Welwyn Consulting

November 16, 2020

David W. Small Designs Inc.
c/o Julie Odanski
1440 Hurontario Street
Mississauga, Ontario L5G 3H4

SUBJECT: Arborist Report and Tree Preservation Plan
965 Whittier Crescent, Mississauga (Lorne Park Estates)

Dear Julie:

Attached please find the Arborist Report and Tree Preservation Plan which has been prepared for the above listed property. It is the client's responsibility to review the entire report to ensure all required tree permit application forms are filed with the City of Mississauga.

This report includes an evaluation of all trees on or within 6 metres of the subject site's property lines with a diameter at breast height (DBH) of **15cm or greater**. This evaluation includes the DBH, height, canopy spread, health, and structural condition of all trees that may be affected by the currently proposed site plan. This report also provides a Tree Preservation Plan for the property, including the appropriate Tree Protection Zones (TPZ).

This information complies with The City of Mississauga's *Private Tree Protection By-Law 254-12* and *Site Plan Control By-Law 0293-2006.* Included in the report (if required) are Valuation Appraisals of any City-owned trees as required by the City of Mississauga to obtain the necessary tree permits.

This letter is part of the Arborist Report and Tree Preservation Plan and may not be used separately. Please feel free to contact me to discuss this report further.

Best regards,

Tom Bradley B.Sc. (Agr)
ASCA Registered Consulting Arborist #492
ISA Certified Arborist #ON-1182A
ISA Certified Tree Risk Assessor
Butternut Health Assessor #257 (OMNR)
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Arborist Report and Tree Preservation Plan

965 Whittier Crescent, Mississauga

(Lorne Park Estates)

Prepared For

David W. Small Designs Inc.
c/o Julie Odanski
1440 Hurontario Street
Mississauga, Ontario L5G 3H4

Prepared By

Tom Bradley
ASCA Registered Consulting Arborist #492
ISA Certified Arborist #ON-1182A
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Prepared On

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Summary

This Arborist Report and Tree Preservation Plan addresses all trees with a diameter at breast height (D.B.H.) of 15cm or greater and within 6 metres of the subject site that may be affected by the proposed property development and provides recommendations for their preservation and/or removal. This report also includes hoarding distances for the Tree Protection Zones (TPZ) and provides recommendations for current and future tree health care.

Based upon the Tree Inventory for this property, there are **seventy nine (79) trees** that may be affected by the proposed site development plan:

- Sixty five (65) trees on the subject site
- Eight (8) neighbouring trees within 6 metres of the subject site property line
- One (1) shared ownership trees (subject site and neighbour to the west)
- Five (5) boulevard trees within proximity to the subject site which are managed by Lorne Park Estates

Table 1: Tree Preservation and Removal

TREES TO PRESERVE	**TREE NUMBER**	**TOTAL**
i) Subject Site Trees	1, 3, 4, 5, 6, 7, 11, 12, 13, 17, 19, 29, 30, 32, 34, 35, 36	46
	37, 38, 39, 40, 41, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55	
	56, 57, 58, 59, 61, 62, 65, 67, 68, 69, 70, 71, 78, 79	
ii) Shared ownership Trees	8	1
iii) Neighbouring Trees	9, 10, 15, 16, 18, 53, 60, 72	8
iv) Lorne Park Estates Trees	2, 73, 74, 75, 76	5
	#of Trees To Be Preserved:	**60**
TREES TO BE REMOVED	**TREE NUMBER**	**TOTAL**
i) Subject Site Trees	14, 20, 22, 23, 24, 28, 31, 33, 42, 43, 44, 63, 64, 78	14
	21, 27, 56 (hazard trees)	3
	25, 26 (removed prior to site plan review application)	2
ii) Shared ownership Trees	0	0
iii) Neighbouring Trees	0	0
iv) Lorne Park Estates Trees	0	0
	#of Trees To Be Removed:	**19**
	Total trees on or adjacent to subject site:	**79**

Specific tree-related issues on this site:

Please refer to Pages 7, 8, 9 and 10 of this report for site supervision requirements by a Certified Consulting Arborist during the proposed construction activities at 965 Whittier Crescent, Mississauga (Lorne Park Estates).

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Introduction

This Arborist Report and Tree Preservation Plan provides the current condition of all trees with a D.B.H of 15cm or greater on or adjacent to the subject site that may be affected by the proposed site development plan, including any City and/or neighbouring trees within 6 metres of the subject site's property lines as indicated by the attached site plan in Appendix A. The intent of the Tree Preservation Plan is to retain as many trees on the site as is reasonable through the use of Tree Protection Zones (TPZ) and other generally recognized arboricultural practices and to minimize the potential impact of construction injury to the trees.

Assignment

Welwyn Consulting was contacted by **David Small Designs Inc.** to provide an Arborist Report and Tree Preservation Plan, as required by the City of Mississauga's *Private Tree Protection By-Law 254-12* and *Site Plan Control By-Law 0293-2006* to minimize the impact that the proposed construction may have on the trees on or adjacent to this property. This report shall list specific trees to be preserved or removed, recommend any immediate maintenance required to create a safer environment for contractors and the property owner and provide a long-term tree preservation and management plan for the site.

Limits of Assignment

This report is limited to assessing and documenting the health and structural condition of the trees with a D.B.H of 15cm or greater on or 6 metres from the subject site during the site survey on **September 9 and November 15, 2020.** Evaluations are based upon a visual inspection of the trees from the ground, and the analysis of photos and any samples taken during that inspection.

Unless specifically stated in the report;

1.) Neither aerial inspections nor root excavations were performed on any trees on or within 6 metres of the subject site.
2.) A Level II Basic Assessment using the 2011 International Society of Arboriculture (I.S.A.) *Best Management Practices* was used for tree evaluations on the subject site.
3.) Where access to off-site trees was restricted, a Level I Limited Visual Assessment was used as required.

Purpose and Use

The purpose of this report is to document the current health and structural condition of the trees with a D.B.H of 15cm or greater on and within 6 metres of the subject site property, and to provide an Arborist Report and Tree Preservation Plan that complies with the City of Mississauga's *Private Tree Protection By-Law 254-12* and *Site Plan Control By-Law 0293-2006.*

This report is intended for the exclusive use of **David Small Designs Inc.** Upon submission by and payment to Welwyn Consulting, this report will become licensed for use by **David Small Designs Inc.** at their discretion.

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Observations

The proposed development is located in an established residential area near the intersections of Lakeshore Road and Whittier Crescent (Lorne Park Estates) within the City of Mississauga. This site presently contains a residential dwelling that will be demolished and replaced with a new home. Welwyn Consulting visited the site on **September 9 and November 15, 2020** to conduct the tree inventory and take photographs of the trees on site, as well as any neighbouring or City-owned trees that may be affected by the proposed site plan.

Photo #1

Photo #2

Figure #1: These 2 photos show the front and rear yard of the property at 965 Whittier Crescent as they appeared during the 2nd site visit conducted on November 15, 2020.

Appendices

Appendix A contains the most current site plan supplied by **David Small Designs Inc.** and provides the following information:

- The location of the trees on or adjacent to the subject site
- Property lines for the subject site and neighbouring properties
- Property lines for City-owned lands adjacent to the subject site
- All existing buildings and hard surfaces
- An outline of the proposed building

Appendix B contains the Tree Inventory for this site. All trees were assigned numbers, and measured for diameter at breast height (DBH=1.4m), height, and canopy spread. The trees' health, structural condition and physical location/ownership provide the basis for their recommended preservation or removal.

Appendix C contains selected photos of trees on this site.

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Trees to Preserve (60)

NOTES:

1.) It is the responsibility of the client to ensure that all architects, engineers, and contractors involved with the project be provided with a copy of the entire Arborist Report and Tree Preservation Plan for review prior to the commencement of construction activities on this site.

2.) All trees 15cm DBH or greater require a permit to injure. Removal of three (3) trees or more over 15cm DBH will require the completion of an "Application to Permit the Injury or Destruction of Trees on Private Property" form available from the link below: **www.mississauga.ca/portal/services/formsonline**

3.) A tree's root system extends 2-3 times beyond the edge of the canopy/dripline. As Tree Protection Zone (TPZ) hoarding protects only that portion of the root system governed by municipal regulations, most trees on urban residential properties may sustain a degree of injury (including but not limited to root severance, soil compaction and disturbance) during proposed construction activities.

- **Trees #1, 3, 4, 5, 6 and 7 Front yard trees (subject site)**

  These six (6) trees are located in the front yard at 965 Whittier Crescent and are located within the existing semi-circular driveway. These 6 trees shall be protected for the duration of the proposed construction activities on this site.

  These six (6) subject site trees shall be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the trees' continued survival.

  NOTES:

  1.) The east portion of the existing semi-circular driveway will be reconfigured outside the minimum 2.4m TPZ for Tree #1.

  2.) The west portion of the existing semi-circular driveway is currently 4m west of Tree #2 (Lorne Park Estates tree), 1.5m west of Tree #3 and 2m from the west base of Trees #4 and 5. Reconfiguration of the driveway will encroach to 3m of Tree #2 (Lorne Park Estates tree - TPZ = 6.0m), 1m of Tree #3 (TPZ = 2.4m) and to 1.5m of Trees #4 and 5 (TPZ = 2.4m for both trees).

  3.) Excavation for the proposed reconfiguration of the semi-circular driveway shall be dug by hand (no heavy equipment) for the proposed encroachments into the TPZ areas of Trees #2 (Lorne Park Estates tree), 3, 4 and 5. The existing driveway base shall be re-used (no excavation – re-grading only) within the trees' drip-line to minimize the potential for root injury.

  4.) *A Certified Consulting Arborist shall be on-site during the hand excavation of the proposed driveway reconfiguration to determine the size and quantity of tree roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. This action is anticipated to minimize the extent of root injury due to excavation and provide any pruned roots with the best opportunity to regenerate.*

- **Tree #8 Black Cherry (shared ownership tree)**

  This tree is located along the west property line of 965 Whittier Crescent and has shared ownership with the neighbour to the west. This tree must be protected for the duration of the proposed construction activities on this site.

  All shared trees must be preserved unless their removal is agreed upon in a "Letter of Agreement" signed by all owners. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the tree's continued survival.

- **Trees #11, 12 and 13 Front yard trees (subject site)**

  These three (3) trees are located in the front yard at 965 Whittier Crescent and to the west of the existing driveway. These 3 trees shall be protected for the duration of the proposed construction activities on this site.

  These three (3) subject site trees shall be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the trees' continued survival.

  NOTES:

  1.) The west portion of the existing driveway is currently 0.5-1m east of the base of Tree #11, 3.6m east of the base of Tree #12 and 3.5m east of the base of Tree #13. Reconfiguration of the driveway will encroach within 0.5m of Tree #11 (TPZ = 3.0m), 3.0m of Tree #12 (TPZ = 3.6m) and 2m of Tree #13 (TPZ = 3.6m).

  2.) Excavation for the proposed reconfiguration of the driveway shall be dug by hand (no heavy equipment) for the proposed encroachments into the TPZ areas of Trees #11, 12 and 13. The existing driveway base shall be re-used (no excavation – re-grading only) within the trees' drip-line to minimize the potential for root injury.

  3.) *A Certified Consulting Arborist shall be on-site during the hand excavation of the proposed driveway reconfiguration to determine the size and quantity of tree roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. This action is anticipated to minimize the extent of root injury due to excavation and provide any pruned roots with the best opportunity to regenerate.*

- **Trees #9, 10, 15, 16, 18, 53, 60, 72 Neighbouring trees**

  These eight (8) trees are located on the neighbouring properties to the west (#9, 10, 15, 16 and 18) and to the east (#53, 60 and 72) of 965 Whittier Crescent. These 8 trees must be protected for the duration of the proposed construction activities on this site.

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These eight (8) neighbouring trees must be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the trees' continued survival.

- **Trees #17, 19, 29, 30, 32, 34, 35, 36, 37, 38, 39, 40 and 41**

  These thirteen (13) trees are located in the rear yard at 965 Whittier Crescent. These 13 trees shall be protected for the duration of the proposed construction activities on this site.

  These thirteen (13) subject site trees shall be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the trees' continued survival.

  NOTES:

  1.) The proposed pool cabana shall be built outside the minimum 3.6m TPZ for Tree #19.
  2.) Excavation for the proposed retaining wall 3m east of Tree #32 shall be dug by hand (no heavy equipment) within the tree's drip-line to minimize the potential for root injury.
  3.) *A Certified Consulting Arborist shall be on-site during the hand digging of the proposed retaining wall excavation to determine the size and quantity of Tree #32's roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. This action is anticipated to minimize the extent of root injury due to excavation and provide any pruned roots with the best opportunity to regenerate.*

- **Trees #45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 57, 58, and 59**

  These fourteen (14) trees are located in the east rear yard at 965 Whittier Crescent. These 14 trees shall be protected for the duration of the proposed construction activities on this site.

  These fourteen (14) subject site trees shall be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the trees' continued survival.

  NOTES:

  1.) Excavation for the proposed building foundation (including an anticipated 90cm over-dig) will encroach 1m into the minimum 5.4m TPZ for Tree #48.
  2.) Excavation for the proposed paverstone terrace/spa will encroach to 2.5m of the west base of Tree #48 (TPZ = 5.4m)

(Next page)

3.) *A Certified Consulting Arborist shall be on-site during the both the proposed building foundation and paverstone/spa excavations to determine the size and quantity of Tree #48's roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. This action is anticipated to minimize the extent of root injury due to excavation and provide any pruned roots with the best opportunity to regenerate.*

- **Trees #61, 62, 65, 66, 67, 68, 69, 70, 71, 77 and 79**

  These eleven (11) trees are located in the east and south front yard at 965 Whittier Crescent. These 11 trees shall be protected for the duration of the proposed construction activities on this site.

  These eleven (11) subject site trees shall be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the trees' continued survival.

  NOTES:

  1.) To retain Tree #77 (Magnolia – TPZ =2.4m), the proposed water and gas line services will have to be directionally bored beneath the tree's root plate (no open trenching within the TPZ) to minimize the potential for root injury.
  2.) The existing driveway west of Tree #79 (Paper Birch – TPZ = 2.4m) is 1.5m west of the tree's base. Reconfiguration of the driveway will encroach to within 1m of Tree #79's west base. Excavation for the driveway base in this area of proposed encroachment shall be dug by hand (no heavy equipment) to minimize the potential for root injury. The existing driveway base shall be reused (no excavation – re-grading only) within Tree #79's drip-line to minimize the potential for root injury.
  3.) *A Certified Consulting Arborist shall be on-site during hand digging of the proposed driveway base excavation to determine the size and quantity of Tree #79's roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. This action is anticipated to minimize the extent of root injury due to excavation and provide any pruned roots with the best opportunity to regenerate.*

- **Trees #2, 73, 74, 75 and 76 Boulevard trees (Lorne Park Estates)**

  These five (5) trees are located in the boulevard area of 965 Whittier Crescent on lands managed by Lorne Park Estates. These 5 trees must be protected for the duration of the proposed construction activities on this site.

  These five (5) trees must be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 14 of this report should result in the trees' continued survival.

NOTE:

Please refer to the preservation requirements for Trees #1, 3, 4, 5, 6 and 7 on Page 7 of this report for details regarding on-site supervision of the excavation for the proposed driveway reconfiguration within the minimum TPZ for Tree #2.

Trees to Remove (19)

Prior to construction, all trees scheduled for removal should be removed to grade level to increase the safety for both the property owner and any contractors.

NOTES:

1.) All trees 15cm DBH or greater require a permit to injure. Removal of three (3) trees or more over 15cm DBH will require the completion of an "Application to Permit the Injury or Destruction of Trees on Private Property" form available from the link below: **www.mississauga.ca/portal/services/formsonline**

2.) Guidelines for Tree Removal can be found at the following City of Mississauga link: **www.mississauga.ca/portal/business/communityservicesstandards?paf_gear_id=9700018&itemId=300012**

- **Trees #14, 20, 22, 23, 24, 28, 31, 33, 42, 43, 44, 63, 64 and 77 Subject site trees**

  These fourteen (14) trees are in conflict with the proposed site plan and are proposed to be safely removed to grade level prior to the commencement of on-site construction activities.

- **Trees #21, 27 and 56 Subject site trees**

  These three (3) trees are dead and pose a safety hazard. These 3 trees should be removed as soon as reasonably possible.

- **Trees #25 and 26 Subject site trees**

  As permitted by the City of Mississauga's Private Tree Protection By-Law, these two (2) trees were removed prior to filing site plan review documents for 965 Whittier Crescent.

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Replacement Tree Planting (13)

Below are the City of Mississauga's Tree Replacement Plan Policy from The City of Mississauga's *Private Tree Protection By-Law 254-12* and the 2017 Forestry Fee Schedule:

(2) Where the planting of a Replacement Tree(s) has been imposed as a condition, the Commissioner may require any one or more of the following:

(a) the Replacement Tree(s) be located on the same Lot in a location, number, size; and/or species to the satisfaction of the Commissioner;

(b) a replanting plan be filed to the satisfaction of the Commissioner;

(e) a written undertaking by the Owner to carry out the replacement planting;

(f) monies or a letter of credit in a form satisfactory to the Commissioner be delivered to the Commissioner to cover the costs of the Replacement Trees, and the maintenance of the Tree(s) for a period of up to two (2) years; or

(g) payment of each Replacement Tree not replanted on the Owner's Lot be made into the City's Replacement Tree Planting Fund. The payment for each such Tree shall be the cost of each street Tree planting as provided in the Fees and Charges By-law.

Forestry Fees and Charges Effective January 1, 2019-December 31, 2019

Street Tree Planting: Up to 60mm (2.5in) Caliper Tree or Up to 200cm (6.5 ft height) Coniferous Tree	**$574.50**
Forestry Section Administration Fee (applicable on Forestry Services provided within road allowance and to all related City By-law contraventions)	**Greater of $421.10 or 8% of total service cost**
Requested Maintenance Work on City Owned Trees (Hourly)	
Caliper, up to 40cm (15.75in)	**$415.80**
Caliper, 41cm to 80cm (16in to 31.5in)	**$731.93**
Caliper, 81cm+ (31.5in)	**$781.23**
Replacement of Damaged or Destroyed Street Trees	**$736**
Tree Removal Permit or Permission	
Dead, Dying or Hazardous Tree (as deemed by the Forestry Section)	**$0**
Removal of Three (3) Trees, each with a diameter greater than 15cm (6in)	**$411.06**
Removal of Additional Trees, each with a diameter greater than 15cm (6in)	**$92.82**
Forestry Inspection	**$51**

Based upon a 1:1 ratio (a 2:1 ratio for trees of 50cm DBH and greater), the City of Mississauga requires thirteen (13) replacement trees to be planted as compensation for trees 15cm DBH and greater being removed due to site re-development. In accordance with the Tree By-Law, replacement trees are to be native in species, a minimum 60mm caliper for deciduous trees and a minimum 1.80m high for coniferous trees. The "cash in lieu of tree replacement planting" fee for 2020 is $574.50

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NOTES:

1.) Replacement tree numbers were derived as follows:

a.	Tree #14 – 26cm DBH	1 replacement tree
b.	Tree #20 – 18cm DBH	1 replacement tree
c.	Tree #22 – 23cm DBH	1 replacement tree
d.	Tree #23 – 25cm DBH	1 replacement tree
e.	Tree #24 – 36cm DBH	1 replacement tree
f.	Tree #28 – 19cm DBH	1 replacement tree
g.	Tree #31 – 33cm DBH	1 replacement tree
h.	Tree #33 – 12cm DBH	No replacement tree
i.	Tree #42 – 24cm DBH	1 replacement tree
j.	Tree #43 – 18cm DBH	1 replacement tree
k.	Tree #44 – 21cm DBH	1 replacement tree
l.	Tree #63 – 19cm DBH	1 replacement tree
m.	Tree #64 – 22cm DBH	1 replacement tree
n.	Tree #77 – 28cm DBH	1 replacement tree
		13 replacement trees

2.) In consultation with the property owner, Welwyn Consulting, and/or a landscape architect, a tree replacement plan will be designed and presented for this project at a later date.

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Tree Care Recommendations

Cabling

Cabling is a practice which provides physical support for trees with structurally weak limbs, co-dominant stems, any branch or trunk unions with included bark, and tree species generally known to be weak-wooded. An aerial inspection of the tree's structural condition should be performed prior to cable installation, and any dead, diseased, or hazardous wood should be removed. Cabled trees should be inspected annually to assess both the cabling hardware and the tree's structural condition. Cabling recommendations by Welwyn Consulting are made as a part of "due diligence" to alert tree owners to the 'potential' for tree failure and to provide hazard mitigation options based upon observed conditions. Cabling reduces but does not eliminate a tree's hazard or failure potential.

Tree #61: White Pine (subject site)

- **This tree should have an approved Dynamic Cabling System installed to help support its co-dominant stems.**

Fertilization

Current research conducted through the International Society of Arboriculture (I.S.A.) indicates that preserved trees within close proximity of proposed construction activities should not be fertilized during the 1st year following construction injury. Uptake of nutrients and water in compacted soils can be reduced and fertilizer salts may actually remove water from a tree's root zone. If and when supplemental fertilization is deemed necessary, products which stimulate root growth should be employed over those that stimulate shoot and foliage growth and be applied at low application rates.

Supplemental fertilization needs should be assessed by a Certified Consulting Arborist upon completion of all on-site construction activities, and any recommendations should be based on site-specific soil nutrient deficiencies determined primarily through soil testing and secondarily by visual analysis of nutrient deficiencies in foliage, twigs, buds, and roots.

Pruning

Pruning is a practice which removes dead, diseased, broken, rubbing, crossing, and hazardous limbs 2.5 cm and larger from trees to create a safer working environment and improve tree health and vigor. Pruning also provides an excellent opportunity for an aerial inspection of the structural integrity of the tree(s). All pruning should be completed prior to any site demolition or construction.

Trees #6, 10, 67 and 71 (subject site) and Trees #11 and 72 (neighbour):

- **Remove large-caliper hazardous deadwood from these six (6) trees.**

Root Pruning/Air Spade/Hydro-Vac

Root pruning is performed to minimize a tree's potential loss of structural stability through root removal and/or injury due to excavation within close proximity of its root zone. While not always feasible for all projects, root pruning should occur in late autumn during tree dormancy and ideally one full growing season prior to any on-site construction or demolition to allow for root regeneration. Root pruning should only be performed by a Certified Arborist in accordance with generally recognized standards and principles within the field of Arboriculture. *Air-Spade/dry-vac technologies provide two of the least invasive methods for root zone excavation, and should be performed under the supervision of a Certified Arborist.*

General Methodology (other than air spade/dry-vac)

Under the direction of a Certified Consulting Arborist and using hand and/or mechanical excavation techniques, the soil shall be carefully removed starting approximately 4-6m (where feasible) from the tree's base perpendicular to the edge of the proposed building foundation area. Digging in a line parallel to the roots rather than across them should minimize cracking of any large roots near the tree's base. The soil shall be removed in shallow layers to minimize the potential for striking any large roots that may have been close to the soil surface.

- **Please refer to Pages 7, 8, 9 and 10 of this report for site supervision requirements by a Certified Consulting Arborist during the proposed construction activities at 965 Whittier Crescent, Mississauga (Lorne Park Estates).**

Irrigation

An irrigation plan for preserved trees should be designed and implemented with the assistance of a Certified Consulting Arborist. The amount and frequency of irrigation will depend on factors such as soil type, local and seasonal precipitation patterns, duration of droughts, and the amount of construction activity near specific trees. The top 30 cm of soil in a tree's root zone should be kept moist without being saturated. Infrequent deep watering produces trees with deeper roots, while frequent shallow watering produces shallow-rooted trees. *When combined with soil aeration improvement techniques such as vertical mulching, drill holes, and radial trenching, an adequate but not excessive supply of moisture to a tree's root zone can be an effective and efficient way to help alleviate construction injury.*

Preserved trees should be monitored at regular intervals by a Certified Consulting Arborist for signs of drought stress or excess irrigation.

- **An irrigation plan will be developed upon determination of tree injury levels after completion of any required root pruning.**

Horizontal Mulching

It may be determined by the Certified Consulting Arborist that trees within close proximity of construction activities will require a layer of composted wood chip mulch applied to the root zones inside the TPZ hoarding. Decomposed wood mulch 5–10 cm (2-4 inches) deep applied to a tree's root zone should help to retain soil moisture, regulate soil temperature, and provide a natural organic source of nutrients in their elemental form over time. Piling of mulch against the tree stem must be avoided. Fresh wood chip mulch shall be applied to a depth of 30 cm beneath steel plates or plywood on vehicle and equipment traffic areas within close proximity to the TPZ to distribute weight on the soil and help reduce potential root zone soil compaction.

- **There are no specific mulching requirements at this time.**

Root Zone Aeration Improvements

Aeration improvement techniques such as drill holes, vertical mulching, soil fracturing, and radial trenching have the ability to reduce various degrees of soil compaction by increasing the amount of soil macro and micropores. Any form of root zone aeration improvement should be performed post-construction and under the supervision of a Certified Consulting Arborist to help remediate soil compaction caused by construction activity near preserved trees.

- **There are no root zone aeration improvements required on this site at this time.**

Transplanting

Transplanting of larger caliper trees, through either hand digging or tree spade, allows for relocation and retention of desirable trees that might have otherwise been removed due to conflict with the proposed property construction design. Trees should be tree-spaded out by a reputable operator, and are best transplanted during dormancy in late autumn. No construction activity should take place near re-located trees either before or after transplantation.

Any transplanted trees should be fertilized using a complete fertilizer with a preferred nitrogen/phosphorus/potassium ratio of 1-2-2, with the Nitrogen component in slow release form. A 10 cm layer of composted wood mulch should be applied to the root zone, and the tree should receive regular irrigation for a period of at least one year. The tree may also require staking for a period of 1 year to provide stability while it re-establishes its root system.

- **There are no trees recommended for transplanting on this site at this time.**

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Tree Preservation Plan

The following Tree Preservation Plan shall be implemented prior to any on-site construction activity.

Hoarding

Hoarding is used to define the **Tree Protection Zone** (TPZ), which protects a tree's root zone, trunk, and branches from injury during both construction and landscaping phases of the project. Hoarding shall be installed prior to any construction activity, and remain intact until construction and landscaping is completed. **No** TPZ shall be used for the temporary storage of building materials, storage or washing of equipment, or the dumping of construction debris, excess fill, or topsoil.

As required by the City of Mississauga, hoarding shall be constructed of 4x8 plywood sheets using 2x4 top and bottom rail construction supported by 4x4 wooden posts. A TPZ may be constructed of orange safety fencing using 2x4 top and bottom rail construction and supported by t-bar supports when protecting street trees where site line obstruction is a concern. TPZ signage shall be posted in visible locations on the TPZ hoarding. T-bar supports for solid hoarding will only be allowed through pre-approval from the City of Mississauga's Development and Design Department. The project architect shall update the most current site plan/grading plan to include all existing trees properly plotted and numbered and all TPZ hoarding locations clearly indicated and to scale.

NOTE: A tree's root system extends 2-3 times beyond the edge of the canopy/dripline. As Tree Protection Zone (TPZ) hoarding protects only that portion of the root system governed by municipal regulations, most trees on urban residential properties may sustain a degree of injury (including but not limited to root severance, soil compaction and disturbance) during proposed construction activities.

Hoarding Installation

A diagram of the proposed hoarding plan for this site can be found in Appendix A on Page 22 of this report. The recommended radial distances from the trunk for installation of TPZ hoarding are listed in Appendix B starting on Page 23 of this report, and the hoarding shall be installed using the following guidelines:

1) All TPZ hoarding shall be placed at the recommended radial distance from the base of all trees to be protected or up to all existing and/or proposed hard surfaces to allow for construction.
2) Any large numbers of trees that can be grouped together in a closed box or continuous line system for protection shall have their TPZ hoarding placed at the recommended radial distance from the base of all of the largest peripheral trees of the system, or up to all existing and/or proposed hard surfaces to allow for construction.
3) Encroachment within a tree's TPZ will require a special permit from the City of Mississauga and/or on-site supervision by a Certified Consulting Arborist during any proposed excavation activities for root pruning and assessment.

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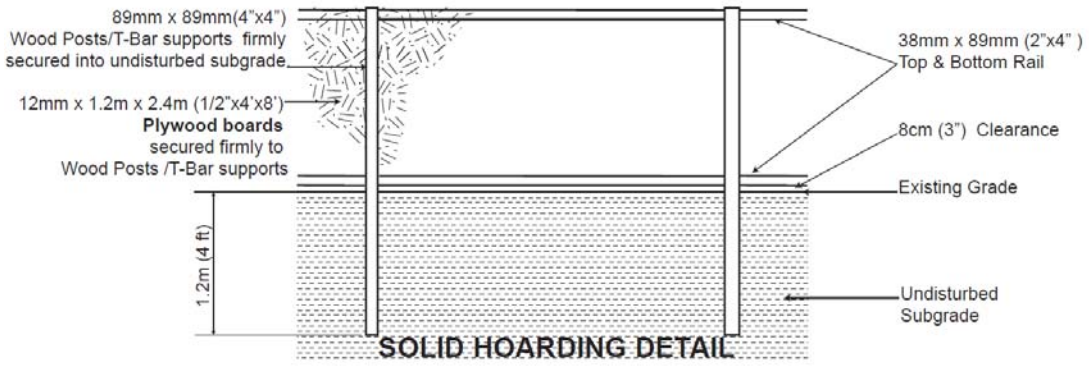
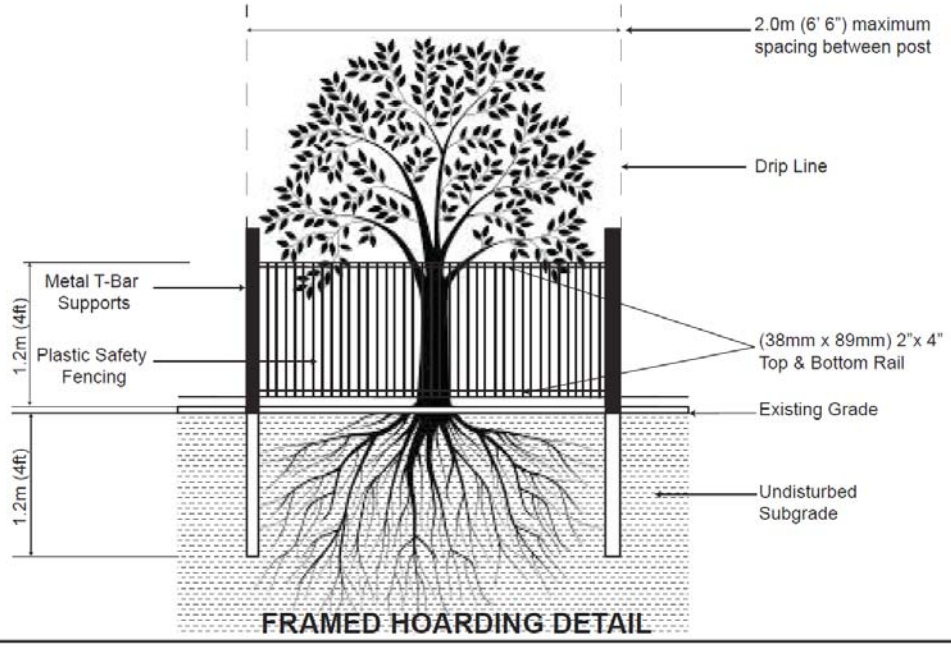
City of Mississauga TPZ Hoarding Specifications

The diagram below provides the City of Mississauga's standards for Tree Protection Zone (T.P.Z) hoarding.





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

MISSISSAUGA

SCALE : N.T.S DATE : June 2017

Welwyn Consulting

Tree Preservation Plan Summary

I.) Pre-Construction Phase

- It is recommended that an on-site meeting take place with the project Certified Consulting Arborist, a representative from the City of Mississauga's Urban Forestry Department, the property owner(s), and any Architects, Engineers, and contractors involved with the project to discuss the Tree Preservation Plan.
- Complete all Tree Care Recommendations, including pruning and any required tree removals.
- Install Tree Protection Zone (TPZ) hoarding as required.
- Where required, apply composted wood mulch to tree root zones within the TPZ hoarding, and apply fresh wood mulch over steel plates and/or plywood to any high-traffic areas immediately adjacent to the TPZ hoarding to help reduce soil compaction.
- If permitted by the City of Mississauga, root-prune any preserved trees adjacent to excavation areas prior to construction under the supervision of a Certified Consulting Arborist.
- Establish an irrigation plan with the assistance of a Certified Consulting Arborist.

II.) Construction Phase

- Maintain and respect TPZ hoarding throughout the construction phase. Do not store or dump materials in this area.
- Continue irrigation plan as directed by a Certified Consulting Arborist.
- If permitted by the City of Mississauga, prune any roots exposed during excavation under the supervision of a Certified Consulting Arborist.
- On-going monitoring by a Certified Consulting Arborist to evaluate construction injury/stress and make recommendations.

III.) Post-Construction Phase

- Remove hoarding only after permission from the City of Mississauga.
- Continue irrigation program as directed by a Certified Consulting Arborist.
- Supplemental fertilizer needs assessment by a Certified Consulting Arborist.
- Post-construction monitoring of all trees by a Certified Consulting Arborist.

NOTE:
Post-Construction Monitoring

Construction injury may take several years to become apparent. All preserved trees should be inspected by a Certified Consulting Arborist on a semi-annual basis for a period of up to 2 years to pro-actively address any tree health related issues as they occur.

ASSUMPTIONS AND LIMITING CONDITIONS

Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, by-laws, or other governmental regulations.

Care has been taken to obtain all information from reliable sources, and all data has been verified insofar as possible. The consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.

The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

Loss or alteration of any part of this report invalidates the entire report.

Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone other than the person to whom it is addressed without the prior expressed written or verbal consent of the consultant/appraiser.

Neither all nor any part of the contents of this report, nor any copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media without the prior expressed written or verbal consent of the consultant/appraiser particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society, institute, or any initialed designation conferred upon the consultant/appraiser as stated in his/her qualification.

This report and the values expressed herein represent the opinion of the consultant/appraiser, and the consultant/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as either engineering or architectural reports or surveys.

Unless expressed otherwise: 1) Information contained in this report covers only those items that were examined and reflections the condition of those items at the time of inspection, and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

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CERTIFICATE OF PERFORMANCE

I, Tom Bradley, certify that:

- I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of any evaluation or appraisal is stated in the attached report and the Limits of Assignment.

- I have no current or prospective interest in the vegetation of the property that is the subject of this report, and have no personal interest or bias with respect to the parties involved.

- The analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts.

- My compensation is not contingent upon the reporting of a pre-determined conclusion that favours the cause of the client or any other party, or upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

- My analysis, opinions and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.

- No one provided significant professional assistance to the consultant, except as indicated within the report.

I further certify that I am a Registered Consulting Arborist through the *American Society of Consulting Arborists (A.S.C.A)*, and both a Certified Arborist and Certified Tree Risk Assessor with the *International Society of Arboriculture (I.S.A)*. I have been involved in the fields of Arboriculture and Horticulture in a full-time capacity for a period of more than 20 years.

Signed: _____

Date: November 16, 2020

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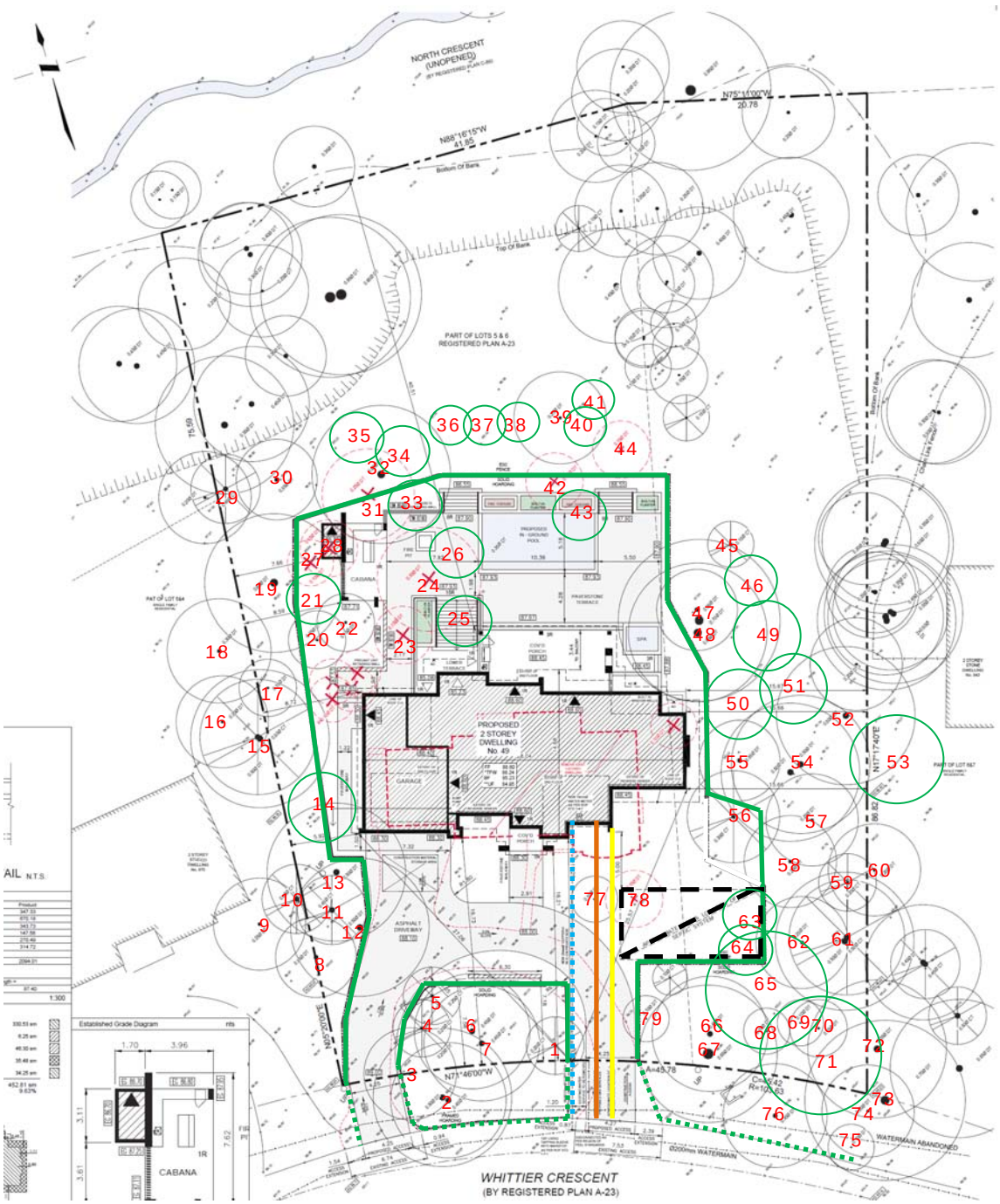
Appendix A: Proposed Site Plan – 965 Whittier Cres. (Lorne Park Estates)

Notes: The locations of Trees #14, 21, 25, 26, 33, 34, 35, 36, 37, 38, 40, 41, 43, 46, 49, 50, 51, 53, 63, 64, 65 and 71 are approximations. The proposed Tree Protection Zone (TPZ) hoarding is shown as green lines and shall be drawn to scale on this drawing by the project architect. Please refer to Pages 12 and 13 of this report for Tree Replacement information for this site.



Legend:

Solid Hoarding		Framed Hoarding	
Water Service (proposed)		Septic System (proposed)	
Gas Service (proposed)		Hydro Service (proposed)	

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Appendix B: Tree Survey – 965 Whittier Crescent (Lorne Park Estates

* denotes estimated DBH due to restricted site access/private property

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
1	Subject Site	White Spruce	*Picea glauca*	23	11	5	Good	Good	Small-caliper deadwood in canopy; branch canopy to ground	Preserve: TPZ = 2.4m
2	*Lorne Park Estates*	Red Oak	*Quercus rubra*	93	26	17	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union from tree base to 1.5m; branch canopy above 12m	Preserve: TPZ = 6.0m
3	Subject Site	Northern Catalpa	*Catalpa bignonioides*	23	15	5	Good	Good	Small-caliper deadwood in canopy; branch canopy above 2m and shaded on east side	Preserve: TPZ = 2.4m
4	Subject Site	White Spruce	*Picea glauca*	24	14	4	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
5	Subject Site	Red Pine	*Pinus resinosa*	30	22	5	Fair	Good	Small-caliper deadwood in canopy; live canopy above 12m and shaded on south side	Preserve: TPZ = 2.4m
6	Subject Site	Black Oak	*Quercus velutina*	53	28	12	Good	Good	Large-caliper deadwood in canopy; branch canopy above 6m and shaded on south side; stem sweep northwest	Preserve: TPZ = 3.6m
7	Subject Site	Black Oak	*Quercus velutina*	55	24	12	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union 16m from tree base; branch canopy above 8m	Preserve: TPZ = 3.6m
8	*Shared Ownership*	Black Cherry	*Prunus serotina*	41	21	6	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with included bark union 1.5m from tree base; branch canopy above 6m	Preserve: TPZ = 3.0m
9	Neighbour	Black Cherry	*Prunus serotina*	20*	12	6	Good	Good	Small-caliper deadwood in canopy; against neighbouring house on north side; branch canopy shaded/reduced on east side	Preserve: TPZ = 2.4m
10	Neighbour	Red Pine	*Pinus resinosa*	45*	26	11	Fair	Good	Large-caliper deadwood (branch stubs) in canopy; branch canopy above 14m	Preserve: TPZ = 3.0m
11	Subject Site	Red Pine	*Pinus resinosa*	47*	26	8	Fair	Good	Large-caliper deadwood (branch stubs) in canopy; branch canopy above 18m	Preserve: TPZ = 3.0m

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
12	Subject Site	White Oak	*Quercus alba*	53	26	12	Good	Good	Small-caliper deadwood in canopy; branch canopy shaded/reduced on west side; driveway at east tree base	Preserve: TPZ = 3.6m
13	Subject Site	Red Maple	*Acer rubrum*	51	20	12	Good	Good	Small-caliper deadwood in canopy; branch canopy shaded/reduced on west side	Preserve: TPZ = 3.6m
14	Subject Site	Black Walnut	*Juglans nigra*	26	21	10	Good	Good	Small-caliper deadwood in canopy; branch canopy above 3m and shaded and reduced on west side	Remove: Proposed site plan in conflict with the tree
15	Subject Site	White Pine	*Pinus strobus*	58	30	12	Good	Good	Small-caliper deadwood in canopy; branch canopy above 14m	Preserve: TPZ = 3.6m
16	Neighbour	Black Cherry	*Prunus serotina*	25*	14	5	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
17	Subject Site	Norway Maple	*Acer platanoides*	21	16	9	Good	Good	Small-caliper deadwood in canopy; branch canopy shaded/reduced in lower canopy	Preserve: TPZ = 2.4m
18	Neighbour	Red Oak	*Quercus rubra*	30*	22	10	Good	Good	Small-caliper deadwood in canopy; branch canopy above 4m	Preserve: TPZ = 2.4m
19	Subject Site	Red Oak	*Quercus rubra*	53	26	14	Good	Good	Small-caliper deadwood in canopy; branch canopy above 8m	Preserve: TPZ = 3.6m
20	Subject Site	Black Walnut	*Juglans nigra*	18	18	6	Good	Good	Small-caliper deadwood in canopy; branch canopy above 12m with lower branch canopy shading	Remove: Proposed site plan in conflict with the tree
21	Subject Site	Green Ash	*Fraxinus pennsylvanica*	15	14	4	---	---	Dead tree (Emerald Ash Borer)	Remove: Potential safety hazard
22	Subject Site	Black Walnut	*Juglans nigra*	23	20	9	Good	Good	Small-caliper deadwood in canopy; branch canopy above 6m with lower branch canopy shaded on northwest side	Remove: Proposed site plan in conflict with the tree
23	Subject Site	Mulberry	*Morus alba*	25	10	7	Good	Poor	Small-caliper deadwood in canopy; 1 stem topped at 1.5m	Remove: Proposed site plan in conflict with the tree
24	Subject Site	Red Maple	*Acer rubrum*	36	18	12	Good	Good	Small-caliper deadwood in canopy; branch canopy above 7m	Remove: Proposed site plan in conflict with the tree

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
25	Subject Site	Red Pine	*Pinus resinosa*	38	24	4	Fair	Good	Small-caliper deadwood in canopy; branch canopy above 10m	*Removed prior to submission of site plan review application*
26	Subject Site	American Beech	*Fagus grandifolia*	39	16	12	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with included bark union 6m from tree base; branch canopy above union	*Removed prior to submission of site plan review application*
27	Subject Site	White Ash	*Fraxinus americana*	16	18	5	---	---	Dead tree (Emerald Ash Borer)	Remove: Potential safety hazard
28	Subject Site	White Ash	*Fraxinus americana*	19	16	6	Fair	Good	Small-caliper deadwood in canopy; live canopy above 10m	Remove: Proposed site plan in conflict with the tree
29	Subject Site	White Pine	*Pinus strobus*	49	30	8	Good	Good	Small-caliper deadwood in canopy; branch canopy above 20m	Preserve: TPZ = 3.0m
30	Subject Site	Norway Maple	*Acer platanoides*	34	20	10	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with adpressed included bark union 6m from tree base	Preserve: TPZ = 2.4m
31	Subject Site	Red Maple	*Acer rubrum*	17, 28 (33)	24	12	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with wide included bark union at tree base	Remove: Proposed site plan in conflict with the tree
32	Subject Site	Red Oak	*Quercus rubra*	76	30	18	Good	Good	Small-caliper deadwood in canopy; branch canopy above 11m	Preserve: TPZ = 4.8m
33	Subject Site	White Spruce	*Picea glauca*	12	4	5	Good	Good	Small-caliper deadwood in canopy; lower branch canopy clearance pruned on south side; below 15cm DBH	Remove: Proposed site plan in conflict with the tree
34	Subject Site	White Spruce	*Picea glauca*	15	8	4	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
35	Subject Site	Norway Maple	*Acer platanoides*	22	22	8	Good	Good	Small-caliper deadwood in canopy; branch canopy above 10m	Preserve: TPZ = 2.4m
36	Subject Site	Paper Birch	*Betula papyrifera*	19	16	6	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union 8m from tree base	Preserve: TPZ = 2.4m

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
37	Subject Site	Paper Birch	*Betula papyrifera*	15	16	5	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
38	Subject Site	Paper Birch	*Betula papyrifera*	15	16	4	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
39	Subject Site	Paper Birch	*Betula papyrifera*	25	22	8	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union 9m from tree base	Preserve: TPZ = 2.4m
40	Subject Site	Paper Birch	*Betula papyrifera*	17	20	4	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
41	Subject Site	Paper Birch	*Betula papyrifera*	20	14	4	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
42	Subject Site	Mulberry	*Morus alba*	24	16	6	Good	Good	Small-caliper deadwood in canopy; approx. 5 degree stem lean south	Remove: Proposed site plan in conflict with the tree
43	Subject Site	Black Walnut	*Juglans nigra*	18	18	11	Good	Good	Small-caliper deadwood in canopy; approx. 5 degree stem lean south	Remove: Proposed site plan in conflict with the tree
44	Subject Site	Paper Birch	*Betula papyrifera*	13, 16 (21)	14	6	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union at tree base	Preserve: TPZ = 2.4m
45	Subject Site	White Spruce	*Picea glauca*	25	10	5	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
46	Subject Site	Black Oak	*Quercus velutina*	60	20	16	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union 10m from tree base; stem curve north at 6m	Preserve: TPZ = 3.6m
47	Subject Site	Red Maple	*Acer rubrum*	44	22	10	Good	Good	Small-caliper deadwood in canopy; at north base of Tree #47	Preserve: TPZ = 3.0m
48	Subject Site	Red Oak	*Quercus rubra*	82	30	15	Good	Good	Small-caliper deadwood in canopy; branch canopy above 7m	Preserve: TPZ = 5.4m
49	Subject Site	Red Maple	*Acer rubrum*	49	21	10	Good	Good	Small-caliper deadwood in canopy; branch canopy above 5m	Preserve: TPZ = 3.0m
50	Subject Site	White Spruce	*Picea glauca*	16	4	4	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
51	Subject Site	White Spruce	*Picea glauca*	16	6	5	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
52	Subject Site	Sugar Maple	*Acer saccharum*	60	24	12	Good	Good	Small-caliper deadwood in canopy; branch canopy above 6m	Preserve: TPZ = 3.6m

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
53	Neighbour	White Pine	*Pinus strobus*	60	25	8	Good	Good	Small-caliper deadwood in canopy; branch canopy shaded/reduced on northwest side	Preserve: TPZ = 3.6m
54	Subject Site	White Oak	*Quercus alba*	95	30	16	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union 1.8m from tree base; branch canopy above 10m	Preserve: TPZ = 6.0m
55	Subject Site	White Pine	*Pinus strobus*	52	27	12	Good	Good	Small-caliper deadwood in canopy; branch canopy above 7m	Preserve: TPZ = 3.6m
56	Subject Site	Red Pine	*Pinus resinosa*	43	20	6	---	---	Dead tree	Remove: Potential safety hazard
57	Subject Site	Black Cherry	*Prunus serotina*	27	16	8	Good	Good	Small-caliper deadwood in canopy; divergent stem at 8m	Preserve: TPZ = 2.4m
58	Subject Site	Red Maple	*Acer rubrum*	10, 30 (32)	14	10	Good	Good	Small-caliper deadwood in canopy; 2 stems at base	Preserve: TPZ = 2.4m
59	Subject Site	Black Cherry	*Prunus serotina*	31	14	4	Good	Good	Small-caliper deadwood in canopy; branch canopy above 4m	Preserve: TPZ = 2.4m
60	Neighbour	Persian Walnut	*Juglans regia*	24	14	4	Good	Good	Small-caliper deadwood in canopy; branch canopy above 4m	Preserve: TPZ = 2.4m
61	Subject Site	White Pine	*Pinus strobus*	59, 64 (87)	24	9	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union at tree base; branch canopy above 10m	Preserve: TPZ = 5.4m *Install Dynamic cabling system*
62	Subject Site	Black Cherry	*Prunus serotina*	29	16	4	Good	Good	Small-caliper deadwood in canopy; branch canopy above 8m and shaded on south side	Preserve: TPZ = 2.4m
63	Subject Site	Norway Maple	*Acer platanoides*	19	10	7	Good	Good	Small-caliper deadwood in canopy; branch canopy shaded/reduced on south and east sides	Remove: Proposed site plan in conflict with the tree
64	Subject Site	Black Cherry	*Prunus serotina*	22	14	3	Good	Good	Small-caliper deadwood in canopy; branch canopy above 10m	Remove: Proposed site plan in conflict with the tree

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
65	Subject Site	Black Cherry	*Prunus serotina*	48	22	8	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union 16m from tree base; branch canopy above union	Preserve: TPZ = 3.0m
66	Subject Site	Red Oak	*Quercus rubra*	48	24	8	Good	Good	Small-caliper deadwood in canopy; branch canopy above 10m	Preserve: TPZ = 3.0m
67	Subject Site	Red Oak	*Quercus rubra*	69	21	12	Good	Good	Large-caliper deadwood in canopy; branch canopy above 10m	Preserve: TPZ = 4.2m
68	Subject Site	Red Maple	*Acer rubrum*	12, 13 (18)	13	6	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union at tree base	Preserve: TPZ = 2.4m
69	Subject Site	Red Maple	*Acer rubrum*	11, 17 (20)	13	8	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union at tree base	Preserve: TPZ = 2.4m
70	Subject Site	Black Cherry	*Prunus serotina*	20	13	4	Good	Good	Small-caliper deadwood in canopy; branch canopy above 10m	Preserve: TPZ = 2.4m
71	Subject Site	Red Oak	*Quercus rubra*	66	24	12	Good	Fair	Large-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union 16m from tree base; branch canopy above 10m	Preserve: TPZ = 4.2m
72	Neighbour	Red Oak	*Quercus rubra*	62	24	10	Good	Good	Small-caliper deadwood in canopy; branch canopy above 10m	Preserve: TPZ = 4.2m
73	*Lorne Park Estates*	Red Oak	*Quercus rubra*	90	26	12	Good	Good	Small-caliper deadwood in canopy; branch canopy above 10m	Preserve: TPZ = 5.4m
74	*Lorne Park Estates*	White Pine	*Pinus strobus*	25	16	3	Good	Good	Small-caliper deadwood in canopy; branch canopy above 10m	Preserve: TPZ = 2.4m
75	*Lorne Park Estates*	White Ash	*Fraxinus americana*	17	15	4	Good	Good	Small-caliper deadwood in canopy	Preserve: TPZ = 2.4m
76	*Lorne Park Estates*	Red Maple	*Acer rubrum*	36	15	7	Good	Good	Small-caliper deadwood in canopy; burls on upper canopy branches	Preserve: TPZ = 2.4m
77	Subject Site	Magnolia	*Magnolia xsoulangiana*	15, 17 (23)	6	6	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union at tree base; branch canopy above 2m	Preserve: TPZ = 2.4m

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
78	Subject Site	Black Locust	*Robinia pseudoacacia*	28	11	8	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with narrow included bark union 1.5m from tree base; branch canopy above 4m	Remove: Proposed site plan in conflict with the tree
79	Subject Site	Paper Birch	*Betula papyrifera*	4, 9, 15 (18)	8	5	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with included bark union at tree base	Preserve: TPZ = 2.4m

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Appendix C: Site Photos – 965 Whittier Crescent, Mississauga

Photo #3 – existing semi-circular driveway (to be re-configured)

Figure #2:
The above photo shows the existing semi-circular driveway to be re-configured at 965 Whittier Crescent.

Please refer to Pages 7 and 10 of this report for further information.