ESTIMATED CANOPY COVERAGE - PROPOSED AND EXISTING

PROPOSED CANOPY COVERAGE AT MATURITY

SIZE OF PROPOSED TREE	AVERAGE MATURE SPREAD	CANOPY COVERAGE PER TREE AT MATURITY (m2)	QUANTITY OF TREES	TOTAL CANOPY COVERAGE (m2)
Deciduous - Small (<7.5m tall)	5m	20	5	98
Deciduous - Medium (7.5-14m tall)	10m	79	0	0
Deciduous - Large (14m+ tall)	15m	177	60	10603
Coniferous	5m	20	26	510
TOTAL PROPOSED CANOPY COVERAGE (m2):				11211
TOTAL AREA OF PRIVATE PROPERTY SITE (m2):				**51,787**
EST. PROPOSED CANOPY COVERAGE (%):				**22%**

CANOPY COVERAGE OF EXISTING TREES RETAINED AT SITE AT MATURITY

	AVERAGE MATURE SPREAD	CANOPY COVERAGE PER TREE AT MATURITY (m2)	QUANTITY OF TREES	TOTAL CANOPY COVERAGE (m2)
Deciduous trees to remain	10m	79	45	3555
Conifers to remain	5m	20	88	1760
Existing vegetation retained beyond the construction limit* (North-east side of building)	na	na	na	5215
TOTAL EXISTING CANOPY COVERAGE RETAINED (m2):				10530
TOTAL AREA OF PRIVATE PROPERTY SITE (m2):				**51,787**
EST. EXISTING CANOPY COVERAGE (%):				**20%**
EST. TOTAL CANOPY COVERAGE (%):				**42%**

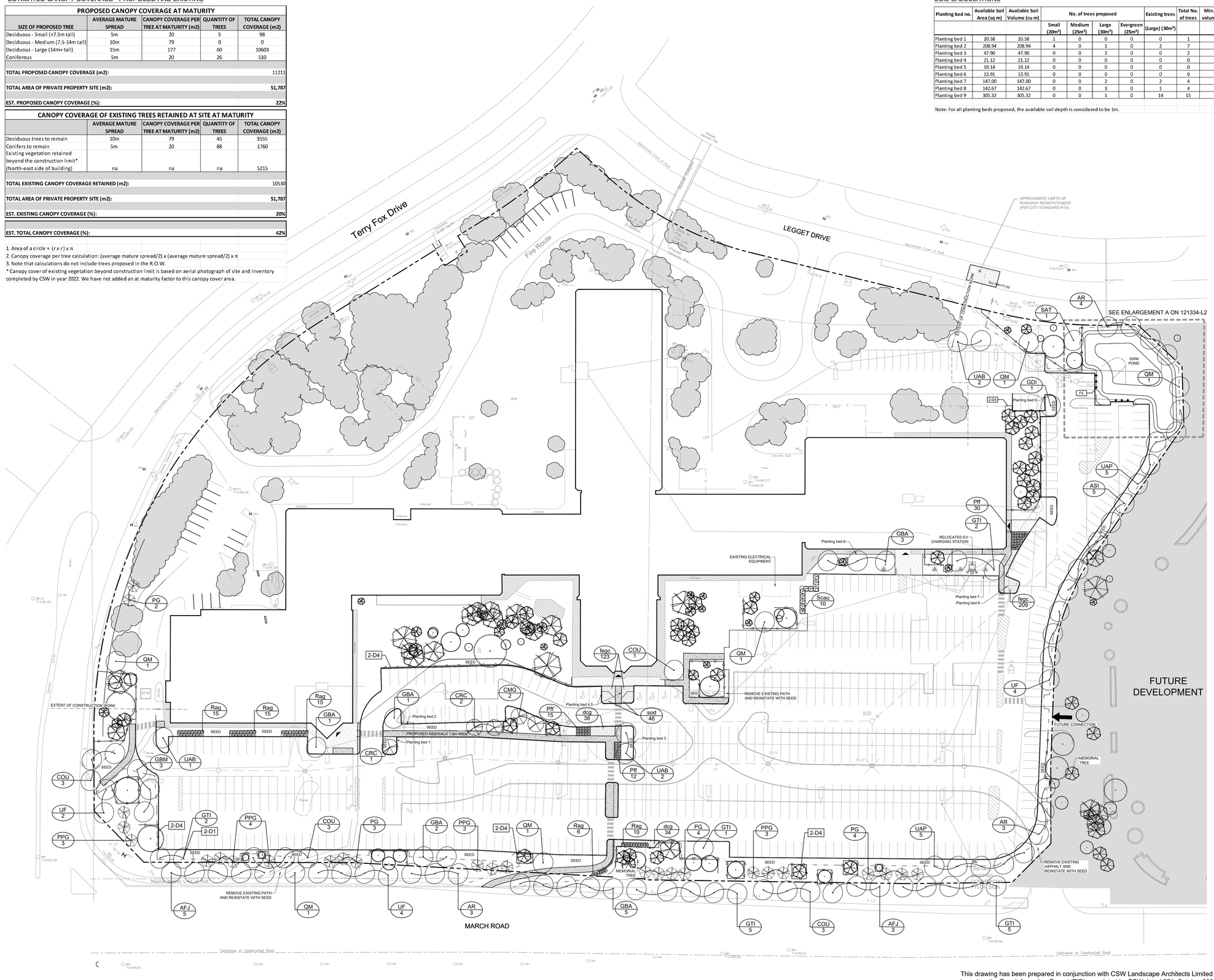
1. Area of a circle = $(r \times r) \times \pi$
2. Canopy coverage per tree calculation: (average mature spread/2) x (average mature spread/2) x π
3. Note that calculations do not include trees proposed in the R.O.W.

* Canopy cover of existing vegetation beyond construction limit is based on aerial photograph of site and inventory completed by CSW in year 2022. We have not added an at maturity factor to this canopy cover area.

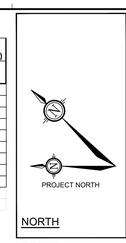
SOIL CALCULATIONS

Planting bed no.	Available Soil Area (sq m)	Available Soil Volume (cu m)	No. of trees proposed				Existing trees	Total No. of trees	Min. required Soil volume total (cu m)
			Small ($20m^3$)	Medium ($25m^3$)	Large ($30m^3$)	Evergreen ($25m^3$)	(Large) ($30m^3$)		
Planting bed 1	20.58	20.58	1	0	0	0	0	1	20.00
Planting bed 2	208.94	208.94	4	0	1	0	2	7	170.00
Planting bed 3	47.90	47.90	0	0	2	0	0	2	36.00
Planting bed 4	21.12	21.12	0	0	0	0	0	0	0.00
Planting bed 5	19.14	19.14	0	0	0	0	0	0	0.00
Planting bed 6	13.91	13.91	0	0	0	0	0	0	0.00
Planting bed 7	147.00	147.00	0	0	2	0	2	4	72.00
Planting bed 8	142.67	142.67	0	0	3	0	1	4	72.00
Planting bed 9	305.32	305.32	0	0	1	0	14	15	270.00

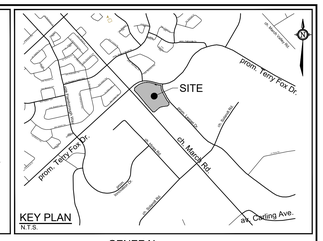
Note: For all planting beds proposed, the available soil depth is considered to be 1m.



This drawing has been prepared in conjunction with CSW Landscape Architects Limited and is based on the Tree Information Report (TIR) completed by CSW dated 27th October 2022. Information regarding tree removal and tree protection measures has been prepared by Novatech.



NORTH



KEY PLAN
N.T.S.

LEGEND

- DETAIL SHEET # EG. L1, L2, ETC. — 3-D1 — NOVATECH OR CITY DETAIL NUMBER SEE LIST FOR CODE
- PROPERTY LIMIT
- EXISTING PAVERS
- EXISTING CONCRETE SIDEWALK
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SHRUBS
- PERENNIALS AND ORNAMENTAL GRASSES
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- EXISTING TREE TO REMAIN
- SPECIES (SEE PLANT LIST) — KEY ## — QUANTITY
- TREE PROTECTION FENCE
- SILT FENCE
- EXISTING VEGETATION BEYOND THE LIMIT OF CONSTRUCTION TO REMAIN
- BOLLARD

CITY DETAILS

Related details from City of Ottawa Standard Tender Documents Volume No. 2 Standard Detail Drawings.

SC4. Typical Concrete Sidewalk in Boulevard
SC5. Sidewalk Construction Joints
F5. 100mm Diameter Steel Bollard Installation for Parking

NOVATECH DETAILS

Found on Sheet L2.

D1. Standard Deciduous Tree Planting
D2. Standard Coniferous Tree Planting
D3. Shrub and Perennial Planting
D4. Tree Protection Fence
D5. Shrub Naturalization

SEED MIX AND APPLICATION

For areas steeper than 3:1, Contractor to apply erosion control blanket. Erosion control blanket to be machine woven mats made from natural wood, coco or cotton fiber, or combination depending on manufacturer, with stitching between two photo-degradable natural organic fiber nettings. Submit products for approval by Consultant. OPSS 804 applies except as may be amended and extended herein.

In addition to the specified seed mixes, all applications are to include a nurse crop as noted.

NURSE CROP
Annual Ryegrass
Seeding Rate: 15kg/hectare

SEED MIX A
(FOR PARKING ISLANDS AND REINSTATEMENT AREA)
CAMPUS GREEN MIX by DLF Pickseed
Seeding Rate: 25kg/hectare

SEED MIX B
(FOR SWM FACILITY)
RETENTION AREA MIX by DLF Pickseed
Seeding Rate: 25kg/hectare

SUMMARY OF TREES

1. There are a total of 133 existing trees to remain as indicated on 121334-TCR1 plan.
2. There are a total of 151 existing trees to be removed as indicated on 121334-TCR1 plan.
3. There are a total of 124 trees proposed, 88 trees in the property limit and 36 trees in the ROW along March road as indicated on the Landscape plan 121334-L1.
4. With 712 parking spaces proposed, a 5:1 ratio of parking to trees would yield a recommendation of 142 trees.

GENERAL

1. Read and interpret this drawing/ drawing set in conjunction with all the contract details and specifications, including related civil, utility, structural, architectural, mechanical, electrical, environmental, geotechnical, and survey information.
2. The Contractor is to determine the exact location, size, material, and elevation of all existing utilities prior to commencing construction. Protect and assume responsibility for all existing utilities regardless of being shown on the drawings.
3. It is essential to use the plans and details in conjunction with the specifications and notes.
4. Do not scale drawings. Work to dimensions only.
5. Protect all existing and retained vegetation for the duration of construction according to the contract details and specifications.
6. Reinstate all areas and items damaged or disturbed, beyond the Limit of Work, because of construction activities, including but not limited to construction staging areas, haul roads, stockpile areas, etc. to the satisfaction of the Consultant. Unless otherwise noted, Contractor is to reinstate all areas to pre-construction condition or better to the satisfaction of the Contract Administrator.

PLANTING

1. Plant material to be No. 1 Grade and is to comply with Canadian Standards for Nursery Stock (latest edition) published by the Canadian Nursery Landscape Association.
2. Use structurally sound plant material with strong fibrous root system free of disease, defects, and injuries. Use trees with straight trunks, well and characteristically branched for species. Obtain approval from consultant of plant material at source prior to digging. All trees and shrubs to be container grown, potted, W/B or B/B, as indicated on Plant List. Bare root plants are only acceptable for certain species and as approved by the Landscape Architect.
3. Plant material substitutions are not be permitted without the written approval from the Consultant, **with 48 hours notice**, prior to shipping plant material.
4. Plant locations are schematic / approximate only. **Contractor is to stake out locations on site for approval by the Landscape Architect prior to installation.**
5. The illustrated number of plants shown in the Planting Plan supersedes the estimated number in the Plant List. Contractor to report any discrepancies to the Landscape Architect prior to installation. Contractor will assume full responsibility if the Landscape Architect is not notified.
6. Ensure trees are thoroughly watered following planting. Monitor material and ensure adequate moisture until acceptance.
7. In heavy clay or poorly drained soils, set root ball with root collar 75-100mm higher than finished grade.
8. Approved topsoil depths are as follows:
   a. Plant Beds - **450mm** continuous depth. Applies to shrubs, perennials, vines, and groundcovers.
   b. Sod/ Seed Areas - **100mm** depth.
   c. Reforestation - **300mm** depth.
9. Sod to be No. 1 Kentucky Bluegrass Sod grown from minimum mixture of 3 Kentucky Bluegrass cultivars. Quality and source are to comply with Canadian Standards for Nursery Stock, Section 17, (latest edition) published by the Canadian Nursery Landscape Nursery Landscape Association.
10. Apply the following mineral fertilizer unless soil tests show other requirements:
    a. Plant Beds - (8-32-16), i.e. 8% Nitrogen, 32% Phosphorus, 16% Potash per manufacturer specifications.
    b. Sod Areas - (8-32-16), i.e. 8% Nitrogen, 32% Phosphorus, 16% Potash at a rate of 350kg/ha.
11. Where applicable, for any plant areas with a mix of species/ cultivars notes, Contractor is to cluster like plants in groups of 3-5 and evenly distribute these in the noted area.

CONSTRUCTION

1. All general site information and conditions are compiled from Consultant field notes and plans provided by the Owner and are supplied for information purposes only. It is the responsibility of the Contractor to verify the accuracy of all the information obtained from this plan.
2. Together with all Subcontractors involved, the Contractor is to examine all surfaces or conditions relating to the work, in order to determine the acceptability of such surfaces or conditions for the work to commence. Notify the Contract Administrator in writing of conditions which could be detrimental to installation and do not commence work until instructed by the Contract Administrator. The commencement of work implies Contractor acceptance of the conditions.
3. Contractor to check and report any discrepancies before commencing work. No responsibility is borne by the Consultants for subsurface conditions.
4. Contractor to check and verify all dimensions and quantities on site and report any errors or omissions to the Consultant.
5. Contractor is responsible for all fees arising from the completion of works conveyed by these drawings, details, and specifications.
6. Carry out all construction in accordance with the most current provincial and municipal standards and specifications.
7. Contractor to coordinate all access and protect the public and users of the site with appropriate control fence and supervision throughout the construction period, to the satisfaction of the Consultant.
8. Contract Administrator is to approve access point(s) prior to mobilization.
9. A Contractor flagman is required to direct all deliveries of machinery or materials to the site.
10. Contractor to coordinate and schedule all work with other trades and contractors. Contractor is to notify Contract Administrator of any schedule difficulties.
11. Contractor responsible for the removal and off-site disposal of all materials as required to facilitate new construction. Store all items and materials identified by the Consultant for salvage at a location on site as identified by the Consultant. Excavate and remove from site any contaminated material. Dispose all contaminated material at a licensed landfill facility.
12. Maintain site in a clean and orderly state for the duration of construction; perform all work in accordance with the Occupational Health and Safety Act. Remove all excess materials, packaging, and debris from the site.
13. Contractor is responsible to take all necessary measures to control dust on the project site and to the satisfaction of the Contract Administrator.
14. Contractor is responsible for all layout for construction purposes.
15. Contractor is to protect all iron bars. Replace any disturbed bars by Owner at the Contractor expense.
16. The Contractor is to notify the Contract Administrator upon completion of the required works to schedule an inspection for acceptance.

PLANT LIST

121334 - Nokia Parking Lot Expansion - Plant List

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING
Coniferous Trees						
PG	13	*Picea glauca*	White Spruce	200cm Ht	W/B	As Shown
PPG	13	*Picea pungens var. glauca*	Colorado Blue Spruce	200cm Ht	W/B	As Shown
Deciduous Trees - Small/Medium						
CMG	2	*Cornus mas 'Golden Glory'*	Golden Glory Cornelian-Cherry Dogwood	150cm Ht	PT	As Shown
CRC	3	*Crataegus crus-galli 'Inermis'*	Thornless Cockspur Hawthorn	50mm Cal	W/B	As Shown
Deciduous Trees - Large						
AR	7	*Acer rubrum*	Red Maple	50mm Cal	W/B	As Shown
ASI	5	*Acer saccharinum*	Silver Maple	50mm Cal	W/B	As Shown
COU	5	*Celtis occidentalis 'Ultra'*	Ultra Hackberry	50mm Cal	W/B	As Shown
GBA	7	*Ginkgo biloba 'Autumn Gold'*	Autumn Gold Ginkgo	50mm Cal	W/B	As Shown
GBM	3	*Ginkgo biloba 'Magyar'*	Magyar Ginkgo	50mm Cal	W/B	As Shown
GTI	5	*Gleditsia triacanthos var. inermis 'Impcole'*	Imperial Honeylocust	50mm Cal	W/B	As Shown
QM	5	*Quercus macrocarpa*	Burr Oak	50mm Cal	W/B	As Shown
SAT	1	*Salix alba 'Tristis'*	Golden Weeping Willow	50mm Cal	W/B	As Shown
UAB	5	*Ulmus americana 'Brandon'*	Brandon Elm	50mm Cal	W/B	As Shown
UAP	10	*Ulmus americana 'Princeton'*	Princeton Elm	50mm Cal	W/B	As Shown
UF	6	*Ulmus americana 'Frontier'*	Frontier Elm	50mm Cal	W/B	As Shown
Deciduous Trees - Large - ROW						
AFJ	8	*Acer x freemanii 'Jeffersred'*	Autumn Blaze Maple	50mm Cal	W/B	As Shown
AR	3	*Acer rubrum*	Red Maple	50mm Cal	W/B	As Shown
COU	5	*Celtis occidentalis 'Ultra'*	Ultra Hackberry	50mm Cal	W/B	As Shown
GBA	5	*Ginkgo biloba 'Autumn Gold'*	Autumn Gold Ginkgo	50mm Cal	W/B	As Shown
GTI	10	*Gleditsia triacanthos var. inermis 'Impcole'*	Imperial Honeylocust	50mm Cal	W/B	As Shown
QM	1	*Quercus macrocarpa*	Burr Oak	50mm Cal	W/B	As Shown
UF	4	*Ulmus americana 'Frontier'*	Frontier Elm	50mm Cal	W/B	As Shown
Deciduous Shrubs						
Pff	52	*Potentilla fruticosa ' Fargo'*	Dakota Sunspot Potentilla	40cm Ht	PT	100cm O.C.
Rag	61	*Rhus aromatica 'Gro-Low'*	Gro-Low Fragrant Sumac	60cm Ht	PT	80cm O.C.
Scau	10	*Sambucus canadensis 'Aurea'*	Golden Elderberry	60cm Ht	PT	
Perennials and Ornamental Grasses						
dcg	72	*Deschampsia cespitosa 'Goldtau'*	Gold Dew Tufted Hair Grass	1g	PT	80cm O.C.
fegc	332	*Festuca glauca 'Cool as Ice'*	Cool As Ice Fescue	1g	PT	40cm O.C.
sod	46	*Solidago caesia*	Bluestem Goldenrod	1ltr	PT	80cm O.C.

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

OWNER INFORMATION
COLLIERS
181 BAY STREET
TORONTO, ONTARIO, M5J 2V1

AARON CLODD
PHONE: (647) 798-9534
EMAIL: Aaron.Clodd@colliers.com

NOT FOR CONSTRUCTION

No.	REVISION	DATE	BY
5.	REVISED PER CITY COMMENTS	FEB 08/24	RGJ
4.	ADDRESS INSERTION ON TITLEBLOCK	DEC 21/23	RGJ
3.	REVISED PER CITY COMMENTS	DEC 05/23	RGJ
2.	REVISED PER CITY COMMENTS	NOV 08/23	RGJ
1.	ISSUED FOR CITY REVIEW	OCT 02/23	RGJ

SCALE 1:400

DESIGN	TCB
CHECKED	RGJ
DRAWN	TCB
CHECKED	RGJ
APPROVED	RGJ

FOR REVIEW ONLY

NOVATECH
Engineers, Planners & Landscape Architects
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Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
600 MARCH ROAD - NOKIA PARKING LOT EXPANSION

DRAWING NAME
LANDSCAPE PLAN

PROJECT No. 121334-00
REV REV 5
DRAWING No. 121334-L1

PLANTED 17/10/2023 | CAD FILE: lib-plotmaster-4 | Plot By: FTIDALI | Date: Wed, Feb 28, 2024 - 4:29pm | Template: Novatech