



COHEN & MASTERTM

TREE AND SHRUB SERVICES

ARBORIST REPORT & TREE PROTECTION PLAN

217 - 227 CROSS AVENUE
&
571 ARGUS ROAD
OAKVILLE, ON
L6J 2W9

Date: March 30, 2022

Cohen and Master Tree and Shrub Services Ltd.

42 Guardsman Road
Thornhill, Ontario, L3T 6L4
416-932-0622

Adam Walicki, B.ENVD. E.E.T.
ISA Certified Arborist - ON 2490A
adam@cmtrees.com

42 Guardsman Road - Thornhill, Ontario, L3T 6L4 - 416-932-0622 – info@cmtrees.com

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METHODOLOGY

Tree Diameter Measurements: All relevant trees were sized by measuring their trunk diameter at 1.4 meters above existing grade, diameter at breast height (DBH) as per accepted arboricultural standards.

Tree Condition: A generalized assessment system was employed to describe the overall condition of tree health categories for each inventoried tree. A three (3) level scale from “Good”, “Fair”, and “Poor”, was used to quantify the range of tree conditions. “Good” condition refers to the tree health category being greater than eighty (80) percent of a perfect specimen. “Fair” condition refers to a category condition that is less than eighty (80) percent but more than twenty (20) percent. “Poor” refers to a tree health category that is less than twenty (20) percent.

Tree #: Refers to the tree number on the tree assessment plan.

Common Name: The common name for each tree inventoried.

Botanical Name: The botanical name for each tree inventoried.

Diameter: Refers to diameter (in centimeters) measured at 1.4m (diameter at breast height (DBH)) above finished grade.

Canopy Spread: Refers to the average distance of the canopy from the longest drip line points of the canopy measured in meters.

Root Zone (R.Z.): This is a tree health category to assess the growing conditions within the root zone of the tree. It is measured on a scale of Good, Fair, Poor.

Trunk Integrity (T.I.): This is a tree health category to assess the trunk condition of the tree for any defects or weaknesses or other notable issues. It is measured on a scale of Good, Fair, Poor.

Canopy Structure (C.S.): This is a tree health category to assess the overall shape and condition of the tree canopy, including scaffold and other branch conditions. This is also measured on a scale of Good, Fair, Poor.

Canopy Vigour (C.V.): This is a tree health category to assess the canopy health of the tree, including the amount of deadwood, dieback and live growth in the canopy as compared to a 100% healthy tree. The size, colour and amount of foliage are also considered in this category. It is measured on a scale of Good, Fair, Poor.

Minimum Tree Protection Zone (TPZ): Minimum Tree Protection Zone (TPZ) as recommended by Town of Oakville. This distance is based on the diameter of the tree at breast height and the tree protection zone is measured from the trunk outwards.

Site Plan Recommendations

preserve: The TPZ of the tree will be fully protected (based on the TPZ requirements) during demolition and construction activities and will remain unaltered throughout the duration of demolition and construction. No permit is required.

INJURY (P): Any situation where the TPZ of the tree cannot be maintained and will be encroached upon, but the tree will not sustain injuries severe enough to compromise long-term health and structural stability. This includes situations where the movement of machinery or storage of materials would require disturbance within the TPZ. Measures to mitigate damage to the root zone and canopy (pruning, root exploration, soil de-compaction, mulching, fertilizing, etc.) may be recommended. A tree injury permit is required.

REMOVE (P): Any tree that is over 15cm in diameter but is not dead, that requires a permit from the city for removal. This includes trees significantly impacted by proposed construction which would sustain an unacceptable level of injury that would be unavoidable and likely cause long-term health and structural defects. A tree removal permit is required.

remove: Any tree that is dead, or that does not require a permit for removal. This also applies to trees less than 15cm in diameter that do not require a permit for removal.

Specifications for Tree Protection Hoarding/Fencing

It is necessary to protect all trees designated for preservation during both demolition and construction activities. This tree protection can be accomplished by installing tree protection hoarding or tree protection fencing (TPH or TPF). The TPZ for non-ravine trees is based on the DBH of the tree, and is 6cm TPZ diameter for every 1cm of tree diameter.

Tree Protection Hoarding should be comprised of plywood mounted on 2 x 4" wood frame (or t-bar if specified). Tree Protection Fencing should be comprised of orange plastic construction web fencing on 2 x 4" wood frame (or t-bar if specified). Horizontal Root Protection Hoarding should be comprised of root armour, plywood sheets (for soft surfaces), steel plate (for hard surfaces), and coarse wood chips.

Minimum Tree Protection Zones

Trunk Diameter (DBH)	Minimum Protection Zone
<10 cm	1.2m
10-29 cm	1.8 m
30-40 cm	2.4 m
41-50 cm	3.0 m
51-60 cm	3.6 m
61-70 cm	4.2 m
71-80 cm	4.8 m
81-90 cm	5.4 m
91-100 cm	6.0 m
< 100 cm	6cm per 1cm DBH

Tree Replanting

Any private tree that is removed for the purpose of construction or land development will require a compensation replanting. These trees must be 50 to 60mm in caliper and maintained in good condition. Supplemental watering may be required during the drier periods of the year, especially during the first two (2) or three (3) years after planting.

TREE REPLACEMENT AS THE CONDITION OF PRIVATE TREE REMOVAL PERMIT	
Diameter at Breast Height (DBH) in cm	Number of replacement trees
First tree 15-24	1
15-24	2
25-34	3
35-44	4
45-54	5
55-64	6
65-74	7
75-84	8
85-94	9
95-104	10
105-114	11
>115	12

Tree Protection Signs

A Tree Protection sign should be displayed on the tree protection fencing/hoarding to inform/remind the contractors and public of the tree protection measures in place.

SUMMARY

Cohen and Master Tree and Shrub Services have been retained to prepare this Arborist Report and Tree Protection Plan for demolition and construction at 217 - 227 Cross Avenue and 571 Argus Road, Oakville. The tree assessment was completed on November 3, 2021 according to the requirements set forth by the Town of Oakville.

The purpose of this report is to assess trees at and adjacent to 217 - 227 Cross Avenue and 571 Argus Road, that are 15cm in diameter or larger, and trees within 6m of proposed demolition and construction. The following outlines trees to be preserved and removed, with recommendations. Tree Protection Fencing should be installed prior to any demolition or construction activities as outlined.

SUMMARY OF TREES INVENTORIED

The following tables summarize findings and recommendations of trees inventoried.

TREES TO BE PRESERVED					
Tree #	Tree Species	DBH (cm)	Overall Tree Condition	Minimum Tree Protection Zone	Site Plan Results
1	Norway Maple	29	Fair	1.8m	preserve
2	Norway Maple	28	Fair	1.8m	preserve
3	Norway Maple	30	Fair	2.4m	preserve
4	Norway Maple	21	Fair	1.8m	preserve
5	Norway Maple	32	Fair	2.4m	preserve
8	Apple	14	Fair	1.8m	preserve
9	Poplar	37	Fair	2.4m	preserve
19	Austrian Pine	22	Good	1.8m	preserve
20	Austrian Pine	31	Good	2.4m	preserve
21	Service Berry	9	Good	1.2m	preserve
22	Honey Locust	49	Good	3.0m	preserve
23	Red Maple	11	Good	1.8m	preserve
40	Norway Maple	26	Fair	1.8m	preserve
41	Honey Locust	12	Fair	1.8m	preserve
42	English Oak	10	Good	1.2m	preserve
43	Little-leaf Linden	11	Good	1.8m	preserve
44	Norway Maple	30	Poor	2.4m	preserve
TOTAL TREES TO BE PRESERVED = 17					

TREE REMOVALS UNDER 15cm DBH				
Tree #	Tree Species	DBH (cm)	Overall Tree Condition	Site Plan Results
6	Siberian Elm	9	Fair	remove
10	American Elm	9	Fair	remove
11	Staghorn Sumac	13	Fair	remove
12	Siberian Elm	10	Fair	remove
14	Siberian Elm	4 to 12	Fair	remove
15	Siberian Elm	13	Fair	remove
16	Honey Locust	6	Fair	remove
17	Honey Locust	8	Fair	remove
18	Blue Spruce	7	Fair	remove
38	Siberian Elm	11	Fair	remove
47	Red Maple	7,10,10	Good	remove
51	Staghorn Sumac	11	Fair	remove
53	Red Maple	5,6,10,10,10	Good	remove
54	Red Maple	8,8,9,11	Fair	remove
TOTAL TREE REMOVALS UNDER 15cm DBH = 14				

TREE REMOVALS OVER 15cm DBH					
Tree #	Tree Species	DBH (cm)	Overall Tree Condition	Site Plan Results	Replacement Trees Required
7	Siberian Elm	18	Fair	REMOVE (P)	1
13	White Mulberry	14,15,17,22,23	Fair	REMOVE (P)	2
24	White Mulberry	12,14,16,21,22	Fair	REMOVE (P)	2
25	Austrian Pine	40	Good	REMOVE (P)	4
26	Austrian Pine	41	Fair	REMOVE (P)	4
27	Siberian Elm	21,44	Fair	REMOVE (P)	4
28	Siberian Elm	36	Fair	REMOVE (P)	4
29	Scots Pine	23	Good	REMOVE (P)	2
30	Austrian Pine	22	Good	REMOVE (P)	2
31	Austrian Pine	25	Good	REMOVE (P)	3
35	Siberian Elm	21,29	Poor	REMOVE (P)	3
36	Siberian Elm	14,15,18,20,24	Poor	REMOVE (P)	2
45	Red Maple	8,14,15,15	Good	REMOVE (P)	2
46	Red Maple	24,24	Good	REMOVE (P)	2
48	Red Maple	12,15,18,24	Good	REMOVE (P)	2
52	Amur Maple	18,29	Good	REMOVE (P)	3
TOTAL TREE REMOVALS = 16					TOTAL: 42

TOWN OF OAKVILLE OWNED TREE REMOVALS OVER 15cm DBH					
Tree #	Tree Species	DBH (cm)	Overall Tree Condition	Site Plan Results	Replacement Trees Required
32	White Mulberry	35	Fair	REMOVE (P)	4
33	White Mulberry	12,13,15	Fair	REMOVE (P)	2
34	Austrian Pine	27	Fair	REMOVE (P)	3
37	Norway Maple	16	Fair	REMOVE (P)	2
39	Norway Maple	18	Fair	REMOVE (P)	2
49	Crimson Norway Maple	20	Fair	REMOVE (P)	2
50	Norway Maple	21	Poor	REMOVE (P)	2
55	Norway Maple	19	Poor	REMOVE (P)	2
TOTAL TREE REMOVALS = 8					TOTAL: 19

CONCLUSION AND RECOMMENDATIONS

TREE REMOVALS

Due to the proposed demolition and building construction throughout the properties and the condition of many of the trees, my client will require the removal of sixteen (16) privately owned trees over 15cm DBH, as well as eight (8) Town of Oakville owned Trees. As a result of the removal of these trees, my client is required to plant sixty-one (61) deciduous trees of 50mm caliper or greater as compensation on the subject site and city property upon completion of construction. The species, quantities, and planting locations of the compensation trees will be included in the landscape design phase of the project. An application to remove these trees will have to be submitted to the Town of Oakville.

Additionally, due to the proposed demolition and building construction throughout the properties and the condition of many of the trees, my client will be removing fourteen (14) privately owned trees under 15cm DBH. These trees do not require a permit for removal.

TREES TO BE PROTECTED

Tree protection fencing should be installed prior to any demolition or construction activities. Trees specified to be protected and preserved will be protected with 1.2m high orange plastic tree protection fencing on 2 x 4" wood frame or as otherwise specified by Town of Oakville.

ROOT ZONE/SOIL RESTORATION/PLANT HEALTH CARE

For all existing trees to remain and for newly planted trees, root zone/soil restoration includes soil aeration, decompaction, and the addition of mycorrhizae and other organics. This will increase the likelihood of compensatory roots growing to increase the health/stability of trees and landscape plants, as well as helping newly planted trees and landscape plants health and recovery. The following recommendations are for preparing and remediating soils to promote healthy rooting environments.

Air Spade

The Air Spade System is a specialized pneumatic air tool with a supersonic nozzle that is strong enough to blow away soil from roots, but is gentle enough not to harm the roots. This system can be used for both root exploration and for soil renovation. Typically for Air Spading around tree roots, a maximum air stream pressure of 100 pounds per square inch (PSI) is utilized to minimize damage to the root bark. The process of air spading soil helps with soil decompaction and aeration, while minimizing damage to existing root systems. This results in increased viable rooting areas for existing trees and new landscape plants.

Vertical Mulching

Vertical mulching is process of making a grid pattern of holes and back filling them with our custom compost mix. This will reduce soil compaction and improve soil structure and chemistry and improve water drainage. Tree roots respond very well to this process, having room to grow and nutrients to take advantage of. This is hugely beneficial for overall tree health. This process works well on lawns as it only makes a small hole on the surface and grass will grow in over the top onto the nutrient rich compost.

Inoculating Trees and Landscape Plants

It is recommended that the new topsoil be drenched with ArborGain and mycorrhizal solution. This allows for spores to be transported in the water suspension that comes in contact with new emerging root grow. These spores will germinate and attach to developing root tips and finer roots. The goal of inoculating trees and new landscape plants is to bring the mycorrhizal spores in contact with the root system efficiently, and to promote new root growth. It may take several applications to successfully inoculate a large/established root system. With large caliper trees, the root system will be at least 25% wider in diameter than the canopy of the tree. This makes inoculating the entirety of an established root system a considerable challenge. However, existing trees and new landscape plants will always benefit from any new mycorrhizal symbiosis, therefore repeated inoculations will always be beneficial.

Construction Activities and Excavation Around Trees and Landscape Plants

Any soil disturbances around existing trees and landscape plants will result in damages to root systems. Damaged roots will begin recovery by producing a new phase of emerging root tips and root hairs where root systems have been stripped of fine roots. These areas of root damage and disturbance are the ideal location where new mycorrhizal symbiosis will be of greatest benefit. A thorough drenching of ArborGain will be of greatest benefit in such circumstances.

Compacted Soils for Established Trees and Landscape Plants

Remediation and decompaction of soils often requires air-spading and vertical mulching. These procedures are both necessary and recommended to help remediate rooting environments. However, both activities will damage/strip fine roots or break lateral roots. Inoculating with ArborGain will assist the roots in their recovery from these necessary but disruptive procedures. When the root systems of established trees and landscape plants do recover, the result is a larger available rooting area for roots to establish and grow.

ArborGain

ArborGain is a custom mix of humates, sea kelp and microbial food sources. Applied to the soil within the landscape, ArborGain stimulates root development, increases drought tolerance and improves soil health. Applied directly to the foliage, ArborGain improves cell structure of the leaf and boosts canopy health.

Kelp: These underwater forests of the ecosystem host a whopping 70 vitamins and minerals at their disposal. Kelp packs a powerhouse of macro & micronutrients, trace elements and natural growth hormones that allow plants to thrive, grow healthier and stronger with heightened growth rates, and boosts the plants immune system to ward off diseases and pests.

Humic Acid: Comprised of plant and animal matter found deep in the earth's crust, this pre-historic, fossilized by-product is known as Humic Acid. It naturally enhances biomass production (plant growth), increases water holding capacity and optimizes the nutrient supply of plants (especially Iron which is also readily available in ArborGain) just to name a few of its benefits.

Yucca: These hearty desert plants are used to dealing with drought and overall stress on an astronomical level. By feeding your crops, trees and turf the harvested yucca, those benefits of combatting weather stress are passed along to crops, trees and turf. Yucca also makes water more readily available for plants, reduces salt build-up and improves root growth.

TREE PRESERVATION AND PLANT HEALTH CARE FOR CONSTRUCTION AROUND TREES

Current ISA Best Management Practices for preserving trees in close proximity to construction activities indicate that trees should not be fertilized during construction or following the first year of construction activities. This is due to urban soils often being sterile and compacted, reducing water and nutrient uptake and causing a built up of fertilizer salts that may burn roots and reduce water uptake by the tree.

Therefore, we recommend saturating the soils around trees with ArborGain, and applying a layer of wood chips that are soaked with ArborGain to provide a slow release food source to help the tree during and after construction. This will stimulate microbial soil activity and root development, and provide a carbohydrate food source for trees to increase vigor and foliage growth. This will also help alleviate some tree stress due to construction activities, and increase drought tolerance. Individual tree needs should be assessed by a qualified arborist prior to construction and in addition to tree health and condition, soil analysis is also recommended to determine soil health and condition.

Pre-construction Phase

The following tree preservation measures should occur prior to construction:

- Tree Protection Hoarding/Fencing should be installed and be in place prior to demolition and construction activities.
- All contractors should be informed of the tree preservation measures and guidelines and any questions or inquiries should be addressed before demolition and construction begins.
- Trees that are proposed for removal (and after receiving the appropriate removal permits) should be removed prior to demolition and construction activities.
- Trees that are to be preserved should be properly pruned prior to construction.
- Watering within the Tree Protection Zones may be required during drought periods or as the season dictates.
- If injury should occur to retained trees during construction, the consulting arborist should re-evaluate the trees so that appropriate treatments can be recommended and performed.
- No excavation or demolition should occur until all tree preservation requirements have been met.
- These recommendations should be used as a minimum requirement for the survival of the retained trees and the consulting arborist should be included in all decisions regarding activities in and around Tree Protection Zones.

Construction Phase

The following tree preservation measures should occur during construction:

- Maintain and respect Tree Protection Zone (TPZ) fencing and Tree Protection Guidelines throughout each construction phase. Do not store or dump materials in the TPZ area.
- Branches that are required to be pruned during construction for clearance, should be done so by a qualified Arborist.
- Watering within the TPZ's may be required during dry periods.

- Preserved trees should be monitored by a qualified Arborist to evaluate construction injury/stress and make recommendations if necessary.

Post-Construction Phase

The following tree preservation measures should occur after construction:

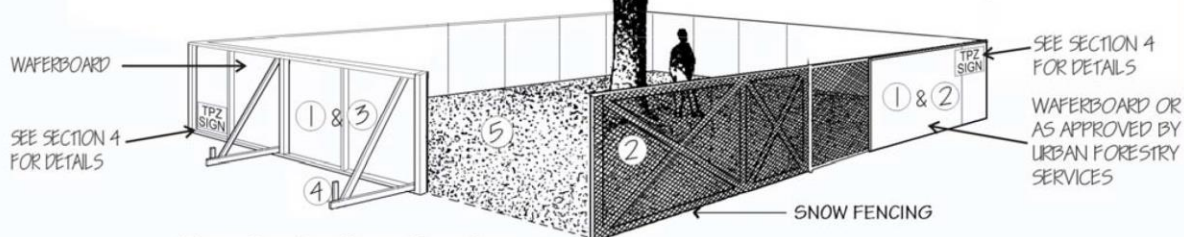
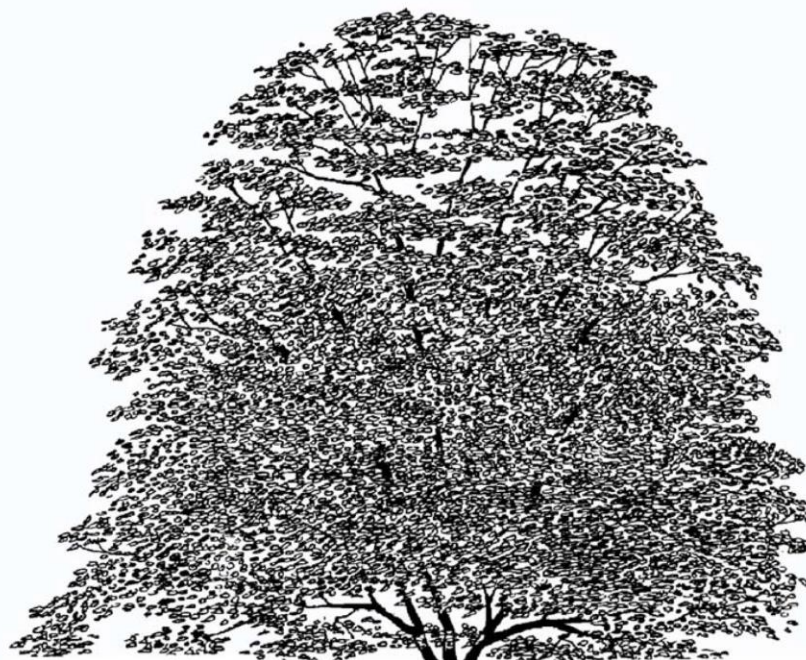
- Remove Tree Protection Fencing/Hoarding only after receiving permission.
- Continue watering trees if necessary.
- Supplemental soil care and fertilization if required.
- Post-construction monitoring of all trees by a qualified Arborist.

Post-Construction Monitoring

Construction injury to trees may not be immediately apparent and could take several years to become evident. All preserved trees should be inspected by a qualified Arborist on a semi-annual basis for a period of up to 2 years to monitor any tree health related issues as they occur and take appropriate measures.



SCHEDULE 1 TREE PROTECTION BARRIER



Tree Protection Barriers

PLYWOOD

- ① Tree protection barriers must be 1.2m (4ft) high, waferboard hoarding or an equivalent approved by Urban Forestry Services.
- ② Tree protection barriers for trees situated on the Town road allowance where visibility must be maintained can be 1.2m (4ft.) high and consist of plastic web snow fencing on a wood frame made of 2"x 4"s .
- ③ Where some excavate or fill has to be temporarily located near a tree protection barrier, plywood must be used to ensure no material enters the Tree Protection Zone.
- ④ All supports and bracing should be outside the Tree Protection Zone. All such supports should minimize damaging roots outside the Tree Protection Barrier.
- ⑤ No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.

LIMITATIONS OF ASSESSMENTS

It is the policy of Cohen and Master Tree and Shrub Services to attach the following clause in regards to limitations. This is to ensure that the client is fully aware of what is technically and professionally realistic in the preservation and assessment of trees in the urban environment.

The assessment of the trees in this report has been done in conjunction with and according to accepted arboriculture methods and techniques. These include an examination of the above ground parts of the tree for structural defects, scars, cracks, the overall condition of the root structures, the severity and direction of lean (if any), the general condition of the trees and the surrounding environment, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, symptoms of infestation and pathogens, discoloured foliage, and the proximity of potential targets should a tree fail. Except where specifically noted, the trees were not cored, probed or climbed and there was no detailed inspection of the root crowns involving excavations, or samples taken to be scientifically tested.

Notwithstanding the recommendations and conclusions presented in this report, it must be acknowledged that trees are living organisms. They are not immune to changes in site conditions, dramatic weather events or seasonal variations in climate. Therefore it should always be recognized that trees are ever evolving and their health and vigour constantly vary over time. While all reasonable efforts have been made to ensure that the subject trees are healthy, no guarantees are offered or implied that these trees or part(s) of any trees will remain intact.

It is professionally and practically impossible to predict with absolute certainty the behaviour of any tree or its component parts under all circumstances and variables. Most trees have the potential for failure under adverse weather conditions and the risk can only be completely eliminated if the tree is removed. Inherently, a standing tree will always pose some level of risk. Although every effort has been made to ensure that this assessment is reasonably accurate, trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

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On behalf of **Cohen and Master Tree and Shrub Services,**

Adam Walicki B.ENVD. E.E.T.
Consulting Arborist - ISA Certification: ON 2490A
Environmental Engineering Technologist
Cohen and Master Tree and Shrub Services Ltd.
adam@cmtrees.com

Tree #	Tree Species	Botanical Name	DBH (cm)	Canopy Spread (m)	Root Zone	Trunk Integrity	Canopy Structure	Canopy Vigour	Overall Tree Condition	Minimum Tree Protection Zone	Condition Comments	Site Plan Results	Ownership
1	Norway Maple	<i>Acer platanoides</i>	29	8	Fair	Fair	Good	Good	Fair	1.8m	elevated root plate, girdling roots, trunk seam with decay, unhealed trunk wounds, requires pruning	preserve	546 Trafalgar Road
2	Norway Maple	<i>Acer platanoides</i>	28	8	Fair	Fair	Good	Good	Fair	1.8m	elevated root plate, crossing branches, top dieback	preserve	546 Trafalgar Road
3	Norway Maple	<i>Acer platanoides</i>	30	7	Fair	Fair	Good	Good	Fair	2.4m	exposed roots, girdling roots, included bark	preserve	546 Trafalgar Road
4	Norway Maple	<i>Acer platanoides</i>	21	6	Fair	Fair	Good	Good	Fair	1.8m	elevated root plate, included bark, recent tear out	preserve	546 Trafalgar Road
5	Norway Maple	<i>Acer platanoides</i>	32	10	Poor	Fair	Good	Fair	Fair	2.4m	elevated root plate, exposed roots, girdling roots, deadwood requires pruning	preserve	546 Trafalgar Road
6	Siberian Elm	<i>Ulmus pumila</i>	9	3	Poor	Fair	Fair	Fair	Fair	NA	self-seeded growing along fenceline, surrounded by asphalt paving	remove	227 Cross Avenue
7	Siberian Elm	<i>Ulmus pumila</i>	18	7	Poor	Fair	Fair	Fair	Fair	NA	self-seeded growing along fenceline, surrounded by asphalt paving, heaving asphalt	REMOVE (P)	227 Cross Avenue
8	Apple	<i>Malus sp.</i>	14	6	Fair	Fair	Fair	Good	Fair	1.8m	co-dominant at 1.4m, imbalanced canopy	preserve	570 Trafalgar Road
9	Poplar	<i>Populus sp.</i>	37	12	Fair	Fair	Fair	Good	Fair	2.4m	growing on a lean, exposed roots, girdling roots, imbalanced canopy, dead top	preserve	570 Trafalgar Road
10	American Elm	<i>Ulmus americana</i>	9	2	Poor	Fair	Fair	Fair	Fair	NA	surrounded by asphalt, dieback	remove	227 Cross Avenue
11	Staghorn Sumac	<i>Rhus typhina</i>	13	5	Poor	Fair	Good	Good	Fair	NA	surrounded by asphalt, unhealed trunk wounds	remove	227 Cross Avenue
12	Siberian Elm	<i>Ulmus pumila</i>	10	5	Poor	Fair	Fair	Fair	Fair	NA	surrounded by asphalt, co-dominant at 2m, included bark	remove	227 Cross Avenue
13	White Mulberry	<i>Morus alba</i>	14,15,17,22,23	8	Poor	Fair	Fair	Good	Fair	NA	heaving asphalt, co-dominant at base, included bark, water trap, crossing branches, requires pruning	REMOVE (P)	227 Cross Avenue
14	Siberian Elm	<i>Ulmus pumila</i>	4 to 12	5	Poor	Fair	Fair	Fair	Fair	NA	co-dominant at base, included bark	remove	227 Cross Avenue
15	Siberian Elm	<i>Ulmus pumila</i>	13	4	Poor	Fair	Fair	Fair	Fair	NA	surrounded by asphalt, exposed roots, girdling roots, unhealed trunk wounds	remove	227 Cross Avenue
16	Honey Locust	<i>Gleditsia triacanthos</i>	6	3	Poor	Fair	Good	Fair	Fair	NA	growing in narrow planting bed, co-dominant at 2m, included bark, unhealed trunk wounds	remove	227 Cross Avenue
17	Honey Locust	<i>Gleditsia triacanthos</i>	8	4	Poor	Fair	Good	Fair	Fair	NA	growing in narrow planting bed, included bark, unhealed trunk wounds	remove	227 Cross Avenue
18	Blue Spruce	<i>Picea pungens</i>	7	4	Poor	Fair	Fair	Good	Fair	NA	heaving interlock paving, unhealed trunk wounds, requires pruning	remove	227 Cross Avenue
19	Austrian Pine	<i>Pinus nigra</i>	22	7	Fair	Fair	Good	Good	Good	1.8m	exposed roots, girdling roots, requires pruning	preserve	217 Cross Avenue
20	Austrian Pine	<i>Pinus nigra</i>	31	8	Fair	Fair	Good	Good	Good	2.4m	exposed roots, girdling roots, co-dominant at 1.5m, included bark, requires pruning	preserve	217 Cross Avenue
21	Service Berry	<i>Amelanchier canadensis</i>	9	4	Fair	Good	Good	Good	Good	1.2m	exposed roots, girdling roots, dead roots	preserve	217 Cross Avenue
22	Honey Locust	<i>Gleditsia triacanthos</i>	49	14	Good	Good	Fair	Good	Good	3.0m	co-dominant at 6m, included bark, unhealed trunk wounds, imbalanced canopy, hydro-haircut	preserve	217 Cross Avenue
23	Red Maple	<i>Acer rubrum</i>	11	6	Good	Good	Good	Good	Good	1.8m	exposed roots, girdling roots, requires pruning	preserve	217 Cross Avenue
24	White Mulberry	<i>Morus alba</i>	12,14,16,21,22	14	Fair	Fair	Fair	Good	Fair	NA	exposed roots, girdling roots, co-dominant at 1.2m, included bark, trunk seams, bacterial wetwood, inosculation, requires pruning	REMOVE (P)	217 Cross Avenue
25	Austrian Pine	<i>Pinus nigra</i>	40	13	Good	Fair	Good	Fair	Good	NA	dieback, deadwood, possible diplodia tip blight	REMOVE (P)	217 Cross Avenue

Tree #	Tree Species	Botanical Name	DBH (cm)	Canopy Spread (m)	Root Zone	Trunk Integrity	Canopy Structure	Canopy Vigour	Overall Tree Condition	Minimum Tree Protection Zone	Condition Comments	Site Plan Results	Ownership
26	Austrian Pine	<i>Pinus nigra</i>	41	14	Good	Fair	Fair	Fair	Fair	NA	bent upper trunk, dieback, deadwood, possible diplodia tip blight	REMOVE (P)	217 Cross Avenue
27	Siberian Elm	<i>Ulmus pumila</i>	21,44	18	Poor	Fair	Fair	Fair	Fair	NA	exposed roots, girdling roots, co-dominant at 1.2m, included bark, bacterial wetwood, unhealed trunk wounds, dieback, deadwood	REMOVE (P)	217 Cross Avenue
28	Siberian Elm	<i>Ulmus pumila</i>	36	11	Poor	Fair	Fair	Fair	Fair	NA	growing on a lean, exposed roots, girdling roots, dieback, deadwood, requires pruning	REMOVE (P)	217 Cross Avenue
29	Scots Pine	<i>Pinus sylvestris</i>	23	7	Fair	Good	Good	Good	Good	NA	exposed roots, girdling roots, requires pruning	REMOVE (P)	217 Cross Avenue
30	Austrian Pine	<i>Pinus nigra</i>	22	7	Fair	Good	Good	Good	Good	NA	growing on a lean, imbalanced canopy	REMOVE (P)	217 Cross Avenue
31	Austrian Pine	<i>Pinus nigra</i>	25	8	Fair	Good	Good	Fair	Good	NA	dieback, deadwood, possible diplodia tip blight	REMOVE (P)	217 Cross Avenue
32	White Mulberry	<i>Morus alba</i>	35	6	Fair	Fair	Good	Good	Fair	NA	trunk seams, bacterial wetwood, unhealed trunk wounds, decay, included bark	REMOVE (P)	Oakville Tree#: 105913
33	White Mulberry	<i>Morus alba</i>	12,13,15	8	Fair	Fair	Good	Good	Fair	NA	growing on a lean, co-dominant at base, included bark, unhealed trunk wounds, imbalanced canopy	REMOVE (P)	Oakville Tree#: 489004
34	Austrian Pine	<i>Pinus nigra</i>	27	5	Fair	Fair	Fair	Fair	Fair	NA	growing on a lean, imbalanced canopy, requires pruning	REMOVE (P)	Oakville Tree#: 59380
35	Siberian Elm	<i>Ulmus pumila</i>	21,29	13	Poor	Fair	Fair	Fair	Poor	NA	co-dominant at base, included bark, epicormic growth, dieback, deadwood, requires pruning	REMOVE (P)	207 Cross Avenue
36	Siberian Elm	<i>Ulmus pumila</i>	14,15,18,20,24	9	Poor	Poor	Poor	Fair	Poor	NA	cavity at base, co-dominant at base, included bark, unhealed trunk wounds, decay, water trap, dieback, deadwood	REMOVE (P)	207 Cross Avenue
37	Norway Maple	<i>Acer platanoides</i>	16	5	Fair	Fair	Good	Fair	Fair	NA	unhealed trunk wound at base, unhealed trunk wounds, dieback, deadwood	REMOVE (P)	Oakville Tree#: 103874
38	Siberian Elm	<i>Ulmus pumila</i>	11	4	Poor	Fair	Fair	Fair	Fair	NA	self-seeded, bacterial wetwood, requires pruning	remove	571 Argus Road
39	Norway Maple	<i>Acer platanoides</i>	18	5	Fair	Good	Fair	Fair	Fair	NA	crossing branches, requires pruning	REMOVE (P)	Oakville Tree#: 34431
40	Norway Maple	<i>Acer platanoides</i>	26	6	Fair	Fair	Fair	Fair	Fair	1.8m	trunk seams, decay, bacterial wetwood, unhealed trunk wounds, imbalanced canopy, dieback, deadwood, dead leader	preserve	Oakville Tree#: 111263
41	Honey Locust	<i>Gleditsia triacanthos</i>	12	7	Fair	Fair	Good	Fair	Fair	1.8m	unhealed trunk wound at base, string trimmer damage	preserve	Oakville Tree#: 48701
42	English Oak	<i>Quercus robur</i>	10	4	Fair	Good	Good	Fair	Good	1.2m	unhealed trunk wound at base, exposed cambium	preserve	Oakville Tree#: 92553
43	Little-leaf Linden	<i>Tilia cordata</i>	11	6	Fair	Good	Fair	Good	Good	1.8m	crossing branches, requires pruning	preserve	Oakville Tree#: 498125
44	Norway Maple	<i>Acer platanoides</i>	30	9	Poor	Poor	Fair	Fair	Poor	2.4m	exposed roots, girdling roots, old root injuries, unhealed trunk wounds, cavity with decay, bacterial wetwood, dieback, deadwood, requires pruning	preserve	Oakville Tree#: 2764
45	Red Maple	<i>Acer rubrum</i>	8,14,15,15	7	Fair	Good	Fair	Good	Good	NA	exposed roots, girdling roots, co-dominant at base, included bark, unhealed trunk wounds, requires pruning	REMOVE (P)	591 Argus Road
46	Red Maple	<i>Acer rubrum</i>	24,24	11	Fair	Good	Fair	Good	Good	NA	exposed roots, girdling roots, co-dominant at base, included bark, unhealed trunk wounds, requires pruning	REMOVE (P)	591 Argus Road
47	Red Maple	<i>Acer rubrum</i>	7,10,10	6	Fair	Good	Fair	Good	Good	NA	co-dominant at base, included bark, unhealed trunk wounds, dieback, deadwood, requires pruning	remove	591 Argus Road

Tree #	Tree Species	Botanical Name	DBH (cm)	Canopy Spread (m)	Root Zone	Trunk Integrity	Canopy Structure	Canopy Vigour	Overall Tree Condition	Minimum Tree Protection Zone	Condition Comments	Site Plan Results	Ownership
48	Red Maple	<i>Acer rubrum</i>	12,15,18,24	9	Fair	Good	Fair	Good	Good	NA	exposed roots, girdling roots, co-dominant at base, included bark, unhealed trunk wounds, requires pruning	REMOVE (P)	591 Argus Road
49	Crimson Norway Maple	<i>Acer platanoides</i>	20	9	Fair	Fair	Good	Good	Fair	1.8m	exposed roots, girdling roots, trunk seams, included bark, epicormic growth	preserve	Oakville Tree#: 111612
50	Norway Maple	<i>Acer platanoides</i>	21	19	Fair	Fair	Fair	Poor	Poor	NA	exposed roots, girdling roots, unhealed trunk wounds, decay, peeling bark in upper canopy, dieback, deadwood	REMOVE (P)	Oakville Tree#: 108609
51	Staghorn Sumac	<i>Rhus typhina</i>	11	4	Fair	Fair	Poor	Good	Fair	NA	exposed roots, girdling roots, unhealed trunk wounds, horizontally bent trunk, deadwood, requires pruning	remove	591 Argus Road
52	Amur Maple	<i>Acer ginnala</i>	18,29	9	Fair	Good	Fair	Good	Good	NA	exposed roots, girdling roots, twisted trunk, included bark, crossing branches, unhealed trunk wounds, peeling bark, epicormic growth, dieback, deadwood requires pruning	REMOVE (P)	591 Argus Road
53	Red Maple	<i>Acer rubrum</i>	5,6,10,10,10	6	Fair	Good	Fair	Good	Good	NA	co-dominant at base, included bark, unhealed trunk wounds, requires pruning	remove	591 Argus Road
54	Red Maple	<i>Acer rubrum</i>	8,8,9,11	5	Fair	Fair	Fair	Good	Fair	NA	exposed roots, girdling roots, co-dominant at base, unhealed trunk wound at base, cavity, decay	remove	591 Argus Road
55	Norway Maple	<i>Acer platanoides</i>	19	6	Poor	Poor	Poor	Poor	Poor	NA	exposed roots, girdling roots, unhealed trunk wounds, peeling bark, dead leader, topped, 40% dead	REMOVE (P)	Oakville Tree#: 60357

preserve - tree proposed to be preserved, not being injured or removed

INJURY (P) - tree proposed to be injured - permit required

remove - tree to be removed - no permit required

REMOVE (P) - tree proposed to be removed - permit required

Tree # - this number refers to the number on the tree assessment and plan - only the last three numbers on the tree tag are referenced

Species - the common name and botanical name for each tree are provided

Diameter - refers to diameter (in centimeters) measured at 1.4 m above finished grade

Canopy Spread (m) - refers to the average distance of the canopy from the longest drip line points of the canopy measured in meters.

Root Zone (R.Z.) - this is an assessment of the growing conditions within the root zone of the tree. It is measured on a scale of Good, Fair, Poor

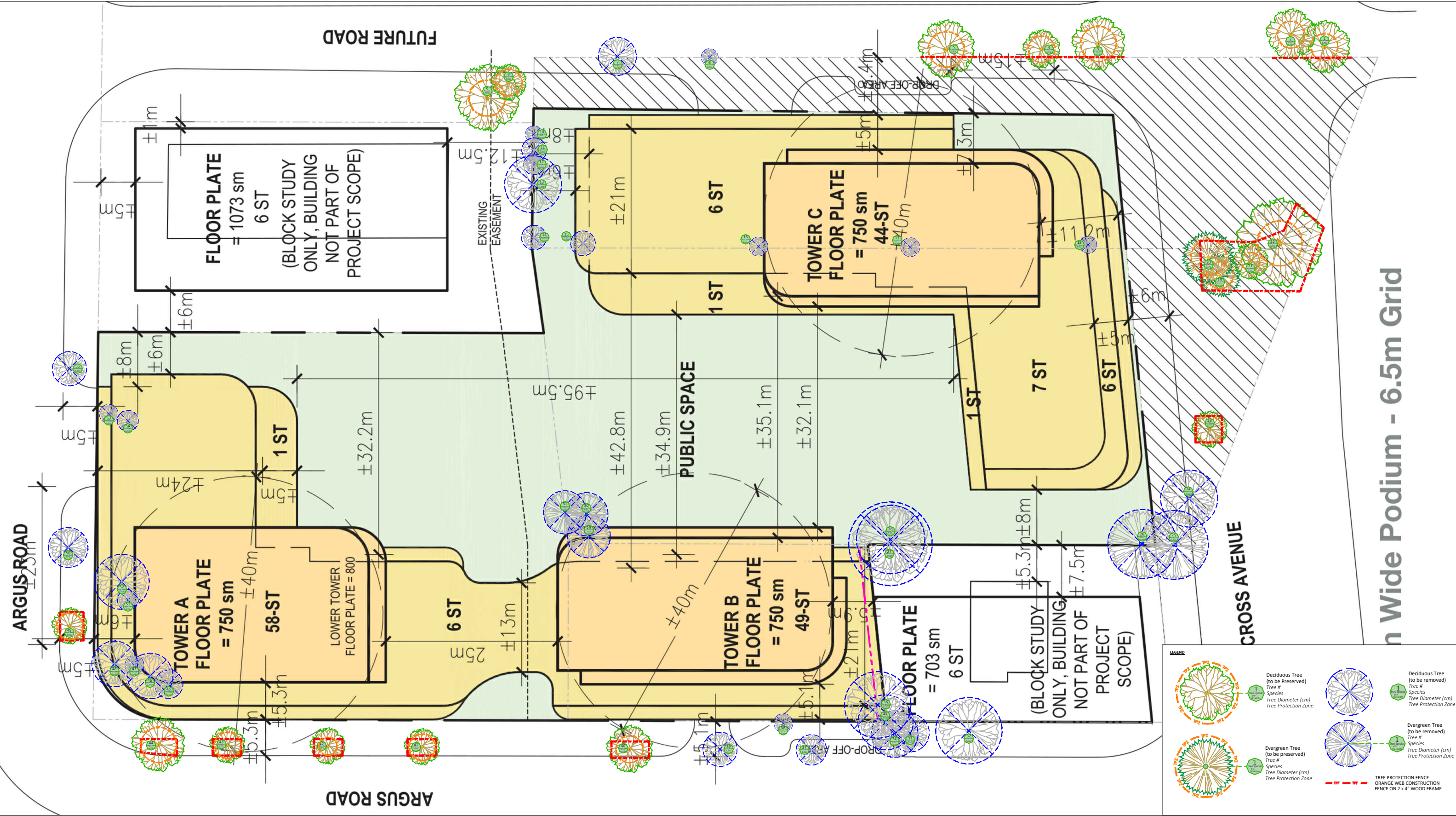
Trunk Integrity (T.I.) - this is an assessment of the trunk for any defects or weaknesses. It is measured on a scale of Good, Fair, Poor

Canopy Structure (C.S) - this is an assessment of the scaffold branches and the canopy of the tree. This is also measured on a Good, Fair, Poor

Canopy Vigour (C.V.) - this is an assessment of the health of the tree and assesses the amount of deadwood and live growth in the crown as compared to a 100% healthy tree. The size, colour and amount of foliage are also considered in this category. This is also measured on a Good, Fair, Poor.

Overall Tree Condition - this is an assessment of the overall condition of the tree based on all parts of the tree. This is also measured on a Good, Fair, Poor

Minimum Tree Protection Zone (TPZ) - minimum Tree Protection Zone as recommended by the Town of Oakville. This distance is based on the diameter of the tree and the protection zone is measured from the trunk.



n Wide Podium - 6.5m Grid

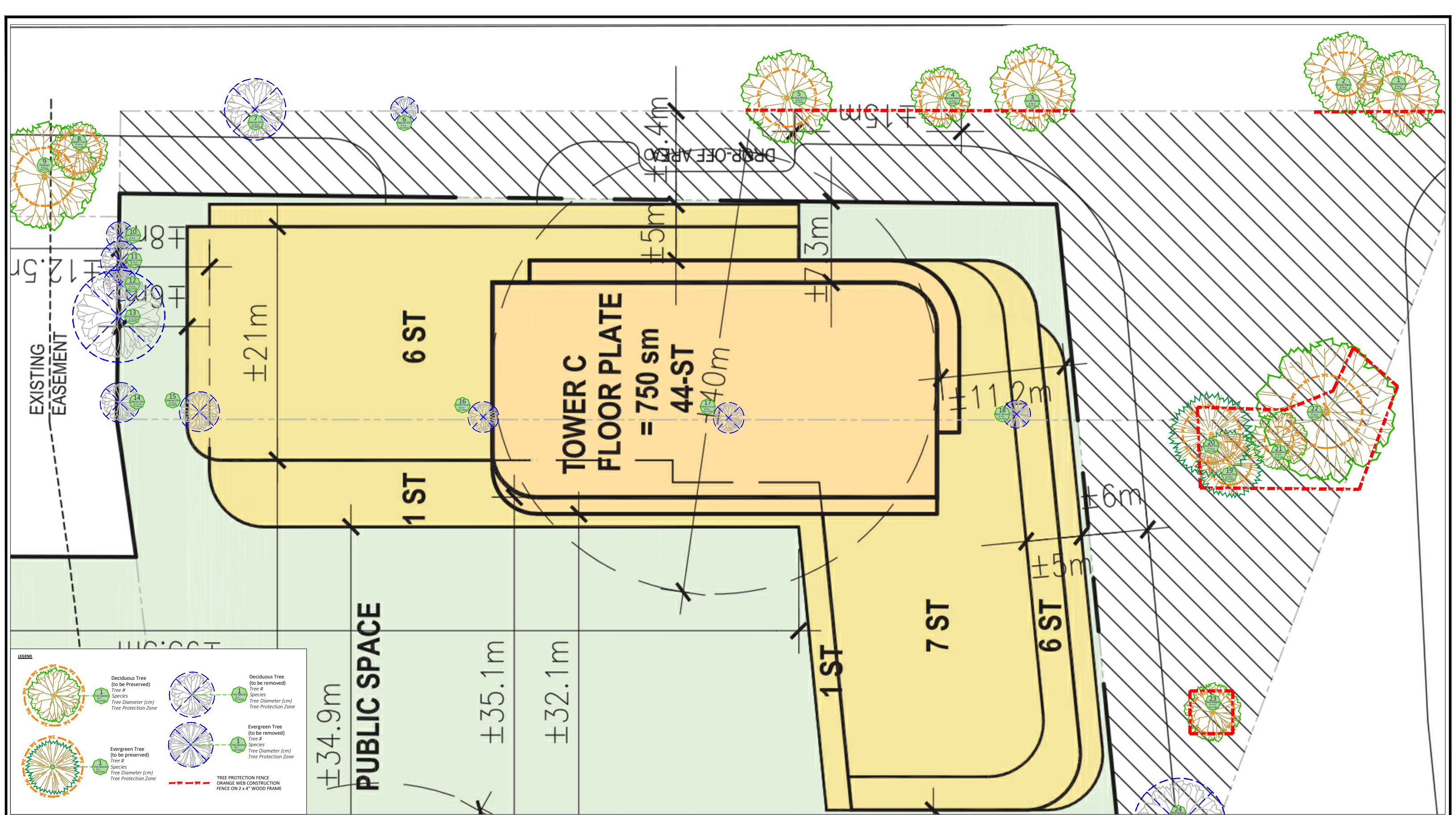


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Project Address
**217 - 227 CROSS AVENUE
 AND 571 ARGUS ROAD**
OAKVILLE, ON L6J 2W9

Title		T1
Tree Protection Plan		
Scale	1:500	
Drawn	AW	
Checked	TC	
Date	Nov. 2021	
Project #	#50737	

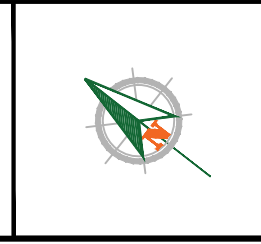


LEGEND

- Deciduous Tree (to be Preserved)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Deciduous Tree (to be removed)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Evergreen Tree (to be preserved)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Evergreen Tree (to be removed)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- TREE PROTECTION FENCE
ORANGE WEB CONSTRUCTION
FENCE ON 2 x 4" WOOD FRAME

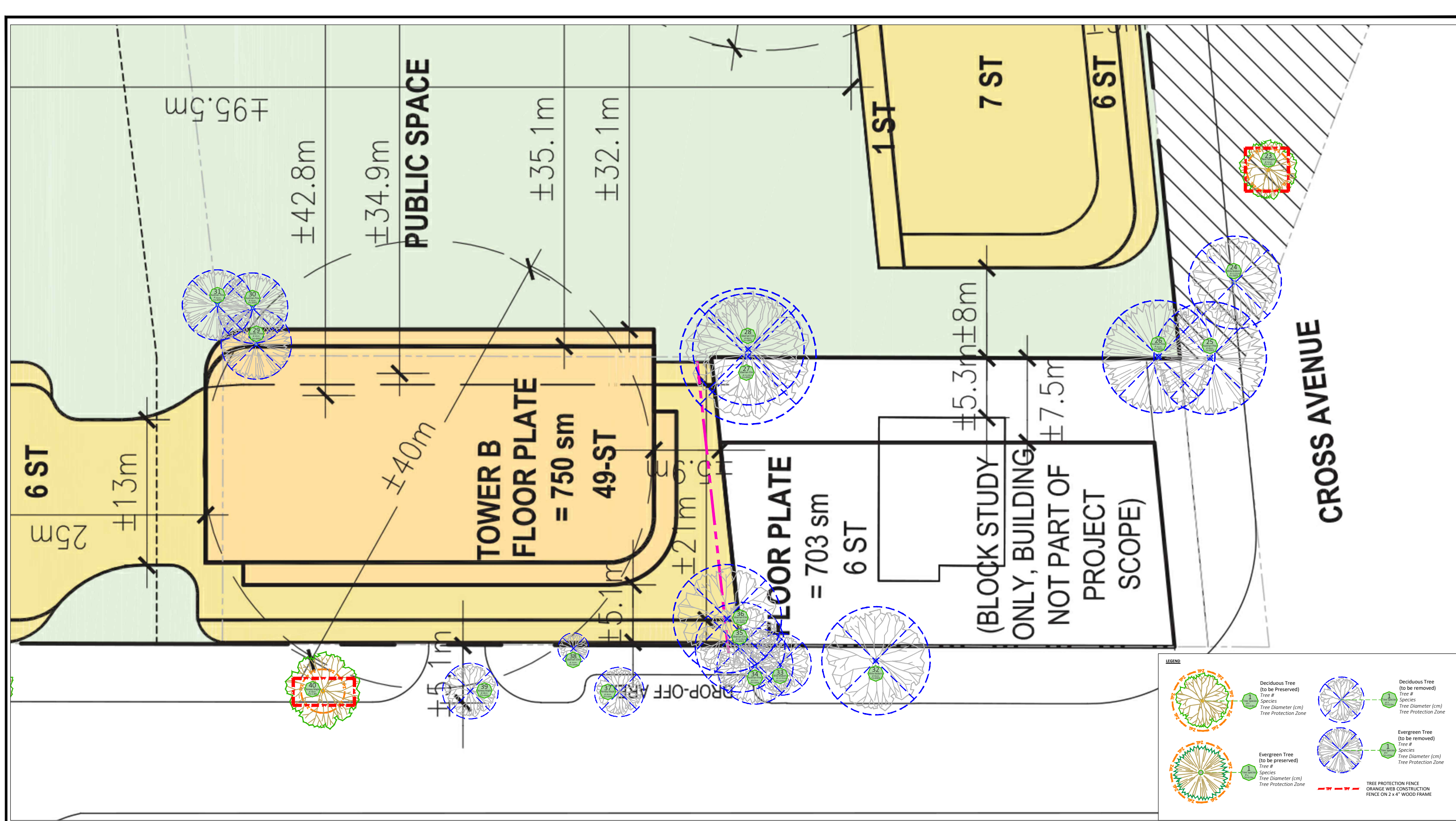
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TREE AND SHRUB SERVICES

42 Guardsman Road
Thornhill, ON, L3T 6L4
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Project Address
**217 - 227 CROSS AVENUE
AND 571 ARGUS ROAD**
OAKVILLE, ON L6J 2W9

Title		Sheet T2
Tree Protection Plan		
Scale	1:500	
Drawn	AW	
Checked	TC	
Date	Nov. 2021	
Project #	#50737	



LEGEND

	Deciduous Tree (to be Preserved) Tree # Species Tree Diameter (cm) Tree Protection Zone		Deciduous Tree (to be removed) Tree # Species Tree Diameter (cm) Tree Protection Zone
	Evergreen Tree (to be preserved) Tree # Species Tree Diameter (cm) Tree Protection Zone		Evergreen Tree (to be removed) Tree # Species Tree Diameter (cm) Tree Protection Zone
			TREE PROTECTION FENCE ORANGE WEB CONSTRUCTION FENCE ON 2 x 4" WOOD FRAME

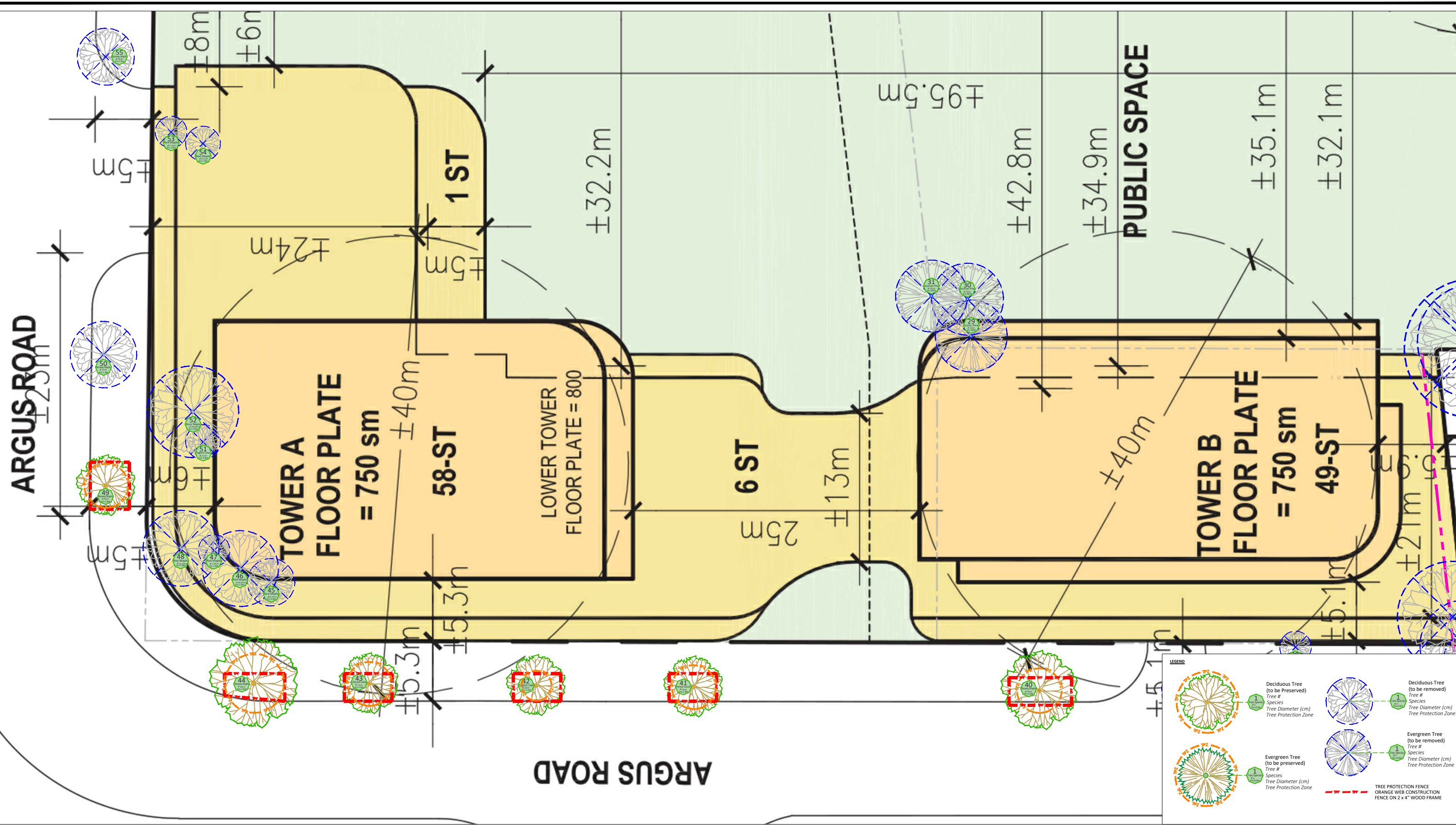


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OAKVILLE, ON L6J 2W9

Title		Sheet T3
Tree Protection Plan		
Scale	1:500	
Drawn	AW	
Checked	TC	
Date	Nov. 2021	
Project #	#50737	



LEGEND

- Deciduous Tree (to be Preserved)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Deciduous Tree (to be removed)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Evergreen Tree (to be preserved)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Evergreen Tree (to be removed)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone

TREE PROTECTION FENCE
ORANGE WEB CONSTRUCTION
FENCE ON 2 x 4" WOOD FRAME



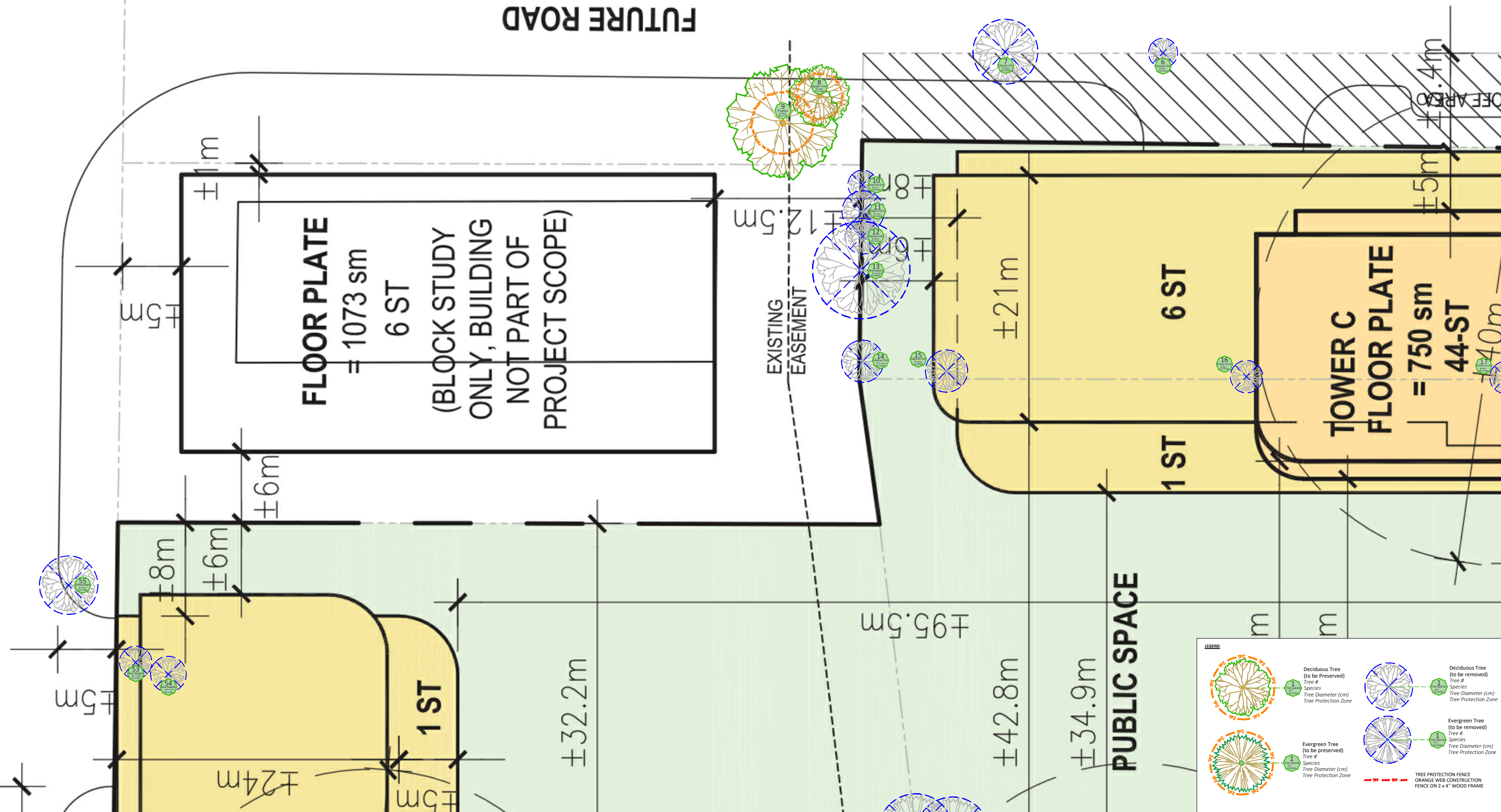
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Thornhill, ON, L3T 6L4
416-932-0622
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**217 - 227 CROSS AVENUE
AND 571 ARGUS ROAD**
OAKVILLE, ON L6J 2W9

Title		Sheet T4
Tree Protection Plan		
Scale	1:500	
Drawn	AW	
Checked	TC	
Date	Nov. 2021	
Project #	#50737	

FUTURE ROAD



LEGEND

- Deciduous Tree (to be Preserved)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Deciduous Tree (to be removed)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Evergreen Tree (to be preserved)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone
- Evergreen Tree (to be removed)
Tree #
Species
Tree Diameter (cm)
Tree Protection Zone

TREE PROTECTION FENCE
ORANGE WEB CONSTRUCTION
FENCE ON 2 x 4" WOOD FRAME



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Title		Tree Protection Plan	
Scale	1:500	Sheet	
Drawn	AW	T5	
Checked	TC		
Date	Nov. 2021		
Project #	#50737		