



Addendum No. 1
City of Coquitlam
Tender No. 92344
Draycott, Haversley and Cornell Sidewalks, and
Cornell Pavement Rehabilitation
 (Consists of 10 Pages)
 Issue Date: June 3, 2025

Tenderers shall note the following changes:

Revisions

1. Refer to: FORM OF TENDER

REMOVE: **Appendix 1**
REPLACE WITH: ***Revised – Appendix 1 – Revision No. 1***

2. Refer to: SUPPLEMENTARY CONTRACT SPECIFICATIONS

ADD: **Structural Soil, Section 32 91 13.23S**

Contractor Questions/Clarifications

Q1) Which type of trees (species and size) are to be planted in front of 1580 Cornell Avenue?

A1) Refer to *Revised – Appendix 1 – Revision No. 1*, Pay Item 17.01.

Q2) How much soil is required for tree planting, and is the soil incidental to the tree planting payment item?

A2) Refer to COQ-L2A, Section Through Tree Location. The 900mm deep tree trench will extend 2.0m on either side of the trees. Tree trench soil is incidental to Pay Item 17.01, Section 32 93 01S.

Q3) How much root barrier is required for tree planting, and at what depth is the root barrier to be installed?

A3) 400mm root barrier is required for 3m on each side of the trees.

- Q4) Are the perforated pipe and clear crush in the boulevard included in this pay item? If so, where would the perforated pipe tie in?
- A4) Perforated pipe and clear crush material are not required for tree planting on this project.**
- Q5) Will structural soil be required around the critical root zones of existing trees that are to be retained?
- A5) Yes. Pay items 14.01 and 42.01 have been added for structural soil. Please refer to *Revised* – Appendix 1 – *Revision No. 1*.**
- Q6) The typical x-section drawing #2 of 10 – Cornell Ave is showing full depth milling up to 275mm thick and 200mm thick base gravel whereas the SOQ & drawing #4 of 10 are showing 175mm thick milling & 100mm thick base gravel. Which one should be followed?
- A6) Full-depth asphalt milling will be 175mm thick and base gravel will be 100mm thick. Please refer to *Revised* – Appendix 1 – *Revision No. 1*.**
- Q7) Does this project require category 3 traffic control plans?
- A7) No.**

End of Addendum No. 1

Tenderers shall take into account the content of this Addendum in the preparation and submission of the Tender which will form part of the contract and shall be acknowledged on the Tender Form, Item 1.

Upon submitting a Tender, Tenderers will be deemed to have received notice of all Addenda that are posted on the City's website and deemed to have considered the information for inclusion in the Tender submitted.

Issued by:

Mark Pain
Manager Procurement
Email: bid@coquitlam.ca

Revised - APPENDIX 1 - Revision No. 1
FORM OF TENDER

Contract 92344
Draycott, Haversley and Cornell Sidewalks, and Cornell Pavement Rehabilitation

SCHEDULE OF QUANTITIES AND PRICES
(see paragraph 5.3.1 of the Instruction to Tenderers)
(All Tender and Contract Prices shall NOT include GST. GST will apply upon payment)
(Should there be any discrepancy in the information provided, the City's original file copy shall prevail)

ITEM NO.	MMCD Ref. / (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
Cornell Avenue						
1	01 55 005	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
1.01	(1.5.1)	Traffic Control and Management				Incidental to Contract
2	01 57 015	ENVIRONMENTAL PROTECTION				
2.01	(1.6.1)	ESC supply & Installation, Maintenance and Removal				Incidental to Contract
3	01 58 015	PROJECT IDENTIFICATION				
3.01	(1.3.1)	1.2m x 1.2m Static Construction Zone Information Sign	each	2		
4	03 30 205	CONCRETE WALKS, CURBS AND GUTTERS				
4.01	(1.4.3)	Concrete Curb and Gutter - MMCD C5 - c/w 100mm granular base	lin.m	125		
4.02	(1.4.5)	Concrete Sidewalk, Walkway Connectors, Driveways, and Wheelchair Letdowns - 100mm thick - Broom Finished c/w 100mm granular base; and as shown and described in the Contract Documents	sq.m	480		
4.03	(1.4.5)	Concrete Driveway Letdown and Sidewalk - 190mm thick - Broom Finished c/w 100mm granular base; and as shown and described in the Contract Documents	sq.m	350		
4.04	(1.4.5)	Concrete Exposed Aggregate Driveways and Walkways - complete with 100mm granular base	sq.m	20		
4.05	(1.4.10)	Tactile Strip - 24in x 60in - Access Tile, Yellow Colour, Removable Type	each	2		
5	31 11 01	CLEARING AND GRUBBING				
5.01	1.4.1	Tree/Hedge Trimming and Removal (including offsite disposal)	L.S.	1		
6	31 11 415	SHRUB AND TREE PRESERVATION				
6.01	(1.3.1)	Tree Protection (Including Tree Protection Fencing COQ-R26)	L.S.	1		
6.02	(1.3.2)	Preservation of Existing Trees (Includes Dry Vac and Air Spade)		Allowance	\$2,000.00	\$2,000.00
7	31 22 165	RESHAPING GRANULAR ROADBEDS				
7.01	(1.4.1)	Reshaping	sq.m	3,040		
8	31 24 135	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
8.01	(1.8.4)	Removal of Existing Concrete Curb and Gutter (includes saw-cutting, removal, and offsite disposal)	lin.m	40		
8.02	(1.8.4)	Removal of Existing Concrete and Asphalt Flat Works (includes saw-cutting, removal, and offsite disposal)	sq.m	230		
8.03	(1.8.4)	Removal of Existing Concrete Monolithic Curbwalk (includes saw-cutting, removal, and offsite disposal)	sq.m	135		
8.04	(1.8.4)	Remove Section of Allan Block Retaining Walls (includes removal and offsite disposal)	L.S.	1		
8.05	(1.8.5)	Common Excavation (includes offsite disposal)	cu.m	160		
8.06	(1.8.10)	Over Excavation (Includes offsite disposal) - Provisional	cu.m	20		
9	32 01 16.75	COLD MILLING				
9.01	(1.5.4)	Full-depth Milling (Up to 175mm)	sq.m	3,040		
10	32 11 235	GRANULAR BASE				
10.01	(1.4.3)	19mm Minus Granular Base (Variable Thickness)	tonnes	1,050		
11	32 12 165	HOT-MIX ASPHALT CONCRETE PAVING				
11.01	(1.5.1)	Asphaltic Concrete Paving - Upper Course #1 (75mm, 1 lift)	tonnes	560		
11.02	(1.5.3)	Asphaltic Concrete Paving - Driveways and Walkways - Upper Course #2 (60mm, 1 lift), c/w 100mm Granular base	tonnes	20		
12	32 14 015	UNIT PAVING				
12.01	(1.6.1)	Remove, Level, and Re-Lay Existing Pavers (Driveway and Walkway Tie-Ins)	sq.m	70		
13	32 17 235	PAINTED PAVEMENT MARKINGS				
13.01	(1.5.3)	Permanent Thermoplastic Pavement Markings	L.S.	1		
13.02	(1.5.4.3)	Relocate Existing Pole and Signs	each	1		
14	32 91 13.235	STRUCTURAL SOIL				
14.01	(1.8.1)	Structural Soil within Critical Root Zones of Existing Tree	tonnes	10		
15	32 91 215	TOPSOIL AND FINISH GRADING				
15.01	(1.4.1)	Imported Topsoil - 150mm Thick	cu.m	120		
16	32 92 235	SODDING				
16.01	(1.8.1)	Supply and Installation of Sod	sq.m	570		
17	32 93 015	PLANTING OF TREES, SHRUBS, AND GROUND COVERS				
17.01	(1.9.1)	Nyssa Sylvatica 'Wildfire' - Wildfire Tupelo, 6cm-7cm Caliper (c/w tree trench as per COQ-L2A)	each	2		
18	33 44 015	MANHOLES AND CATCHBASINS				
18.01	(1.5.3.1)	Manhole Adjustment Only - Provisional	each	5		
18.02	(1.5.3.3)	Water Valve Lid & Frame Replacement - Provisional	each	1		
18.03	(1.5.3.4)	Water Valve Adjustment Only - Provisional	each	4		
18.04	(1.5.3.6)	Catchbasin Adjustments Only - Provisional	each	2		

ITEM NO.	MMCD Ref. / (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
Draycott Street						
19	01 55 005	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
19.01	(1.5.1)	Traffic Control and Management				Incidental to Contract
20	01 57 015	ENVIRONMENTAL PROTECTION				
20.01	(1.6.1)	ESC supply & Installation, Maintenance and Removal				Incidental to Contract
21	01 58 015	PROJECT IDENTIFICATION				
21.01	(1.3.1)	1.2m x 1.2m Static Construction Zone Information Sign	each	2		
22	03 30 205	CONCRETE WALKS, CURBS AND GUTTERS				
22.01	(1.4.3)	Concrete Curb and Gutter - MMCD C5 - c/w 100mm granular base	lin.m	30		
22.02	(1.4.5)	Concrete Sidewalk, Walkway Connectors, Driveways, and Wheelchair Letdowns - 100mm thick – Broom Finished c/w 100mm granular base; and as shown and described in the Contract Documents	sq.m	190		
22.03	(1.4.5)	Concrete Driveway letdown and Sidewalk - 190mm thick - Broom Finished c/w 100mm granular base; and as shown and described in the Contract Documents	sq.m	270		
22.04	(1.4.10)	Tactile Strip - 24in x 60in - Access Tile, Yellow Colour, Removable Type	each	4		
23	31 11 01	CLEARING AND GRUBBING				
23.01	1.4.1	Tree/Hedge Trimming and Removal (including offsite disposal)	L.S.	1		
24	31 11 415	SHRUB AND TREE PRESERVATION				
24.01	(1.3.1)	Tree Protection (Including Tree Protection Fencing COQ-R26)	L.S.	1		
25	31 24 135	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
25.01	(1.8.4)	Removal of Existing Concrete Curb and Gutter (includes saw-cutting, removal, and offsite disposal)	lin.m	30		
25.02	(1.8.4)	Removal of Existing Concrete and Asphalt Flat Works (includes saw-cutting, removal, and offsite disposal)	sq.m	275		
25.03	(1.8.4)	Remove Section of Allan Block Retaining Walls (includes removal and offsite disposal)	L.S.	1		
25.04	(1.8.4)	Remove Wood Planter Box at 521 Draycott Street	L.S.	1		
25.05	(1.8.4)	Remove Planter between 503 and 507 Draycott Street	L.S.	1		
25.06	(1.8.5)	Common Excavation (includes offsite disposal)	cu.m	80		
26	32 12 165	HOT-MIX ASPHALT CONCRETE PAVING				
26.01	(1.5.3)	Asphaltic Concrete Paving - Driveways- Upper Course #2 (60mm, 1 lift), c/w 100mm Granular base	tonnes	15		
27	32 17 235	PAINTED PAVEMENT MARKINGS				
27.01	(1.5.3)	Permanent Thermoplastic Pavement Markings	L.S.	1		
27.02	(1.5.4.3)	Relocate Existing Pole and Signs	each	1		
28	32 91 215	TOPSOIL AND FINISH GRADING				
28.01	(1.4.1)	Imported Topsoil - 150mm thick	cu.m	50		
29	32 92 235	SODDING				
29.01	(1.8.1)	Supply and Installation of Sod	sq.m	230		
30	33 44 015	MANHOLES AND CATCHBASINS				
30.01	(1.5.3.1)	Manhole Adjustment Only - Provisional	each	2		
Haversley Avenue						
31	01 55 005	TRAFFIC CONTROL, VEHICLE ACCESS AND PARKING				
31.01	(1.5.1)	Traffic Control and Management				Incidental to Contract
32	01 57 015	ENVIRONMENTAL PROTECTION				
32.01	(1.6.1)	ESC supply & Installation, Maintenance and Removal				Incidental to Contract
33	01 58 015	PROJECT IDENTIFICATION				
33.01	(1.3.1)	1.2m x 1.2m Static Construction Zone Information Sign	each	2		
34	03 30 205	CONCRETE WALKS, CURBS AND GUTTERS				
34.01	(1.4.3)	Concrete Curb and Gutter - MMCD C5 - c/w 100mm granular base	lin.m	60		
34.02	(1.4.5)	Concrete Sidewalk, Walkway Connectors, Driveways, and Wheelchair Letdowns - 100mm thick – Broom Finished c/w 100mm granular base; and as shown and described in the Contract Documents	sq.m	270		
34.03	(1.4.5)	Concrete Driveway letdown and Sidewalk - 190mm thick - Broom Finished c/w 100mm granular base; and as shown and described in the Contract Documents	sq.m	70		
34.04	(1.4.10)	Tactile Strip - 24in x 60in - Access Tile, Yellow Colour, Removable Type	each	4		
35	03 30 535	CAST-IN-PLACE CONCRETE				
35.01	(1.5.3)	Concrete Stairs - Existing Walkway at 1734 Haversley Ave	lin.m	1		
36	31 11 01	CLEARING AND GRUBBING				
36.01	1.4.1	Tree/Hedge Trimming and Removal (including offsite disposal)	L.S.	1		
37	31 11 415	SHRUB AND TREE PRESERVATION				
37.01	(1.3.1)	Tree Protection (Including Tree Protection Fencing COQ-R26)	L.S.	1		
37.02	(1.3.2)	Preservation of Existing Trees (Includes Dry Vac and Air Spade)		Allowance	\$2,000.00	\$2,000.00
38	31 24 135	ROADWAY EXCAVATION, EMBANKMENT AND COMPACTION				
38.01	(1.8.4)	Removal of Existing Concrete Curb and Gutter (includes asphalt curb, saw-cutting, removal and offsite disposal)	lin.m	60		
38.02	(1.8.4)	Removal of Existing Concrete and Asphalt Flat Works (includes saw-cutting, removal and offsite disposal)	sq.m	42		
38.03	(1.8.4)	Remove Wooden/Concrete Retaining Walls (includes saw-cutting, removal, and offsite disposal)	L.S.	1		

ITEM NO.	MMCD Ref. / (Supplementary Contract Specifications)	DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENDED AMOUNT
38.04	(1.8.4)	Remove Planter at 1750 Haversley Ave	L.S.	1		
38.05	(1.8.5)	Common Excavation (includes offsite disposal)	cu.m	60		
39	32 12 165	HOT-MIX ASPHALT CONCRETE PAVING				
39.01	(1.5.3)	Asphaltic Concrete Paving - Driveways- Upper Course #2 (60mm, 1 lift), c/w 100mm Granular base	tonnes	5		
40	32 14 015	UNIT PAVING				
40.01	(1.6.1)	Remove, Level, and Re-Lay Existing Pavers (Driveway and Walkway Tie-Ins)	sq.m	50		
41	32 17 235	PAINTED PAVEMENT MARKINGS				
41.01	(1.5.3)	Permanent Thermoplastic Pavement Markings	L.S.	1		
41.02	(1.5.4.3)	Relocate Existing Pole and Signs	each	1		
42	32 91 13.235	STRUCTURAL SOIL				
42.01	(1.8.1)	Structural Soil within Critical Root Zones of Existing Tree	tonnes	20		
43	32 91 215	TOPSOIL AND FINISH GRADING				
43.01	(1.4.1)	Imported Topsoil - 150mm thick	cu.m	50		
44	32 92 235	SODDING				
44.01	(1.8.1)	Supply and Installation of Sod	sq.m	210		
45	33 44 015	MANHOLES AND CATCHBASINS				
45.01	(1.5.3.4)	Water Valve Adjustment Only - Provisional	each	2		
45.02	(1.5.3.6)	Catchbasin Adjustment Only - Provisional	each	1		

Total Tendered Price (exclude GST) \$ _____

(Transfer the amount to Form of Tender Summary Page 1)

Name of Contractor: _____

STRUCTURAL SOIL

- | | | | |
|--|----|--|--------------------------|
| 1.0 GENERAL | .1 | Section 32 91 13.23 refers to the labour, materials, and equipment necessary for the supply and installation of materials specified herein. <ol style="list-style-type: none"> 1. Structural soil 2. Filter fabric | |
| 1.1 Related Works and Standards | .1 | Excavating, Trenching and Backfilling | <u>Section 31 23 01</u> |
| | .2 | Clearing and Grubbing | <u>Section 31 11 01</u> |
| | .3 | Shrub and Tree Preservation | <u>Section 31 11 41</u> |
| | .4 | Waterworks | <u>Section 33 11 01</u> |
| | .5 | Storm Sewers | <u>Section 33 40 01</u> |
| | .6 | Manholes and Catch Basins | <u>Section 33 44 01</u> |
| | .7 | Irrigation System | <u>Section 32 94 01S</u> |
| | .8 | Trees, Shrubs and Ornamentals | <u>Section 32 93 10S</u> |
| 1.2 Quality Assurance | .1 | All structural soil material used in planting shall be from a source approved by the Contract Administrator and all similar materials supplied to the site shall be of similar nature and from a single source. 21 days prior to supplying any material to the site, inform the Contract Administrator of proposed source and provide a copy of an analysis undertaken by a recognized testing agency appointed by the Contract Administrator, at the Contractor's expense and indicating the particle size characteristics of the proposed material in written form as laid out in 2.1.1 of this Section. | |
| | .2 | All nutritive admixtures to structural soil material supplied to the site shall be from a source approved by the Contract Administrator and all similar nutritive admixtures supplied to the site shall be of similar nature and from a single source. 21 days prior to supplying any nutritive admixture, inform the Contract Administrator of proposed source and provide a copy of an analysis undertaken by a recognized testing agency appointed by the Contract Administrator, at the Contractor's expense and indicating the following characteristics of the proposed nutritive admixture: <ol style="list-style-type: none"> 1. Gravel, sand and fines content each as a percentage of dry weight mineral fractions. 2. Organic material content as a percentage of dry weight. Acidity (pH). 3. Salinity in millimhos/cm at 25oC. 4. Basic fertility (total nitrogen available K, Ca, Mg, P). 5. Recommendations for incorporation of necessary amendments. | |
| | .3 | Costs of imported materials shall include cost of modifications from source to ensure that these materials meet specifications. | |
| | .4 | The Owner may appoint a qualified Contract Administrator for the purpose of interpreting and evaluating the quality of the installation and materials used before, during and after construction. | |
| | .5 | Acceptance of material at source does not preclude future rejection if material fails to conform to requirements specified, or if its field performance is found to be unsatisfactory. | |

STRUCTURAL SOIL

- .6 Structural Soil volume requirements for a tree is calculated at 60m³ per tree in beds shared with other trees and 100m³ per tree for isolated trees based on 25% planting median by volume.
- 1.3 Scheduling**
- .1 Obtain approval from Contract Administrator of Schedule 14 days in advance of structural soil preparation or delivery of material to site.
- Schedule to include:
1. Date for commencement of preparation of structural soil at source.
 2. Shipping dates.
 3. Arrival dates on site.
 4. Installation dates.
- 1.4 Field Review**
- .1 Start-up meeting with Contract Administrator is required to confirm the areas of installation and mixing. If not previously submitted, ensure growing medium sample and test report, aggregate stone sample and structural soil sample and report are supplied at the start-up meeting.
- .2 Coordinate site meeting with Contract Administrator at the following times:
1. Drainage installation and connection;
 2. Irrigation installation;
 3. Mixing of structural soil mixture;
 4. Installation of structural soil mixture;
 5. Sub-grade preparation and layout; and
 6. Installation of trees.
- 1.5 Samples**
- .1 Provide 2 kg samples of all materials required for the preparation of structural soil minimum 14 days prior to commencement of installation as required by the Contract Administrator.
- 1.6 Product Handling**
- .1 All materials used in the composition of structural soil shall not be prepared, worked or travelled upon when in a wet or frozen condition.
- .2 Limestone and other chemical amendments shall be supplied and handled in standard sealed, waterproof containers with net weight and product analysis clearly marked on the exterior package
- 1.7 Delivery, Storage and Protection**
- .1 For structural soil prepared at source and delivered to site, deliver all materials to site in such a manner as to prevent damage to or separation of all materials used in the preparation of structural soil.
- .2 On-site storage of prepared structural soil shall be undertaken in such a manner as to prevent damage of separation of any materials.
- .3 Structural soils to be installed as soon as practicable after mixing, any structural soils stored overnight whether on-site or at source shall be covered with tarpaulin of material approved by the Contract Administrator until such time as material is installed.
- .4 All material to be stockpiled shall be protected in accordance with B.C. Ministry of Environment guidelines.
- 1.8 Measurement and Payment**
- .1 Measurement for structural soil will be for actual quantity placed based on weight tickets provided to Contract Administrator as loads are delivered. Payment will include supply, installation, compaction of soil, and filter cloth (Non Woven Geotextile - Nilex 4535 or approved equal). All other costs will be considered incidental to the payment item.
- 2.0 PRODUCTS**

STRUCTURAL SOIL

- 2.1 Soil Stabilizer / Nutritive Admixture** .1
1. Unless indicated otherwise, all material shall be imported from a source approved by the Contract Administrator.
 2. Material shall be friable, containing a minimum of four percent (4%) and maximum six percent (6%) organic matter by dry weight or 25% by volume (whichever is higher), free from stones and debris over 30mm. Acidity (pH) shall be in the range 5.5 to 7.5. Carbon to nitrogen ratio shall not exceed 40:1, and salinity shall not exceed 3.0 millimhos at 25 degrees Celsius. Gravel greater than 2mm shall not exceed ten percent (10%) of total by weight.
 3. Non-toxic organic binder to be approved by the Contract Administrator prior to inclusion in any structural soil mixture.
 - 1) "Humus Builder" by The Answer! Garden Products
 - 2) "The Natural Solution" by Sport Turf Inc.
 - 3) Equivalent product approved by Contract Administrator prior to commencement of mixing operations.
 - 4) Submit 5 kg sample of mixture to Contract Administrator prior to commencement of large scale mixing procedures.
 4. Planting Medium
 - 1) Provide all growing medium required to complete the work.
 - 2) Comply with the requirements of table below.
 - 3) Organic material in the growing medium must be well decomposed to prevent oxygen consumption caused as a result of decomposition of the organic matter in the soil

GROWING MEDIUM PROPERTIES FOR GAP-GRADED MIXTURE

Texture*	Percentage of Mixture
Gravel: greater than 2 mm – less than 75 mm	0%
Sand: greater than 0.05 mm – less than 2 mm	maximum 30%
Silt: greater than 0.002 mm – less than 0.05 mm	maximum 50%
Clay: less than 0.002 mm	maximum 30%
Clay & Silt Combined	maximum 60%
Acidity (pH)	6.0-7.0
Drainage: Minimum saturated hydraulic conductivity (cm/hr) in place	3.0
Salinity: Saturated extract conductivity shall not exceed:	3.0 millimhos/cm at 25oC
Organic Content: Percent of Dry Weight (%)	8 – 12%

* Particle size classes by the Canadian System of Soil Classification

- 2.2 Stone** .1
1. Clean inert stone of high angularity is preferred over washed gravel.
 2. Stone dimension aspect ratio should approach 1:1:1 with a maximum of 2:1:1 length: width: depth.
 3. Single size stone, 60 mm to 75 mm clear sieve designation: Blasted Quarry Rock.
 4. Aggregate to be used for structural soil shall be free of any foreign elements or material. Provide samples and test reports as described in Section 1.5 and 1.8.
 5. Aggregate quality: Material shall be sound hard, durable, free from soft, thin, elongated or laminated particles, organic material, clay lumps or material, or other substances that would act in a deleterious manner for use intended.
- 2.3 Granular Base** .1
1. To Master Municipal Specification Section 31 05 17 – Aggregates and Granular Materials.
- 2.4 Filter Fabric** .1
1. Non-woven filter fabric shall be installed as a separation layer directly above the compacted structural soil mixture. Do not install fabric until adequate compaction of the structural soil mixture has been confirmed.

STRUCTURAL SOIL

- .2 Filter fabric shall be selected and designed to withstand wear and tear during construction without deterioration of its strength and filtering properties. Conform to the following ASTM designations.
 - 1. Grab Tensile Strength ASTM-D-4632 .400 kN
 - 2. Tensile Elongation ASTM-D-4632 50%
 - 3. Mullen Burst ASTM-D-3786 1270 kPa
 - 4. Flow Rate ASTM-D-4491 6110 l/min/m²
- .3 Fabric shall be Nilex 4535 or approved equivalent.

3.0 EXECUTION

3.1 Existing Subgrade

- .1 Excavate subgrade to establish tree pit/trench as indicated.
- .2 Areas designated as tree pits/trench for street tree planting shall be prepared to ninety five percent (95%) Modified Proctor Density and shall be free of stones, debris, roots branches, toxic materials, building materials and other deleterious materials, greater than 30 mm.

3.2 Preparation of Existing Grade

- .1 Verify that grades are correct. If discrepancies occur, notify Contract Administrator and do not commence work until directed.
- .2 Subgrade elevations shall slope parallel to the finished grades and/or toward the subsurface drain lines as indicated on the civil engineering drawings.
- .3 Do not proceed with the installation of the structural soil material until all walls, curbs, and utility work in the area has been installed.
- .4 Re-compact subgrade to requirements of Master Municipal Specifications and civil engineering drawings.

3.3 Mixing of Structural Soil

- .1 Ensure consistent even distribution of all components by thorough mixing. The ratio of components will vary and may require adjustment to ensure the soil volume is adequate to fill all voids.
- .2 Base Ratio of Materials for Structural Soil.
 - 1) Mix structural soil to create a homogeneous product to the following table.

MATERIAL	AMOUNT	REFERENCE
Stone	4 m ³	Part 2.3
Growing Medium	1 m ³	Part 2.2
Soil Stabilizer	2 kg	Part 2.1

- .3 Moisten mixture with fine spray of clean potable water while mixing to activate soil stabilizer product.
- .4 Do not OVER MIX, OVER HANDLING can result in separation of the constituent materials. Further and final mixing will occur during the placement of the material.
- .5 All mixing shall be performed at the contractor's yard using appropriate soil mixing equipment. No mixing of soils at the project site shall be permitted unless approved by the Contract Administrator.

3.4 Placement of Structural Soil

- .1 Subgrade shall be approved by the Contract Administrator and unfrozen prior to placing structural soil.
- .2 Structural soil shall be moist, twenty-five to seventy-five percent (25%-75%) of field capacity, but not saturated with water when placed. Placement shall be handled to avoid damage to drainage structures, irrigation equipment, concrete structures or pavement.

STRUCTURAL SOIL

- .3 Place mixture in 300mm lifts through entire area of structural soil mixture. Compact each lift to 95% MPD prior to placement of next lift.
- .4 Place structural soil such that finished grades are achieved as indicated and compact to achieve 95% of MPD.
- .5 Provide stamped Professional Engineer's Report to confirm compaction. Test to ensure uniform compaction rates have been achieved for each lift and in all areas of structural soil mixture. Refer to Quality Assurance, Section 1.4.
- 3.5 Installation of Filter Fabric**
 - .1 After approval of structural soil mixture compaction, install filter fabric, as indicated.
 - .2 Ensure minimum 60cm overlap of all fabric seams and beyond edge of structural soil.
- 3.6 Finish Grading, Restoration and Reinstatement**
 - .1 All areas shall be graded to contours and elevations as indicated on contract drawings. Eliminate rough spots and low areas to ensure positive drainage.
 - .2 Finish grade shall be as indicated and shall follow a level line
- 3.7 Tolerances**
 - .1 Finish grade shall be to within 15 mm of proposed grades within 3.0 m of any adjacent fixed elevation points and to within 15 mm of proposed grades over any other 3.0 m length. Finish grades shall be neither uniformly high nor low.
- 3.8 Surplus Material and Clean-Up**
 - .1 Dispose of surplus material off site to location approved by the Contract Administrator.
 - .2 Leave all hard surfaces groomed clean of soil, amendments and debris following completion of structural soil preparation and placement.

END SECTION