

APPROVED  
By Lily Xu at 12:03 pm, May 22, 2024

*Lily Xu*  
LILY XU, MCIIP, RPP  
MANAGER, DEVELOPMENT REVIEW SOUTH  
PLANNING, DEVELOPMENT, AND BUILDING SERVICES  
DEPARTMENT, CITY OF OTTAWA

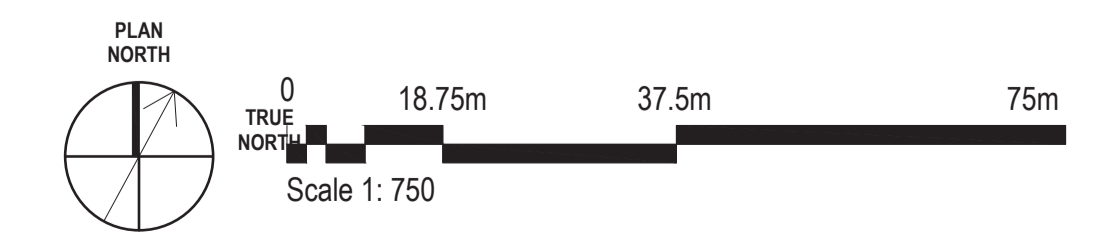
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- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE SALVAGED RE: NOTES
- ✕ EXISTING TREE TO BE REMOVED
- ⊞ EXISTING SHRUB HEDGE TO BE REMOVED
- TREE PROTECTION FENCE
- - - LIMIT OF WORK
- - - FACILITY LEASE BOUNDARY
- - - EXPECTED EXTENT OF ADVANCED WORKS EXCAVATION

TREE TOTALS - ADVANCED WORKS	
EXISTING TREES	1275
TREES TO BE REMOVED	197
TREES TO REMAIN	1078
OFF-SITE (AFC) TREE TO BE REMOVED	14

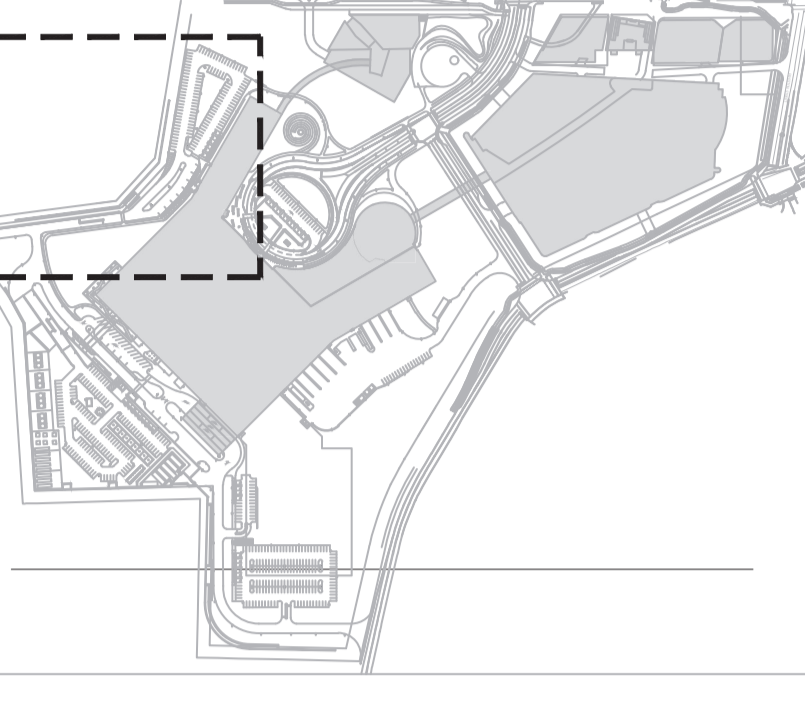
- GENERAL NOTES:
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  - UTILITIES SHOWN FOR GENERAL REFERENCE, REFER TO CIVIL SHEETS FOR CIVIL WORK
  - CONTRACTOR SHALL VERIFY ALL TREES SHOWN FOR REMOVAL ADJACENT TO LIMITS OF ADVANCED WORKS EXCAVATION PRIOR TO DEMOLITION.
  - TREE PROTECTION FENCING SHALL BE INSTALLED AND CHECKED BY A QUALIFIED ARBORIST PRIOR TO ANY SITE DISTURBANCE OR EXCAVATION. FOR MORE TREE PROTECTION DETAILS INFORMATION RE: SHEET L-2.2.2.107
  - IF EXCAVATION WILL ENROACH 30% OR MORE OF THE CRITICAL ROOT ZONE (CRZ) FOR TREES IDENTIFIED TO REMAIN, AN EVALUATION BY A QUALIFIED ARBORIST SHALL BE PERFORMED ON WHETHER THE TREE IS TO BE REMOVED OR IF ROOT PRUNING CAN BE PERFORMED TO KEEP TREE IN GOOD HEALTH.
  - ALL TREE REMOVALS SHALL BE PERFORMED BY A QUALIFIED ARBORIST.

- COORDINATION WITH AUTHORITIES PRIOR TO TREE REMOVALS
- CONTRACTOR TO MARK IN THE FIELD THE LIMIT OF WORK/AREAS OF DISTURBANCE.
  - CONTRACTOR TO RETAIN A CERTIFIED ARBORIST OR REGISTERED PROFESSIONAL FORESTER TO IDENTIFY AND MARK ALL TREES INTENDED TO BE REMOVED AND INSTALL TREE PROTECTION FENCING AS IDENTIFIED IN THE TREE REMOVALS AND PROTECTION PLAN FOR INSPECTION AND APPROVAL BY THE CONTRACTING AUTHORITY AND APPROVAL AUTHORITIES.
  - CONTRACTOR WILL MAKE ANY AND ALL ADJUSTMENTS TO THE TREE PROTECTION FENCING AS INSTRUCTED BY THE CONTRACTING AUTHORITY AND APPROVAL AUTHORITY. DEPENDING ON THE SCOPE OF ADJUSTMENTS, A SECOND INSPECTION BY THE CONTRACTING AUTHORITY AND/OR APPROVAL AUTHORITY MAY BE REQUIRED AT THE DISCRETION OF THE CONTRACTING/APPROVAL AGENCIES.
  - CONTRACTOR TO INSTALL BILINGUAL SIGNAGE ON TREE PROTECTION FENCING TO PROVIDE AWARENESS TO CONTRACTORS AS TO THE PURPOSE OF THE FENCING AS INSTRUCTED BY THE APPROVAL AGENCIES.

- TREE SALVAGING NOTES:
- TREES IDENTIFIED FOR SALVAGE ON THIS PLAN WERE SELECTED BASED ON THEIR DIAMETER AT BREAST HEIGHT (DBH) AND HEALTH CONDITION AT THE TIME OF THE TREE SURVEY. CONTRACTOR SHALL ENGAGE A CERTIFIED ARBORIST AND REGISTERED PROFESSIONAL FORESTER TO REVIEW THESE TREES ON-SITE TO CONFIRM THEIR SUITABILITY FOR THE INTENDED USE DEFINED IN NOTES #2 AND 3 BELOW.
  - TREES IDENTIFIED FOR SALVAGE SHALL BE CUT, FELLED & REMOVED FROM THE SITE IN A MANNER THAT MAXIMIZES THEIR USE FOR HARVESTING FINISHED LUMBER FOR INTERIOR AND EXTERIOR USES. FOR INTERIOR USES: FINISHED BOARDS AS SMALL AS 1.58 cm THICK BY 5 cm WIDE CAN BE USED FOR BATTENS, THOUGH LARGER BOARDS WILL ALSO BE NEEDED FOR THE RIBBON OF LIFE SCULPTURE IN THE LOBBY. FOR EXTERIOR USES: UNFINISHED TREE TRUNKS AND LARGE BRANCHES CAN BE USED FOR BENCHES.
  - SALVAGED TREES SHALL BE CAREFULLY REMOVED FROM THE SITE AND STORED INDOORS TO MINIMIZE DAMAGE OR DETERIORATION AND TO PROMOTE DRYING OUT PRIOR TO MILLING AND CUTTING THEM INTO BOARDS OR LOGS.
  - TREES WITH A 60 cm OR LARGER DBH THAT ARE UNSUITABLE FOR LUMBER USE, SHALL ALSO BE SALVAGED FOR POTENTIAL USE OUTDOORS AS SEATING OR BIOMASS FOR HABITAT ON THE FORESTED PARTS OF THE SITE. THESE TREE TRUNKS SHALL ALSO BE STORED INSIDE TO MINIMIZE DAMAGE OR DETERIORATION UNTIL THE PROJECT IS READY FOR THEIR INSTALLATION.







THE OTTAWA HOSPITAL  
- CIVIC CAMPUS  
REDEVELOPMENT

PRELIMINARY  
NOT FOR CONSTRUCTION

Project Manager	MM
Project Designer	JEG
Project Architect	JEF
Landscape Architect	MJ Fahs
Civil Engineer	SW
Structural Engineer	EVP
Mechanical Engineer	Smith + Anderson
Electrical Engineer	Smith + Anderson
Plumbing Engineer	Smith + Anderson
Interior Designer	Collins
Equipment Planner	
Wayfinding	

Sheet Reviewer: J. Author

MARK	DATE	DESCRIPTION
2022-09-30		ISSUED FOR PRE-CONSULTATION
2022-11-30		ISSUED FOR SPC & FLUENTA - 1ST SUBMISSION
2022-12-02		ISSUED FOR SPC & FLUENTA - 2ND SUBMISSION
2023-02-24		ISSUED FOR RFP VERSION 1.0
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2024-03-22		ISSUED FOR CONSTRUCTION

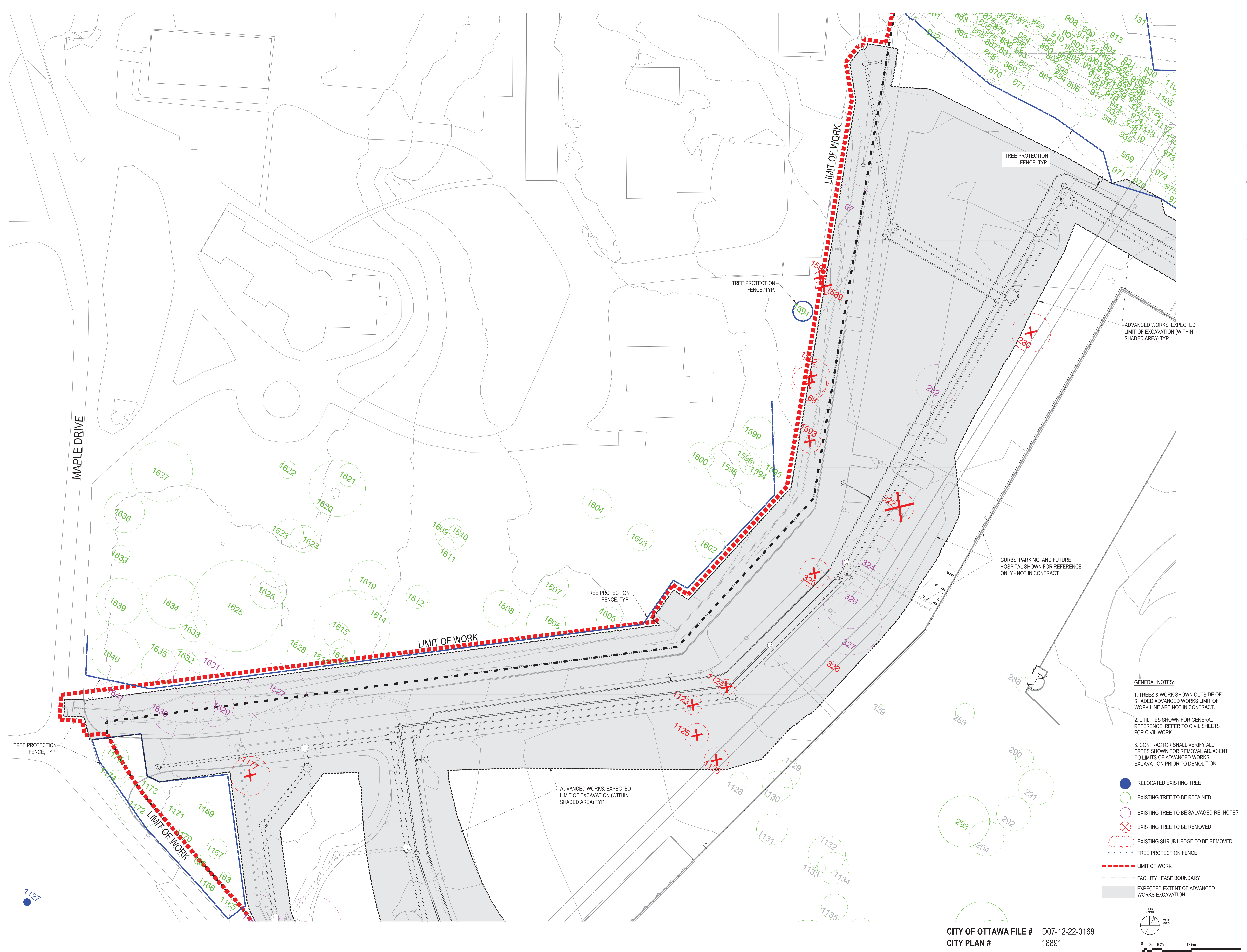
Project Number: 10333982  
Original Issue: 04/21/22



Sheet Name  
**TREE PRESERVATION  
AND REMOVAL  
ENLARGEMENT PLAN**

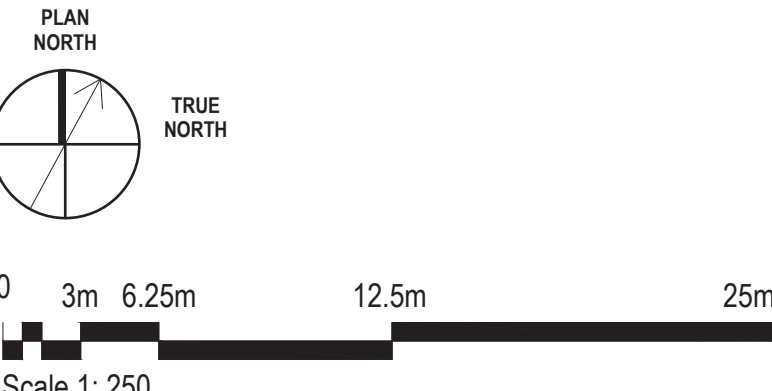
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Project Status  
STAGE 3



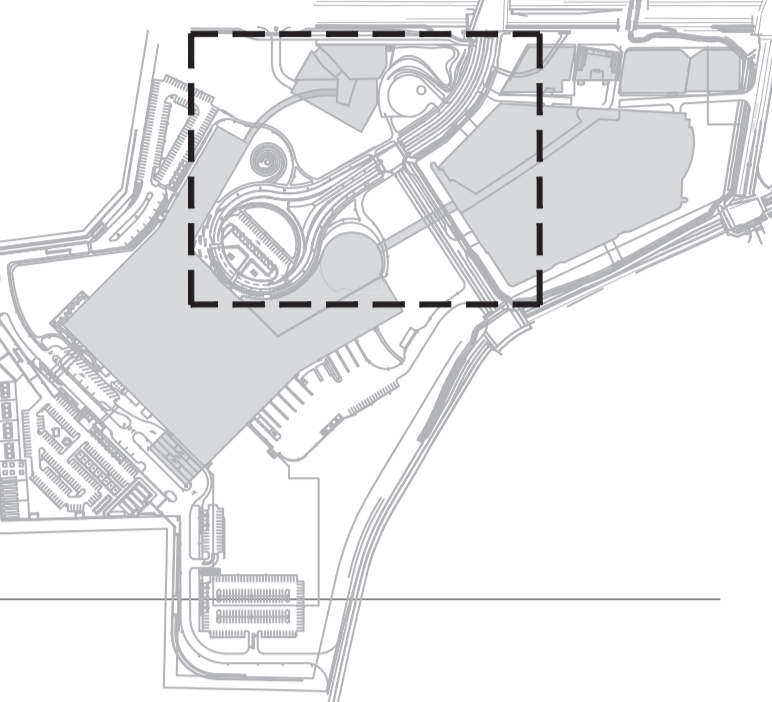
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CITY OF OTTAWA FILE # D07-12-22-0168  
CITY PLAN # 18891





THE OTTAWA HOSPITAL  
- CIVIC CAMPUS  
REDEVELOPMENT



PRELIMINARY  
NOT FOR CONSTRUCTION

Project Manager	MM
Project Designer	JEG
Project Architect	JEF
Landscape Architect	MJ Fahs
Civil Engineer	Civil Engineer
Structural Engineer	ESR
Mechanical Engineer	Smith + Anderson
Electrical Engineer	Smith + Anderson
Plumbing Engineer	Smith + Anderson
Interior Designer	Interior Designer
Equipment Planner	Collins
Wayfinding	

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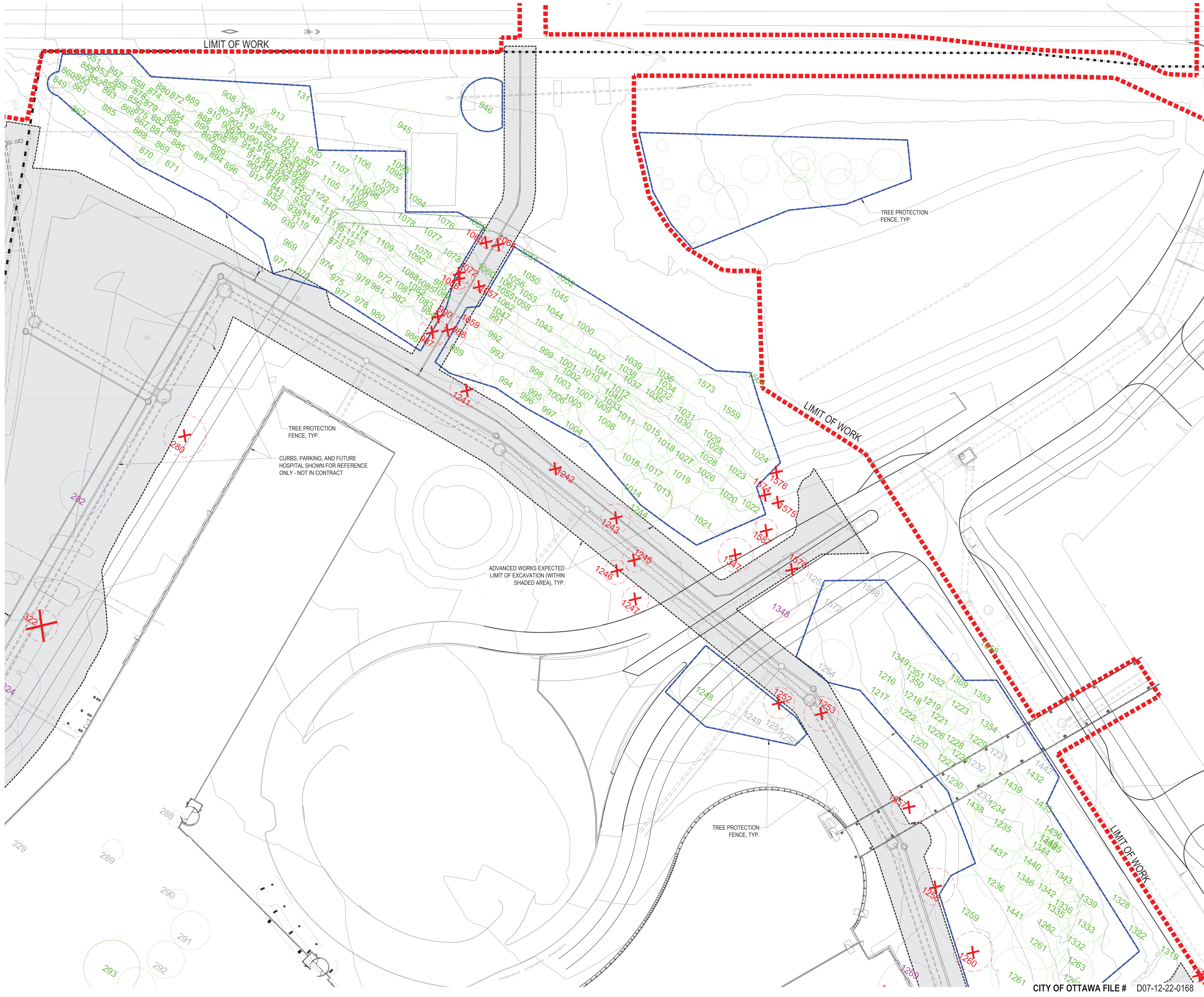
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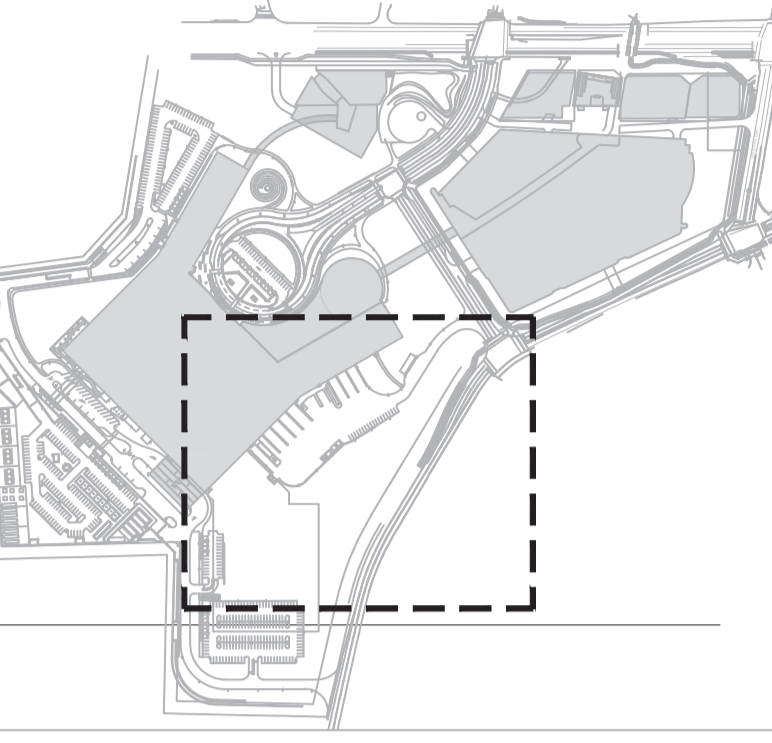
TREE PRESERVATION  
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Sheet Number: L-2.2.2.103

Project Status: STAGE 3







THE OTTAWA HOSPITAL  
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REDEVELOPMENT



PRELIMINARY  
NOT FOR CONSTRUCTION

Project Manager	MM
Project Designer	JEG
Project Architect	JMF
Landscape Architect	JMF
Civil Engineer	EM
Structural Engineer	EM
Mechanical Engineer	SM
Electrical Engineer	SM
Plumbing Engineer	SM
Interior Designer	CS
Equipment Planner	CS
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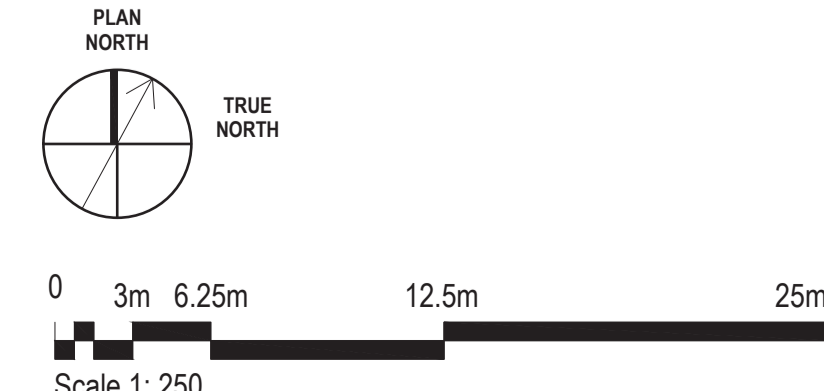
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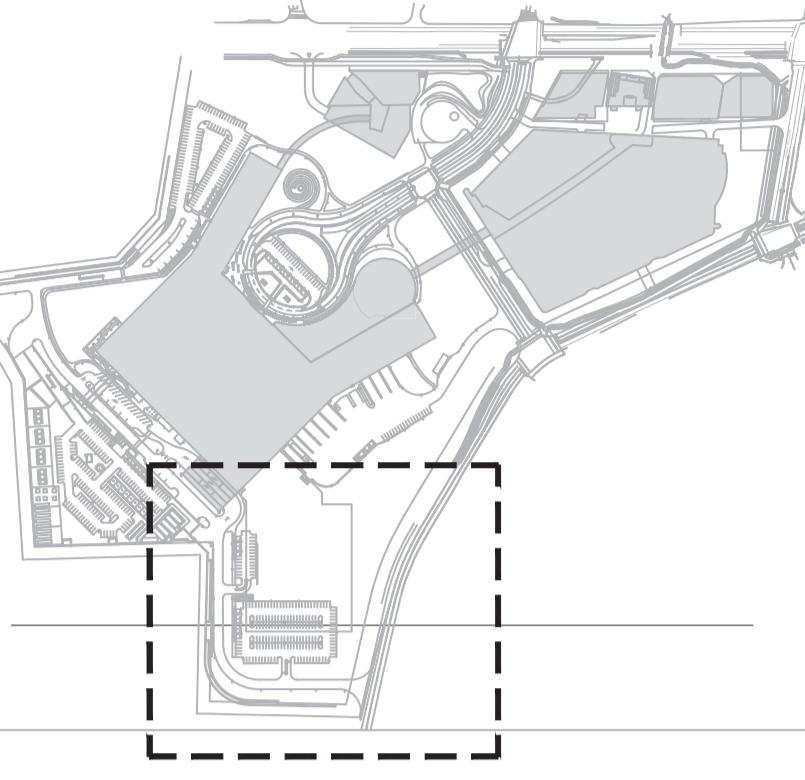
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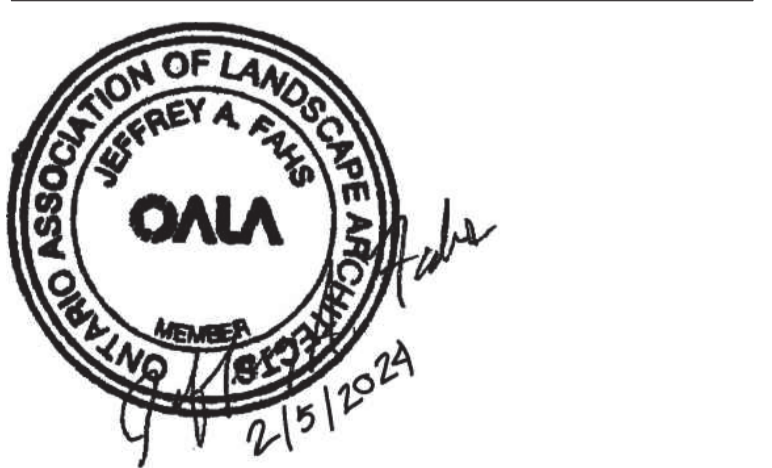


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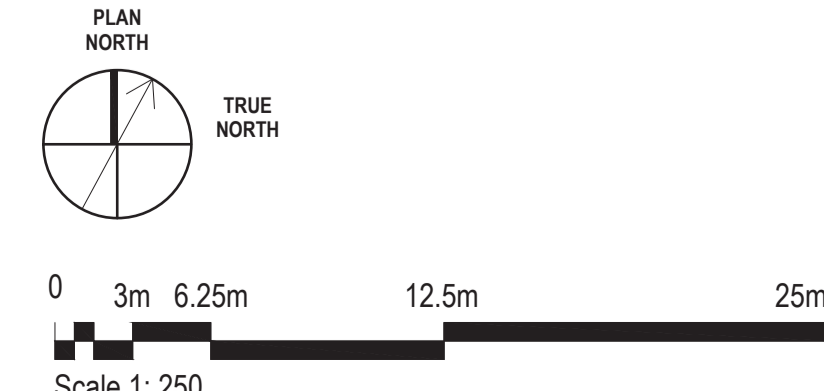


TREE PRESERVATION  
AND REMOVAL  
ENLARGEMENT PLAN

Sheet Number  
L-2.2.2.105

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STAGE 3

CITY OF OTTAWA FILE # D07-12-22-0168  
CITY PLAN # 18891









# TREE PROTECTION AND PRUNING

## MONITORING OF TREE PROTECTION MEASURES

MONITORING OF THE PROTECTED VEGETATION AREAS WILL BE CARRIED OUT UNDER THE DIRECTION OF A CERTIFIED ARBORIST/REGISTERED PROFESSIONAL FORESTER. THE MONITORING WILL BE IMPLEMENTED DURING ACTIVE CONSTRUCTION PERIODS FOR THE DEVELOPMENT WITH THE FOLLOWING FREQUENCY:

- ON A WEEKLY BASIS, AND/OR
- AFTER EVERY 10 MM OR GREATER RAINFALL EVENT, AND/OR
- DURING PERIODS OF AGRICULTURAL DROUGHT

PROTECTED VEGETATION AREAS WILL REQUIRE MONITORING AS PER ABOVE TO ENSURE THAT THEY ARE NOT BEING IMPACTED BY THE PROPOSED DEVELOPMENT. SHOULD IMPACTS BE OBSERVED, NECESSARY STEPS WILL BE TAKEN TO ENSURE THAT THE IMPACTED VEGETATION IS EITHER RESTORED OR REPLACED. A RECORD OF THE IMPACT AND MEASURES TAKEN TO CORRECT THE IMPACT WILL BE DOCUMENTED WITHIN 5 BUSINESS DAYS AND WILL BE MADE AVAILABLE TO THE NCC/PSPC UPON REQUEST.

## CRITICAL ROOT ZONE AND TREE PROTECTION BARRIER

THE CRITICAL ROOT ZONE (CRZ) IS A DEFINED AREA AROUND AN EXISTING TREE WHEREIN TREE PROTECTION MEASURES SHOULD BE IMPLEMENTED IF SITE DISTURBANCE IS PLANNED WITHIN THE CRZ, OR IF THERE IS A REASONABLE LIKELIHOOD OF INADVERTENT ENROACHMENT INTO THE CRZ DURING SITE DISTURBANCE. THE CRZ FOR THE CITY OF OTTAWA IS CALCULATED AS 10 CM FROM THE TRUNK OF A TREE FOR EVERY CENTIMETER OF TRUNK DIAMETER.

- THE ARBORIST/FORESTER MAY ADJUST THIS AS REQUIRED BASED ON WHETHER THE TREE IS MULTI-STEMMED, PARTICULARLY SENSITIVE TO ROOT DISTURBANCE, OR CERTAIN SITUATIONS SUCH AS IF THE ROOTS ARE CONSTRAINED BY HARD SURFACES AND THE MAJORITY OF ROOTS WOULD BE EXPECTED TO OCCUR ON THE SIDE WHERE PROTECTION IS REQUIRED.
- TREE PROTECTION MEASURES WILL BE INSPECTED DURING A WALKTHROUGH BY CITY OF OTTAWA AND NCC FORESTRY STAFF IN ADVANCE OF TREE REMOVALS. WHERE CONSTRUCTION ACTIVITIES ARE REQUIRED WITHIN THE CRZ OF A RETAINED TREE, PROTECTION MEASURES THAT MAY BE CONSIDERED ON A CASE-BY-CASE BASIS INCLUDE PLACING METAL PLATES OR A 20 CM DEEP LAYER OF COARSE MULCH OVERLAIN BY LARGE SHEETS OF ¾" OR GREATER THICKNESS PLYWOOD, IN ORDER TO DISTRIBUTE PRESSURE AND AVOID SOIL COMPACTION AND ONLY UNDER THE GUIDANCE OF AN ARBORIST/FORESTER. FOLLOWING COMPLETION OF ACTIVITY IN THE AREA, THE MULCH SHOULD BE SPREAD TO BETWEEN 8-10 CM THICK AROUND THE BASE OF THE TREE.

THE TREE PROTECTION BY-LAW REQUIRES THAT ANYONE WORKING NEAR PROTECTED TREES MUST, UNLESS OTHERWISE AUTHORIZED BY THE CITY:

- ERRECT A 1.2 M HIGH FENCE AROUND THE OUTER EDGE OF THE CRITICAL ROOT ZONE. CRZ OF TREES PRIOR TO BEGINNING OTHER SITE WORK, AND MAINTAIN THE FENCE UNTIL THE WORK IS COMPLETE;
- NOT PLACE ANY MATERIAL OR EQUIPMENT WITHIN THE CRZ OF THE TREE;
- NOT RAISE OR LOWER THE EXISTING GRADE WITHIN THE CRZ OF A TREE;
- NOT EXTEND ANY HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING WITHIN THE CRZ OF A TREE;
- NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE, EXCEPT AS REQUIRED BY THIS BY-LAW FOR TREES TO BE REMOVED;
- NOT DAMAGE THE ROOT SYSTEM, TRUNK OR BRANCHES OF ANY TREE; AND
- ENSURE THAT EXHAUST FUMES FROM EQUIPMENT ARE NOT DIRECTED TOWARDS ANY TREE'S CANOPY.

## ROOT PRUNING PRACTICES

ROOT DAMAGE CAN BE MINIMIZED BY RESTRICTING EQUIPMENT IN THE VICINITY OF THE EXISTING TREES AND LIMITING EQUIPMENT AND MATERIALS STORAGE AREA WITHIN PROXIMITY TO RETAINED TREES AND SHRUBS. IN GENERAL, ROOTS 100 MM IN DIAMETER OR LARGER SHOULD BE CONSIDERED STRUCTURAL ROOTS. IF THERE IS ANY QUESTION ABOUT WHETHER A TREE'S STABILITY MAY BE AFFECTED, A QUALIFIED ARBORIST SHOULD BE CONSULTED.

- AIR SPADES OR HYDROVAC SHOULD BE USED WHERE EXPOSURE OF ROOTS IS REQUIRED.
- ROOT PRUNING SHOULD OCCUR PRIOR TO THE START OF CONSTRUCTION TO PREVENT DRYING OUT OF ROOTS, INCREASE ROOT REGENERATION, AND MINIMIZE DAMAGE TO ROOT SYSTEMS DURING CONSTRUCTION. ROOTS SHOULD BE PRUNED TO THE LIMIT OF EXCAVATION AND TO A DEPTH OF 1 M OR THE MAXIMUM DEPTH OF ROOT PENETRATION (WHICHEVER IS GREATER). ALL PRUNING SHOULD BE DONE WITH CLEAN, APPROVED ROOT-PRUNING EQUIPMENT AND UNDER THE SUPERVISION OF A QUALIFIED ARBORIST.
- ANY ROOTS THAT ARE SEVERED DURING CONSTRUCTION SHOULD BE CUT CLEANLY TO MINIMIZE DECAY AND ENTRY POINTS FOR DISEASE. IF ROOTS WILL BE EXPOSED FOR MORE THAN A FEW HOURS, THEY SHOULD BE PROTECTED FROM DRYING WITH THE APPLICATION OF MULCH THAT IS KEPT MOIST (BUT NOT SATURATED).
- PRUNED ROOT ENDS SHALL BE NEATLY AND SQUARELY TRIMMED AND THE AREA SHALL BE BACKFILLED WITH CLEAN NATIVE FILL AS SOON AS POSSIBLE TO PREVENT DRYING AND PROMOTE ROOT GROWTH.
- THE EXPOSED ROOTS SHALL NOT BE ALLOWED TO DRY OUT AND AN APPROPRIATE WATERING SCHEDULE SHALL BE UNDERTAKEN (E.G., WATER BI-WEEKLY TO FIELD CAPACITY BETWEEN JUNE 1ST AND SEPTEMBER 15TH) SO THAT THE ROOTS MAINTAIN OPTIMUM SOIL MOISTURE DURING CONSTRUCTION AND BACKFILLING OPERATIONS.
- MEASURES TO MINIMIZE ROOT LOSS: WHEN IT IS NECESSARY TO EXCAVATE WITHIN THE TREE PROTECTION ZONE OF TREES AND SHRUBS, PRE-CUTTING OF THE ROOTS MUST BE CARRIED OUT IN ORDER TO AVOID LIFTING OR TEARING THE ROOTS. THIS WORKING METHOD CONSISTS OF SLICING THE GROUND AND CUTTING THE ROOTS OF TREES AND SHRUBS. FOR EXAMPLE USING A CONCRETE SAW WHEN STRIPPING THE GROUND, THE DEPTH OF THE PRE-CUT MUST BE AT LEAST 500 MM. IF ROOTS 50 MM IN DIAMETER OR MORE ARE ENCOUNTERED AT A DEPTH OF MORE THAN 500 MM, THEY SHOULD BE CUT CLEANLY WITH A SHARP TOOL. BACKFILLING MUST BE DONE WITH TOPSOIL TO A DEPTH OF NO MORE THAN 500 MM. AN NCC REPRESENTATIVE OR A CONSULTANT ARBORIST MAY REQUEST THE APPLICATION OF AN ANTI-DESICCANT AGENT TO THE FOLIAGE OR TAKE ANY OTHER MEASURE AIMED AT REDUCING EVAPOTRANSPIRATION. FOR ALL TREES AND SHRUBS WHOSE ROOTS ARE EXPOSED DURING WORK, THE ROOT SYSTEM MUST BE KEPT MOIST TO AVOID DESICCATION AND DEATH OF THE ROOTLETS.

## BRANCH PRUNING PRACTICES

THE FOLLOWING ARE STANDARD BMPS FOR BRANCH PRUNING:

- DUE TO THE REMOVAL OF TREES WITHIN THE PROJECT AREA, IS NOT EXPECTED THAT PRUNING WILL BE REQUIRED AT THIS PHASE, HOWEVER IF PRUNING IS REQUIRED, THE CONTRACTOR MUST IDENTIFY ANY PRUNING REQUIREMENTS IN ADVANCE FOR CONFIRMATION WITH THE CITY OF OTTAWA AND THE NCC
- LIMBS THAT MAY INTERFERE WITH CONSTRUCTION, INCLUDING THOSE THAT MAY OVERHANG THE WORK AREA, SHOULD BE PRUNED UTILIZING BY-PASS SECATEURS BY A QUALIFIED ARBORIST. ALL PRUNING SHALL BE COMPLETED AS PER THE AMERICAN NATIONAL STANDARD (ANSI) A300 (PART 1) - PRUNING (INTERNATIONAL SOCIETY OF ARBORICULTURE 2006).
- ALL LIMBS DAMAGED OR BROKEN DURING 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 ROSACEAE FAMILY).
- PRUNING CUTS SHOULD BE REDUCTION CUTS WHEREVER POSSIBLE AND MADE TO A GROWING POINT SUCH AS A BUD, TWIG, OR BRANCH OF APPROXIMATELY 1/3 DIAMETER OF THE BRANCH BEING PRUNED.
- REMOVAL CUTS SHOULD NOT EXCEED 10% OF THE TOTAL CUTS MADE ON EACH INDIVIDUAL TREE, AND CUTS SHOULD BE MADE 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 ANGLE AND TORN CUTS ARE NOT ACCEPTABLE.
- EXTENSIVE PRUNING IS BEST COMPLETED BEFORE PLANTS BREAK DORMANCY.
- PRUNING SHOULD BE LIMITED TO THE REMOVAL OF NO MORE THAN 20% 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
  - TIGHT V-SHAPED OR INCLUDED BARK IN UNIONS
  - SECONDARY OR COMPETING LEADERS TO PROMOTE SINGLE STEM STRUCTURE IN LARGE CANOPY SPECIES

# SPECIES AT RISK AND WILDLIFE

## BUTTERNUT

BUTTERNUT IS LISTED AS ENDANGERED UNDER THE ESA (ENDANGERED SPECIES ACT, 2007) AND THE SARA (SPECIES AT RISK ACT, 2002). ONE BUTTERNUT TREE WAS IDENTIFIED WITHIN THE PROJECT AREA, HOWEVER, WAS CONFIRMED TO BE A HYBRID THROUGH GENETIC TESTING. THIS TREE IS LOCATED APPROXIMATELY 90 M FROM THE LIMITS OF CONSTRUCTION ACTIVITY; TYPICAL TREE PROTECTION FENCING FOR THE WOODED RIDGELINE HAS BEEN RECOMMENDED FOR THIS PHASE AND INCLUDES THIS TREE.

## WILDLIFE INCLUDING SARA

General Provisions (ADAPTED FROM (<https://documents.ottawa.ca/en/files/protocol-wildlife-protection-during-construction> [documents.ottawa.ca]))

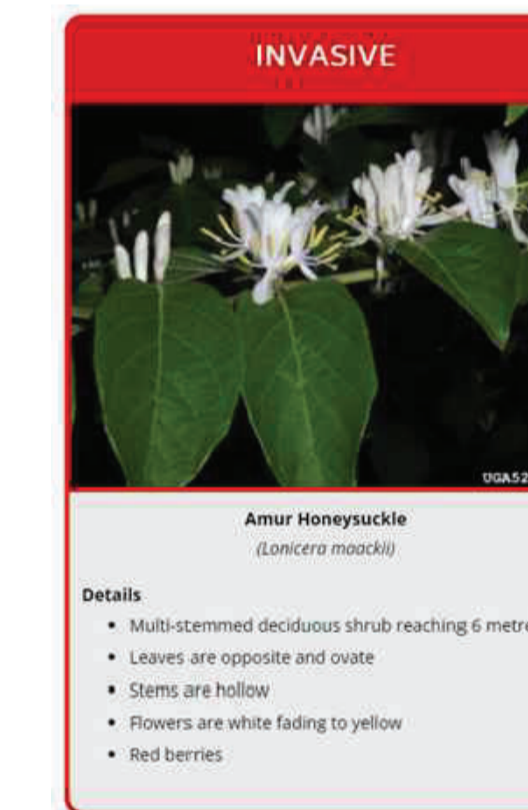
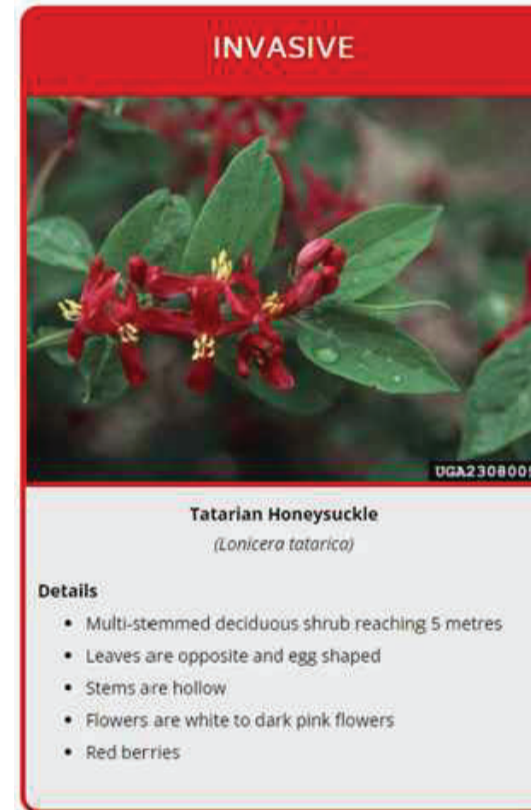
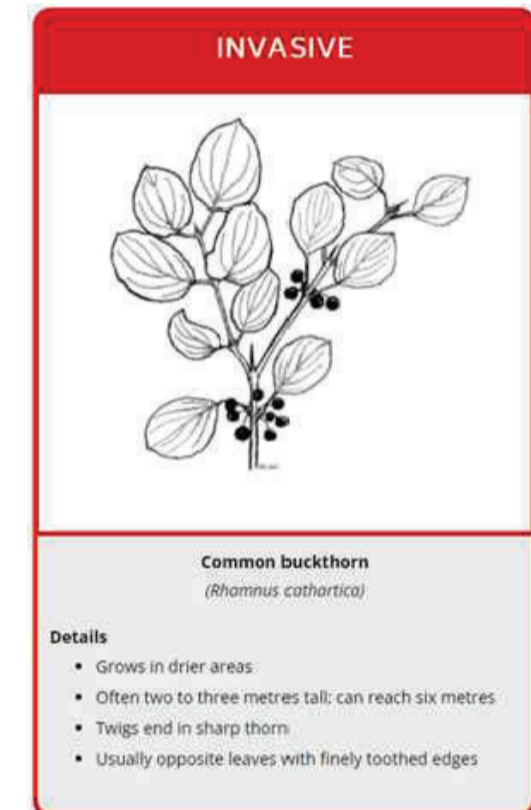
- WATCH OUT FOR WILDLIFE WHILE DRIVING, AND AVOID HITTING THEM. PROVIDED THAT IT IS SAFE TO DO SO.
- PRIOR TO BEGINNING WORK EACH DAY, CHECK FOR WILDLIFE BY CONDUCTING A THOROUGH VISUAL INSPECTION OF THE WORK SPACE AND IMMEDIATE SURROUNDINGS.
- RESTRICT ALL ACTIVITIES, VEHICLES AND MATERIALS TO THE DESIGNATED WORK SPACE. DO NOT DISTURB AREAS IDENTIFIED FOR RETENTION.
- SECURE STOCKPILED MATERIALS, VEHICLES AND STRUCTURES AGAINST WILDLIFE ENTRY.
- EXCLUSION MEASURES SHOULD BE APPLIED AS WARRANTED TO PREVENT NESTING/ROOSTING IN STOCKPILES INCLUDING MULCH PILES OR WITHIN ANY BUILDINGS/STRUCTURES THAT ARE CONSTRUCTED.
- LITTER AND OTHER WASTE MATERIALS MUST BE APPROPRIATELY CONTAINED AND PROMPTLY DISPOSED OF.
- DO NOT FEED ANY WILDLIFE OR LEAVE FOOD OUT WHERE IT COULD ATTRACT THEM.
- AS A GENERAL PRECAUTION, TREE AND VEGETATION REMOVALS (INCLUDING MOWING OF TALL GRASS) SHALL BE CONDUCTED OUTSIDE OF ECCO'S BIRD NESTING WINDOW FOR THE OTTAWA REGION (APRIL 8 TO AUGUST 31). TREE REMOVAL OF INDIVIDUAL CAVITY TREES OR OF TREES IN WOODED HABITATS SHOULD BE CONDUCTED PRIOR TO APRIL 1 OR AFTER SEPTEMBER 30TH TO AVOID IMPACTS TO BATS.
- IF VEGETATION REMOVAL IS REQUIRED DURING THE BREEDING BIRD SEASON, A NEST SWEEP SHOULD BE COMPLETED DAILY BY A QUALIFIED BIOLOGIST PRIOR TO CONSTRUCTION TO VERIFY NESTING ACTIVITY, AND TO INSPECT FOR LEAF-ROOSTING BATS.
- IT IS HIGHLY RECOMMENDED THAT CAVITY TREES ARE NOT REMOVED DURING THE ACTIVE BAT SEASON, THEREFORE THESE REMOVALS SHOULD BE PRIORITIZED AND SCHEDULED ACCORDINGLY. IF TREE REMOVAL WORKS ARE TO OCCUR BETWEEN APRIL 1 AND APRIL 7, OR BETWEEN SEPTEMBER 1-30, THE SITE MUST BE PRE-STRESSED TO AVOID IMPACTS TO BATS. REFER TO CITY OF OTTAWA PROTOCOL FOR WILDLIFE PROTECTION DURING CONSTRUCTION (<https://documents.ottawa.ca/en/files/protocol-wildlife-protection-during-construction> [documents.ottawa.ca]). IF WORKS WILL OCCUR BETWEEN APRIL 1 AND APRIL 7, OR BETWEEN SEPTEMBER 1-30, SURVEYS FOR BATS MUST BE CARRIED OUT BY A QUALIFIED BIOLOGIST FOR BATS - I.E. A PERSON WHO HAS DEMONSTRATED EXPERIENCE AT IDENTIFYING POTENTIAL BAT HABITAT IN THE OTTAWA REGION; AN AVIAN EXPERT WHO IS ALSO A QUALIFIED BIOLOGIST FOR BATS MAY ALSO CONDUCT THE SURVEYS.
- IF AN ACTIVE NEST OR ROOST IS FOUND WITHIN THE WORK AREA, AT ANY TIME (INCLUDING TIMES OUTSIDE OF THE TYPICAL NESTING SEASON), ECCO MUST BE CONTACTED FOR SPECIES PROTECTED UNDER THE MBCA AND/OR THE SARA, AND MECP MUST BE NOTIFIED FOR SPECIES PROTECTED UNDER THE ESA. CONSTRUCTION IN THE VICINITY MUST CEASE UNTIL THE YOUNG BIRDS HAVE FLEDGED OR THE NEST IS OTHERWISE ABANDONED. A SETBACK FROM THE NEST (E.G., 30 M) SHOULD BE IDENTIFIED AND THE AREA DEMARCATED TO ENSURE WORK DOES NOT OCCUR WITHIN THE SETBACK LIMITS. ECCO SHOULD BE CONSULTED TO DETERMINE THE SETBACK LIMITS FOR HEALTH AND SAFETY REASONS, AND FOR PROTECTION OF ANIMALS. REMOVAL AND RELOCATION OF MAMMALS MUST ONLY BE DONE BY QUALIFIED AND PROPERLY EQUIPPED PERSONNEL. CALL THE RIDEAU VALLEY WILDLIFE SANCTUARY AT (613) 258-9480 FOR ASSISTANCE.
- FOR HEALTH AND SAFETY REASONS, AND FOR PROTECTION OF ANIMALS, REMOVAL AND RELOCATION OF MAMMALS MUST ONLY BE DONE BY QUALIFIED AND PROPERLY EQUIPPED PERSONNEL. CALL THE RIDEAU VALLEY WILDLIFE SANCTUARY AT (613) 258-9480 FOR ASSISTANCE.
- FOR INJURED WILDLIFE, CALL THE OTTAWA HUMANE SOCIETY EMERGENCY SERVICES AT (613) 725-1532.
- FOR INJURED BIRDS, CALL THE WILD BIRD CARE CENTRE AT (613) 828-2849.
- SCRATCHES AND BITES FROM ANIMALS, WHETHER DOMESTIC OR WILD, CAN RESULT IN SERIOUS INFECTIONS AND/OR TRANSMIT DISEASES. SEEK MEDICAL TREATMENT IMMEDIATELY FOR ANY PERSON INJURED BY AN ANIMAL.

WILDLIFE ENCOUNTERS (ADAPTED FROM (<https://documents.ottawa.ca/en/files/protocol-wildlife-protection-during-construction> [documents.ottawa.ca])):

- DO NOT HARM ANY WILDLIFE. MANY SPECIES ARE PROTECTED UNDER PROVINCIAL AND/OR FEDERAL LEGISLATION.
- LEGAL PROTECTION OF EGG-LAYING SPECIES APPLIES TO THEIR EGGS AS WELL. PENALTIES FOR CONTRAVENING THESE ACTS CAN BE SEVERE.
- STAND BACK AND ALLOW THE ANIMAL TO LEAVE THE SITE. WILDLIFE MAY BE ENCOURAGED TO MOVE AWAY FROM THE WORK AREA BY SHOUTING, WAVING OF ARMS, CLAPPING OF HANDS OR GENTLE REDIRECTION USING A PUSH BROOM. CONTACT PROJECT BIOLOGIST / WILDLIFE SERVICE PROVIDER FOR ASSISTANCE IF NEEDED (E.G., IF YOUNG ANIMALS ARE FOUND), DO NOT UNNECESSARILY HARASS ANY WILDLIFE.
- TURTLES MAY NEED TO BE HELPED TO SAFETY. OUR MOST COMMON SPECIES, PAINTED AND SNAPPING TURTLES, ARE PROTECTED UNDER THE FISH AND WILDLIFE CONSERVATION ACT, 1997. SNAPPING TURTLE IS ALSO PROTECTED UNDER THE SARA AS IS Blanding's TURTLE, WHICH OCCURS WITHIN THE OTTAWA AREA. IF ONE OF THESE TURTLES IS FOUND IN THE WORK AREA, IT CAN BE GENTLY REMOVED TO A SAFE LOCATION NEARBY. WEAR GLOVES, OR USE A BROOM TO STEER THE TURTLE INTO A BUCKET OR OTHER CONTAINER. HANDLE WITH CARE TO AVOID INJURY TO THE TURTLE OR YOURSELF, PARTICULARLY WHEN DEALING WITH SNAPPING TURTLES, WHICH MAY BITE OR SCRATCH. TURTLES MAY ALSO WET THEMSELVES WHEN HANDLED. ALSO REFER HERE FOR HANDLING INFORMATION: [https://files.ontario.ca/environment-and-energy/species-at-risk/mms\\_sar\\_45\\_car\\_fund\\_rnd\\_en.pdf](https://files.ontario.ca/environment-and-energy/species-at-risk/mms_sar_45_car_fund_rnd_en.pdf) [files.ontario.ca]
- MOST OF OTTAWA'S SNAKES ARE PROTECTED UNDER THE FISH AND WILDLIFE CONSERVATION ACT, 1997. NONE OF THEM ARE VENOMOUS, BUT BITES MAY CAUSE INFECTIONS. SOME PRODUCE A FOUL-SMELLING MUSK WHEN HANDLED. INSTEAD OF BITING, SNAKES WILL USUALLY TRY TO ESCAPE OR HIDE WHEN DISTURBED, AND ONLY DEFEND THEMSELVES WHEN TRAPPED. IF A SNAKE IS FOUND IN THE WORK AREA, IT SHOULD BE GENTLY HERDED OUT TO A SAFE LOCATION.
- STOP WORK IMMEDIATELY IF ANY SPECIES PROTECTED UNDER THE ENDANGERED SPECIES ACT, 2007 OR THE SPECIES AT RISK ACT (2002) ARE SEEN IN OR NEAR THE WORK SITE. TAKE A PHOTOGRAPH IF POSSIBLE, TO CONFIRM THE SIGHTING, AND CONTACT THE PROJECT BIOLOGIST AT (613) 218-1186. ADDITIONAL MEASURES TO AVOID IMPACTS MAY BE REQUIRED BY ENVIRONMENT AND CLIMATE CHANGE CANADA BEFORE WORK CAN RESTART.

# INVASIVE SPECIES REMOVAL

## INVASIVE PLANT SPECIES



- HEAVY EQUIPMENT MUST BE CLEANED AND FREE OF INVASIVE SPECIES PRIOR TO ENTERING AND BEFORE LEAVING THE CONSTRUCTION SITE. BEST MANAGEMENT PRACTICES FROM THE INVASIVE ONTARIO PLANT COUNCIL (<https://www.ontarioinvasiveplants.ca> ) SHOULD BE ADOPTED TO PREVENT THE SPREADING OF INVASIVE SPECIES INTO AND FROM FEDERAL PROPERTY.
- AREAS OF INVASIVE BRUSH CLEARING (EUROPEAN BUCKTHORN AND ISOLATED INVASIVE HONEY-SUCKLES) WILL BE IDENTIFIED IN THE SITE WALK-THROUGH (CLUSTERS THROUGHOUT LRT CORRIDOR AND CARLING AVENUE WOODLOT)
  - PREVENT SPREAD BY MOVING FROM OUTSIDE EDGE INWARDS DURING REMOVAL EFFORTS; AND
  - STRIP AREAS WITH IDENTIFIED DOMINANT INVASIVE SPECIES LAST SO THAT EQUIPMENT DOES NOT TRACK PROPAGULES OR SEEDS INTO UNCONTAMINATED AREAS; OR
  - CLEAN EQUIPMENT IN ACCORDANCE WITH THE ABOVE CLEAN EQUIPMENT PROTOCOL WHEN MOVING FROM AN INVASIVE CONTAMINATED WORK AREA INTO A CLEAN AREA
  - DISPOSAL OF INVASIVE SPECIES AT A MUNICIPAL LAND FILL THAT ACCEPTS ORGANIC WASTE
- COMPREHENSIVE LONG-TERM REMOVAL STRATEGIES AND MONITORING ARE NOT REQUIRED AT THIS STAGE AND WILL BE INCORPORATED INTO FUTURE SITE PLANS.

## EMERALD ASH BORER

- CANADIAN FOOD INSPECTION AGENCY (CFIA) DIRECTIVE (D-03-08): PHYTOSANITARY REQUIREMENTS TO PREVENT THE INTRODUCTION INTO AND SPREAD WITHIN CANADA OF THE EMERALD ASH BORER (EAB) (AGRILLUS PLANIPENNIS (FARMIAIRE)) RESTRICTS THE MOVEMENT OF ALL ASH MATERIAL INCLUDING WOOD, BARK, CHIPS OR BARK CHIPS FROM BEING TRANSPORTED OUTSIDE OF THE REGULATED AREA. A MOVEMENT CERTIFICATE IS REQUIRED BY THE CFIA FOR ANY ASH MATERIAL LEAVING THE REGULATED AREA.
- ASH ARE PERMITTED TO BE CHIPPED ON SITE AND/OR REMOVED OR CUT DOWN AND REMOVED FROM THE SITE. CHIPPED ASH MATERIAL THAT IS TO REMAIN ON SITE MUST BE GROUND OR CHIPPED TO A SIZE OF LESS THAN 2.5 CM IN ANY TWO DIMENSIONS. ALL ASH MATERIAL CHIPPED OR WHOLE THAT IS TO BE REMOVED FROM SITE MUST BE DISPOSED OF AT THE CITY OF OTTAWA TRAIL ROAD WASTE FACILITY.
- A MOVEMENT CERTIFICATE IS NOT REQUIRED TO DISPOSE OF PROJECT RELATED ASH TREES AT THE TRAIL ROAD FACILITY.

## DUTCH ELM DISEASE

CFIA DIRECTIVE (D-97-07): PHYTOSANITARY REQUIREMENTS FOR THE IMPORTATION FROM THE UNITED STATES AND DOMESTIC MOVEMENT OF ELM MATERIAL (ULMUS SPP. AND ZELKOVA SPP.) TO PREVENT THE INTRODUCTION AND SPREAD OF DUTCH ELM DISEASE OPHIOSTOMA ULMI (BUSISMAN) NANFN. AND OPHIOSTOMA NOVO-ULMI (BRASIER) WITHIN CANADA RESTRICTS THE MOVEMENT OF ALL ELM MATERIAL INCLUDING PROPAGATIVE MATERIAL, INCLUDING NURSERY STOCK, AND NON-PROPAGATIVE MATERIAL WITH BARK ATTACHED SUCH AS LOGS, LUMBER, FIREWOOD, CRATES AND ISOLATED BARK OF ALL SPECIES, HYBRIDS AND HORTICULTURAL CULTIVARS OF ELM.

- ELM INFECTED WITH DUTCH ELM DISEASE SHOULD BE BURIED, DEBARKED, BURNED OR CHIPPED.

## LDD MOTH

- THE CONTRACTOR MUST VERIFY THAT NO LDD MOTH EGG MASSES ARE LOCATED ON THE TRUNK AND/OR BRANCHES OF THE TREES TO BE REMOVED. IF THE CONTRACTOR FINDS AN EGG MASS, IT IS RECOMMENDED THAT NO EGG MASS BE REMOVED AND DISPOSED OF IN A BAG OR RECIPIENT WITH SOAPY WATER TO KILL THE EGGS.

Karla Sady, Washington State Department of Agriculture, Bugwood.org



# TREE REMOVAL

## TIMING WINDOWS FOR TREE REMOVALS

TO MINIMIZE IMPACTS TO WILDLIFE AND ENSURE COMPLIANCE OF THE MIGRATORY BIROS CONVENTION ACT (MBCA), 1994, THE SPECIES AT RISK ACT (SARA) 2002 AND THE ENDANGERED SPECIES ACT (ESA), 2007, THE FOLLOWING IS RECOMMENDED:

- AS A GENERAL PRECAUTION, TREE AND VEGETATION REMOVALS (INCLUDING MOWING OF TALL GRASS) SHALL BE CONDUCTED OUTSIDE OF ECCO'S BIRD NESTING WINDOW FOR THE OTTAWA REGION (APRIL 8 TO AUGUST 31). TREE REMOVAL OF INDIVIDUAL CAVITY TREES OR OF TREES IN WOODED HABITATS SHOULD BE CONDUCTED PRIOR TO APRIL 1 OR AFTER SEPTEMBER 30TH TO AVOID IMPACTS TO BATS.
- IF VEGETATION REMOVALS IS REQUIRED DURING THE BREEDING BIRD SEASON, A NEST SWEEP SHOULD BE COMPLETED DAILY BY A QUALIFIED BIOLOGIST PRIOR TO CONSTRUCTION TO VERIFY NESTING ACTIVITY, AND TO INSPECT FOR LEAF-ROOSTING BATS.
- IT IS HIGHLY RECOMMENDED THAT CAVITY TREES ARE NOT REMOVED DURING THE ACTIVE BAT SEASON, THEREFORE THESE REMOVALS SHOULD BE PRIORITIZED AND SCHEDULED ACCORDINGLY. IF TREE REMOVAL WORKS ARE TO OCCUR BETWEEN APRIL 1 AND APRIL 7, OR BETWEEN SEPTEMBER 1-30, THE SITE MUST BE PRE-STRESSED TO AVOID IMPACTS TO BATS. REFER TO CITY OF OTTAWA PROTOCOL FOR WILDLIFE PROTECTION DURING CONSTRUCTION (<https://documents.ottawa.ca/en/files/protocol-wildlife-protection-during-construction> [DOCUMENTS.OTTAWA.CA]). IF WORKS WILL OCCUR BETWEEN APRIL 1 AND APRIL 7, OR BETWEEN SEPTEMBER 1-30, SURVEYS FOR BATS MUST BE CARRIED OUT BY A QUALIFIED BIOLOGIST FOR BATS - I.E. A PERSON WHO HAS DEMONSTRATED EXPERIENCE AT IDENTIFYING POTENTIAL BAT HABITAT IN THE OTTAWA REGION; AN AVIAN EXPERT WHO IS ALSO A QUALIFIED BIOLOGIST FOR BATS MAY ALSO CONDUCT THE SURVEYS.
- IF AN ACTIVE NEST OR ROOST IS FOUND WITHIN THE WORK AREA, AT ANY TIME (INCLUDING TIMES OUTSIDE OF THE TYPICAL NESTING SEASON), ECCO MUST BE CONTACTED FOR SPECIES PROTECTED UNDER THE MBCA AND/OR THE SARA, AND MECP MUST BE NOTIFIED FOR SPECIES PROTECTED UNDER THE ESA. CONSTRUCTION IN THE VICINITY MUST CEASE UNTIL THE YOUNG BIRDS HAVE FLEDGED OR THE NEST IS OTHERWISE ABANDONED. A SETBACK FROM THE NEST (E.G., 30 M) SHOULD BE IDENTIFIED AND THE AREA DEMARCATED TO ENSURE WORK DOES NOT OCCUR WITHIN THE SETBACK LIMITS. ECCO SHOULD BE CONSULTED TO DETERMINE THE SETBACK LIMITS.

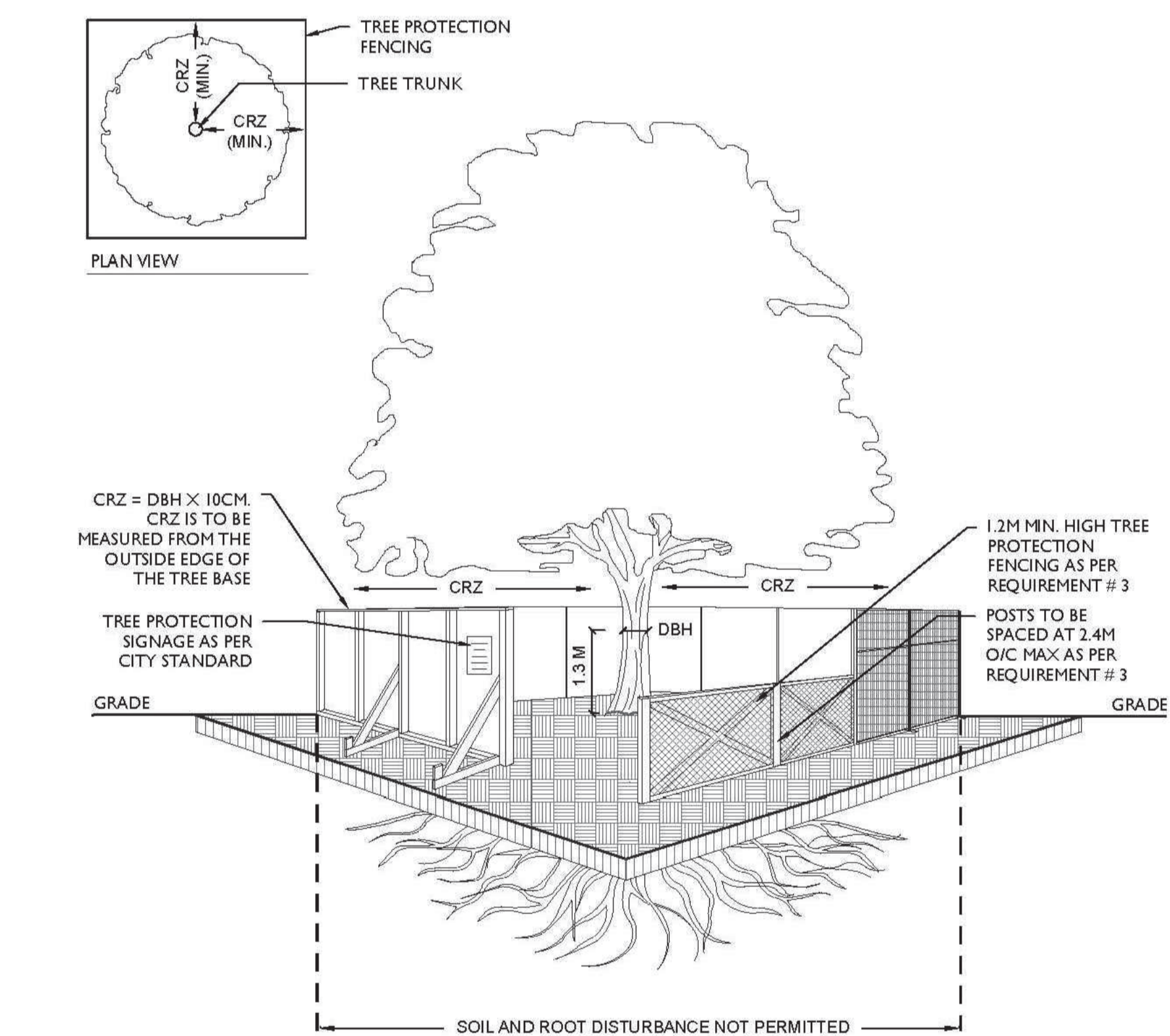
## REMOVAL AND GRUBBING

- ALL TREES REMOVED WITHIN THE PHASE 3/4 PROJECT AREA AS DELINEATED BY CONSTRUCTION SITE EXCLUSION FENCING SHOULD BE GRUBBED TO REMOVE THE STUMP AND ROOTS.
- IF ISOLATED TREES (E.G. DEAD, HAZARD, INVASIVE) ARE REMOVED OUTSIDE OF THE PHASE 3/4 PROJECT AREA FENCING, OR IF FENCING IS NOT IN PLACE IN ADVANCE OF REMOVALS, ALL TREES AND SHRUBS SHOULD BE CUT TO A STUMP.
- TREES MAY BE MULCHED ON SITE, HOWEVER MULCH SHOULD NOT BE STORED LONG TERM. ALL MULCH PILES MUST BE LOCATED WITHIN THE PHASE 3/4 CONSTRUCTION SITE EXCLUSION FENCING, OR MUST OTHERWISE BE EXCLUDED TO PREVENT ENTRY BY WILDLIFE.

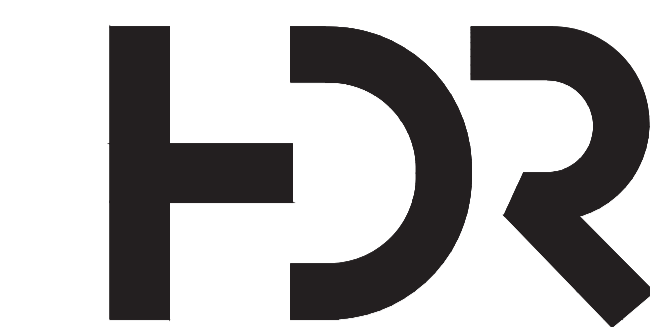
# LANDSCAPE TREE PRESERVATION DETAIL

TREE PROTECTION MEASURES THE FOLLOWING PROTECTION MEASURES MUST BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF CONSTRUCTION ON SITE:

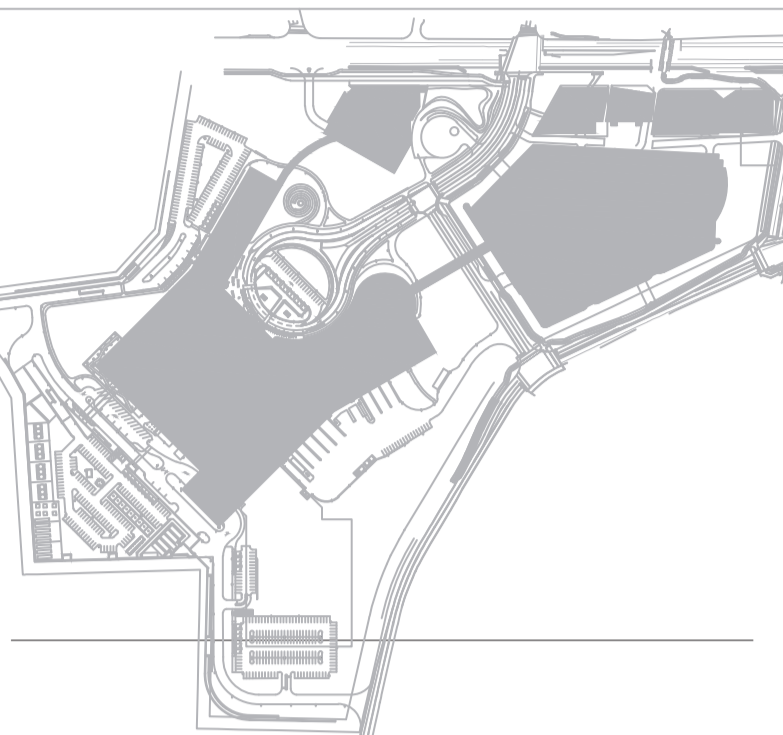
- UNDER THE GUIDANCE OF AN ARBORIST, ERRECT A FENCE AT THE CRITICAL ROOT ZONE (CRZ) OF TREES WHERE THE CRZ IS ESTABLISHED AS BEING 10 CENTIMETRES FROM THE TRUNK OF A TREE FOR EVERY CENTIMETER OF TRUNK DIAMETER AT BREAST HEIGHT. THE CRZ IS CALCULATED AS DBH × 10CM.
- DO NOT PLACE ANY MATERIAL OR EQUIPMENT WITHIN THE CRZ OF THE TREE.
- DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE.
- DO NOT RAISE OR LOWER THE EXISTING GRADE WITHIN THE CRZ WITHOUT APPROVAL.
- TUNNEL OR BORE WHEN DIGGING WITHIN THE CRZ OF A TREE.
- DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OF ANY TREE.
- TREES MAY BE PROTECTED INDIVIDUALLY, OR AS A GROUPING
- THE SAME STANDARDS APPLY TO ALL TREES TO BE PROTECTED
- A TREE PROTECTION FENCING INSPECTION WILL BE CARRIED OUT BY THE CITY OF OTTAWA AS A CONDITION OF THE TREE CUTTING PERMIT



- TREE PROTECTION REQUIREMENTS**
1. PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
  2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
    - DO NOT PLACE ANY MATERIAL OR EQUIPMENT - INCLUDING OUTRIGGERS;
    - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
    - DO NOT RAISE OR LOWER THE EXISTING GRADE;
    - TUNNEL OR BORE WHEN DIGGING;
    - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE;
    - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARDS ANY TREE CANOPY;
    - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
  3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC - STEEL, PLYWOOD/BOARDWALK, OR SHOV FENCE ON A 2"X4" WOODS FRAME) WITH POSTS 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMIZE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
  4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE INFORMATION REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
  5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OF THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.
- THE CITY TREE PROTECTION BY-LAW, 2020-340 PROTECTS BOTH CITY-OWNED TREES, CITY-WIDE, AND PRIVATELY-OWNED TREES WITHIN THE URBAN AREA. PLEASE REFER TO WWW.OTTAWA.CA/TREEREMOVAL FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.



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# THE OTTAWA HOSPITAL - CIVIC CAMPUS REDEVELOPMENT



Project Manager	MH
Project Designer	JEG
Project Architect	JEG
Landscape Architect	JHF Fahs
Civil Engineer	EJH
Structural Engineer	Smith + Anderson
Mechanical Engineer	Smith + Anderson
Electrical Engineer	Smith + Anderson
Planning Engineer	Smith + Anderson
Interior Designer	Collins
Equipment Planner	Collins
Wayfinding	

Sheet Reviewer:  Author:

MARK	DATE	DESCRIPTION
	2022-09-30	ISSUED FOR PRE-CONSULTATION
	2022-11-30	ISSUED FOR SPIC & FLUETTA - 1ST SUBMISSION
	2022-12-02	ISSUED FOR SPIC & FLUETTA - 2ND SUBMISSION
	2023-02-24	ISSUED FOR RFP VERSION 1.0
	2023-04-14	ISSUED FOR SPIC & FLUETTA APPROVAL
	2023-07-26	RE-ISSUED FOR SPIC & FLUETTA APPROVAL
	2023-08-01	ISSUED FOR CONTRACTOR PRICING
	2023-09-29	ISSUED FOR COSTING
	2023-10-06	FLUETTA - ADVANCED WORKS
	2023-10-27	ISSUED FOR M3h 3e 3
	2024-02-05	ISSUED FOR TENDER - ADVANCED WORKS
	2024-04-29	ISSUED FOR RFP 2.0
	2024-03-07	ISSUED FOR TENDER
	2024-03-22	ISSUED FOR CONSTRUCTION

Project Number: 10333982  
Original Issue: 04/02/22



Sheet Name:

# LANDSCAPE TREE PRESERVATION DETAIL

Sheet Number:



# Clean Equipment Protocol for Industry – Summary

Invasive species are plants, animals and microorganisms that have been accidentally or deliberately introduced into areas beyond their normal range, that out compete native species. Invasive species are a major threat to Ontario's natural areas, and are very costly to deal with once established.

Invasive species can be spread to new areas by contaminated mud, gravel, soil and plant materials on vehicles and machinery.

The best practice is to prevent the spread of invasive species. By inspecting and cleaning equipment and following some simple guidelines, the risk of spreading invasive plants is greatly reduced.

- Identify invasive plants and plan activities accordingly (i.e. schedule work in areas without invasive plants first, leaving infested areas til the end, to reduce the risk of unintentionally moving plants into a new area).
- Record & report sightings of invasive plants (Invading Species hotline at **1-800-563-7711** or online [www.invadingspecies.com/report/](http://www.invadingspecies.com/report/) or [www.eddmaps.org/Ontario](http://www.eddmaps.org/Ontario))
- Inspect vehicles and machinery before and after entering sites or conducting work along roadways & waterways.

## How to Inspect

Before leaving the site, inspect the vehicle thoroughly inside and out for where dirt, plant material and seeds may be lodged or stuck to interior and exterior surfaces. Remove and clean any guards, covers or plates that are easy to remove.

Pay attention to the underside of the vehicle, radiators, spare tires, foot wells and bumper bars. If clods of dirt, seed or other plant material are found, remove immediately and discard where the contamination occurred or in the garbage.

## When Cleaning is required

- Safely locate the vehicle and equipment away from any hazards, ensure engine is off and the vehicle or equipment is immobilized.
- Clean the vehicle/equipment in an appropriate area where contamination and seed spread is not possible (or limited).

### The site should be:

- Mud free, gravel covered hard surface, or, if this is not available, a well maintained grassy area.
- Gently sloping to assist in draining water and material away from the vehicle or equipment. Care should be taken to ensure that localized erosion will not be created.
- At least 30m away from any watercourse, water body and natural vegetation.
- Large enough to allow for adequate movement of larger vehicles and equipment.

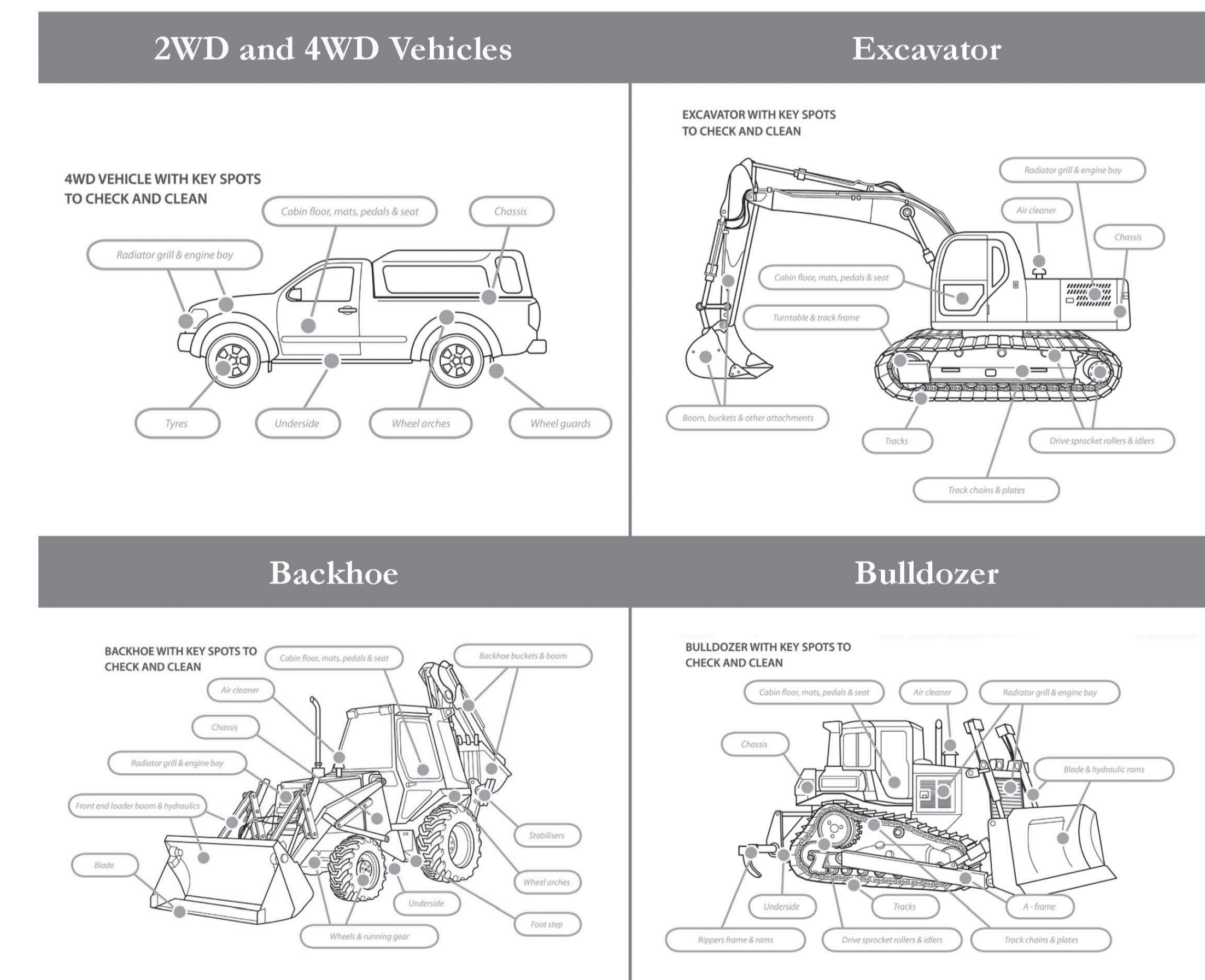
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## Equipment Required

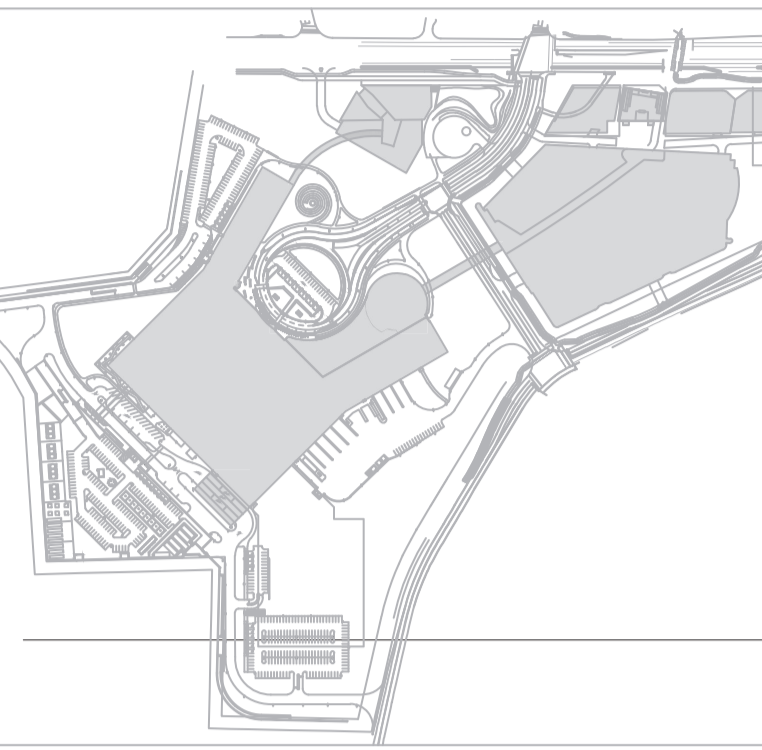
- A pump and high pressure hose OR High pressure water unit
- Air compressor and blower OR Vacuum
- Shovel
- Pry bar
- Stiff brush or broom

## Final Inspection Checklist

- No clods of dirt should be visible after cleaning.
- Radiators, grills and the interiors of vehicles should be free of accumulations of seed, soil, mud and plant material parts including seeds, roots, flowers, fruit and or stems.



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## THE OTTAWA HOSPITAL - CIVIC CAMPUS REDEVELOPMENT



PRELIMINARY  
NOT FOR CONSTRUCTION

Project Manager	MH
Project Designer	JEG
Project Architect	MJ Fahs
Landscape Architect	Civil Engineer
Structural Engineer	ENV
Mechanical Engineer	Smith + Anderson
Electrical Engineer	Smith + Anderson
Plumbing Engineer	Smith + Anderson
Interior Designer	Collins
Equipment Planner	
Wayfinding	

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	2023-04-14	ISSUED FOR SPIC & FLUETA APPROVAL
	2023-07-25	RE-ISSUED FOR SPIC & FLUETA APPROVAL
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	2023-09-29	ISSUED FOR COSTING
	2023-10-06	FLUETA - ADVANCED WORKS
	2023-10-27	ISSUED FOR MCH 3a.3
	2024-02-05	ISSUED FOR TENDER - ADVANCED WORKS
	2024-02-29	ISSUED FOR RFP 1.0
	2024-03-07	ISSUED FOR TENDER
	2024-03-22	ISSUED FOR CONSTRUCTION

Project Number: 10333982  
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## CLEAN EQUIPMENT PROTOCOL

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