

**Tree Inventory and Preservation Plan Report
41 – 43 Essa Road & 259 Innisfil Street
Barrie, Ontario**

prepared for

**Innovative Planning Solutions
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prepared by



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KUNTZ FORESTRY CONSULTING Inc. Project P2771

Introduction

Kuntz Forestry Consulting Inc. was retained by Innovative Planning Solutions to complete a Tree Inventory and Preservation Plan Report in support of a development application for the properties located at 41 – 43 Essa Road and 259 Innisfil Street in Barrie, Ontario. The property is located east of Innisfil Street and south of Tiffin Street, within a mixed-use area.

The work plan for this study included the following:

- Prepare inventory of all tree resources 10 cm in diameter and larger occurring on subject properties and on adjacent neighbouring properties and trees of all sizes within the road right-of-way;
- Evaluate potential tree saving opportunities based on proposed site plans; and,
- Document the findings in a Tree Inventory and Preservation Plan report.

Methodology

Field assessments were conducted on 02 June 2021. Trees were located using the topographic survey provided, aerial imagery, and estimations made in the field. Trees on the subject property were tagged with the numbers 27 – 96. Trees on neighbouring properties were identified as N1 – N47. Where trees were located in groups, they were identified with the prefix “P”.

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

Tree # - numbers assigned to trees that corresponds to Figure TP-1.

Species - common and botanical names provided in the inventory table (Table 1).

DBH - diameter (centimeters) 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).

Dripline – size of crown radius, as measured from the stem to the outermost reaches of the branches.

Crown Dieback – the percentage of dead branches located in the crown.

Comments - additional relevant detail.

Where trees were situated in groups, they were inventoried in tree polygons. Trees within a tree polygon were inventoried using a 100% tally analysis by species, size class, and quality. Trees with a DBH of 10cm or greater were included in the stand tally analysis. Trees in polygons were assessed for condition utilizing the following parameters:

Species: Common and botanical names provided in the inventory table;

Size Class (DBH): 10 – 24cm, 26 – 36cm, 38 – 48cm, 50cm +

Quality Class: Acceptable Growing Stock (AGS), Unacceptable Growing Stock (UGS)

Trees classified as AGS are trees exhibiting no major defects in the bole and a relatively good crown structure and vigour. Trees classified as UGS are trees exhibiting a major defect in the bole or a relatively poor crown structure or vigour.

Refer to Table 1 and Table 2 for the results of the tree inventory and Figure TP-1 for the location of the trees.

Existing Site Conditions

The subject site is approximately 1.7 hectares in size and consists of multiple commercial and industrial buildings with an associated above-ground parking lot. The property is surrounded by residential and commercial dwellings. There is a Go Transit rail line that runs in an east-west direction and borders the subject site to the north. Trees exist in the form of landscape trees and natural regeneration.

The tree inventory documented a total of 114 trees and three tree polygons located on and within six metres of the subject property. Refer to Figure TP-1 for the tree locations and Table 1 and Table 2 for the complete tree inventory.

Tree resources included in the inventory are composed of Manitoba Maple (*Acer negundo*), Norway Maple (*Acer platanoides*), Sugar Maple (*Acer saccharum*), White Ash (*Fraxinus americana*), Black Walnut (*Juglans nigra*), Apple species (*Malus* sp.), Weeping White Mulberry (*Morus alba* 'Pendula'), Poplar species (*Populus* sp.), Basswood (*Tilia americana*), White Elm (*Ulmus americana*), and Siberian Elm (*Ulmus pumila*).

Proposed Development

The proposed development includes the demolition of the existing structures and the construction of four multi-storey towers with associated above ground parking. A road connecting Innisfil Street to Essa Road will be constructed south of the existing railway. Vehicular access to the proposed development will be permitted from Innisfil Street and Essa Road. Refer to Figure TP-1 for the proposed development.

Discussion

The following sections provide a discussion and analysis of development impacts, tree removals and tree preservation relative to both concept plans.

Development Impacts/Tree Removals

The removal of Trees 30 – 59, 62 – 64, 66 – 68, 72 – 96, N14, and N17 will be required to accommodate the proposed development. Trees 30 – 32, 34, 56, 57, 73, and 74 have trunks that conflict with the proposed roadways. Trees 33, 35, 54, 55, 58, 59, 66 – 68, 72, 79 – 96, N14, and N17 are located close to the proposed roadways such that their roots and / or crowns would be significantly impacted by construction. Trees 39 – 48 and 76 – 78 have trunks that conflict with the proposed above-ground parking. Trees 37 and 38 are located close to the proposed above-ground parking garage such that their roots and / or crowns would be significantly impacted by construction. Trees 49 – 53 have trunks that conflict with the proposed buildings. Trees 63 and 64 are located close to the existing building such that they would be significantly impacted by building demolition. Tree 62 will be significantly impacted by asphalt removal within its root zone. Trees in P75 will be significantly impacted by fence removal on site. Tree 36 requires removal to accommodate the swale through this area. Trees 44, 46, 48, 56, 60, 61, 83, 85, 92, N7, N11, N16, N31, N32, and N37 are in poor condition or dead and their removal is advised regardless of the site plan.

Trees 81, 83 – 93, 95, N7, N11, N14, N16, N17, N31, N32, and N37 are located on the neighbouring properties or the shared property boundary and written permission from their respective landowners will be required prior to their removal. Trees within P75 are partially located within the road right-of-way, therefore a permit will be required prior to their removal. Refer to Figure TP-1 for the location of tree removals.

Tree Preservation

Preservation of the remaining trees will be possible with appropriate tree protection measures as indicated on Figure TP-1. Tree protection measures have not been prescribed for Trees N1, N5, and N6, as their driplines do not intersect with the property boundary. 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. Refer to Figure TP-1 for the location of required tree preservation fencing and general Tree Protection Plan Notes and Figure TP-2 for tree preservation fencing specifications.

Trees N9, N10, N12, N18, N21, N22, N26, N29, N33, N34, N38, N43, N45, and N46

Encroachment into the driplines of Trees N9, N10, N12, N18, N21, N22, N26, N29, N33, N34, N38, N43, N45, and N46 will be required to accommodate construction of the proposed roadway. As the City of Barrie's tree protection specifications (dripline) already provide greater tree protection than the minimum Tree Protection Zones established in similar local municipalities, these trees should be sufficiently protected from development impacts. If the following protection and mitigation measures are employed before, during and after construction, long-term adverse effects are not anticipated to these trees.

1. The removal of the existing asphalt within the driplines of the trees in question should be conducted with minimal impact by hand. Asphalt debris should be removed by pulling away radially from the trunk. Any roots damaged through the process of removing asphalt should be hand pruned by a Certified Arborist in accordance with Good Arboricultural Standards.
2. Prior to construction, vertical tree protection fencing should be installed approximately 1.5 metres north of the proposed roadway to provide room for construction.
3. All works should be supervised by a Certified Arborist in accordance with Good Arboricultural Standards.

Trees N2 and N3

Encroachment into the driplines of Trees N2 and N3 will be required to accommodate the demolition of the existing building and the construction of the proposed roadway. It is unlikely that many roots from Trees N2 and N3 are present in this area, as there is an existing building there. If the following protection and mitigation measures are employed before, during and after construction, long-term adverse effects are not anticipated to these trees.

1. The removal of the existing building within the driplines of Trees N2 and N3 should be conducted with minimal impact by machinery. Any roots damaged through the process of removing asphalt should be hand pruned by a Certified Arborist in accordance with Good Arboricultural Standards.

2. Prior to construction, vertical tree protection fencing should be installed approximately 1.5 metres north of the proposed roadway to provide room for construction.
3. All works should be supervised by a Certified Arborist in accordance with Good Arboricultural Standards.

P65

Encroachment into the driplines of Trees in P65 will be required to accommodate the demolition of the existing asphalt pavement. If the following protection and mitigation measures are employed before, during and after construction, long-term adverse effects are not anticipated to these trees.

1. The removal of the existing asphalt within the driplines of the trees in P65 should be conducted with minimal impact by hand. Asphalt debris should be removed by pulling away radially from the trunk. Any roots damaged through the process of removing asphalt should be hand pruned by a Certified Arborist in accordance with Good Arboricultural Standards.
2. Prior to construction, vertical tree protection fencing should be installed at the dripline of trees within P65.
3. All works should be supervised by a Certified Arborist in accordance with Good Arboricultural Standards.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Innovative Planning Solutions to complete a Tree Inventory and Preservation Plan Report in support of a development application for the properties at 41 – 43 Essa Road and 259 Innisfil Street in Barrie, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total 114 trees and three tree polygons situated on and adjacent to the subject property. The removal of 70 trees and one tree polygon will be required to accommodate the proposed development and / or due to condition. All other trees can be preserved with appropriate tree protection measures.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure TP-1 for the location of tree preservation fence and further tree protection plan notes and Figure TP-2 for tree preservation details and drawings.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure TP-1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail on Figure TP-1.
- Tree protection measures are to be implemented prior to the demolition phase to ensure the trees identified for preservation are not impacted by the development.
- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional as approved by the City of Barrie. 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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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 (ie. 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

Location: 41 - 43 Essa Road & 259 Innisfil Street, Barrie

Date: 2 June 2021

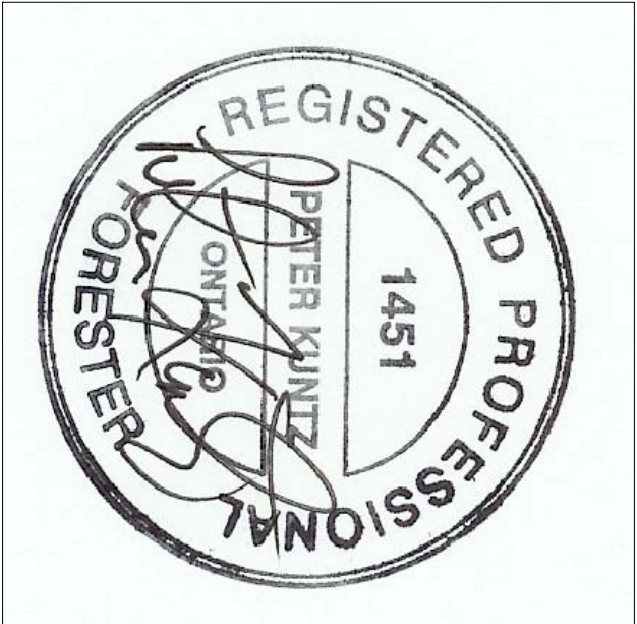
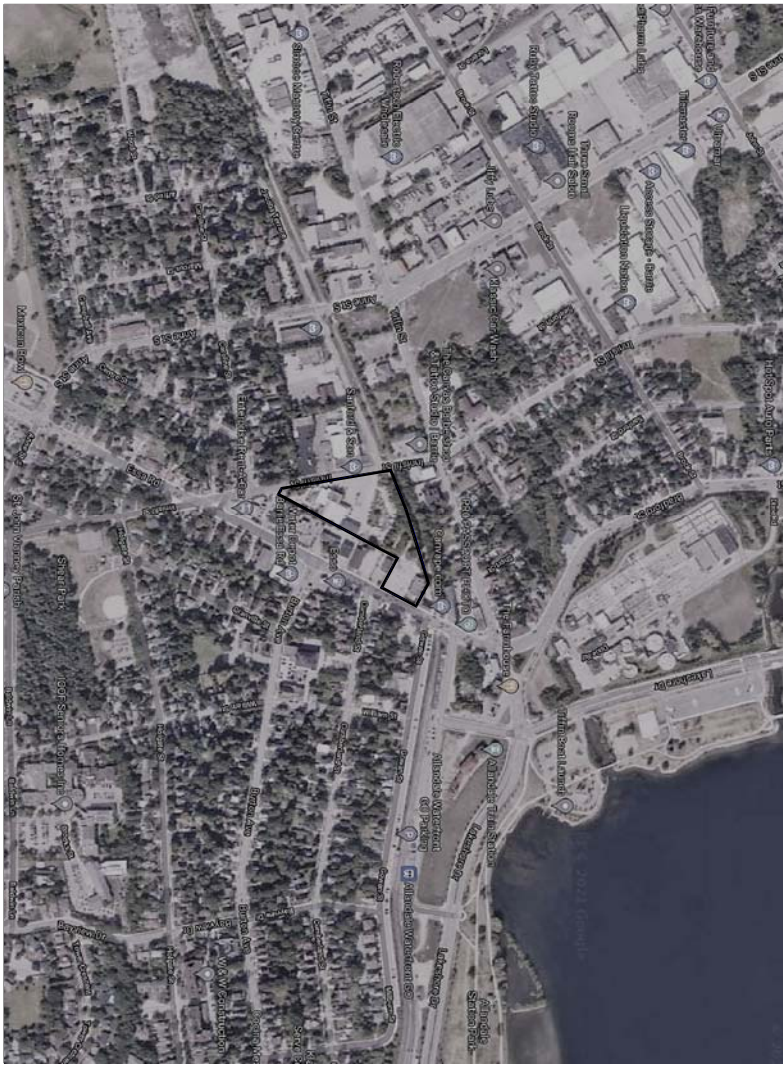
Surveyors: KD

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Tree Category	Owner	Preservation Value	Protection Level	Action
27	Weeping White Mulberry	<i>Morus alba</i> 'Pendula'	~10	G	G	F-G		1		Hedgerow	Private	High	2	Retain
28	Weeping White Mulberry	<i>Morus alba</i> 'Pendula'	~10	G	G	F-G		1		Hedgerow	Private	High	2	Retain
29	Weeping White Mulberry	<i>Morus alba</i> 'Pendula'	~11	G	G	F-G		1		Hedgerow	Private	High	2	Retain
30	Weeping White Mulberry	<i>Morus alba</i> 'Pendula'	~12	G	G	F-G		1		Hedgerow	Private	-	-	Remove
31	Weeping White Mulberry	<i>Morus alba</i> 'Pendula'	~13	G	G	F-G		1		Hedgerow	Private	-	-	Remove
32	Weeping White Mulberry	<i>Morus alba</i> 'Pendula'	~14	G	G	F		1		Hedgerow	Private	-	-	Remove
33	Manitoba Maple	<i>Acer negundo</i>	12, 11, 7, 7	F	F	F-G		2	Multi-stem at base, two stems topped at 1 metre, sweep (L), coppice growth (M), asymmetrical crown (M)	Individual	Private	-	-	Remove
34	White Elm	<i>Ulmus americana</i>	52	F-G	F-G	F-G		6	Bow (M), deadwood (L), asymmetrical crown (M), co-dominant stems at 4 metres	Individual	Private	-	-	Remove
35	Black Walnut	<i>Juglans nigra</i>	~60	G	G	F-G	15	6	Deadwood (L)	Individual	Private	-	-	Remove
36	Manitoba Maple	<i>Acer negundo</i>	~40	F-G	F	F-G		5	Union at base, included fence (L), sweep (L), coppice growth (M)	Hedgerow	Private	-	-	Remove
37	Manitoba Maple	<i>Acer negundo</i>	42, 32	F	F	P-F	15	7	Co-dominant stems at base, included bark (L), divergent stems (L), deadwood (L), epicormic branching (H)	Hedgerow	Private	-	-	Remove
38	Manitoba Maple	<i>Acer negundo</i>	~15	P-F	P	P-F	15	2.5	Epicormic branching (H), stem wound (H) from base to 1 metre, included fence (M), bow (M)	Hedgerow	Private	-	-	Remove
39	Black Walnut	<i>Juglans nigra</i>	14	G	G	F-G	10	2	Deadwood (L)	Hedgerow	Private	-	-	Remove
40	Manitoba Maple	<i>Acer negundo</i>	~15, ~4	G	F	F	15	2	Co-dominant stems at base, deadwood (L), vine competition (M), bow (L)	Hedgerow	Private	-	-	Remove
41	Manitoba Maple	<i>Acer negundo</i>	~14, ~10	F-G	F-G	F-G		2.5	Co-dominant stems at base, vine competition (M), divergent stems (M)	Hedgerow	Private	-	-	Remove
42	Black Walnut	<i>Juglans nigra</i>	~35	F	F-G	F	20	4	Sparse crown (L), deadwood (L), crook (M)	Hedgerow	Private	-	-	Remove
43	Manitoba Maple	<i>Acer negundo</i>	42	F	P-F	F	15	5	Co-dominant stems at 5 metres, divergent stems (M), epicormic branching (H), vine competition (M), stem wound (M) at base	Hedgerow	Private	-	-	Remove
44	-	-	~20	-	-	-	-	-	Dead	Hedgerow	Private	-	-	Remove (Condition)
45	Manitoba Maple	<i>Acer negundo</i>	36	F	F-G	F	25	3.5	Cavity (L) at 2 metres, co-dominant stems in crown	Hedgerow	Private	-	-	Remove
46	Manitoba Maple	<i>Acer negundo</i>	~18, ~17	F	F	P	40	3	Co-dominant stems at 0.25 metres, included bark (M), vine competition (H), bow (M), included fence (M), epicormic branching (H)	Hedgerow	Private	-	-	Remove (Condition)
47	Manitoba Maple	<i>Acer negundo</i>	29, ~25	F	P-F	P-F	20	5	Co-dominant stems at base, included bark (L), bow (M), vine competition (M), epicormic branching (M)	Hedgerow	Private	-	-	Remove
48	Manitoba Maple	<i>Acer negundo</i>	34	P-F	F	F	20	4	Cavity (M) at base with response growth, co-dominant stems at 1.5 metres, bow (M), epicormic branching (H), deadwood (L)	Hedgerow	Private	-	-	Remove (Condition)
49	Black Walnut	<i>Juglans nigra</i>	26	G	F-G	F-G	15	3	Deadwood (L)	Hedgerow	Private	-	-	Remove
50	Sugar Maple	<i>Acer saccharum</i>	81	P-F	F	F	25	7	Seams (M), deadwood (M), cavities (M), included bark (H), target canker causing some decline	Individual	Private	-	-	Remove
51	Manitoba Maple	<i>Acer negundo</i>	~14	F	P-F	F	15	2	Bow (H), vine competition (M)	Individual	Private	-	-	Remove
52	Black Walnut	<i>Juglans nigra</i>	21	F-G	G	F	20	2	Deadwood (M), asymmetrical crown (M), included fence (L)	Individual	Private	-	-	Remove
53	Manitoba Maple	<i>Acer negundo</i>	~30	F-G	F	F-G		5	Included fence (L), asymmetrical crown (H), sweep (M)	Individual	Private	-	-	Remove
54	Manitoba Maple	<i>Acer negundo</i>	~37	P-F	P-F	F		4	Seam (M) at 1 metre, included fence (H), bow (M), exposed roots (L), seam (M) from 1 metre to 1.5 metres, divergent stems (H)	Individual	Private	-	-	Remove
55	Black Walnut	<i>Juglans nigra</i>	19	F-G	G	P-F	30	3	Deadwood (M), asymmetrical crown (M), included fence (L)	Individual	Private	-	-	Remove
56	Black Walnut	<i>Juglans nigra</i>	24	F-G	G	P	50	3	Vine competition (M), deadwood (H)	Individual	Private	-	-	Remove (Condition)
57	Black Walnut	<i>Juglans nigra</i>	31	F-G	G	F	20	4	Vine competition (H), deadwood (M)	Individual	Private	-	-	Remove
58	Black Walnut	<i>Juglans nigra</i>	13	G	G	G		1.5		Group	Private	-	-	Remove
59	Poplar species	<i>Populus</i> sp.	~16, 11	P-F	F-G	G		2	Cavity (M) at base from previous stem failure, co-dominant stems at 0.25 metres, included bark (L)	Group	Private	-	-	Remove
60	Poplar species	<i>Populus</i> sp.	~20	-	-	-	-	-	Dead	Individual	Private	-	-	Remove (Condition)
61	Poplar species	<i>Populus</i> sp.	~18	-	-	-	-	-	Dead	Individual	Private	-	-	Remove (Condition)
62	Poplar species	<i>Populus</i> sp.	13	P-F	F	F-G		1.5	Stem wound (H) from 0.1 metres, to 1.25 metres, uprooting concrete, sweep (L)	Individual	Private	-	-	Remove
63	Manitoba Maple	<i>Acer negundo</i>	~10, ~10	F	F	P-F	15	2	Vine competition (M), co-dominant stems at base, top-down dieback	Individual	Private	-	-	Remove

64	Manitoba Maple	<i>Acer negundo</i>	1 - 12	F	F	F-G		2.5	Included fence (H), multi-stem at base	Individual	Private	-	-	Remove
P65				Refer to Table 2						Boundary Hedgerow	Shared	High	2	Retain
66	Manitoba Maple	<i>Acer negundo</i>	~35, ~30, ~25	F-G	F-G	G		4	Co-dominant stems at base, included fence (H)	Hedgerow	Private	-	-	Remove
67	Manitoba Maple	<i>Acer negundo</i>	~30, ~8	F-G	F	F-G		4	Union at base, co-dominant stems at 2 metres, included fence (L), bow (L), epicormic branching (M)	Hedgerow	Private	-	-	Remove
68	Black Walnut	<i>Juglans nigra</i>	12	F-G	F	G		3	Vine competition (M), bow (L)	Hedgerow	Private	-	-	Remove
69	Manitoba Maple	<i>Acer negundo</i>	11	F	F	G		2	Sweep (M), co-dominant stems at 1.5 metres, previous co-dominant stem pruned at base	Individual	Private	High	2	Retain
70	Manitoba Maple	<i>Acer negundo</i>	11	G	G	G		2		Boundary	Shared	High	2	Retain
71	Manitoba Maple	<i>Acer negundo</i>	~18	F-G	F-G	G		2.5	Co-dominant stems at 1.5 metres	Boundary	Shared	High	2	Retain
72	Manitoba Maple	<i>Acer negundo</i>	~25	F	F-G	F-G		2.5	Included fence (H), vine competition (M)	Individual	Private	-	-	Remove
73	Manitoba Maple	<i>Acer negundo</i>	10 - 20	F	F	F-G		3	Multi-stem at base, included fence (H)	Individual	Private	-	-	Remove
74	Black Walnut	<i>Juglans nigra</i>	~15	F	G	F	10	2	Included fence (H), vine competition (M), epicormic branching (M), deadwood (L)	Individual	Private	-	-	Remove
P75	Manitoba Maple	<i>Acer negundo</i>	1 - 7	F	F	G		1	6 stems of regeneration, all have included fence	Boundary Hedgerow	Shared	-	-	Remove
76	Manitoba Maple	<i>Acer negundo</i>	1 - 10	G	F-G	F-G	10	1.5	Multi-stem at base	Individual	Private	-	-	Remove
77	Siberian Elm	<i>Ulmus pumila</i>	~11, ~9	F-G	F-G	F-G		1	Co-dominant stems at 1 metre, sweep (L)	Individual	Private	-	-	Remove
78	Manitoba Maple	<i>Acer negundo</i>	10 - 25	F-G	F-G	G		4	Multi-stem	Individual	Private	-	-	Remove
79	Poplar species	<i>Populus</i> sp.	15	G	G	G		1.5		Individual	Private	-	-	Remove
80	Manitoba Maple	<i>Acer negundo</i>	~22	F	F	F-G		5	Included fence (L), bow (M), vine competition (L)	Group	Private	-	-	Remove
81	Manitoba Maple	<i>Acer negundo</i>	26, 21	F-G	F-G	F-G		4	Co-dominant stems at 1 metre, bow (L)	Boundary	Shared	-	-	Remove
82	Black Walnut	<i>Juglans nigra</i>	30	F-G	F-G	F-G		3.5	Deadwood (L), asymmetrical crown (L), burrow in root zone	Group	Private	-	-	Remove
83	Manitoba Maple	<i>Acer negundo</i>	~40, ~35, ~25, ~10	P-F	P-F	F-G		7	Multi-stem at base, cavity (M) at base, stem wound (H) at base from previous stem failure, divergent stems (M), epicormic branching (M)	Boundary	Shared	-	-	Remove (Condition)
84	Manitoba Maple	<i>Acer negundo</i>	~40	F	F-G	F-G		6	Stem wound (L) at base from previous stem failure, bow (L),	Boundary	Shared	-	-	Remove
85	Manitoba Maple	<i>Acer negundo</i>	~35	P-F	F	F-G		6	Stem wound (H) at base from previous stem failure, coppice growth (M), deadwood (M), bow (L)	Boundary	Shared	-	-	Remove (Condition)
86	Manitoba Maple	<i>Acer negundo</i>	10 - 45	F	F	F		7	Multi-stem at base, included fence (L), 7 stems, 4 stems dead, divergent stems (M)	Boundary	Shared	-	-	Remove
87	Manitoba Maple	<i>Acer negundo</i>	~50, ~40, ~30	F-G	P-F	F-G		8	Included fence (L), divergent stems (M)	Boundary	Shared	-	-	Remove
88	Sugar Maple	<i>Acer saccharum</i>	30	G	G	G		3		Boundary	Shared	-	-	Remove
89	Sugar Maple	<i>Acer saccharum</i>	18, 11	G	F-G	G		2	Union at base, asymmetrical crown (L)	Boundary	Shared	-	-	Remove
90	Sugar Maple	<i>Acer saccharum</i>	~20, ~12, ~12, ~10	F-G	F	F-G		2.5	Multi-stem at base, small stem dead	Boundary	Shared	-	-	Remove
91	Basswood	<i>Tilia americana</i>	5 - 25	G	F-G	G		5	Multi-stem at base, 7 stems	Boundary	Shared	-	-	Remove
92	Manitoba Maple	<i>Acer negundo</i>	~30, ~20, ~15	P	P	F		7	Cavity (H) with decay at base from previous stem failure, lean (H), multi-stem at base --> Hazard	Boundary	Shared	-	-	Remove (Condition)
93	Manitoba Maple	<i>Acer negundo</i>	24	F	F-G	F		4	Crooks (M), included fence (L)	Boundary	Shared	-	-	Remove
94	White Elm	<i>Ulmus americana</i>	~27	F-G	F	F		3	Bow (M), vine competition (H), included fence (L)	Group	Private	-	-	Remove
95	Black Walnut	<i>Juglans nigra</i>	~28, ~28	F-G	F-G	F	25	5	Co-dominant stems at 0.25 metres, included bark (M), deadwood (M)	Boundary	Shared	-	-	Remove
96	Manitoba Maple	<i>Acer negundo</i>	~35	F	P-F	F	25	5	Sweep (H), co-dominant stems in crown, divergent stems (H)	Group	Private	-	-	Remove
N1	Apple species	<i>Malus</i> sp.	~15	G	G	G		1.5		Individual	Neighbour	High	2	Retain
N2	Manitoba Maple	<i>Acer negundo</i>	~10	F	F	F-G		1.5	Sweep (M), fill piled at base within root zone	Group	Neighbour	High	2	Retain
N3	Norway Maple	<i>Acer platanoides</i>	~30	F-G	G	G		3	Pruning wounds (L), included object (L), coppice growth (L)	Group	Neighbour	Medium	3	Retain
P4	Manitoba Maple	<i>Acer negundo</i>	5 - 25	F-G	F-G	G		3	Group of 5 trees, ~20 stems	Group	Neighbour	High	2	Retain
N5	Black Walnut	<i>Juglans nigra</i>	~23	F-G	G	F-G	10	2.5	Deadwood (L), seam (M) from base to 0.75 metres	Individual	Neighbour	High	2	Retain
N6	Black Walnut	<i>Juglans nigra</i>	~21	F-G	G	F-G	15	2	Vine competition (M), asymmetrical crown (M), deadwood (M)	Individual	Neighbour	High	2	Retain
N7	-	-	~35	-	-	-	-	-	Dead	Individual	Neighbour	-	-	Remove (Condition)
N8	White Elm	<i>Ulmus americana</i>	~23, ~18	F-G	F-G	F-G		2.5	Co-dominant stems at base, vine competition (H), included bark (L), bow (L)	Individual	Neighbour	Medium	3	Retain
N9	White Elm	<i>Ulmus americana</i>	~25	F-G	G	F-G	15	3	Vine competition (M), deadwood (L), co-dominant stems in crown	Group	Neighbour	Medium	3	Retain
N10	Black Walnut	<i>Juglans nigra</i>	~25	F-G	F	F	25	3.5	Deadwood (M), asymmetrical crown (M), stem wound (L) at 0.5 metres, vine competition (L)	Group	Neighbour	Medium	3	Retain
N11	Black Walnut	<i>Juglans nigra</i>	~18	F	F	P-F	50	3.5	Bow (M), vine competition (L), deadwood (M)	Group	Neighbour	-	-	Remove (Condition)
N12	Black Walnut	<i>Juglans nigra</i>	~30	F-G	G	F	30	4.5	Deadwood (M)	Group	Neighbour	Medium	3	Retain
N13	Black Walnut	<i>Juglans nigra</i>	~65	F-G	F-G	F-G	15	5	Co-dominant stems at 3.5 metres, deadwood (L), buried root flare	Individual	Neighbour	High	2	Retain
N14	Norway Maple	<i>Acer platanoides</i>	~30	F-G	F-G	G		2.5	Co-dominant stems at 2 metres	Boundary	Shared	-	-	Remove

N15	Siberian Elm	<i>Ulmus pumila</i>	~32	F-G	F-G	F-G		3	Co-dominant stems at 1.25 metres, included bark (M), vine competition (M), deadwood (L)	Group	Neighbour	High	2	Retain
N16	Manitoba Maple	<i>Acer negundo</i>	~30, 28, ~27, ~25	P	P-F	F-G		6	Multi-stem at base, divergent stems (H), stems at risk of failure due to grade changes --> Hazard	Group	Neighbour	-	-	Remove (Condition)
N17	Manitoba Maple	<i>Acer negundo</i>	~40	F	F	F-G		6	Stem wound (M) at base from previous stem failure, bow (M), deadwood (L), broken branches (L)	Group	Neighbour	-	-	Remove
N18	Black Walnut	<i>Juglans nigra</i>	~30	G	G	F-G	10	4.5	Deadwood (L)	Group	Neighbour	Medium	3	Retain
N19	Black Walnut	<i>Juglans nigra</i>	~20	G	G	F-G	15	2.5	Deadwood (L)	Group	Neighbour	High	2	Retain
N20	Black Walnut	<i>Juglans nigra</i>	~11	F	F	F		1.5	Epicormic branching (M), bow (M), deadwood (L)	Boundary	Shared	High	2	Retain
N21	Black Walnut	<i>Juglans nigra</i>	~25, ~15	F-G	F-G	F	20	4		Group	Neighbour	Medium	3	Retain
N22	Black Walnut	<i>Juglans nigra</i>	~30	G	F-G	F-G		4	Asymmetrical crown (L), vine competition (L), epicormic branching (L)	Group	Neighbour	Medium	3	Retain
N23	Black Walnut	<i>Juglans nigra</i>	~13	G	F-G	F	25	2	Vine competition (M), union at 3 metres, 1 stem dead	Group	Neighbour	High	2	Retain
N24	Manitoba Maple	<i>Acer negundo</i>	~25	F-G	F	F-G		3	Sweep (M)	Group	Neighbour	High	2	Retain
N25	Manitoba Maple	<i>Acer negundo</i>	~11	F	P-F	F-G		2	Bow (M)	Group	Neighbour	High	2	Retain
N26	Black Walnut	<i>Juglans nigra</i>	~25	F-G	F-G	F-G		3.5		Group	Neighbour	Medium	3	Retain
N27	Sugar Maple	<i>Acer saccharum</i>	~15	G	G	G		2	Epicormic branching (L)	Group	Neighbour	High	2	Retain
N28	Black Walnut	<i>Juglans nigra</i>	~30	G	F-G	F-G	15	3.5	Multi-stem at 3.5 metres	Group	Neighbour	Medium	3	Retain
N29	Basswood	<i>Tilia americana</i>	~35	G	F-G	G		4.5	Coppice growth (L), sweep (L)	Group	Neighbour	High	2	Retain
N30	Sugar Maple	<i>Acer saccharum</i>	~10	G	G	G		1		Group	Neighbour	High	2	Retain
N31	White Elm	<i>Ulmus americana</i>	~25	-	-	-	-	-	Dead	Group	Neighbour	-	-	Remove (Condition)
N32	White Elm	<i>Ulmus americana</i>	~25	-	-	-	-	-	Dead	Group	Neighbour	-	-	Remove (Condition)
N33	Sugar Maple	<i>Acer saccharum</i>	~20	G	F-G	G		3		Group	Neighbour	Medium	3	Retain
N34	Black Walnut	<i>Juglans nigra</i>	~30	G	F-G	F-G	10	3.5	Asymmetrical crown (M), deadwood (L)	Group	Neighbour	Medium	3	Retain
N35	Black Walnut	<i>Juglans nigra</i>	~10	G	G	F-G	10	2	Deadwood (L), crooks (L)	Group	Neighbour	High	2	Retain
N36	White Elm	<i>Ulmus americana</i>	~14	F-G	F-G	F-G		1.5	Crooks (L), vine competition (M)	Group	Neighbour	High	2	Retain
N37	Manitoba Maple	<i>Acer negundo</i>	~13, ~10	P	P-F	P		1	Fungal fruiting bodies at base, broken top, epicormic branching (H)	Group	Neighbour	-	-	Remove (Condition)
N38	Manitoba Maple	<i>Acer negundo</i>	~17, ~9	P-F	F	P-F		3	Cavity (M) at base, epicormic branching (H), bow (M)	Group	Neighbour	Medium	3	Retain
N39	Black Walnut	<i>Juglans nigra</i>	~18	G	G	F	25	2	Vine competition (M), deadwood (M)	Group	Neighbour	High	2	Retain
N40	Black Walnut	<i>Juglans nigra</i>	~20	G	F-G	F-G	15	3	Vine competition (L), deadwood (L)	Group	Neighbour	High	2	Retain
N41	Black Walnut	<i>Juglans nigra</i>	~21	G	G	F	25	3	Vine competition (M), deadwood (M)	Group	Neighbour	High	2	Retain
N42	Black Walnut	<i>Juglans nigra</i>	~16	F-G	G	F	30	2	Deadwood (M)	Group	Neighbour	High	2	Retain
N43	Norway Maple	<i>Acer platanoides</i>	~22	F	F-G	F-G		3	Fill piled at base	Group	Neighbour	Medium	3	Retain
N44	Manitoba Maple	<i>Acer negundo</i>	12	F-G	F-G	F-G		2.5	Bow (L)	Group	Neighbour	High	2	Retain
N45	Norway Maple	<i>Acer platanoides</i>	~10, ~5, ~4, ~4	F	F	F		2.5	Multi-stem at base, cavity (L) at base, epicormic branching (M)	Group	Neighbour	Medium	3	Retain
N46	Norway Maple	<i>Acer platanoides</i>	24, ~10	G	F-G	G		3	Union at base, crook (L)	Group	Neighbour	Medium	3	Retain
N47	Black Walnut	<i>Juglans nigra</i>	~20	G	F-G	F	20	2	Crooks in crown	Group	Neighbour	High	2	Retain

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



Preservation of the remaining 44 trees and two tree polygons will be possible with appropriate tree protection measures. Tree protection measures must be implemented prior to the construction phase (earth works).

- It is the applicant's responsibility to ensure a potential applicant is not located near or within an eligible property or on an owned property.
- It is the applicant's responsibility to ensure a potential applicant is not located on a property owned by the applicant or an owned property.
- The applicant would be required to provide evidence to explain any need to the satisfaction of Urban Forestry.
- The production materials must be handled using standards as outlined in the document titled "the satisfaction of Urban Forestry".
- The production materials must be handled using Powdered and handling (minimum) form of 1/4" or an equivalent approved by Urban Forestry.
- When required, signs as specified in Section 4, Tree Protection Signage must be attached to all sides of the barrier.
- Perk to the components of the tree activity such as site analysis, description or consultation, the tree production measures specified on this plan must be verified by the satisfaction of Urban Forestry.
- Once all tree production measures have been installed, Urban Forestry will need to be contacted for an inspection of the production materials and tree production measures. The inspection will be scheduled within 14 days of the production materials being installed.
- Urban Forestry will review the production materials and tree production measures.

[illegible]

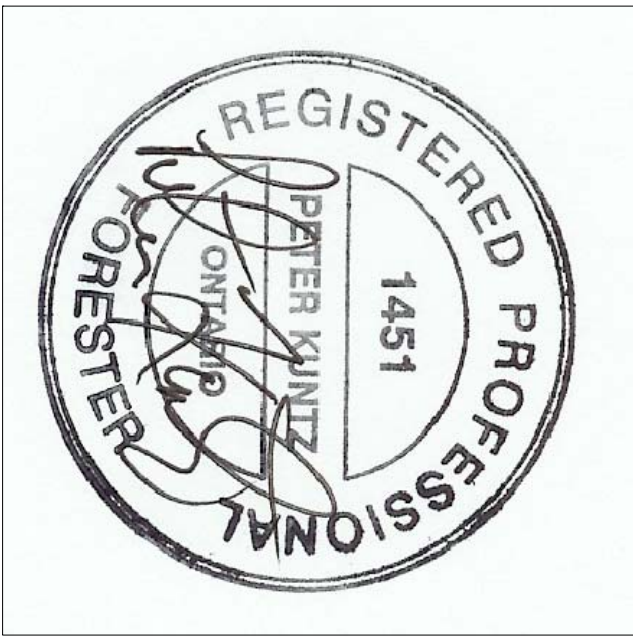
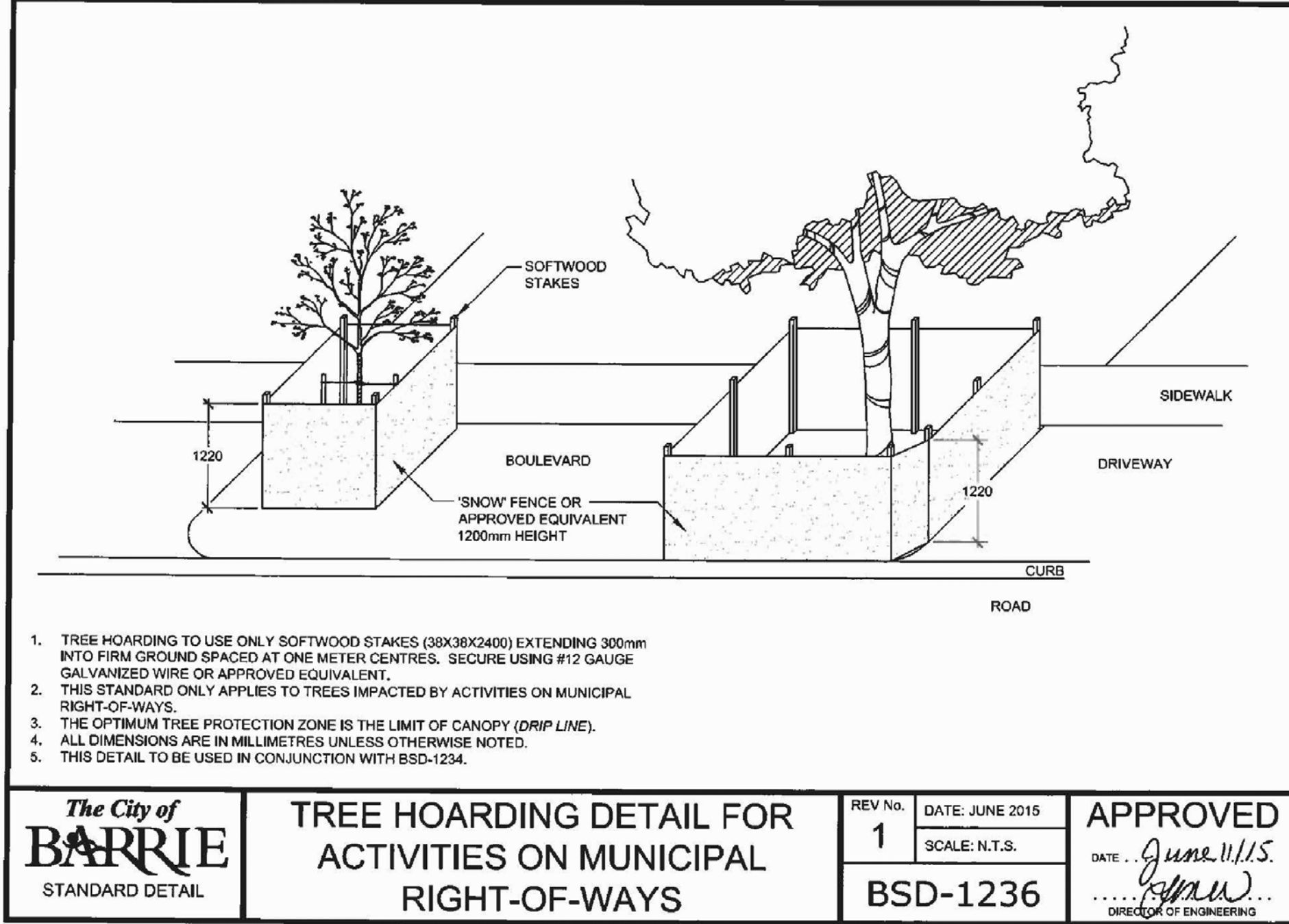
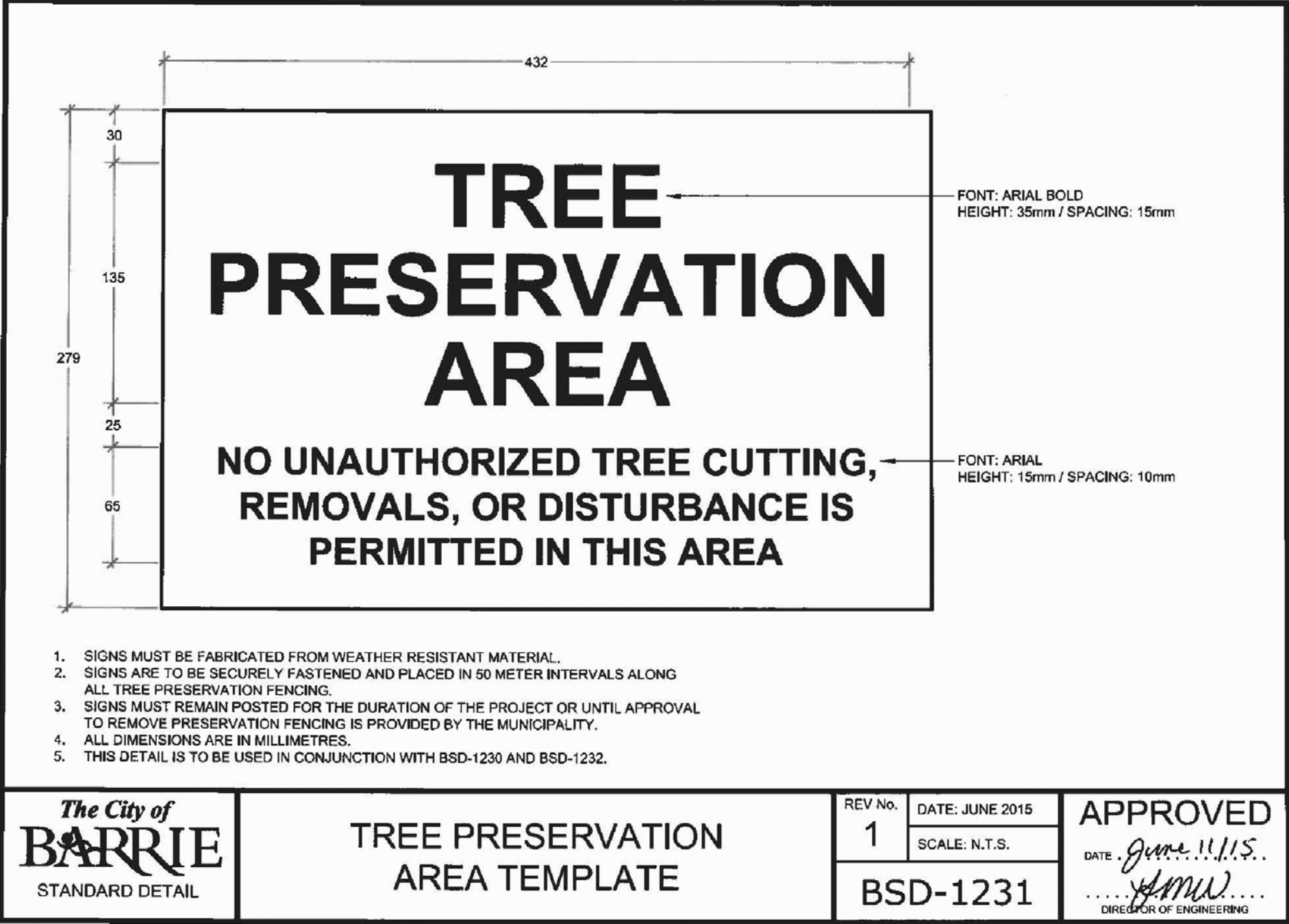
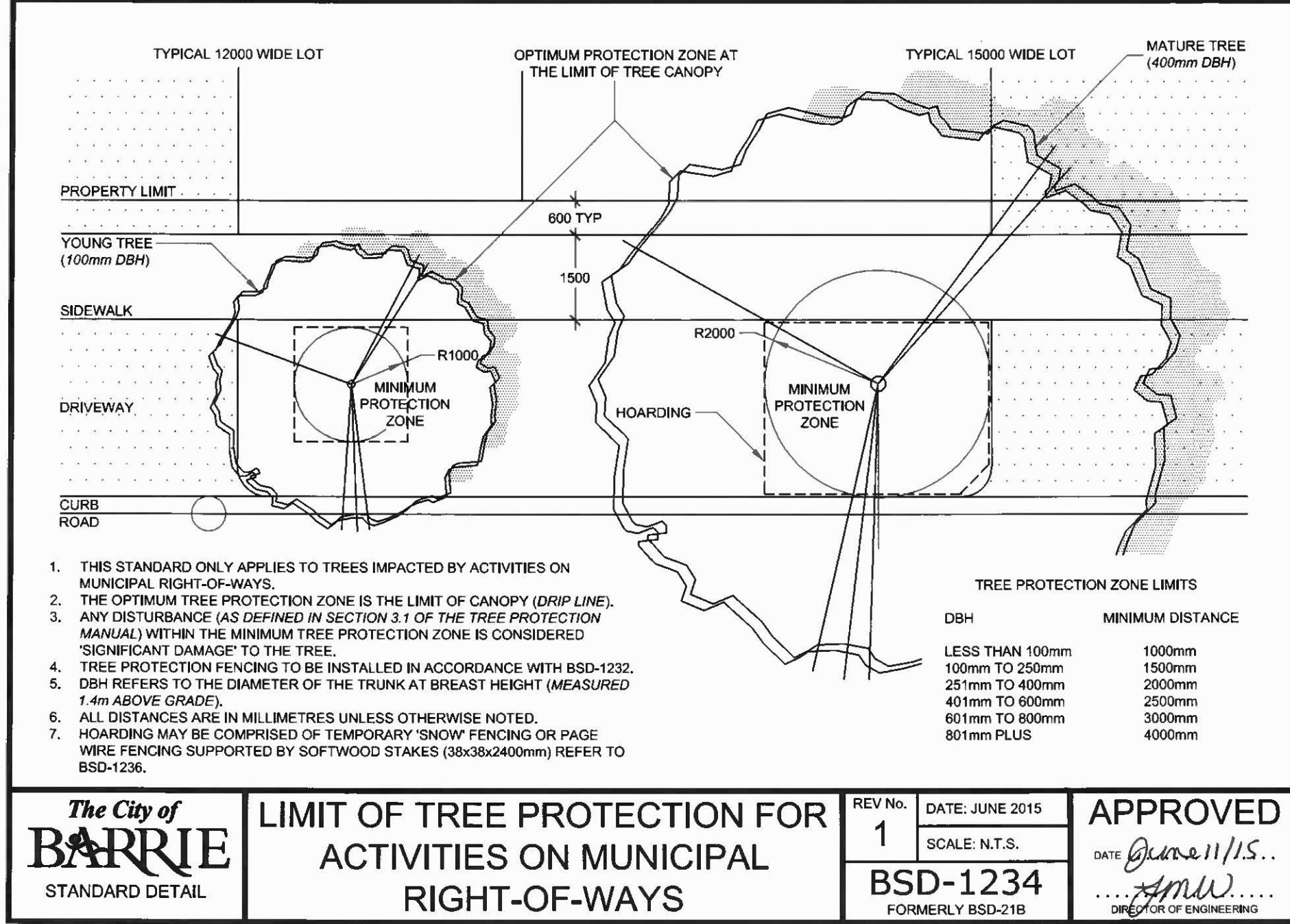
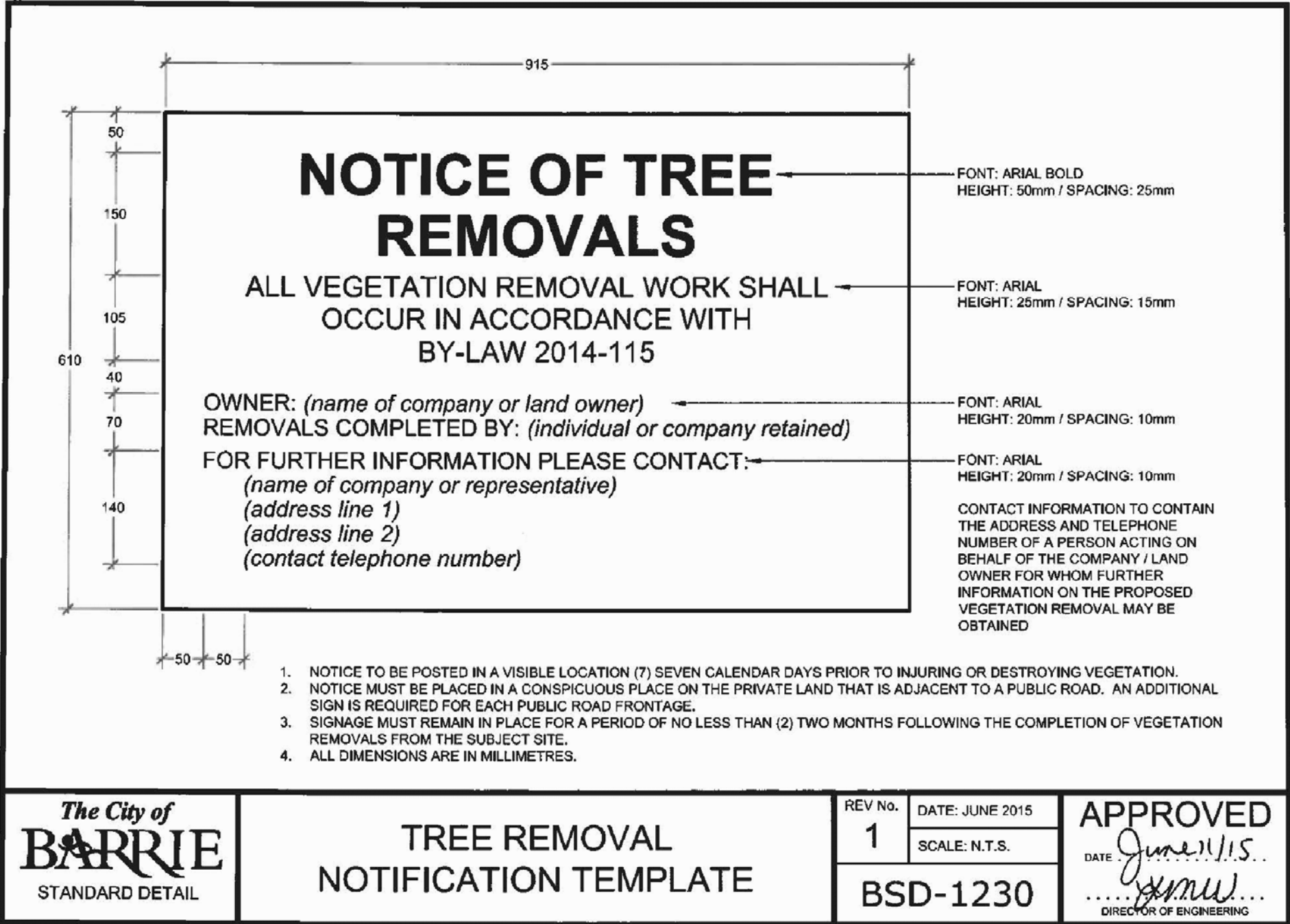
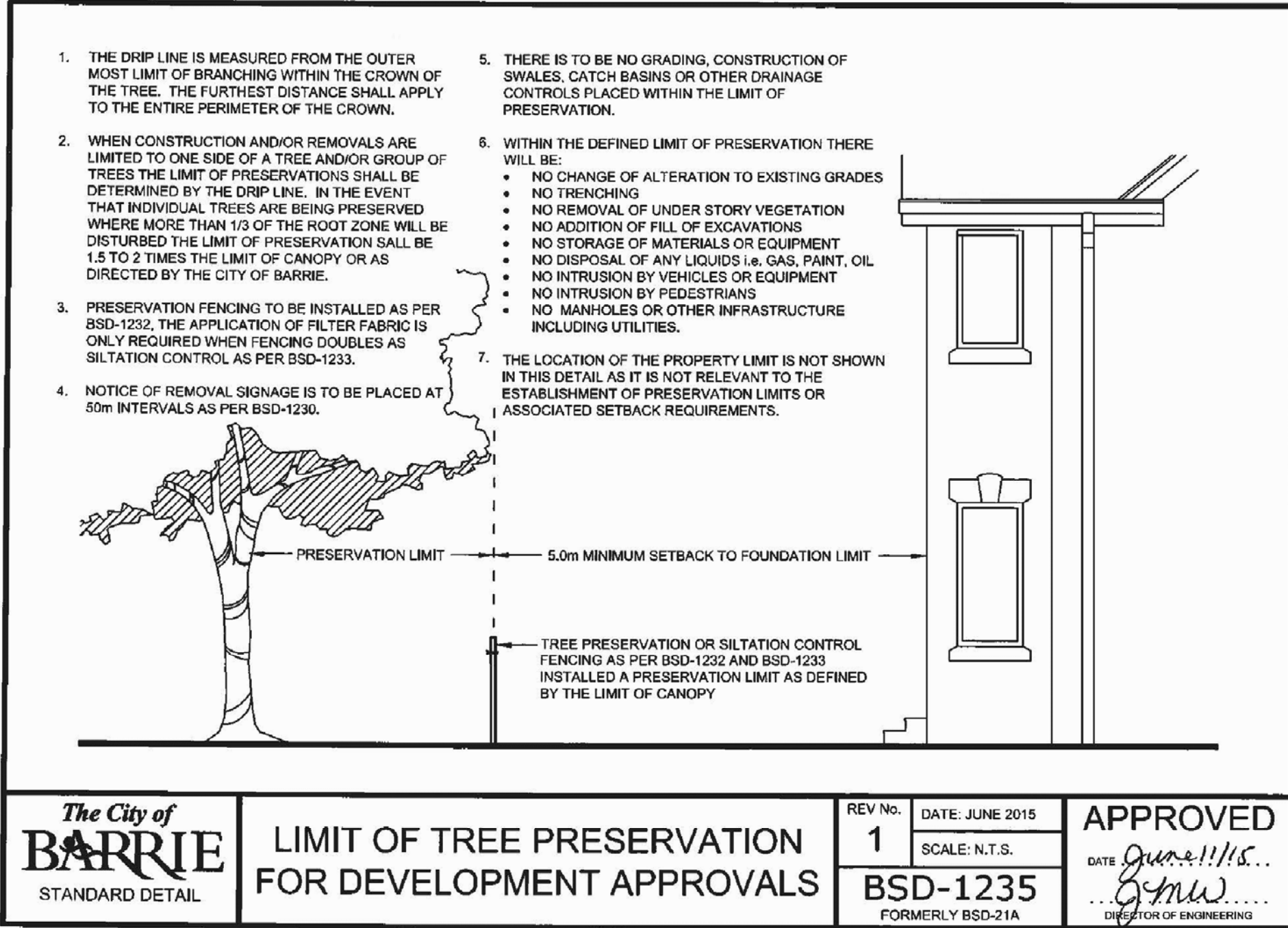
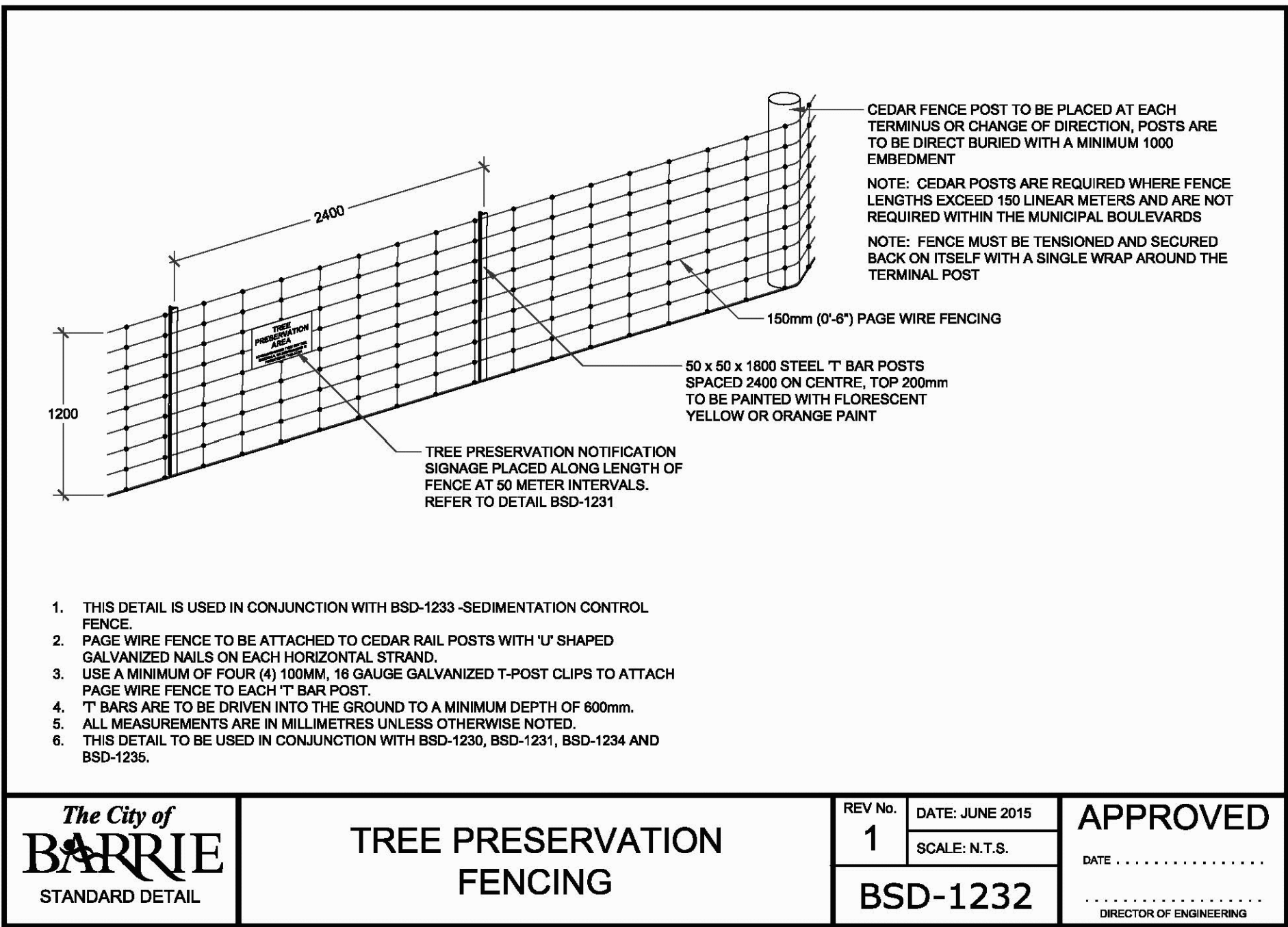
Base Data: KRCMAR Survoyors Ltd. (survey), Architecture Unfolded (site plan)

Innovative Planning Solutions
647 Welham Road, Unit 9A
Barrie, ON L4N 0B7

Property:
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Barrie, ON

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

TP-1



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Tree Inventory and Preservation Plan
Standard Details and Drawings

Project P2771

Date 21 June 2021

Scale NTS

Figure TP-2