HYDROSEED MIX

(SEEDING IS TO BE APPLIED FOLLOWING THE APPLICATION OF THE TURF REINFORCEMENT MATTING FM200-TRM OR APPROVED EQUAL).

200-300mm OF TOPSOIL TO BE PROVIDED IN ALL HYDRO-SEEDED AREAS

COMBINE 75% UPLAND DRY MEADOW MIX

BOTANICAL NAME	COMMON NAME	PERCENTAGE OF MIX (%)
Andropogon gerardii	Big Bluestem	30
Asclepias syriaca	Common Milkweed	5
Clematis virginiana	Virgins Bower	5
Monarda fistulosa	Wild Bergamot	5
Rudbeckia hirta	Black Eyed Susan	15
Schizachyrium scoparium	Little Bluestem	35
Solidago canadensis	Canada Goldenrod	8
Symphyotrichum cordifolius	Blue Wood Aster	1
Symphotrichum novae-anglae	New England Aster	1

WITH 25% NURSE CROP MIX

BOTANICAL NAME	COMMON NAME	PERCENTAGE OF MIX (%)
Agrostis stolonifera	Creeping Bent Grass	20
Avena sativa	Annual Oats	25
Elymus canadensis	Canada Wild Rye	35
Festuca rubra	Red Fescue	20

2 L100 HYDROSEED MIX

terrafix geosynthetics inc.

FM200 - TRM

Specification Sheet

The FM200 is a turf reinforcement mat made of 100% polypropylene fiber (green) designed for critical slope and channel applications requiring permanent erosion control and turf reinforcement. The matting is sewn together on 1.5 inch (38.1 mm) polypropylene thread. The top side is reinforced with a 2 inch (50.8 mm) x 2 inch (50.8 mm) x 6 ga. (5.16 mm) HDPE reinforcement matting for use on slopes with gradients up to 0.5:1 (2H:1V), channels, and shorelines. The FM200 has been tested by the National Transportation Product Evaluation Program (NTPEP). The FM200 comes packaged in clear shrink-wrap with a blue band which includes installation instructions.

Product Nomenclature & Properties

- **FM** = 100% polypropylene fiber matrix (tan or green in color) applied at a rate of 3.75 lbs/yd² (400 g/m²)
- **200** = top permanent UV stabilized black net with a mesh size of 0.55 x 0.5 in (1.34 x 1.27 cm)
- bottom permanent UV stabilized black net with a mesh size of 0.55 x 0.55 in (1.34 x 1.59 cm)
- permanent UV stabilized black thread

Index & Bench Scale Testing

	Test Description	Test Method	Test Results
Mass per Unit Area		ASTM D6475	13.7 oz/yd² (464 g/m²)
UV Stability at 500 hours		ASTM D 4355	91 %
Tensile Strength		ASTM D6818	31.4 kN/m @ 21.0% MD 17.7 kN/m @ 33.4% TD
Thickness		ASTM D6525	0.488 in (12.4 mm)
Light Penetration / Ground Cover		ASTM D6567	20% / 80%
Unvegetated Bench-Scale Rain Splash and Runoff (not to be used as a design value)		ASTM D7101	Soil Loss Ratio**= 0.09 Soil Loss Ratio*= 0.01
Unvegetated Bench-Scale Shear Stress (not to be used as design value)		ASTM D7207	Soil Loss Ratio**= 5.81
Vegetation and Plant Growth Under Bench-Scale Conditions		ASTM D7322	500% improvement (increased biomass)

*Site Loss Ratio = Bar Loss Bare Soil / Bar Loss with RECP • ** Site Loss Ratio = Bar loss is based on regression analysis

3 L100 TURF REINFORCEMENT MATTING

Design Values

- SF factor = 0.001
- Unvegetated Maximum Permissible Shear Stress = 3.30 lbs/ft² (158.0 Pa)
- Vegetated Maximum Permissible Shear Stress = 10.0 lbs/ft² (555 Pa)
- Maximum Flow Velocity Unvegetated = 12 ft/s (3.6 m/s)
- Maximum Flow Velocity Vegetated = 20 ft/s (6.05 m/s)
- Unvegetated Manning's "n" = 0.02 (The hydraulic roughness coefficient will vary for vegetated conditions based on vegetation size and height and density)

Standard Roll Details

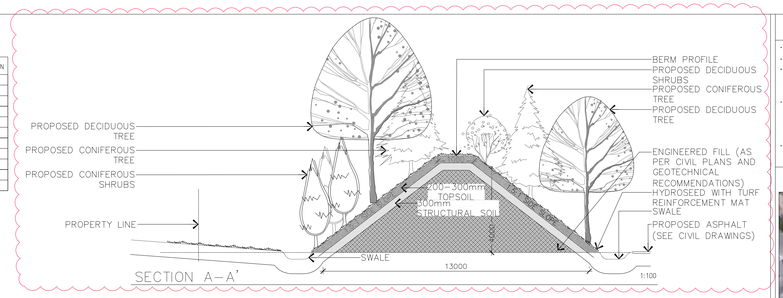
Roll Dimensions	2.4m (8ft)			
Weight/Length	25.2m (84.3ft)			
Area	60.2m² (715yd²)			
Weight ±10%	35kg (97lb)			
Also available in:				
Roll Dimensions	2.4m (8ft)	4.96m (15ft)	4.96m (16ft)	
Weight/Length	102.9m (337.7ft)	102.9m (337.7ft)	25.7m (84.3ft)	
Area	250.6m² (2700yd²)	501.2m² (5400yd²)	125.6m² (1352yd²)	
Weight ±10%	142kg (314 lb)	284kg (627 lb)	70kg (155lb)	

PHONE: (416)674-0369 • www.terrafixgeo.com • FAX: (416)674-1159
455 Horner Ave., Toronto, ON, M8W 4W9

PLANT LIST

KEY	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPREAD	CAL.	SPACING	COND.	REMARKS	ON	DT	ST	CAUTION
		DECIDUOUS TREES											
AR	11	Acer rubrum	Red Maple	4000	2000	40	as shown	WB	FULL FORM	✓			
UM	8	Ulmus japonica x wilsoniana 'Accolade'	Accolade Elm	4000	2000	50	as shown	WB	FULL FORM		✓		
		CONIFEROUS TREES											
PG	8	Picea glauca	White Spruce	1750	1500	–	3000	WB	FULL FORM	✓	✓	✓	
PP	9	Picea pungens	Colorado Spruce	1750	1500	–	–	WB	FULL FORM		✓	✓	
		DECIDUOUS SHRUBS											
Rt	130	Rhus typhina 'Tiger Eyes'	Tigers Eye Cutleaf Sumac	1500	–	–	750	CG	FULL FORM		✓	✓	
Vi	109	Viburnum lentago	Nannyberry	1500	1500	40	as shown	WB	TREE FORM	✓			
		CONIFEROUS SHRUBS											
To	169	Thuja occidentalis	White Cedar	1250	–	–	as shown	WB	FULL FORM	✓	✓		

NOTE:
–CHECK ALL QUANTITIES
–REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT
–THE QUANTITIES INDICATED ON THE PLAN SUPERSEDE THE TOTAL ON THE PLANT LIST
–THE LAYOUT OF ALL PLANT MATERIAL IS TO BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING
–TURF REINFORCEMENT MATTING TO BE CUT AT PLANTING LOCATIONS AND PLANTS TO BE SPOT PLANTED ACCORDINGLY FOLLOWING HYDROSEED GERMINATION AND STABILIZATION OF THE SLOPE. ADDITIONAL STAPLES FOR REINFORCEMENT MATTING TO BE REAPPLIED AROUND PLANT MATERIAL (AS PER TERRAFIX GUIDELINES)



SECTION A–A'

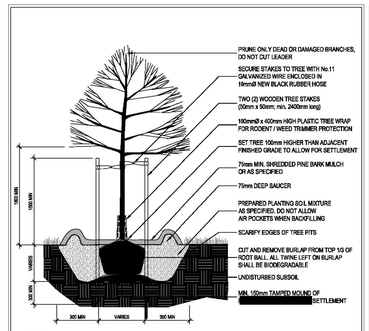
GENERAL NOTES

- VERIFY ALL DIMENSIONS.
- DO NOT SCALE DRAWINGS.
- REPORT ANY DISCREPANCIES, DISCOVERED ERRORS, OR OMISSIONS TO THE LANDSCAPE ARCHITECT BEFORE PROCEEDING.
- IT IS ADVISED THAT CONTRACTORS CONTACT THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION TO ENSURE THE USE OF THE LATEST REVISED DRAWINGS.
- DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE LANDSCAPE ARCHITECT.

KEY MAP (NOT TO SCALE)

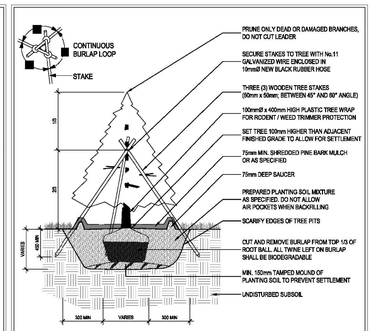
LEGEND

- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED DECIDUOUS SHRUBS
- PROPOSED CONIFEROUS SHRUBS
- HYDROSEED
- EASEMENT
- LIMIT OF TURF REINFORCEMENT MATTING



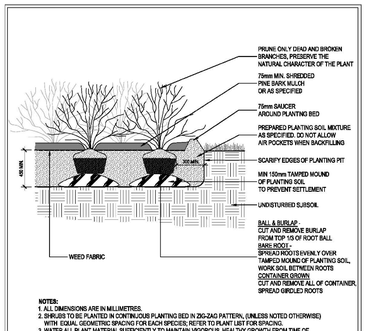
NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. NO TREE PITS SHALL BE LEFT OPEN OVERNIGHT.
3. ALL TREES 76mm CALIPER OR LESS INSTALLED IN LAWN OR PLANTED AREA SHALL BE STAKED (EXCEPT CONIFERS) STAKES TO BE REMOVED AT THE CLOSE OF THE SECOND GROWING SEASON OR UPON THE EXPIRATION OF WARRANTY PERIOD.
4. ALL TREES NOT MEETING TOWN OF OAKVILLE REQUIREMENTS WILL BE REMOVED AND REPLACED AT NO EXPENSE TO THE TOWN OF OAKVILLE.

drawing title: **DEDICUOUS TREE PLANTING AT GRADE** | scale: N.T.S. | date: MARCH, 2015 | drawn by: DS | checked by: JO | drawing no.: PL-2A
Parks and Open Space Department | OAKVILLE



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. NO TREE PITS SHALL BE LEFT OPEN OVERNIGHT.
3. STAKES TO BE REMOVED AT THE CLOSE OF THE SECOND GROWING SEASON OR UPON THE EXPIRATION OF WARRANTY PERIOD.
4. ALL TREES NOT MEETING TOWN OF OAKVILLE REQUIREMENTS WILL BE REMOVED AND REPLACED AT NO EXPENSE TO THE TOWN OF OAKVILLE.

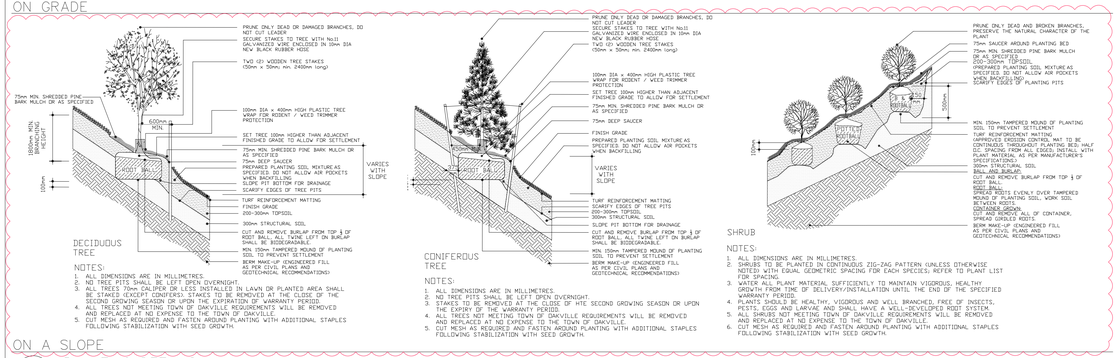
drawing title: **CONIFEROUS TREE PLANTING AT GRADE** | scale: N.T.S. | date: MARCH, 2015 | drawn by: DS | checked by: JO | drawing no.: PL-1A
Parks and Open Space Department | OAKVILLE



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. SHRUBS TO BE PLANTED IN CONTINUOUS PLANTING BED IN ZIG-ZAG PATTERN, (UNLESS NOTED OTHERWISE) WITH EQUAL GEOMETRIC SPACING FOR EACH SPECIES; REFER TO PLANT LIST FOR SPACING.
3. WATER ALL PLANT MATERIAL SUFFICIENTLY TO MAINTAIN VIGOROUS, HEALTHY GROWTH FROM TIME OF DELIVERY/INSTALLATION UNTIL THE END OF THE SPECIFIED WARRANTY PERIOD.
4. PLANTS SHOULD BE HEALTHY, VIGOROUS AND WELL BRANCHED, FREE OF INSECTS, PESTS, EGGS AND LARVAE AND SHALL HAVE A WELL-DEVELOPED ROOT SYSTEM.
5. ALL SHRUBS NOT MEETING TOWN OF OAKVILLE REQUIREMENTS WILL BE REMOVED AND REPLACED AT NO EXPENSE TO THE TOWN OF OAKVILLE.

drawing title: **SHRUB PLANTING AT GRADE** | scale: N.T.S. | date: MARCH, 2015 | drawn by: DS | checked by: JO | drawing no.: PL-5A
Parks and Open Space Department | OAKVILLE

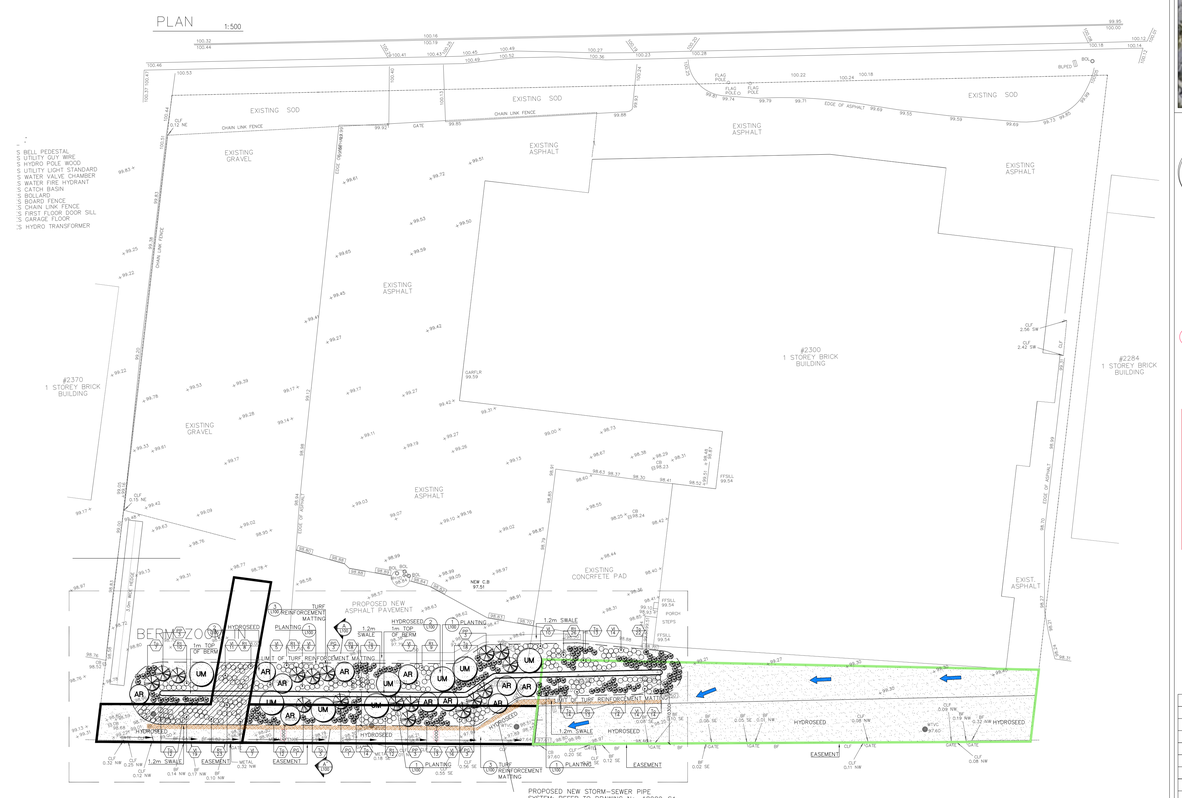
ON GRADE



ON A SLOPE

1 L100 PLANTING DETAILS

N.T.S.



GENERAL NOTES:

UTILITIES:
- APPLICANT IS RESPONSIBLE FOR OBTAINING NECESSARY APPROVALS FROM THE UTILITY COMPANIES FOR WORKS WITHIN THE MUNICIPAL BOULEVARD.
- ALL UTILITIES WITHIN THE BOULEVARDS MUST BE LOCATED PRIOR TO COMMENCING CONSTRUCTION WITHIN THE BOULEVARD.

MAINTENANCE and ACCEPTANCE:
- ALL PLANT MATERIAL SHALL BE MAINTAINED BY THE CONTRACTOR IMMEDIATELY AFTER ANY PLANTING HAS BEEN INSTALLED AND SHALL CONTINUE UNTIL THE DATE OF FINAL ACCEPTANCE.
- SUCH MAINTENANCE SHALL INCLUDE ALL MEASURES NECESSARY TO ESTABLISH AND MAINTAIN ALL PLANTS IN AN ACCEPTABLE, VIGOROUS AND HEALTHY GROWING CONDITION INCLUDING CULTIVATING AND WEEDING, WATERING WHEN REQUIRED, PRUNING AND MAINTENANCE OF ALL ACCESSORIES.
- AT TIME OF INSPECTION FOR INITIAL & FINAL ACCEPTANCE, ALL PLANTING BEDS AND TREE PITS SHALL BE FRESHLY CULTIVATED, FREE OF WEEDS, LEAVES, BROKEN BRANCHES AND RUBBISH AND SHALL BE IN A NEAT AND TIDY CONDITION.
- ALL PLANT MATERIAL TO BE GUARANTEED FOR A PERIOD OF 2 (TWO) YEARS FROM THE DATE OF ACCEPTANCE BY THE LANDSCAPE ARCHITECT AND LOCAL AUTHORITY UNLESS OTHERWISE NOTED.
- MAINTAIN PLANTING BEDS AND TREE PITS FREE OF WEEDS THROUGHOUT THE GUARANTEE PERIOD.
- THE DEVELOPER SHALL REGULARLY REMOVE DEBRIS FROM THE WETLAND UNTIL THE COMPLETION OF ALL BUILDING CONSTRUCTION WITHIN THE DEVELOPMENT.

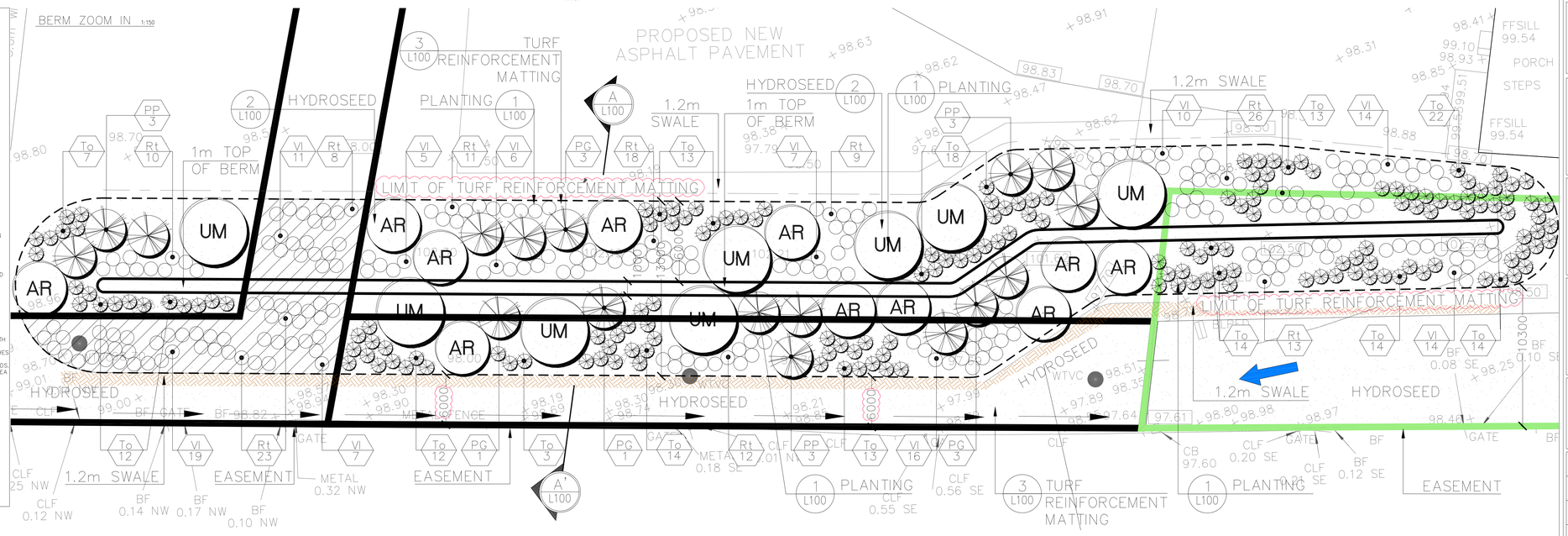
SODDING:
- PREPARE A MINIMUM 100mm DEPTH OF TOPSOIL WITH A 10–6–4 COMMERCIAL FERTILIZER AT 7.3Kg./100Sq.m. AND SUPER PHOSPHATE AT 5Kg./100Sq.m.. THE PROPORTIONS SPECIFIED ARE SUBJECT TO ADJUSTMENT DEPENDING ON TOPSOIL ANALYSIS REPORT.
- LAY No. 1 NURSERY SOD ON ALL AREAS OF THE PROJECT NOT COVERED BY BUILDINGS OR PAVING. IMMEDIATELY AFTER INSTALLATION, SOD MUST BE WATERED AND ROLLED.

RODENT PROTECTION:
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL TREES AND SHRUBS FROM RODENT INJURY FOR THE DURATION OF THE GUARANTEE PERIOD. PROTECTIVE WIRE MESH GUARDS SHALL BE EMPLOYED AROUND ALL DECIDUOUS TREES. GUARDS SHALL BE INSTALLED PRIOR TO THE APPLICATION OF MULCH AND SHOULD BE PLACED A MINIMUM OF 50mm OUT FROM THE TREE TRUNK ON ALL SIDES. SUFFICIENT MESH SHOULD BE CUT TO COMPLETE THIS CIRCUMFERENCE AS WELL AS TO PROVIDE A MINIMUM OF 25mm OVERLAP.
- THE WIRE MESH GUARDS MUST BE OF GALVANIZED STEEL 12mm SQUARE MESH, 19 GAUGE AND SUPPLIED IN 600mm ROLLS. THE WIRE MESH CAN BE FASTENED WITH ANY ACCEPTABLE GALVANIZED WIRE TIE. ALL SHRUBS AND CONIFEROUS TREES SHALL HAVE AN APPLICATION OF "SKOOT" OR APPROVED EQUIVALENT RODENT FORMULA, TO BE APPLIED AT THE END OF OCTOBER. FOLLOW MANUFACTURER'S DIRECTIONS FOR APPLICATION.

TREE LOCATION:
- NO TREES SHALL BE PLANTED UNDER OVERHEAD WIRES OR OVER UNDERGROUND SERVICES.
- TREES ARE NOT TO BE PLANTED LESS THAN 1M FROM CURBS, UNDERGROUND UTILITIES, SIDEWALKS AND DRIVEWAYS.
  2m FROM FIRE HYDRANTS AND TRANSFORMERS, AND 4m FROM LIGHT STANDARDS.
- THE CONTRACTOR IS TO STAKE OUT LOCATIONS OF TREE PITS. THIS STAKE OUT IS TO BE INSPECTED BEFORE THE EXCAVATION OF ANY TREE PITS.
- BEFORE THIS STAKE OUT, THE CONTRACTOR IS TO REQUEST A STAKE OUT ALL UNDERGROUND SERVICES.
- THE LANDSCAPE ARCHITECT AND THE MUNICIPALITY MAY, AT THEIR DISCRETION REDISTRIBUTE TREE LOCATIONS, PRIOR TO PLANTING, IN ORDER TO MINIMIZE CONFLICTS WITH UTILITIES, DRIVEWAYS AND INTERSECTION VISIBILITY.

PLANTING:
(UNLESS OTHERWISE SPECIFIED)
- PREPARE PLANTING SOIL BY EVENLY MIXING FOUR PARTS SANDY TOPSOIL, ONE PART ORGANIC SOIL ADDITIVE WITH 500g. BONE MEAL AND 750g COMMERCIAL FERTILIZER PER CUBIC METER. THE FOREGOING RATES ARE SUBJECT TO ADJUSTMENT ON RECEIPT OF TOPSOIL ANALYSIS REPORT.
- EXCAVATE AND PROVIDE PLANTING SOILS AS PER PLANTING DETAILS.
- PROVIDE ALL SHRUBS AND TREES ACCORDING TO THE GUIDE SPECIFICATIONS FOR NURSERY STOCK OF THE CANADIAN NURSERY TRADE ASSOCIATION WITH REGARD TO QUALITY AND GRADING AND SIZED AS PER PLANT LIST.
- SPRAY ALL PLANTINGS IN LEAF WITH ANTIDESICCANT. PROVIDE TREES WITH STAKES.
- PLANTS ARE TO BE No. 1 NURSERY GROWN, UNDER PROPER CULTURAL PRACTICES, IN PARTICULAR WITH RESPECT TO AMPLE SPACING, PEST AND DISEASE CONTROL, AND BRANCH AND ROOT PRUNING.
- TREES ARE TO HAVE STURDY, STRAIGHT TRUNKS.
- TREES SHALL BE WELL BRANCHED AND BALANCED WITH A STRONG CENTRAL LEADER.
- DECIDUOUS SHADE TREES SHALL BE FREE OF BRANCHES NOT LESS THAN 1.8m ABOVE THE GROUND.
- ALL SHRUBS ARE TO BE PLANTED IN CONTINUOUS BEDS.
- DO NOT SOD BETWEEN PLANTS. EXCAVATE ENTIRE AREA OF SHRUB BED UNIFORMLY TO SPECIFIED DEPTH AND FILL WITH SPECIFIED PLANTING SOIL.

TOPSOIL:
- USE EVENLY MIXED TOPSOIL OF FERTILE, FRIABLE NATURAL LOAM CONTAINING NOT LESS THAN 4% ORGANIC MATTER FOR CLAY LOAMS AND 2% MINIMUM ORGANIC MATTER FOR SAND LOAMS WITH AN ACIDITY RANGE OF 5.5 TO 7.5 pH.
- ALL TOPSOIL SHOULD BE FREE OF SUBSOILS, CLAY, STONES, ROOTS, EXCESS WATER, FROST AND OTHER EXTRANEOUS MATTER.
- 200~300mm OF TOPSOIL TO BE PROVIDED IN ALL HYDRO-SEEDED AREAS.



No.	DATE.	REVISION.	BY.
5.	JUNE 2020	ISSUED FOR SPA	S.V.
4.	JAN. 22, 2020	AS PER LATEST SITE PLAN	S.V.
3.	NOV. 14, 2019	AS PER LATEST SITE PLAN	S.V.
2.	OCT. 31, 2019	AS PER CITY COMMENTS	S.V.
1.	AUG. 7, 2019	AS PER LATEST SITE PLAN	S.V.

It is the responsibility of the Contractor and/or Owner to ensure that the drawings with the latest revisions are used for construction.

Plans and drawings approved pursuant to the Planning Act. Planning Services Department

31-July-2020

Town of Oakville

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — MEMBER

SBK
5770 HURONTARIO STREET, SUITE 320
MISSISSAUGA, ONTARIO, L5R 3G5
T: 416.695.4949 F: 905.712.3101
WWW.STRYBOS.COM
STRYBOS BARRON KING
LANDSCAPE ARCHITECTURE

PROJECT.
PROPOSED NEW LANDSCAPING
2300 Speers Road, Oakville, ON

DRAWING TITLE.
LANDSCAPE PLAN

SCALE. AS SHOWN	PROJECT No. 5353
DATE. AUGUST 7, 2019	
DRAWN BY. J.M.	DRAWING No. L100
CHECKED BY. S.V.	