

**Sheridan Park Drive Extension
Municipal Class Environmental
Assessment**

**Tree Inventory and Preservation
Report**

City of Mississauga

**R.J. Burnside & Associates Limited
6990 Creditview Road, Unit 2
Mississauga ON L5N 8R9 CANADA**

**January 19, 2018
3000379474.0000**

Distribution List

No. of Hard Copies	PDF	Email	Organization Name
0	Yes	Yes	City of Mississauga

Record of Revisions

Revision	Date	Description
0	December 12, 2017	Draft Submission to the City of Mississauga
1	January 19, 2018	Final Submission to the City of Mississauga

R.J. Burnside & Associates Limited**Report Prepared By:**

Kevin Butt, B.Sc. (Env). Eco. Rest. Cert.
Certified Arborist & Terrestrial Ecologist
ISA ON-0861A, Tree Risk Assessment Qualified
KB:js

**Report Reviewed By:**

Jennifer Vandermeer, P.Eng.
Environmental Assessment Lead

Table of Contents

1.0	Introduction	1
2.0	Study Area	1
3.0	Methodology	3
4.0	Findings	4
4.1	Description of Proposed Construction	4
4.2	Impacts to Trees	4
5.0	Guidelines to the Protection of Trees and Adjacent Natural Features during Construction	5
6.0	Compensation and Mitigation Guidelines.....	5
7.0	Summary	6

Appendices

Appendix A Tree Study Methodology
Appendix B Tree Assessment Data sheet
Appendix C Limitation of Tree Studies
Appendix D Hoarding Detail
Plan C Tree Preservation Plan

Disclaimer

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

1.0 Introduction

The City of Mississauga (City) has undertaken a Municipal Class Environmental Assessment (EA) to investigate the proposed extension of Sheridan Park Drive between Homelands Drive and Speakman Drive in the southwestern area of Mississauga. R.J. Burnside & Associates Limited (Burnside) has facilitated the EA on behalf of the City.

The Study has followed a comprehensive planning and design process in order to explore the opportunity to connect the east and west sections of Sheridan Park Drive, improve the road network connectivity in the residential neighbourhood and business area, create options for alternative routes and improve multi-modal network connectivity. The Study has been completed in accordance with the requirements of a Schedule B Undertaking as outlined in the Municipal Engineers Association Municipal Class Environmental Assessment Document (October 2000, as amended 2007, 2011 & 2015), which is an approved process under the *Ontario Environmental Assessment Act*.

As part of the EA Study, Burnside has completed an arborist report to map and assess trees within or immediately adjacent the proposed road alignment that may be impacted by construction of the road extension. The Tree Preservation Plan illustrates the trees in the context of the proposed design with recommendations on preservation. Mitigation guidelines to optimize tree retention through the implementation of measures such as tree protection fence are provided in the report, and illustrated on Plan C: Tree Preservation Plan.

2.0 Study Area

The Study Area is generally bordered by a utility corridor to the north, Winston Churchill Boulevard to the west, Speakman Drive/Homelands Drive to the east and naturalized private lands to the south. The Study Area is illustrated on the figure below. The proposed extension of Sheridan Park Drive falls within the existing City of Mississauga owned right-of-way (ROW), which runs through the centre part of the Study Area.

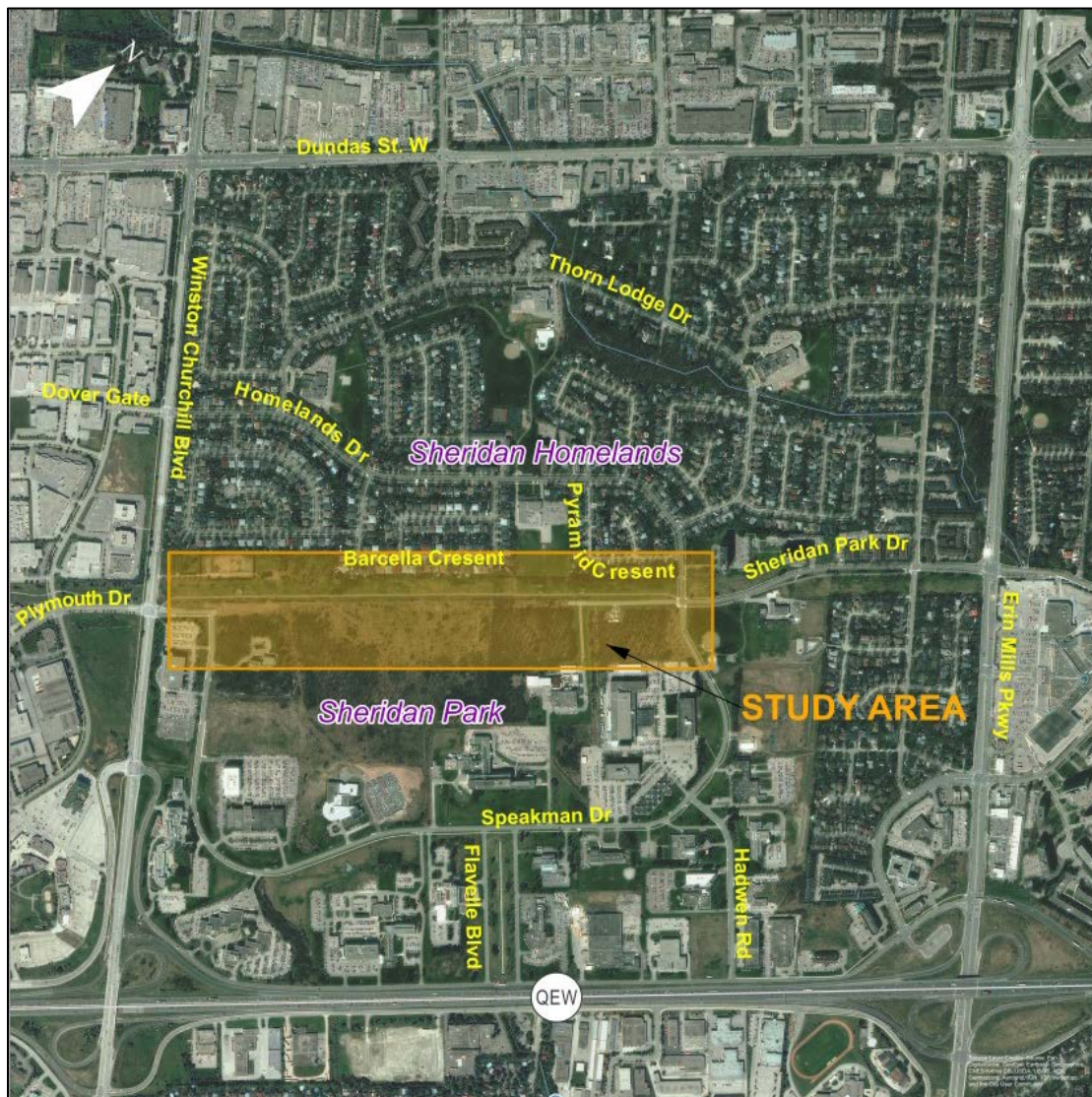
The Study Area includes a unique combination of uses including the Sheridan Park Corporate Centre (Sheridan Park), a utility corridor that includes a multi-use trail (MUT) and the Sheridan Homelands residential neighbourhood.

Sheridan Park is a 340 acre corporate centre, which is primarily designated Business Employment in the City of Mississauga's Official Plan (MOP). The majority of Sheridan Park is occupied by private industries and businesses, which include in their landholdings significant natural areas particularly on the north side of corporate centre, within the Study Area. These naturalized areas include two wooded areas that are

identified as Significant Natural Areas in the City's Natural Areas Survey (2016 Update). Sheridan Park is also identified as one of the City's cultural landscape due to its scenic and distinct visual qualities.

The City maintains a paved MUT through the utility corridor from Winston Churchill Boulevard to Homelands Drive/Speakman Drive. The trail then continues east along the south side of Sheridan Park Drive to Erin Mills Parkway. To the west of Winston Churchill Boulevard, the trail continues through the hydro corridor in Oakville. The trail provides recreational opportunities to the local residents and commuter cyclists.

Study Area



3.0 Methodology

A site meeting was completed with Sarah Piett, Natural Heritage Coordinator (City of Mississauga) on April 26, 2017. A site walk was carried out and the approach to the tree assessment was approved at that time.

Trees included in the assessment are:

- Trees 10 cm Diameter at Breast Height (DBH) and greater within the existing unopened road allowance; and
- Trees 10 cm DBH and greater with canopies that extend into the anticipated impact area.

The methodology used to assess the trees is provided in Appendix A. The following data were collected for each tree included in the study:

- Species;
- DBH (cm);
- Crown reserve (m);
- Condition (Good, Fair, Poor, or Dead); and
- Additional comments (to supplement condition or location notes, as needed).

Trees within the proposed road extension area were tagged during the assessment. Trees located offsite and within existing roadside areas (i.e. in manicured turf boulevard areas) were not tagged.

Trees are illustrated on Plan C (provided at the end of this Report) with their crown reserves and the proposed development design (including the proposed grading limits). Generally, trees with 25% or greater of their crown reserve conflicting with the proposed construction zone were recommended for removal.

Preservation recommendations (i.e., preserve or remove) are provided in separate columns in the data based on the existing condition and proposed development impacts.

A final recommendation, either preserve or remove is provided in the data based on the condition and development preservation recommendations. A tree is recommended for preservation if it has been assigned a fair or good condition rating and can be incorporated into the proposed design. A tree is recommended for removal if it has been assigned a poor condition rating and/or will be significantly impacted by, or is in conflict with the proposed design.

Assessment data is provided in Appendix B and locations and crown reserves of the assessed trees, with the preliminary road design plan prepared by Burnside are provided on Plan C: Tree Preservation Plan.

Limitations of this tree assessment are provided in Appendix C.

4.0 Findings

The proposed location of the road extension is dominated by early successional immature trees; mainly Green Ash (*Fraxinus pennsylvanica*). Mature woodlots are found at the east and west limits of the unopened road right-of-way and are dominated by Bur Oak (*Quercus macrocarpa*), Bitternut Hickory (*Carya cordiformis*) and Sugar Maple (*Acer saccharum*). Shrub thicket and meadow vegetation is found between the woodlots.

An additional woodlot is found at the southwest corner of Homelands Drive / Speakman Drive and Sheridan Park Drive. Manicured turf grass with open grown trees characterizes the remainder the existing boulevards.

Additional details of the natural heritage features are included in the Natural Environment Report (provided under separate cover).

4.1 Description of Proposed Construction

Preliminary road design plans have been created to accommodate a single lane for each direction of travel with two horizontal deflection medians for speed management. Two roundabouts are also included in the preliminary design: 1) At the west limit of the Study Area where Sheridan Park Drive currently terminates and connects to Speakman Drive, and 2) At the east limit of the Study Area where Sheridan Park Drive connects with Homelands Drive / Speakman Drive.

4.2 Impacts to Trees

A total of 191 trees were included in the assessment. The final preservation recommendations of the trees are as follows:

- 77 trees recommended for preservation; and
- 114 trees recommended for removal.

The majority of the trees are Green Ash (92 of the 191 trees), and 71 of these species require removal. There is concern about the long term survivability of Green Ash throughout most of Ontario due to Emerald Ash Borer (EAB). EAB damage, most obviously manifesting as severe crown dieback, was encountered on a small number of the trees. It is anticipated that more trees will have EAB impacts or early signs of feeding if trees were extensively reviewed. The second most common tree was Black Locust (*Robinia pseudoacacia*), at 34 of the total trees, is an introduced species that may aggressively colonize disturbed and early successional areas.

5.0 Guidelines to the Protection of Trees and Adjacent Natural Features during Construction

Delineation of the work zone is necessary to prevent impacts to root zones of trees adjacent to the proposed construction. Storage of equipment, materials and vehicles, dumping of waste materials, and grade filling or lowering beyond the identified limits may result in short or long term impacts to trees. The following measures are recommended to reduce impacts to these adjacent trees:

1. Clearly delineate the extent of vegetation removal for the vegetation clearing and grubbing contractor. All vegetation must be cut in a way that it stays within the work zone.
2. Install all tree protection and erosion and sediment control (ESC) measures prior to site disturbance.
3. Install tree protection hoarding based on City standard (provided in Appendix D) in locations shown on Plan C: Tree Preservation Plan. The work zone adjacent to the woodlots at the east and west limits of the unopened right-of-way are recommended to receive this enhanced treatment.
4. Inspection of tree protection measures by the site supervisor or environmental inspector to be coordinated with review of ESC measures throughout the construction period. All damaged, sagging or deficient measures must be fixed immediately.
5. An arborist should review all trees adjacent to the work zone and prior to opening the road for use by the general public. Branches and trunks damaged during the construction period that may cause damage or injury must be mitigated.

6.0 Compensation and Mitigation Guidelines

Compensation and mitigation plantings are identified in the Streetscape Plan (provided under separate cover) and will be implemented as follows:

- New trees will be planted along the roadside as streetscaping with trees installed 12 metres on centre in conformity with the Transportation Association of Canada;
- Shrubs planted where the new road interfaces with the two woodlots; and
- Shrubs installed within the meadow area in the central portion of the Study Area.

Based on the existing species and vegetation community attributes of the area, a replacement value of 2:1 trees were determined to be appropriate as part of the proposed project. The total number of replacement trees will be confirmed during the detailed design phase of the Project. Replacement trees will be planted to the extent

possible within the City-owned right-of-way of the road extension corridor. The City will explore opportunities to plant the remainder of the replacement trees as a suitable off-site location as necessary. A possible method of determining the number of replacement trees required is to use the Trunk Formula Method of the International Society of Arboriculture (ISA). The ISA formula takes into consideration a variety of factors to determine the value of a tree, including size, age, species, health, and location. It is not possible to recreate the forest edge immediately, but the goal is to both replace and improve the habitat features by providing site specific restoration recommendations to ensure no net loss of forest within the Study Area.

7.0 Summary

Tree preservation and removal has been identified in this Tree Inventory and Preservation Report. Measures to ensure protection of the trees prior to and during the construction period are detailed to minimize impacts to preserved trees.



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Tree Study Methodology

Tree Studies: Methodology

The list provided below represents all data that may be collected in the analysis of trees. Methodology descriptions should be reviewed with the column headings provided in the data. The columns represent the scope and extent of the tree assessment carried out.

Tree #: This number may be assigned by the tree assessor or predetermined by the surveyor or client. The number corresponds with the tree tag affixed to the tree, if tree tagging is part of the study's scope.

Species Name: Botanical name of the species.

Common Name: Commonly used English name.

DBH (cm): Diameter at Breast Height measured using DBH tape or tree caliper.

Crown Reserve (m): Average measurement of the diameter or width of the dripline (extent of branches from the trunk). Generally the trunk is the midpoint of this measurement. It is represented on the drawing(s) as a circle. This measurement may not be used in the subject jurisdiction.

TPZ (m): Tree protection zone required based on the required setback from the trunk, as designated by the agency (e.g. municipality). The TPZ is calculated by doubling the setback and including the trunk diameter to create a diameter of circle of protection around the tree.

HT (m): Estimated height from the base to the top of the tree.

Condition (G, F, P, D): A qualitative score of the combination of biological health and structural condition assigned as Good, Fair, Poor or Dead.

Preserve or Remove Reason: Reasons for recommended preservation or removal assigned in the tree study. Reasons for recommended removal may result from:

- Existing condition (critical deficiency such as severe crown dieback)
- Anticipated impacts of the proposed development (i.e., tree location is in conflict with construction element)
- Both existing condition and anticipated impacts

A checkmark is provided in the appropriate column.

Description of Reason: Rationale for the assignment of preservation or removal rationale based on analysis of collected data and proposed development.

Transplant Potential (G,F,P): Assignment of qualitative measure of reestablishment success of a tree when removed from its existing location and moved to another or removed and stored for replanting following construction. An assignment of Good, Fair or Poor is assigned based on a species' ability to reestablish, condition of the tree, new growing conditions, etc.



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix B

Tree Assessment Data sheet

Tree Number	Scientific Name	Common Name	DBH	Crown Reserve	Condition	Preservation Recommendation (Condition)	Preservation Recommendation (Development)	Preservation Recommendation (Final)	Comments
1	<i>Carya ovata</i>	Shagbark Hickory	40	12	Good	Preserve	Preserve	Preserve	
2	<i>Sorbus aucuparia</i>	European Mountain-ash	16	5	Good	Preserve	Preserve	Preserve	Moderate lean to the north
3	<i>Fraxinus pennsylvanica</i>	Green Ash	18,16	8	Fair	Preserve	Preserve	Preserve	
4	<i>Fraxinus pennsylvanica</i>	Green Ash	11	2	Good	Preserve	Remove	Remove	
5	<i>Acer saccharum</i>	Sugar Maple	12	4	Good	Preserve	Remove	Remove	Severe one-sided crown to the east
6	<i>Fraxinus pennsylvanica</i>	Green Ash	35	8	Good	Preserve	Remove	Remove	
7	<i>Pinus strobus</i>	White Pine	51	6	Fair	Preserve	Preserve	Preserve	Decayed cavity in trunk
8	<i>Fraxinus pennsylvanica</i>	Green Ash	17	4	Fair	Preserve	Preserve	Preserve	
9	<i>Fraxinus pennsylvanica</i>	Green Ash	16	6	Good	Preserve	Preserve	Preserve	
10	<i>Fraxinus pennsylvanica</i>	Green Ash	15	3	Good	Preserve	Remove	Remove	
11	<i>Malus sp.</i>	Apple	16,12,11	6	Fair	Preserve	Remove	Remove	
12	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Good	Preserve	Remove	Remove	
13	<i>Fraxinus pennsylvanica</i>	Green Ash	28	7	Good	Preserve	Remove	Remove	
14	<i>Malus sp.</i>	Apple	6-12	6	Fair	Preserve	Preserve	Preserve	Multiple stems
15	<i>Fraxinus pennsylvanica</i>	Green Ash	11	2	Fair	Preserve	Remove	Remove	
16	<i>Malus sp.</i>	Apple	9,10,12,14	6	Fair	Preserve	Remove	Remove	
17	<i>Malus sp.</i>	Apple	12	2	Fair	Preserve	Remove	Remove	
18	<i>Fraxinus pennsylvanica</i>	Green Ash	8,10,11	3	Fair	Preserve	Preserve	Preserve	
19	<i>Fraxinus pennsylvanica</i>	Green Ash	14	4	Fair	Preserve	Preserve	Preserve	
20	<i>Fraxinus pennsylvanica</i>	Green Ash	14,14	6	Good	Preserve	Preserve	Preserve	
21	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Good	Preserve	Preserve	Preserve	
22	<i>Fraxinus pennsylvanica</i>	Green Ash	13,12	3	Good	Preserve	Remove	Remove	
23	<i>Fraxinus pennsylvanica</i>	Green Ash	15	6	Fair	Preserve	Remove	Remove	
24	<i>Fraxinus pennsylvanica</i>	Green Ash	12	2	Fair	Preserve	Remove	Remove	
25	<i>Fraxinus pennsylvanica</i>	Green Ash	11	2	Fair	Preserve	Remove	Remove	
26	<i>Fraxinus pennsylvanica</i>	Green Ash	12	2	Fair	Preserve	Remove	Remove	
27	<i>Fraxinus pennsylvanica</i>	Green Ash	8,11	3	Fair	Preserve	Remove	Remove	
28	<i>Quercus macrocarpa</i>	Bur Oak	81	14	Good	Preserve	Preserve	Preserve	
29	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Fair	Preserve	Preserve	Preserve	Trunk forks into 2 at 0.5m
30	<i>Malus sp.</i>	Apple	12	7	Fair	Preserve	Remove	Remove	
31	<i>Fraxinus pennsylvanica</i>	Green Ash	24	8	Fair	Preserve	Preserve	Preserve	
32	<i>Malus sp.</i>	Apple	11	3	Good	Preserve	Remove	Remove	
33	<i>Malus sp.</i>	Apple	12	4	Good	Preserve	Preserve	Preserve	
34	<i>Fraxinus pennsylvanica</i>	Green Ash	50	10	Fair	Preserve	Remove	Remove	
35	<i>Quercus macrocarpa</i>	Bur Oak	68	10	Fair	Preserve	Remove	Remove	Major hollow in trunk
36	<i>Malus sp.</i>	Apple	8,14	8	Fair	Preserve	Preserve	Preserve	
37	<i>Carya ovata</i>	Shagbark Hickory	38	8	Good	Preserve	Remove	Remove	
38	<i>Fraxinus pennsylvanica</i>	Green Ash	12,14	4	Good	Preserve	Remove	Remove	
39	<i>Fraxinus pennsylvanica</i>	Green Ash	12,14	3	Good	Preserve	Remove	Remove	
40	<i>Fraxinus pennsylvanica</i>	Green Ash	14,14,16	5	Fair	Preserve	Preserve	Preserve	
41	<i>Fraxinus pennsylvanica</i>	Green Ash	11	2	Fair	Preserve	Remove	Remove	Multiple basal sprouts

Tree Number	Scientific Name	Common Name	DBH	Crown Reserve	Condition	Preservation Recommendation (Condition)	Preservation Recommendation (Development)	Preservation Recommendation (Final)	Comments
42	<i>Fraxinus pennsylvanica</i>	Green Ash	12	4	Fair	Preserve	Preserve	Preserve	
43	<i>Fraxinus pennsylvanica</i>	Green Ash	31	8	Good	Preserve	Remove	Remove	
44	<i>Fraxinus pennsylvanica</i>	Green Ash	16	4	Fair	Preserve	Remove	Remove	
45	<i>Fraxinus pennsylvanica</i>	Green Ash	11	3	Fair	Preserve	Remove	Remove	Edge of pool
46	<i>Fraxinus pennsylvanica</i>	Green Ash	15	4	Good	Preserve	Remove	Remove	Edge of pool
47	<i>Fraxinus pennsylvanica</i>	Green Ash	14,15	7	Fair	Preserve	Remove	Remove	
48	<i>Fraxinus pennsylvanica</i>	Green Ash	12,16	4	Good	Preserve	Remove	Remove	Edge of pool
49	<i>Fraxinus pennsylvanica</i>	Green Ash	12	4	Good	Preserve	Remove	Remove	Edge of pool
50	<i>Fraxinus pennsylvanica</i>	Green Ash	14,14	4	Fair	Preserve	Remove	Remove	Edge of pool
51	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Fair	Preserve	Remove	Remove	Within pool
52	<i>Fraxinus pennsylvanica</i>	Green Ash	10	2	Fair	Preserve	Remove	Remove	Within pool
53	<i>Fraxinus pennsylvanica</i>	Green Ash	8,8,10	3	Fair	Preserve	Remove	Remove	Within pool
54	<i>Fraxinus pennsylvanica</i>	Green Ash	15	3	Fair	Preserve	Remove	Remove	Within pool
55	<i>Fraxinus pennsylvanica</i>	Green Ash	11	3	Good	Preserve	Remove	Remove	
56	<i>Fraxinus pennsylvanica</i>	Green Ash	12	4	Good	Preserve	Preserve	Preserve	Edge of pool
57	<i>Fraxinus pennsylvanica</i>	Green Ash	42	12	Fair	Preserve	Remove	Remove	
58	<i>Fraxinus pennsylvanica</i>	Green Ash	13,13	4	Fair	Preserve	Remove	Remove	
59	<i>Fraxinus pennsylvanica</i>	Green Ash	38	8	Fair	Preserve	Remove	Remove	Edge of pool
60	<i>Fraxinus pennsylvanica</i>	Green Ash	26	5	Fair	Preserve	Remove	Remove	
61	<i>Malus sp.</i>	Apple	6,8,10	4	Fair	Preserve	Preserve	Preserve	
62	<i>Carya ovata</i>	Shagbark Hickory	29	5	Good	Preserve	Preserve	Preserve	
63	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Fair	Preserve	Remove	Remove	
64	<i>Carya ovata</i>	Shagbark Hickory	18	5	Good	Preserve	Preserve	Preserve	
65	<i>Fraxinus pennsylvanica</i>	Green Ash	5,11	2	Good	Preserve	Remove	Remove	
66	<i>Fraxinus pennsylvanica</i>	Green Ash	12,13	4	Fair	Preserve	Remove	Remove	
67	<i>Fraxinus pennsylvanica</i>	Green Ash	13	3	Good	Preserve	Preserve	Preserve	
68	<i>Fraxinus pennsylvanica</i>	Green Ash	11	2	Fair	Preserve	Remove	Remove	
69	<i>Fraxinus pennsylvanica</i>	Green Ash	11	2	Fair	Preserve	Remove	Remove	
70	<i>Fraxinus pennsylvanica</i>	Green Ash	8,11	2	Good	Preserve	Remove	Remove	
71	<i>Fraxinus pennsylvanica</i>	Green Ash	8,11	3	Fair	Preserve	Remove	Remove	
72	<i>Fraxinus pennsylvanica</i>	Green Ash	10,12	4	Good	Preserve	Remove	Remove	
73	<i>Fraxinus pennsylvanica</i>	Green Ash	13	3	Good	Preserve	Remove	Remove	
74	<i>Fraxinus pennsylvanica</i>	Green Ash	5-10	4	Fair	Preserve	Remove	Remove	
75	<i>Fraxinus pennsylvanica</i>	Green Ash	15	4	Fair	Preserve	Remove	Remove	
76	<i>Fraxinus pennsylvanica</i>	Green Ash	16	6	Good	Preserve	Remove	Remove	
77	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Good	Preserve	Remove	Remove	
78	<i>Pyrus communis</i>	Common Pear	8,14	5	Fair	Preserve	Remove	Remove	
79	<i>Fraxinus pennsylvanica</i>	Green Ash	8,10,12,13	4	Fair	Preserve	Remove	Remove	
80	<i>Fraxinus pennsylvanica</i>	Green Ash	11	3	Fair	Preserve	Remove	Remove	
81	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Good	Preserve	Remove	Remove	
82	<i>Fraxinus pennsylvanica</i>	Green Ash	6,11	3	Fair	Preserve	Preserve	Preserve	

Tree Number	Scientific Name	Common Name	DBH	Crown Reserve	Condition	Preservation Recommendation (Condition)	Preservation Recommendation (Development)	Preservation Recommendation (Final)	Comments
83	<i>Fraxinus pennsylvanica</i>	Green Ash	1	1	Fair	Preserve	Preserve	Preserve	
84	<i>Fraxinus pennsylvanica</i>	Green Ash	15	5	Good	Preserve	Remove	Remove	
85	<i>Fraxinus pennsylvanica</i>	Green Ash	13	3	Good	Preserve	Remove	Remove	
86	<i>Fraxinus pennsylvanica</i>	Green Ash	12,14,15	4	Fair	Preserve	Remove	Remove	
87	<i>Robinia pseudoacacia</i>	Black Locust	12	3	Fair	Preserve	Preserve	Preserve	
88	<i>Robinia pseudoacacia</i>	Black Locust	12	3	Good	Preserve	Remove	Remove	
89	<i>Robinia pseudoacacia</i>	Black Locust	14	4	Good	Preserve	Remove	Remove	
90	<i>Robinia pseudoacacia</i>	Black Locust	11	3	Good	Preserve	Remove	Remove	
91	<i>Robinia pseudoacacia</i>	Black Locust	14	4	Good	Preserve	Remove	Remove	
92	<i>Robinia pseudoacacia</i>	Black Locust	12	3	Fair	Preserve	Preserve	Preserve	
93	<i>Robinia pseudoacacia</i>	Black Locust	10	2	Fair	Preserve	Preserve	Preserve	
94	<i>Robinia pseudoacacia</i>	Black Locust	14	3	Fair	Preserve	Preserve	Preserve	
95	<i>Robinia pseudoacacia</i>	Black Locust	11	2	Fair	Preserve	Preserve	Preserve	
96	<i>Robinia pseudoacacia</i>	Black Locust	12	3	Fair	Preserve	Preserve	Preserve	
97	<i>Robinia pseudoacacia</i>	Black Locust	11	3	Fair	Preserve	Remove	Remove	
98	<i>Robinia pseudoacacia</i>	Black Locust	11	2	Fair	Preserve	Preserve	Preserve	
99	<i>Robinia pseudoacacia</i>	Black Locust	34	6	Fair	Preserve	Remove	Remove	
100	<i>Robinia pseudoacacia</i>	Black Locust	11	3	Fair	Preserve	Remove	Remove	
101	<i>Robinia pseudoacacia</i>	Black Locust	15	3	Fair	Preserve	Preserve	Preserve	
102	<i>Robinia pseudoacacia</i>	Black Locust	11	2	Fair	Preserve	Remove	Remove	
103	<i>Robinia pseudoacacia</i>	Black Locust	12	3	Fair	Preserve	Preserve	Preserve	
104	<i>Robinia pseudoacacia</i>	Black Locust	16	3	Fair	Preserve	Remove	Remove	
105	<i>Robinia pseudoacacia</i>	Black Locust	11	2	Fair	Preserve	Preserve	Preserve	
106	<i>Robinia pseudoacacia</i>	Black Locust	13	2	Good	Preserve	Preserve	Preserve	
107	<i>Robinia pseudoacacia</i>	Black Locust	10	2	Good	Preserve	Preserve	Preserve	
108	<i>Robinia pseudoacacia</i>	Black Locust	14	3	Good	Preserve	Preserve	Preserve	
109	<i>Robinia pseudoacacia</i>	Black Locust	10	3	Good	Preserve	Preserve	Preserve	
110	<i>Robinia pseudoacacia</i>	Black Locust	13	4	Good	Preserve	Preserve	Preserve	
111	<i>Robinia pseudoacacia</i>	Black Locust	12	5	Good	Preserve	Preserve	Preserve	
112	<i>Robinia pseudoacacia</i>	Black Locust	11	2	Good	Preserve	Preserve	Preserve	
113	<i>Robinia pseudoacacia</i>	Black Locust	10	2	Good	Preserve	Preserve	Preserve	
114	<i>Robinia pseudoacacia</i>	Black Locust	12,15	4	Good	Preserve	Remove	Remove	
115	<i>Robinia pseudoacacia</i>	Black Locust	16	4	Good	Preserve	Remove	Remove	
116	<i>Robinia pseudoacacia</i>	Black Locust	12	3	Good	Preserve	Remove	Remove	
117	<i>Robinia pseudoacacia</i>	Black Locust	10	3	Good	Preserve	Remove	Remove	
118	<i>Robinia pseudoacacia</i>	Black Locust	12	2	Good	Preserve	Remove	Remove	
119	<i>Robinia pseudoacacia</i>	Black Locust	14	3	Good	Preserve	Remove	Remove	
120	<i>Robinia pseudoacacia</i>	Black Locust	14	3	Fair	Preserve	Remove	Remove	Severe trunk wound
121	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Good	Preserve	Remove	Remove	
122	<i>Malus sp.</i>	Apple	12,14,16	7	Good	Preserve	Remove	Remove	
123	<i>Acer platanooides</i>	Norway Maple	12	4	Good	Preserve	Remove	Remove	

Tree Number	Scientific Name	Common Name	DBH	Crown Reserve	Condition	Preservation Recommendation (Condition)	Preservation Recommendation (Development)	Preservation Recommendation (Final)	Comments
124	<i>Fraxinus pennsylvanica</i>	Green Ash	11	3	Fair	Preserve	Remove	Remove	
125	<i>Fraxinus pennsylvanica</i>	Green Ash	12	2	Poor	Remove	Remove	Remove	
126	<i>Fraxinus pennsylvanica</i>	Green Ash	8,11,12	3	Poor	Remove	Remove	Remove	
127	<i>Fraxinus pennsylvanica</i>	Green Ash	11,12	3	Fair	Preserve	Remove	Remove	
128	<i>Fraxinus pennsylvanica</i>	Green Ash	10	3	Fair	Preserve	Remove	Remove	
129	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Fair	Preserve	Remove	Remove	
130	<i>Fraxinus pennsylvanica</i>	Green Ash	14	3	Good	Preserve	Remove	Remove	
131	<i>Fraxinus pennsylvanica</i>	Green Ash	13	3	Fair	Preserve	Remove	Remove	
132	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Fair	Preserve	Remove	Remove	
133	<i>Fraxinus pennsylvanica</i>	Green Ash	8,12,13,14	5	Fair	Preserve	Remove	Remove	
134	<i>Fraxinus pennsylvanica</i>	Green Ash	12,14	3	Fair	Preserve	Remove	Remove	
135	<i>Fraxinus pennsylvanica</i>	Green Ash	8,8,10,12	4	Fair	Preserve	Preserve	Preserve	
136	<i>Fraxinus pennsylvanica</i>	Green Ash	8,12	3	Good	Preserve	Preserve	Preserve	
137	<i>Elaeagnus angustifolia</i>	Russian-olive	22	10	Fair	Preserve	Remove	Remove	
138	<i>Fraxinus pennsylvanica</i>	Green Ash	14,16	10	Fair	Preserve	Remove	Remove	
139	<i>Fraxinus pennsylvanica</i>	Green Ash	11	3	Good	Preserve	Remove	Remove	
140	<i>Fraxinus pennsylvanica</i>	Green Ash	12,13	4	Good	Preserve	Preserve	Preserve	
141	<i>Fraxinus pennsylvanica</i>	Green Ash	14	3	Good	Preserve	Preserve	Preserve	
142	<i>Fraxinus pennsylvanica</i>	Green Ash	12	3	Good	Preserve	Remove	Remove	
143	<i>Fraxinus pennsylvanica</i>	Green Ash	14	3	Good	Preserve	Remove	Remove	
144	<i>Quercus rubra</i>	Red Oak	68	18	Good	Preserve	Preserve	Preserve	
145	<i>Ulmus pumila</i>	Siberian Elm	16	6	Good	Preserve	Remove	Remove	
146	<i>Fraxinus pennsylvanica</i>	Green Ash	16	5	Fair	Preserve	Preserve	Preserve	
147	<i>Fraxinus pennsylvanica</i>	Green Ash	12	2	Fair	Preserve	Remove	Remove	
148	<i>Quercus rubra</i>	Red Oak	48	14	Good	Preserve	Preserve	Preserve	
149	<i>Pyrus communis</i>	Common Pear	14	4	Fair	Preserve	Remove	Remove	
150	<i>Quercus alba</i>	White Oak	71	18	Good	Preserve	Preserve	Preserve	
151	<i>Quercus rubra</i>	Red Oak	74	18	Good	Preserve	Preserve	Preserve	
152	<i>Ulmus americana</i>	White Elm	28	16	Good	Preserve	Remove	Remove	
1000	<i>Malus sp.</i>	Apple	5,5,7,10,16	8	Poor	Remove	Preserve	Preserve	In hydro corridor
1001	<i>Fraxinus americana</i>	White Ash	25	6	Fair	Preserve	Preserve	Preserve	Moderate EAB impacts
1002	<i>Fraxinus americana</i>	White Ash	8,8,10,14,16	10	Poor	Remove	Preserve	Preserve	Dead
1004	<i>Gleditsia triacanthos var. inernis</i>	Honey-locust	22,23	11	Good	Preserve	Remove	Remove	Trunk forks into 2 at 0.5m
1005	<i>Acer campestre</i>	Field Maple	10,14,14,16,18,28	10	Fair	Preserve	Remove	Remove	
1006	<i>Acer saccharinum</i>	Silver Maple	24	7	Good	Preserve	Remove	Remove	Minor epicormic growth
1007	<i>Acer saccharinum</i>	Silver Maple	21	7	Good	Preserve	Preserve	Preserve	
1008	<i>Malus sp.</i>	Apple	19,26,28	12	Fair	Preserve	Remove	Remove	
1009	<i>Fraxinus pennsylvanica</i>	Green Ash	12,14	6	Poor	Remove	Remove	Remove	Severe crown dieback, severe EAB impacts
1010	<i>Malus coronaria</i>	Crabapple	14,14,16,16	12	Fair	Preserve	Remove	Remove	Minor past pruning
1011	<i>Morus alba</i>	White Mulberry	16,18	10	Good	Preserve	Remove	Remove	
1012	<i>Fraxinus pennsylvanica</i>	Green Ash	10,14	6	Fair	Preserve	Remove	Remove	Moderate EAB impacts

Tree Number	Scientific Name	Common Name	DBH	Crown Reserve	Condition	Preservation Recommendation (Condition)	Preservation Recommendation (Development)	Preservation Recommendation (Final)	Comments
1013	<i>Fraxinus pennsylvanica</i>	Green Ash	15	6	Poor	Remove	Preserve	Remove	Severe crown dieback, severe EAB impacts
1014	<i>Juniperus spp.</i>	Juniper sp	12	3	Good	Preserve	Preserve	Preserve	
1015	<i>Quercus rubra</i>	Red Oak	14	5	Good	Preserve	Remove	Remove	
1016	<i>Quercus rubra</i>	Red Oak	27	12	Good	Preserve	Remove	Remove	
1017	<i>Quercus rubra</i>	Red Oak	38	16	Good	Preserve	Remove	Remove	
1018	<i>Quercus rubra</i>	Red Oak	33	10	Good	Preserve	Remove	Remove	
1019	<i>Pinus strobus</i>	White Pine	3	1	Good	Preserve	Preserve	Preserve	Recently planted
1020	<i>Pinus strobus</i>	White Pine	3	1	Good	Preserve	Preserve	Preserve	Recently planted
1021	<i>Pinus nigra</i>	Austrian Pine	35	10	Good	Preserve	Preserve	Preserve	
1022	<i>Tilia cordata</i>	Littleleaf Linden	23,25,47	10	Fair	Preserve	Preserve	Preserve	
1023	<i>Acer saccharinum</i>	Silver Maple	6	2	Good	Preserve	Preserve	Preserve	
1024	<i>Acer rubrum</i>	Red Maple	5,6,6,9,10	5	Fair	Preserve	Preserve	Preserve	
1025	<i>Pinus nigra</i>	Austrian Pine	42	8	Good	Preserve	Remove	Remove	
1026	<i>Pinus nigra</i>	Austrian Pine	26	7	Fair	Preserve	Preserve	Preserve	
1027	<i>Tilia cordata</i>	Littleleaf Linden	15,21,24,29	11	Fair	Preserve	Preserve	Preserve	
1028	<i>Pinus nigra</i>	Austrian Pine	45	11	Fair	Preserve	Preserve	Preserve	Minor crown dieback
1029	<i>Acer saccharinum</i>	Silver Maple	5,8,10,14	5	Fair	Preserve	Preserve	Preserve	Severe callused wound, 2 basal wounds
1030	<i>Tilia cordata</i>	Littleleaf Linden	25,50	13	Fair	Preserve	Preserve	Preserve	Minor past pruning
1031	<i>Tilia cordata</i>	Littleleaf Linden	13,21,26,31	13	Good	Preserve	Preserve	Preserve	Minor past pruning
1032	<i>Pinus nigra</i>	Austrian Pine	38	7	Good	Preserve	Preserve	Preserve	Minor past pruning
1033	<i>Pinus nigra</i>	Austrian Pine	29	7	Good	Preserve	Preserve	Preserve	Minor past pruning
1034	<i>Pinus nigra</i>	Austrian Pine	33	9	Fair	Preserve	Preserve	Preserve	Severe past pruning
1035	<i>Prunus virginiana 'Schubert'</i>	Schubert Chokecherry	19	5	Fair	Preserve	Preserve	Preserve	Moderate past pruning
1036	<i>Populus balsamifera</i>	Balsam Poplar	27	5	Fair	Preserve	Preserve	Preserve	Moderate crown dieback, minor past pruning
1037	<i>Pinus nigra</i>	Austrian Pine	30	6	Good	Preserve	Preserve	Preserve	Minor past pruning
1038	<i>Pinus nigra</i>	Austrian Pine	33	5	Fair	Preserve	Preserve	Preserve	Minor crown dieback, minor past pruning
1039	<i>Sorbus aucuparia</i>	European Mountain-ash	8	1	Good	Preserve	Preserve	Preserve	

Totals			
Preserve	185	78	77
Remove	6	113	114
Total	191	191	191



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix C

Limitation of Tree Studies

Tree Studies: Limitations

This report, drawings and data (i.e., qualitative and quantitative measurements) are intended to inform the recipient and reviewer(s) of the report of the tree(s) condition at the time of the assessment. The assessment may be limited by the following constraints:

1. Access – tree is located offsite, or the onsite location is not reasonably accessed.
2. Weather – accumulated snow around the base or in branch attachments may obscure defects.
3. Season – biotic indications (e.g., foliage chlorosis or fungal fruiting bodies) are only obvious for a portion of the year.
4. Visual obstructions – Elements such as other trees' canopies can prevent the view of the entire tree.

The study is completed from the ground using a DBH tape or tree caliper. Non-invasive tools such as binoculars and a sounding hammer may be used to provide additional information about defects and characteristics. Excavation of the rootzone and other intensive analyses have not been completed unless stated.

It must be understood that trees may not manifest signs or symptoms (e.g., dieback) of some impacts (e.g., root compaction) immediately and so recent changes to the tree or its growing conditions prior to the assessment may not be apparent to the assessor. Also, changes to the tree condition resulting from damage, weather, infestations, defects, soil, decay, light, moisture, exposure, etc. may occur after the assessment.

No tree is without some level of risk, where a tree may fail and strike a target. Mitigation options, if provided, will not eliminate risk but are prescribed treatments to reduce risk based on the measured and assessed factors at the time of assessment, subject to site and assessment constraints.

Identification of the ownership of assessed trees (i.e., on-site or off-site) made in the report is based on the legal survey. The assessor of trees uses the point location of the tree provided on the survey and the limits of property to assign ownership in the report and associated materials.

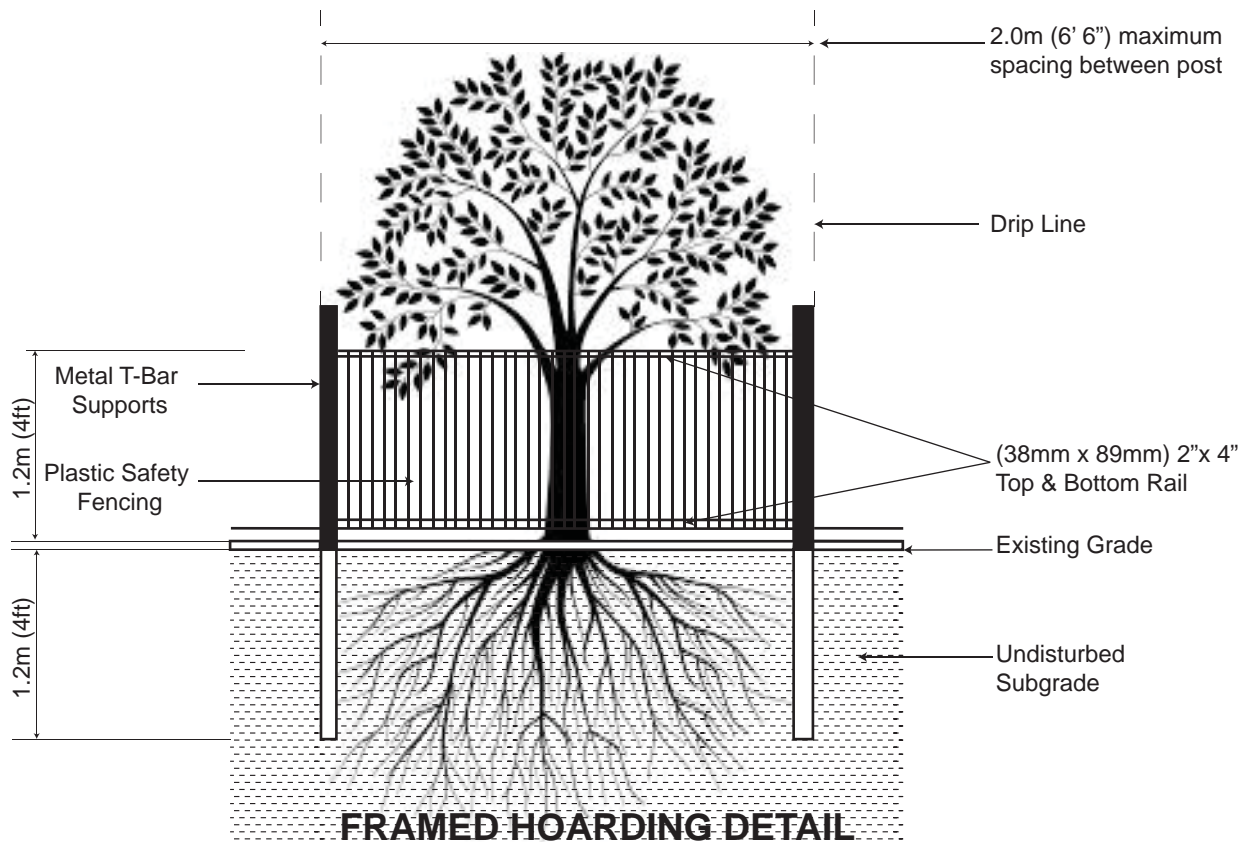
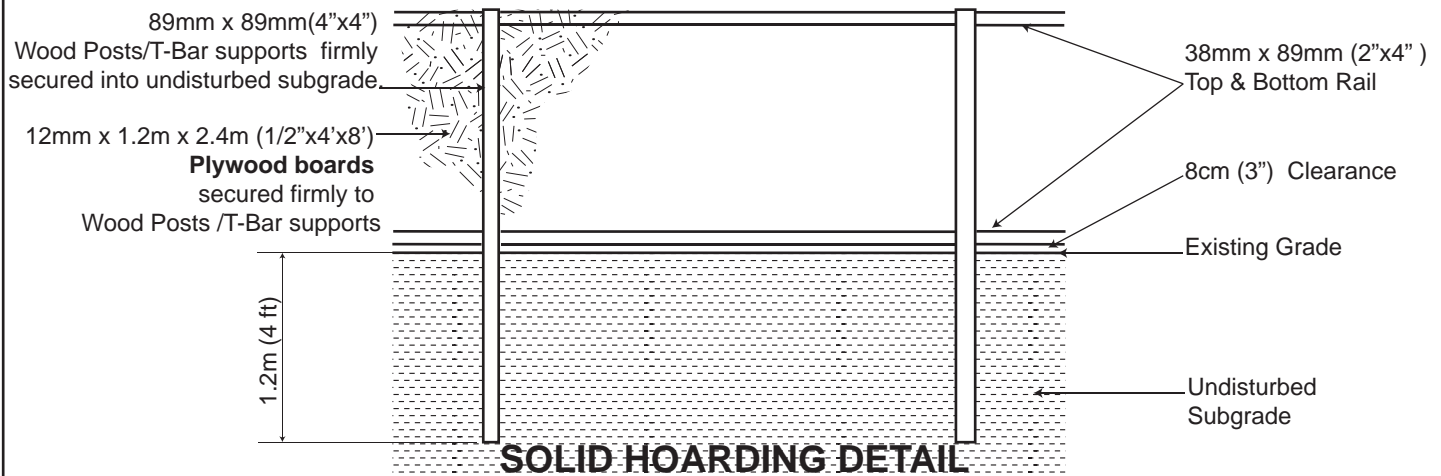


BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix D

Hoarding Detail



NOTES:

1. Hoarding details to be determined following initial site inspection.
2. Private tree hoarding to be approved by Development & Design ;
City tree hoarding to be approved by Community Services Dept.
3. Hoarding must be supplied, installed and maintained by the applicant throughout all phases of construction.
Inspection must be conducted by the Development and Design Division prior to removing any/all private hoarding.
4. Do not allow water to collect and pond behind or within hoarding.
5. **T-bar supports are acceptable alternative to 4x4 posts. U-shaped metal supports will not be accepted.**
6. **Plywood** must be utilized for 'solid' hoarding. OSB/Chipboard will not be accepted for solid hoarding. Plywood sheets must be installed on "construction" side of frame.
7. Applicant is responsible to ensure utility locates are completed within city boulevard prior to installing framed hoarding.

TREE PRESERVATION HOARDING



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Plan C

Tree Preservation Plan

