TREE INVENTORY & PRESERVATION STUDY

2121 Riverside Drive West, City of Windsor

Prepared for:

AGBABA HOLDINGS CORPORATION

Prepared by:

NEUHEIMER
Tree Care and Consulting Inc

July 2, 2024

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ABOUT THE AUTHOR

Michael Neuheimer is the owner and president of Neuheimer Tree Care and Consulting. Michael has over 20 years of experience working in the field of Arboriculture and tree preservation. He has held numerous contracts with the City of Windsor, the City of Brampton, the local municipalities and even carried out a specialized tree inventory project for the City of Salzburg, Austria that was 22,000 trees in size. Michael has achieved a Bachelor of Science from the University of Windsor and has been a Certified Arborist with the International Society of Arboriculture (ISA) since the year 2000. He also holds credentials in Tree Risk Assessment with the ISA.

INTRODUCTION

A Tree Inventory & Preservation Study has been prepared for Marko Agbaba, Agbaba Holdings Corporation by consultant, Neuheimer Tree Care and Consulting Inc. This study pertains to the impact of the proposed development of an apartment building for 2121 Riverside Drive West, in the City of Windsor on the surrounding trees. The scope of this study comes from a section of the City's Official Plan, whereas the purpose of the Tree Inventory and Preservation study is to:

'investigate existing tree vegetation, within and adjacent to development and determine how protection and enhancement can coincide with proposed development' (City of Windsor, 2012).

The City of Windsor has also provided Agbaba Holdings Corporation with the following comment and instructions:

"9. Tree Inventory & Preservation Study (ZBA) – (per O.P. Vol 1- SS10.2.14) Applicant is to be aware that there are 5 municipal trees near the property line along Rankin Avenue which will need to be reviewed by the City Forester and need to be preserved. Please contact Stefan Fediuk, Senior Urban Design Planner at (519) 255-6543 ext. 6025 sfediuk@citywindsor.ca with any questions for additional information.

METHODS & OBSERVATIONS

There are a number of trees present at 2121 Riverside Drive West that were assessed for the purpose of this report. Michael Neuheimer attended the site twice to collect all the necessary information and data. He met with Marko Agbaba on site on May 28, 2024 and attended the site again on June 14th, 2024 by himself.

Trees were assessed to determine their health, structure and whether they could remain as part of the landscape or whether they would have to be removed due to conflicts with the proposed development.

Trees are routinely measured for size, by determining their diameter using an Arborist's Diameter tape, where the trunk of each tree is measured at 1.3 metres above the ground. This measurement is referred to as the trees 'Diameter At Breast Height' (DBH).

Trees were also measured for their Vitality and for their Structure. Vitality refers to the tree's overall health. Trees that had a full crown, with little to no dead wood observed in their canopy, along with a full canopy of green healthy leaves and with leaves that were free of disease or insect damage, were classified as having 'Good' vitality. Whereas, trees that had significant amounts of deadwood present, had diminished leaves, and or signs of insect and disease activity were classified as 'Fair' or 'Poor' vitality depending on the severity of the trees decline or ailments. However, no trees in this report were classified as 'Poor'.

The Structure of a tree refers to how mechanically sound the tree is, in reference to the state of its trunk, roots and branches at the time of the assessment. Trees with full a crown can appear healthy, only to find that they may be structurally flawed due to lightning strikes, storm damage,

compacted root systems, or mechanical damages done to the trunk where decay is advancing within and are now deemed as unsafe.

Finally, with the aid of a recent Plan of Survey (December 2023), all trees on site were verified for their ownership. The survey shows that all trees on site are privately owed, meaning that no portion of the trees' trunk is touching the boundary between private and municipal land.

The Forestry Act, R.S.O. 1990, c. F.26 defines trees as common property where *(2) Every tree whose trunk is growing on the boundary between adjoining lands is the common property of the owners of the adjoining lands*. The survey also provides a comment from the surveyor which states that *'Trees trunks shown lie completely within the subject property'*. A copy of this survey is included within the Appendix section of this report.

We also observed that there are 3 City owned trees growing across from the proposed site, located in the centre median of Rankin and have been included in this report. Centre median trees are often damaged during construction activities, as they frequently serve as staging areas for heavy equipment and building materials, which can lead to their demise.

RESULTS

Below are the details of our tree inventory for 2121 Riverside Drive West in the City of Windsor. Each table below outlines the attributes of each tree found within the study area and provides a response to the required components of the City's Tree Inventory Preservation Study guidelines within Section 10.2.14 of the Official Plan (City of Windsor, 2012).

Location: 2121 Riverside Drive West

TABLE 1: 82-35 CM DBH SILVER MAPLE ATTRIBUTES

Species of Tree: Silver Maple, *Acer saccharinum*	Size: 82 cm & 35 cm DBH (co-dominate stem)	Location: South west corner of property
Canopy Vitality: Good	Structure: Good	Ownership: Private
Other Comments: Minor amount of deadwood in canopy; probable root damage from sidewalk installation; some surface roots		
Impact of Development on this tree: This tree is already showing signs of stress as portions of its canopy is showing signs of decline. The impact of construction in and around this tree will cause further decline as this tree is already in the mature stage of its life span.		
Possible Infrastructure Modifications: Modifications to the site plan in order to retain this tree is not recommended as this tree is entering the late stages of its life span and any gains in tree preservation will likely not be realized post construction.		
Preservation or Removal of Tree Recommended: **Removal**		
Best Management Practices to mitigate impact of development upon trees: NA		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for either on site or within the neighbourhood can be discussed.		
Details of maintenance program post development: Not applicable.		

FIGURE 1: PHOTO OF 82-65 CM DBH SILVER MAPLE

TABLE 2: 71 CM DBH BLACK WALNUT ATTRIBUTES

Species of Tree: Black Walnut, Juglans nigra	Size: 71 cm DBH	Location: South west corner
Canopy Vitality: Good	Structure: Good	Ownership: Private
Other Comments: Minor deadwood; location is causing the adjacent sidewalk to heave upwards; probable root damage from sidewalk installation		
Impact of Development on this tree: Black Walnut are sensitive trees and do not tolerate construction activities and damages (Coder, 2021). The development of this site in and around this tree will lead to its demise.		
Possible Infrastructure Modifications: Modifications to the site plan in order to retain this tree is not recommended as these trees are not tolerant to construction activities.		
Preservation or Removal of Tree Recommended: **Removal**		
Best Management Practices to mitigate impact of development upon trees: NA		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for either on site or within the neighbourhood can be discussed.		
Details of maintenance program post development: NA		

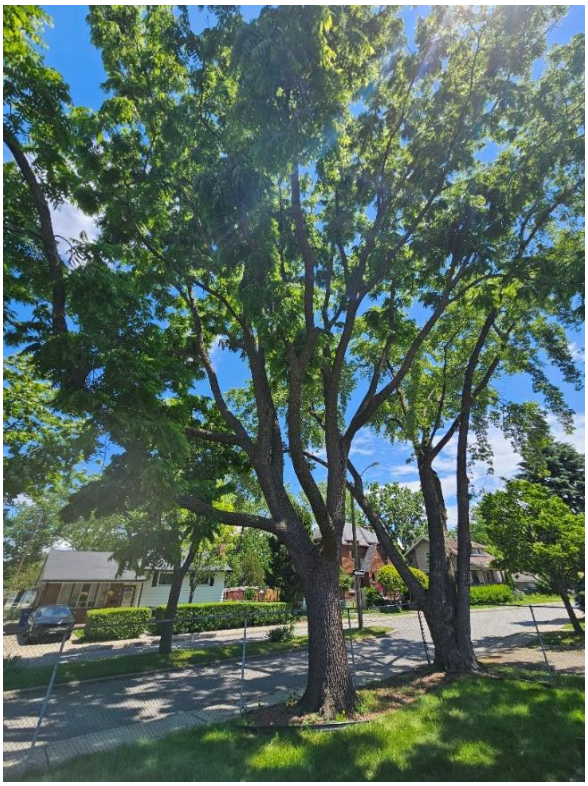

FIGURE 2: PHOTO OF 71 CM DBH BLACK WALNUT

TABLE 3: 16 CM DBH CHOKE CHERRY ATTRIBUTES

Species of Tree: Choke Cherry, *Prunus virginiana*	Size: 16 cm DBH	Location: South of carport
Canopy Vitality: Fair	Structure: Fair	Ownership: Private
Other Comments: Medium infestation of the disease known as 'Black Knot of Cherry'; noticeable crown thinning		
Impact of Development on this tree: This tree is unfortunately located in the footprint of the proposed building and will have to be removed		
Possible Infrastructure Modifications: Not applicable		
Preservation or Removal of Tree Recommended: **Removal**		
Best Management Practices to mitigate impact of development upon trees: NA		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for either on site or within the neighbourhood can be discussed.		
Details of maintenance program post development: Not applicable		

FIGURE 3: PHOTO OF16 CM DBH CHOKE CHERRY

TABLE 4: 26-40 CM DBH PAPER BIRCH ATTRIBUTES

Species of Tree: Paper Birch, *Betula papyrifera*	Size: 26-40 cm DBH	Location: North East corner of house
Canopy Vitality: Fair	Structure: Fair	Ownership: Private
Other Comments: Signs of crown dieback, possibly from the Bronze Birch Borer		
Impact of Development on this tree: This tree is unfortunately located in the footprint of the proposed building and will have to be removed		
Possible Infrastructure Modifications: Not applicable		
Preservation or Removal of Tree Recommended: **Removal**		
Best Management Practices to mitigate impact of development upon trees: Not applicable.		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for either on site or within the neighbourhood can be discussed.		
Details of maintenance program post development: Not applicable.		

FIGURE 4: PHOTO OF 26-40 CM DBH PAPER BIRCH

TABLE 5: 37 CM DBH SUGAR MAPLE ATTRIBUTES

Species of Tree: Sugar Maple, *Acer saccharum*	Size: 37 cm DBH	Location: North east corner of house
Canopy Vitality: Good	Structure: Good	Ownership: Private
Other Comments: Healthy vibrant tree		
Impact of Development on this tree: This tree is unfortunately located in the footprint of the proposed building and will have to be removed		
Possible Infrastructure Modifications: Not applicable.		
Preservation or Removal of Tree Recommended: **Removal**		
Best Management Practices to mitigate impact of development upon trees: Not applicable.		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for on either site or within the neighbourhood can be discussed.		
Details of maintenance program post development: Not applicable.		

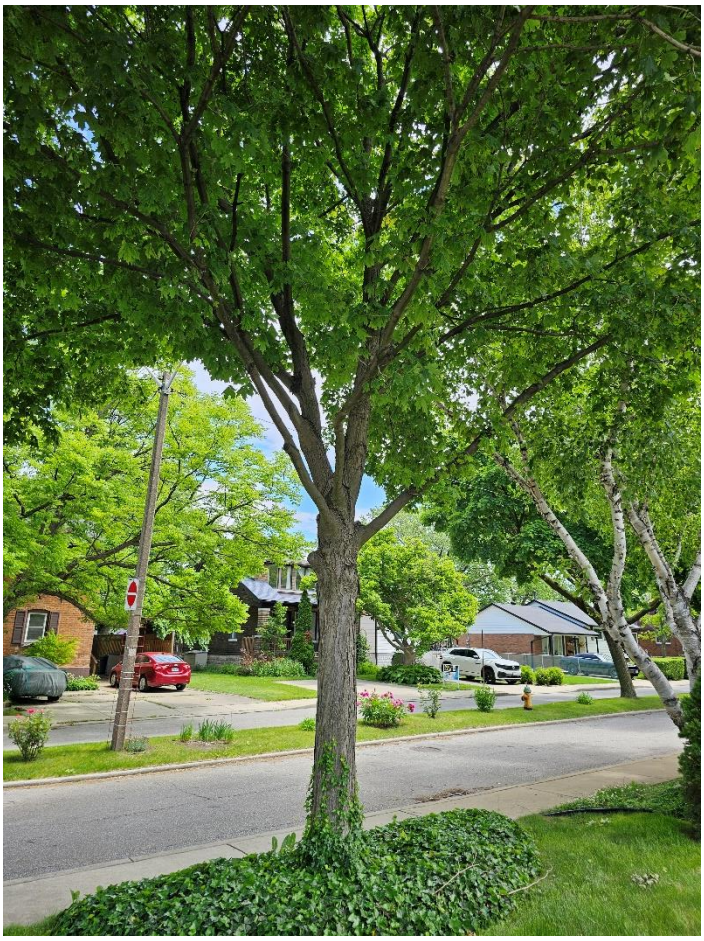

FIGURE 5: PHOTO OF 37 CM DBH SUGAR MAPLE

TABLE 6: 61 CM DBH HONEYLOCUST ATTRIBUTES

Species of Tree: Honeylocust, *Gleditsia triacanthos*	Size: 61 cm DBH	Location: North east corner of property
Canopy Vitality: Good	Structure: Good	Ownership: Private
Other Comments: Minor amount of deadwood present; severe girdling roots		
Impact of Development on this tree: This tree is free and clear of this development and should be retained.		
Possible Infrastructure Modifications: This tree needs to be protected throughout the construction process and tree protection fencing should be installed around the circumference of the canopy.		
Preservation or Removal of Tree Recommended: **Preservation**		
Best Management Practices to mitigate impact of development upon trees: Identify the tree protection zone and install tree protection fencing around the circumference of the tree's canopy to protect the root system and from heavy machinery striking the tree.		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for either on site or within the neighbourhood can be considered in lieu.		
Details of maintenance program post development: Decorative shredded mulch to be applied post development to help the tree retain moisture, keep machinery away from striking the bark, and to provide organic material to the soil. The tree should than be monitored for its vitality and watered weekly during times of droughty conditions in the summer and for the first 3 years post construction.		

FIGURE 6: PHOTO OF 61 CM DBH HONEYLOCUST

TABLE 7: 10 CM DBH RED MAPLE ATTRIBUTES

Species of Tree: Red Maple, *Acer rubrum*	Size: 10 cm DBH	Location: North west corner of property
Canopy Vitality: Good	Structure: Good	Ownership: Private
Other Comments: Newer planting		
Impact of Development on this tree: This tree is free and clear of this development and should be retained.		
Possible Infrastructure Modifications: This tree should be protected throughout the construction process and tree protection fencing should be installed around the circumference of the canopy.		
Preservation or Removal of Tree Recommended: **Preservation**		
Best Management Practices to mitigate impact of development upon trees: Identify the tree protection zone and install tree protection fencing around the circumference of the tree's canopy to protect the root system and from heavy machinery striking the tree and compacting the soil.		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for either on site or within the neighbourhood can be discussed.		
Details of maintenance program post development: Decorative shredded mulch to be applied post development to help the tree retain moisture, keep machinery away from striking the bark, and to provide organic material to the soil. The tree should than be monitored for its vitality and watered weekly during times of droughty conditions in the summer and for the first 3 years post construction.		

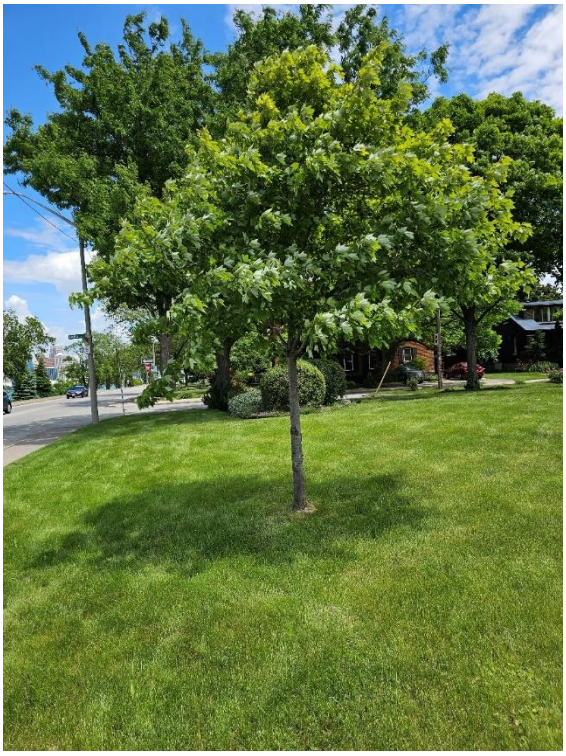

FIGURE 7: PHOTO OF 10 CM DBH RED MAPLE

TABLE 8: 23 CM DBH NOOTKA CYPRESS ATTRIBUTES

Species of Tree: Nootka Cypress, *Chamaecyparis nootkatensis*	Size: 23 cm DBH	Location: North west of current house
Canopy Vitality: Good	Structure: Good	Ownership: Private
Other Comments: Fine specimen		
Impact of Development on this tree: This tree is unfortunately located in the footprint of the proposed building and will have to be removed		
Possible Infrastructure Modifications: Not applicable		
Preservation or Removal of Tree Recommended: **Removal**		
Best Management Practices to mitigate impact of development upon trees: Not applicable		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: This is a privately owned tree and compensation to the City for replacement trees is generally not a past practice. However, consideration for the funding of future tree planting for either on site or within the neighbourhood can be discussed.		
Details of maintenance program post development: Not applicable.		

FIGURE 8: PHOTO OF 23 CM DBH NOOTKA CYPRESS

Location: Rankin Centre Median (100 block)

TABLE 9: 48 CM DBH NORWAY MAPLE ATTRIBUTES

Species of Tree: Norway Maple, *Acer platanoides*	Size: 48 cm DBH	Location: Across from 126 Rankin in Centre Median
Canopy Vitality: Good	Structure: Good	Ownership: Municipal
Other Comments: Has a girdling root, has a 'V' shape appearance from pruning back of street light wire		
Impact of Development on this tree: This tree is free and clear of this development and should be retained and protected.		
Possible Infrastructure Modifications: This tree should be protected throughout the construction process. Tree protection fencing should be installed around all three (3) trees growing on the centre median as one large tree protection zone. This will keep all heavy machinery and building supplies from being staged around the trees and over their rooting systems.		
Preservation or Removal of Tree Recommended: **Preservation**		
Best Management Practices to mitigate impact of development upon trees: Identify the tree protection zone and install tree protection fencing around this tree and the other two (2) trees near by.		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: If these trees are properly protected through the creation of a tree protection zone, then the likelihood of this tree succumbing to construction activities would be very low. If these measures are in place and the trees still do succumb, a tree assessment should be conducted to see if their death was associated with this development in any way or whether they died due to some other abiotic/biotic factor.		
Details of maintenance program post development: Decorative shredded mulch to be applied post development to help the tree retain moisture, keep machinery away from striking the bark, and to provide organic material to the soil. The tree should than be monitored for its vitality and watered weekly during times of droughty conditions during the summer for the first 3 years post construction.		

FIGURE 9: PHOTO OF 23 CM DBH NORWAY MAPLE

TABLE 10: 31 CM DBH RED MAPLE ATTRIBUTES

Species of Tree: Red Maple, *Acer rubrum*	Size: 31 cm DBH	Location: Across from 136 Rankin in Centre Median
Canopy Vitality: Good	Structure: Good	Ownership: Municipal
Other Comments: This is the middle tree of three (3) trees located on the centre median		
Impact of Development on this tree: This tree is free and clear of this development and should be retained and protected.		
Possible Infrastructure Modifications: This tree should be protected throughout the construction process. Tree protection fencing should be installed around all three (3) trees growing on the centre median as one large tree protection zone. This will keep all heavy machinery and building supplies from being staged around the trees and over their rooting systems.		
Preservation or Removal of Tree Recommended: **Preservation**		
Best Management Practices to mitigate impact of development upon trees: Identify the tree protection zone and install tree protection fencing around this tree and the other two (2) trees near by.		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: If these trees are properly protected through the creation of a tree protection zone, then the likelihood of this tree succumbing to construction activities would be very low. If these measures are in place and the trees still do succumb, a tree assessment should be conducted to see if their death was associated to this development in any way or whether they died to some other abiotic/biotic factor.		
Details of maintenance program post development: Decorative shredded mulch to be applied post development to help the tree retain moisture, keep machinery away from striking the bark, and to provide organic material to the soil. The tree should than be monitored for its vitality and watered weekly during times of droughty conditions during the summer for the first 3 years post construction.		

FIGURE 10: PHOTO OF 31 CM DBH RED MAPLE

TABLE 11: 37 CM DBH NORWAY MAPLE ATTRIBUTES

Species of Tree: Norway Maple, *Acer platanoides*	Size: 37 cm DBH	Location: Across from 140 Rankin in Centre Median
Canopy Vitality: Good	Structure: Good	Ownership: Municipal
Other Comments: The southern Norway Maple in the centre island		
Impact of Development on this tree: This tree is free and clear of this development and should be retained and protected.		
Possible Infrastructure Modifications: This tree should be protected throughout the construction process. Tree protection fencing should be installed around all three (3) trees growing on the centre median as one large tree protection zone. This will keep all heavy machinery and building supplies from being staged around the trees and over their rooting systems.		
Preservation or Removal of Tree Recommended: **Preservation**		
Best Management Practices to mitigate impact of development upon trees: Identify the tree protection zone and install tree protection fencing around this tree and the other two (2) trees near by.		
Provisions for tree replacement for trees that were to be retained but that were not successfully preserved: If these trees are properly protected through the creation of a tree protection zone, then the likelihood of this tree succumbing to construction activities would be very low. If these measures are in place and the trees still do succumb, a tree assessment should be conducted to see if their death was associated to this development in any way or whether they died to some other abiotic/biotic factor.		
Details of maintenance program post development: Decorative shredded mulch to be applied post development to help the tree retain moisture, keep machinery away from striking the bark, and to provide organic material to the soil. The tree should than be monitored for its vitality and watered weekly during times of droughty conditions during the summer for the first 3 years post construction.		

FIGURE 11: PHOTO OF 23 CM DBH NORWAY MAPLE

LITERATURE CITED

City of Windsor. (2012, September 7). *Official Plan, Volume 1, SS10.2.14.* Retrieved from Chapter 10 - Procedures: https://www.citywindsor.ca/Documents/residents/planning/plans-and-community-information/windsor-official-plan/Chapter%2010.pdf

Coder, K. D. (2021, May). *Tree Tolerance of Site Development Activities.* Retrieved from University of Georgia, Warnell School of Forestry & Natural Resources Outreach Publication WSFNR21-45C. 6 pp.: https://bugwoodcloud.org/resource/files/19015.pdf

APPENDIX

Plan of Survey of Part of lot 1, Registered Plan 1163 (2121 Riverside Drive West)