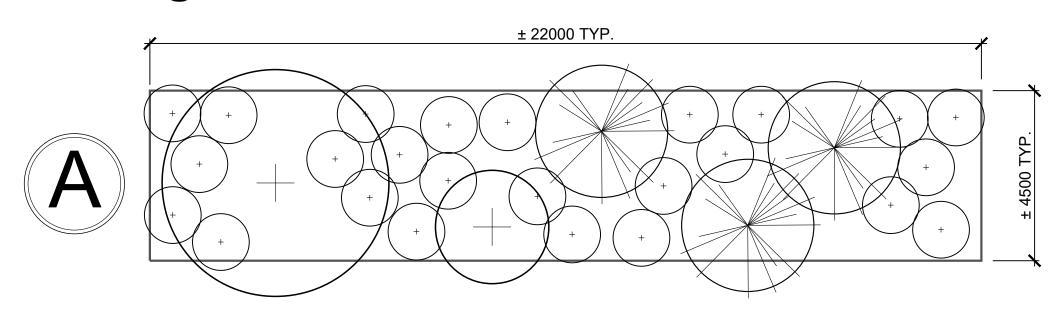
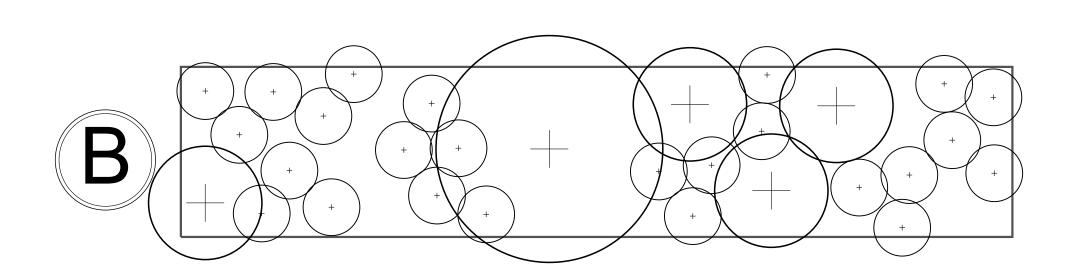
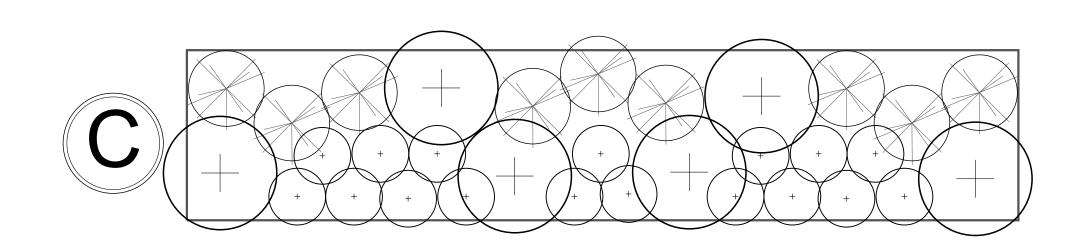
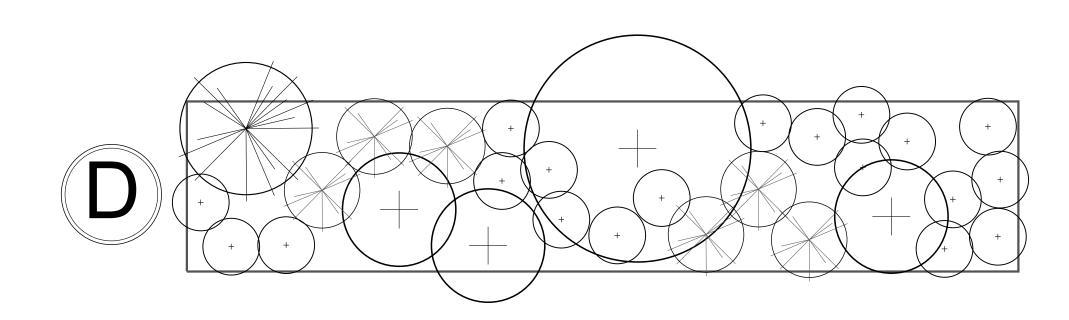


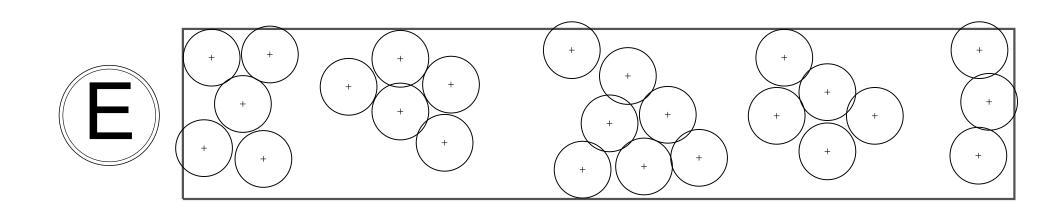
## **Ecological & Scenic Restoration Buffer Nodes**











NOI	DE /	4				
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREES	3					
AS	1	ACER SACCHARUM	SUGAR MAPLE	60 CM CAL	WB	SPACING AS SHOWN
PS	3	PINUS STROBUS	WHITE PINE	200 CM HT	WB	3.5m SPACING O.C.
	4	TOTAL TREES				
WHIPS	3					
Ar	1	ACER RUBRUM	RED MAPLE	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
	1	TOTAL WHIPS				
SHRUE	3S					
CR	5	CORNUS RACEMOSA	GREY DOGWOOD	50 CM HT	3 GAL	1.5m SPACING O.C.
DL	5	DIREVILLA LONICERA	BUSH HONEYSUCKLE	50 CM HT	3 GAL	1.5m SPACING O.C.
RT	10	RHUS TYPHINA	STAGHORN SUMAC	60 CM HT	3 GAL	1.5m SPACING O.C.
VL	5	VIBURNUM LENTAGO	NANNYBERRY	80 CM HT	3 GAL	1.5m SPACING O.C.
	25	TOTAL SHRUBS				

10	DE I					
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREES	3					
TA	1	TILIA AMERICANA	BASSWOOD	60 CM CAL	WB	SPACING AS SHOWN
	1	TOTAL TREES				
WHIPS	3					
Ov	1	OSTRYA VIRGINIANA	IRONWOOD	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Qr	1	QUERCUS RUBRA	RED OAK	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Pt	2	POPULUS TREMULOIDES	TREMBLING ASPEN	150 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
	4	TOTAL WHIPS				
SHRUE	3S					
CS	5	CORNUS SERICEA	RED OSIER DOGWOOD	50 CM HT	3 GAL	1.5m SPACING O.C.
RT	5	RHUS TYPHINA	STAGHORN SUMAC	60 CM HT	3 GAL	1.5m SPACING O.C.
RB	7	ROSA BLANDA	SMOOTH ROSE	50 CM HT	3 GAL	1.5m SPACING O.C.
SR	8	SAMBUCUS RACEMOSA	RED ELDERBERRY	80 CM HT	3 GAL	1.5m SPACING O.C.
	25	TOTAL SHRUBS				'

NOI	DE (	C				
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
WHIPS	3					
As	2	ACER SACCHARUM	SUGAR MAPLE	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Сс	1	CARYA CORDIFORMIS	BITTERNUT HICKORY	150 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Ps	1	PRUNUS SEROTINA	BLACK CHERRY	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Qm	2	QUERCUS MACROCARPA	BUR OAK	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Tj	9	THUJA OCCIDENTALIS	EASTERN WHITE CEDAR	150 CM HT	POTTED	WHIP, 2.0m SPACING O.C.
	15	TOTAL WHIPS				
SHRUE	3S					
PV	3	PRUNUS VIRGINIANA	COMMON CHOKECHERRY	50 CM HT	3 GAL	1.5m SPACING O.C.
RI	7	RUBUS IDAEUS SSP. STRIGOSUS	WILD RED RASPBERRY	50 CM HT	3 GAL	1.5m SPACING O.C.
VA	7	VIBURNUM ACERIFOLIUM	MAPLELEAF VIBURNUM	50 CM HT	3 GAL	1.5m SPACING O.C.
	17	TOTAL SHRUBS				

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREES	;		1			
AS	1	ACER SACCHARUM	SUGAR MAPLE	60 CM CAL	WB	SPACING AS SHOWN
PS	1	PINUS STROBUS	WHITE PINE	200 CM HT	WB	SPACING AS SHOWN
	2	TOTAL TREES				
WHIPS						
Ar	1	ACER RUBRUM	RED MAPLE	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Qr	2	QUERCUS RUBRA	RED OAK	200 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
Tj	6	THUJA OCCIDENTALIS	EASTERN WHITE CEDAR	150 CM HT	POTTED	WHIP, 3.0m SPACING O.C.
	9	TOTAL WHIPS	·			
SHRUE	3S					
CR	5	CORNUS RACEMOSA	GREY DOGWOOD	50 CM HT	3 GAL	1.5m SPACING O.C.
DL	5	DIREVILLA LONICERA	BUSH HONEYSUCKLE	50 CM HT	3 GAL	1.5m SPACING O.C.
RT	5	RHUS TYPHINA	STAGHORN SUMAC	60 CM HT	3 GAL	1.5m SPACING O.C.
VL	4	VIBURNUM LENTAGO	NANNYBERRY	80 CM HT	3 GAL	1.5m SPACING O.C.
	19	TOTAL SHRUBS		,		

NODE E								
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS		
SHRUE	BS	1		1				
DL	8	DIREVILLA LONICERA	BUSH HONEYSUCKLE	50 CM HT	3 GAL	1.5m SPACING O.C.		
RT	10	RHUS TYPHINA	STAGHORN SUMAC	60 CM HT	3 GAL	1.5m SPACING O.C.		
VL	7	VIBURNUM LENTAGO	NANNYBERRY	80 CM HT	3 GAL	1.5m SPACING O.C.		
	25	TOTAL SHRUBS		·				

#### NODE PLANTING NOTES:

1. SHRUBS AND WHIPS TO BE PLANTED IN

LEGEND:

PROPOSED DECIDUOUS TREE

PROPOSED DECIDUOUS WHIP

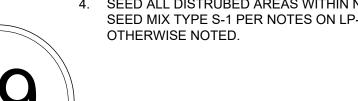
PROPOSED CONIFEROUS TREE

PROPOSED CONIFEROUS WHIP

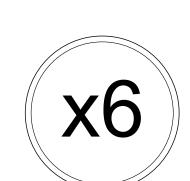
PROPOSED DECIDUOUS SHRUBS

- CONTINUOUSLY MULCHED BEDS. 2. FIELD FIT ALL TREES AND SHRUBS AROUND
- EXISTING VEGETATION TO BE RETAININED. 3. DIMENSINONS AND LAYOUT ARE APPROXIMATELY ONLY. ALL NODES COVER APPROXIMATELY 100 SQUARE METERS (UNLESS
- OTHERWISE NOTED), BUT MAY VARY IN SHAPE. 4. SEED ALL DISTRUBED AREAS WITHIN NODES SEED MIX TYPE S-1 PER NOTES ON LP-1, UNLESS OTHERWISE NOTED.









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	XI	

	Description  (ISIONS: All previous issues o	Ву	Date
	<b>5</b> :		
0	ISSUED FOR COORDINATION	EE	28 JUL-23
1	ISSUED FOR COORDINATION	EE	23 AUG-23
2	ISSUED FOR COORDINATION	MGN	19 SEP-23
3	ISSUED FOR SUBMISSION	MGN	26 OCT-23



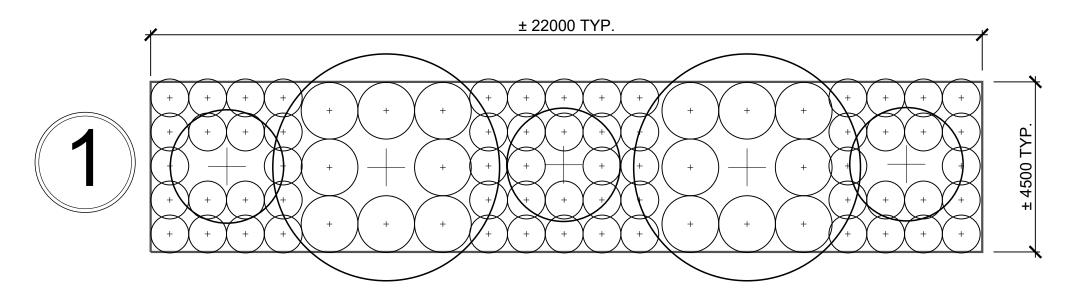
LANDSCAPE PLAN -RESTORATION NODES

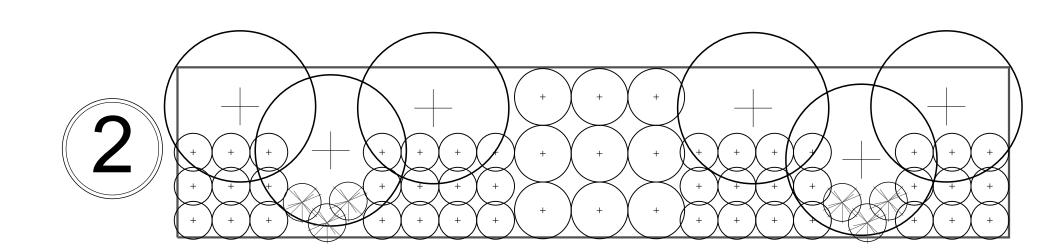
2935-2955 MISSISSAUGA ROAD CITY OF MISSISSAUGA 590816 ONTARIO INC.

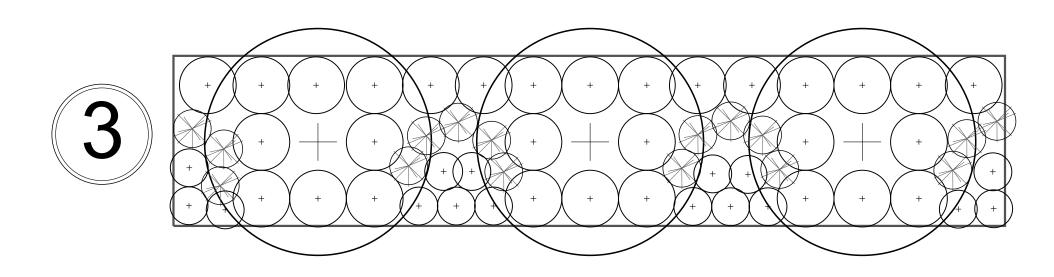
Date: JULY 2023	Designer: EE
Project: AA23-082A	Drawn: EE
Scale: AS SHOWN	Checked: MGN

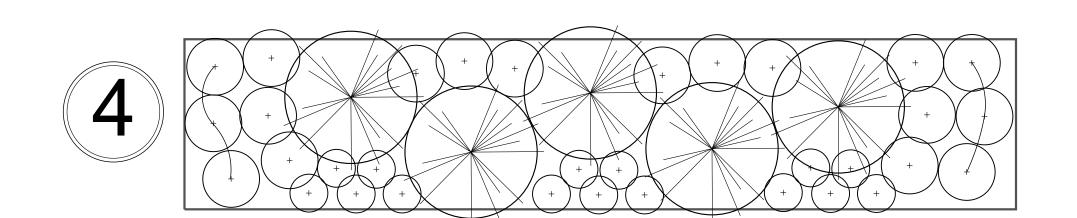


# Landscape Buffer Nodes







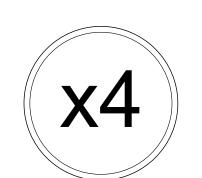


KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREE	3		,			
AS	2	ACER SACCHARUM	SUGAR MAPLE	60 CM CAL	WB	9.5m O.C. SPACING
	2	TOTAL TREES				
SHRU	BS					
CR	36	CORNUS RACEMOSA	GREY DOGWOOD	50 CM HT	3 GAL	1.5m O.C. SPACING
DL	18	DIREVILLA LONICERA	BUSH HONEYSUCKLE	50 CM HT	3 GAL	1.0m O.C. SPACING
	3	HAMAMELIS VIRGINIANA	WITCH HAZEL	125 CM HT	7 GAL	9.0m O.C. SPACING
HV						
RB	24	ROSA BLANDA	SMOOTH ROSE	50 CM HT	3 GAL	1.0m O.C. SPACING

NOI	DE 2	2				
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREES	;					
AM	3	AMELANCIER LAEVIS	ALLEGHENY SERVICEBERRY	40 CM CAL	WB	CLUMP, 2.5m O.C. SPACE
CA	3	CORNUS ALTERNIFOLIA	PAGODA DOGWOOD	100 CM HT	7 GAL	CLUMP, 2.5m O.C. SPACE
	3	TOTAL TREES				
SHRUE	3S					
CS	18	CORNUS SERICEA	RED OSIER DOGWOOD	50 CM HT	3 GAL	1.0m O.C. SPACING
RT	9	RHUS TYPHINA	STAGHORN SUMAC	60 CM HT	3 GAL	1.5m O.C. SPACING
RO	24	RUBUS ODORATUS	FLOWERING RASPBERRY	50 CM HT	3 GAL	1.0m O.C. SPACING
TC	6	TAXUS CANADENSIS	CANADIAN YEW	50 CM HT	3 GAL	
	57	TOTAL SHRUBS				,

NO	NODE 3							
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS		
TREES	3							
AR	2	ACER RUBRUM	RED MAPLE	60 CM CAL	WB	7.5m O.C. SPACING		
	2	TOTAL TREES						
SHRUI	BS							
DL	10	DIERVILLA LONICERA	BUSH HONEYSUCKLE	50 CM HT	3 GAL	1.0m O.C. SPACING		
RT	15	RHUS TYPHINA	STAGHORN SUMAC	60 CM HT	3 GAL	1.5m O.C. SPACING		
TC	16	TAXUS CANADENSIS	CANADIAN YEW	50 CM HT	3 GAL	1.0m O.C. SPACING		
SR	15	SAMBUCUS RACEMOSA	RED ELDERBERRY	80 CM HT	3 GAL	1.5m O.C. SPACING		
VA	6	VIBURNUM ACERIFOLIUM	MAPLELEAF VIBURNUM	50 CM HT	3 GAL	1.0m O.C. SPACING		
	62	TOTAL SHRUBS				·		

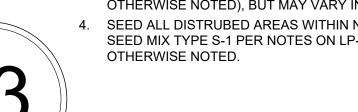
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREES	3					
PS	5	PINUS STROBUS	WHITE PINE	200 CM HT	WB	3.5m O.C. SPACING
	5	TOTAL TREES				,
SHRUI	3S					
CR	15	CORNUS RACEMOSA	GREY DOGWOOD	50 CM HT	3 GAL	1.0m O.C. SPACING
RI	6	RUBUS IDAEUS SSP. STRIGOSUS	WILD RED RASPBERRY	50 CM HT	3 GAL	1.5m O.C. SPACING
RT	12	RHUS TYPHINA	STAGHORN SUMAC	60 CM HT	3 GAL	1.5m O.C. SPACING
	33	TOTAL SHRUBS	•			•



#### NODE PLANTING NOTES:

- 1. SHRUBS AND WHIPS TO BE PLANTED IN CONTINUOUSLY MULCHED BEDS.
- FIELD FIT ALL TREES AND SHRUBS AROUND EXISTING VEGETATION TO BE RETAININED.
- 3. DIMENSINONS AND LAYOUT ARE
  APPROXIMATELY ONLY. ALL NODES COVER
  APPROXIMATELY 100 SQUARE METERS (UNLESS
  OTHERWISE NOTED), BUT MAY VARY IN SHAPE.
- 4. SEED ALL DISTRUBED AREAS WITHIN NODES SEED MIX TYPE S-1 PER NOTES ON LP-1, UNLESS OTHERWISE NOTED.











LEGEND:

PROPOSED DECIDUOUS TREE

PROPOSED DECIDUOUS WHIP

PROPOSED CONIFEROUS TREE

PROPOSED CONIFEROUS WHIP

PROPOSED DECIDUOUS SHRUBS



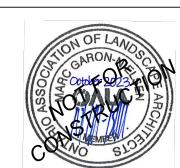
		3	ISSUED FOR SUBMISSION	MGN	26 OCT-23
		2	ISSUED FOR COORDINATION	MGN	19 SEP-23
		1	ISSUED FOR COORDINATION	EE	23 AUG-23
		0	ISSUED FOR COORDINATION	EE	28 JUL-23
		No.	Description	Ву	Date
		REVISIONS: All previous issues		f this draw	ing are superceded



### LANDSCAPE PLAN -RESTORATION NODES

2935-2955 MISSISSAUGA ROAD CITY OF MISSISSAUGA 590816 ONTARIO INC.

Date: JULY 2023	Designer: EE
Project: AA23-082A	Drawn: EE
Scale: AS SHOWN	Checked: MGN



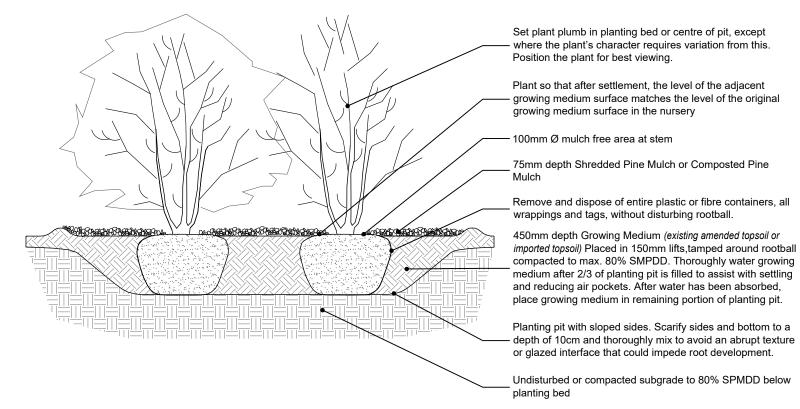
PLANTING PIT Ø TABLE				
Caliper	Rootball Ø	Min. Pit Ø		
40 mm	50 cm	1.8 m		
50 mm	60 cm	2.1 m		
60 mm	70 cm	2.4 m		
70 mm	75 cm	2.7 m		
80 mm	80 cm	3.0 m		

Plant Characteristics, Rootballs, Rootball Standards including minimum rootball diameters, Harvesting Practices, Transporting, Unloading, Handling/Protection, Scheduling, Water/Irrigation, Digging of Plants and Preparing Roots prior to planting in accordance with the Section 9 of the Canadian Landscape Standard. Do not perform work under adverse field conditions such as frozen soil, excessively wet soil or soil covered with snow, ice, or standing water. Contractor to supply all required water during planting and maintenance work.

	Remove all nursery tags, wires and wraps at time of planting. Remove tree guards and supports at end of warranty period.
	At time of planting, pruning shall be limited to cleaning (stubs, broken, dead or diseased branches). Contractor shall complete any structural pruning and pruning to raise required to improve tree and branch—architecture at end of warranty period. No more than 25% of foliage shall be removed in a single growing season. All pruning work shall be completed in compliance with ANSI A300 (Part 1) - 2008 Pruning and the Best Management Practices companion publication (revised 2008)
	Set tree plumb in planting bed or centre of pit, except where the plant's character requires variation from this. Where possible, orient plant in the —same direction that it was grown in the nursery. Face the lowest branch away from the greatest pedestrian and vehicular traffic and position the plant for best viewing.
	Polypropylene type tree tie (Arbortie Green or approved equivalent) installed per manufacturers recommendations
	38mm x 38mm x 2300mm wood stake pointed at one end. Align stakes with prevailing wind
	20 Gallon slow release tree water bag such as TreeGator Watering Bag or approved equal
	—60cm height PVC spiral tree guard
	Locate trunk(root) flare and first root at top of rootball. Remove any fill so—at top of rootball to ensure flare is 25 to 50mm above finish grade and first root is located 25 to 50mm below finish grade
	─200mm Ø mulch free area at trunk
	—75mm depth Composted Pine Mulch
	—300mm wide x 100mm depth soil saucer
	Remove all wires and ties, cut away top one third of wrapping and wire—basket without damaging root ball. Do not pull burlap or rope from under root ball.
	600mm depth Growing Medium (using existing topsoil per specificifications or approved equal) Placed in 150mm lifts, tamped around rootball compacted—max. 80% SMPDD. Throughly water growing medium after 2/3 of planting pit is filled to assist with settling and reducing air pockets. After water has been absorbed, place growing medium in remaining portion of planting p
	Planting pit with sloped sides. Scarify sides and bottom to a depth of —30cm and thoroughly mix to avoid an abrupt texture or glazed interface that could impede root development.
VARIES (SEE PLANTING PIT Ø TABLE)	—Undisturbed or compacted subgrade to max 80% SPMDD below rootball

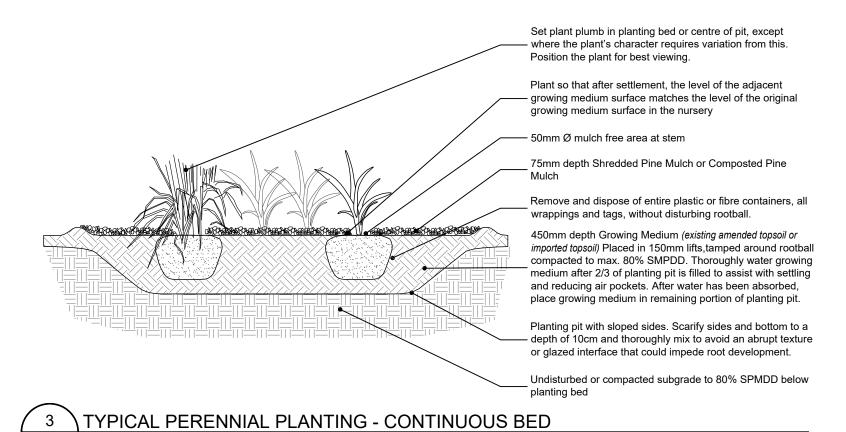
1 TYPICAL DECIDUOUS TREE PLANTING DETAIL

Plant Characteristics, Rootballs, Rootball Standards including minimum rootball diameters, Harvesting Practices, Transporting, Unloading, Handling/Protection, Scheduling, Water/Irrigation, Digging of Plants and Preparing Roots prior to planting in accordance with the Section 9 of the Canadian Landscape Standard. Do not perform work under adverse field conditions such as frozen soil, excessively wet soil or soil covered with snow, ice, or standing water. Contractor to supply all required water during planting and maintenance work.



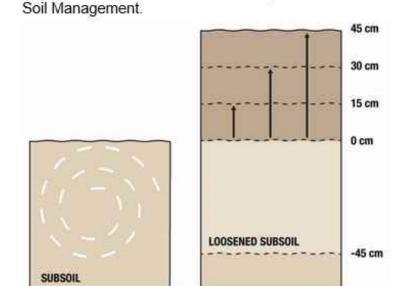
2 \TYPICAL SHRUB PLANTING - CONTINUOUS BED

Plant Characteristics, Rootballs, Rootball Standards including minimum rootball diameters, Harvesting Practices, Transporting, Unloading, Handling/Protection, Scheduling, Water/Irrigation, Digging of Plants and Preparing Roots prior to planting in accordance with the Section 9 of the Canadian Landscape Standard. Do not perform work under adverse field conditions such as frozen soil, excessively wet soil or soil covered with snow, ice, or standing water. Contractor to supply all required water during planting and maintenance work.



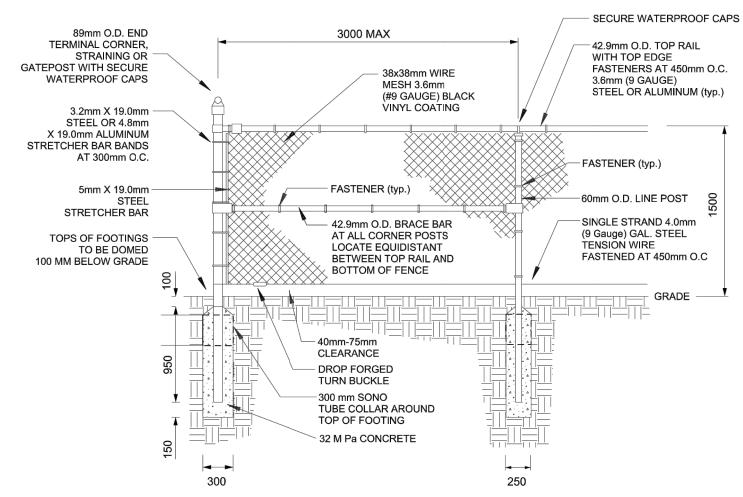
Lands within the post-conveyance property boundary (excluding areas within the woodlot) will receive 450mm depth of imported topsoil to establish healthy soil conditions and to create a soil profile that will sustain the growth of proposed plant materials to maturity. Where imported topsoil is proposed, the following process should be followed, per Section 2.3 of Credit Valley Conservation's Healthy Soil Guideline, 2017:

- Prior to importing new topsoil, till and/or scarify the existing subsoil to address any compaction to a depth of 450mm.
  - a. Tilling and scarifying should not be done within the minimum tree protection zone for trees to be preserved.
  - b. Loosening soil shall be done under dry conditions. Do not till or scarify soils in wet or frozen conditions.
- Import new topsoil that meets the specifications in Table 2 of Appendix A of CVC's Healthy Soil Guideline and City of Mississauga material specifications for Topsoil and Finish Grading. Add required amendments as recommended in topsoil testing results from OMAFRA accredited soil testing laboratory.
- 3. Spread topsoil over the entire area to a settled depth of 450mm for a final uncompacted
- soil depth of 900mm (i.e. 450mm scarified topsoil + 450mm imported topsoil).
- 4. Place topsoil in 150mm depth lifts and use only low ground pressure machinery (e.g. rated to <4 PSI) to apply the topsoil in order to avoid additional compaction.
- Ensure that topsoil has been wetted after machinery has ceased operation on the site.
- Topsoil must be allowed to settle for at least one week prior to verification tests. 6. Depth and compaction must be verified in the field at the completion of the works, prior to planting. Post-installation depths are best measured using soil pits. Post-installation
- soil compaction is best measured on-site using cone-penetrometer tests. A minimum of five sample locations per area should be tested to verify both depth and compaction. All imported topsoil must meet the requirements outlined in O. Reg. 406/19: On-Site and Excess



SOIL PREPARATION - LANDSCAPED AND LANDSCAPE BUFFER AREAS ON SUBJECT SITE

TO BE USED AS A GUIDELINE ONLY.
NOT TO SCALE. REMOVE CITY TITLE BLOCK AND REDRAW TO REPRESENT SITE SPECIFIC CONDITIONS. ALL SITE SPECIFIC CONDITIONS ARE TO BE CONFIRMED BY THE PROJECT CONSULTANT.



NOTES:

- 1. ALL FABRIC SHALL BE 3.6 mm (#9 GAUGE WITH #11 GAUGE STEEL CORE) KNUCKLED AT TOP AND BOTTOM 2. THE VINYL COATING SHALL BE BLACK 3. ALL POSTS AND RAILS SHALL BE GALVINIZED STEEL PIPE "STANDARD WEIGHT", CONFORMING TO CURRENT SPECIFICATIONS FOR BLACK AND HOT DIPPED ZINC COATED (GAL) WELDED AND SEAMLESS PIPE FOR ORDINARY
- USES, ASTM. DESIGNATION A120 4. ALL REQUIRED FITTINGS AND HARDWARE SHALL BE OF SUITABLE ALUMINUM ALLOY OR OF A STEEL DUCTILE IRON ASTM SPECIFICATION (A152) 5. MINIMUM REQUIREMENTS FOR ZINC COATING:
- POSTS AND RAILS = 0.5 KG/M, FRAME AND BRACES = 0.5 KG/M,

WIRE = 0.5 KG/M,

- CAST FITTINGS = 0.6 KG/M. OTHER FITTINGS = 0.6 KG/M
- 6. FABRIC SHALL BE INSTALLED ON THE MUNICIPAL SIDE OF THE FENCE POSTS 7. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED

ORIGINAL DATE: Oct 09/15 REVISION DATE: month xx/1x Detail: 02831-1

MISSISSAUGA 8. CHAINLINK FENCE SHALL BE LOCATED 150mm OUTSIDE OF PROPERTY LINE (ON CITY SIDE OF PROPERTY BOUNDARY)

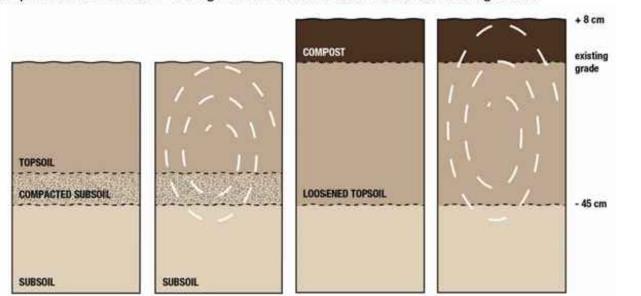
1.5m HEIGHT CHAIN LINK FENCE

wet or frozen conditions.

Lands within the ecological restoration buffer, that will ultimately be conveyed to the City of Mississauga, will require scarification and soil amendments to increase soil health. To amend the compacted topsoil, deficiency in organic material and subsoil compaction, the following steps are recommended:

- Loosen subsoil by deep tilling/subsoiling/ripping to a depth of 450mm.
  - a. Tilling and scarifying should not be done within the minimum tree protection zone for trees to be preserved.
- b. Loosening soil shall be done under dry conditions. Do not till or scarify soils in
- Spread 80mm of organic matter compost on the surface of the tilled soil and till the compost into the loosened soil.

Compost used for organic matter amendments must meet Ontario Compost Quality Standards (MOE, 2012). Use compost that meets category AA for amending site subsoil, or category AA or A for amending site topsoil. Compost should be obtained from a supplier certified by the Compost Council of Canada's Compost Quality Assurance (CQA) program and meet the CQA program requirements for use as a soil amendment. All imported compost must also meet the requirements outlined in O. Reg. 406/19: On-Site and Excess Soil Management.



6 SOIL PREPARATION - ECOLOGICAL RESTORATION BUFFER (LANDS TO BE CONVEYED) LP-5 N.T.S

ISSUED FOR SUBMISSION | MGN | 26 OCT-23 2 ISSUED FOR COORDINATION | MGN | 19 SEP-23 I ISSUED FOR COORDINATION | EE | 23 AUG-23 **0** ISSUED FOR COORDINATION | EE | 28 JUL-23 Ву No. Description **REVISIONS:** All previous issues of this drawing are superce

ABOUD & ASSOCIATES INC. Consulting Arborists • Ecologists • Landscape Architects 3-5 Edinburgh Road S . Guelph . Ontario . N1H 7L5 . 519.822.6839 . www.aboudtng.con

LANDSCAPE DETAILS

2935-2955 MISSISSAUGA ROAD CITY OF MISSISSAUGA 590816 ONTARIO INC.

Date: JULY 2023 Designer: EE Project: AA23-082A Drawn: EE Scale: AS SHOWN Checked: MGN



1.1. Grading and Servicing Plans prepared by Greck Engineering dated October 6, 2023. 1.2. Site Plan prepared by Caricari Lee Architects dated October 19, 2023. 2. All dimensions are in metric unless otherwise noted. 3. Do not scale drawings. Dimensions are to be verified on site by Contractor prior to commencement of the work. 4. These plans shall be read in conjunction with all details, notes, reports, written specifications, general conditions, any supplemental conditions and agreement which form the contract documents. 5. These drawings shall not be used for construction purposes unless noted as "Issued for Construction" and signed by the Landscape Architect or Professional Engineer. 6. Contractor shall review all drawings and verify actual field conditions to determine the total scope of work and all required coordination prior to submission of bids and commencement of the work. Report any discrepancies to the Landscape Architect, for action to the satisfaction of 7. Contractor shall locate all underground, at grade and overhead utilities prior to commencement of the work. All utilities not necessarily shown on these drawings. Aboud & Associates assumes no responsibility for the accuracy of any utilities shown in these drawings. 8. Contractor shall perform all work in accordance with the most current Ontario Building Code, Occupational Health and Safety Act and it's regulations, as well as local municipal codes, regulations, and By-laws. 9. Contractor shall identify the location of all internal/external construction access routes, parking and storage of materials in conformance with project erosion and sediment control plans for acceptance by the Owner. Construction, maintenance and removal/restoration of access, parking and storage facilities shall be included in the Contractor's bid price. 10. Contractor shall submit shop drawings where indicated in these drawings. Shop drawings shall be certified by a Professional Engineer licensed to practice in Ontario and reviewed by the contractor for dimensional correlation with the drawings and field conditions. Fabrication of elements on shop drawings shall not proceed until drawings have been reviewed and approved by a Professional Engineer and have been accepted for general design conformance by the Landscape Architect in writing. The cost of preparing shop drawings, as well as the services of a Professional Engineer, shall be included in the Contractor's bid price. 11. Contractor proposed substitution of materials and products shall be submitted in writing for review by Landscape Architect and acceptance by Owner and Municipality. 12. Material quantities on drawings shall take precedent over those in lists and schedules 13. Where traffic control is necessary, Contractor shall use the guideline of the Construction Safety Association of Ontario, municipal by-laws, the Highway Traffic Act and the Ontario Traffic Manual (Book 7). The cost of preparing, obtaining approvals and implementing traffic control plans shall be included in the Contractor's bid price, unless otherwise noted. 14. Contractor shall erect temporary barriers, as required, to secure the work area. Contractor shall maintain temporary barriers in good repair and remove at the end of the work. 15. Contractor shall provide layout and grade staking, for general review by Landscape Architect and acceptance by Owner. Contractor is responsible for protecting and/or reinstating site elements indicated in these drawings. 17. Contractor is responsible for restoration of adjacent surfaces and existing site elements damaged by the Contractor in the performance of the work, including but not limited to roads, driveways, utilities, buildings, curbs, sidewalks, retaining walls, fencing, turf, flowers and woody vegetation. Restoration work shall be performed by the Contractor at no cost to the Owner and be completed in conformance with applicable Provincial, Municipal or Agency standards and requirements, to the satisfaction of the Owner/Agency of the damaged element. 18. Where new paving or earthwork meets existing, smoothly blend line and grade of existing with new. 19. Contractor or Owner to request in writing [email] Project Landscape Architect general review services at substantial performance of landscape work between May 1st and October 31st. Requests for review after October 31st will be carried out after May 1st the following 20. All work and materials are to be warranteed by the Contractor for twenty-four (24) months from date of initial acceptance of all items by Metrolinx and Project Landscape Architect. 20.1. The Contractor shall be retained by the Owner to perform maintenance, as described in these drawings for all the installed trees, shrubs, perennials, turf, and seeding during the warranty period. 20.2. The Owner shall provide maintenance themselves or retain a separate Contractor to perform the maintenance as described in these drawings for all installed trees, shrubs, perennials, turf and seeding during the warranty period. 21. Unless identified in warranty maintenance requirements, after substantial performance, it is the Owner's responsibility to inspect and maintain all safety devices, signs, guards, fences, handrails, surfaces, structures, and stormwater drainage system so they may function for their intended use and without harm for all users of the site. GENERAL LANDSCAPE NOTES 1. Sod to be installed per OPSS.PROV 803. 2. Sod shall be a No. 1 Commercial Grade Turfgrass Nursery Sod, Kentucky Bluegrass/Fine Fescue according to the Classifications and Use of Turfgrass Sod for Ontario. 3. Sod shall be seeded and established in nursery sod fields as a turfgrass sod. 3.1. Sod shall be uniform in texture, and in good healthy condition with no sign of decay.

1. Base information sources:

3.2. There shall be no more than 5 broadleaf weeds per 40 m2 of sod and up to 20% non-specified grass seed. 3.3. Sod shall be of sufficient density that no surface soil is visible. The grass height shall be 30 mm minimum and 70 mm maximum.

4. The soil portion of the sod shall be a good mineral type soil with a thickness of 10 mm minimum and 15 mm maximum.

5. Each sod piece shall be well permeated with roots. Individual sod pieces shall be in such condition so that each may be lifted, rolled, transported, and placed without breaking or tearing and without loss of soil under normal handling conditions.

6. Sod shall contain sufficient moisture to maintain its vitality during transportation and placement. 7. Topsoil shall be loose, friable, fertile loamy material that is free from subsoil, weeds, roots, vegetation and other deleterious material greater than 25mm diameter in the greatest dimension. The topsoil shall also be certified by an OMAFRA Accredited Soil Testing Laboratory in Ontario to meet the following requirements:

7.1. Topsoil texture shall be loam, sandy loam to with: 7.1.1. Sand content between 20-75% 7.1.2. Silt content between 5-30% 7.1.3. Clay content between 5-30%

7.2. Herbicides - No detectable levels 7.3. Organic Matter content between 4-15% 7.4. Phosphorus 10-60 (ppm)

7.5. Potassium 80-259 (ppm) 7.6. Calcium 1000-4000 (ppm) 7.7. Magnesium 100-300 (ppm)

7.8. Chloride <100 (ppm) 7.9. Sodium <200 (ppm) 7.10. Sodium Adsorption Ratio <15 7.11. Shall not have contaminants that adversely affect plant growth.

7.12. The cost to amend existing on-site topsoil to be reused shall be paid for by the Owner. 7.13. The cost to amend imported topsoil supplied by the Contractor to meet Agronomist written recommendations shall be aid for by the

8. Water shall not have contaminants or impurities that would adversely affect the germination and growth of vegetation. 9. Sod shall not be separated from its mineral soil base and not damaged during transportation, handling, and placement.

10. Surface litter and debris shall be removed immediately prior to topsoil or sod placement. 11. Topsoil or sod shall not be placed when in a frozen condition, under adverse field conditions such as high wind, frozen soil or soil covered with snow, ice, or standing water.

12. Topsoil shall be placed, spread and leveled as required to match grades as indicated in the grading drawings prepared by the Project Civil Engineer and to allow for positive drainage away from pathways and structures.

13. Minimum consistent depth for topsoil in areas to be sodded after settlement shall be 200mm deep, 14. At the time of sodding, all surface areas designated for sodding shall be free of erosion and shall have a fine graded uniform surface. The surface shall be uniformly cultivated to a minimum depth of 50 mm and shall not have surface materials greater than 25 mm in size, such as stones and clods and weeds or other unwanted vegetation.

15. Sod shall be placed in locations and as specified in Drawing LP-1 and LP-2. 15.1. Voids shall not be left between the soil portion of the sod and the underlying ground surface. 15.2. Sod shall be securely placed lengthwise across the face of slopes and parallel to the centreline of ditches.

15.3. End joints of adjacent sod pieces shall be staggered.

15.4. The edges of adjacent sod pieces shall be placed tightly against one another without overlapping. 15.5. Sod shall be countersunk to existing grade level at all edges.

15.6. Butt joints will be used where new sod blends with existing grass; lap joints will not be permitted. 15.7. Joints shall be tamped to a uniform surface. 15.8. Where required, sod should be staked to the grade to avoid movement.

3 TREE, SHRUB, AND PERENNIAL PLANTING SPECIFICATIONS

drained, reset any settled plants or grades around the plant, adding soil if required.

Plant Characteristics, Rootballs, Rootball Standards including minimum rootball diameters specified on these plans are to be in accordance with the Canadian Nursery Landscape Association Canadian Standards for Nursery Stock, current edition.

Planting shall only be performed when weather and soil conditions are suitable for planting the materials specified in accordance with locally accepted practice. Install plant materials during the planting time as described below unless otherwise approved in writing by Landscape Architect. In the event that the Contractor request planting outside the dates of the planting season, approval of the request does not change the requirements of the warranty.

 Deciduous Trees: April 1 - June 30 and September 1 - October 31 • Deciduous Shrubs: April 1 - June 30 and September 1 - October 31 • Perennials and Groundcover: April 1 - June 30 and September 1 - October 31 Evergreen Trees and Shrubs: April 1 - June 30 and September 1 - October 31

Transportation of plants should be restricted to closed vans or trucks covered with mesh tarpaulin or, similar material, to protect the leaves or needles from windburn or desiccation. This may be supplemented by spraying the foliage with an antidesiccant prior to shipping.

Plant material shall at no time be dropped or handled roughly. 5. Protect plant material from frost, excessive heat, wind and sun following delivery.

6. Immediately store and protect plant material, which will not be installed within 1 hour after arrival at site in storage location, approved by the

Protect stored plant material from frost, wind and sun and as follows: For pots and containers, maintain moisture level in containers. 8. For balled and burlapped and wire basket root balls, place to protect branches from damage. Maintain moisture level in root zones.

9. Topsoil or plantings shall not be placed or installed when in a frozen condition, under adverse field conditions such as high wind, frozen soil or soil covered with snow, ice, or standing water. 10. The Landscape Architect and Municipal Staff has the right to reject any and all plant material that does not conform to the requirements of

this specification at any time regardless of any previous approval. 11. When a plant has been rejected, immediately remove it from the area of the Work and replace it with a plant of the required species, size and quality at the earliest planting period consistent with these specifications. Replacement plant material shall meet all the requirements of this specification. Rejected plants shall be replaced at no cost to the Owner.

12. Acceptance shall not be given for the planting Work until all plants rejected during the course of the Work are replaced.

13. Any plant that has the following characteristics shall be cause for rejection: 13.1. Only nursery grown plants will be accepted.

13.2. Any plant that has a canopy with 25% or more dead or removed limbs.

13.3. Evidence of damage to plant material, which diminishes the aesthetic character/form, biological integrity, or structural integrity of the plant or group of plants.

13.4. Evidence of improper digging; inadequate protection following digging; carelessness while in transit; evidence of desiccation or wind-related damage; cold damage; improper handing or storage; root zones that have dried to the point of leaf wilt; cracked, loose,

damaged or distorted root balls. 13.5. Plants with undersized root balls or containers, kinked or girdling roots, matted roots on the top, and edges of the container, excessive surface adventitious roots, root balls and containers with no structural roots in the top 75mm of the soil.

13.6. Plants balled with synthetic, treated or non-biodegradable fabrics. 13.7. Any tree that is of a species that characteristically has a dominant central leader, and if the leader is dead or removed, the tree will not

have a form consistent with the species. 13.8. Any tree that has open wounds (not completely healed over) that penetrates the cambium into the wood on trunks or major limbs the removal of which would result in the loss of 25% or more of the structure and form of the tree.

14. Topsoil shall be loose, friable, fertile loamy material that is free from subsoil, weeds, roots, vegetation and other deleterious material greater than 25mm diameter in the greatest dimension. The topsoil shall also be certified by an OMAFRA Accredited Soil Testing Laboratory in Ontario to meet the following requirements:

14.1. Topsoil texture shall be loam, sandy loam to with: 14.1.1. Sand content between 20-75%

14.1.2. Silt content between 5-30% 14.1.3. Clay content between 5-30% 14.2. Herbicides - No detectable levels

14.3. Organic Matter content between 4-15% 14.4. Phosphorus 10-60 (ppm)

14.5. Potassium 80-259 (ppm) 14.6. Calcium 1000-4000 (ppm) 14.7. Magnesium 100-300 (ppm)

14.8. Chloride <100 (ppm) 14.9. Sodium <200 (ppm) 14.10. Sodium Adsorption Ratio <15

14.11. Shall not have contaminants that adversely affect plant growth. 14.12. The cost to amend existing on-site topsoil to be reused shall be paid for by the Owner.

14.13. The cost to amend imported topsoil supplied by the Contractor to meet Agronomist written recommendations shall be paid for by the

15. Water shall not have contaminants or impurities that would adversely affect the germination and growth of vegetation. Proposed plants which

come over or under any utility shall be relocated by the Contractor for review by the Landscape Architect, to the satisfaction of the utility 16. Mulch shall be shredded hardwood or softwood as specified in the planting details. Free from roots, leaves, twigs, debris, stones, fungus,

crabgrass rhizomes, or any material detrimental to plant growth. Material shall be mulching grade, uniform in size and foreign matter. Mulch that has become saturated with water and presents an anaerobic odor shall be rejected. 17. Anti-Desiccant (if used) shall be emulsion type, film-forming agent similar to Dowax by Dow Chemical Company, or Wilt-Pruf by Nursery Specialty Products, Inc., Croton Falls, New York, designed to permit transpiration but retard excessive loss of moisture from plants. Deliver in

manufacturer's fully identified containers and use in accordance with manufacturer's instructions. Submit manufacturers product data for approval. 18. Contractor to examine the surface grades and soil conditions for any circumstances that might be detrimental to plant growth, such as

deposits of construction-related waste or soil contamination, storage of material or equipment, soil compaction or poor drainage. Contractor to examine the grading, verify all elevations, and notify the Landscape Architect in writing of any unsatisfactory conditions.

19. Contractor to inspect each plant after delivery and prior to installation for damage of other characteristics that may cause rejection of the

20. Excavate pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify the Consultant before planting. Dispose of subsoil removed from planting excavations. Do not mix with growing media or use as backfill. Plants to be planted in prepared planting soil may utilize the soil removed from the planting hole as backfill around the root ball.

21. Set edge of the root ball at the elevation of the proposed finish. Consult the grading plan and utilize a builder's level or transit to determine the grade at the tree grade. For trees on sloped surfaces, set the edge of the root ball at the average grade around the tree. Set the plant plumb and in the location indicated on the plan. The root flare and tree graft, if applicable, shall be visible at the top of the root ball, above the grade. Do not place soil on top of the root ball and remove soil pushed above root flare by mechanical potting/balled & burlapping process during transplantation by the nursery.

22. When set, brace root ball by tamping backfilled soil around the lower portion of the root ball. Place additional backfill around base and sides of ball in 150mm lifts. Work each lift to settle backfill and eliminate voids and air pockets. When excavation is approximately two-thirds full, water thoroughly before placing remainder of backfill. Ropes or strings on top of ball shall be cut and removed. Burlap or cloth wrapping shall be cut and removed from the top of the root ball. The top horizontal ring of support wire baskets shall be cut in four places and the top half of the wire basket folded down into the soil.

23. Where staking is required, caliper trees shall be supported by wooden stakes driven outside the ball in line with the direction of the prevailing wind. Tree tie type and installation method to be per planting detail. Stakes shall be 50mm x 50mm hardwood stakes free of knots and of lengths appropriate to the size plant required for to adequately support the plant.

24. Tree Guard type and installation per planting detail.

25. Contractor shall maintain all trees and shrubs in a plumb position throughout the warranty period. Straighten all trees including those not staked. Plants to be straightened shall be excavated and the root ball moved to a plumb position, and then re-backfilled. Do not straighten plants by pulling the trunk with guys.

26. Do not apply any fertilizer to plantings during the first year after transplanting, unless soil tests determine that fertilizer or other chemical additives are required. If required, fertilizers shall be applied according to the manufacturer's instructions and standard horticultural practices. 27. Pruning shall be done with clean, sharp, rust-free tools. Cuts shall be made flush, leaving no stubs as per ANSI A 300 - current edition. No

tree paint or sealants shall be used. 28. Dead wood, suckers, and broken and badly bruised branches shall be removed. Do not prune plant material that has been severely damaged due to transit or handling until viewed by the Landscape Architect.

29. Pruning of broken or dead branches shall be done after planting. Form-corrective pruning may occur when tree has hardened until bud-break in the spring. If corrective pruning dates fall outside the construction schedule, it shall remain a punch list (warranty) item. The Contractor shall be responsible for completing this off-season punch list (warranty) item.

30. Mulch top of root balls and planting beds, covering the entire planting bed area. Leaving a mulch free zone at stem/trunk as indicated in 31. Water each plant on the day of installation to saturate the soil around the roots and wash the soil into the root zone. After the soil has

1. Hydraulic seeding to be installed per OPSS.PROV 803.

2. Permanent Seed and Annual Nurse Cover Crop Seed Mix composition as indicated in drawing LP-1 and LP-2. 3. No seed fertilizer to be applied (Native Seed Mixes do not require supplementary fertilizer on prepared growing media.

4. Topsoil shall be loose, friable, fertile loamy material that is free from subsoil, weeds, roots, vegetation and other deleterious material greater than 25mm diameter in the greatest dimension. The topsoil shall also be certified by an OMAFRA Accredited Soil Testing Laboratory in

Ontario to meet the following requirements: 4.1. Topsoil texture shall be loam, sandy loam to with:

4.1.1. Sand content between 20-75% 4.1.2. Silt content between 5-30%

4.1.3. Clay content between 5-30% 4.2. Herbicides - No detectable levels

4.3. Organic Matter content between 4-15%

4.4. Phosphorus 10-60 (ppm) 4.5. Potassium 80-259 (ppm)

4.6. Calcium 1000-4000 (ppm) 4.7. Magnesium 100-300 (ppm) 4.8. Chloride <100 (ppm)

4.9. Sodium <200 (ppm)

4.10. Sodium Adsorption Ratio <15

4.11. Shall not have contaminants that adversely affect plant growth.

4.12. The cost to amend existing on-site topsoil to be reused shall be paid for by the Owner. 4.13. The cost to amend imported topsoil supplied by the Contractor to meet Agronomist written recommendations shall be paid for by the

5. Hydraulic Seeder: shall be capable of mixing the materials into a homogeneous slurry and maintaining the slurry in a homogeneous state until it is applied. The discharge pumps and gun nozzles shall be capable of applying the materials uniformly over the specified area. A hose extension for the hydraulic seeder shall be on site and available for use for areas outside of the range of the gun nozzle. Equipment shall provide constant agitation to prevent seed and slurry from clogging equipment. The seeding equipment shall be calibrated to provide the

coverage areas to receive seed indicated in drawing LP-1 and LP-2. 6. Hydraulic Mulch: shall consist of shredded wood or paper fibres or both, and water or a stabilizing emulsion or both. Stabilizing emulsions shall consist of an organic tackifier or an inorganic polymer. Hydraulic mulch shall be capable of dispersing rapidly in water to form a homogeneous slurry. Hydraulic mulch shall be dry, free of weeds and other foreign materials, and shall be supplied in factory sealed packages bearing the manufacturer's label indicating the product name, its mass and content.



1. Submit monthly written reports in during the growing season (April - September) to Consultant identifying:

1.4. Maintenance work carried out. 1.5. Watering method, quantity of water used, water source.

1.6. General development and condition of plant material.

1.7. Preventative or corrective measures required which are outside Contractor's responsibility. TREES, SHRUBS AND PERENNIALS

2. Perform following maintenance operations from time of planting trees, and shrubs to end of warranty period two (2) years following substantial performance of the work.

2.1. Water to maintain soil moisture conditions for optimum establishment, growth and health of plant material without causing erosion. In a typical loam soil, optimum soil moisture in planting beds at root depth is 65% of field capacity. Guidelines during a typical growing

season are as follows: 2.1.1. Deep root water newly planted plants once per week for the first three weeks, such that the water penetrates to a minimum depth

2.1.2. Deep root or surface water trees and shrubs a minimum of every ten (10) days between May 15 and September 15.

2.1.3. Deep root or surface water trees and shrubs a minimum of every twenty-one (21) days between September 15 and freeze up. 2.1.4. Water evergreen plants thoroughly in late fall prior to freeze-up to saturate soil around root system.

2.2. Soil moisture to be monitored throughout the growing season:

2.2.1. Watering schedule to be increased when plant materials are reaching the permanent wilting point. 2.2.2. Watering schedule to be reduced when a sufficient volume of rainfall has penetrated the soil fully as required.

2.3. Replace or respread damaged, missing or disturbed mulch. 2.4. If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Consultant prior to application.

2.5. Control outbreaks of perennial weeds as directed by Consultant, and annual weeds by mechanical or chemical means utilizing acceptable integrated pest management practices to meet acceptance/success targets

2.5.1. If chemical means are used, comply with all municipal, provincial, and federal legislation and regulations. 2.6. Remove dead or broken branches from plant material using clean sharp horticultural tools using current arboricultural practices.

2.7. Keep trunk protection and guy wires in proper repair and adjustment. 2.8. Provide adequate protection from winter, wind and rodent damage.

2.9. Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings, unless otherwise directed by Consultant. 2.10. Remove trunk protection, tree supports and level watering saucers at end of warranty period, unless notify by Consultant in writing.

3. Sod shall be maintained by the Contractor as part of base price during the establishment period (30 Days) following completion of placement. During this period, the placed sod shall be kept healthy, actively growing, and green in colour. This requirement shall be suspended during the winter dormant period defined as November 15 to April 15 inclusive. During the establishment period the Contractor

3.1. Install temporary barriers or signage to be maintained where required to protect newly established sod. Water to maintain soil moisture conditions for optimum establishment, growth and health of plant material without causing erosion. In a

typical loam soil, optimum soil moisture in planting beds at root depth is 65% of field capacity. 3.3. Mow to a height of 60mm (2.5") when turf reaches height of 80mm (3") at least twice during the establishment period. 3.4. If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal

regulations. Obtain product approval from Consultant prior to application. 3.5. Control outbreaks of perennial weeds and annual weeds by mechanical or chemical means utilizing acceptable integrated pest management practices to meet acceptance/success targets.

4. After establishment period is complete and sod is accepted, the Owner shall retain the installing Landscape Contractor, a third-party Landscape Maintenance Contractor, or perform the following maintenance work to end of warranty period two (2) years following substantial

4.1. Maintenance Level 3 "Moderate" in accordance with the Canadian Landscape Standard. The main objective is a generally neat, moderately groomed appearance, with some tolerance for the effects of "wear and tear," moderate traffic and natural processes. 4.2. Mow turf to a height of 75-100mm (3"-4"), Mowing should be performed as necessary to avoid the removal of any more than one third of the grass blade length at any one time.

4.3. Supplemental watering shall be carried out when required and with sufficient quantities of water to prevent turf and underlying soil from 4.4. If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal

regulations. Obtain product approval from Consultant prior to application. 4.5. Control outbreaks of perennial weeds and annual weeds by mechanical or chemical means utilizing acceptable integrated pest

management practices to meet acceptance/success targets. 4.6. If chemical means are used, comply with all municipal, provincial, and federal legislation and regulations.

3.4. If chemical means are used, comply with all municipal, provincial, and federal legislation and regulations.

5. Hydraulic Mulch/Native Seed Mix areas shall be maintained by the Contractor as part of base price during the establishment period (90 Days) following completion of placement. During this period, the Hydraulic Mulch/Native Seed Mix shall be kept healthy, actively growing, and green in colour. This requirement shall be suspended during the winter dormant period defined as November 15 to April 15 inclusive.

During the establishment period the Contractor will: 5.1. Install temporary barriers or signage to be maintained where required to protect newly seeded areas.

5.2. Water to maintain soil moisture conditions for optimum establishment, growth and health of plant material without causing erosion. In a typical loam soil, optimum soil moisture in planting beds at root depth is 65% of field capacity.

5.3. If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Consultant prior to application. Control outbreaks of perennial weeds and annual weeds by mechanical or chemical means utilizing acceptable integrated pest

management practices to meet acceptance/success targets. 5.5. If chemical means are used, comply with all municipal, provincial, and federal legislation and regulations. The Metrolinx Guideline recommends that use of a wick/wipe-on application method rather than a non-selective spray application where spray drift could inadvertently injure the establishing native species and cover crop species.



ISSUED FOR SUBMISSION

No. Description

**REVISIONS:** 

ISSUED FOR COORDINATION | MGN | 19 SEP-23

ISSUED FOR COORDINATION | EE | 23 AUG-23

0 ISSUED FOR COORDINATION | EE | 28 JUL-23

**ABOUD & ASSOCIATES INC** 

Consulting Arborists • Ecologists • Landscape Architects

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2935-2955 MISSISSAUGA ROAD

Designer: EE

Checked: MGN

Drawn: EE

LANDSCAPE DETAILS

CITY OF MISSISSAUGA

590816 ONTARIO INC.

Date: JULY 2023

Project: AA23-082A

Scale: AS SHOWN

| MGN | 26 OCT-23

Ву

All previous issues of this drawing are superce

2 \SOD SPECIFICATIONS