

- LEGEND:**
- EXISTING TREE
ID NUMBER / OUTER CIRCLE DENOTES APPROX. POTENTIAL ROOTING AREA (PRA); INNER CIRCLE DENOTES MINIMUM TREE PROTECTION ZONE (MTPZ).
 - PRESERVE TREE
TREE HAS MODERATE TO HIGH BIOLOGICAL HEALTH AND/OR STRUCTURAL CONDITION AND CAN BE INCORPORATED INTO THE PROPOSED DEVELOPMENT.
 - DISCRETIONARY PRESERVATION
TREE HAS LOW BIOLOGICAL HEALTH AND/OR STRUCTURAL CONDITION BUT IS NOT ON SUBJECT PROPERTY. REMOVAL IS AT THE DISCRETION OF THE OWNER.
 - REMOVE TREE
TREE IS IN CONFLICT WITH PROPOSED DEVELOPMENT.
 - LIMIT OF WORK
 - TREE PROTECTION FENCE
 - ROOT SENSITIVE EXCAVATION
REFER TO NOTES ON THIS DRAWING

TREE OWNER CONSENT IS REQUIRED FOR INJURY OR REMOVAL OF OFFSITE OR SHARED TREES. REFER TO TREE TABLE ON TP2.

GRADING AND SERVICING SHOWN ON THIS PLAN FOR COORDINATION ONLY. DO NOT USE THIS PLAN FOR CONSTRUCTION OF GRADING AND SERVICING ITEMS.

No.	Description	By	Date
5	SUBMITTED FOR OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT	MGN	12 DEC-23
4	ISSUED FOR COORDINATION	MGN	04 DEC-23
3	RE-SUBMITTED FOR OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT	JD	26 APR-23
2	SUBMITTED FOR OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT	JD	15 MAR-23
1	SUBMITTED FOR INTERNAL REVIEW	JD	17 FEB-22
0	SUBMITTED FOR INTERNAL REVIEW	JD	27 JAN-22

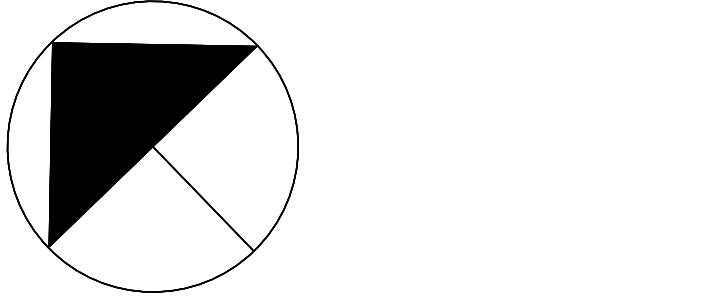
REVISIONS: All previous issues of this drawing are superseded.

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TREE PRESERVATION PLAN

Project:
RESIDENTIAL DEVELOPMENT
 1166-1204 GORDON STREET, GUELPH
 GSD DEVELOPMENT & MANAGEMENT INC.

Date: MARCH 2022 Designer: DB/EE
 Project: AA21-205A Drawn: JGL/EE
 Scale: 1:250 Checked: JD



Drawing No: **TP1**

GENERAL TREE NOTES

- Base information sources:
 - Site Plan prepared by Broadview Architect Inc. Engineering dated April 19, 2023.
 - Site Grading and Servicing Plans prepared by GM BluePlan Engineering Ltd. received April 14, 2023.
 - Tree inventory conducted by an Aboud & Associates Inc. ISA Certified Arborist November 15 & 16, 2021.
- All arboricultural work performed on trees such as pruning of branches and roots shall be conducted by an ISA Certified Arborist.
- Prune and mitigate limbs and roots damaged by construction work in accordance with ANSI A300 (Part 1) - 2008 Pruning and the Best Management Practices companion publication (revised 2008).
- Tree Protection Fence to be erected prior to the commencement of any construction or grading, and maintained throughout the duration of the work.
- Tree Protection Zone is delimited by Tree Protection Fence shown on the drawings.
- No construction or activities including the following to occur within Tree Protection Zone: equipment parking or access, storage of supplies, topsoil or fill, and refueling.
- Tree removals (if required) will be undertaken in compliance with the Migratory Birds Convention Act. Efforts will be made to remove vegetation outside the General Nesting period (April 1 - Aug 31) for regions C1 and C2 of Ontario. In the event vegetation must be removed within the General Nesting Period, a qualified avian biologist is to review the site prior to removal to ensure compliance with the Migratory Birds Convention Act.
- Any soils and vegetation within tree protection zone damaged by the Contractor shall be restored to the satisfaction of the Municipality by the Contractor at no additional cost to the Owner.

- CONSTRUCTION WITHIN MINIMUM TREE PROTECTION ZONE**
- An ISA Certified Arborist must be present on site during construction activities within MTPZ to confirm and/or modify mitigation measures for trees to be preserved.
 - Use trenchless methods (e.g. horizontal directional drilling) to install underground services (e.g. sanitary sewers and water lines) within Minimum Tree Protection Zones.

- EXISTING UNDERGROUND SERVICES WITHIN TREE PROTECTION ZONES**
- Existing sanitary/storm sewers and waterlines to be discontinued within tree protection zones will be filled (as needed) and abandoned.
 - Excavation and access for construction/removal of abandoned underground services will be conducted outside of tree protection zones.

- FINISH GRADING WITHIN TREE PROTECTION ZONES**
- Where finish grading of cuts and fills, and including swales occurs within tree protection zones, the following steps are required.

GENERAL TREE PROTECTION NOTES

Grade Cut:

- Excavate by hand or Air-spade technology to a maximum depth of 100mm.
- Roots encountered are to be assessed by the Project Arborist to determine the extent of roots to be pruned. Based on findings, other treatments may be required (e.g. crown reduction, tree removal), and which may require approval from the City.
- Based on root findings, local, minor adjustments to grading within the tree protection zone may be required based on field consultation between the Project Arborist and Project Engineer.
- No access by heavy equipment into tree protection zone is permitted. Fine grading to be carried out using light equipment and/or by hand.

Grade Fill:

- Add topsoil to meet grade requirements to a maximum of 150mm.
- No topsoil to be added onto trunk base or above-ground section of trunk base flare.
- Maintain positive drainage away from trunk base.
- Based on local conditions (e.g. surface drainage), local, minor adjustments to grading within the tree protection zone may be required based on field consultation between the Project Arborist and Project Engineer.

TREES OWNED BY OTHERS

- Trees owned by others require permission (i.e. written consent) from the land owner(s) prior to activities that may damage or destroy trees. Trees owned by others are:
 - Offsite Trees - Trees on property adjacent to the subject property;
 - Shared (Boundary) Trees - Trees whose trunk including the basal trunk flare growing on the boundary between the subject property and adjoining property (from Ontario Forestry Act).

The Provincial Forestry Act, R.S.O. 1990 (Section 10):

- Every tree whose trunk is growing on the boundary between adjoining lands is the common property of the owners of the adjoining lands. 1990, c. 18 Sched. I, s. 21.
 - Every person who injures or destroys a tree growing on the boundary between adjoining lands without the consent of the land owners is guilty of an offence under this Act. 1998, c. 18, Sched. I, s. 21.

ROOT SENSITIVE EXCAVATION

A preliminary excavation at the limit of work is recommended to determine the potential magnitude of the impacts posed by the planned work. For excavation in turf or permeable surfaces, the final excavation limit should be marked in the field and arborist supervised excavation shall be performed using air-spade, dry-vac truck, hydro-vac truck or hand tools. For excavation of existing impermeable surfaces, the impermeable top layer may be broken up by machine to allow access to the permeable base layers. The permeable base layers may need to be excavated further to expose existing roots,

in which case this excavation shall be performed using air-spade, dry-vac truck, hydro-vac truck or hand tools. All root sensitive excavation must be performed under the supervision of a qualified arborist. All roots exposed must be documented by the supervising arborist. Every effort should be made to preserve as many exposed roots as possible. Roots approved for pruning should be cleanly cut with a sharp, non-vibrating tool such as a hand saw, secateurs, chainsaw at face of trench such that no further disturbance of the roots are to be expected once mechanical excavation begins. All root pruning is to be performed by the arborist only, as per guidelines below.

- When root sensitive excavation is performed in regards to the installation of a deep site feature such as a foundation, roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the Tree Protection Zone (TPZ) of bylaw trees they should be preserved.
- When root sensitive excavation is performed in regards to the installation of site features such as post holes, all roots exposed of under 5cm diameter may be cleanly cut at face of hole such that no further disturbance of the roots are to be expected once mechanical excavation begins for the lower portion of the holes (below hand dug area). If roots of 5cm diameter or greater are uncovered they should be preserved, the post holes filled in with viable soil and the hole moved at least 0.5 metre away to avoid significant roots.
- When root sensitive excavation is performed in regards to the installation of site features such as driveways, walkways, curbs, etc. roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the TPZ of bylaw trees they should be preserved.
- When root sensitive excavation is performed in regards to the installation of utilities such as water lines or sewers, every effort should be made to preserve as many exposed roots as possible by installing the utilities underneath the roots without root pruning. If roots of 5cm diameter or greater are uncovered they should be preserved.

1. Perform following maintenance operations within the remaining potential rooting area (PRA) of injured trees from substantial completion to end of warranty period two (2) years following substantial performance of the work.

- Water to maintain soil moisture conditions for optimum establishment, growth and health of plant material without causing erosion. In a typical loam soil, optimum soil moisture in planting beds at root depth is 65% of field capacity. Guidelines during a typical growing season are as follows:
 - Deep root or surface water PRA a minimum of every ten (10) days between May 15 and September 15.
 - Deep root or surface water PRA a minimum of every twenty-one (21) days between September 15 and freeze up.
- Soil moisture to be monitored throughout the growing season:
 - Watering schedule to be increased when plant materials are reaching the permanent wilting point.
 - Watering schedule to be reduced when a sufficient volume of rainfall has penetrated the soil fully as required.
- If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Consultant prior to application. Remove dead or broken branches from plant material using clean sharp horticultural tools using current arboricultural practices, as directed by the Consulting Arborist.
- Submit monthly written reports in during the growing season (April - September) to Consultant identifying:
 - Maintenance work carried out.
 - Watering method, quantity of water used, water source.
 - General development and condition of plant material.
 - Preventative or corrective measures required which are outside Contractor's responsibility.

POST CONSTRUCTION MAINTENANCE NOTES

