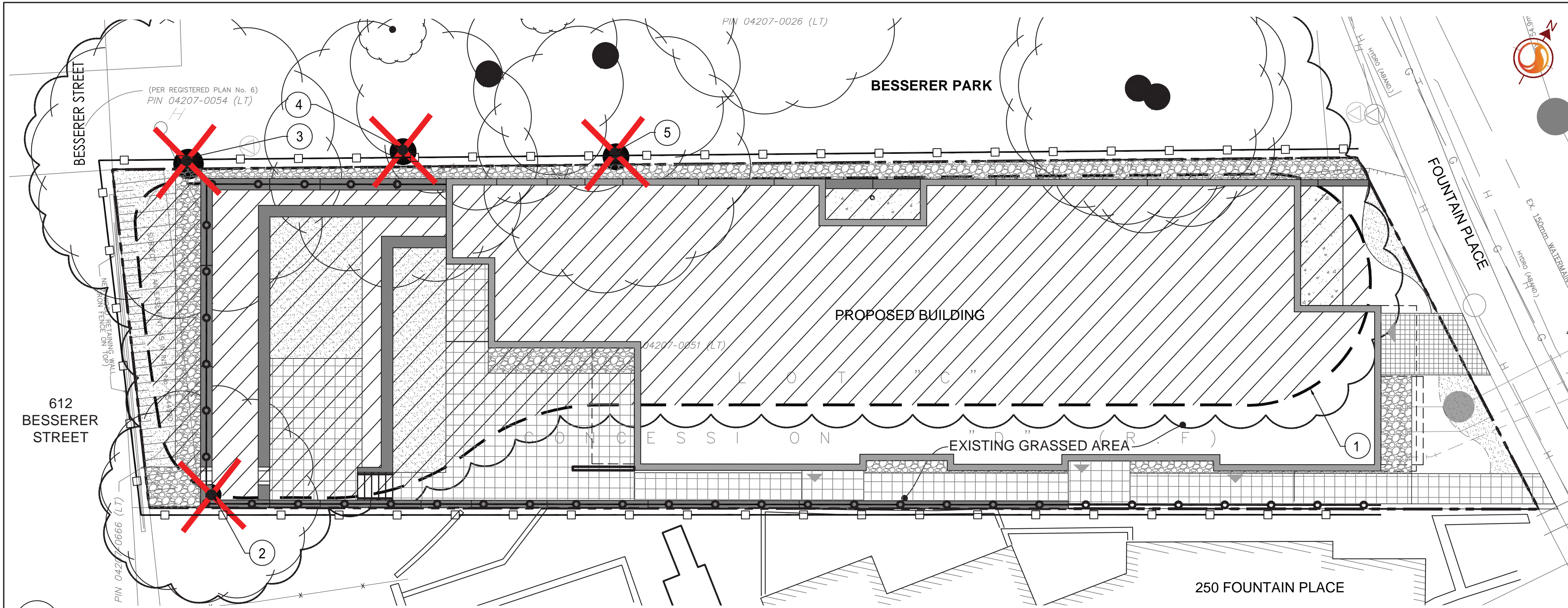
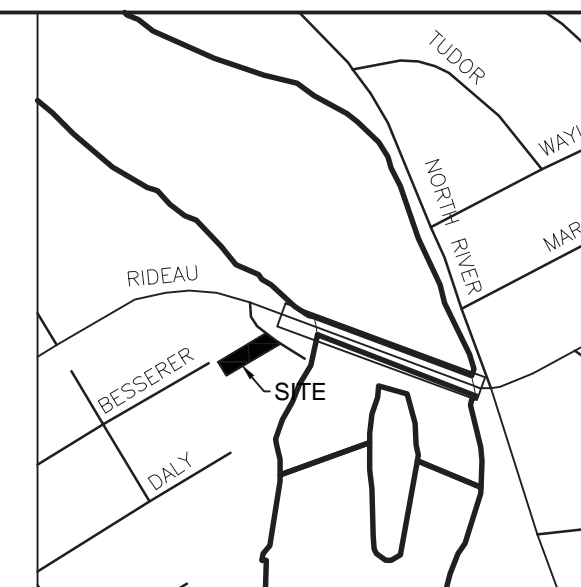


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TREE PRESERVATION NOTES

- NO TREES SHALL BE REMOVED WITHOUT THE CITY OF OTTAWA WRITTEN APPROVAL AS DEEMED UNDER BY-LAW NUMBER 2009-200.
- NO VEGETATION REMOVAL SHALL OCCUR BETWEEN APRIL 15 AND AUGUST 15 OF ANY YEARS TO PROTECT BREEDING MIGRATORY BIRDS, AS WELL AS AT RISK BAT SPECIES. SHALL TREE REMOVAL DURING THIS PERIOD BY UNAVOIDABLE, THE CONTRACTOR IS REQUIRED TO CONDUCT A NESTING SURVEY BY A REGISTERED PROFESSIONAL AVIAN BIOLOGIST TO IDENTIFY AND ENSURE NO NESTING ACTIVITIES ARE PRESENT. TREE REMOVAL WILL BE ALLOWED WITHIN FIVE (5) DAYS OF CONDUCTING THE SURVEY.
- CONTRACTOR SHALL ENSURE THE PROTECTION OF MATURE TREES IDENTIFIED TO BE RETAINED. TREE PROTECTION FENCING SHALL BE INSTALLED 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 CENTIMETRE OF TRUNK DIAMETER AT BREAST HEIGHT (DBH). THE CRZ IS CALCULATED AS DBH X 10 CM. TREE PROTECTION FENCING SHALL BE INSTALLED AS SPECIFIED ON DETAIL 21.101.
- DURING EXCAVATION EQUIPMENT MUST BE MAINTAINED WITHIN THE CONFINES OF THE WORK AREA SO AS NOT TO DISRUPT ANY TURF OR TREE ROOTS UNNECESSARILY. DO NOT PLACE ANY MATERIAL OR EQUIPMENT WITHIN THE CRITICAL ROOT ZONE (CRZ) OF ANY TREE TO BE RETAINED.
- CONTRACTOR SHALL ENSURE THAT NO FILL WILL BE ALLOWED TO OCCUR ON THE SURFACE ABOVE THE CRITICAL ROOT ZONE (CRZ) OF TREES.
- ALL EXCAVATED MATERIAL, INCLUDING IMPORTED MATERIAL, MUST BE REMOVED IMMEDIATELY AND NOT PLACED ON GRASS OR NEAR TREES IN ORDER TO PREVENT ROOT DAMAGE. ACCESS TO HITTING OF ADJACENT TREES, AND TURF DAMAGE OUTSIDE OF WORK AREA.
- CONTRACTOR SHALL MINIMIZE SOIL COMPACTION BY KEEPING OPERATION OF MACHINERY AND EQUIPMENT CONFINED TO DESIGNATED WORK AREA.
- CONTRACTOR SHALL KEEP A SPILL KIT ON SITE.
- CONTRACTOR SHALL DEVELOP AN EMERGENCY RESPONSE PLAN.
- CONTRACTOR SHALL AVOID SOIL CONTAMINATION AND FUTURE LIABILITY BY CONFINING THE OILING AND REFUELING OF MACHINERY AND EQUIPMENT TO DESIGNATED STAGING AREA.
- NO FUEL IS TO BE STORED WITHIN THE CRITICAL ROOT ZONE (CRZ) OF ANY TREE AND EXHAUST FUMES FROM ALL EQUIPMENT MUST NOT BE DIRECTED TOWARDS ANY TREE'S CANOPY.
- CONTRACTOR SHALL PREVENT ANY DAMAGE TO THE ROOT SYSTEM, TRUNK OR BRANCHES OF ANY TREES TO BE RETAINED ON SITE AND ON ADJACENT PROPERTIES.
- STORAGE OF EQUIPMENT AND VEHICLES WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES IS STRICTLY PROHIBITED.

Legend

- EXISTING SIGNIFICANT TREE
- EXISTING WOODED AREA
- EXISTING VEGETATION ID
- EXISTING TREE TO BE REMOVED
- EXISTING VEGETATION GROUPING TO BE REMOVED
- PROPOSED CONCRETE UNIT PAVERS
- PROPOSED CONCRETE
- PROPOSED RIVERSTONE
- PROPOSED TEMPORARY TREE PROTECTION FENCE
- PROPERTY LINE

1 TREE PRESERVATION PLAN
1:100

RETENTION QUALITIES

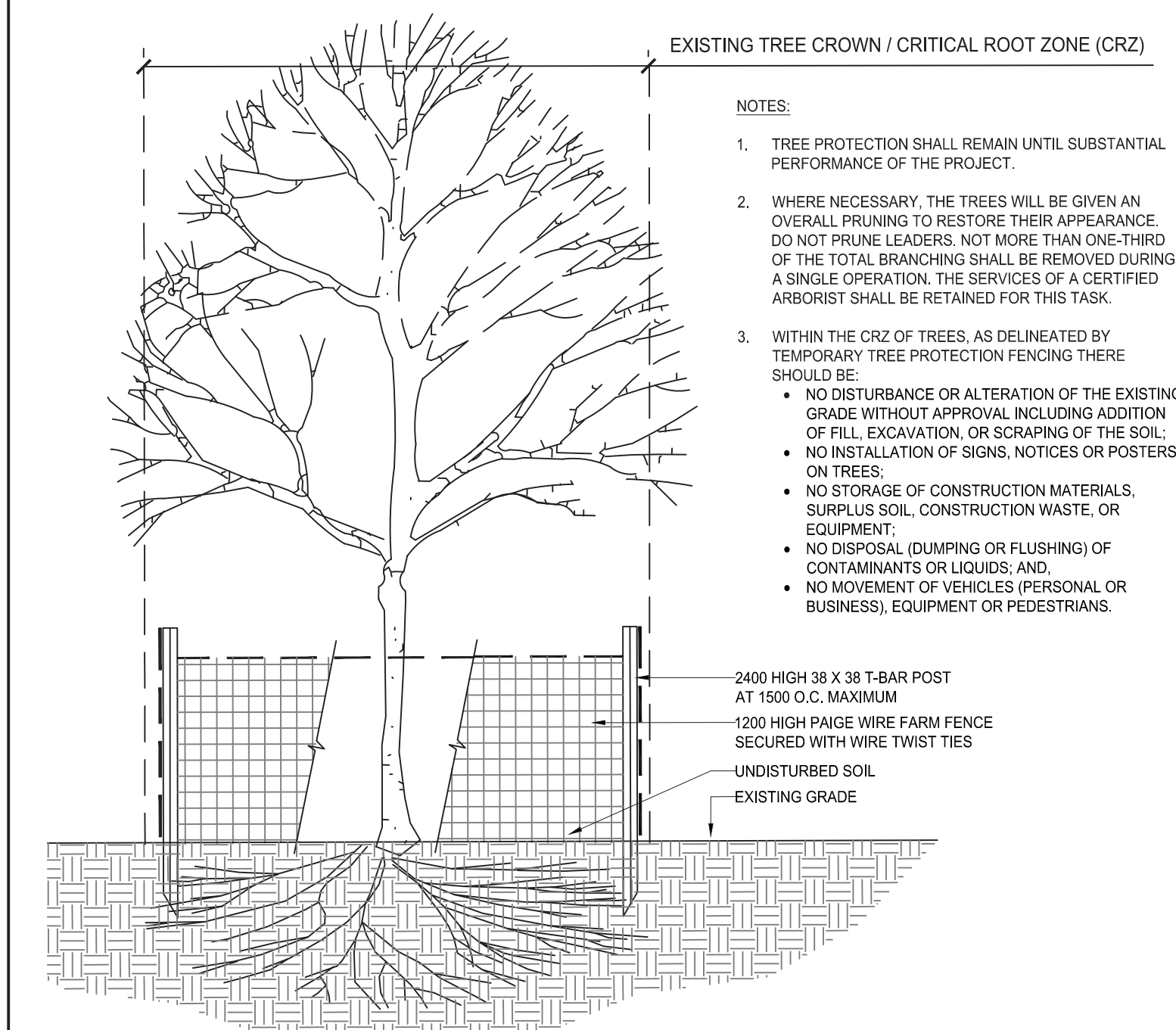
PLANT ID	REMARKS	SUITABILITY FOR RETENTION
<i>Acer negundo</i> / Manitoba maple	Invasive species. Branches have tendency to lean and break easily.	Moderate to Poor
<i>Acer platanoides</i> / Norway maple	Invasive species. Tolerant to poor soils, compaction and pollution. Once established, Norway maples form a dense forest canopy that shades out other species. The seedlings, which are shade tolerant, can form a thick mat on the forest floor that will further limit regeneration of other species.	High
<i>Rhamnus spp.</i> / Buckthorn	Invasive species.	Not recommended
<i>Ulmus americana</i> / American elm	Tolerant to some fill. Root system is tolerant of excavation works. Sensitive to Dutch elm disease.	Moderate to Poor

EXISTING VEGETATION SCHEDULE

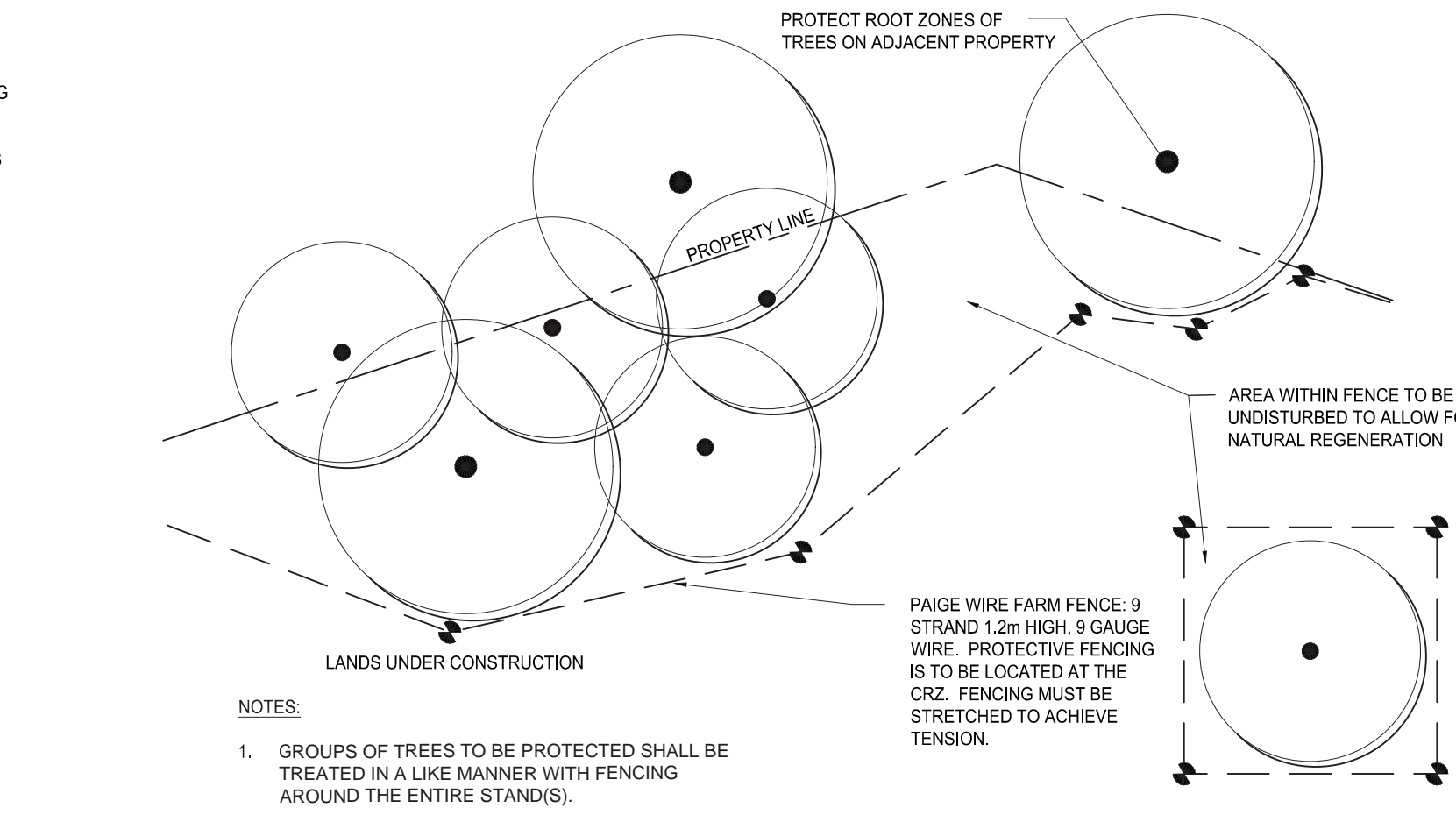
TREE ASSESSMENT CONDUCTED APRIL 20, 2016 and June 22, 2017 (Butternut trees)

PLANT ID	BOTANICAL NAME / COMMON NAME	DIAMETER AT BREAST HEIGHT (cm)	HEALTH CONDITION	REMARKS
1	<i>Acer negundo</i> / Manitoba Maple - 45% <i>Acer platanoides</i> / Norway Maple - 45% <i>Rhamnus cathartica</i> / Buckthorn - 7.5% <i>Ulmus americana</i> / American Elm - 2.5%	15-25	Good to Poor	GROUPING; Trees located closer to Fountain Place are generally in good health condition with stressed and damaged trees being at the back of the property near 612 Besserer Street; GROUPING TO BE REMOVED
2	<i>Acer negundo</i> / Manitoba Maple	50	Good	Tree is located on or close to the property line; TO BE REMOVED
3	<i>Acer negundo</i> / Manitoba Maple	3 x 50	Good	Multi-stem (3 stems); Canopy extends over Besserer Street and Besserer Park; Tree is located on or close to the property line; TO BE REMOVED
4	<i>Acer negundo</i> / Manitoba Maple	60; 30; 20	Good	Multi-stem (3 stems); Tree is located on or close to the property line; TO BE REMOVED
5	<i>Acer negundo</i> / Manitoba Maple	50	Good	Tree is located on or close to the property line; TO BE REMOVED
B1 to B9	<i>Juglans cinerea</i> / Butternut	n/a	Good	Besserer Park; Planted saplings
B10	<i>Juglans cinerea</i> / Butternut	6	Fair	Besserer Park; Located more than 50m from property; Category 1; Twig and branch dieback; 70% Live Crown
B11	<i>Juglans cinerea</i> / Butternut	3	Fair	Besserer Park; Located more than 50m from property; Category 2; twig dieback; 90% Live Crown
B12	<i>Juglans cinerea</i> / Butternut	23	Good	Besserer Park; Located within 50m from property; Category 3; 100% Live Crown
B13	<i>Juglans cinerea</i> / Butternut	17	Fair	Besserer Park; Located within 50m from property; Category 2; Twig dieback; 80% Live Crown
B14	<i>Juglans cinerea</i> / Butternut	11	Poor	Besserer Park; Located within 50m from property; Category 1; Twig dieback; Heavily cankered; 80% Live Crown

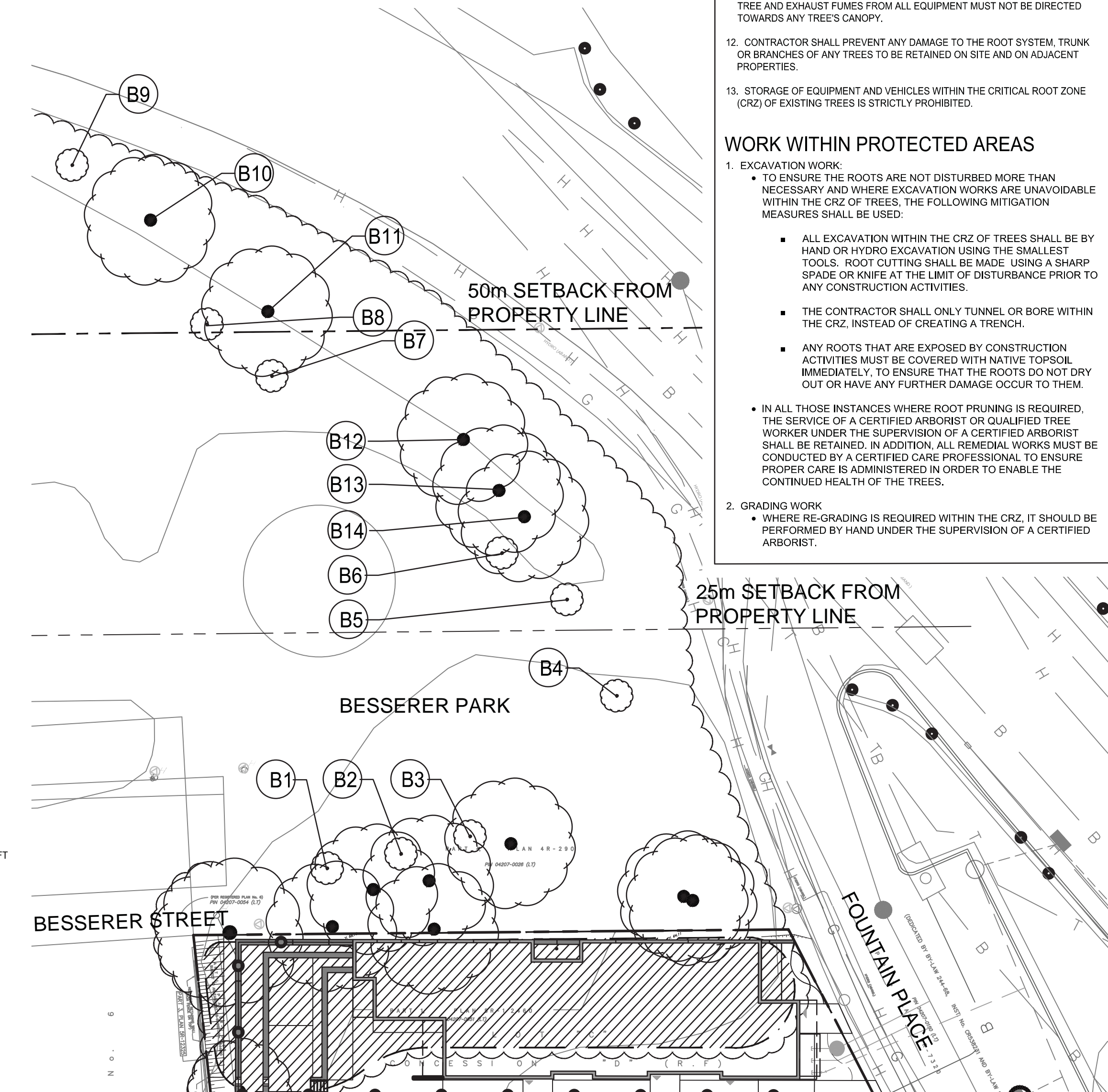
NOTE:
1. LOCATION OF TREES 2 TO 5 IS FOR REFERENCE ONLY AND SHALL BE CONFIRMED BY AN ARBORIST AND SURVEYOR.
2. DATA RELATED TO BUTTERNUT TREES WERE PROVIDED BY ANDREW BOYD, CONSULTING URBAN FORESTER WITH IFS ASSOCIATES INC.



2 TEMPORARY TREE PROTECTION FENCE - SECTION
N.T.S.



3 TEMPORARY TREE PROTECTION FENCE - GROUPING OF TREES
N.T.S.



4 BUTTERNUT TREES IN BESSERER PARK
1:300

WORK WITHIN PROTECTED AREAS

- EXCAVATION WORK:
 - TO ENSURE THE ROOTS ARE NOT DISTURBED MORE THAN NECESSARY AND WHERE EXCAVATION WORKS ARE UNAVOIDABLE WITHIN THE CRZ OF TREES, THE FOLLOWING MITIGATION MEASURES SHALL BE USED.
 - ALL EXCAVATION WITHIN THE CRZ OF TREES SHALL BE BY HAND OR HYDRO EXCAVATION USING THE SMALLEST TOOLS. ROOT CUTTING SHALL BE MADE USING A SHARP SPADE OR KNIFE AT THE LIMIT OF DISTURBANCE PRIOR TO ANY CONSTRUCTION ACTIVITIES.
 - THE CONTRACTOR SHALL ONLY TUNNEL OR BORE WITHIN THE CRZ, INSTEAD OF CREATING A TRENCH.
 - ANY ROOTS THAT ARE EXPOSED BY CONSTRUCTION ACTIVITIES MUST BE COVERED WITH NATIVE TOPSOIL IMMEDIATELY TO ENSURE THAT THE ROOTS DO NOT DRY OUT OR HAVE ANY FURTHER DAMAGE OCCUR TO THEM.
 - IN ALL THOSE INSTANCES WHERE ROOT PRUNING IS REQUIRED, THE SERVICE OF A CERTIFIED ARBORIST OR QUALIFIED TREE WORKER UNDER THE SUPERVISION OF A CERTIFIED ARBORIST SHALL BE RETAINED. IN ADDITION, ALL REMEDIAL WORKS MUST BE CONDUCTED BY A CERTIFIED CARE PROFESSIONAL TO ENSURE PROPER CARE IS ADMINISTERED IN ORDER TO ENABLE THE CONTINUED HEALTH OF THE TREES.
- GRADING WORK:
 - WHERE RE-GRADING IS REQUIRED WITHIN THE CRZ, IT SHOULD BE PERFORMED BY HAND UNDER THE SUPERVISION OF A CERTIFIED ARBORIST.

Revision	By	Appd.	YY.MM.DD	
4	REVISED SITE PLAN	LZ	IL	18.10.26
3	ADDED BUTTERNUT TREE LOCATION	IL	IL	17.06.23
2	REVISED SITE PLAN	IL	IL	17.01.23
1	ISSUED TO SITE PLAN CONTROL APPROVAL	BD	IL	16.10.19

Permit-Seal



Client/Project
TC UNITED GROUP

244 FOUNTAIN PLACE

OTTAWA, ON

Title
TREE PRESERVATION PLAN

Project No. 160401234
Drawing No. 160401234
Scale 1:100
Sheet
Revision