

Appendix E

Tree Management Plan



MMM GROUP

Prepared for: City of Mississauga

MAVIS ROAD CLASS ENVIRONMENTAL ASSESSMENT

ARBORIST REPORT

April 2017

Arborist Report

MAVIS ROAD CLASS ENVIRONMENTAL ASSESSMENT

Prepared For:

City of Mississauga

Prepared by:



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1.0 INTRODUCTION

MMM Group (MMM), a wholly owned subsidiary of WSP Global Inc., conducted an inventory and assessment of trees located along Mavis Road from Courtneypark Drive West to the North City Limit, including intersections and approaches. The report is an inventory of the trees located within the Mavis Road right-of-way and within 10 metres of the right-of-way on either side. No inventory was conducted for trees located north of Highway 407. Information for these trees was captured based on the Region of Peel's (Region) recently completed Mavis Road Widening Project 09-4060 from Steeles Avenue West to Highway 407 ETR, which is under warranty until October 31, 2017. The subject area includes 407 ETR lands, City of Mississauga property and private property located along the Mavis Road right-of-way.

This report is to be read in conjunction with:

- Tree Inventory and Preservation Charts (see Table 1)
- Tree Management Plans (see Appendix A)
- Associated Engineering Drawings

The trees in the study area were inventoried and assessed based on their health and condition at the time of report preparation. At the time of report preparation no concept plan or design drawings were available. Tree management recommendations are provided based on municipal standards and best management practices. Recommendations for retention or removal of individual trees should be re-examined when the preliminary road widening design plans become available.

2.0 BACKGROUND

Mavis Road within the study area consists of a 4-lane urban cross-section flanked by predominantly residential properties and occasional commercial plazas. See the Tree Management Plans for alignment and land ownership details.

Vegetation along the alignment exists in four forms:

1. Groups of planted native and non-native coniferous and deciduous street trees located in the grassed strip adjacent to the Mavis Road sidewalk;
2. Planted trees on private property directly adjacent to the Mavis Road right-of-way that were planted by homeowners;
3. Groups of native and non-native deciduous vegetation that have been established in lands adjacent to the Mavis Road right-of-way (e.g. Fletcher's Flats green space and adjacent to Highway 407 ramp); and,
4. Groups of native coniferous and deciduous vegetation that were recently planted by local organizations.

The majority of vegetation on site consists of planted non-native street trees, the most dominant species of which is Colorado Spruce (*Picea pungens*) and Norway Maple (*Acer platanoides*).

2.1 Definitions

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

Tree Number	Refers to the steel numbered tag, alphabetical value and tree grouping number on the Tree Management Plans eg: 001, 'A' and 'G1'
Species	The botanical and common names are provided for each tree.
DBH	Refers to diameter (in centimetres) at breast height and is measured at 1.4 m above the ground for each tree.
Canopy Width	Measurement of the tree canopy from its trunk to its dripline, recorded as a radius.
Tree Protection Zone	Refers to the preservation area of the tree to be protected with tree protection measures. No construction activities are to be undertaken within this zone.
Suppressed	Refers to trees that have their crowns completely overtopped by adjacent trees and received limited to very limited sunlight.
Co-dominant Stem	Stems equal in size and relative importance, usually associated with either the trunks and stems or scaffold limbs and branches in the crown.
Union	Junction point where two or more stems meet. A 'U' shaped junction indicates a well formed union. A 'V' shaped junction indicates a weakly formed union, whereas stems grow and increase in girth, weak bark called 'included bark' forms within the junction and stems start to push apart causing vertical cracks and loss of structure.
Tree form	Refers to branches and stems that have formed irregularly often resulting in contorted growth, weak attachments, weakly formed unions and co-dominant stems. The irregular growth of scaffold (lateral) branches typically leads to damage to other scaffold branches
Root Zone	Refers to the subterranean area around the tree measured from the trunk to the dripline plus one metre.

2.2 Tree Assessment Criteria

All inventoried trees have been reviewed using the following criteria. The tree condition for each of the criteria is assessed on a scale of poor, fair and good.

Trunk Integrity (T.I.)	An assessment of the trunk for defects or weaknesses. It is measured on a scale of poor, fair, good.
Canopy Structure (C.S.)	An assessment of the scaffold branches, unions and the canopy of the tree. This is measured on a scale of poor, fair, good.
Canopy Vigour (C.V.)	An assessment of the health of the tree, based on comparison of the amount of deadwood and live growth in the crown compared to a 100% healthy tree. The size, colour and amount of foliage are also considered in this category. This is measured on a scale of poor, fair, good.

2.3 Tree Condition

Tree health recorded in relation to each of the assessment criterion (TI, CS and CV)

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).

3.0 DISCUSSION

Field observations were undertaken on June 1st and 6th, 2016 in areas shown on the Tree Management Plans (see Appendix A). Detailed tree assessments for tree species, general health condition and dripline radius were undertaken for trees within the subject property limits and within 10m of the subject property limits. Trees with a DBH greater than 10 cm were inventoried. All new plantings found onsite were also inventoried. This includes trees with a DBH smaller than 10cm that are supported by stakes and guys, or within a cultivated landscape.

3.1 Summary of Existing Conditions

The inventory was restricted to the area within 10m of the existing Mavis Road. Tree inventory findings are recorded in the Tree Inventory and Preservation Charts (see Table 1) and in the Tree Management Plans (see Appendix A).

A total of +/- 920 trees are located within the study area. A total of +/- 843 located between Courtneypark Rd. West and Highway 407 were inventoried (368 on the east side of Mavis Road and 475 on the west side). A further 77 (approximately) are located north of Highway 407

between the highway on-ramp and Ray Lawson Boulevard and were not inventoried or assessed in the field. A total of 208 trees are located on private property and 711 are located on public property, including street trees along Mavis Road and adjacent streets, the Highway 407 ramps and Fletcher's Flats green space.

A total of 250 trees were individually tagged. Approximately 562 trees were assessed in 105 groupings. A total of 30 trees were individually assessed but not tagged owing to barriers to access and/or private ownership. Trees range in size from 5-25 cm diameter at breast height (DBH).

Trees were found to be in mostly fair to good condition. Vegetation found to be in fair to poor condition showed signs and symptoms of weakly formed unions, poor form due to abnormal development of scaffold branches causing injury to other branches, co-dominant stems, included bark, trunk wounds, winter/environmental damage, scorched and/or undersized leaves, sprouting, exfoliating bark, sucker growth, suppression, broken branches and deadwood ranging between 10-70%.

The majority of trees on site are planted three or more metres apart and have adapted to the wind-swept conditions common to major corridors. Several privately-owned trees are located behind chainlink or privacy fencing.

The breakdown of trees inventoried on and adjacent to the study area includes:

- Colorado Spruce (*Picea pungens*)
- Norway Maple (*Acer platanoides*)
- Silver Maple (*Acer saccharinum*)
- Austrian Pine (*Pinus nigra*)
- Thornless Honeylocust (*Gleditsia triacanthos* var. *inermis*)
- Crabapple species (*Malus* sp.)
- Ornamental Pear (*Pyrus* sp.)
- American Elm (*Ulmus americana*)
- Manitoba Maple (*Acer negundo*)
- Zelkova (*Zelkova serrata*)
- Basswood (*Tilia americana*)
- Celtis occidentalis (*Celtis occidentalis*)
- Norway Spruce (*Picea abies*)
- Red Oak (*Quercus rubra*)
- Littleleaf Linden (*Tilia cordata*)
- White Oak (*Quercus alba*)
- Eastern White Cedar (*Thuja occidentalis*)
- Ash species (*Fraxinus* sp.)
- White Mulberry (*Morus alba*)
- Burr Oak (*Quercus macrocarpa*)
- Pawpaw (*Asimina triloba*)
- Juniper species (*Juniperus* sp.)

3.2 By-laws / Permits / Directives

3.2.1 *City of Mississauga Private Tree Protection By-law 254-12 (2012) and Development and Design Construction Hoarding Detail (Jan. 2008)*

The City of Mississauga Urban Forestry Department has a tree protection policy in place for privately owned trees. No trees on private property should be injured or harmed. In addition, the City of Mississauga's hoarding detail is included in the Tree Management Plans, which specifies the size of tree protection zone and style of tree protection barrier that should be implemented.

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

The Canadian Food Inspection Agency issues a prohibition of movement where the emerald ash borer (EAB) has been confirmed. EAB has been found in Mississauga and therefore has been identified as part of the EAB Regulated Area encompassing most of southern and central Ontario and western Quebec. The study area is within identified areas prohibiting the movement of regulated materials (including but not limited to ash wood or bark and ash wood chips or bark chips) from the regulated area.

- Ash trees were observed within the limits of work. A visual assessment confirmed the presence of Emerald Ash Borer within these trees. These trees are permitted to be either chipped on site and/ or cut down and removed from site. Chipped Ash material that is to remain on site must be grinded or chipped to a size of less than two and a half (2.5) cm in any two (2) dimensions. All Ash material chipped or whole that is removed from site, must be disposed of within the regulated area of Canada. Removal, disposal and treatment of Ash material must be in compliance with Appendix 5 & 6 of directive #D-03-08. If it is necessary for Ash materials to be disposed of outside of this area than a 'Movement Certificate' will be required from the CFIA prior to transport. Contractor to consult with CFIA Mississauga office for specific requirements (1050 Courtneypark Dr E, Mississauga, ON L5T 1L7, (289) 247-4098).*

4.0 ANALYSIS

Tree preservation and removal recommendations were determined based on proposed grading plans, the City of Mississauga's Tree Protection By-Law and best management practices.

4.1 Summary of Recommendations for Tree Preservation / Removal

Trees selected for retention should be protected with tree protection fencing at the dripline or as far from the dripline as the proposed limit of grading allows. No construction activity is permitted within the tree protection zone. Based on the proposed limit of grading and construction works, a total of 145 trees are required to be removed, including 6 dead standing trees. A total of 65 trees will be impacted by grading and construction works within the critical root zone. In addition, dead trees and trees in poor condition (e.g. topped leaders, considerable dieback) should be considered for removal and where possible, replaced with appropriate native species. If the design allows, plantings should be considered in areas where street trees were previously removed. Best efforts should be made during the detailed design phase to retain all trees located on private property and trees that are in fair to good condition. Through the use of appropriate mitigation measures, tree protection and sensitivity to the tree preservation, tree removals may be

kept to a minimum. Refer to Section 6.0 for Tree Preservation Strategies. Descriptions of individual trees and groupings are presented below.

4.1.1 *Ray Lawson Boulevard to Highway 407*

Tree numbers: G106-G110, T31

As noted above, information on trees located north of Highway 407 was obtained from as-built drawings provided by the Region of Peel and aerial photography/street imagery dated June 2016 available online. No field survey was conducted for these trees. The as-built drawings are included in Appendix B and described to a limited extent in Table 1.

Trees recommended for retention: G106, G107 (Retain 14), G108, G109 (Retain 11), G110 (Retain 9), T31

A total of 46 trees are recommended for retention and preservation. Of these trees, 3 will be impacted by grading and construction works within the critical root zone.

Trees recommended to be removed: G107 (Remove 5), G109 (Remove 11), G110 (Remove 15)

Proposed grading works will require the removal of 31 trees. Refer to Tree Management Plans (Appendix A) for specific tree impacts within groupings.

4.1.2 *Highway 407 to Twain Avenue / Knotty Pine Grove*

Tree numbers: 1-31, 80-110, G1-G11, G41-G56, T30

Trees along this block of Mavis Road consist of one woodlot grouping (G1) beside the Highway 407 on-ramp, 171 planted native and non-native street trees and 7 trees located away from the street. There are 14 dead trees. The woodlot grouping is in fair to good condition, contains a mature Sugar Maple and should be protected if grading allows.

Trees recommended for retention: 1-26, 80-102, G1-G10, G11 (Retain 1), G41-G46, G47 (Retain 3), G48, G49 (Retain 2), T30

A total of 125 trees are recommended for retention and preservation. Of these trees, 49 will be impacted by grading and construction works within the critical root zone.

Trees recommended to be removed: 27-31, 103-110, G11 (Remove 2), G47 (Remove 1), G49 (Remove 1), G50-G56

Proposed grading works will require the removal of 53 trees. Refer to Tree Management Plans (Appendix A) for specific tree impacts within groupings.

4.1.3 *Twain Avenue / Knotty Pine Grove to Kaiser Drive / Envoy Drive*

Tree numbers: 32-41, 55-79, G12-G20, G32-G40, T1-T2

Trees along this block of Mavis Road consist of 98 planted native and non-native street trees and 17 trees located off of the street. There are also three sections of cut stumps where rows of street trees have been removed.

Trees recommended for retention: 32-35, 37-41, 55-79, G12-G20, G32-G40, T1-T2

A total of 114 trees are recommended for retention and preservation.

Trees recommended to be removed: 36

It is recommended that 1 Ash tree (tree number 36) showing heavy dieback and evidence of Emerald Ash Borer should be removed.

4.1.4 *Kaiser Drive / Envoy Drive to Derry Road West*

Tree numbers: 42-54, G21-31, T3-T18, T29

Trees along this block of Mavis Road consist of 83 planted native and non-native street trees and 10 trees located off of the street. There are 8 dead trees.

Trees recommended for retention: 53, 54, G21-G25, G26 (Retain 8), G27-31, T3-T18, T29

A total of 78 trees are recommended for retention and preservation. Of these trees, 2 will be impacted by grading and construction works within the critical root zone.

Trees recommended to be removed: 42-52, G26 (Remove 4)

Proposed grading works will require the removal of 15 trees. Refer to Tree Management Plans (Appendix A) for specific tree impacts within groupings.

4.1.5 *Derry Road West to Novo Star Drive / Crawford Mill Avenue*

Tree numbers: 170-225, G25, G95-G101, T19, T20, T28

Trees along this block consist of one grouping on public property (G25 – 16 trees) that contains native species planted by a local organization, as well as 88 planted native and non-native street trees and 15 trees located off of the street. There are 7 dead trees.

Trees recommended for retention: 170-200, 206-225, G25, G93-G101, T19, T20, T28

A total of 114 trees are recommended for retention and preservation. Of these trees, 2 will be impacted by grading and construction works within the critical root zone.

Trees recommended to be removed: 201-205

Proposed grading works will require the removal of 5 trees.

4.1.6 *Novo Star Drive / Crawford Mill Avenue to Western Skies Way / Craig Carrier Court*

Tree numbers: 145-169, 226-250, G68-72, G85-G92, G102-G104, T21, T22, T26, T27

Trees along this block of Mavis Road consist of 116 planted native and non-native street trees and 37 trees located off of the street. There are 17 dead trees.

Trees recommended for retention: 145-169, 226-250, G68-72, G85-G92, G102-G104, T21, T22, T26, T27

All trees located within this area are recommended for retention and preservation.

Trees recommended to be removed:

No tagged trees or trees in groupings are recommended for removal. However, dead trees and trees in poor condition (e.g. topped leaders, considerable dieback) should be considered for removal and where possible, replaced with appropriate native species.

4.1.7 *Western Skies Way / Craig Carrier Court to Courtneypark Drive West*

Tree numbers: 111-144, G58-G67, G73-G84, T23-T25

Trees along this block of Mavis Road consist of 7 groupings of naturalized native and non-native trees in Fletcher's Flats green space (G60-G64 and G74-G75 – approximately 60 trees), 86 planted native and non-native street trees and 39 trees located off of the street. There are several dead Ash trees in grouping G64, as well as 3 dead trees located on Mavis Road and 2 dead trees off of the street.

Trees recommended for retention: 111-134, G58-G67, G73, G74 (Retain 8), G75-G79, G80 (Retain 1), G81 (Retain 1), G84, T23

A total of 145 trees are recommended for retention and preservation. Of these trees, 9 will be impacted by grading and construction works within the critical root zone.

Trees recommended to be removed: 135-144, G74 (Remove 5), G80 (Remove 5), G81 (Remove 8), G82, G83, T24, T25

Proposed grading works will require the removal of 40 trees. In addition, it is recommended that the dead Ash trees in the meadow groupings should be removed and consideration should be given to enhancement of the meadow area through the planting of native species.

5.0 TREE MANAGEMENT PROCESS

The tree management process can be found below. Steps include initial tree removals to post-construction monitoring.

5.1 Tree Removals

Removals should be marked in the field by a consulting arborist prior to any cutting or stumping taking place. Removals will be based on proposed roadway widening limits and tree health condition.

5.2 Tree Protection Fencing

The following guidelines will apply to the installation of tree protection fence:

- A site meeting will be held with the contractor and consulting arborist to review the staked layout for the temporary tree protection fence to confirm the clearing limits and the installation location.
- A site inspection will take place to inspect the installed tree protection fencing and, if in accordance with the Arborist Report and Tree Management Plans, issue a certification letter to the City of Mississauga for their review and approval.
- All of the tree protection measures are to be installed and approved prior to commencement of site grading. Periodic inspection and maintenance of the tree protection measures will be required throughout construction.
- During the detailed design phase it is recommended that consideration is given to adding silt fabric to existing chain link fencing on public property where tree protection fencing is required, in place of standard tree protection fencing. This will reduce the amount of disturbance to the critical root zone of trees recommended for preservation.
- To avoid root zone impacts on trees to be retained, excavated material will not be stored against the tree protection barrier. The temporary protection fence 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 temporary protection fence.

5.3 Monitoring Plan

5.3.1 Construction

- Upon completion of initial grading, a site inspection will be undertaken by a consulting arborist to monitor tree protection fencing, unintended damage, pruning needs and hazard trees.

- Inspections will be undertaken by a consulting arborist to ensure that the tree preservation measures are maintained during construction.

5.3.2 *Post-Construction*

- The temporary protection fence will be removed last after review and approval by a consulting arborist once all construction has ended, soils are stabilized and all equipment has been removed.

6.0 TREE PRESERVATION STRATEGIES

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 environmental features of the existing microclimate including winds, temperature, soil moisture, available sunlight, soil quality, and the level of the water table. Increased human activities may also damage the structure and/or physiology 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 servicing requirements.

6.1 General Notes

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 construction.

- Prior to the commencement of tree removals, all limits of the locations of the tree protection fencing must be clearly staked in the field and approved by the Contract Administrator. All trees within the tree protection zone must be left standing. The tree removals must be coordinated to be completed outside of the migratory bird nesting season.
- All removals must be felled into the work area to ensure that damage does not occur to the trees within the tree protection 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 migratory bird nesting season.
- The City of Mississauga is within the EAB Regulated area covering most of southern Ontario. The removal and disposal of Ash (*Fraxinus sp.*) is subject to the Canadian Food and Inspections Agencies (CFIA) regulations. As mandated by the Canadian Food

Inspection Agency a ***prohibition of movement will be issued for properties where the emerald ash borer (EAB) has been confirmed***. This measure prohibits the movement of regulated materials outside of the regulated area. Regulated materials include: ash trees (whole or parts), ash nursery stock, ash logs and branches, ash lumber, wood, packaging materials with an ash component, ash wood or bark, ash wood chips or bark chips, firewood from all tree species. EAB regulated articles moving out of a regulated area must be accompanied by a ***Movement Certificate issued by the CFIA***. All vehicles used to transport regulated articles must be cleaned of debris prior to loading at origin and prior to departure from the receiving facility. The required treatment will depend upon the regulated article transported, but may include sweeping or power washing. Should it be necessary to dispose of materials on site methods of disposal include incineration or deep burial. For more information about transporting regulated articles and disposal contact your local CFIA office

- Tree protection fencing must be constructed and installed as per the details on the approved Tree Management Plan (see Appendix A). Upon installation of the fencing, the Contractor will contact the Contract Administrator to review and approve the fencing and its location prior to commencement of any grading work.
- Areas within the tree protection 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 tree protection zone or dripline of trees designated for preservation within or adjacent to the construction zone.
- No grade changes shall occur within the tree protection 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 Contract Administrator 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.
- In the event that it is necessary to remove additional limbs or portions of trees, after construction has commenced, to accommodate construction, the Contract Administrator 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.

6.2 Pruning Practices

- All limbs damaged or broken during the course of construction should be pruned cleanly, utilizing by-pass 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 a 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 one third (1/3) 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.
- 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.

6.3 Establishment of Tree Protection Zone (TPZ)

- Tree preservation measures, including the establishment of the Tree Protection Zone (TPZ) shall apply to the individual trees denoted for preservation on the Tree Management Plan (Appendix A), as well as all vegetated areas noted for retention.
- Trees located within the study area that are to be preserved will have tree protection fencing installed at the dripline to establish a tree protection zone. All trees located on adjacent properties shall be preserved unless otherwise stated in this report.
- No grade changes shall occur within the tree protection zone. In the advent that grade changes occur either as a cut or fill situation, the Contract Administrator 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 protect root systems from damage, compaction and contamination resulting from the construction to the satisfaction of the Contract Administrator.
- Trees that require pruning to permit construction activities have been identified in this Arborist Report. In the event that it is necessary to remove additional limbs or portions of trees, after construction has commenced, to accommodate construction, the Contract Administrator 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.
- 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 a consulting arborist so that the damage can be assessed immediately and mitigation can be promptly implemented.

7.0 CONCLUSIONS

The implementation of tree management and protection measures outlined within this report will promote the continued health of trees to be retained. Enhancement of the boulevard and remaining open spaces adjacent to the new roadway limit will help mitigate the overall loss of vegetation. 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. Care should be taken to protect trees with tree protection fencing as illustrated on the attached plans. Tree protection fencing shall be erected prior to the start of construction and demolition.

8.0 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 | MMM GROUP LIMITED



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9.0 REFERENCES

City of Mississauga. 2012. Private Tree Protection By-Law

Canadian Food Inspection Agency. 2014. CFIA Directive (D-03-08): Phytosanitary Requirements to Prevent the Introduction Into and Spread within Canada of the Emerald Ash Borer, *Agrilus planipennis* (Fairmaire)

Region of Peel. 2014. Existing Tree Survey – Mavis Road (from Steeles Ave. West to Highway 407).

Table 1

Tree Inventory and Preservation Charts

Table 1: Tree Inventory and Preservation Charts												
Project: Mavis Drive Class EA				Field Work Completed By: Sarah Taslimi and Nicholas Minigan								
Date of Field Work: June 1 and 6				Weather: Sunny, 25 to 30 degrees Celcius							Conditions: Good, Fair, Poor, Dead	
Tree Tag #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Tree Condition			Tree Ownership	Dripline Radius	Recommendation	Remarks
						TI	CS	CV				
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 comparison of the amount of deadwood and live growth in the crown. The size, colour and amount of foliage are also considered						Tree Condition Good: tree displays less than 15% deficiency/defect within the given tree assesment 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)						
Tree Preservation / Removal Legend						G#: Grouping number (no tag) T#: Tree number (no tag)						
	Trees to be impacted, removed, or varied recommendations											
	Trees recommended to be retained and preserved											
MAVIS ROAD - EAST SIDE - RAY LAWSON BOULEVARD TO HIGHWAY 407												
Note: Information on trees located north of Highway 407 was obtained from as-built drawings provided by the Region of Peel and aerial photography/street imagery dated June 2016 available online. No field survey was conducted for these trees.												
G106	Unknown, newly planted - Refer to Region of Peel landscape contract drawings.		6	10-15		-	-	-	Public	1	Retain	No field data recorded.
G107	Unknown, newly planted - Refer to Region of Peel landscape contract drawings.		19	10-15		-	-	-	Public	1	Remove 5; 1 impacted	No field data recorded. Refer to Tree Management Plans for specific tree impacts within grouping.
MAVIS ROAD - WEST SIDE - STEELES AVENUE WEST TO HIGHWAY 407												
G108	Unknown, newly planted - Refer to Region of Peel landscape contract drawings.		5	15		-	-	-	Private	1.5	Retain	No field data recorded.
G109	Unknown, newly planted - Refer to Region of Peel landscape contract drawings.		22	10		-	-	-	Public	1	Remove 11; 1 impacted	No field data recorded. Refer to Tree Management Plans for specific tree impacts within grouping.
T31	Unknown, newly planted - Refer to Region of Peel landscape contract drawings.		1	10		-	-	-	Public	1	Retain	No field data recorded.
G110	Unknown - Located adjacent to rear yards of Cedar Lake Crescent townhomes.		~24	N/A		-	-	-	Private	1	Remove 15; 1 impacted	No field data recorded. Refer to Tree Management Plans for specific tree impacts within grouping.
MAVIS ROAD - EAST SIDE - HWY 407 TO TWAIN AVENUE / KNOTTY PINE GROVE												
1	<i>Pinus nigra</i>	Austrian Pine	1	8, 10	5	F	F	P	Public	3	Retain	Co-dominant union
2	<i>Pinus nigra</i>	Austrian Pine	1	12, 13	5	F	P	F	Public	3	Retain	Co-dominant union
3	<i>Pinus nigra</i>	Austrian Pine	1	10	3	F	P	P	Public	2	Retain	
4-10	<i>Acer saccharinum</i>	Silver Maple	7	12-20		F	F	G	Public	3	Retain	Trunk wounds, suckering
11-13	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	3	10-15		G	G	G	Public	3	Impacted	Some suckering along trunks. Grading within critical root zone.
14-20	<i>Acer saccharinum</i>	Silver Maple	7	12-20		F	F	G	Public	3	Impacted	Trunk wounds, suckering. Grading within critical root zone.
21-23	<i>Acer saccharinum</i>	Silver Maple	3	25		F	F	G	Public	6	Retain	
24-26	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	3	12-15		G	F	G	Public	6	Impacted	Grading within critical root zone.
27-28	<i>Acer platanoides</i>	Norway Maple	2	15		F	F	G	Private	5	Remove	#28 is multi-stemmed and suckering. Grading within 1.5m of trunks.
29-31	<i>Acer platanoides 'Crimson King'</i>	Crimson King Norway Maple	3	13		F	F	P-F	Private	4	Remove	#29 has heavy dieback; #31 has heavy lean. Grading within 1.5m of trunks.

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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 assesment 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 comparison of the amount of deadwood and live growth in the crown. The size, colour and amount of foliage are also considered						Poor: tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)							
Tree Preservation / Removal Legend													
	Trees to be impacted, removed, or varied recommendations					G#: Grouping number (no tag)							
	Trees recommended to be retained and preserved					T#: Tree number (no tag)							
G1	Woodlot Grouping: 1 mature <i>Acer saccharum</i> (Sugar Maple - 40cm DBH), understorey of young maples, honeysuckle and dogwood.					G	F	G	Public - HWY 407 Ramp		Retain		
G2	<i>Picea pungens</i>	Colorado Spruce	5	10-12	2.5-4	P-F	P-F	P-F	Public	1	Retain	1 tree in grouping dead, leaders bent on 2	
G3	<i>Picea pungens</i>	Colorado Spruce	7	15-20	6	G	G	G	Public	2	Retain		
G4	<i>Picea pungens</i>	Colorado Spruce	7	15-20	6-8	G	G	G	Public	2	Impacted	Grading within critical root zone.	
G5	<i>Picea pungens</i>	Colorado Spruce	5	10-15	4-6	F	F	P-G	Public	2	3 Impacted	Grading within critical root zone of 3 trees in grouping	
G6	<i>Picea pungens</i>	Colorado Spruce	6	15-20	6-8	G	G	G	Public	2	Retain		
G7	<i>Pinus nigra</i>	Austrian Pine	2	25	5,6	G,P	G,P	G	Public	5	Retain		
G8	<i>Picea pungens</i>	Colorado Spruce	5	10-13	6-7	G	G	G	Public	1	Retain		
G9	<i>Acer platanoides</i> 'Columnare'	Columnar Norway Maple	3	12		G	F	G	Public	1	Retain		
G10	<i>Picea pungens</i>	Colorado Spruce	5	10-13	6-8	G	G	G	Public	1-2	Retain		
G11	<i>Pinus nigra</i>	Austrian Pine	3	15-20	6	P	P	P	Public	3	Remove 2; 1 impacted	1 tree in grouping dead. Refer to Tree Management Plans for specific tree impacts within grouping.	
MAVIS ROAD - WEST SIDE - HWY 407 TO TWAIN AVENUE / KNOTTY PINE GROVE													
80-83	<i>Acer platanoides</i>	Norway Maple	4	15		G	G	G	Public	4	Retain		
84-87	<i>Zelkova serrata</i>	Zelkova	4			P	P	P	Public	2	Retain	1 tree in grouping (#87) dead, #84 and #85 >40% dieback	
88-91	<i>Malus species</i>	Crabapple	4	15		G	G	G	Public	3-4	Impacted	Grading within critical root zone.	
92-98	<i>Zelkova serrata</i>	Zelkova	7	15		F	F	P-F	Public	2	Impacted	1 leader topped. Grading within critical root zone.	
99	<i>Ulmus americana</i>	American Elm	1	15		F	F	P	Public	4	Impacted	Leaves under sized, burnt spots. Grading within critical root zone.	
100	<i>Ulmus americana</i>	American Elm	1	20		F	F	F	Public	6	Impacted	Some dieback. Grading within critical root zone.	
101-102	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	2	10		G	G	G	Public	4	Impacted	Grading within critical root zone.	
103-107	<i>Ulmus americana</i>	American Elm	5	15		G	G	F	Public	3	Remove	Located within limit of grading or grading within 1.5m of trunk.	
108-110	<i>Acer saccharum</i>	Sugar Maple	3	12-15		G	G	G	Public	5	Remove	Located within limit of grading.	

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Tree Preservation / Removal Legend													
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	Trees recommended to be retained and preserved					T#: Tree number (no tag)							
G41	<i>Picea pungens</i>	Colorado Spruce	3	10-15	6-8	G	G	G	Public	2	Retain		
G42	<i>Picea pungens</i>	Colorado Spruce	4	15	8	G	G	G	Public	2	Retain		
G43	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	2	<10		G	G	G	Public	2	Retain		
G44	<i>Pinus nigra</i>	Austrian Pine	5	15	6-8	G	G	G	Public	3	3 Impacted	Grading within critical root zone of 3 trees in grouping	
G45	<i>Pinus nigra</i>	Austrian Pine	4	15	6-8	G	G	G	Public	3	2 Impacted	Grading within critical root zone of 2 trees in grouping	
G46	<i>Picea pungens</i>	Colorado Spruce	3	10-15	2-8	P-F	P-F	F	Public	2	Retain		
G47	<i>Picea pungens</i>	Colorado Spruce	4	10-15	3-7	F	F	G	Public	1	Remove 1; 3 impacted	Refer to Tree Management Plans for specific tree impacts within grouping.	
G48	<i>Acer platanoides</i>	Norway Maple	2	<10		G	F	F	Public	2	Impacted	Grading within critical root zone.	
G49	<i>Picea pungens</i>	Colorado Spruce	3	<10	2	F	P	P	2 Public, 1 Private	<1	Remove 1	>40% dieback, leaders bent. Refer to Tree Management Plans for specific tree impacts within grouping.	
G50	Grouping: 2 <i>Picea pungens</i> (Colorado Spruce), 1 <i>Acer platanoides</i> (Norway Maple), 3 dead trees		6	<10	2	P	P	P	Public	<1	Remove	3 dead trees in grouping. Located within limit of grading.	
G51	<i>Picea pungens</i>	Colorado Spruce	6	10	6-8	G	G	G	Private	2	Remove	Located within limit of grading.	
G52	<i>Picea pungens</i>	Colorado Spruce	5	10	6-8	G	G	G	Private	2	Remove	Located within limit of grading.	
G53	<i>Acer rubrum</i>	Red Maple	4	<10		G	G	F	Private	2	Remove	15% dieback, leaves wilting. Located within limit of grading	
G54	<i>Picea pungens</i>	Colorado Spruce	6	10	5	G	G	G	Private	2	Remove	Located within limit of grading.	
G55	<i>Quercus rubra</i>	Red Oak	3	<10		G	G	F	Private	2	Remove	15% dieback. Located within limit of grading.	
G56	<i>Picea pungens</i>	Colorado Spruce	6	10	3-5	G	G	G	Private	2	Remove	Located within limit of grading.	
T30	<i>Morus alba</i>	White Mulberry	1	10		G	G	G	Private	1	Retain		

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MAVIS ROAD - EAST SIDE - TWAIN AVENUE / KNOTTY PINE GROVE TO KAISER DRIVE / ENVOY DRIVE												
32-35	<i>Acer platanoides</i>	Norway Maple	4	15		G	G	G	Public	3	Retain	
36	<i>Fraxinus sp.</i>	Ash species	1	14		F	P	P	Public	4	Remove	Leader broken, 90% dieback , Emerald Ash Borer evidence
37	<i>Tilia cordata</i>	Littleleaf Linden	1	15		G	G	F	Public	4	Retain	Burnt spots on leaves
38	<i>Tilia cordata</i>	Littleleaf Linden	1	15		G	G	F	Public	4	Retain	Burnt spots on leaves
39-41	<i>Tilia cordata</i>	Littleleaf Linden	3	20		G	F	F	Public	4	Retain	Burnt spots on leaves
G12	<i>Picea pungens</i>	Colorado Spruce	2	10	6	G	G	G	Public	1	Retain	
G13	<i>Picea pungens</i>	Colorado Spruce	4	10-13	6-8	G	G	G	Public	1-2	Retain	
G14	<i>Picea pungens</i>	Colorado Spruce	7	15	8-9	G	G	G	Public	1-2	Retain	
G15	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	9	<10		G	F	G	Public	3-4	Retain	Some co-dominant unions, suckering
G16	<i>Picea pungens</i>	Colorado Spruce	5	10-15	6-8	G	G	G	Public	1-2	Retain	
G17	<i>Picea pungens</i>	Colorado Spruce	5	10-15	6-8	G	G	G	Public	1-2	Retain	
G18	<i>Picea pungens</i>	Colorado Spruce	3	15	8	G	G	F	Public	1-2	Retain	
G19	<i>Acer platanoides 'Crimson King'</i>	Crimson King Norway Maple	2	10		G	G	G	Private	2	Retain	
G20	Corner lot grouping: 2 <i>Picea pungens</i> (Colorado Spruce), 2 <i>Pyrus</i> (Ornamental Pear) species, 1 <i>Chamaecyparis</i> (Cypress) species		5	10-15		G	G	G	Private	2	Retain	Some suckering
T1	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	1	<10		G	G	G	Public	2	Retain	
T2	<i>Morus alba</i>	White Mulberry	1	<10		G	G	G	Public	1	Retain	

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MAVIS ROAD - WEST SIDE - TWAIN AVENUE / KNOTTY PINE GROVE TO KAISER DRIVE / ENVOY DRIVE												
55-58	<i>Acer platanoides</i>	Norway Maple	4	25		G	G	G	Public	3-4	Retain	
59-61	<i>Malus species</i>	Crabapple	3	10		G	G	G	Public	2	Retain	
62-73	<i>Ulmus americana</i>	American Elm	12	12-20		G	G	G	Public	3	Retain	
74-75	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	2	10-15		F	G	G	Public	5	Retain	Some split bark
76-79	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	4	10-15		F	G	G	Public	5	Retain	Some split bark
G32	Corner lot grouping: 2 <i>Pyrus</i> species (Ornamental Pear), 1 <i>Picea pungens</i> (Colorado Spruce)		3	10		G	G	G	Private	2	Retain	
G33	<i>Picea pungens</i>	Colorado Spruce	3	12	6	P-G	P-G	P-G	Public	1	Retain	1 leader topped
G34	<i>Picea pungens</i>	Colorado Spruce	9	10-15	6-8	G	G	G	4 Public, 5 Private	2	Retain	
G35	<i>Picea abies</i>	Norway Spruce	2	10	8	G	G	G	Private	2	Retain	
G36	Grouping: 1 <i>Acer platanoides</i> (Norway Maple), 5 <i>Picea pungens</i> (Colorado Spruce)		6	10-15	2-6	P-G	P-G	P-G	Public	1-2	Retain	3 Spruce leaders topped, 1 Spruce leader bent
G37	<i>Picea pungens</i>	Colorado Spruce	5	6-8		G	G	G	Public	2	Retain	
G38	<i>Acer negundo</i>	Manitoba Maple	2	<10		P	P	F	Public	3	Retain	Multi-stemmed
G39	<i>Picea pungens</i>	Colorado Spruce	3	15	6-8	G	G	G	Public	2	Retain	
G40	<i>Picea pungens</i>	Colorado Spruce	3	<10-17	4-8	F	G	G	Public	1-2	Retain	1 under 10cm

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MAVIS ROAD - EAST SIDE - KAISER DRIVE / ENVOY DRIVE TO DERRY ROAD WEST												
G21	Corner lot grouping: 4 <i>Picea abies</i> (Norway Spruce), 2 <i>Pyrus</i> (Ornamental Pear) species, 1 <i>Picea pungens</i> (Colorado Spruce)		6	10-15	8-10	G	G	G	1 Public, 5 Private	3-4	Retain	
G22	<i>Picea pungens</i>	Colorado Spruce	3	15	8-10	G	G	G	Public	2	Retain	
G23	<i>Picea pungens</i>	Colorado Spruce	4	15	8-10	G	G	G	Public	2	Retain	
G24	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	3	<10		G	F	G	Public	3	Retain	1 branch broken on centre tree
T3	<i>Quercus alba</i>	White Oak	1	12		F	G	G	Public	3	Retain	Leader leaning at top, co-dominant union
T4	<i>Quercus alba</i>	White Oak	1	10		G	G	G	Public	2	Retain	Leader leaning at top, co-dominant union
T5	<i>Pinus nigra</i>	Austrian Pine	1	15	6	G	G	G	Public	2	Retain	
T6	<i>Quercus rubra</i>	Red Oak	1	10		F	P	P	Public	1	Retain	>40% dieback
T7	<i>Quercus rubra</i>	Red Oak	1	10		G	F	F	Public	2	Retain	15-40% dieback
T8	<i>Quercus rubra</i>	Red Oak	1	10		G	F	G	Public	2	Retain	15-40% dieback
T9	<i>Pinus nigra</i>	Austrian Pine	1	15	6	G	G	G	Public	3	Retain	
T10-T13	<i>Tilia americana 'Fastigiata'</i>	Columnar Basswood	3	<10		G	F	G	Public	1	Retain	T11 >40% dieback, still staked
T14	<i>Quercus alba</i>	White Oak	1	10		F	F	F	Public	2	Retain	15% dieback, co-dominant union
T15	<i>Quercus alba</i>	White Oak	1	10		G	F	G	Public	3	Retain	Co-dominant union
T16-T17	<i>Pyrus species</i>	Ornamental Pear	2	12		G	F	G	Public	1	Retain	Crowded crown, too many internal branches
T18	<i>Pinus nigra</i>	Austrian Pine	1	17	7	G	G	G	Public	3	Retain	

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Project: Mavis Drive Class EA				Field Work Completed By: Sarah Taslimi and Nicholas Minigan								
Date of Field Work: June 1 and 6				Weather: Sunny, 25 to 30 degrees Celcius							Conditions: Good, Fair, Poor, Dead	
Tree Tag #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Tree Condition			Tree Ownership	Dripline Radius	Recommendation	Remarks
						TI	CS	CV				
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 comparison of the amount of deadwood and live growth in the crown. The size, colour and amount of foliage are also considered						Tree Condition Good: tree displays less than 15% deficiency/defect within the given tree assesment 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)						
Tree Preservation / Removal Legend												
	Trees to be impacted, removed, or varied recommendations					G#: Grouping number (no tag)						
	Trees recommended to be retained and preserved					T#: Tree number (no tag)						
MAVIS ROAD - WEST SIDE - KAISER DRIVE / ENVOY DRIVE TO DERRY ROAD WEST												
G26	Laurelwood Terrace Entrance Grouping: 2 <i>Acer platanoides</i> 'Crimson King' (Norway Maple), 10 <i>Picea pungens</i> (Colorado Spruce)		12	10-15	6-8	G	G	G	Private	2-4	Remove 4; 1 impacted	Refer to Tree Management Plans for specific tree impacts within grouping.
42-53	<i>Acer platanoides</i>	Norway Maple	12	15		G	G	G	Private	3-5	Remove 11; 1 impacted	Refer to Tree Management Plans for specific tree impacts within grouping.
G27	<i>Picea pungens</i>	Colorado Spruce	9	10-15	6-8	G	G	G	Public	2	Retain	1 tree in grouping dead
G28	<i>Acer platanoides</i> 'Crimson King'	Crimson King Norway Maple	13	<10		G	F	F-G	Public	1	Retain	Some dieback (<15%)
G29	<i>Picea pungens</i>	Colorado Spruce	5	12	6-10	G	G	G	Public	2	Retain	
G30	<i>Tilia americana</i>	Basswood	3	15		G	G	G	Public	3	Retain	
54	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	1	13		G	G	G	Public	1	Retain	
T29	<i>Picea pungens</i>	Colorado Spruce	1	12	8	G	G	G	Public	2	Retain	
G31	Corner lot grouping: 1 <i>Asimina triloba</i> (Pawpaw), 2 <i>Picea pungens</i> (Colorado Spruce), 1 <i>Malus</i> (Crabapple) species, 2 <i>Pyrus</i> (Ornamental Pear) species		6	<10		F	F	G	1 Public, 5 Private	1-2	Retain	
MAVIS ROAD - EAST SIDE - DERRY ROAD WEST TO NOVO STAR DRIVE / CRAWFORD MILL AVENUE												
170	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	1	12		G	G	G	Public	4	Retain	
171	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	1	<10		G	F	G	Public	2	Retain	Undersized
172-173	<i>Celtis occidentalis</i>	Common Hackberry	2	15		G	G	G	Public	3	Retain	
174	<i>Celtis occidentalis</i>	Common Hackberry	1	13		G	G	G	Public	4	Retain	
175-181	<i>Acer platanoides</i>	Norway Maple	7	10-15		F	G	G	Public	3	Retain	Some trunks split
182-191	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	10	10-15		G	F	G	Public	4	Retain	Some co-dominant leaders
192	<i>Acer platanoides</i>	Norway Maple	1	15		G	G	G	Public	3	Retain	
193	<i>Ulmus americana</i>	American Elm	1	10		F	G	G	Public	1.5	Retain	Trunk splits

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Tree Preservation / Removal Legend													
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	Trees recommended to be retained and preserved					T#: Tree number (no tag)							
194	<i>Ulmus americana</i>	American Elm	1	10		G	G	P	Public	2	Retain	Undersized leaves, burnt spots	
195-198	<i>Acer platanoides</i>	Norway Maple	4	15		G	G	G	Public	3	Retain		
G93	Corner lot grouping: 4 <i>Pyrus</i> (Pear) species, 3 <i>Picea pungens</i> (Colorado Spruce)		7	10-15	8	G	F	F	Private	1-3	Retain		
G94	<i>Picea pungens</i>	Colorado Spruce	3	10		G	G	G	Public	2	Retain		
G95	<i>Picea pungens</i>	Colorado Spruce	7	10	1.5-8	P-G	P-G	P-G	Public	2	Retain	2 leaders cut off, 1 undersized	
G96	<i>Picea pungens</i>	Colorado Spruce	5	12		G	F	F	Public	2	Retain		
G97	<i>Picea pungens</i>	Colorado Spruce	3	15	8-10	G	G	G	Public	2	Retain		
T19	<i>Picea pungens</i>	Colorado Spruce	1	10	8	G	G	G	Private	2	Retain		
T20	<i>Pyrus species</i>	Ornamental Pear	1	<10		G	G	G	Private	1	Retain		
MAVIS ROAD - WEST SIDE - DERRY ROAD WEST TO NOVO STAR DRIVE / CRAWFORD MILL AVENUE													
G25	Meadow grouping: <i>Picea pungens</i> (Colorado Spruce), young <i>Pinus nigra</i> (Austrian Pine), young <i>Acer</i>		16	5-20	8-10	G	F	G	Public		Retain	Some leaders bent at top	
G98	Window Street Grouping: 5 <i>Picea pungens</i> (Colorado Spruce)		5	10	8-10	G	G	F	Public	2	Retain	1 dead Ash in grouping; understorey consists of: young <i>Celtis occidentalis</i> and <i>Populus tremuloides</i> .	
G99	<i>Picea pungens</i>	Colorado Spruce	5	10		F	G	F	Public	1.5	Retain		
T28	<i>Acer platanoides</i>	Norway Maple	1	20		G	G	G	Private	3	Retain		
G100	<i>Thuja occidentalis</i>	Eastern White Cedar	4	<10	5	G	G	G	Public	<1	Retain		

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Tree Preservation / Removal Legend												
	Trees to be impacted, removed, or varied recommendations					G#: Grouping number (no tag)						
	Trees recommended to be retained and preserved					T#: Tree number (no tag)						
G101	Corner lot grouping: 3 <i>Picea pungens</i> , 2 <i>Pyrus</i> (Ornamental Pear) species		5	10-15	6-8	G	G	F	Private	2-3	Retain	
199-204	<i>Zelkova serrata</i>	Zelkova	6	10-15		G	G	F	Public	2-4	Remove 4; 2 Impacted	#200 has orange "X" on trunk - may be scheduled for removal by City. Refer to Tree Management Plans for specific tree impacts within grouping.
205-207	<i>Malus species</i>	Crabapple	3	12		F	G	G	Public	2	Remove 1	Refer to Tree Management Plans for specific tree impacts within grouping.
208-214	<i>Ulmus americana</i>	American Elm	7	10-15		F	F	P	Public	4	Retain	Undersized leaves, burnt spots
215-219	<i>Malus species</i>	Crabapple	5	13		F	G	G	Public	2	Retain	Leaning trunks
220-224	<i>Zelkova serrata</i>	Zelkova	5	10		F	F	F	Public	2	Retain	#221 to be removed (orange 'X' on trunk)
225	<i>Acer platanoides</i> 'Globosum'	Globe Norway Maple	1	10		F	G	G	Public	2	Retain	Trunk split
MAVIS ROAD - EAST SIDE - NOVO STAR DRIVE / CRAWFORD MILL AVENUE TO WESTERN SKIES WAY / CRAIG CARRIER COURT												
145	<i>Acer saccharinum</i>	Silver Maple	1	10		G	G	G	Public	1.5	Retain	
146	<i>Acer saccharinum</i>	Silver Maple	1	10		P	P	P	Public	1	Retain	Trunk wounds, dieback
147-148	<i>Acer saccharinum</i>	Silver Maple	2	12		G	F	G	Public	2	Retain	
149-166	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	18	10-15		G	G	G	Public	1-3	Retain	#152 is undersized with lots of suckering and a trunk wound
167	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	1	10		F	F	F	Public	3	Retain	1 leader damaged (co-dominant)
168	<i>Celtis occidentalis</i>	Common Hackberry	1	13		G	G	G	Public	2	Retain	
169	<i>Celtis occidentalis</i>	Common Hackberry	1	10	2-6	G	G	G	Public	4	Retain	
G68	<i>Picea pungens</i>	Colorado Spruce	2	10	2-3	G	F	G	Public	1	Retain	
G69	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	6	<10		F	G	G	Public	2-3	Retain	Suckering along trunk
G70	Private grouping: <i>Pyrus</i> (Pear) species, <i>Picea pungens</i> (Colorado Spruce)		5	10-15		G	G	G	Private	3	Retain	
G71	<i>Picea pungens</i>	Colorado Spruce	5	10	3	G	G	G	Public	1-2	Retain	
G85	<i>Picea pungens</i>	Colorado Spruce	5	10	3-6	G	G	F	Public	2	Retain	

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Tree Tag #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Tree Condition			Tree Ownership	Dripline Radius	Recommendation	Remarks
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Tree Preservation / Removal Legend												
	Trees to be impacted, removed, or varied recommendations					G#: Grouping number (no tag)						
	Trees recommended to be retained and preserved					T#: Tree number (no tag)						
G86	<i>Acer saccharinum</i>	Silver Maple	4	<10		G	F	P	Public	1-2	Retain	
G87	<i>Picea pungens</i>	Colorado Spruce	5	15	6-8	G	G	G	Public	2	Retain	
G88	<i>Picea pungens</i>	Colorado Spruce	6	<10	3-6	G	G	G	Public	1	Retain	
G89	<i>Picea pungens</i>	Colorado Spruce	4	5-10		G	F	F	Public	1-2	Retain	
G90	<i>Picea pungens</i>	Colorado Spruce	7	5-10		G	F	F	Private	1-2	Retain	
G91	<i>Pyrus species</i>	Ornamental Pear	4	15-20	3	G	G	G	Private	2-4	Retain	
G92	<i>Picea pungens</i>	Colorado Spruce	3	<10	8	G	G	F	Public	1	Retain	
T21	<i>Celtis occidentalis</i>	Common Hackberry	1	<10		G	F	F	Public	1	Retain	
T22	<i>Celtis occidentalis</i>	Common Hackberry	1	<10		G	G	G	Public	2	Retain	
MAVIS ROAD - WEST SIDE - NOVO STAR DRIVE / CRAWFORD MILL AVENUE TO WESTERN SKIES WAY / CRAIG CARRIER COURT												
226-230	<i>Ulmus americana</i>	American Elm	5	10-13		G	G	G	Public	3	Retain	
231-236	<i>Acer platanoides</i>	Norway Maple	6	12		G	G	G	Public	3	Retain	
237-242	<i>Acer platanoides</i>	Norway Maple	7	15-20		G	G	G	Public	3	Retain	
243	<i>Zelkova serrata</i>	Zelkova	1	20		P	P	G	Public	3	Retain	Split and included bark, co-dominant union
244-248	<i>Acer platanoides</i> 'Globosum'	Globe Norway Maple	5	10		G	G	G	Public	2	Retain	
249	<i>Ulmus americana</i>	American Elm	1	13		G	G	G	Public	3	Retain	
250	<i>Fraxinus species</i>	Ash species	1	12		G	F	G	Public	3	Retain	
G72	Corner lot grouping: <i>Pinus stobus</i> (White Pine), <i>Picea pungens</i> (Colorado Spruce), <i>Picea abies</i> (Norway		18	10-20	6-10	G	G	G	2 Public, 16 Private	2-4	Retain	
G102	Corner lot grouping: 3 <i>Picea pungens</i> , 2 <i>Pyrus</i> (Ornamental Pear) species, 1 <i>Acer platanoides</i>		5	10-15	8	G	F	G	Private	2-4	Retain	
G103	<i>Picea pungens</i>	Colorado Spruce	8	12	6-8	G	G	F	Public	2	Retain	

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Tree Preservation / Removal Legend												
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G104	<i>Picea pungens</i>	Colorado Spruce	7	10-15	5-8	G	G	G	Public	2	Retain	
G105	<i>Picea pungens</i>	Colorado Spruce	4	10-15	6	G	G	G	Public	2	Retain	
T26	<i>Acer saccharinum</i>	Silver Maple	1	10		G	G	G	Public	2	Retain	
T27	<i>Acer saccharinum</i>	Silver Maple	1	<10		G	G	G	Public	1.5	Retain	
MAVIS ROAD - EAST SIDE - WESTERN SKIES WAY / CRAIG CARRIER COURT TO COURTNEYPARK DRIVE WEST												
111	<i>Acer platanoides</i>	Norway Maple	1	10		G	G	F	Private	2	Retain	
112	<i>Acer platanoides</i>	Norway Maple	1	15		G	G	G	Private	2	Retain	
113-120	<i>Tilia americana</i>	Basswood	8	10-15		F	G	G	Private	2	Retain	Lots of suckering, multi-stemmed
G58	<i>Malus species</i>	Crabapple	8	<10		F	F	P-F	Private	2	Retain	1 tree in grouping dead
G59	<i>Picea pungens</i>	Colorado Spruce	2	10	3	G	G	G	Private	1	Retain	
G60	Meadow grouping: 3 <i>Acer negundo</i> (Manitoba Maple), 3 <i>Acer saccharinum</i> (Silver Maple)		6	<10		P-F	F	F-G	Public	2-4	Retain	
G61	Meadow grouping: 2 <i>Acer saccharinum</i> (Silver Maple), 1 <i>Quercus macrocarpa</i> (Burr Oak)		3	<10		G	F	P-F	Public	2	Retain	
G62	Meadow grouping: <i>Picea</i> (Spruce) species, <i>Pinus strobus</i> (White Pine), <i>Acer negundo</i> (Manitoba Maple) and <i>Pyrus</i> (Ornamental Pear) species		8	<10		G	F	P-F	Public	2-3	Retain	Some trees covered in grapevine, multiple dead
G63	Meadow grouping: <i>Quercus rubra</i> (Red Oak), <i>Pinus strobus</i> (White Pine), <i>Acer negundo</i> (Manitoba Maple)		10			F	F	P-F	Public	3-4	Retain	
G64	Meadow grouping: 1 <i>Acer saccharinum</i> (Silver Maple), 1 <i>Acer negundo</i> (Manitoba Maple)		10	<10		F	P	P-F	Public	2-4	Retain	Multiple dead Ash in grouping
G65	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	6	<10		G	F	F	Public	3	Retain	Suckering, 15% dieback
G66	<i>Picea pungens</i>	Colorado Spruce	3	<10	2	G	G	G	Public	1	Retain	
G67	Corner lot grouping: 4 <i>Pyrus</i> (Ornamental Pear) species , 3 <i>Picea pungens</i> (Colorado Spruce)		7	10-15	6-8	G	F	F	Private	1-3	Retain	
T23	<i>Acer platanoides</i>	Norway Maple	1	10		G	F	F	Private	1	Retain	30% dieback

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MAVIS ROAD - WEST SIDE - WESTERN SKIES WAY / CRAIG CARRIER COURT TO COURTNEYPARK DRIVE WEST													
121-125	Acer platanoides	Norway Maple	5	12-15		G	G	G	Public	3	Retain		
126-133	Gleditsia triacanthos var. inermis	Thornless Honeylocust	8	10-15		G	G	G	Public	6	Retain		
134-139	Celtis occidentalis	Common Hackberry	6	15-20		G	G	F	Public	6	Remove 5; 1 Impacted	Refer to Tree Management Plans for specific tree impacts within grouping.	
140-144	Acer platanoides 'Columnare'	Columnar Norway Maple	5	15		G	G	G	Public	2-3	Remove	Located within limit of grading.	
G73	Corner lot grouping: 5 Picea pungens (Colorado Spruce), 4 Pyrus (Ornamental Pear) species, 1 Gleditsia triacanthos var. inermis (Thornless Honeylocust)		10	10-20	6-10	G	G	G	2 Public, 8 Private	2-4	Retain		
G74	Meadow grouping: 3 Acer saccharinum (Silver Maple), 10 Acer negundo (Manitoba Maple)		13	5-15		G	F	G	Public	1-5	Remove 5	Refer to Tree Management Plans for specific tree impacts within grouping.	
G75	Meadow grouping: 3 Pinus strobus (White Pine), 3 Picea pungens (Colorado Spruce), 4 Acer		10			F	G	G	Public	1-5	Retain		
G76	Acer negundo	Manitoba Maple	3	<10		F	P	F	Public	3	Retain	Multi-stemmed	
G77	Picea pungens	Colorado Spruce	7	15	6-8	G	G	G	Public	2	Retain		
G78	Window Street Grouping: 5 Pinus nigra (Austrian Pine), 3 Acer saccharum (Sugar Maple)		8	<10		G	G	G	Public	2-3	6 Impacted	Refer to Tree Management Plans for specific tree impacts within grouping.	
G79	Picea pungens	Colorado Spruce	6	10	6-8	G	G	G	Public	2	1 Impacted	Refer to Tree Management Plans for specific tree impacts within grouping.	
G80	Picea pungens	Colorado Spruce	6	10-15	6-8	G	F	G	Public	1-2	Remove 5; 1 Impacted	1 leader bent, >40% dieback. Refer to Tree Management Plans for specific tree impacts within grouping.	
G81	Window Street Grouping: 6 Picea pungens (Colorado Spruce), 2 Malus (Crabapple) species, 1 Pinus nigra (Austrian Pine)		9	<10		F	F	F	Public	1	Remove 8	Refer to Tree Management Plans for specific tree impacts within grouping.	
G82	Picea pungens	Colorado Spruce	7	10-15	4-6	G	F	F	Public	1	Remove	1 has co-dominant leaders. Refer to Tree Management Plans for specific tree impacts within grouping.	

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Tree Preservation / Removal Legend													
	Trees to be impacted, removed, or varied recommendations					G#: Grouping number (no tag)							
	Trees recommended to be retained and preserved					T#: Tree number (no tag)							
G83	<i>Picea pungens</i>	Colorado Spruce	3		4	F	P	P	Public	1	Remove	2 trees in grouping dead, 1 undersized. Located within limit of grading.	
G84	Corner lot grouping: 2 <i>Tilia americana</i> 'Fastigiata' (Columnar Basswood), 1 <i>Juniperus</i> (Juniper)		3	<10		F	F	F	Private	1-2	Retain		
T24	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	1	<10		G	G	G	Public	3	Remove	Located within limit of grading.	
T25	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust	1	<10		G	G	P-G	Public	3	Remove	Grading within 1.5m of trunk.	

Appendix A

Tree Management Plans



MMM GROUP

Landscape Architecture
582 Lancaster Street West
Kitchener, ON N2K 1M3
t. 519-743-6625
f. 519-743-8778
www.mmm.ca

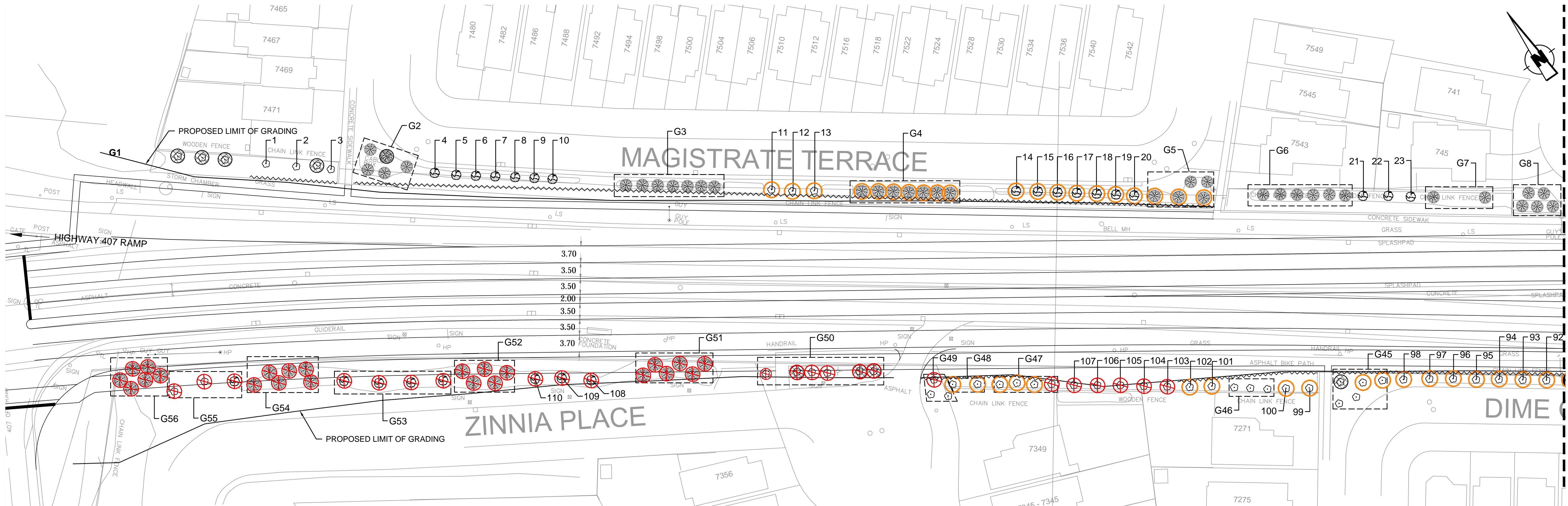
PROJECT TITLE:

Mavis Road Class EA

DRAWING TITLE:

KEY PLAN

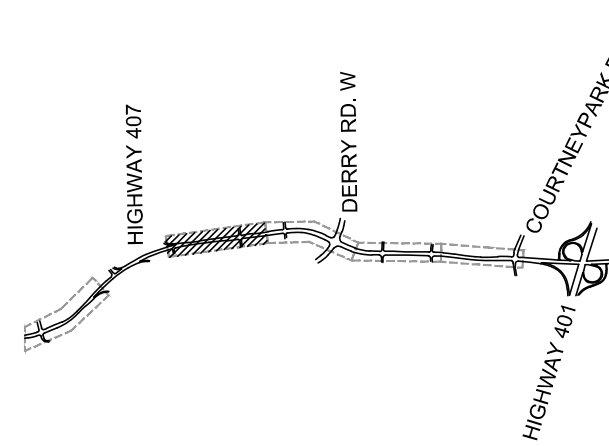
DESIGNED	ST	DRAWN	NM	CHECKED	ST
SCALE 1:7500			DATE JUNE 2016		
PROJECT NUMBER			DWG. NUMBER		
3215102-000			T-1		



1 TREE MANAGEMENT PLAN ENLARGEMENT
T-3

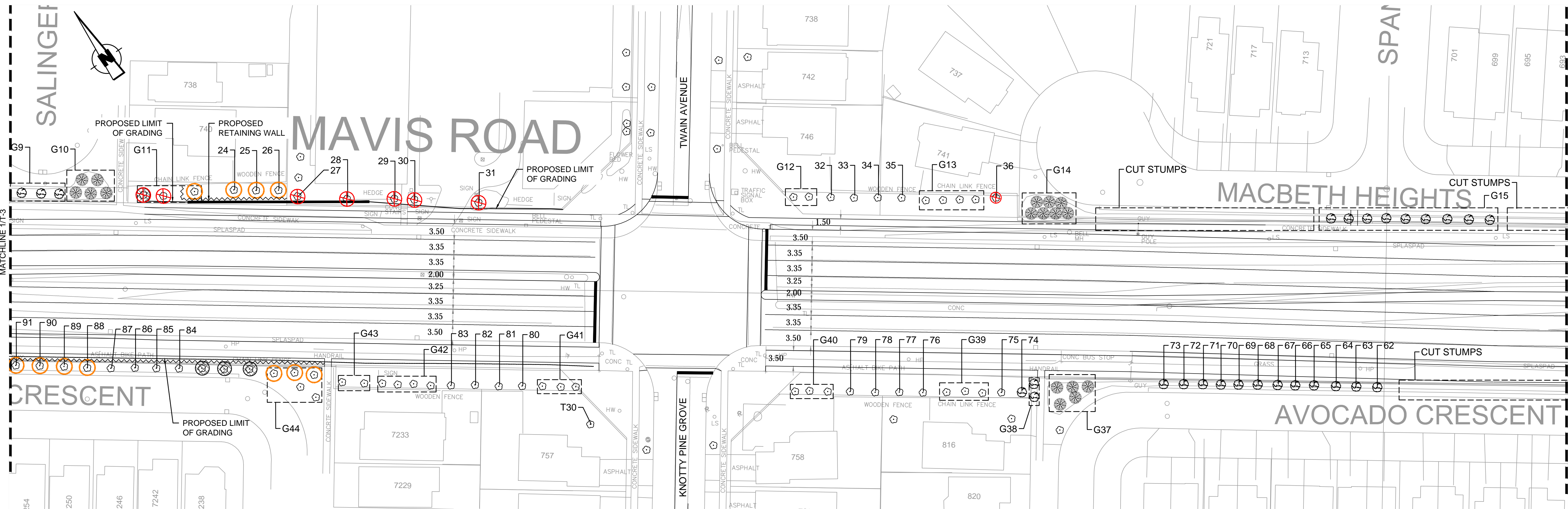
Scale: 1:500

KEY MAP



LEGEND

- EXISTING SURVEYED TREES
- EXISTING TREES - NOT SURVEYED
- DEAD TREE
- EXISTING TREE GROUPING
- KEY FOR EXISTING TAGGED TREES
- KEY FOR EXISTING TREES - NOT TAGGED
- TREE TO BE IMPACTED - GRADING WITHIN DRIPLINE
- TREE TO BE REMOVED - GRADING WITHIN 1.5M OF TRUNK
- TREE PROTECTION FENCING PER STANDARD CITY DETAIL (D1/T-8) OR SILT FABRIC ATTACHED TO EXISTING CHAIN LINK FENCING IN APPROPRIATE AREAS (REFER TO ARBORIST REPORT).



2 TREE MANAGEMENT PLAN ENLARGEMENT
T-3

Scale: 1:500



CLIENT: City of Mississauga
300 City Centre Drive, Mississauga, ON, L5B 3C1

PROJECT TITLE: Mavis Road Class EA

SITE ADDRESS: Mavis Road
Steeles Ave. W to Courtneypark Dr. W

DRAWING TITLE: TREE MANAGEMENT PLAN

STAMP	STAMP
Sarah Taslimi ISA Certified Arborist ON-1883A	
DESIGNED ST	DRAWN NM
SCALE 1:500	CHECKED ST
PROJECT NUMBER 3215102-000	DATE JUNE 2016
	DWG. NUMBER T-3

ESTABLISHMENT OF TREE PROTECTION ZONE (TPZ):

- TREE PROTECTION ZONE:

WORK WITHIN A TREE PROTECTION ZONE:

DETERMINATION OF THE ORDER OF THE POLYNOMIAL


GENERAL RECOMMENDATIONS:

- ROOT PRUNING:

- 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.

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.

- FERTILIZING: TRANSPLANTED TREES WITH A SLOW RELEASE FERTILIZER EG: BONE MEAL OR AN APPROVED EQUAL. APPLY PER MANUFACTURER'S RECOMMENDATIONS.

 Landscape Architecture
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f. 519-743-8778
www.mmm.ca

PROJECT TITLE:

Mavis Road Class EA

SITE ADDRESS:

Mavis Road
Steeles Ave. W to Courtenypark Dr. W

DRAWING TITLE:

TREE PROTECTION NOTES

STAMP		STAMP	
_____ Sarah Taslimi ISA Certified Arborist ON-1883A			
DESIGNED	ST	DRAWN	
		NM	CHECKED
SCALE		DATE	ST
PROJECT NUMBER		JUNE 2016	
3215102-000		DWG. NUMBER	
		T-8	



 **MMM GROUP**

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582 Lancaster Street West
Kitchener, ON N2K 1M3
t. 519-743-6625
f. 519-743-8778
www.mmm.ca

PROJECT TITLE:

Mavis Road Class EA

DRAWING TITLE:

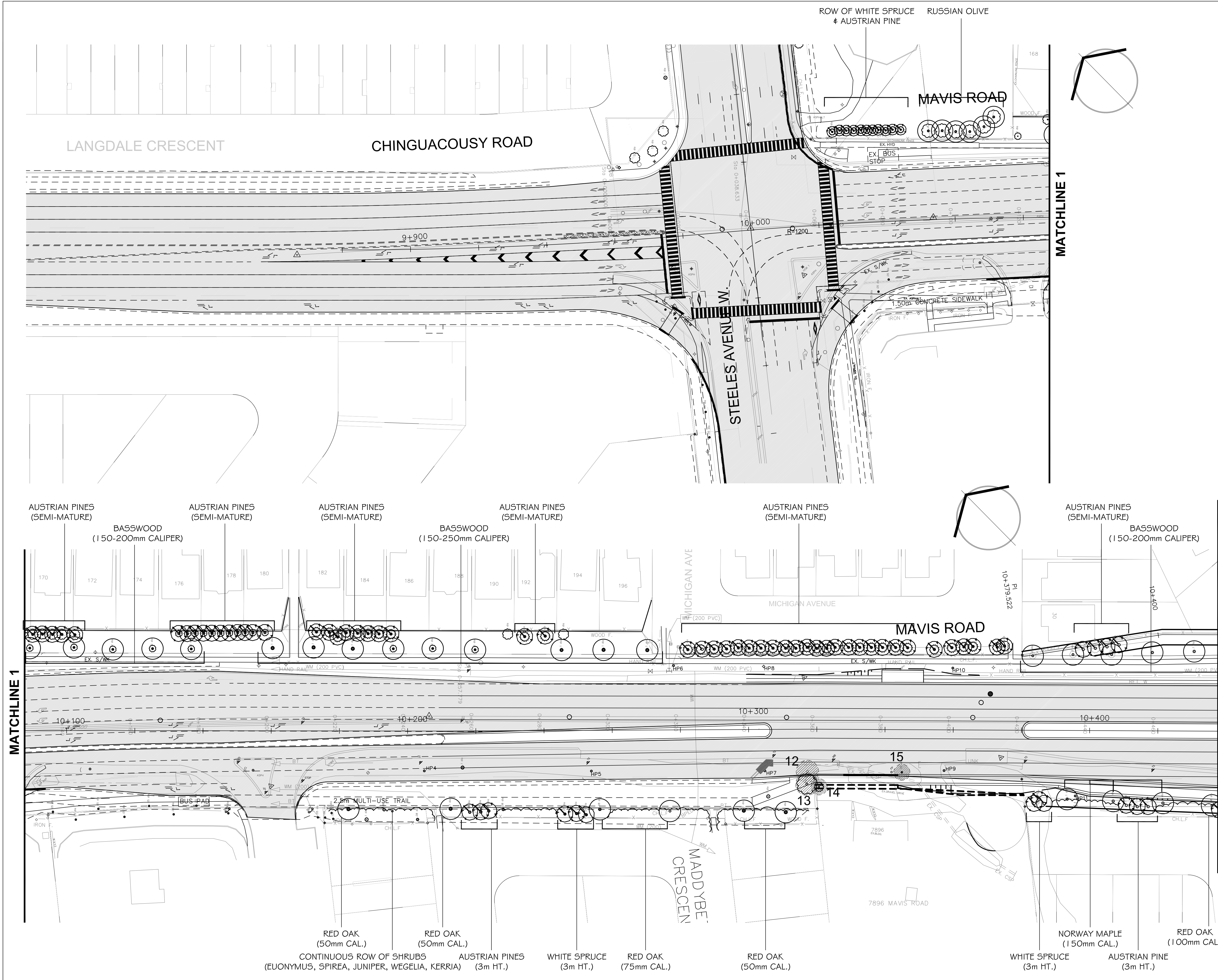
DETAILS

DESIGNED	ST	DRAWN	NM	CHECKED	ST
SCALE		N.T.S.	DATE	JUNE 2016	
PROJECT NUMBER			DWG. NUMBER		
3215102-000			T-9		

Appendix B

Existing Tree Survey – Mavis Road (from Steeles Ave. W to Highway 407)

Region of Peel, 2014



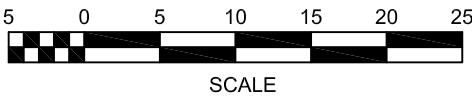
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SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		
REVISIONS					
DATE	DETAILS				INIT.
2014/04/07	ISSUED FOR TENDER				J.S.M.

Mavis Road Reconstruction - Trees To be removed*			
Code	Description	Size	Condition
12	Basswood (<i>tilia americana</i>)	multi stem (100-200mm)	fair
13	Manitoba Maple (<i>acer negundo</i>)	700mm	fair
14	Red Cedar (<i>juniperus virginiana</i>)	200mm	fair
15	Mountain Ash (<i>sorbus sp.</i>)	50mm	fair
16	Red Oak (<i>quercus rubra</i>)	100mm	good
17	Red Oak (<i>quercus rubra</i>)	100mm	good
18	Pyramidal English Oak (<i>quercus robur</i>)	200mm	fair
19	Pyramidal English Oak (<i>quercus robur</i>)	225mm	fair
20	Pyramidal English Oak (<i>quercus robur</i>)	175mm	fair
21	Pyramidal English Oak (<i>quercus robur</i>)	200mm	fair
22	Pyramidal English Oak (<i>quercus robur</i>)	225mm	fair
23	Austrian Pine (<i>pinus nigra</i>)	200mm	good
24	Austrian Pine (<i>pinus nigra</i>)	200mm	good
25	Austrian Pine (<i>pinus nigra</i>)	200mm	good
26	Austrian Pine (<i>pinus nigra</i>)	150mm	good
27	White Pine (<i>pinus strobus</i>)	650mm	fair

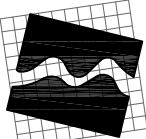
Note: It is estimated that these trees will require removal due to construction activities. The trees located immediately adjacent to direct construction activities are to be evaluated on site to determine if adjustments to local grades or excavation activities, could be adjusted to minimize impact on trees.

LEGEND

- EXISTING DECIDUOUS TREES (TO REMAIN)
- EXISTING CONIFEROUS TREES (TO REMAIN)
- EXISTING TREES TO BE REMOVED (SEE TABLE)
- SHRUB BED (TO REMAIN)



MATCHLINE 2



JAMES McWILLIAM
LANDSCAPE ARCHITECT

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IBI Group
30 International Boulevard
Toronto ON M9W 5P3 Canada



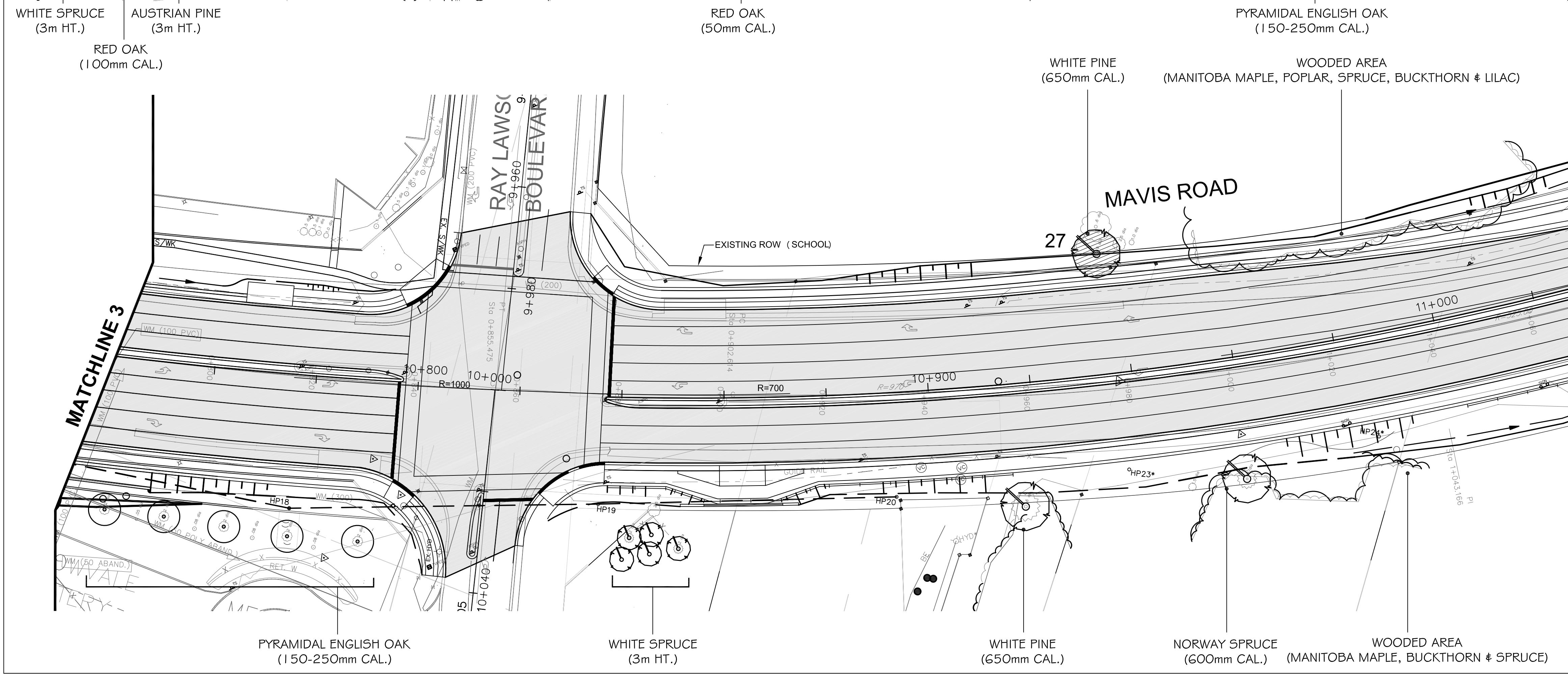
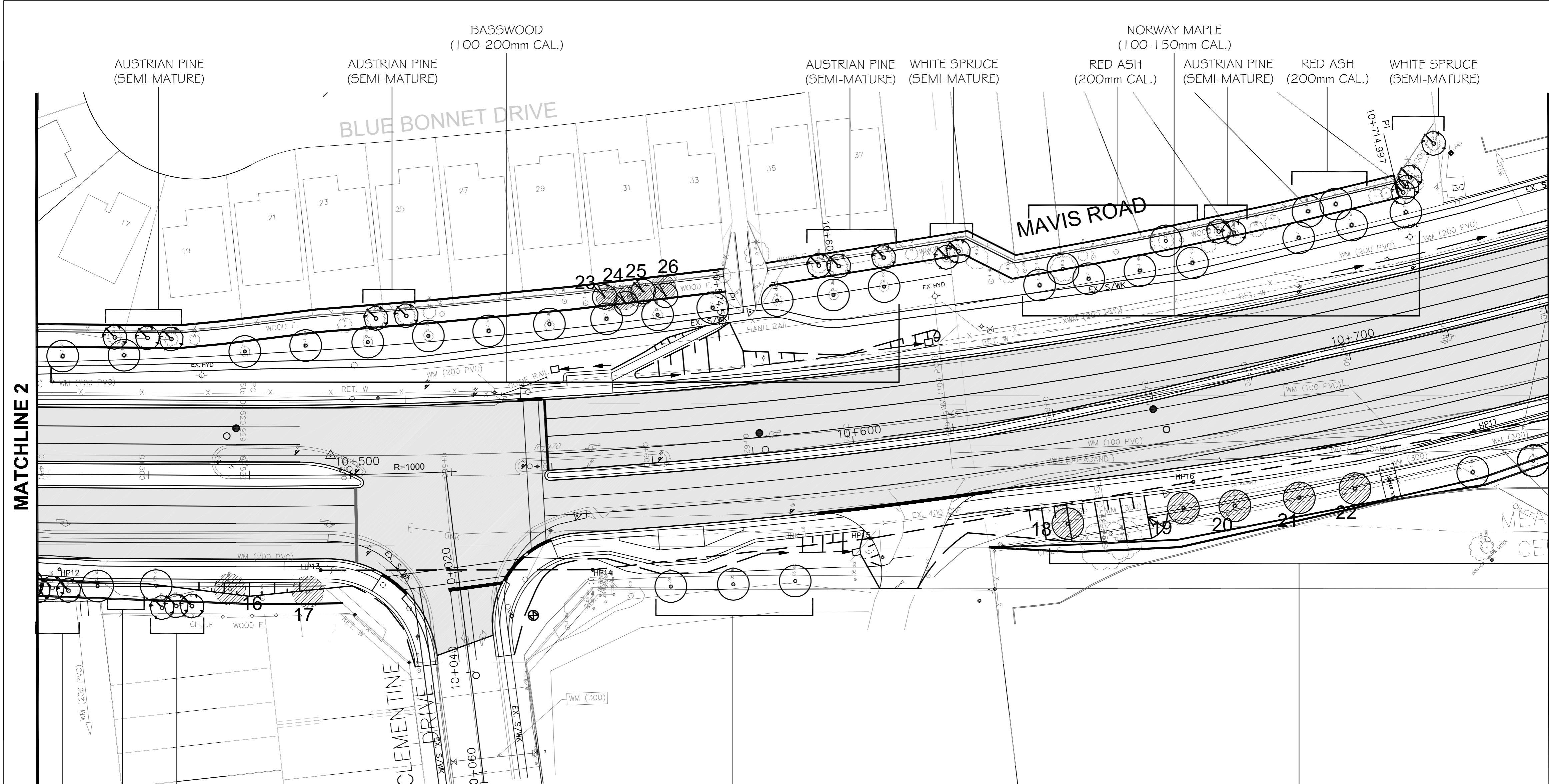
Designed by Chkd.

Approved by

Region of Peel
Working for you

MAVIS ROAD
(FROM STEELES AVE. WEST TO HWY 407)
EXISTING TREE SURVEY

Cad Area	B-73 / 74	Area	B-6 / B-7	Project No.	09-4060
Checked by	J.S.M.	Drawn by	T.F.G.		
Date	APRIL 2013	Sheet	28	Plan No.	50181-D



SERVICE DATA					
SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		
REVISIONS					
DATE	DETAILS				INIT.
2014/04/07	ISSUED FOR TENDER				J.S.M.

LEGEND

- EXISTING DECIDUOUS TREES (TO REMAIN)
- EXISTING CONIFEROUS TREES (TO REMAIN)
- EXISTING TREES TO BE REMOVED (SEE TABLE)
- SHRUB BED (TO REMAIN)

SCALE

JAMES McWILLIAM
LANDSCAPE ARCHITECT

Phone: 905-937-8666, Fax: 905-938-9959

IBI Group
30 International Boulevard
Toronto ON M9W 5P3 Canada

Designed by _____ Chkd. _____
Approved by _____

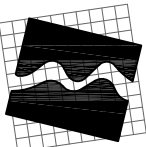
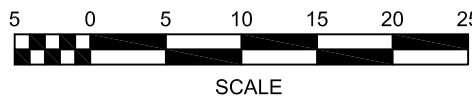
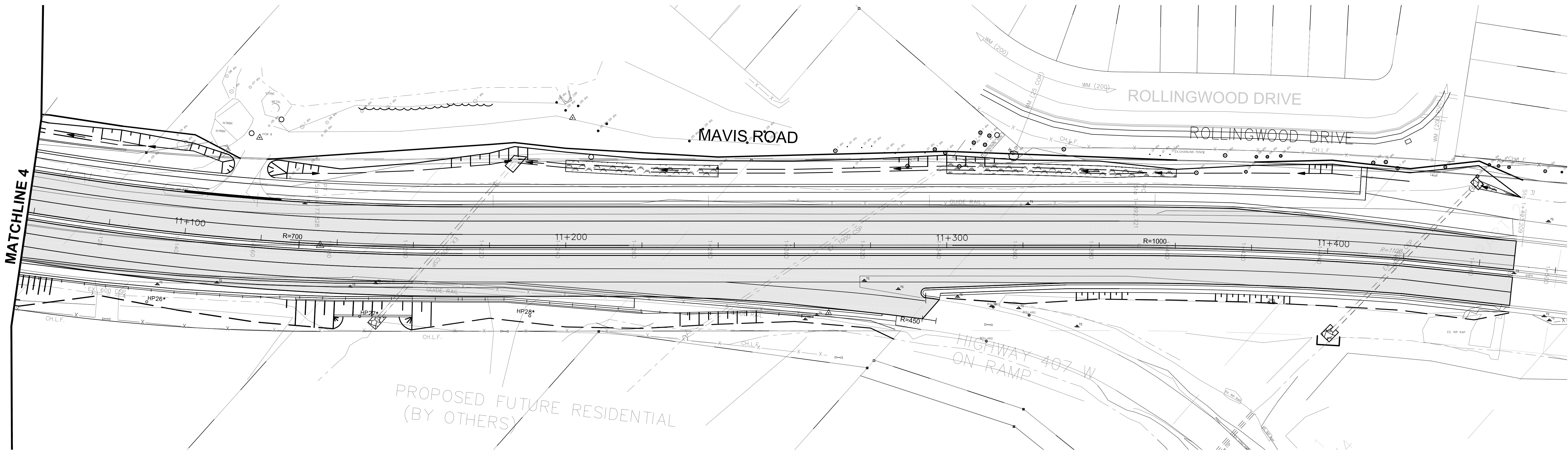
Region of Peel
Working for you

MAVIS ROAD
(FROM STEELES AVE. WEST TO HWY 407)

EXISTING TREE SURVEY

Cad Area	B-73 / 74	Area	B-6 / B-7	Project No.	09-4060
Checked by	J.S.M.	Drawn by	T.F.G.		
Date	APRIL 2013	Sheet	29	Plan No.	50182-D

SERVICE DATA					
SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		
REVISIONS					
DATE	DETAILS				INIT.
2014/04/07	ISSUED FOR TENDER				J.S.M.

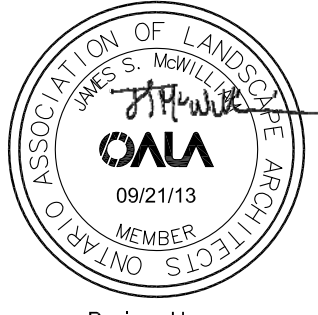


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Toronto ON M9W 5P3 Canada



Designed by

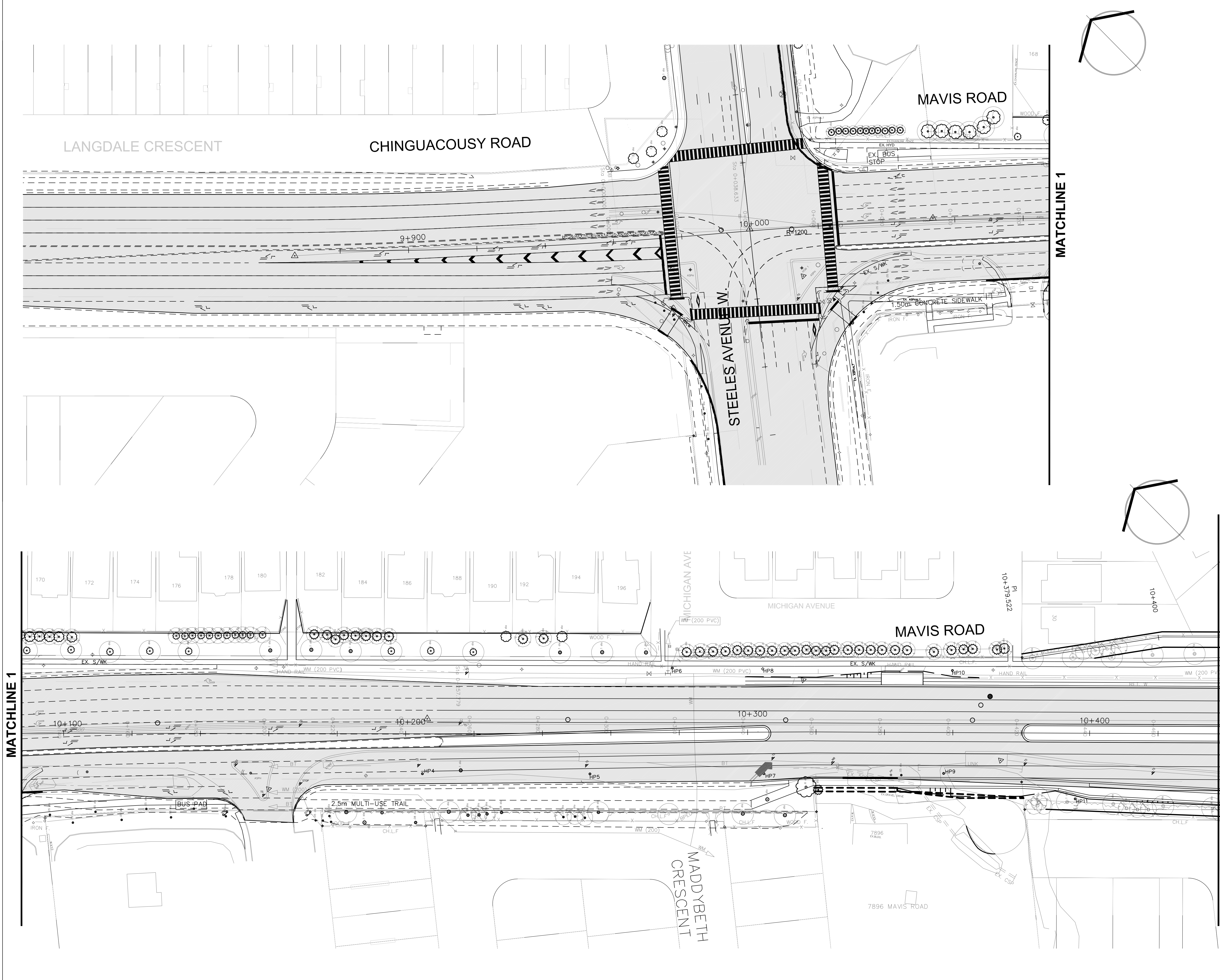
Chkd.

Approved by

Region of Peel
Working for you

MAVIS ROAD
(FROM STEELES AVE. WEST TO HWY 407)
EXISTING TREE SURVEY

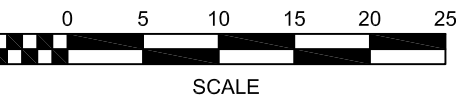
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Checked by	J.S.M.	Drawn by	T.F.G.		
Date	APRIL 2013	Sheet	30	Plan No.	50183-D



SERVICE DATA					
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SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		
REVISIONS					
DATE	DETAILS				INIT.
2014/04/07	ISSUED FOR TENDER				J.S.M.

NO PLANTING ON
THIS SHEET

- LEGEND
- PROPOSED TREES
 - EXISTING TREES
 - SHRUBS



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IBI Group
30 International Boulevard
Toronto ON M9W 5P3 Canada



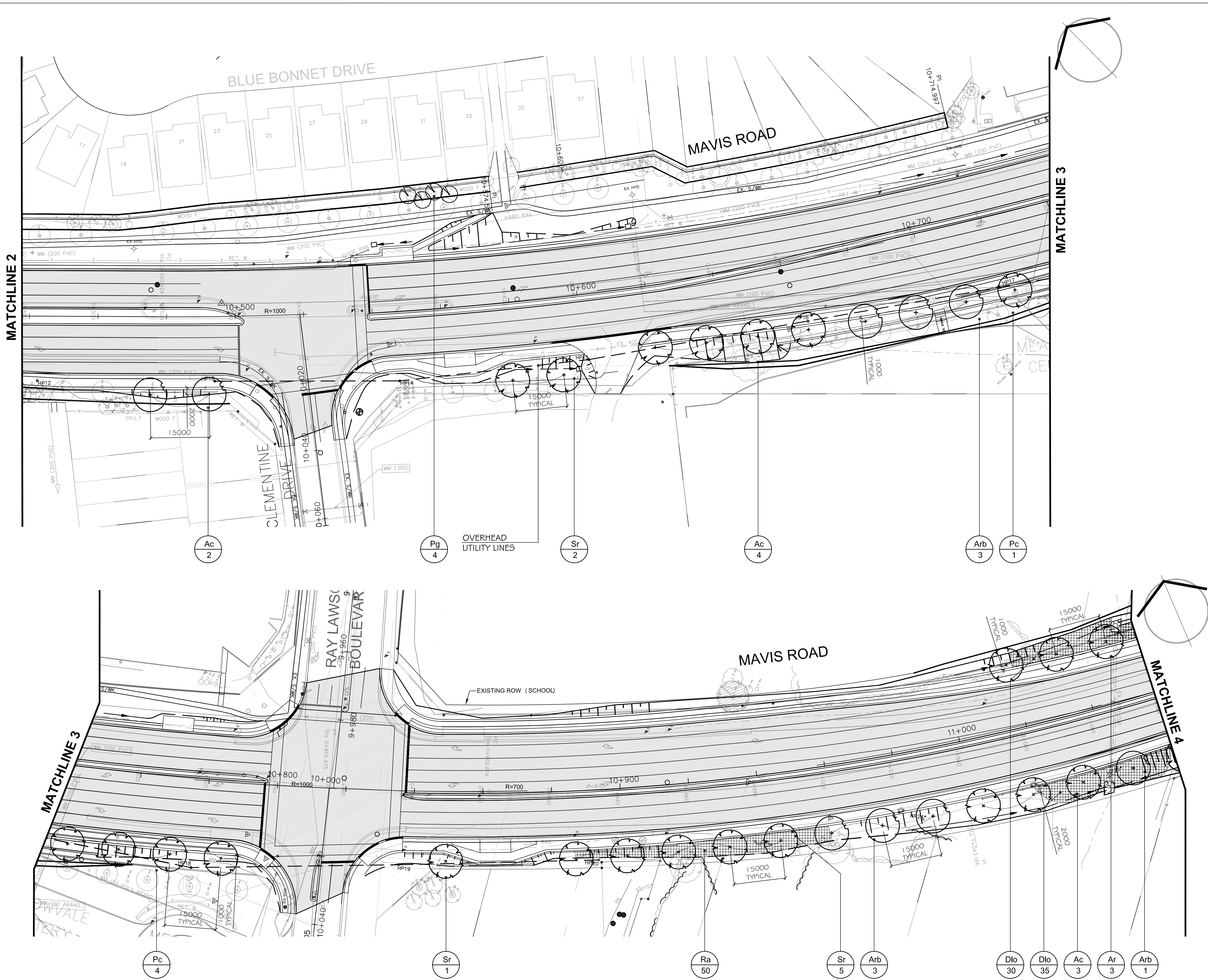
Designed by Chkd.

Approved by

Region of Peel
Working for you

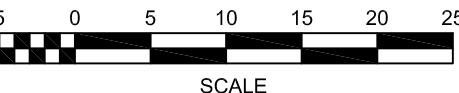
MAVIS ROAD
(FROM STEELES AVE. WEST TO HWY 407)
LANDSCAPE PLANTING PLAN

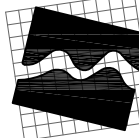
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Checked by	J.S.M.	Drawn by	T.F.G.	Plan No.	50184-D
Date	APRIL 2013	Sheet	31		



SERVICE DATA					
SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		
REVISIONS					
DATE	DETAILS				INIT.
2014/04/07	ISSUED FOR TENDER				J.S.M.


- LEGEND
- PROPOSED TREES
 - EXISTING TREES
 - SHRUBS






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LANDSCAPE ARCHITECT

Phone: 905-937-8666, Fax: 905-938-9959




IBI Group
30 International Boulevard
Toronto ON M9W 5P3 Canada



Designed by _____
Chkd. _____

Approved by _____



Region of Peel
Working for you

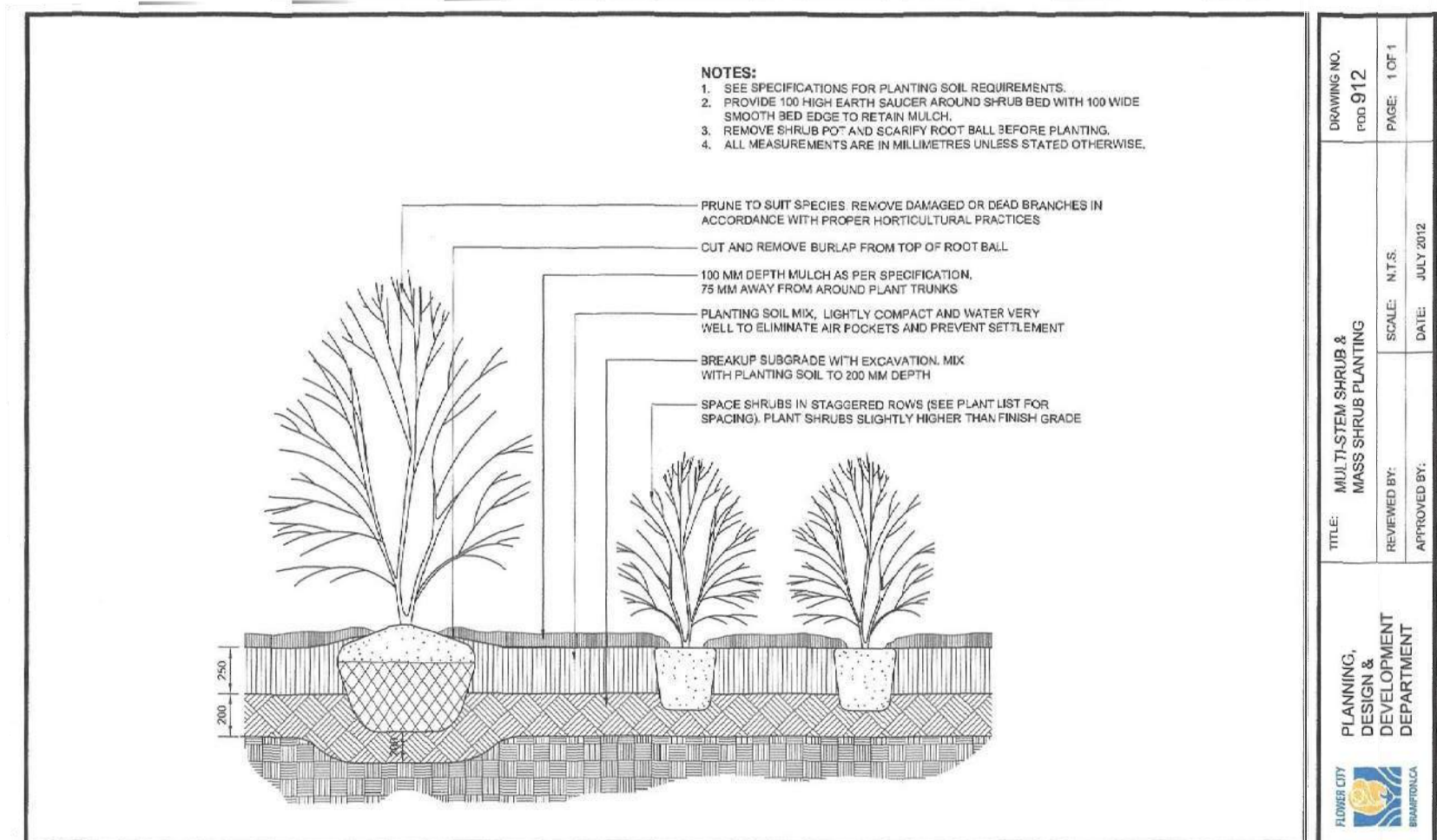
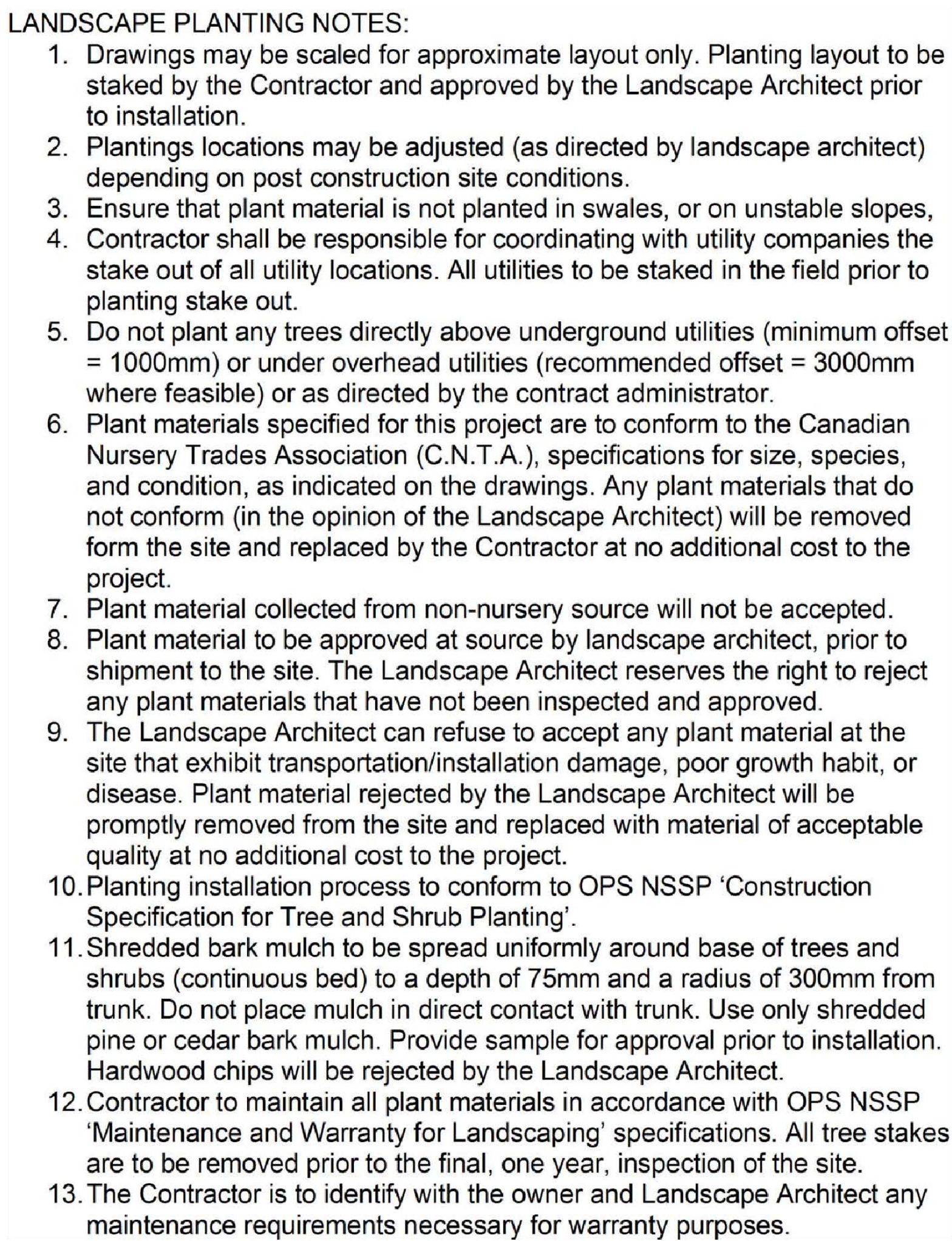
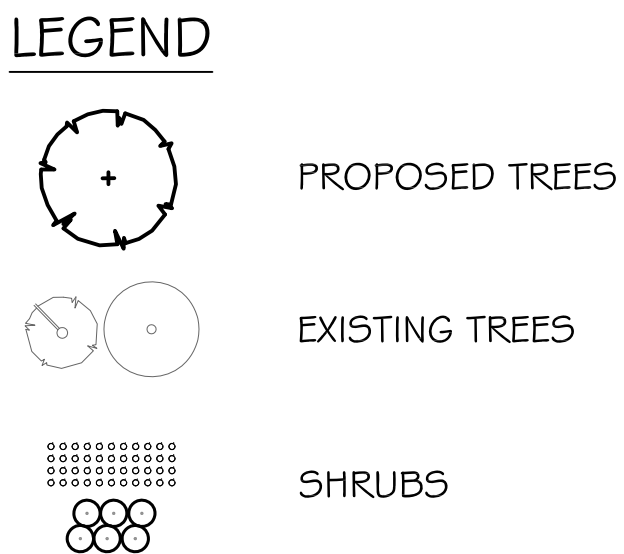
MAVIS ROAD
(FROM STEELES AVE. WEST TO HWY 407)

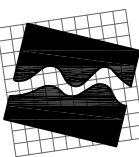



LANDSCAPE PLANTING PLAN

Cad Area	B-73 / 74	Area	B-6 / B-7	Project No.	09-4060
Checked by	J.S.M.	Drawn by	T.F.G.	Plan No.	50185-D
Date	APRIL 2013	Sheet	32		

SERVICE DATA			
SERVICE	DATE	INIT.	
SAN SEWERS			GAS MAINS
STORM SEWERS			BELL U/G CABLE
WATERMAINS			HYDRO U/G CABLE
TRANSIT			HYDRO ONE
PARKS & REC.			CTV
ONT. CLEAN WATER			COMMUNIC. CABLES

REVISIONS		
DATE	DETAILS	INIT.
2014/04/07	ISSUED FOR TENDER	J.S.M.



		JAMES McWILLIAM LANDSCAPE ARCHITECT	
Phone: 905-937-8666, Fax: 905-938-9959			
		IBI Group 30 International Boulevard Toronto ON M9W 5P3 Canada	
		Approved by _____ _____	
Designed by _____		Chkd. _____	
 Region of Peel <i>Working for you</i>			
MAVIS ROAD (FROM STEELES AVE. WEST TO HWY 407) LANDSCAPE PLANTING PLAN AND DETAILS			
Cad Area B-73 / 74	Area B-6 / B-7	Project No. 09-4060	
Checked by J.S.M.	Drawn by T.F.G.		
Date APRIL 2013	Sheet 33	Plan No. 50186-D	



- LEGEND**
- EXISTING TREE TO REMAIN
 - EXISTING TREE OR GROUP OF TREES IMPACTED BY GRADING
 - EXISTING TREE OR GROUP OF TREES REMOVED DUE TO GRADING
 - EXISTING DEAD TREE / STUMP

TOTAL TREE IMPACTS		NEW & REPLACEMENT TREES	
65	EXISTING TREES IMPACTED BY GRADING	188	PROPOSED TREES TO REPLACE EXISTING DEAD TREES / STUMPS AND TREES TO BE REMOVED
139	EXISTING TREES REMOVED DUE TO GRADING	280	ADDITIONAL TREES PROPOSED
49	DEAD TREES (EXISTING)	468	TOTAL TREES PROPOSED (REFER TO LANDSCAPE PLAN)

