



HAZARD TREE ASSESSMENT REPORT

BOB TO BOYLES TRAIL PROJECT

PARKS CANADA

November 17, 2020



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1.0 Introduction

WSP Canada Inc. (WSP) is pleased to provide you with this Hazard Tree Assessment Report in support of trail construction within Rouge National Urban Park, in Markham, Ontario. This report is based on a hazard edge assessment for any wooded areas, hedgerows or individual trees that are scheduled to be retained. This report includes an assessment of hazard trees, snags that may be at risk of failing in the future and recommendations for the pruning of additional trees.

2.0 Field Observations

The field observations were made on July 21, 28 and 30, 2020. The lengths of trail surveyed included: a section approximately 5.8km in length from north of Major Mackenzie Drive East to north of Reesor Road and 16th Avenue; a section approximately 2.9km in length from south of 16th Avenue to Highway 7; and a section approximately 1.8km in length from south of Highway 407 to south of 14th Avenue, City of Markham. A visual assessment was conducted to determine if any trees are at risk of failure. Individual deciduous and coniferous trees identified as hazard trees or snags were identified by taking a GPS coordinate of each tree. A summary of individual hazard and snags is discussed under the Hazard Tree Assessment section of this report and in Table 2: Hazard Tree Assessment Chart.

3.0 Definitions

The following are the definitions of the assessment categories utilized in our tree assessment:

Tree Number	this number refers to the number on the reference plan.
Species	the botanical and common names are provided for each tree.
DBH	this refers to diameter (in centimetres) at breast height and is measured at 1.3 m above the ground for each tree.
Target	this refers to people, property or activities that could be injured damaged or disrupted by a tree failure.
Target Zone	this refers to the area in which the tree or branch is likely to strike when it fails.
Dripline Radius	this refers to the measured radius (in metres) of the tree crown from the base of the trunk.

4.0 Tree Risk Categorization

The International Society of Arboriculture's (ISA) Best Management Practices: Tree Risk Assessment, Second Edition (2017) was utilized as a resource for the preparation of this report. The likelihood of failure and likelihood of impacting a target are defined as follows:

4.1 Likelihood of Failure

This is based on an assessment of the significance of defects, conditions and response growth. Tree failures typically occur when there is a significant combination of tree defects, conditions and contributing environmental factors such as wind, rain, freezing rain or snow. The likelihood of failure can be categorized using the following guidelines:

Improbable	This refers to the tree or branch that is not likely to fail during normal weather conditions and may not fail in severe weather conditions.
Possible	Failure could occur, but it is unlikely during normal weather conditions.
Probable	Failure may be expected under normal weather conditions.
Imminent	Failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load.

4.2 Likelihood of Impacting a Target

This is based on an estimate of the occupancy rate of any targets within the target zone, and any factors that could affect the failed tree as it falls toward the target. In this case the occupancy rate is people using the trails and the target is people. Likelihood of impacting a target can be categorized using the following guidelines:

Very Low	The chance of a failed tree or branch impacting the specified target is remote.
Low	It is not likely that the failed tree or branch will impact the target. Pedestrian traffic is low with some obstructions.
Medium	The failed tree or branch may or may not impact the target with nearly equal likelihood.
High	The failed tree or branch will most likely impact the target.

5.0 Edge Management

The management of woodland edges, vegetation located along the trail and trees to be retained within the limits of construction is an important step in maintaining the overall health of these communities as well as ensuring the safety of people. The removal of surrounding trees, grading up to the dripline and the creation of new edges can present challenges and concerns for species. The implementation of tree preservation measures (shown on Landscape Plans L-401-L-429) will ensure that tree health is maintained during trail construction.

Trees to be retained have been assessed for defects, likelihood of failure and likelihood of impacting a target. The following sections discuss trees identified as hazards, trees to be pruned and restoration of the forest edge. Refer to Table 2: Hazard Tree Assessment Chart for species, tree numbers and recommendations.

5.1 Hazard Tree Assessment

An analysis of hazard trees was conducted during field observations. Tree height, health, proximity to a target, target zone, likelihood of failure and likelihood of impacting a target were taken into consideration in determining hazard trees. Hazard trees and dead snags were identified by taking GPS coordinates of each tree. A total of 211 individual dead and / or declining trees (and trees within groupings, TG-01 [14] and TG-02 [12]) have been identified along the three (3) trail sections. It is recommended that 191 of these trees (with DBHs of 10cm or greater) be removed due to their potential for failure causing damage and / or to fall onto or within the vicinity of the proposed trail.

Table 1 below summarizes the number of hazard trees observed according to DBH size.

Table 1. Number of Hazard Trees per DBH Size Class.

Hazard Tree DBH (cm)	Number of Hazard Trees
< 10	3
10 to 20	106
20< to 30	50
> 30	54
Total Hazard Trees	211

5.2 Hazard Trees to be Removed

5.2.1 Ash (*Fraxinus* sp.)

- Ash (*Fraxinus* sp.) trees were inspected for signs of Emerald Ash Borer (EAB) infestation, which is characterized by D-shaped exit holes in the bark. Since this insect can kill Ash trees within 2-3 years, an affected tree can become a hazard or snag within a short time period. As a result of EAB, 135 trees of these 211 hazard trees are dead as a result of EAB damage or are EAB-infested Ash trees that have been identified to be removed. These trees currently pose a hazard or have a high potential to become a future hazard.

5.2.2 Major Mackenzie Drive East to North of Reesor Road and 16th Avenue – 5.8km

- Along the 5.8km section from north of Major Mackenzie Drive East to north of Reesor Road and 16th Avenue there are: five (5) dead Elm Species (*Ulmus* sp.); one (1) dead Trembling Aspen (*Populus tremuloides*); 1 dead Pine Species (*Pinus* sp.); 1 American Basswood (*Tilia americana*) in poor condition; four (4) dead Sweet Cherry (*Prunus avium*), and 1 in poor condition; and 4 dead trees of unknown species. Since these trees are within close proximity to the proposed trail, it is recommended they be removed.

5.2.3 South of 16th Avenue to Highway 7 – 2.9km

- Along the 2.9km section of trail from south of 16th Avenue to Highway 7 there are: 1 dead Black Cherry (*Prunus serotina*); two (2) dead Sugar Maple (*Acer saccharum*), and 1 in poor condition; 1 dead Elm Species; 1 Black Walnut (*Juglans nigra*) in poor condition; 5 dead Canada Poplar (*Populus x canadensis*); and 11 dead trees of unknown species. Since these trees are within close proximity to the proposed trail, it is recommended they be removed.
- 12 trees (1301-1312) were also tagged for pruning/removal. See Table 2.

5.2.4 South of Highway 407 to South of 14th Avenue

- Along the 1.8km section from south of Highway 407 to south of 14th Avenue there are: one (1) dead Sugar Maple; 1 dead Canada Poplar; 1 American Basswood in poor condition; and 4 dead trees of unknown species. Since these trees are within close proximity to the proposed trail, it is recommended they be removed.
- These hazard trees and their locations are discussed in further detail in the Landscape Plans (L-401-L-429) and in Table 2.

5.3 Wildlife Habitat

- Mature to semi-mature hazard trees with DBHs of 20cm or greater that are proposed for removal can be retained given the appropriate measures are taken to mitigate risk to visitors. If hazardous branches are removed with proper pruning techniques, there is potential for these trees to be retained to provide wildlife habitat and / or perches for bird species. Stems shall be cut to 3 to 5m in height.

5.4 Hazard Trees to be Retained

- There are six (6) Ash trees (trees #146 to 151) that are dead, or in significant decline, and are not within close proximity to the trail alignment. Therefore, these trees can be retained to provide habitat and perches for wildlife.
- There are 2 Ash trees (trees #142 and 212) and 26 Eastern White Cedar (*Thuja occidentalis*) within tree groupings TG-01 (14 trees) and TG-02 (12 trees) that are below 10cm DBH. Though these trees may be prone to breakage and they are within close proximity to the proposed trail, the likelihood of these trees and / or their branches hitting a target is very low based on their small size.

5.5 Potential Hazard Trees

- Mature trees #184 (Black Walnut), 235 and 236 (Sugar Maple) and 250 (American Basswood) were observed to be in decline but are not necessarily in need of immediate removal. If hazardous branches are removed with proper pruning techniques these trees can be retained. However, they should be reassessed within a few years due to the potential to become hazard trees in the future.

6.0 Trees to be Retained

Tree protection measures may be necessary to retain tree B (Black Ash [*Fraxinus nigra*] in good condition) east of the creek crossing northeast of Reesor Road and Major Mackenzie Drive East and trees #241 to 242, 244 to 245 and 247 (Butternut [*Juglans cinerea*] in fair condition). Black Ash is listed as Threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC, 2018). Butternuts are listed as Endangered and as such, are protected under Ontario's Species at Risk Act (ESA). Therefore, in accordance with the regulations of Ontario's Species at Risk Act, 2007 (ESA), O.Reg 230/08A, a certified Butternut Health Assessor registered with the Ontario Ministry of Natural Resources and Forestry (MNR) should conduct

a Butternut Health Assessment to determine whether these trees are retainable. Impacts to these trees should be avoided and mitigated where possible.

Along the trail section from south of Highway 407 to south of 14th Avenue, tree A (American Basswood) is situated in close proximity to the proposed trail. Since the trail alignment encroaches within the dripline of this mature trees, it is recommended that their lower branches be pruned using good arboricultural practices utilizing by-pass secateurs in accordance with approved horticultural practices and / or American National Standard (ANSI) A300 Pruning Standard – Part 1 (2017).

7.0 Summary and Recommendations

A total of 211 individual hazard trees (and trees within groupings TG-01 [14] and TG-02 [12]) were assessed. A total of 191 of these trees are recommended to be removed as they may pose potential hazards to future visitors.

The following recommendations pertain to trees to be removed:

- All removals must be felled into the work area to ensure that damage does not occur to the trees within the Tree Protection Zone (TPZ).
- Cut stump to a maximum height of 0.3 m above grade. No grubbing.
- Hazard trees proposed for removal with DBHs of 20cm or greater can be retained to provide wildlife habitat given hazard limbs and branches are appropriately pruned and stems are cut to a height of 3 to 5m.
- The removal of Ash trees is subject to the Canadian Food and Inspection Agency's (CFIA) directives. No Ash products are permitted to leave the regulated area.
- Any trees slated for removal should be done so with care, avoiding and mitigating any negative impacts to adjacent trees to be retained, and in accordance with good arboricultural practices.

8.0 CFIA Directive (D-03-08): Phytosanitary Requirements to Prevent the Introduction into and Spread within Canada of the Emerald Ash Borer, *Agilus planipennis* (Fairmaire)

Canada Food and Inspection Agency (CFIA) Directive D-03-08: Phytosanitary Requirements to Prevent the Introduction into and Spread within Canada of the Emerald Ash Borer (EAB), *Agilus planipennis* (Fairmaire) applies to Ash species observed on properties that are located within the EAB Regulated Areas of Canada, prepared by the CFIA and dated: 2014. This area covers all south and central Ontario and western Quebec. Ash trees that require removal are subject to this directive.

Applicability to Project:

- The CFIA restricts the movement of all Ash material including wood, bark, chips or bark chips from being transported outside of the Regulated Area. A Movement Certificate is required by the CFIA for any Ash material leaving the Regulated Area.
- Ash are permitted to be chipped on site and / or removed or cut down and removed from site. Chipped Ash material that is to remain on site must be ground or chipped to a size of less than 2.5 cm in any two dimensions. All Ash material chipped or whole that is to be removed from site must be disposed of within the Regulated Areas of Canada.

9.0 Preservation and Protection Recommendations

The survival rates for trees, which are in proximity to construction, are dependent on the resultant changes to a variety of environmental and anthropogenic factors. These construction activities bring about changes to a variety of environmental features including the existing microclimate including winds, temperature, soil moisture, amount of available sunlight, soil quality, and the level of the water table. Increased human activities may also damage the structure and / or physiological activities of the trees. The full effects of the damage may not appear until several years after its occurrence. Thus, it is essential that both vegetative clearing and preservation methods follow the guidelines below and those generally accepted as keeping with good horticultural and construction practices. The guidelines are subject to adjustments deemed reasonable and appropriate considering the proximity and number of trees involved and the site-specific requirements.

9.1 General Recommendations

The following is a list of practical considerations for the construction phase of the project that applies to all trees that may be impacted by the construction.

- Tree protection fencing should be erected prior to the start of construction and should be limited to areas in close proximity to the trail alignment where there are large clusters of trees that may be affected by the proposed alignment. Fencing should be placed at the limit of the TPZ area;
- Prior to the commencement of tree removals, all limits of the locations of the tree preservation fencing must be clearly staked in the field and approved by WSP. All trees within the tree preservation zone must be left standing. The tree removals must be coordinated to be completed outside of the nesting season, April 1 to August 31, or a visual survey must be undertaken by an ornithologist to ascertain that there are no nests present within the nesting season;
- No tree removals will be permitted within the nesting season (April 1 to August 31) unless a visual survey has been undertaken by an ornithologist to ascertain that there are no nests present within the nesting season. All removals must be felled into the work area to ensure that damage does not occur to the trees within the tree preservation zone;
- Upon completion of the tree removals, all felled trees are to be removed from the site, and all brush chipped. All brush, roots and wood debris must be shredded into pieces that are smaller than 25 mm in size to ensure that any insect pests that could be present within the wood are destroyed. This work must be completed outside of the nesting season, April 1 to August 31, or a visual survey must be undertaken by an ornithologist to ascertain that there are no nests present within the nesting season;
- The CFIA has issued a prohibition of movement where the EAB has been confirmed. EAB has been found within York Region and is within the EAB Regulated Area which covers most of Ontario and a portion of western Quebec. This directive pertains to the movement of regulated materials (including but not limited to ash wood or bark and ash wood chips or bark chips) from a regulated area. EAB regulated articles moving out of a regulated area must be accompanied by a Movement Certificate issued by the CFIA. Refer to the EAB Regulated Areas of Canada found on the CFIA website;

- Ash materials may be removed from the site and disposed of within the 'Regulated Area' (see CFIA website for the 'Regulated Area' limits). Should it be necessary to dispose of Ash products outside of the 'Regulated Area' a 'Movement Certificate' will be required from the CFIA prior to transport;
- Areas within the tree preservation zone are not to be used for any type of storage (e.g. storage of debris, construction material, surplus soils, and construction equipment). No trenching or tunneling for underground services shall be located within the TPZ or dripline of trees designated for preservation within or adjacent to the construction zone;
- No grade changes shall occur within tree preservation zone unless approved as part of this report. In the event that any grade changes may occur, either as a cut or fill situation, the consulting arborist must be notified prior to such work occurring to ensure that all precautions to preserve the tree can be made;
- Trees shall not have any rigging cables or hardware of any sort attached or wrapped around them, nor shall any contaminants be dumped within the protective areas. Further, no contaminants shall be dumped or flushed where they may come into contact with the feeder roots of the trees; and,
- In the event that it is necessary to remove additional limbs or portions of trees after construction has commenced, or to accommodate construction, the consulting arborist is to be informed and under their direction the removal is to be executed carefully and in full accordance with arboricultural techniques, by a certified arborist.

9.1.1 Pruning Practices:

- All limbs damaged or broken during construction should be pruned cleanly, utilising bypass secateurs in accordance with approved horticultural practices. Should there be a potential risk of transfer of disease from infected to non-infected trees, tools must be disinfected after pruning each tree by dipping in methyl hydrate. This practice is particularly important during periods of tree stress and when pruning many members of the same genera, within which a disease could be spread quickly (i.e., Verticillium Wilt on Maples or Fireblight on genera of the Rosacea family);
- During excavation operations in which the root area is affected, the contractor is to prune all exposed roots cleanly. Pruned root ends are to be neatly and squarely trimmed and the area is to be backfilled with clean native fill as soon as possible to prevent desiccation and promote root growth. The exposed roots should not be allowed to dry out, and the contractor shall discuss watering of the roots with the consulting arborist so that the roots shall maintain optimum soil moisture during construction and backfilling operations, yet so not to interfere with construction operations. Backfilling must be with clean uncontaminated topsoil from an approved source. Texture must be coarser than existing soils, and to come into clean contact with existing soils (remove air pockets, sod, etc.);
- All pruning cuts should be made to a growing point such as a bud, twig or branch, cut just outside the branch collar (the swollen area at the base of the branch that sometimes has a bark ridge), and perpendicular to the branch being pruned rather than as close to

the trunk as possible. This minimizes the site of the wound. No stubs should be left. Poor cut location, poor cut angle and torn cuts are not acceptable;

- Tree roots should not be excavated within the critical structural rooting area. This is the minimum area of the root system necessary to maintain vitality or stability of the tree. Typically, this area extends to the dripline of the tree. The severing of one root can cause approximately 5-20% loss of the root system. A reduction of this area by greater than 30% can pose stability concerns for the tree;
- Extensive pruning is best completed before plants break dormancy. Pruning should be limited to the removal of no more than twenty-five (25%) of the total bud and leaf bearing branches. Pruning should include the careful removal of:
 - deadwood;
 - branches that are weak, damaged, diseased and those which will interfere with construction activity;
 - secondary leaders of conifers,
 - trunk and root suckers;
 - trunk waterspouts; and,
 - tight V-shaped or weak crotches (included unions);
- The contractor must report immediately any damage to trees such as broken limbs, damage to roots, or wounds to the main trunk or stem systems so that the damage can be assessed immediately; and,
- The tree protection fencing will be maintained until all construction is completed, soils are stabilized and all of the equipment has been removed from the site.

9.1.2 Establishment of Tree Protection Zone (TPZ)

- No grade changes shall occur within the TPZ area. In the advent that grade changes occur either as a cut or fill situation, the consulting arborist must be notified so that precautions to preserve the tree can be determined prior to the placement of fill or excavation activities;
- Every precaution must be taken to prevent damage to trees and root systems from damage, compaction and contamination resulting from the construction to the satisfaction of the consulting arborist;
- In the event that it is necessary to remove additional limbs or portions of trees, after construction has commenced, to accommodate construction, the consulting arborist is to be informed and under their direction the removal is to be executed carefully and in full accordance with arboricultural techniques, by a certified arborist; and,
- Any damage to trees such as broken limbs, damage to roots, or wounds to the main trunk or stem systems are to be reported to the consulting arborist so that the damage can be assessed immediately and mitigation can be promptly implemented.

9.2 Construction Implementation

9.2.1 Pre-Construction

- A site meeting is recommended to be held with contractor, City forestry representative and consulting arborist to review the trees to be removed and pruned;
- The tree removals must be coordinated to be completed outside of the nesting season, April 1 to August 31, or a visual survey must be undertaken by an ornithologist to ascertain that there are no nests present within the nesting season; and,
- It is highly recommended that tree reductions along the forest edge be conducted from the roadside to minimize any impacts to existing healthy trees. Stumps adjacent to trees identified for retention are to be cut at 0.3m height or 3m height in standing water locations in order to avoid impacts to retained trees.

9.2.2 Construction

- Periodic inspections will be undertaken by the site supervisor to ensure that the mitigation measures are being maintained during construction;
- The TPZ fencing is to be maintained throughout the entire construction period. No equipment storage, flushing of fuel, washing of construction equipment, and storage of spoil or construction debris is to occur behind the fencing;
- To avoid root zone impacts on trees to be retained, excavated material will not be stored against the TPZ fencing; and,
- Where the root system of trees to be preserved are exposed or damaged through construction activities, the cut ends are to be neatly and squarely trimmed back to the limits of disturbance and the area is to be backfilled with clean native fill as soon as possible to prevent desiccation and promote root growth. Proportional selective thinning of the canopy is not recommended as canopy pruning is only recommended in the event that the health of the tree declines.

9.2.3 Post-Construction

- The TPZ fencing will be removed last after all construction has ended, soils are stabilized and all of the equipment has been removed.

10.0 Limitations of Assessment

It is our policy to attach the following clause regarding limitations. We do this to ensure that the client is aware of what is technically and professionally realistic in retaining trees.

The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These include a visual examination 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 and direction of lean (if any), the general condition of the trees and the surrounding site, and the proximity of property and people. Except where specifically noted, the trees were not cored, probed or climbed and there was no detailed inspection of the root crowns involving excavations.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigour constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions.

While reasonable efforts have been made to ensure that the subject trees are healthy, no guarantees are offered, or implied, that these trees or any of their parts will remain standing. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or its component parts under all circumstances. Inevitably, a standing tree will always pose some level of risk. Most trees have the potential for failure under adverse weather conditions, and the risk can only be eliminated if the tree is removed.

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.

WSP Canada Inc. (WSP)



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11.0 Literature Cited

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Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail		Field Work Completed By: Carlene Perkin		Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind					
Tree Assessment Criteria:				Tree Condition								
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.				Good: tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)								
CS - Canopy Structure: assessment of scaffold branches, unions and canopy				Fair: tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)								
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown				Poor: tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)								
Conditions:		Legend:		Tree Grouping			Minimum TPZ reduction / Injury		Trees to be Preserved / Retained			
G=Good, F=Fair, P=Poor, D=Dead		Minimum TPZ reduction / No Injury		Minimum TPZ reduction / Injury			Hazard Tree to be Removed		Trees to be Removed			
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
Rouge National Urban Park Trail - north of Major Mackenzie Drive East												
84	<i>Fraxinus pennsylvanica</i>	Green Ash	1	15	15	P	P	P	1.5	3.6	Remove	90% canopy dieback. EAB damage
B	<i>Fraxinus nigra</i>	Black Ash	1	6	6	G	G	G	0.5	1.2	Retain - With protection measures	Adjacent to proposd trail
Rouge National Urban Park Trail - Major Mackenzie Drive East to west side of Reesor Road												
85	<i>Fraxinus sp.</i>	Ash sp.	1	60	DEAD	-	-	-	-	-	Remove	Dead, broken branches
86	<i>Ulmus sp.</i>	Elm sp.	1	50	DEAD	-	-	-	-	-	Remove	Dead, broken branches, decay
87	<i>Fraxinus sp.</i>	Ash sp.	1	20	20	P	P	P	2	3.6	Remove	80% canopy dieback
88	<i>Fraxinus sp.</i>	Ash sp.	1	40,35,30	61	P	P	P	6	8.4	Remove	55% canopy dieback
89	<i>Fraxinus americana</i>	White Ash	1	20	20	P	P	P	2	3.6	Remove	35% canopy dieback, chlorosis
90	<i>Ulmus sp.</i>	Elm sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
91	<i>Unknown - Dead</i>	Unknown - Dead	1	20	DEAD	-	-	-	-	-	Remove	Dead
92	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
93	<i>Unknown - Dead</i>	Unknown - Dead	1	20	DEAD	-	-	-	-	-	Remove	Dead
94	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
95	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
96	<i>Populus tremuloides</i>	Trembling Aspen	1	10	DEAD	-	-	-	-	-	Remove	Dead
97	<i>Fraxinus sp.</i>	Ash sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead
98	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
99	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
100	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
101	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
102	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
103	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
104	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
105	<i>Fraxinus sp.</i>	Ash sp.	1	25	25	P	P	P	30	3.6	Remove	EAB damage
106	<i>Fraxinus sp.</i>	Ash sp.	1	20	20	P	P	P	2	3.6	Remove	EAB damage
107	<i>Fraxinus sp.</i>	Ash sp.	1	20	20	P	P	P	30	3.6	Remove	EAB damage
108	<i>Ulmus americana</i>	American Elm	1	78	DEAD	-	-	-	-	-	Remove	Dead, peeling bark

Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail		Field Work Completed By: Carlene Perkin		Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind					
Tree Assessment Criteria:				Tree Condition								
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.				Good: tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)								
CS - Canopy Structure: assessment of scaffold branches, unions and canopy				Fair: tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)								
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown				Poor: tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)								
Conditions:				Legend:								
G=Good, F=Fair, P=Poor, D=Dead				Tree Grouping			Minimum TPZ reduction / Injury			Trees to be Preserved / Retained		
				Minimum TPZ reduction / No Injury			Hazard Tree to be Removed			Trees to be Removed		
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
109	<i>Ulmus sp.</i>	Elm sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead, peeling bark
110	<i>Ulmus sp.</i>	Elm sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead, peeling bark
111	<i>Pinus sp.</i>	Pine sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead, peeling bark
112	<i>Fraxinus sp.</i>	Ash sp.	1	12	12	P	P	P	1	3.6	Remove	30% canopy dieback
Rouge National Urban Park Trail - East side of Reesor Road to northeast of Reesor Road and 16th Avenue												
113	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
114	<i>Unknown - Dead</i>	Unknown - Dead	1	35	DEAD	-	-	-	-	-	Remove	Dead, no branches left
115	<i>Tilia americana</i>	American Basswood	1	25,25	35	P	P	P	3.5	4.8	Remove	30% canopy dieback
116	<i>Fraxinus sp.</i>	Ash sp.	1	90	DEAD	-	-	-	-	-	Remove	Dead, broken branches
117	<i>Prunus avium</i>	Sweet Cherry	1	15	DEAD	-	-	-	-	-	Remove	Dead
118	<i>Fraxinus sp.</i>	Ash sp.	1	40	40	P	P	P	4	4.8	Remove	90% canopy dieback
119	<i>Fraxinus sp.</i>	Ash sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead
120	<i>Fraxinus sp.</i>	Ash sp.	1	40	DEAD	-	-	-	-	-	Remove	Dead, broken branches
121	<i>Fraxinus sp.</i>	Ash sp.	1	60	DEAD	-	-	-	-	-	Remove	Dead, broken branches
122	<i>Unknown - Dead</i>	Unknown - Dead	1	35	DEAD	-	-	-	-	-	Remove	Dead, broken branches
123	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead, broken branches
124	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead, broken branches
125	<i>Fraxinus sp.</i>	Ash sp.	1	27	DEAD	-	-	-	-	-	Remove	Dead, broken branches
126	<i>Fraxinus sp.</i>	Ash sp.	1	25,30,15	42	F	F	F	4.0	6	Remove	10% canopy dieback, EAB
127	<i>Fraxinus sp.</i>	Ash sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead
128	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
129	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
130	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
131	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
132	<i>Fraxinus sp.</i>	Ash sp.	1	40	DEAD	-	-	-	-	-	Remove	Dead
133	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
134	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
135	<i>Prunus avium</i>	Sweet Cherry	1	25	DEAD	-	-	-	-	-	Remove	Dead

Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail		Field Work Completed By: Carlene Perkin		Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind					
Tree Assessment Criteria:						Tree Condition						
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.						Good: tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)						
CS - Canopy Structure: assessment of scaffold branches, unions and canopy						Fair: tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)						
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown						Poor: tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)						
Conditions:			Legend:			Tree Grouping			Minimum TPZ reduction / Injury			
G=Good, F=Fair, P=Poor, D=Dead			Minimum TPZ reduction / No Injury			Minimum TPZ reduction / Injury			Trees to be Preserved / Retained			
			Minimum TPZ reduction / No Injury			Hazard Tree to be Removed			Trees to be Removed			
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
136	<i>Prunus avium</i>	Sweet Cherry	1	50,20	54	P	P	P	5	7.2	Remove	Dead main stem
137	<i>Prunus avium</i>	Sweet Cherry	1	12	DEAD	-	-	-	-	-	Remove	Dead, broken branches
138	<i>Prunus avium</i>	Sweet Cherry	1	20	DEAD	-	-	-	-	-	Remove	Dead, broken branches
139	<i>Fraxinus sp.</i>	Ash sp.	1	11	DEAD	-	-	-	-	-	Remove	Dead
140	<i>Fraxinus sp.</i>	Ash sp.	1	12	DEAD	-	-	-	-	-	Remove	Dead
141	<i>Fraxinus sp.</i>	Ash sp.	1	120,40	DEAD	-	-	-	-	-	Remove	Dead
142	<i>Fraxinus sp.</i>	Ash sp.	1	9	DEAD	-	-	-	-	-	Retain	Dead
143	<i>Fraxinus sp.</i>	Ash sp.	1	50,15,10	53	P	P	P	5	7.2	Remove	95% canopy dieback, water sprouting
144	<i>Fraxinus sp.</i>	Ash sp.	1	18	DEAD	-	-	-	-	-	Remove	Dead
145	<i>Fraxinus sp.</i>	Ash sp.	1	18	DEAD	-	-	-	-	-	Remove	Dead
146	<i>Fraxinus sp.</i>	Ash sp.	1	10	10	F	F	F	1	3.6	Potential to retain for snag habitat	10% canopy dieback
147	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Potential to retain for snag habitat	Dead
148	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Potential to retain for snag habitat	Dead
149	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Potential to retain for snag habitat	Dead
150	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Potential to retain for snag habitat	Dead
151	<i>Fraxinus sp.</i>	Ash sp.	1	10,10	DEAD	-	-	-	-	-	Potential to retain for snag habitat	Dead
Rouge National Urban Park Trail - east of 16th Avenue and Reesor Road to Highway 7												
167	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
168	<i>Fraxinus sp.</i>	Ash sp.	1	28	DEAD	-	-	-	-	-	Remove	Dead
169	<i>Fraxinus sp.</i>	Ash sp.	1	28	DEAD	-	-	-	-	-	Remove	Dead
170	<i>Prunus serotina</i>	Black Cherry	1	50	DEAD	-	-	-	-	-	Remove	Dead, broken branches
171	<i>Fraxinus sp.</i>	Ash sp.	1	28	DEAD	-	-	-	-	-	Remove	Dead
172	<i>Fraxinus sp.</i>	Ash sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead
173	<i>Fraxinus sp.</i>	Ash sp.	1	50	DEAD	-	-	-	-	-	Remove	Dead
174	<i>Unknown - Dead</i>	Unknown - Dead	1	10	DEAD	-	-	-	-	-	Remove	Dead
175	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
176	<i>Unknown - Dead</i>	Unknown - Dead	1	20	DEAD	-	-	-	-	-	Remove	Dead
177	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead

Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail		Field Work Completed By: Carlene Perkin		Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind					
Tree Assessment Criteria:				Tree Condition								
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CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown				Poor: tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)								
Conditions:			Legend:									
G=Good, F=Fair, P=Poor, D=Dead			Tree Grouping			Minimum TPZ reduction / Injury			Trees to be Preserved / Retained			
			Minimum TPZ reduction / No Injury			Hazard Tree to be Removed			Trees to be Removed			
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
178	<i>Fraxinus sp.</i>	Ash sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead
179	<i>Fraxinus sp.</i>	Ash sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead
180	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
181	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
182	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
183	<i>Fraxinus sp.</i>	Ash sp.	1	12	12	P	P	P	1.0	3.6	Remove	15% canopy dieback, epicormic shoots
184	<i>Juglans nigra</i>	Black Walnut	1	40	40	P	P	P	4.0	4.8	Retain - Prune dead branches to ISA standards	10% canopy dieback, dead branches trunk wounds, some decline
185	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
186	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
187	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
188	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
189	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
190	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
191	<i>Fraxinus sp.</i>	Ash sp.	1	30	30	P	P	P	3.0	4.8	Remove	10% canopy dieback
192	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
193	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
194	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
195	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
196	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
197	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
198	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
199	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
200	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
201	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
202	<i>Fraxinus sp.</i>	Ash sp.	1	30	DEAD	-	-	-	-	-	Remove	Dead
203	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
204	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
205	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead

Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail			Field Work Completed By: Carlene Perkin			Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind			
Tree Assessment Criteria: TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses. CS - Canopy Structure: assessment of scaffold branches, unions and canopy CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown						Tree Condition Good: tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV) Fair: tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV) Poor: tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)						
Conditions: G=Good, F=Fair, P=Poor, D=Dead			Legend: Tree Grouping Minimum TPZ reduction / No Injury Minimum TPZ reduction / Injury Hazard Tree to be Removed Trees to be Preserved / Retained Trees to be Removed									
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
206	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead, fallen over
207	<i>Unknown - Dead</i>	Unknown - Dead	1	25	DEAD	-	-	-	-	-	Remove	Dead
208	<i>Unknown - Dead</i>	Unknown - Dead	1	55	DEAD	-	-	-	-	-	Remove	Dead, no branches remaining, heavy decay
209	<i>Unknown - Dead</i>	Unknown - Dead	1	10	DEAD	-	-	-	-	-	Remove	Dead

Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail		Field Work Completed By: Carlene Perkin		Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind					
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Conditions:			Legend:									
G=Good, F=Fair, P=Poor, D=Dead			Tree Grouping			Minimum TPZ reduction / Injury			Trees to be Preserved / Retained			
			Minimum TPZ reduction / No Injury			Hazard Tree to be Removed			Trees to be Removed			
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
210	<i>Acer saccharum</i>	Sugar Maple	1	40	40	P	P	P	4.0	4.8	Remove	Dead at top
211	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead
212	<i>Fraxinus sp.</i>	Ash sp.	1	<10	DEAD	-	-	-	-	-	Retain	Dead
213	<i>Fraxinus sp.</i>	Ash sp.	1	50	DEAD	-	-	-	-	-	Remove	Dead
214	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
215	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
216	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
217	<i>Unknown - Dead</i>	Unknown - Dead	1	50	DEAD	-	-	-	-	-	Remove	Dead, broken branches
218	<i>Fraxinus sp.</i>	Ash sp.	1	15	15	P	P	P	1.5	3.6	Remove	EAB damage evidence
219	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
220	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
221	<i>Unknown / Ash - Dead</i>	Unknown / Ash - Dead	1	30	DEAD	-	-	-	-	-	Remove	Dead
222	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
223	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
224	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
225	<i>Fraxinus sp.</i>	Ash sp.	1	10	10	P	P	P	-	3.6	Remove	25% canopy dieback
226	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
227	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
228	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
229	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
230	<i>Fraxinus sp.</i>	Ash sp.	1	20	20	P	P	P	-	3.6	Remove	25% canopy dieback
231	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
232	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead
233	<i>Fraxinus sp.</i>	Ash sp.	1	15	DEAD	-	-	-	-	-	Remove	Dead
234	<i>Acer saccharum</i>	Sugar Maple	1	20	DEAD	-	-	-	-	-	Remove	Dead, peeling bark
235	<i>Acer saccharum</i>	Sugar Maple	1	35	35	P	P	P	3.5	4.8	Retain - Prune dead branches to ISA standards	Broken branches
236	<i>Acer saccharum</i>	Sugar Maple	1	25	25	P	P	P	2.5	3.6	Retain - Prune dead branches to ISA standards	Broken branches, potential future hazard
237	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead

Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail		Field Work Completed By: Carlene Perkin		Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind					
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Conditions:			Legend:			Tree Grouping			Minimum TPZ reduction / Injury			
G=Good, F=Fair, P=Poor, D=Dead			Minimum TPZ reduction / No Injury			Minimum TPZ reduction / Injury			Trees to be Preserved / Retained			
			Minimum TPZ reduction / No Injury			Hazard Tree to be Removed			Trees to be Removed			
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
238	<i>Acer saccharum</i>	Sugar Maple	1	25	25				2.5	3.6	Remove	Broken branches
239	<i>Fraxinus sp.</i>	Ash sp.	1	12	DEAD	-	-	-	-	-	Remove	Dead
240	<i>Unknown - Dead</i>	Unknown - Dead	1	10	DEAD	-	-	-	-	-	Remove	Dead
241	<i>Juglans cinerea</i>	Butternut	1	41,26	49	F	F	F	4.5	6	Retain - With protection measures	Canker, dead main branch, 15% canopy dieback, branches with wounds, broken
242	<i>Juglans cinerea</i>	Butternut	1	27	27	F	F	F	2.5	3.6	Retain - With protection measures	Canker, water sprouting, dead branches, 10% dieback
243	<i>Unknown - Dead</i>	Unknown - Dead	1	10	DEAD	-	-	-	-	-	Remove	Dead
244	<i>Juglans cinerea</i>	Butternut	1	22,10	24	F	F	F	2.0	3.6	Retain - With protection measures	Canker, dead branches, 10% dieback
245	<i>Juglans cinerea</i>	Butternut	1	24	24	F	F	F	2.0	3.6	Retain - With protection measures	Canker, dead branches, 10% dieback, 1 dead stem
246	<i>Fraxinus americana</i>	White Ash	1	24	24	P	P	P	2.0	3.6	Remove	15% canopy dieback
247	<i>Juglans cinerea</i>	Butternut	1	38,27	47	F	F	F	4.5	6	Retain - With protection measures	Wounds on trunk from mechanical damage, canker at base, 10% dieback
248	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
249	<i>Fraxinus sp.</i>	Ash sp.	1	30	30	P	P	P	3.0	4.8	Remove	90% canopy dieback
250	<i>Tilia americana</i>	American Basswood	1	30	30	F	F	F	3.0	4.8	Retain - Prune dead branches to ISA standards	Broken branch adjacent to pathway
251	<i>Unknown - Dead</i>	Unknown - Dead	1	20	DEAD	-	-	-	-	-	Remove	Dead
252	<i>Ulmus sp.</i>	Elm sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead
253	<i>Fraxinus sp.</i>	Ash sp.	1	15	15	P	P	P	1.5	3.6	Remove	10% canopy dieback
254	<i>Unknown - Dead</i>	Unknown - Dead	1	10	DEAD	-	-	-	-	-	Remove	Dead
255	<i>Unknown - Dead</i>	Unknown - Dead	1	18	DEAD	-	-	-	-	-	Remove	Dead, fallen onto trail
256	<i>Juglans nigra</i>	Black Walnut	1	52	52	P	P	P	5.0	7.2	Remove	80% canopy dieback
257	<i>Populus x canadensis</i>	Canada Poplar	1	60	DEAD	-	-	-	-	-	Remove	Dead
258	<i>Fraxinus sp.</i>	Ash sp.	1	25	DEAD	-	-	-	-	-	Remove	Dead, Epicormic shoots
259	<i>Populus x canadensis</i>	Canada Poplar	1	45	DEAD	-	-	-	-	-	Remove	Dead
260	<i>Fraxinus sp.</i>	Ash sp.	1	20	DEAD	-	-	-	-	-	Remove	Dead, Epicormic shoots
261	<i>Populus x canadensis</i>	Canada Poplar	1	15	DEAD	-	-	-	-	-	Remove	Dead
262	<i>Populus x canadensis</i>	Canada Poplar	1	20	DEAD	-	-	-	-	-	Remove	Dead
263	<i>Fraxinus sp.</i>	Ash sp.	1	10	DEAD	-	-	-	-	-	Remove	Dead, Epicormic shoots
TG-01	<i>Thuja occidentalis</i>	Eastern White Cedar	14	<10	DEAD	-	-	-	-	-	Retain	Dead
264	<i>Populus x canadensis</i>	Canada Poplar	1	45	DEAD	-	-	-	-	-	Remove	Dead

Table 2: Hazard Tree Assessment Charts

Project: Rouge Park Trail		Field Work Completed By: Carlene Perkin		Date of Fieldwork: July 21, 2020			Weather: 30C, overcast, low wind					
Tree Assessment Criteria:						Tree Condition						
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.						Good: tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)						
CS - Canopy Structure: assessment of scaffold branches, unions and canopy						Fair: tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)						
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown						Poor: tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)						
Conditions:				Legend:								
G=Good, F=Fair, P=Poor, D=Dead				Tree Grouping				Minimum TPZ reduction / Injury				
				Minimum TPZ reduction / No Injury				Hazard Tree to be Removed				
								Trees to be Preserved / Retained				
								Trees to be Removed				
Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
TG-02	<i>Thuja occidentalis</i>	Eastern White Cedar	12	<10	DEAD	-	-	-	-	-	Retain	Dead
1301	<i>Salix sp.</i>	Willow	1	90	90	P	P	P	6	6.0	Retain	Prune dead/broken limbs over 100mm diameter. Tree is tagged.
1302	<i>Populus x canadensis</i>	Canada Poplar	1	45	45	P	P	P	-	-	Remove	Canopy dieback. Tree is tagged.
1303	<i>Acer negundo</i>	Manitoba Maple	1	20	20	P	P	P	-	-	Remove	Leaning. Tree is tagged.
1304	<i>Acer negundo</i>	Manitoba Maple	1	20	20	P	P	P	-	-	Remove	Leaning. Tree is tagged
1305	<i>Unknown - Dead</i>	Unknown - Dead	1	20	DEAD	-	-	-	-	-	Remove	Dead
1306	<i>Fraxinus sp.</i>	Ash sp.	1	40	40	P	P	P	-	-	Remove	Cut at base. Stump to be left in ground. Tree is tagged.
1307	<i>Acer sp.</i>	Maple sp.	1	15	15	P	P	P	-	-	Remove	Tree is tagged.
1308	<i>Unknown - Dead</i>	Unknown - Dead	1	75	DEAD	-	-	-	-	-	Remove	Tree is tagged. To be cut to 1.5m height - leave stump.
1309	<i>Populus x canadensis</i>	Canada Poplar	1	17, 17	17	-	-	-	-	-	Remove	Tree is tagged. Fallen limbs at top of tree.
1310	<i>Unknown - Dead</i>	Unknown - Dead	1	25	DEAD	-	-	-	-	-	Remove	Dead. Tree is tagged.
1311	<i>Fraxinus sp.</i>	Ash sp.	1	16	16	-	-	-	-	-	Remove	Tree is tagged.
1312	<i>Populus x canadensis</i>	Canada Poplar	1	16	16	-	-	-	-	-	Remove	Tree is tagged.
Rouge National Urban Park Trail - south of Highway 407 to 14th Avenue												
42	<i>Fraxinus americana</i>	White Ash	1	50	50	P	P	P	5	6.0	Remove	Multistem, dead
43	<i>Fraxinus americana</i>	White Ash	1	6 stems 40 to 50	DEAD	-	-	-	-	-	Remove	Dead
44	<i>Fraxinus americana</i>	White Ash	1	50	50	P	P	P	5	6.0	Remove	EAB damage, dying or dead
45	<i>Fraxinus americana</i>	White Ash	1	20	20	P	P	P	2	3.6	Remove	EAB damage, dying or dead
46	<i>Fraxinus americana</i>	White Ash	1	15	15	P	P	P	1.5	3.6	Remove	EAB damage, dying or dead
47	<i>Fraxinus americana</i>	White Ash	1	60	60	P	P	P	6	7.2	Remove	EAB damage, dying or dead
48	<i>Fraxinus americana</i>	White Ash	1	40	40	P	P	P	4	4.8	Remove	EAB damage, dying or dead
49	<i>Fraxinus americana</i>	White Ash	1	25	25	P	P	P	2.5	3.6	Remove	EAB damage, dying or dead
50	<i>Fraxinus americana</i>	White Ash	1	45,50	67	P	P	P	6.5	8.4	Remove	EAB damage, dying or dead
51	<i>Fraxinus americana</i>	White Ash	1	20	20	P	P	P	2	3.6	Remove	EAB damage, dying or dead
52	<i>Fraxinus americana</i>	White Ash	1	20	20	P	P	P	2	3.6	Remove	EAB damage, dying or dead
53	<i>Fraxinus americana</i>	White Ash	1	60	60	P	P	P	6	7.2	Remove	EAB damage, dying or dead, proposed trail through this dead Ash
54	<i>Fraxinus americana</i>	White Ash	1	50	50	P	P	P	5	6.0	Remove	EAB damage, dying or dead
55	<i>Fraxinus americana</i>	White Ash	1	6 stems 30 to 60	105	P	P	P	10	6.3	Remove	EAB damage, dying or dead

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Tree #	Botanical Name	Common Name	No.	DBH (cm)	Effective DBH	Tree Condition			Dripline Radius (m)	Tree Protection Zone (m)	Recommendation	Remarks
						TI	CS	CV				
Rouge National Urban Park Trail - south of 14th Avenue												
56	<i>Unknown - Dead</i>	Unknown - Dead	1	50	DEAD	-	-	-	-	-	Remove	Dead
57	<i>Populus x canadensis</i>	Canada Poplar	1	50	DEAD	-	-	-	-	-	Remove	Dead
58	<i>Unknown - Dead</i>	Unknown - Dead	1	50	DEAD	-	-	-	-	-	Remove	Dead
59	<i>Unknown - Dead</i>	Unknown - Dead	1	60	DEAD	-	-	-	-	-	Remove	Dead
60	<i>Unknown - Dead</i>	Unknown - Dead	1	50	DEAD	-	-	-	-	-	Remove	Dead
61	<i>Fraxinus americana</i>	White Ash	1	20	20	P	P	P	2	3.6	Remove	EAB, dying
62	<i>Fraxinus americana</i>	White Ash	1	20	20	P	P	P	2	3.6	Remove	EAB, dying, vines
63	<i>Fraxinus americana</i>	White Ash	1	55	55	P	P	P	5.5	7.2	Remove	EAB, dying, vines
64	<i>Tilia americana</i>	American Basswood	1	40	40	P	P	P	4	4.8	Remove	Dead limb
65	<i>Fraxinus americana</i>	White Ash	1	20,20,15	DEAD	-	-	-	-	-	Remove	Dead
66	<i>Fraxinus americana</i>	White Ash	1	25	DEAD	-	-	-	-	-	Remove	Dead
67	<i>Fraxinus americana</i>	White Ash	1	27	DEAD	-	-	-	-	-	Remove	Dead
68	<i>Fraxinus americana</i>	White Ash	1	40	DEAD	-	-	-	-	-	Remove	Dead
69	<i>Fraxinus americana</i>	White Ash	1	20	DEAD	-	-	-	-	-	Remove	Dead
70	<i>Fraxinus americana</i>	White Ash	1	20,20	DEAD	-	-	-	-	-	Remove	Dead
A	<i>Tilia americana</i>	American Basswood	1	3 stems 40 to 50	75	G	G	G	Prune limb overhanging trail	9.6	Retain - Prune lower branches to ISA standards	Alive, recommend pruning, trail proposed to go beneath dripline
71	<i>Acer saccharum</i>	Sugar Maple	1	50	DEAD	-	-	-	-	-	Remove	Dead