinum*	35	F	F-G	G		4.5	-	-	-	Co-dominant stems at 2 metres, included bark (M), stem wound (L) at 0.25 metres, coppice growth (L)	Neighbour	Remove
N7	Pear species	*Pyrus* sp.	40	P	F	P-F		3	-	-	-	Cavity (H) at 0.75 metres, epicormic branching (H)	Neighbour	Remove (Condition)
N8	White Elm	*Ulmus americana*	15, 13	F-G	F	G		3	-	-	-	Co-dominant stems at 0.25 metres	Neighbour	Remove
N9	Pear species	*Pyrus* sp.	45	F	F-G	F		4	-	-	-		Neighbour	Remove
N10	White Ash	*Fraxinus americana*	15	-	-	-	-	-	-	-	-	Dead	Neighbour	Remove (Condition)
N11	White Ash	*Fraxinus americana*	40	-	-	-	-	-	-	-	-	Dead	Neighbour	Remove (Condition)
N12	White Ash	*Fraxinus americana*	25	-	-	-	-	-	-	-	-	Dead	Neighbour	Remove (Condition)
N13	Bur Oak	*Quercus macrocarpa*	15	G	G	F-G		1.5	-	-	-		Neighbour	Remove
N14	Bur Oak	*Quercus macrocarpa*	65	G	F-G	F		8	-	-	-	Epicormic branching (M)	Neighbour	Remove
N15	Bur Oak	*Quercus macrocarpa*	15	G	G	G		2	-	-	-		Neighbour	Remove
N16	Bur Oak	*Quercus macrocarpa*	40	G	F-G	F		5	-	-	-	Epicormic branching (M)	Neighbour	Remove
N17	Bur Oak	*Quercus macrocarpa*	50	F-G	F	P-F		8	-	-	-	Epicormic branching (H), included bark (M), sparse crown (M)	Neighbour	Remove
N18	Apple species	*Malus* sp.	33	F	F	F		3	-	-	-		Neighbour	Remove
N19	Ironwood	*Ostrya virginiana*	16	P-F	F	F	20	3	-	-	-	Lost leader, top-down dieback	Neighbour	Remove (Condition)
N20	Shagbark Hickory	*Carya ovata*	30	P-F	F-G	F		4	-	-	-	Epicormic branching (M), decay column (M) from 0.5 metres to 1 metre, bow (L), asymmetrical crown (M)	Neighbour	Remove (Condition)
N21	Shagbark Hickory	*Carya ovata*	30	G	F-G	F-G		4	2.4	-	-	Bow (L)	Neighbour	Retain
N22	Sugar Maple	*Acer saccharum*	30	G	G	G		4	2.4	-	-		Neighbour	Retain
N23	Sugar Maple	*Acer saccharum*	40	F-G	F-G	G		5	3	-	-		Neighbour	Retain
N24	Pear species	*Pyrus* sp.	20	F	F	F-G		2	2.4	2.4	-		Town	Retain
N25	Shagbark Hickory	*Carya ovata*	25	F-G	G	F-G		2.5	2.4	2.4	-	Included wire fence, bow (L)	Town	Retain
N26	Red Oak	*Quercus rubra*	50	F-G	F	F-G		6	3	2.4	-	Deadwood (L), crooks (M), epicormic branching (M)	Town	Retain
N27	Sugar Maple	*Acer saccharum*	20, 15	F	F	F		3	2.4	2.4	-	Co-dominant stems at 0.5 metres, included bark (H), deadwood (M)	Town	Retain

Codes		
DBH	Diameter at Breast Height	*(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)*
mTPZ	minimum Tree Protection Zone	*TPZ (m) based on Town of Oakville's Tree Protection During Construction (Prcedure EN-TRE-001-001) from base of tree*
A. mTPZ	Actual minimum Tree Protection Zone	*Actual TPZ (m) achievable during construction from base of tree*
~ = estimate; (L) = light; (M) = moderate; (H) = heavy		

Table 2. Stand Tally Analysis of Tree Polygons

P105 - Stand Tally Analysis

Tree Size Class >	Polewood (15 - 24 cm DBH)		Small (26 - 36 cm DBH)		Medium (38 - 48 cm)		Large (50 cm +)		Total All Sizes	
Species	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*
White Mulberry (*Morus alba*)	0	2	0	2	0	0	0	0	0	4
Cherry species (*Prunus* sp.)	0	0	0	1	0	0	0	0	0	1
Total Number of Trees	0	2	0	3	0	0	0	0	0	5

P138 - Stand Tally Analysis

Tree Size Class >	Polewood (15 - 24 cm DBH)		Small (26 - 36 cm DBH)		Medium (38 - 48 cm)		Large (50 cm +)		Total All Sizes	
Species	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*
Pear species (*Pyrus s*p.)	3	2	1	1	0	0	0	0	4	3
Bur Oak (*Quercus macrocarpa*)	1	0	0	0	0	0	0	0	1	0
Total Number of Trees	4	2	1	1	0	0	0	0	5	3

P151 - Stand Tally Analysis

Tree Size Class >	Polewood (15 - 24 cm DBH)		Small (26 - 36 cm DBH)		Medium (38 - 48 cm)		Large (50 cm +)		Total All Sizes	
Species	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*
Ash species (*Fraxinus* sp.)	0	42	0	22	0	9	0	3	0	76
Bur Oak (*Quercus macrocarpa*)	0	0	2	1	0	0	1	0	3	1
White Elm (*Ulmus americana*)	1	2	0	0	0	0	0	0	1	2
Apple species (*Malus* sp.)	0	1	0	1	0	0	0	0	0	2
Total Number of Trees	1	45	2	24	0	9	1	3	4	81

P152 - Stand Tally Analysis

Tree Size Class >	Polewood (15 - 24 cm DBH)		Small (26 - 36 cm DBH)		Medium (38 - 48 cm)		Large (50 cm +)		Total All Sizes	
Species	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*
Bur Oak (*Quercus macrocarpa*)	1	3	0	1	0	1	1	6	2	11
Apple species (*Malus* sp.)	0	1	0	0	0	0	0	0	0	1
Red Oak (*Quercus macrocarpa*)	0	0	0	0	0	0	1	0	1	0
Total Number of Trees	1	4	0	1	0	1	2	6	3	12

P158 - Stand Tally Analysis

Tree Size Class >	Regeneration (<15cm)		Polewood (15 - 24 cm DBH)		Small (26 - 36 cm DBH)		Medium (38 - 48 cm)		Large (50 cm +)		Total All Sizes	
Species	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*
White Elm (*Ulmus americana*)	1	0	0	0	0	0	0	0	0	0	1	0
Red Oak (*Quercus macrocarpa*)	4	0	0	0	0	0	0	0	0	0	4	0
White Ash (*Fraxinus americana*)	0	24	0	0	0	0	0	0	0	0	0	24
Total Number of Trees	5	24	0	0	0	0	0	0	0	0	5	24

P159 - Stand Tally Analysis

Tree Size Class >	**Polewood (15 - 24 cm DBH)**		**Small (26 - 36 cm DBH)**		**Medium (38 - 48 cm)**		**Large (50 cm +)**		**Total All Sizes**	
Species	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*
American Beech (*Fagus grandifolia*)	1	1	0	1	0	0	0	0	1	2
Shagbark Hickory (*Carya ovata*)	6	1	5	1	1	0	1	0	13	2
White Pine (*Pinus strobus*)	0	1	1	0	1	0	0	1	2	2
Ironwood (*Ostrya virginiana*)	0	4	0	0	0	0	0	0	0	4
White Elm (*Ulmus americana*)	3	5	2	0	0	0	0	0	5	5
Basswood (*Tilia americana*)	2	0	1	0	0	0	0	0	3	0
Bur Oak (*Quercus macrocarpa*)	0	0	1	0	0	0	0	0	1	0
Sugar Maple (*Acer saccharum*)	5	0	5	1	3	0	0	0	13	1
Red Oak (*Quercus rubra*)	0	0	0	1	0	0	2	1	2	2
Green Ash (*Fraxinus pennsylvanica*)	0	3	0	0	0	0	0	0	0	3
Apple species (*Malus* sp.)	0	1	0	0	0	0	0	0	0	1
Total Number of Trees	17	16	15	4	5	0	3	2	40	22

P166 - Stand Tally Analysis

Tree Size Class >	**Polewood (15 - 24 cm DBH)**		**Small (26 - 36 cm DBH)**		**Medium (38 - 48 cm)**		**Large (50 cm +)**		**Total All Sizes**	
Species	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*	*AGS*	*UGS*
Pear species (*Pyrus* sp.)	3	0	0	2	0	0	0	0	3	2
Black Walnut (*Juglans nigra*)	1	0	0	0	0	0	0	0	1	0
White Elm (*Ulmus americana*)	0	2	0	2	0	0	0	0	0	4
Shagbark Hickory (*Carya ovata*)	3	0	2	0	2	2	0	0	7	2
Ironwood (*Ostrya virginiana*)	1	5	0	0	0	0	0	0	1	5
Bur Oak (*Quercus macrocarpa*)	1	0	0	0	0	0	0	1	1	1
Red Oak (*Quercus rubra*)	4	1	1	0	0	0	0	0	5	1
White Ash (*Fraxinus americana*)	0	0	0	1	0	0	0	0	0	1
American Beech (*Fagus grandifolia*)	0	0	0	0	0	1	0	0	0	1
Total Number of Trees	13	8	3	5	2	3	0	1	18	17

Table 3. Hazard Tree Inventory

Tree #	Common Name	Scientific Name	DBH
H1	White Elm	*Ulmus americana*	~40
H2	White Ash	*Fraxinus americana*	~15
H3	White Ash	*Fraxinus americana*	~10
H4	White Ash	*Fraxinus americana*	~15, ~5
H5	White Ash	*Fraxinus americana*	~20, ~15
H6	Pear species	*Pyrus* sp.	~55
H7	Bur Oak	*Quercus macrocarpa*	~70, ~60
H8	White Elm	*Ulmus americana*	~25
H9	White Elm	*Ulmus americana*	~30
H10	White Ash	*Fraxinus americana*	~10
H11	Shagbark Hickory	*Carya ovata*	~40
H12	Sugar Maple	*Acer saccharum*	~25
H13	Shagbark Hickory	*Carya ovata*	~25
H14	Shagbark Hickory	*Carya ovata*	~20, ~20, ~15
H15	White Ash	*Fraxinus americana*	~12
H16	White Elm	*Ulmus americana*	~20, ~20
H17	Shagbark Hickory	*Carya ovata*	~30, ~30
H18	Shagbark Hickory	*Carya ovata*	~25
H19	White Ash	*Fraxinus americana*	~20
H20	Shagbark Hickory	*Carya ovata*	~60
H21	Green Ash	*Fraxinus pennsylvanica*	~20, ~8
H22	Sugar Maple	*Acer saccharum*	~35
H23	White Pine	*Pinus strobus*	~45
H24	White Pine	*Pinus strobus*	~40
H25	White Ash	*Fraxinus americana*	~25
H26	Sugar Maple	*Acer saccharum*	~25
H27	American Beech	*Fagus grandifolia*	~20

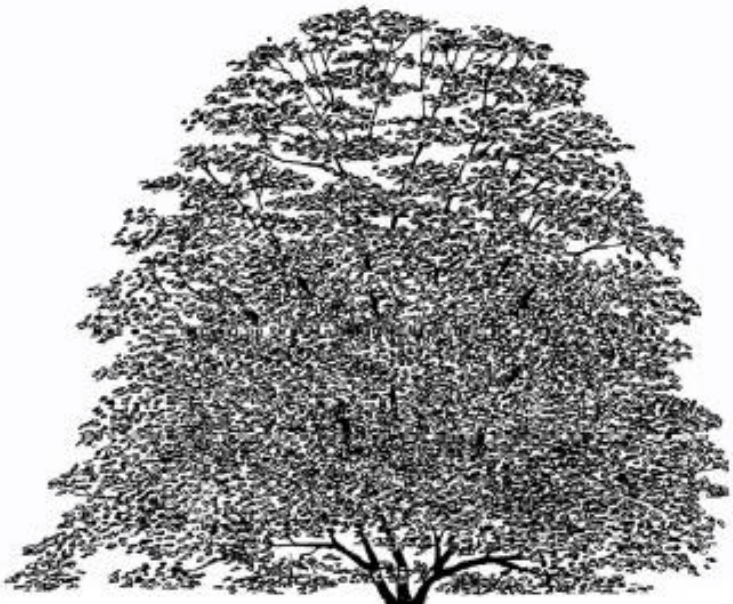
Table 4. Tree Valuation of Town-Owned Trees

Sixth Line and Burnhamthorpe Road West, Oakville				*Appraised Trunk Area (cm^2)*	*Unit Tree Cost (RPAC)*	*Basic Tree Cost ($)*	Depreciation			*Appraised Tree Value*
Tree	**Common Name**	**DBH**	**OC**				*Condition Rating (%)*	*Functional Limitation Rating (%)*	*External Limitation Rating (%)*	
N24	Pear species	20	F	314	6.51	2045.18	0.5	0.9	1	$ 920.33
N25	Shagbark Hickory	25	F-G	491	6.51	3195.60	0.75	0.9	1	$ 2,157.03
N26	Red Oak	50	F	1964	6.51	12782.39	0.5	0.9	1	$ 5,752.07
N27	Sugar Maple	25	F	491	6.51	3195.60	0.5	0.9	1	$ 1,438.02
										$ 10,267.45

Appendix A. Tree Preservation Fencing Specifications

OAKVILLE

SCHEDULE 1
TREE PROTECTION BARRIER



Tree Protection Barriers

PLYWOOD

1. Tree protection barriers must be 1.2m (4ft) high, waferboard hoarding or an equivalent approved by Urban Forestry Services.
2. Tree protection barriers for trees situated on the Town road allowance where visibility must be maintained can be 1.2m (4ft.) high and consist of plastic web snow fencing on a wood frame made of 2"x 4"s .
3. Where some excavate or fill has to be temporarily located near a tree protection barrier, plywood must be used to ensure no material enters the Tree Protection Zone.
4. All supports and bracing should be outside the Tree Protection Zone. All such supports should minimize damaging roots outside the Tree Protection Barrier.
5. No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.

Appendix B. Photographs of Specimen Shagbark Hickory Trees

Image 1. Tree 139

Image 2. Tree 156

Image 3. Crown of Tree 139

Image 4. Crown of Tree 156

Tree Protection Zone

No grade change, storage of materials or equipment is permitted within this area.
This tree protection barrier must not be removed without the written authorization of the Town of Oakville.
Report any contraventions to
Contact Name ____ Tel No. ____
Unauthorized removal of the tree protection barrier or other contraventions may result in prosecution.

BURNHAMTHORPE ROAD

EXISTING RESIDENTIAL

EXISTING RESIDENTIAL

PROPOSED TOWNHOUSES

PROPOSED TOWNHOUSES

PROPOSED TOWNHOUSES

PROPOSED SCHOOL

PROPOSED SCHOOL

PROPOSED TOWNHOUSES

PROPOSED TOWNHOUSES

PROPOSED TOWNHOUSES

PROPOSED SWM

FUTURE TOWNHOUSE

FUTURE SINGLE DETACHED

RD. WIDENING

SIXTH LINE

CHANNEL

BL-97 RD. WID.

BL-96 RD. WID.

BL-95 RD. WID.

BL-94

BL-72

BL-69

P158

P159

BLOCK 89
7u @ MIN. 6.1m TH

P166

BLOCK 90
6u @ MIN. 6.1m TH

P152

P151

P138

BLOCK 88
7u @ 7.5m TH

BLOCK 87
8u @ 7.5m TH

BLOCK 86
7u @ 7.5m TH

BLOCK 83
8u @ 6.1m LTH

BLOCK 84
8u @ 6.1m LTH

BLOCK 85
8u @ 6.1m LTH

BLOCK 82
6u @ 6.1m LTH

BLOCK 81
6u @ 6.1m LTH

BLOCK 80
6u @ 6.1m LTH

BLOCK 79
6u @ 6.1m LTH

BLOCK 76
6u @ 7.5m TH

BLOCK 77
6u @ 7.5m TH

BLOCK 78
7u @ 7.5m TH

BLOCK 75
6u @ 7.5m TH

BLOCK 74
7u @ 7.5m TH

BLOCK 73
5u @ 7.5m TH

BLOCK 71
8u @ 7.5m TH

BLOCK 70
7u @ 7.5m TH

STREET L=238±m "3"

STREET L=168±m "4"

STREET L=162±m "4"

STREET L=193±m "5"

STREET L=204±m "6"

STREET L=143±m "7"

STREET L=371±m "1"

STREET L=378±m "2"

STR. "5"

BLOCK 93
N.H.S.A.
AREA = 11.823±Ha.
(29.215±Ac.)

BLOCK 91
S.W.M.
STAR OAK AREA = 1.636±Ha.
(4.043±Ac.)

BLOCK 92
N.H.S.A.
AREA = 0.917±Ha.
(2.266±Ac.)

WOOD LOT

EX. AGR. DESIGNATED

EX. AGR. DESIGNATED

STAKED DRIPLINE

STAKED THICKET

STAKED DRIPLINE

STAKED DRIPLINE

DRIPLINE

TPZ

N1 N2 N3 N4 N5 N6 N7 N8 N9 N10 N11 N12 N13 N14 N15 N16 N17 N18 N19 N20 N21 N22 N23 N24 N25 N26 N27

99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 131 132 133 134 135 136 137 139 140 141 142 143 144 145 146 147 148 150 153 154 155 156 157 160 161 162 163 164 165 167 168 169 170 171 172 173 174 175 176 177 178

LEGEND

Tree Inventory

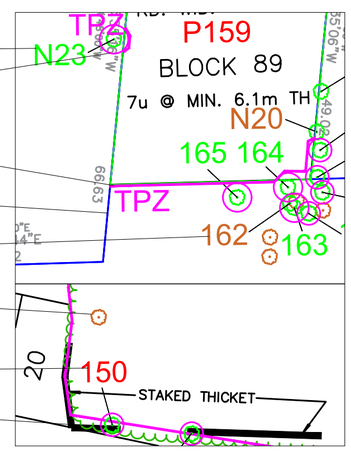
Refer to Table 1 and Table 2 of the report dated 08 January 2021. Trees greater than 15cm DBH on and within six metres of the proposed development and trees of all sizes within the road right-of-way were included in the inventory.

Tree Removals

The removal of 81 trees and seven tree polygons is required to accommodate the proposed development. Twenty-seven (27) hazard trees were identified within striking distance of the proposed open space and are recommended for removal. Removals are indicated with RED or ORANGE labels.

Tree Preservation

Preservation of the remaining 19 trees and trees within the Natural Heritage System will be possible with appropriate tree protection measures. Trees identified for preservation are indicated wtih GREEN labels. Tree protection measures must 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.



Tree Label (GREEN), preservation recommended

Minimum Tree Protection Zone (MAGENTA Circle)

Tree Protection Fencing (Thick MAGENTA)

Property Boundary (DARK BLUE)

Tree Label (ORANGE), removal recommended based on condition

Hazard Tree Location (not included in tree inventory)

Tree Label (RED), removal recommended

Tree Location Estimated by KFCI

TREE PROTECTION PLAN NOTES

- It is the applicants' responsibility to discuss potential impacts to trees located near or wholly on adjacent properties or on shared boundary lines with their neighbours. Should such trees be injured to the point of instability or death the applicant may be held responsible through civil action. The applicant would also be required to replace such trees to the satisfaction of Urban Forestry.
- Tree protection barriers shall be installed to standards as detailed in this document and to the satisfaction of Urban Forestry.
- Tree protection barriers must be installed using plywood clad hoarding (minimum 19mm or ¾" thick) or an equivalent approved by Urban Forestry.
- Where required, signs as specified in Section 4, Tree Protection Signage must be attached to all sides of the barrier.
- Prior to the commencement of any site activity such as site alteration, demolition or construction, the tree protection measures specified on this plan must be installed to the satisfaction of Urban Forestry.
- Once all tree/site protection measures have been installed, Urban Forestry staff must be contacted to arrange for an inspection of the site and approval of the tree/site protection requirements. Photographs that clearly show the installed tree/site protection shall be provided for Urban Forestry review.
- Where changes to the location of the approved TPZ or sediment control or where temporary access to the TPZ is proposed, Urban Forestry must be contacted to obtain approval prior to alteration.
- Tree protection barriers must remain in place and in good condition during demolition, construction and/or site disturbance, including landscaping, and must not be altered, moved or removed until authorized by Urban Forestry.
- No construction activities including grade changes, surface treatments or excavation of any kind are permitted within the area identified on the Tree Protection Plan or Site Plan as a tree protection zone (TPZ). No root cutting is permitted. No storage of materials or fill is permitted within the TPZ. No movement or storage of vehicles or equipment is permitted within the TPZ. The area(s) identified as a TPZ must be protected and remain undisturbed at all times.
- All additional tree protection or preservation requirements, above and beyond the installation of tree protection barriers, must be undertaken or implemented as detailed in the Urban Forestry approved arborist report and/or the approved tree protection plan and to the satisfaction of Urban Forestry.
- If the minimum tree protection zone (TPZ) must be reduced to facilitate construction access, the tree protection barriers must be maintained at a lesser distance and the exposed portion of TPZ must be protected using a horizontal root protection method approved by Urban Forestry.
- Any roots or branches indicated on this plan which require pruning, as approved by Urban Forestry, must be pruned by an arborist. All pruning of tree roots and branches must be in accordance with good arboricultural practice. Roots that have received approval from Urban Forestry to be pruned must first be exposed using pneumatic (air) excavation, by hand digging or by a using low pressure hydraulic (water) excavation. The water pressure for hydraulic excavation must be low enough that root bark is not damaged or removed. This will allow a proper pruning cut and minimize tearing of the roots. The arborist retained to carry out crown or root pruning must contact Urban Forestry no less than three working days prior to conducting any specified work.
- The applicant/owner shall protect all by-law regulated trees in the area of consideration that have not been approved for removal throughout development works to the satisfaction of Urban Forestry.
- Convictions of offences respecting the regulations in the Street Tree By-law and Private Tree By-law are subject to fines. A person convicted of an offence under these by-laws is liable to a minimum fine of $500 and a maximum fine of $100,000 per tree, and /or a Special Fine of $100,000. The landowner may be ordered by the City to stop the contravening activity or ordered to undertake work to correct the contravention.
- Prior to site disturbance the owner must confirm that no migratory birds are making use of the site for nesting. The owner must ensure that the works are in conformance with the Migratory Bird Convention Act and that no migratory bird nests will be impacted by the proposed work no less than 48 hours prior to conducting any specified work.

No.	Issue/Revisions	Date	By
1	Report Submission	22 Dec. '20	KD
2	Report Resubmission	08 Jan. '21	KD

Base Data: Rady-Pentek & Edward Surveying Ltd. (survey); KLM Planning Partners Inc. (site plan)

KUNTZ FORESTRY CONSULTING Inc.
146 Lakeshore Road West
PO Box 1267 Lakeshore W PO
Oakville ON L6K 0B3
t: 289.837.1871
e: consult@kuntzforestry.ca
web: www.kuntzforestry.ca

Client
Star Oak Developments Limited
145 Reynolds Street, Suite 400
Oakville, ON, L6J 0A7

Property
Sixth Line & Burnhamthorpe Road West
Oakville, ON

Existing Conditions, Proposed Site Plan, Tree Inventory and Preservation Plan

Project	P2601
Date	08 January 2021
Scale	1:1000

Figure 1

Tree Protection Zone
No grade change, storage of materials or equipment is permitted within this area.
This tree protection barrier must not be removed without the written authorization of the Town of Oakville.
Report any contraventions to
Contact Name ____ Tel No. ____
Unauthorized removal of the tree protection barrier or other contraventions may result in prosecution.

NATURAL HERITAGE SYSTEM AREA

EX. AGRICULTURAL DESIGNATED TRANSITIONAL AREA

EX. AGRICULTURAL DESIGNATED TRANSITIONAL AREA

BURNHAMTHORPE ROAD

EXISTING RESIDENTIAL

EXISTING RESIDENTIAL

BL-97 RD. WID.

BL-96 RD. WID.

BL-95 RD. WID.

BLOCK 89
7u @ MIN. 6.1m TH

BLOCK 90
6u @ MIN. 6.1m TH

BLOCK 88
7u @ 7.5m TH

"3"

BLOCK 93
N.H.S.A.
AREA = 11.823±Ha.
(29.215±Ac.)

WOOD LOT

P158
P159
P166
TPZ
N18
N19
N20
N21
N22
N23
N24
N25
N26
N27
150
154
155
156
157
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
DRIPLINE
STAKED DRIPLINE
STAKED THICKET

LEGEND

Tree Inventory

Refer to Table 1 and Table 2 of the report dated 08 January 2021. Trees greater than 15cm DBH on and within six metres of the proposed development and trees of all sizes within the road right-of-way were included in the inventory.

Tree Removals

The removal of 81 trees and seven tree polygons is required to accommodate the proposed development. Twenty-seven (27) hazard trees were identified within striking distance of the proposed open space and are recommended for removal. Removals are indicated with RED or ORANGE labels.

Tree Preservation

Preservation of the remaining 19 trees and trees within the Natural Heritage System will be possible with appropriate tree protection measures. Trees identified for preservation are indicated with GREEN labels. Tree protection measures must 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.

Tree Label (GREEN), preservation recommended

Minimum Tree Protection Zone (MAGENTA Circle)

Tree Protection Fencing (Thick MAGENTA)

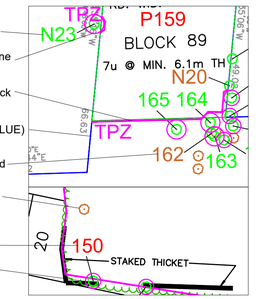
Property Boundary (DARK BLUE)

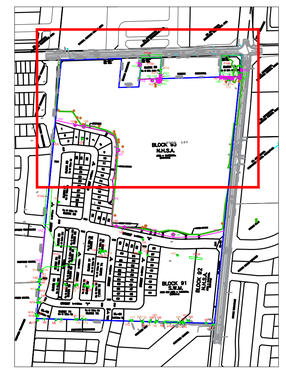
Tree Label (ORANGE), removal recommended based on condition

Hazard Tree Location (not included in tree inventory)

Tree Label (RED), removal recommended

Tree Location Estimated by KFCI





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Project	P2601	Figure	2
Date	08 January 2021		
Scale	1:650		

LEGEND

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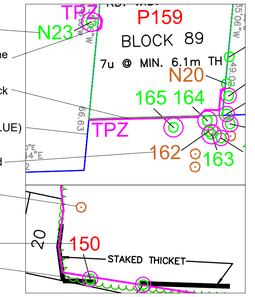

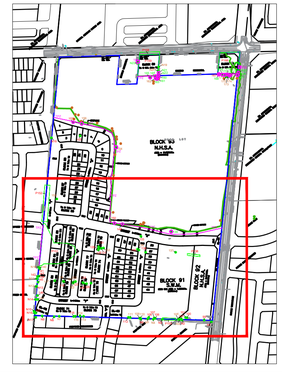

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Existing Conditions, Proposed Site Plan, Tree Inventory and Preservation Plan

Project	P2601	Figure	3
Date	08 January 2021		
Scale	1:650		