



TREE PROTECTION BARRIER

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TI-2
N.T.S.

General Note:

Prior to the commencement of any site activity the tree protection barriers specified on this plan must be installed and written notices provided to Urban Forestry. The tree protection barriers must remain in effective condition until all site activities including landscaping are complete. Where required, signs as specified in the Arborist Report "Tree Protection Zone" must be attached to all sides of the barrier. Written notice must be provided to Urban Forestry prior to the removal of the tree protection barriers.

ARBORICULTURAL WORK:

Any roots or branches which extend beyond TPZ indicated on this plan which require pruning, must be pruned by a qualified Arborist or other tree professional as approved by Urban Forestry. All pruning of tree roots and branches must be in accordance with good arboricultural standards. Roots located outside the TPZ that have received approval from Urban Forestry to be pruned must first be exposed by hand digging or by using a low pressure hydro vac method. This will allow a proper pruning cut and minimize resting of the roots. The Arborist/tree professional retained to carry out crown or root pruning must contact Urban Forestry no less than 48 hours prior to conducting any specified work.

THE TREE PROTECTION ZONE:

The following chart is showing minimum required distances for determining a Tree Protection Zone (TPZ) for Town-owned trees located on a Town Street, in parks and trees on private property subject to either the Ravine and Natural Feature Protection By-law or the Private Tree By-law. Some trees and some site conditions may require a larger TPZ.

Table 1 – Tree Protection Zones:

Trunk Diameter DBH*	Minimum Protection Distances Required** Town-owned and Private Trees	Minimum Protection Distances Required Trees in Areas Protected by the Ravine and Natural Feature Protection By-law Whichever of the two is greater:
<10cm	1.8m	The drip line***or 1.2m
10–30cm	2.4m	The drip line or 3.6m
31–50cm	3.0m	The drip line or 4.8
51–60cm	3.6m	The drip line or 6.0m
61–70cm	4.2m	The drip line or 8.4m
71–80cm	4.8m	The drip line or 9.6m
81–90cm	5.4m	The drip line or 10.8m
91–100cm	6.0m	The drip line or 12.0m

- For trees over 100 cm DBH, add 10cm, to the TPZ for every one centimeter of DBH.
- Roots can extend from the trunk to 2–3 times the distance of the drip line (See Detail 3, TP-2)
- Diameter at breast height (DBH) measurement of tree trunk taken at 1.37 metres above ground.
- Tree Protection Zone distances are to be measured from the outside edge of the tree base towards the drip line and may be limited by an existing paved surface, provided the existing paved surface remains intact throughout the construction work.

*Diameter at breast height (DBH) measurement of tree trunk taken at 1.4 metres above the ground.
** Tree Protection Zone distances are to be measured from the outside edge of the tree base.
*** Diameter (30cm) at which the trees qualify for protection under the private tree by-law.
**** The drip line is defined as the area beneath the outer most branch tips of the tree.
***** Converted from ISA Arborists' Certification Study Guide, general guideline for tree protection barriers of 1 foot of diameter from the stem for each inch of stem diameter.

Within a TPZ there must be:
– no construction;
– no altering of grade by adding fill, excavating, trenching, scraping, dumping or disturbance of any kind.
– no storage of construction materials, equipment, soil, construction waste or debris.
– no disposal of any liquids e.g. concrete slush, gas, oil, paint.
– no movement of vehicles, equipment, or pedestrians.
– no parking of vehicles or machinery.
– directional micro-tunneling and boring may be permitted with the limits of a TPZ subject to approval by Urban Forestry.
– open face cuts outside a TPZ that are consistent with an approved plan and that require root pruning, require the services of a qualified arborist or approved tree professional. An exploratory dig, either by hand or using low water pressure hydro vac method, must be completed prior to commencing with open face cuts outside the TPZ.

The above mentioned requirements are for area(s) designated as a TPZ. These requirements should also be implemented outside the TPZ in areas where tree roots are located. The roots of a tree can extend from the trunk to approximately 2–3 times the distance of the drip line.

TREE PROTECTION NOTES

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Tree No.	Owner	Common Name	Botanical Name	DBH (cm)	Canopy Diameter (m)	Condition	Comments - Condition Related	Recommendation	1401	SN	Ash sp.	Fraxinus sp.	21	D	D	EAB	RX		
									1402	SN	Ash sp. <td>Fraxinus sp.<th>32</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>32</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	32	D	D	EAB	RX		
									1403	P	Ash sp. <td>Fraxinus sp.<th>20</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>20</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	20	D	D	EAB	RX		
									1404	N	Ash sp. <td>Fraxinus sp.<th>33</th><th>D</th><th>D</th><th>EAB</th><th>Beaver damage.</th><th>RX</th></td>	Fraxinus sp. <th>33</th> <th>D</th> <th>D</th> <th>EAB</th> <th>Beaver damage.</th> <th>RX</th>	33	D	D	EAB	Beaver damage.	RX	
									1405	P	Ash sp. <td>Fraxinus sp.<th>22</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>22</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	22	D	D	EAB	RX		
									1406	P	Ash sp. <td>Fraxinus sp.<th>15</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>15</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	15	D	D	EAB	RX		
									1407	N	Ash sp. <td>Fraxinus sp.<th>24</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>24</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	24	D	D	EAB	RX		
									1408	P	Ash sp. <td>Fraxinus sp.<th>31</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>31</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	31	D	D	EAB	RX		
									1409	P	Ash sp. <td>Fraxinus sp.<th>22</th><th>D</th><th>D</th><th>EAB</th><th>2 stem co-dominant</th><th>RX</th></td>	Fraxinus sp. <th>22</th> <th>D</th> <th>D</th> <th>EAB</th> <th>2 stem co-dominant</th> <th>RX</th>	22	D	D	EAB	2 stem co-dominant	RX	
									1410	SN	Ash sp. <td>Fraxinus sp.<th>25</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>25</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	25	D	D	EAB	RX		
									1411	P	Ash sp. <td>Fraxinus sp.<th>24</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>24</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	24	D	D	EAB	RX		
									1412	P	Ash sp. <td>Fraxinus sp.<th>27</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>27</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	27	D	D	EAB	RX		
									1413	P	Ash sp. <td>Fraxinus sp.<th>24</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>24</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	24	D	D	EAB	RX		
									1414	P	Ash sp. <td>Fraxinus sp.<th>30</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>30</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	30	D	D	EAB	RX		
									1415	P	Ash sp. <td>Fraxinus sp.<th>28</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>28</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	28	D	D	EAB	RX		
									1416	P	Ash sp. <td>Fraxinus sp.<th>31</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>31</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	31	D	D	EAB	RX		
									1417	P	Ash sp. <td>Fraxinus sp.<th>33</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>33</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	33	D	D	EAB	RX		
									1418	P	Ash sp. <td>Fraxinus sp.<th>31</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>31</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	31	D	D	EAB	RX		
									1419	P	Ash sp. <td>Fraxinus sp.<th>30</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>30</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	30	D	D	EAB	RX		
									1420	P	Ash sp. <td>Fraxinus sp.<th>23</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>23</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	23	D	D	EAB	RX		
									1421	SN	Ash sp. <td>Fraxinus sp.<th>24</th><th>D</th><th>D</th><th>EAB</th><th>2 stem</th><th>RX</th></td>	Fraxinus sp. <th>24</th> <th>D</th> <th>D</th> <th>EAB</th> <th>2 stem</th> <th>RX</th>	24	D	D	EAB	2 stem	RX	
									1422	P	Ash sp. <td>Fraxinus sp.<th>28</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>28</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	28	D	D	EAB	RX		
									1423	P	Ash sp. <td>Fraxinus sp.<th>22</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>22</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	22	D	D	EAB	RX		
									1424	P	Ash sp. <td>Fraxinus sp.<th>26</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>26</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	26	D	D	EAB	RX		
									1425	P	Ash sp. <td>Fraxinus sp.<th>18</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>18</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	18	D	D	EAB	RX		
									1426	P	Swamp Cedar	Thuja occidentalis	17	F/P	F	Part of hedge of smaller caliper cedar +/- 40 stems	RX		
									1427	P	Ash sp. <td>Fraxinus sp.<th>24</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>24</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	24	D	D	EAB	RX		
									1428	P	Ash sp. <td>Fraxinus sp.<th>25</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>25</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	25	D	D	EAB	RX		
									1429	P	Ash sp. <td>Fraxinus sp.<th>26</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>26</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	26	D	D	EAB	RX		
									1430	P	Ash sp. <td>Fraxinus sp.<th>43</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>43</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	43	D	D	EAB	RX		
									1431	P	Ash sp. <td>Fraxinus sp.<th>40</th><th>D</th><th>D</th><th>EAB</th><th>RX</th></td>	Fraxinus sp. <th>40</th> <th>D</th> <th>D</th> <th>EAB</th> <th>RX</th>	40	D	D	EAB	RX		
									1432	P	Swamp Cedar	Thuja occidentalis	15	F	F	4 stems, part of hedge of similar caliper cedars +/- 50 stems at 10-15	R		
									1433	P	Swamp Cedar	Thuja occidentalis	17	F	F	Part of hedge	R		
									1434	P	Manitoba Maple	Acer negundo	34	10	F	F		R	
									1435	P	Manitoba Maple	Acer negundo	38	8	F	F		R	
									1436	P	Manitoba Maple	Acer negundo	22	7	F	F/P	Co-dominant at base	R	
									1437	P	Manitoba Maple	Acer negundo	30	6	F	F	Mild lean	R	
									1438	P	Ash sp. <td>Fraxinus sp.<th>56</th><th>D</th><th>EAB</th><th></th><th>RX</th></td>	Fraxinus sp. <th>56</th> <th>D</th> <th>EAB</th> <th></th> <th>RX</th>	56	D	EAB		RX		
									1439	P	Manitoba Maple	Acer negundo	29	8	F	F	Mild lean	R	
									1440	P	Manitoba Maple	Acer negundo	30	6	F	F	Mild lean	R	
									1441	P	Manitoba Maple	Acer negundo	21	5	F	F	Mild lean	R	
									1442	P	Manitoba Maple	Acer negundo	42	12	F	P	Co-dominant at 1.2m, weak union with included bark and signs of probable failure	R	
									1443	P	Manitoba Maple	Acer negundo	34	9	F	F	Mild lean	R	
									1444	P	Manitoba Maple	Acer negundo	24	6	F	F	Mild lean	P	
									1445	SN	Manitoba Maple	Acer negundo	24	5	F	F	Mild lean	P	
									1446	P	Manitoba Maple	Acer negundo	59	21	P	F/P	Significant deadwood in canopy, tree is in decline	R	
									1447	P	Manitoba Maple	Acer negundo	40	10	F	F	Mild lean	R	
									1448	P	Manitoba Maple	Acer negundo	37	D	EAB		RX		
									1449	P	Burr Oak	Quercus macrocarpa	24	6	F/P	P	Strangled by vines	R	
									1450	P	White Birch	Betula papyrifera	19	4	P	P	Significant failure of former co-dominant stems, unbalanced, former co-dominant stem has failed, remaining stem has moderate/significant lean	RX	
									1451	P	Manitoba Maple	Acer negundo	61	9	F/P	P		R	
									1452	P	Manitoba Maple	Acer negundo	30	8	F	F/P		P	
									1453	P	Manitoba Maple	Acer negundo	34	9	F	F	Imbalanced crown	R	
									1454	P	Manitoba Maple	Acer negundo	19	4	F	F		P	
									1455	P	Manitoba Maple	Acer negundo	31	7	F	F	Mild lean	P	
									1456	P	Manitoba Maple	Acer negundo	15	4	F	F		P	
									1457	P	Manitoba Maple	Acer negundo	26	6	F/P	F		P	
									1458	P	Ash sp. <td>Fraxinus sp.<th>31</th><th>D</th><th>EAB</th><th></th><th>RX</th></td>	Fraxinus sp. <th>31</th> <th>D</th> <th>EAB</th> <th></th> <th>RX</th>	31	D	EAB		RX		
									1459	P	Manitoba Maple	Acer negundo	21	6	F/P	F/P		R	
									1460	P	Manitoba Maple	Acer negundo	28	12	F	F		P	
									1461	P	Manitoba Maple	Acer negundo	26	4	F/P	F/P		R	
									1462	P	Manitoba Maple	Acer negundo	23	5	F	F/P	3 stem, co-dominant at base	R	
									1463	P	Ash sp. <td>Fraxinus sp.<th>16</th><th>D</th><th>EAB</th><th></th><th>RX</th></td>	Fraxinus sp. <th>16</th> <th>D</th> <th>EAB</th> <th></th> <th>RX</th>	16	D	EAB		RX		
									1464	P	Manitoba Maple	Acer negundo	39	22	F/P	F/P	2 stem, co-dominant, moderate/significant deadwood in canopy	P	
									1465	P	Manitoba Maple	Acer negundo	45	18	F/P	F/P	2 stem, co-dominant, moderate/significant deadwood in canopy	P	
									1466	P	Manitoba Maple	Acer negundo	45	20	F	F/G		P	
									1467	N	White Pine	Pinus strobus	17	5	F/G	G		P	
									1468	N	White Pine	Pinus strobus	18	6	F/G	G		P	
									1469	N	White Pine	Pinus strobus	20	7	F	G		P	
									1470	N	White Pine	Pinus strobus	22	7	G/H	G		P	
									1471	N	White Pine	Pinus strobus	18	6	G/H	G		P	
									1472	N	White Pine	Pinus strobus	17	5	F/G	G		P	
									1473	P	Manitoba Maple	Acer negundo	37	10	F/P	P	2 stem	P	
									1474	P	Manitoba Maple	Acer negundo	40	15	F	P		P	
									1475	P	Red Oak	Quercus rubra	21	6	F/P	F		P	
									1476	P	Red Oak	Quercus rubra	34	12	F	F		P	
									1477	P	Red Oak	Quercus rubra	33	14	F	F	Mild lean	P	
									1478	N	Black Cherry	Prunus serotina	42	18	P	P		P	
									1479	N	White Oak	Quercus alba	108	30	F	P/P	Significant deadwood in canopy, multiple developing structural issues, tree in severe decline	P	
									1480	P	Cherry Sp.	Prunus Sp.	23	6	F	F/P		P	
									1481	P	American Elm	Ulmus americana	15	4	F	F		P	
									1482	N	Cherry Sp.	Prunus Sp.	15	3	F	F		P	
									1483	P	Red Oak	Quercus rubra	18	4	F	F/P		P	
									1484	N	Burr Oak	Quercus macrocarpa	64	20	F/P	F	Signs of internal rot	P	
									1485	N	Burr Oak	Quercus macrocarpa	25	8	F	F/P		P	
									1486	P	American Elm	Ulmus americana	17	4	F/P	P		P	
									1487	N	Burr Oak	Quercus macrocarpa	29	8	F	P	co-dominant at 0.9m with included bark	P	
									1488	N	Burr Oak	Quercus macrocarpa	45	16	F/P	F/P	co-dominant at 1.5m	P	
									1489	N	Red Oak	Quercus rubra	35	17	F	P		P	
									1490	P	American Elm	Ulmus americana	18	4	F	F	Mild lean	P	
									1491	P	Burr Oak	Quercus macrocarpa	29	7	F/P	F		P	
									1492	N	Burr Oak	Quercus macrocarpa	34	9	F	F		P	
									1493	P	Burr Oak	Quercus macrocarpa	30	7	F/P	F		P	
									1494	N	Red Oak	Quercus macrocarpa	43	14	F/P	F		P	