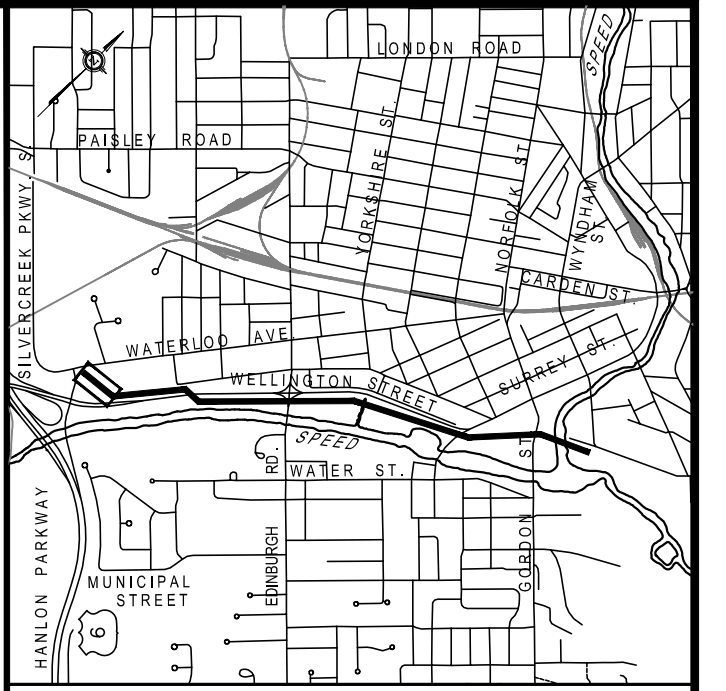
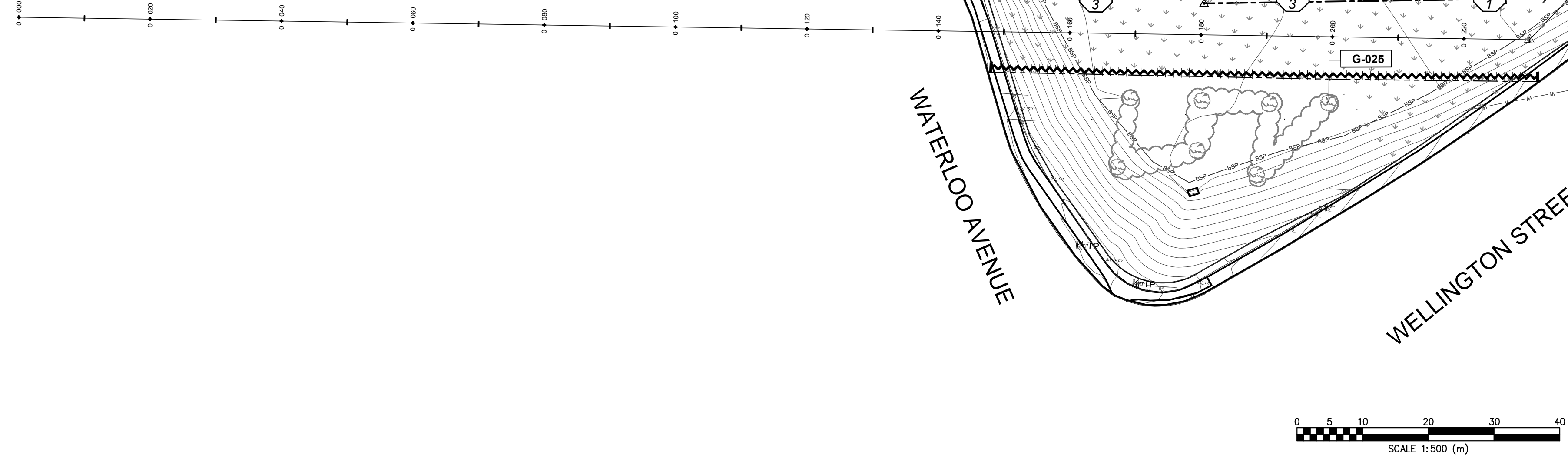


- NOTE:
- REFER TO SHEET L14, L15, L16, L17, AND L18 FOR LANDSCAPE NOTES, DETAILS AND MASTER PLANT LIST.
  - CONTRACTOR TO CONTACT THE CONTRACT ADMINISTRATOR FOR EXACT LOCATION PRIOR TO INSTALLATION OF TREES, SEEDING AND SODDING AREAS.
  - ALL TREES ON SLOPED AREAS THAT MAY BE IMPACTED BY WATERMAIN CONSTRUCTION SHOULD BE REMOVED AND REPLACED WITH NEW TREES FOLLOWING WATERMAIN INSTALLATION.
  - CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY DAMAGED SIGNS



- LEGEND
- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/L17, 2/L17, AND 3/L17
  - PROPOSED SHRUBS REFER TO DETAIL 4/L17 AND 5/L17
  - APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/L16 AND 4/L16
  - EXISTING SURVEYED TREES
  - EXISTING TREE GROUPING
  - EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
  - EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3/L16 AND 4/L16
  - EXISTING TREE TO BE REMOVED
  - LIMIT OF WORK
  - PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
  - PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED. REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUP TO BE REMOVED
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 1 (L1 TO L11) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12 TO L13) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
  - TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
  - TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1/L16
  - LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

TREE INVENTORY CHART -- TABLE 1

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn									
Date of Field Work: 12/19/2012		Weather:									
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Drip-line Radius	Recommendation	Remarks
						Trunk	Canopy	Vigour			
001	Picea glauca	Colorado Spruce	1	37	12	F	F	F		retain	canker
002	Picea glauca	Colorado Spruce	1	34	12	F	F	F		retain	canker
003	Picea glauca	Colorado Spruce	1	29	12	P	P	P		retain	canker
004	Acer platanoides	Norway Maple	1	22	7	G	G	G		retain	
005	Acer platanoides	Norway Maple	1	36	12	G	G	G		retain	
006	Fraxinus sp.	Ash	1	50	14	F	F	F		retain	
007	Fraxinus sp.	Ash	1	40	14	F	F	F		retain	suckers, 30% deadw ood, trunk w ounds
008	Fraxinus sp.	Ash	1	42	15	F	F	F		retain	30% deadw ood, lean, trunk w ounds
009	Acer platanoides	Norway Maple	1	41	10	g	F	F		retain	
G-010	Grouping--Picea glauca	Colorado Spruce	3	32	10	P	P	P		retain	3 trees all w th canker
011	Picea glauca	Colorado Spruce	1	40	12	P	P	P		retain	canker
012	Fraxinus sp.	Ash	1	52	12	G	F	F		retain	
013	Fraxinus sp.	Ash	1	48	14	F	F	P		retain	trunk w ound, poor form, broken branches, 30-40% deadw ood
014	Fraxinus sp.	Ash	1	48	14	F	F	P		retain	trunk w ound, poor form, broken branches, 30-40% deadw ood
015	Fraxinus sp.	Ash	1	48	14	F	F	F		retain	poor form, outside of construction limit
016	Picea glauca	Colorado Spruce	1	28	12	D	D	D		retain	dead, outside of construction limit
017	Picea glauca	Colorado Spruce	1	32	12	F	P	P		retain	50% deadw ood, outside of construction limit
018	Picea glauca	Colorado Spruce	1	32	12	P	P	P		retain	30% deadw ood
019	Acer rubrum	Red Maple	1	14	7	F	F	F		retain	trunk girdle (due to power trimmers)
020	Acer rubrum	Red Maple	1	37	12	G	G	G		retain	
021	Acer saccharum	Sugar Maple	1	12,15		P	F	F		retain	multi-stem
023	Acer rubrum	Red Maple	1	15		P	F	F		retain	major trunk w ound, exposed cambium, 20% deadw ood
G-025	Grouping--Acer platanoides	Norway Maple	7	15-35		G-F	G-F	G-F		retain	exposed roots, damage from mow ers, 10-15% deadw ood, poor form, w eak unions

PLANT LIST - L1

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	4	Acer rubrum	Red Maple	45mm Cal	W.B	--
As	3	Acer saccharum	Sugar Maple	45mm Cal	W.B	--

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supersede the Quantities Listed Above.

2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ	BTRM

No.	DATE	DESCRIPTION	BY:	CHKD.
			JJZ	CHKD.

ISSUES/REVISIONS

**CITY OF Guelph**

ENGINEERING SERVICES

YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN TREE INVENTORY AND LANDSCAPE RESTORATION

**MMM GROUP**

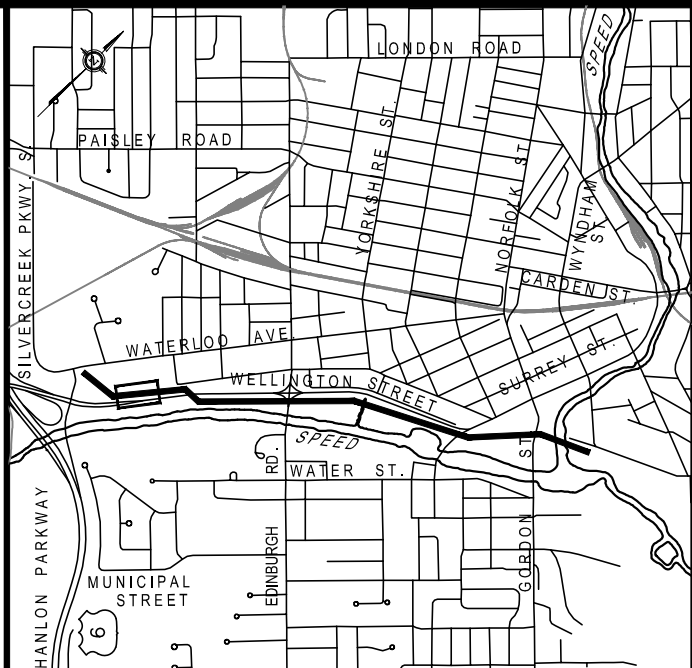
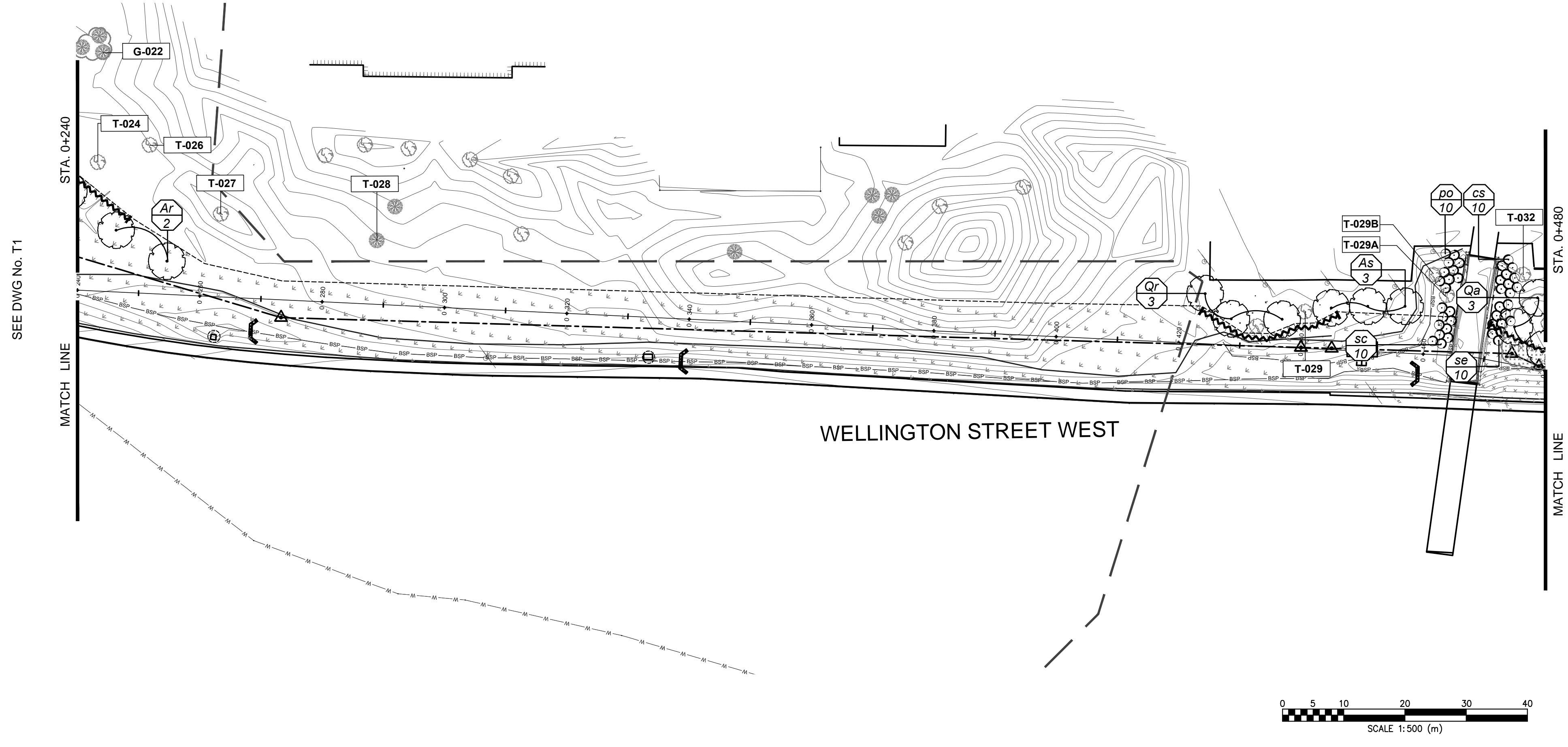
100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
 T: 905.882.1100 F: 905.882.0505 www.mmm.ca



<b>LEGEND</b>		<b>SCALES:</b>	
	NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17	HOR: 1:500	VER: _____
	SODDING AREA FOR BOULEVARD AREA	DATE DRAWN:	AUGUST 2013
	SODDING AREA FOR SPORTS FIELD	DRAWN BY:	JJZ
	SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18	CHECKED BY:	B.T./P.M.
	ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18	CONSULTANT DRAWING No.:	L1
		CITY CONTRACT No.:	12-145
		CITY REFERENCE No.:	REV.

FILE NAME: L:\Jobs\2012\10-12-108-York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory and Landscape Restoration\Drawings\1012108\_L1\_P\_Combined.dwg, L:\T\_PAW/REV.DWG, Wednesday, 07/22/2014

- NOTE:
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  - CONTRACTOR TO CONTACT THE CONTRACT ADMINISTRATOR FOR EXACT LOCATION PRIOR TO INSTALLATION OF TREES, SEEDING AND SODDING AREAS.
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- KEY PLAN Scale: NOT TO SCALE
- LEGEND
- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/L17, 2/L17, AND 3/L17
  - PROPOSED SHRUBS REFER TO DETAIL 4/L17 AND 5/L17
  - APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/L16 AND 4/L16
  - EXISTING SURVEYED TREES
  - EXISTING TREE GROUPING
  - EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
  - EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3/L16 AND 4/L16
  - EXISTING TREE TO BE REMOVED
  - LIMIT OF WORK
  - PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
  - PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED. REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUP TO BE REMOVED
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 1 (L1 TO L11) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
  - TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
  - TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1/L16
  - LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

TREE INVENTORY CHART -- TABLE 1

Project: Guelph Trunk Sewer 10-12-108			Field Work Completed By: Ben Tymchyshyn								
Date of Field Work: 12/19/2012			Weather:								
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Dripline Radius	Recommendation	Remarks
						Trunk	Canopy	Vigour			
G-022	Grouping-Picea glauca	Colorado Spruce	3	31.35	10	G	G	G		retain	group of 3. Note: One is leaning
024	Acer saccharum	Sugar Maple	1	30		G	G	G		retain	
026	Acer saccharum	Sugar Maple	1	18		G	G	G		retain	
027	Acer platanoides	Norway Maple	1	32		G	G	G		retain	
028	Pinus nigra	Austrian Pine	1	25	12	G	G	G		retain	
029	Ulmus pumila	Siberian Elm	1	26.38		G	G	G		retain	multi-stem
029(A)	Prunus sp.	Cherry	1	30		F	F	F		retain	
029(B)	Acer sp.	Maple	1	40		F	F	F		retain	
032	Acer saccharum	Sugar Maple	1	55		G	G	G		retain	

PLANT LIST - L2

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	2	Acer rubrum	Red Maple	45mm Cal	W.B	--
As	3	Acer saccharum	Sugar Maple	45mm Cal	W.B	--
Qa	3	Quercus alba	White Oak	45mm Cal	W.B	--
Qr	3	Quercus rubra	Red Oak	45mm Cal	W.B	--
<b>Shrubs</b>						
cs	10	Cornus sericea	Red Osier Dogwood	50cm, 3gal	pot	1.5m o.c.
pe	10	Physocarpus opulifolius	Eastern Ninebark	50cm, 3gal	pot	1.5m o.c.
sc	10	Sambucus nigra ssp. canadensis	Common Elderberry	50cm, 3gal	pot	1.5m o.c.
se	10	Salix eriocephala	Heart-leaved Willow	50cm, 3gal	pot	1.5m o.c.

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supersede the Quantities Listed Above.

2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ	BTRM
No.	DATE	DESCRIPTION	BY:	CHKD.

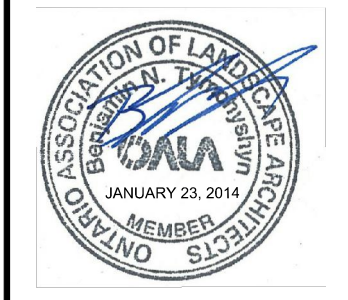
ISSUES/REVISIONS

**CITY OF Guelph**

ENGINEERING SERVICES  
&  
YORK TRUNK SEWER  
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PAISLEY-CLYTHE WATERMAIN  
TREE INVENTORY AND  
LANDSCAPE RESTORATION

**MMM GROUP**

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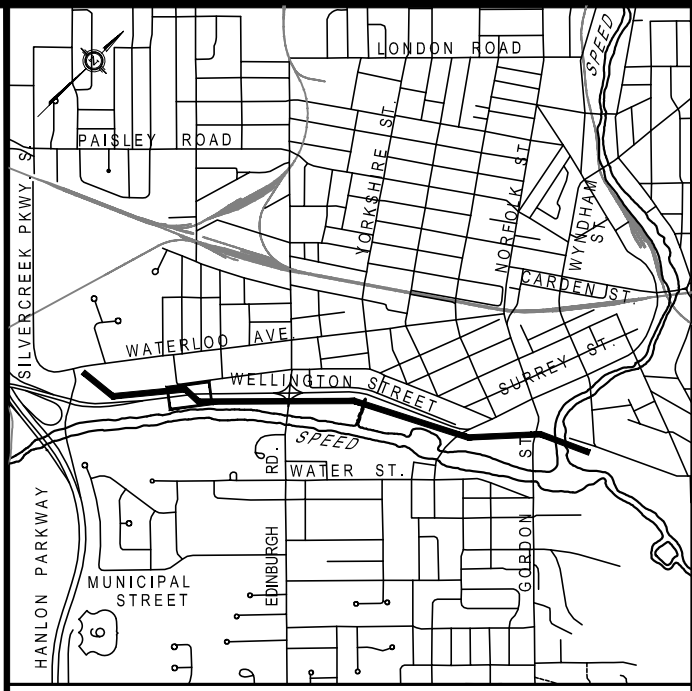
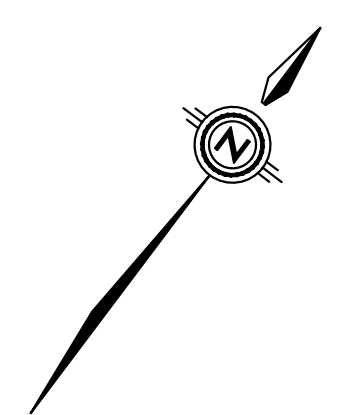
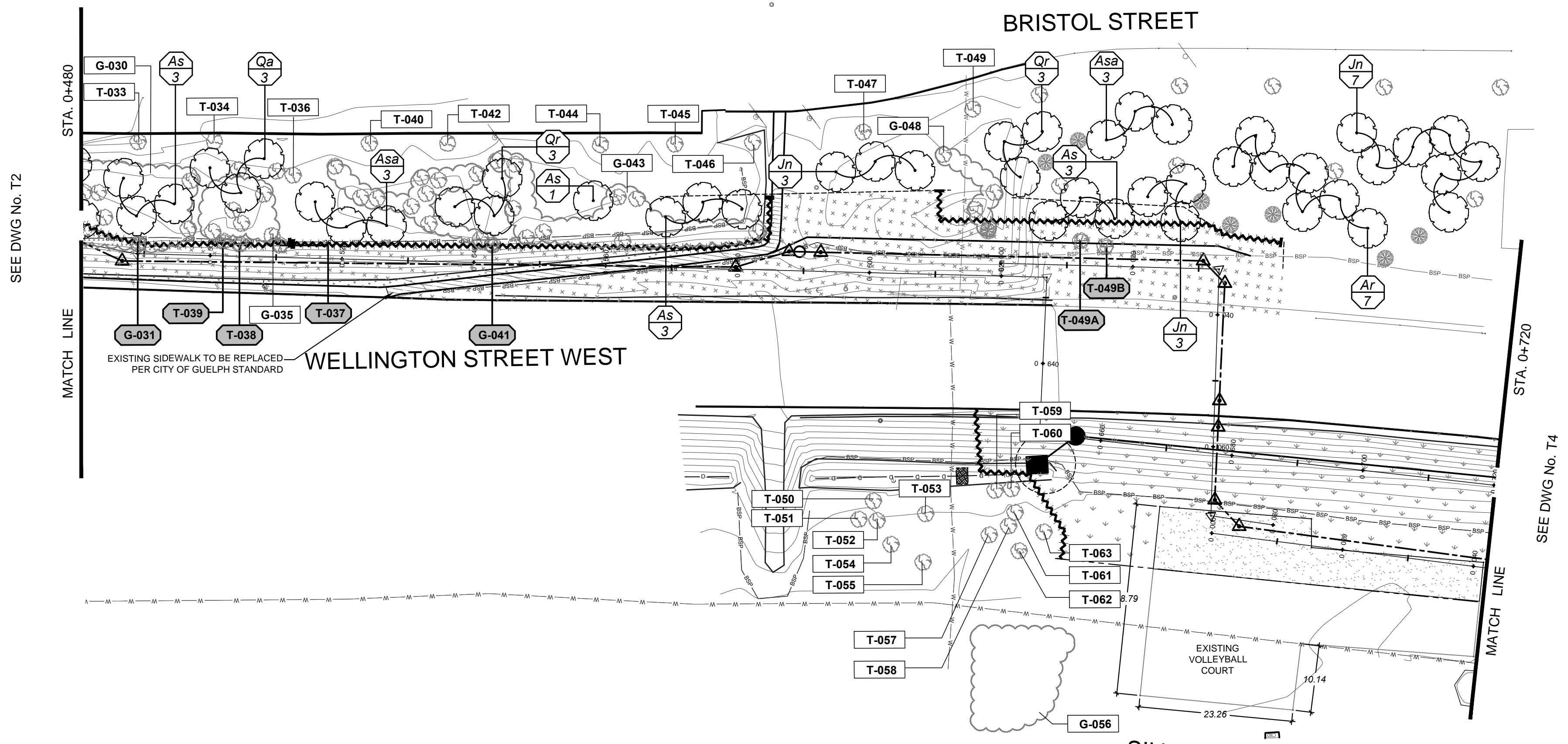


LEGEND		SCALES:	
[Symbol]	NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17	HOR: 1:500	VER: _____
[Symbol]	SODDING AREA FOR BOULEVARD AREA	DATE DRAWN:	AUGUST 2013
[Symbol]	SODDING AREA FOR SPORTS FIELD	DRAWN BY:	JJZ
[Symbol]	SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18	CHECKED BY:	B.T./P.M.
[Symbol]	ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18	CONSULTANT DRAWING No.	L2
		CITY CONTRACT No.	12-145
		CITY REFERENCE No.	REV.

FILE NAME: L:\Jobs\2012\10-12-108-12-108-001 York Trunk Sewer & Paisley-Clythe Watermain\Drawings\1012108\_L2\_PP\_Combined.dwg; L-2 PROVIDED ON: Wednesday 07/22/2014

NOTE:

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KEY PLAN Scale: NOT TO SCALE

LEGEND

- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/L17, 2/L17, AND 3/L17
- PROPOSED SHRUBS REFER TO DETAIL 4/L17 AND 5/L17
- APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/L16 AND 4/L16
- EXISTING SURVEYED TREES
- EXISTING TREE GROUPING
- EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
- EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3/L16 AND 4/L16
- EXISTING TREE TO BE REMOVED
- LIMIT OF WORK
- PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
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- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12) FOR TREE INVENTORY CHART
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
- TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
- TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1/L16
- LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

TREE INVENTORY CHART -- TABLE 1

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn										
Date of Field Work: 12/19/2012		Weather:										
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Dripline Radius	Recommendation	Conditions: G - Good, F - Fair, P - Poor, D - Dead	Remarks
						Trunk	Canopy	Vigour				
G-030	Grouping-Fraxinus pennsylvanica	Green Ash	6							retain		1 young haw thorn, 5 young ash
G-031	Grouping-Picea glauca	White Spruce	5	saplings	2					retain/remove		5 in grouping, inside of grading limit
033	Acer saccharum	Sugar Maple	1	62		G	G	G		retain		
034	Acer saccharum	Sugar Maple	1	65		F	G	G		retain		multi-stem at breast height, w weakly formed union
G-035	Grouping-Fraxinus pennsylvanica	Red Ash	10	10-18						retain		10 tree grouping
G-036	Grouping	Ash, White Spruce	12	10-14	2	G	G	G		retain		5 young ash, 7 w hite spruce saplings
037	Acer saccharum	Sugar Maple	1	15		G	G	G		remove		inside of grading limit
038	Acer saccharum	Sugar Maple	1	10		G	G	G		remove		inside of grading limit
039	Acer saccharum	Sugar Maple	1	8		G	G	G		remove		inside of grading limit
040	Acer saccharum	Sugar Maple	1	90		G	G	G		retain		
G-041	Grouping	Austrian Pine, Sugar Maple, White Spruce	20		5					retain/remove		8 White Spruce saplings, 12 Ash/Sugar Maples max 2 m height. Retain trees outside limit of work, remove trees that w ill be impacted
042	Acer saccharum	Sugar Maple	1	79		G	G	G				
G-043	Grouping	Sugar Maple, White Spruce, Austrian Pine	16	15		G-F	G	G		retain		8 Sugar Maples, 6 White Spruce max. 2 m height, 2 Austrian Pines 5 m height. Retain trees outside limit of work, remove trees that w ill be impacted
044	Acer saccharum	Sugar Maple	1	55		G	G	G		retain		
045	Acer saccharum	Sugar Maple	1	46,40		G	G	G		retain		multi-stem
046	Acer saccharum	Sugar Maple	1	73		G	G	G		retain		
047	Acer saccharum	Sugar Maple	1	91		F	F	G		retain		lean, poor form
G-048	Grouping	4 Sugar Maples, 8 Ash	10	15						retain/remove		1 White Spruce, 6 m height, 9 Cedar White saplings
049	Acer platanoides	Norway Maple	1	45		G	G	G		retain		
049A	Fraxinus pennsylvanica	Green Ash	1	14		G	G	G		remove		
049B	Fraxinus pennsylvanica	Green Ash	1	10		G	G	G		remove		
050	Juglans nigra	Black Walnut	1	19		G	G	G		retain		
051	Fraxinus sp.	Ash	1	19		G	G	G		retain		
052	Acer sp.	Maple	1	22		G	G	G		retain		
053	Acer saccharinum	Silver Maple	1	29		G	G	G		retain		
054	Acer negundo	Manitoba Maple	1	18		F	F	F		retain		
055	Fraxinus americana	White Ash	1	24		G	G	G		retain		
G-056	Grouping	Birch, Maple	9	10-30		G-F	G-F	G-F		retain		1 Birch, 4 Norway Maples, 4 Manitoba Maple 20-28 cm dia. Weakly formed unions, poor form
057	Betula papyrifera	White Birch	1	12		G	G	G		retain		
058	Betula papyrifera	White Birch	1	14		G	G	G		retain		
059	Fraxinus sp.	Ash	1	18		G	G	G		retain		suckers, lion tailing on suckers
060	Fraxinus sp.	Ash	1	20		G	G	G		retain		
061	Acer sp.	Maple	1	14		G	G	G		retain		
062	Betula papyrifera	White Birch	1	28		G	G	G		retain		
063	Betula papyrifera	White Birch	1	16		G	G	G		retain		

PLANT LIST - L3

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	7	Acer rubrum	Red Maple	45mm Cal	W.B	--
As	10	Acer saccharum	Sugar Maple	45mm Cal	W.B	--
Asa	6	Acer saccharinum	Silver Maple	45mm Cal	W.B	--
Jn	13	Juglans nigra	Black Walnut	45mm Cal	W.B	--
Qa	3	Quercus alba	White Oak	45mm Cal	W.B	--
Qr	6	Quercus rubra	Red Oak	45mm Cal	W.B	--

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.

No.	DATE	DESCRIPTION	BY:	CHKD.
2	JAN 23, 14	ORCA SUBMISSION	JJZ	BTM
1	OCT 23, 13	FINAL ARBORIST REPORT	JJZ	BTM

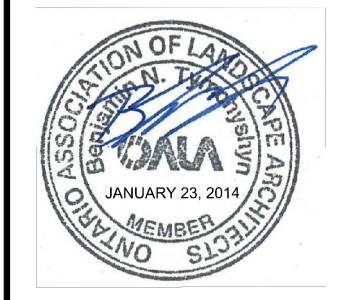
ISSUES/REVISIONS

**CITY OF Guelph**

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YORK TRUNK SEWER  
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TREE INVENTORY AND  
LANDSCAPE RESTORATION

**MMM GROUP**

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LEGEND

- NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17
- SODDING AREA FOR BOULEVARD AREA
- SODDING AREA FOR SPORTS FIELD
- SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18
- ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18

SCALES:  
HOR: 1:500 VER: \_\_\_\_\_

DATE DRAWN: AUGUST 2013

DRAWN BY: JJZ CHECKED BY: B.T.P.M.

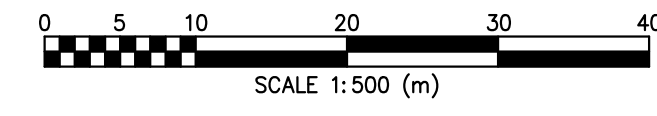
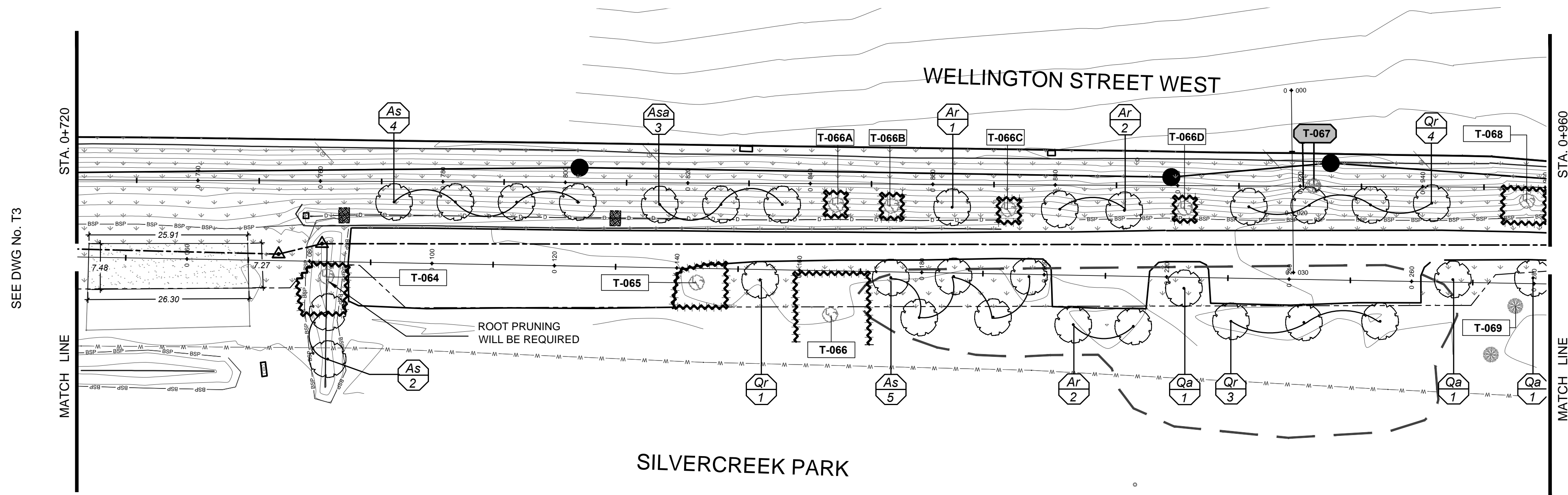
CONSULTANT DRAWING No. L3

CITY CONTRACT No. 12-145

CITY REFERENCE No. REV.

P.L. NAME: L. Vohr, 2012 (10-12-108-001 York Trunk Sewer & Paisley-Clythe Watermain) (10/21/2012) (P. Combines) (07/22/2014) REVISED ON: Wednesday 07/22/2014

- NOTE:
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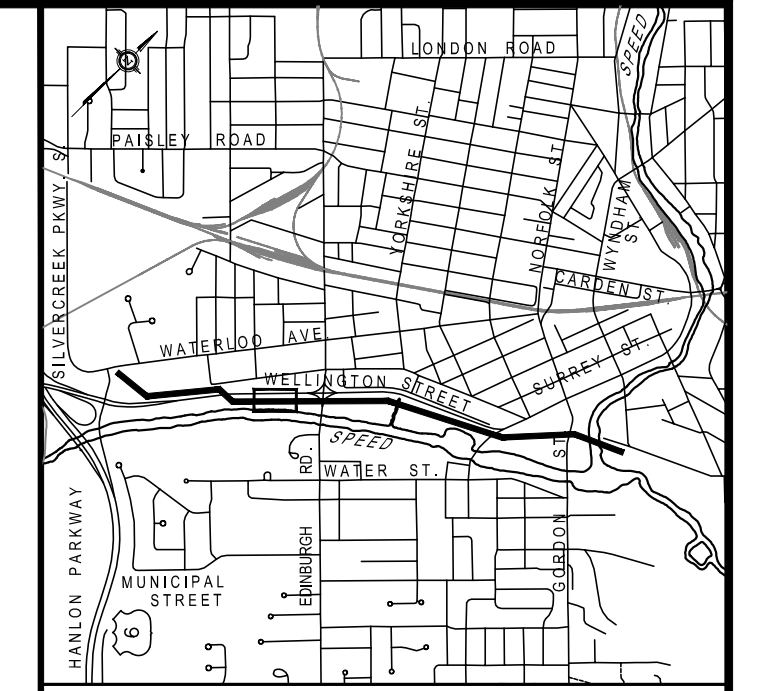
**TREE INVENTORY CHART -- TABLE 1**

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn									
Date of Field Work: 12/19/2012		Weather:									
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Recomm endation	Conditions: G - Good, F - Fair, P - Poor, D - Dead	Remarks
						Trunk	Canopy	Vigour			
064	Platanus x acerifolia	London Plane Tree	1	74		G	G	G	retain		root system may be impacted and root pruning may be required
065	Quercus rubra	Red Oak	1	50		G	G	G	retain		
066	Populus deltoides	Eastern Cottonwood	1	78		G	G	G	retain		
066(A)	Acer sp.	Maple	1	<10		F	F	F	retain		
066(B)	Acer sp.	Maple	1	<10		F	F	F	retain		
066(C)	Acer sp.	Maple	1	<10		F	F	F	retain		
066(D)	Platanus x acerifolia	London Plane Tree	1	<10		F	F	F	retain		
067	Acer platanoides	Norway Maple	1	42		G	G	G	remove		will need to be removed due to the construction limits
068	Gleditsia triacanthos var. inermis	Thomless Honey Locust	1	35		G	G	G	retain		
069	Picea abies	Norway Spruce	1	50		G	G	G	retain		

**PLANT LIST - L4**

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	5	Acer rubrum	Red Maple	45mm Cal	W.B	--
As	11	Acer saccharum	Sugar Maple	45mm Cal	W.B	--
Asa	3	Acer saccharinum	Silver Maple	45mm Cal	W.B	--
Qa	3	Quercus alba	White Oak	45mm Cal	W.B	--
Qr	8	Quercus rubra	Red Oak	45mm Cal	W.B	--

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.



KEY PLAN Scale: NOT TO SCALE

- LEGEND**
- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/L17, 2/L17, AND 3/L17
  - PROPOSED SHRUBS REFER TO DETAIL 4/L17 AND 5/L17
  - APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/L16 AND 4/L16
  - EXISTING SURVEYED TREES
  - EXISTING TREE GROUPING
  - EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
  - EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3/L16 AND 4/L16
  - EXISTING TREE TO BE REMOVED
  - LIMIT OF WORK
  - PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
  - PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED. REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUP TO BE REMOVED
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 1 (L1 TO L11) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
  - TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
  - TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1/L16
  - LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

No.	DATE	DESCRIPTION	BY:	CHKD.
2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ	BT/PM

**ISSUES/REVISIONS**

**CITY OF Guelph**

ENGINEERING SERVICES  
&  
YORK TRUNK SEWER  
&  
PAISLEY-CLYTHE WATERMAIN  
TREE INVENTORY AND  
LANDSCAPE RESTORATION

**MMM GROUP**

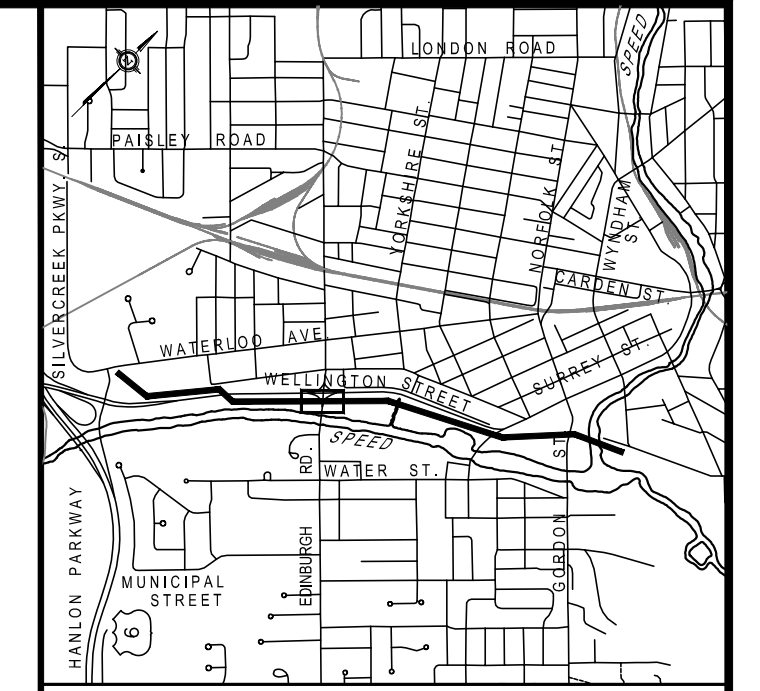
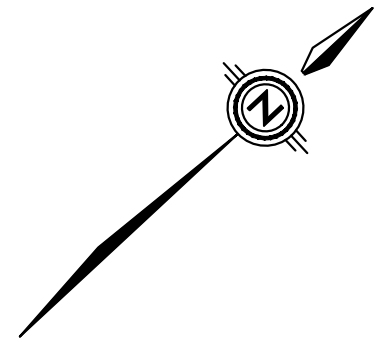
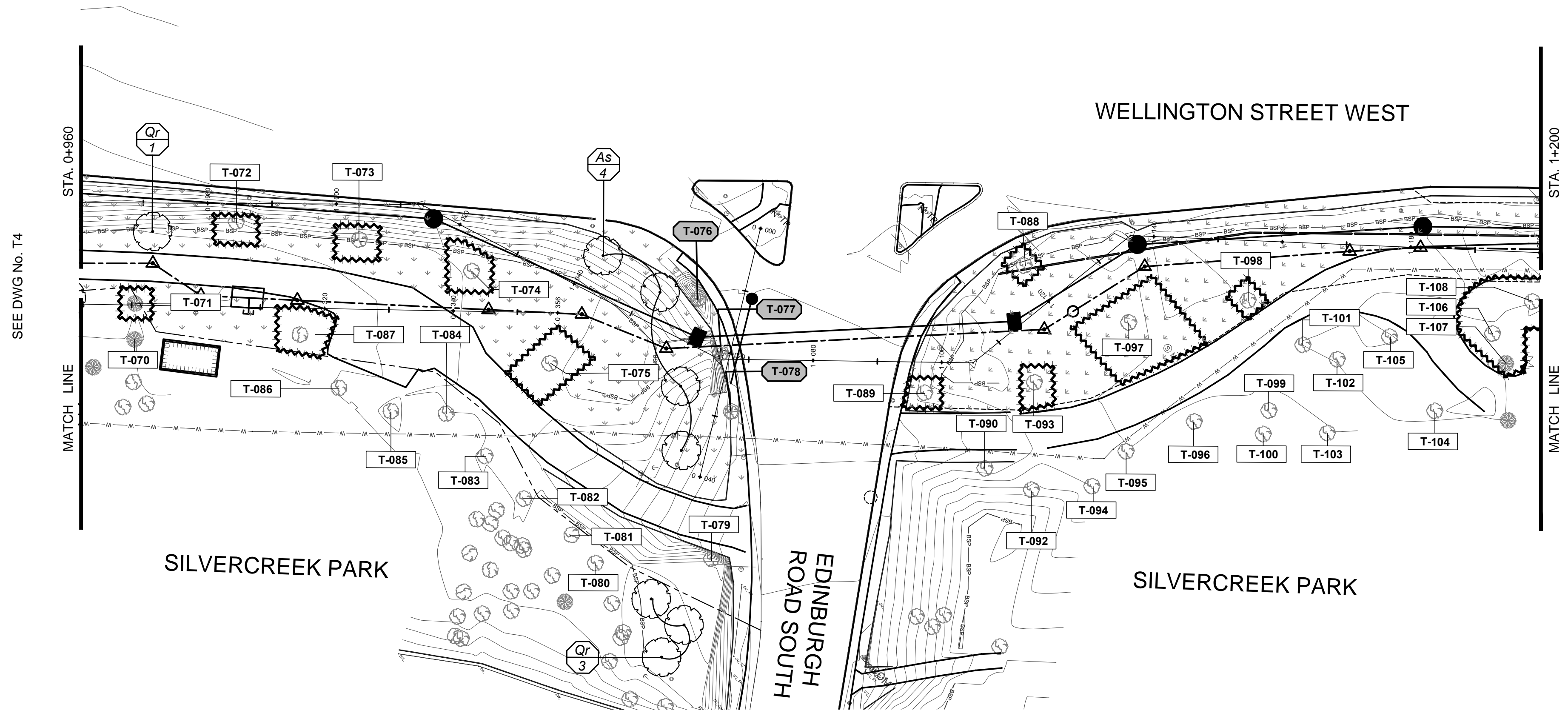
100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
1-905-882-1100 F: 905-882-0055 www.mmm.ca



LEGEND		SCALES:	
NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17	SODDING AREA FOR BOULEVARD AREA	HOR: 1:500	VER: _____
SODDING AREA FOR SPORTS FIELD	SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18	DATE DRAWN: AUGUST 2013	
ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18		DRAWN BY: JJZ	CHECKED BY: B.T./P.M.
		CONSULTANT DRAWING No. L4	
		CITY CONTRACT No. 12-145	
		CITY REFERENCE No.	REV.

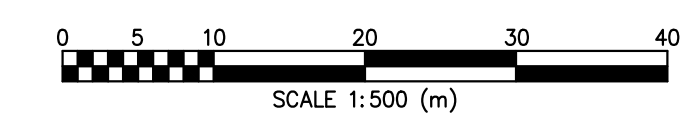
FILE NAME: L:\Jobs\2012\10-12-108-108-001 York Trunk Sewer & Paisley-Clythe Watermain\Drawings\1012108\_LP\_PP\_Combined\_08122014.PRN/REV: 08/22/2014

- NOTE:**
- REFER TO SHEET L14, L15, L16, L17, AND L18 FOR LANDSCAPE NOTES, DETAILS AND MASTER PLANT LIST.
  - CONTRACTOR TO CONTACT THE CONTRACT ADMINISTRATOR FOR EXACT LOCATION PRIOR TO INSTALLATION OF TREES, SEEDING AND SODDING AREAS.
  - ALL TREES ON SLOPED AREAS THAT MAY BE IMPACTED BY WATERMAIN CONSTRUCTION SHOULD BE REMOVED AND REPLACED WITH NEW TREES FOLLOWING WATERMAIN INSTALLATION.
  - CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY DAMAGED SIGNS



KEY PLAN Scale: NOT TO SCALE

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- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/17, 2/17, AND 3/17
  - PROPOSED SHRUBS REFER TO DETAIL 4/17 AND 5/17
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  - EXISTING SURVEYED TREES
  - EXISTING TREE GROUPING
  - EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
  - EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED, REFER TO DETAIL 3/16 AND 4/16
  - EXISTING TREE TO BE REMOVED
  - LIMIT OF WORK
  - SPECIES QUANTITY PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
  - PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED, REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
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  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
  - TREE PROTECTION FENCING REFER TO DETAIL 1/16 AND 2/16
  - TREE PROTECTION FENCE WITH EROSION CONTROL REFER TO DETAIL 1/16
  - LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/18



TREE INVENTORY CHART -- TABLE 1

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn		Weather:				Conditions: G - Good, F - Fair, P - Poor, D - Dead					
Tree ID	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Trunk	Canopy	Vigour	Dripline Radius	Recommendation	Remarks		
070	Pinus sylvestris	Scots Pine	1	19,20,22		G	F	F		retain	co-dominant stems, poor form, 10-20% dead wood		
071	Pinus sylvestris	Scots Pine	1	20,23		G	F	F		retain	co-dominant stems, poor form, 10-20% dead wood		
072	Gleditsia triacanthos var. inermis	Thornless Honey Locust	1	35		G	F	G		retain	poor form, outside of construction limit		
073	Gleditsia triacanthos var. inermis	Thornless Honey Locust	1	36		G	G	G		retain	epicormic growth		
074	Gleditsia triacanthos var. inermis	Thornless Honey Locust	1	43		G	G	G		retain	10-20% dead wood		
075	Gleditsia triacanthos var. inermis	Thornless Honey Locust	1	64		G	G	G		retain	10-20% dead wood		
076	Prunus sp.	Cherry	1	26,23,15		F	F	G		remove	suckers, poor form, multi-stem, epicormic growth, 10-15% dead wood		
077	Prunus sp.	Cherry	1	24,21,20		F	F	G		remove	suckers, poor form, multi-stem, epicormic growth, 10-15% dead wood, will need to be removed due to the construction limits		
078	Prunus sp.	Cherry	1	21/21/20		F	F	G		remove	suckers, poor form, multi-stem, epicormic growth, 10-15% dead wood, will need to be removed due to the construction limits		
079	Prunus sp.	Cherry	1	21,18,24,14		F	F	G		retain	suckers, poor form, multi-stem, epicormic growth, 10-15% dead wood		
080	Quercus rubra	Red Oak	1	15		G	G	G		retain			
081	Acer platanoides	Norway Maple	1	46		G	G	G		retain	girdling roots		
082	Acer platanoides	Norway Maple	1	42		G	G	G		retain			
083	Acer platanoides	Norway Maple	1	44		G	G	G		retain	girdling roots		
084	Acer platanoides	Norway Maple	1	28		G	G	G		retain			
085	Acer platanoides	Norway Maple	1	38		G	G	G		retain			
086	Acer platanoides	Norway Maple	1	56		G	G	G		retain			
087	Tilia americana	Basswood	1	50		D	D	D		retain	dead, outside of construction limit		
088	Prunus sp.	Cherry	1	19/22/24		P	P	P		retain	multi-stem		
089	Malus sp.	Crabapple	1	27/22		G	G	G		retain	multi-stem		

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn		Weather:				Conditions: G - Good, F - Fair, P - Poor, D - Dead					
Tree ID	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Trunk	Canopy	Vigour	Dripline Radius	Recommendation	Remarks		
090	Salix alba 'Tristis'	Golden Weeping Willow	1	84/84		P	F	G		retain	multi-stem, large wound, weakly formed union, broken branches, poor form		
091	stuck to #092									retain			
092	Fraxinus pennsylvanica	Red Ash	1	13		G	G	G		retain			
093	Acer platanoides	Norway Maple	1	38		P	F	G		retain	large wound, contorted growth		
094	Salix sp.	Willow	1	74		G	G	G		retain			
095	Fraxinus sp.	Ash	1	12		G	G	G		retain			
096	Fraxinus sp.	Ash	1	12		G	G	G		retain			
097	Salix sp.	Willow	1	121		P	G	G		retain	large wound, broken branch exposed		
098	Acer platanoides	Norway Maple	1	39		G	G	G		retain			
099	Fraxinus sp.	Ash	1	11		F	G	G		retain	trunk wound		
100	Salix sp.	Willow	1	84		F	G	G		retain	evidence of torsion on trunk		
101	Salix sp.	Willow	1	88		G	G	G		retain			
102	Salix sp.	Willow	1	69		G	G	G		retain			
103	Fraxinus sp.	Ash	1	10		G	G	G		retain			
104	Acer platanoides	Norway Maple	1	38		G	G	G		retain			
105	Fraxinus sp.	Ash	1	15		G	G	G		retain			
106	Acer platanoides	Norway Maple	1	65		G	G	G		retain			
107	Picea glauca	White Spruce	1	14		G	G	G		retain			
108	Betula papyrifera	White Birch	1	40		F	G	G		retain			

PLANT LIST - L5

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
As	4	<i>Acer saccharum</i>	Sugar Maple	45mm Cal	W.B	--
Qr	4	<i>Quercus rubra</i>	Red Oak	45mm Cal	W.B	--

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.

**CITY OF Guelph**  
ENGINEERING SERVICES  
&  
YORK TRUNK SEWER  
&  
PAISLEY-CLYTHE WATERMAIN  
TREE INVENTORY AND  
LANDSCAPE RESTORATION



**LEGEND**

- NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/17
- SODDING AREA FOR BOULEVARD AREA
- SODDING AREA FOR SPORTS FIELD
- SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/18
- ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/18

**SCALES:** HOR: 1:500 VER: \_\_\_\_\_

DATE DRAWN: AUGUST 2013

DRAWN BY: JJZ | CHECKED BY: B.T.P.M.

CONSULTANT DRAWING No. L5

CITY CONTRACT No. 12-145

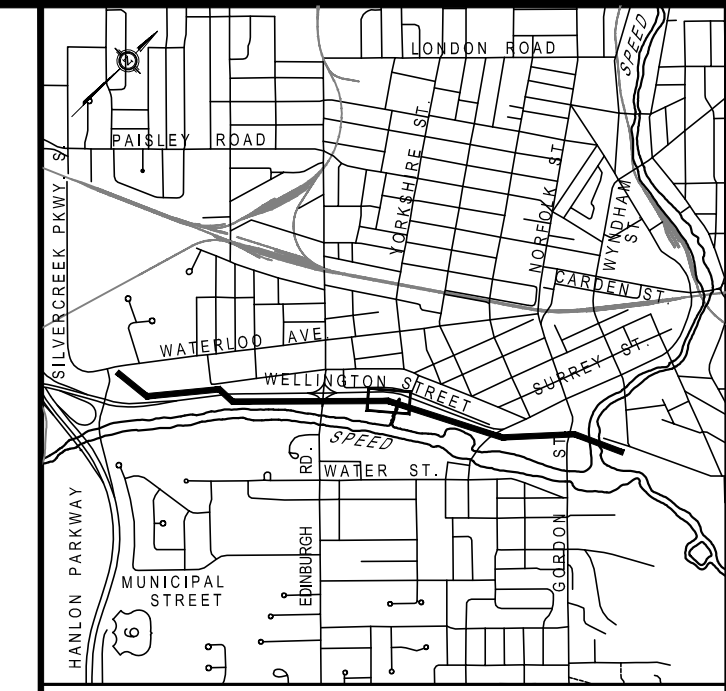
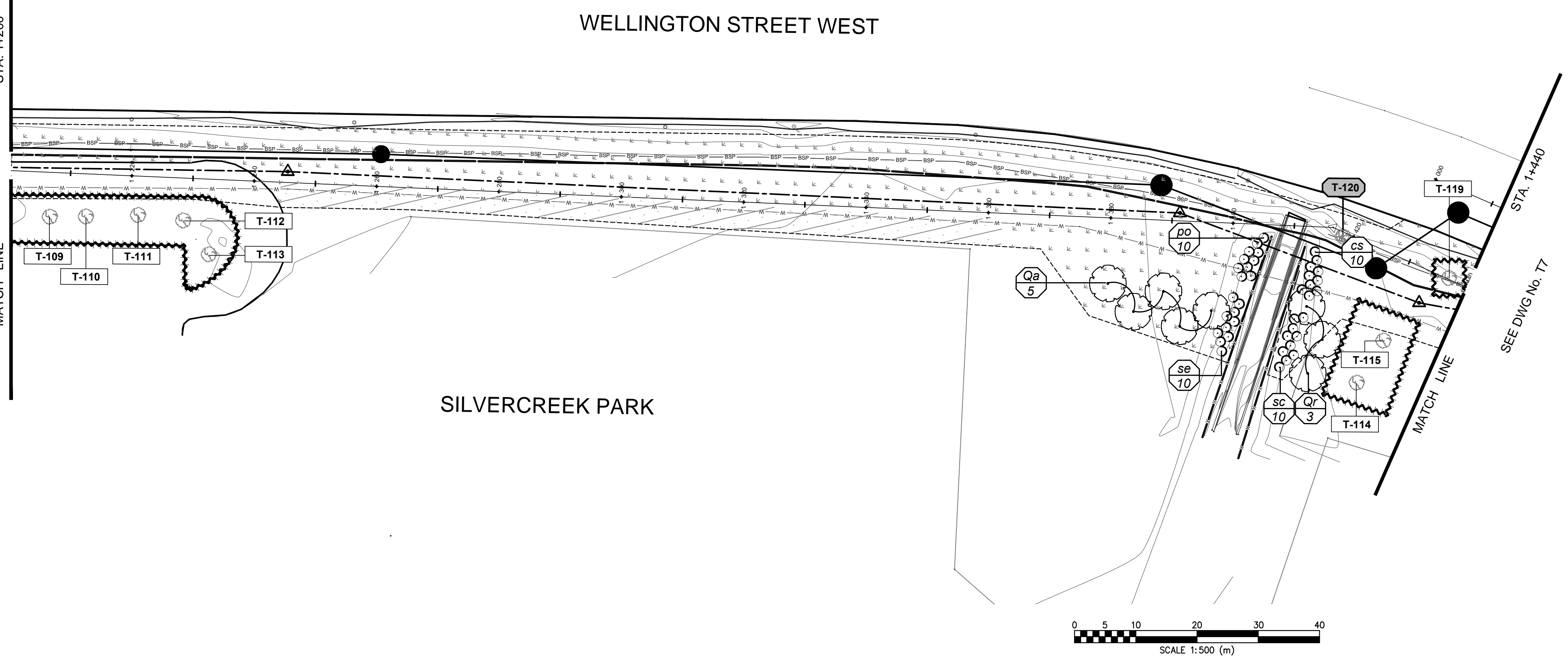
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FILE NAME: L:\Jobs\2012\10-12-108-12-108-001 York Trunk Sewer & Paisley-Clythe Watermain & Landscaping\Drawings\02\10-12-108-L5\_PlanList\_L5.dwg PLOT DATE: Wednesday, 07/22/2014 PLOT TIME: 09:02:39 AM

NOTE:

- REFER TO SHEET L14, L15, L16, L17, AND L18 FOR LANDSCAPE NOTES, DETAILS AND MASTER PLANT LIST.
- CONTRACTOR TO CONTACT THE CONTRACT ADMINISTRATOR FOR EXACT LOCATION PRIOR TO INSTALLATION OF TREES, SEEDING AND SODDING AREAS.
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- CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY DAMAGED SIGNS

SEE DWG No. T5  
STA. 1+200



KEY PLAN Scale: NOT TO SCALE

- LEGEND
- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/L17, 2/L17, AND 3/L17
  - PROPOSED SHRUBS REFER TO DETAIL 4/L17 AND 5/L17
  - APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/L16 AND 4/L16
  - EXISTING SURVEYED TREES
  - EXISTING TREE GROUPING
  - EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
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  - EXISTING TREE TO BE REMOVED
  - LIMIT OF WORK
  - PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
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  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
  - TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
  - TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1/L16
  - LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

TREE INVENTORY CHART -- TABLE 1

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn										
Date of Field Work: 12/19/2012		Weather:										
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Dripline Radius	Recommendation	Remarks	
						Trunk	Canopy	Vigour				
109	<i>Betula papyrifera</i>	White Birch	1	48			F	G	G		retain	
110	<i>Prunus sp.</i>	Cherry	1	32			F	F	F		retain	w eakly formed union, poor form, exposed cambium
111	<i>Acer platanoides</i>	Norway Maple	1	38			G	F	G		retain	w eakly formed union
112	<i>Acer platanoides</i>	Norway Maple	1	26			P	F	P		retain	stem w ounds, 20-30% dead ood, trunk w ound
113	<i>Acer platanoides</i>	Norway Maple	1	49			G	F	G		retain	w eakly formed union
114	<i>Aesculus hippocastanum</i>	Horsechestnut	1	60			F	F	G		retain	trunk torsion, poor form, trunk w ound
115	<i>Aesculus hippocastanum</i>	Horsechestnut	1	99			P	F	F		retain	poor form , w eakly formed unions, included bark crack, decay, 10 15% deadw ood
119	<i>Acer platanoides</i>	Norway Maple	1	42			F	F	F		retain	cracked tree, dead branches
120	<i>Acer platanoides</i>	Norway Maple	1	48			G	F	F		remove	poor pruning practices, 10-15% deadw ood, poor form, may need to be removed due to the construction limits

PLANT LIST - L6

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Qa	5	<i>Quercus alba</i>	White Oak	45mm Cal	W.B	--
Qr	3	<i>Quercus rubra</i>	Red Oak	45mm Cal	W.B.	--
<b>Shrubs</b>						
cs	10	<i>Cornus sericea</i>	Red Osier Dogwood	50cm, 3gal.	pot	1.5m o.c.
po	10	<i>Physocarpus opulifolius</i>	Eastern Ninebark	50cm, 3gal.	pot	1.5m o.c.
sc	10	<i>Sambucus nigra ssp. canadensis</i>	Common Elderberry	50cm, 3gal.	pot	1.5m o.c.
se	10	<i>Salix eriocephala</i>	Heart-leaved Willow	50cm, 3gal.	pot	1.5m o.c.

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.

2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 20, 13	FINAL ARBORIST REPORT	JJZ	BTRM

No.	DATE	DESCRIPTION	BY:	CHKD.
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ISSUES/REVISIONS

**CITY OF Guelph**

ENGINEERING SERVICES  
&  
YORK TRUNK SEWER  
&  
PAISLEY-CLYTHE WATERMAIN  
TREE INVENTORY AND  
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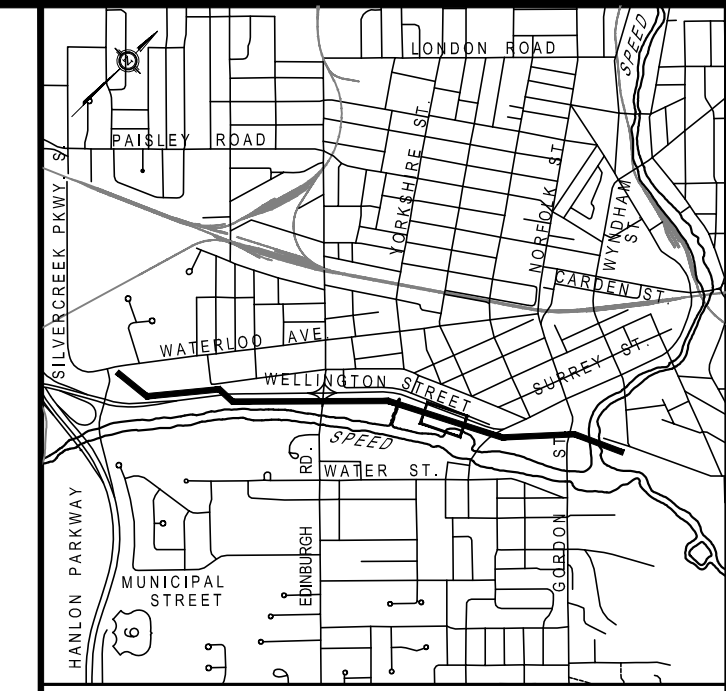
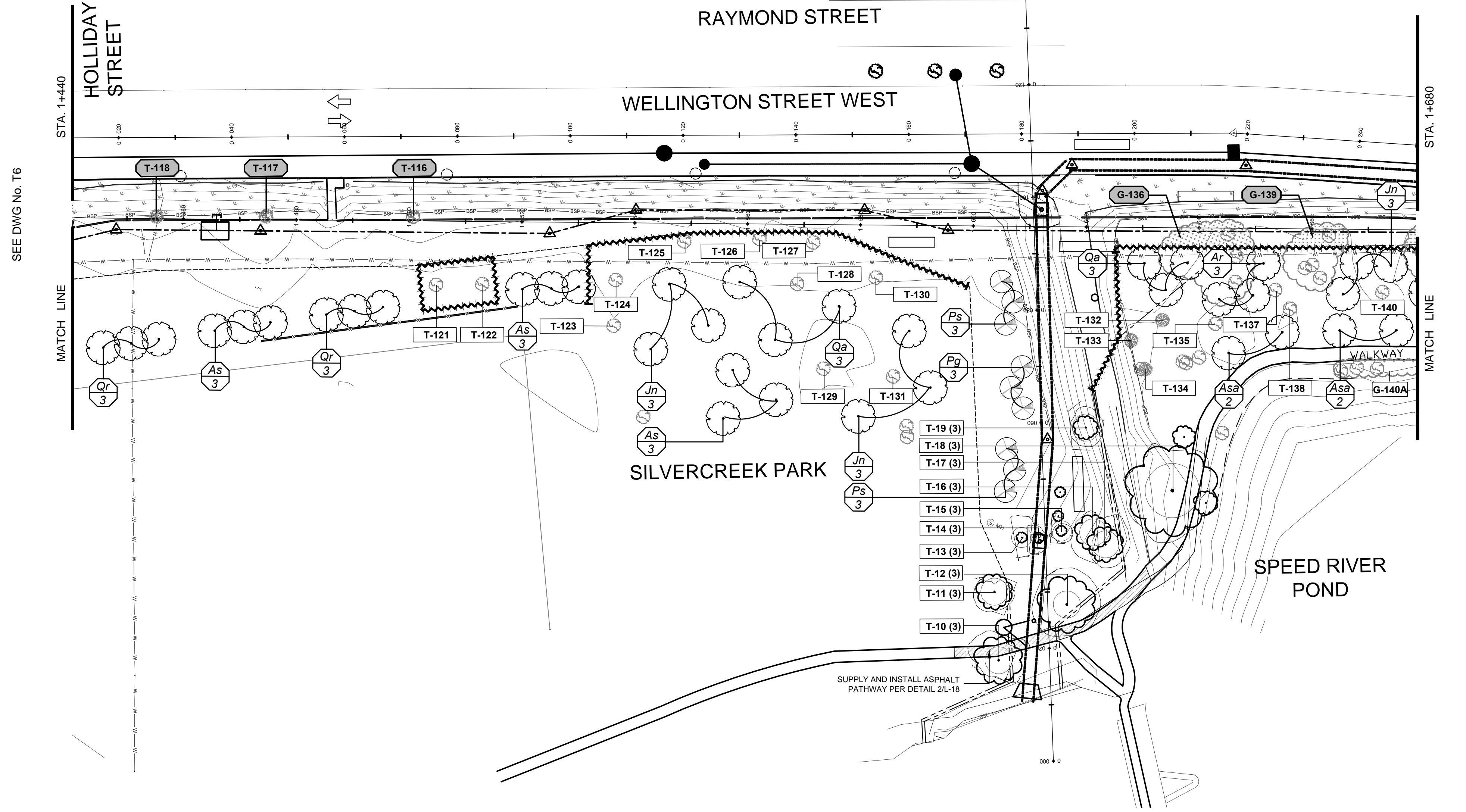
**MMM GROUP**  
100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
1-905-882-1100 F: 905-882-0055 www.mmm.ca



LEGEND		SCALES:	
	NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17	HOR: 1:500	VER: _____
	SODDING AREA FOR BOULEVARD AREA	DATE DRAWN:	AUGUST 2013
	SODDING AREA FOR SPORTS FIELD	DRAWN BY:	JJZ
	SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18	CHECKED BY:	B.T./P.M.
	ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18	CONSULTANT DRAWING No.	L6
		CITY CONTRACT No.	12-145
		CITY REFERENCE No.	REV.

FILE NAME: L:\Jobs\2012\10-12-108-12-108-001 York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory and Landscape Restoration\Drawings\1012108\_L6\_P\_Combined.dwg; L-6 REVISED ON: Wednesday 07/22/2014

- NOTE:
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  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
  - TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
  - TREE PROTECTION FENCE WITH EROSION CONTROL REFER TO DETAIL 1/L16
  - LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

TREE INVENTORY CHART -- TABLE 1

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116	Acer platanoides	Norway Maple	1	45		G	G	G		remove		
117	Acer platanoides	Norway Maple	1	51		F	F	G		remove		poor form, broken branches, 10% dead wood, trunk deformity
118	Acer platanoides	Norway Maple	1	35		F	F	F		remove		lean, dead branches, 15% dead wood, exposed cambium on upper stems
121	Fraxinus sp.	Ash	1	69		G	G	F		retain		10% dead wood
122	Fraxinus sp.	Ash	1	41		F	G	G		retain		10-15% dead wood, lean
123	Tilia cordata	Little-leaf Linden	1	69		F	G	G		retain		lean
124	Tilia cordata	Little-leaf Linden	1	60		F	F	G		retain		w eakly formed union, included bark
125	Gleditsia triacanthos	Honeylocust	1	50		F	G	G		retain		10-15% dead wood
126	Gleditsia triacanthos	Honeylocust	1	44		G	G	G		retain		10-15% dead wood
127	Sorbus aucuparia	European Mountain Ash	1	23		G	F	G		retain		w eakly formed union
128	Sorbus aucuparia	European Mountain Ash	1	23		G	G	G		retain		slight lean, 10% dead wood
129	Fraxinus pennsylvanica	Green Ash	1	63		P	G	G		retain		Manitoba Maple beside acer negundo. Wound, cavity
130	Juglans nigra	Black Walnut	1	12		G	G	G		retain		
G-131	Juglans nigra	Black Walnut	2	22/11		G	G	G		retain		2 trees
132	Pinus nigra	Austrian Pine	1	24	6	P	P	P		retain		note: a lot of sumac underbrush around pines, Tilia 0.5m from Pine
133	Pinus nigra	Austrian Pine	1	29	7	G	G	G		retain		multi-stem Tilia growing w/in 0.5m of Pine
134	Pinus nigra	Austrian Pine	1	27	7	P	P	P		retain		
135	Populus tremuloides	Trembling Aspen	1	96		P	F	F		retain		a lot of trunk damage
G-136	Grouping-Fraxinus sp.	Ash	7	12		G	G	G		retain/remove		1 small Ash, 6 small Maples in surrounding area - under 10 mm, inside of grading limit
137	Acer saccharinum	Silver Maple	1	12		G	G	G		retain		2 other small Maples in surrounding area under 10 mm
138	Acer saccharinum	Silver Maple	1	37		G	G	G		retain		
G-139	Grouping-Juglans nigra	Black Walnut	1	10		G	G	G		retain/remove		6 small caliper trees
140	Salix sp.	Willow	1	131		P	F	P		retain		large broken branches
G-140A	Grouping-Acer saccharinum	Silver Maple	5	10-25		G-F	G-F	G		retain		multi-stem, poor form, unions Opposite side of trail from 140, orange paint

TREE INVENTORY CHART -- TABLE 3

Tree No.	Tree Species	DBH (cm)	Crown Reserve (m)	Biological Health (H,M,L)	Structural Condition (H,M,L)	Age Category (see below)	Life Expectancy (see below)	Height (m)	Municipal Tree	Grade	Rec. Action based on Condition	Construction Impacts	Final Recommendation	Observations / Comments
10	Quercus rubra Red Oak	25	11	H	H	3	6	7.3	0	0	P	P	P	LC (M, leaf necrosis (L))
11	Acer platanoides Norway Maple	18	8	H	H	2	6	7.1	0	0	P	P	P	Memorial tree
12	Acer platanoides Norway Maple	36	12	H	M	4	6	8.9	0	0	P	P	P	Poorly formed buttress (M)
13	Juglans nigra Black Walnut	8	6	H	M/L	1	4	3	0	1	P	P	P	CU(H,N,S)
14	Pinus communis Pear	8.7	5	H	M	1	5	3.5	0	0	P	R	R	
15	Pinus communis Pear	5.3	3	H	M	1	5	2.9	0	1	P	P	P	
16	Acer negundo Manitoba Maple	18.9	10	H	M	2	5	8.6	0	1	P	P	P	Many large laterals low on trunk
17	Acer negundo Manitoba Maple	19	9	H	M	2	5	8.6	0	1	P	P	P	3 large basal sprouts
18	Populus deltoides ssp. deltoides Eastern Cottonwood	78	16	H	M	5	3	17	0	1	P	P	P	CU(MSE)
19	Juglans nigra Black Walnut	14	7	H	M/L	2	6	7.5	0	1	P	P	P	Open grown form
20	Acer negundo Manitoba Maple	18,17, 14,15,17	14	H	M	2	5	7.8	0	1	P	P	P	
21	Juglans nigra Black Walnut	6	3	H	L	1	2	3.5	0	0	P	P	P	LP(H)
22	Pinus nigra Austrian Pine	30	10	H/M	M	2	5	8.7	0	0	P	P	P	
23	Tilia cordata Little-leaf Linden	11,11	8	H/M	M	2	6	8.7	0	0	P	P	P	
24	Pinus nigra Austrian Pine	25	8	H/M	M	3	5	8	0	0	P	P	P	Growing in thicket, tree tag #132

NOTE:  
THE FIELD WORK OF TREE SPECIES LISTED UNDER THE TREE INVENTORY TABLE 3 WAS COMPLETED BY ABOUD & ASSOCIATES INC. REFER TO THE ABOUD & ASSOCIATES INC. S ROAD AND SERVICE IMPROVEMENTS WELLINGTON STREET ARBORIST REPORT, NOVEMBER 12, 2013 FOR DETAILS

PLANT LIST - L7

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	3	Acer rubrum	Red Maple	45mm Cal	W.B	--
As	9	Acer saccharum	Sugar Maple	45mm Cal	W.B	--
Asa	4	Acer saccharinum	Silver Maple	45mm Cal	W.B	--
Jn	9	Juglans nigra	Black Walnut	45mm Cal	W.B	--
Qa	6	Quercus alba	White Oak	45mm Cal	W.B	--
Qr	6	Quercus rubra	Red Oak	45mm Cal	W.B	--
<b>Coniferous</b>						
Pg	3	Picea glauca	White Spruce	200cm ht	W.B	--
Ps	6	Pinus strobus	Eastern White Pine	200cm ht	W.B	--

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supersede the Quantities Listed Above.

LEGEND

- NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17
- SODDING AREA FOR BOULEVARD AREA
- SODDING AREA FOR SPORTS FIELD
- SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18
- ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18

SCALES:  
HOR: 1:500 VER: \_\_\_\_\_

DATE DRAWN: AUGUST 2013

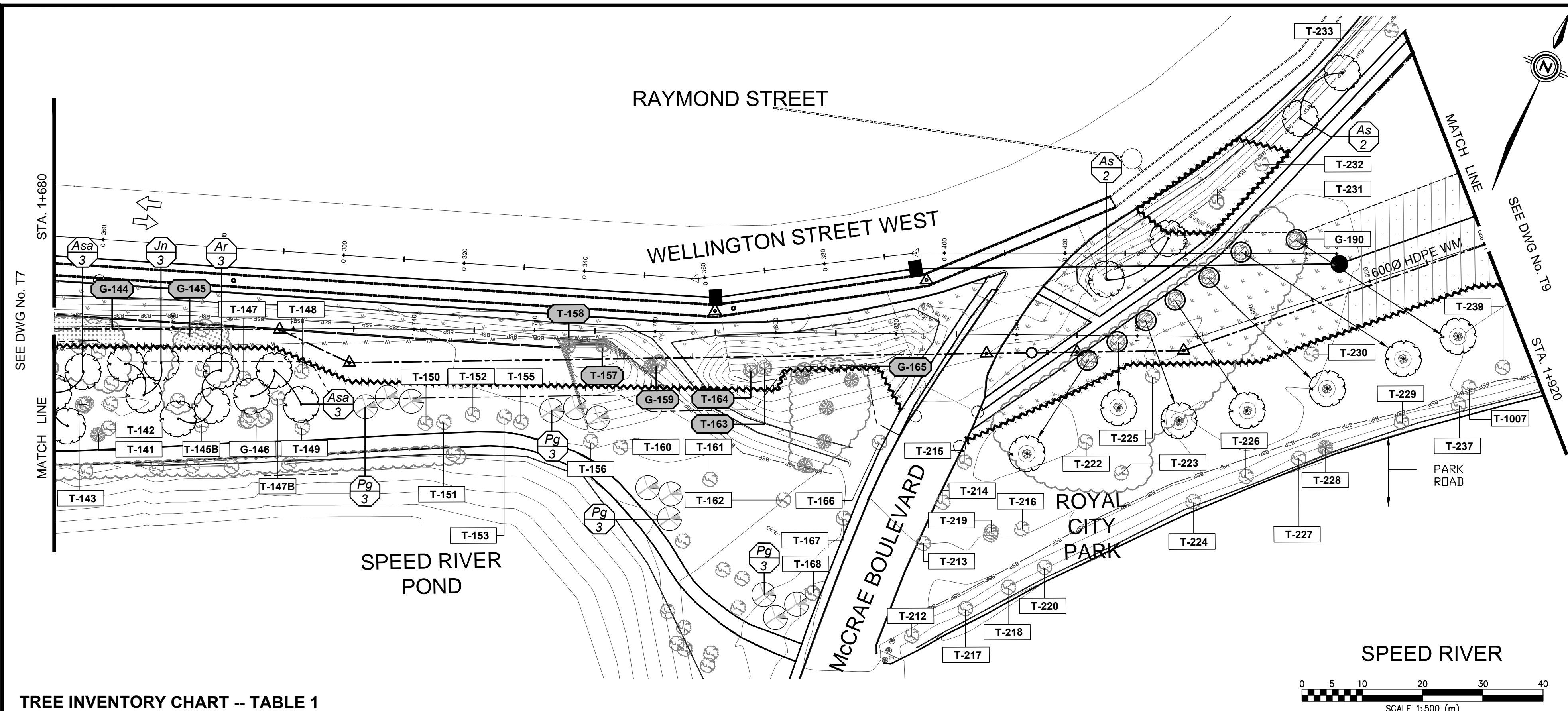
DRAWN BY: JJZ CHECKED BY: B.T.P.M.

CONSULTANT DRAWING No. L7

CITY CONTRACT No. 12-145

CITY REFERENCE No. REV.

P.L. NAME: L. John 2012 (12-108-108-001 York Trunk Sewer & Paisley-Clythe Watermain Improvements) 10/21/12 (L7 - PP - Combos) 06/11/12 (L7 - PP - Combos) 07/22/2014



NOTE:

- REFER TO SHEET L14, L15, L16, L17, AND L18 FOR LANDSCAPE NOTES, DETAILS AND MASTER PLANT LIST.
- CONTRACTOR TO CONTACT THE CONTRACT ADMINISTRATOR FOR EXACT LOCATION PRIOR TO INSTALLATION OF TREES, SEEDING AND SODDING AREAS.
- TREES LOCATED WITHIN THE YORK ROAD PARK AREA ARE MEMORIAL TREES, AND CANNOT BE REMOVED. PARK TREES IMPACTED BY THE WATERMAIN AND SEWER CONSTRUCTION MAY REQUIRE TRANSPLANTING.
- ALL TREES ON SLOPED AREAS THAT MAY BE IMPACTED BY WATERMAIN CONSTRUCTION SHOULD BE REMOVED AND REPLACED WITH NEW TREES FOLLOWING WATERMAIN INSTALLATION.
- CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY DAMAGED SIGNS

PLANT LIST - L8

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	3	<i>Acer rubrum</i>	Red Maple	45mm Cal	W.B	--
As	4	<i>Acer saccharum</i>	Sugar Maple	45mm Cal	W.B	--
Asa	6	<i>Acer saccharum</i>	Silver Maple	45mm Cal	W.B	--
Jn	3	<i>Juglans nigra</i>	Black Walnut	45mm Cal	W.B	--
<b>Coniferous</b>						
Pg	12	<i>Picea glauca</i>	White Spruce	2000mm ht	W.B	--

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.

TREE INVENTORY CHART -- TABLE 1

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn										
Date of Field Work: 12/19/2012		Weather:										
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Trunk	Condition	Canopy	Vigour	Dripline Radius	Recommendation	Remarks
141	<i>Larix sp.</i>	Tamarack	1	28	7	G	G	G	G		retain	Tile growing beside Tamarack
142	<i>Acer negundo</i>	Manitoba Maple	1	20		F	F	F	F		retain	
143	<i>Acer negundo</i>	Manitoba Maple	1	16		F	F	F	F		retain	multi-stem
G-144	Grouping-Fraxinus sp.	Ash	6	10		G	G	G	G		retain/remove	6 Ash total - small caliper
G-145	Grouping-Acer saccharum	Silver Maple	3	10		G	G	G	G		retain/remove	3 Maples total - small caliper, inside of grading limit
145B	<i>Juglans cinerea</i>	Buttemut	1	2		G	G	G	G		retain	near #145
G-146	Grouping-Acer negundo	Manitoba Maple	3	17/18		G	G	G	G		retain	3 Maples total
147	<i>Fraxinus sp.</i>	Ash	1	12		G	G	G	G		retain	small caliper trees in surrounding area - Maple (4), Ash (4), Tamarack, Spruce (3)
147B	<i>Juglans cinerea</i>	Buttemut	1	5		G	G	G	G		retain	near #147
148	<i>Acer saccharum</i>	Silver Maple	1	8-12		F	G	G	G		retain	multi-stem, unions, poor form
149	<i>Fraxinus sp.</i>	Ash	1	8-12		F	G	G	G		retain	multi-stem, unions, poor form
150	<i>Acer saccharum</i>	Silver Maple	1	8-12		F	G	G	G		retain	multi-stem, unions, poor form
151	<i>Acer saccharum</i>	Silver Maple	1	7-12		F	G	G	G		retain	multi-stem, unions, poor form
152	<i>Acer saccharum</i>	Silver Maple	1	10		G	G	G	G		retain	multi-stem, small caliper Tamarack (1), Maple (4), Ash (4), White Pine (1)
153	<i>Acer negundo</i>	Manitoba Maple	1	10		F	F	G	G		retain	multi-stem, unions, poor form
154	NOT USED										retain	
155	<i>Fraxinus americana</i>	White Ash	1	12		G	G	G	G		retain	small caliper trees surrounding - Tamarack (1), Maple (4), Ash (5)
156	<i>Acer saccharum</i>	Silver Maple	1	16		G	G	G	G		retain	small caliper trees surrounding Ash (4), Maple (3) under 10 mm
157	<i>Pinus nigra</i>	Austrian Pine	1	23	4	F	F	F	F		remove	w/ll need to be removed due to the construction limits
158	<i>Pinus nigra</i>	Austrian Pine	1	12	5	F	F	F	F		remove	multi-stem, inside of grading limit
G-159	Grouping-Pinus nigra	Austrian Pine	3	22	5	F	F	F	F		remove	3 small caliper trees - Ash and White Pine, w/ll need to be removed due to the construction limits
160	<i>Populus deltoides</i>	Cottonwood	1	80		P	G	G	G		retain	
161	<i>Acer negundo</i>	Manitoba Maple	1	90		P	P	P	P		retain	small caliper trees, Maple (7), Ash (7)
162	<i>Acer saccharum</i>	Silver Maple	1	22		G	G	G	G		retain	
163	<i>Fraxinus sp.</i>	Ash	1	25		P	P	P	P		remove	large Juniper growing under trees, w/ll need to be removed due to the construction limits
164	<i>Fraxinus sp.</i>	Ash	1	16		P	P	P	P		remove	w/ll need to be removed due to the construction limits
G-165	Grouping-Picea sp.	Spruce	5	28	10	G	G	G	G		retain/remove	grouping of 5 trees all same size
166	<i>Acer saccharum</i>	Silver Maple	1	116		F	F	F	F		retain	
167	<i>Acer saccharum</i>	Silver Maple	1	104		F	F	F	F		retain	
168	<i>Acer saccharum</i>	Silver Maple	1	140		F	F	F	F		retain	

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn											
Date of Field Work: 12/19/2012		Weather:											
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Trunk	Condition	Canopy	Vigour	Dripline Radius	Recommendation	Remarks	
G-190	Refer to Mark-Up of Royal City Park Plan for the location of the following trees											transplant	small trees to be transplanted due to the construction limits. Additional survey w/ll be required to pick up the trees w/ll be 190 grouping. Need to be transplanted due to the construction limits
A	<i>Fagus sp.</i>	Beech	1	6		G	G	G	G			pyramid	
B	<i>Fagus sp.</i>	Beech	1	6		G	G	G	G			pyramid	
C	<i>Fagus sp.</i>	Beech	1	7		G	G	G	G			pyramid	
D	<i>Fagus sp.</i>	Beech	1	6		G	G	G	G			pyramid	
E	<i>Ulmus sp.</i>	Elm	1	5		G	G	G	G				
F	<i>Aesculus hippocastanum 'baumanni'</i>	Baumann Horsechestnut	1	7		G	G	G	G				
G	<i>Quercus rubrum</i>	Red Oak	1	6		G	G	G	G				
H	<i>Acer sp.</i>	Maple	1	4		G	G	G	G				
I	<i>Quercus rubrum</i>	Red Oak	1	4		G	G	G	G				
212	<i>Fraxinus americana</i>	White Ash	1	74		G	F	F	F	10	retain	mature	
213	<i>Acer platanoides</i>	Norway Maple	1	57		G	F	F	F	8	retain	mature	
214	<i>Acer platanoides</i>	Norway Maple	1	59		P	F	F	F	8	retain	mature	
215	<i>Fraxinus pennsylvanica</i>	Green Ash	1	78		F	F	F	F	7	retain	mature	
216	<i>Acer platanoides</i>	Norway Maple	1	54		G	G	G	G	7	retain	mature	
217	<i>Fraxinus americana</i>	White Ash	1	62		G	F	F	F	8	retain	mature	
218	<i>Fraxinus americana</i>	White Ash	1	74		G	F	F	F	8	retain	mature	
219	<i>Syringa vulgaris</i>	Common Lilac	1	17		F	F	F	F	3	retain	semi-mature	
220	<i>Fraxinus americana</i>	White Ash	1	65		G	F	F	F	6	retain	mature	
222	<i>Catalpa speciosa</i>	Catalpa	1	58		F	F	F	F	4	retain	mature	
223	<i>Fraxinus pennsylvanica</i>	Green Ash	1	7		G	P	P	P	1	retain	young	
224	<i>Acer platanoides</i>	Norway Maple	1	84		F	G	F	F	10	retain	mature	
225	<i>Fraxinus pennsylvanica</i>	Green Ash	1	20		G	F	F	F	2	retain	young	
226	<i>Acer platanoides</i>	Norway Maple	1	70		P	G	F	F	10	retain	mature	
227	<i>Fraxinus americana</i>	WhiteAsh	1	61		G	F	F	F	8	retain	mature	
228	<i>Picea glauca</i>	WhiteSpruce	1	20		G	G	G	G	2	retain	semi-mature	
229	<i>Fraxinus americana</i>	WhiteAsh	1	72		P	G	P	P	9	retain	mature	
230	<i>Acer platanoides</i>	Norway Maple	1	103		F	F	F	F	6	retain	mature	
231	<i>Acer platanoides</i>	Norway Maple	1	50		F	F	F	F	4	retain	mature	
232	<i>Acer platanoides</i>	Norway Maple	1	39		F	P	P	P	4	retain	semi-mature	
233	<i>Acer platanoides</i>	Norway Maple	1	43		P	P	P	P	4	retain	semi-mature	
237	<i>Fraxinus americana</i>	White Ash	1	71		F	P	F	F	9	retain	mature	
239	<i>Fraxinus pennsylvanica</i>	Green Ash	1	10		F	G	F	F	1	retain	young	
1007	<i>Quercus rubra</i>	Red Oak	1	2		F	G	F	F	1	retain	young	

**KEY PLAN** Scale: NOT TO SCALE

**LEGEND**

- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/17, 2/17, AND 3/17
- PROPOSED SHRUBS REFER TO DETAIL 4/17 AND 5/17
- APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/16 AND 4/16
- EXISTING SURVEYED TREES
- EXISTING TREE GROUPING
- EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
- EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3/16 AND 4/16
- EXISTING TREE TO BE REMOVED
- LIMIT OF WORK
- PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
- PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED. REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUP TO BE REMOVED
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 1 (L1 TO L11) FOR TREE INVENTORY CHART
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12) FOR TREE INVENTORY CHART
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
- TREE PROTECTION FENCING REFER TO DETAIL 1/16 AND 2/16
- TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1/16
- LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/18

**2** JAN 23, 14 ORCA SUBMISSION J.J.Z. BT

**1** OCT 20, 13 FINAL ARBORIST REPORT J.J.Z. BT/PM

No.	DATE	DESCRIPTION	BY:	CHKD.

**ISSUES/REVISIONS**

**CITY OF Guelph**

**ENGINEERING SERVICES**

**YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN TREE INVENTORY AND LANDSCAPE RESTORATION**

**MMM GROUP**

100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
T: 905-882-1100 F: 905-882-0055 www.mmm.ca

**ASSOCIATION OF LANDSCAPE ARCHITECTS**  
MEMBER SINCE 2014  
JANUARY 23, 2014

**LEGEND**

- NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/17
- SODDING AREA FOR BOULEVARD AREA
- SODDING AREA FOR SPORTS FIELD
- SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/18
- ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/18

**SCALES:** HOR: 1:500 VER:

**DATE DRAWN:** AUGUST 2013

**DRAWN BY:** J.J.Z. **CHECKED BY:** B.T./P.M.

**CONSULTANT DRAWING No.:** L8

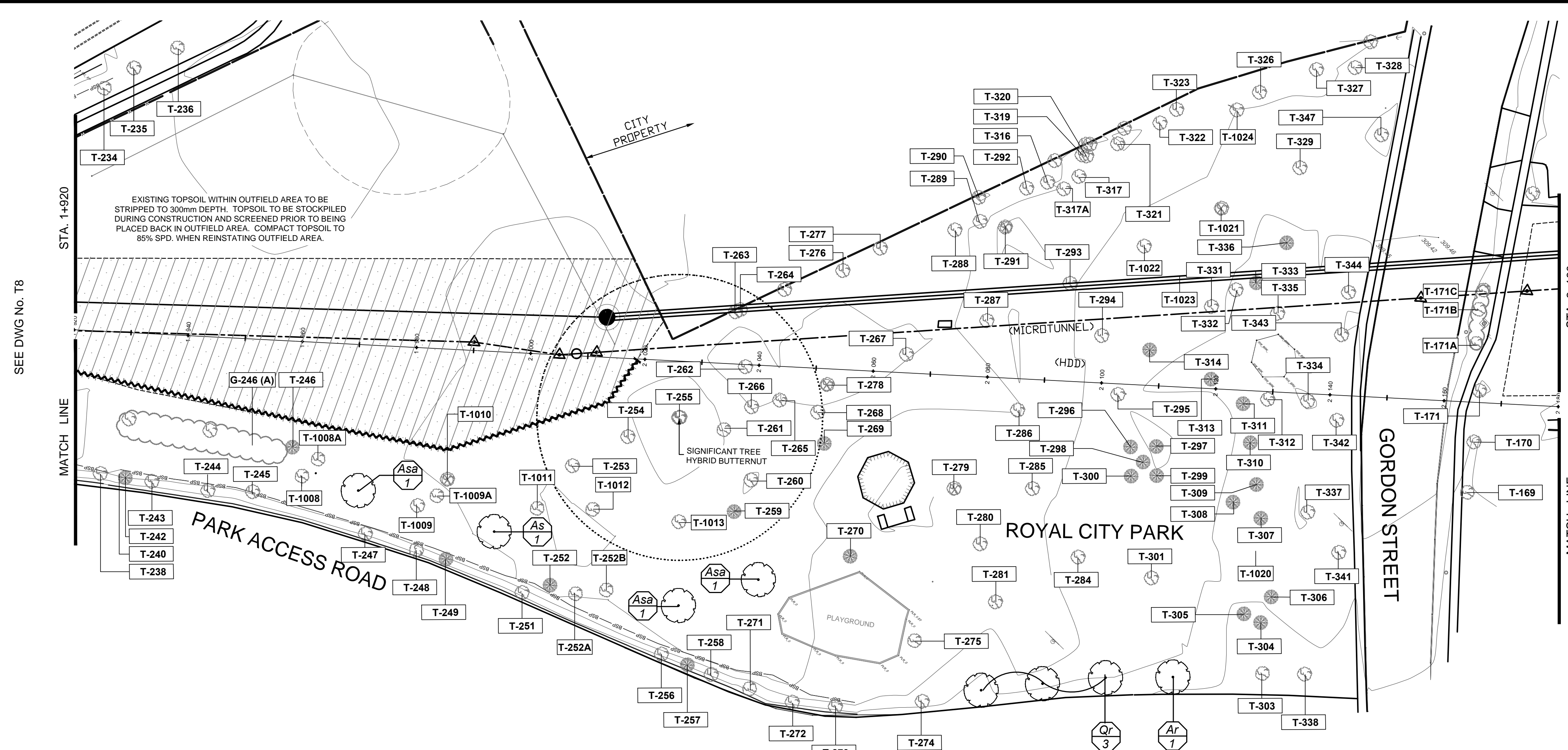
**CITY CONTRACT No.:** 12-145

**CITY REFERENCE No.:** **REV.:**

P.L.F. NAME: L. J. J. 12/19/2012 10:00:00 AM 10-12-108-York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory and Landscape Restoration - L8  
 REVISED ON: Wednesday 07/22/2014

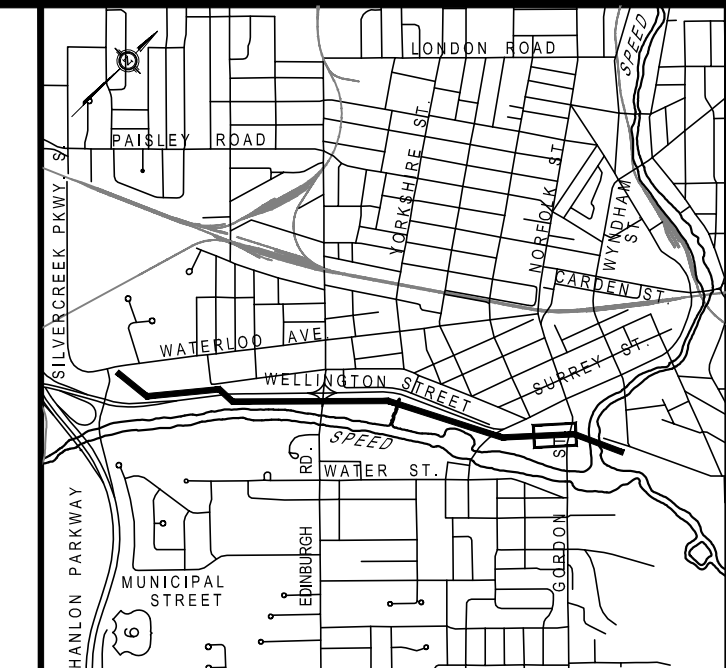


- NOTE:
- REFER TO SHEET L14, L15, L16, L17, AND L18 FOR LANDSCAPE NOTES, DETAILS AND MASTER PLANT LIST.
  - CONTRACTOR TO CONTACT THE CONTRACT ADMINISTRATOR FOR EXACT LOCATION PRIOR TO INSTALLATION OF TREES, SEEDING AND SODDING AREAS.
  - TREES LOCATED WITHIN THE YORK ROAD PARK AREA ARE MEMORIAL TREES, AND CANNOT BE REMOVED. PARK TREES IMPACTED BY THE WATERMAIN AND SEWER CONSTRUCTION MAY REQUIRE TRANSPLANTING.
  - ALL TREES ON SLOPED AREAS THAT MAY BE IMPACTED BY WATERMAIN CONSTRUCTION SHOULD BE REMOVED AND REPLACED WITH NEW TREES FOLLOWING WATERMAIN INSTALLATION.
  - CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY DAMAGED SIGNS



ROYAL CITY PARK AREA -- TREE INVENTORY CHART -- TABLE 1, REFER TO SHEET L9, L10

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchyshyn										
Date of Field Work: 12/19/2012		Weather:										
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Drip-line Radius	Recommendation	Conditions: Good, Fair, Poor, Dead	Remarks
						Trunk	Canopy	Vigour				
326	Acer platanoides	Norway Maple	1	18		G	G	Good	3	retain	semi-mature	
327	Acer platanoides	Norway Maple	1	22		G	G	G	4	retain	semi-mature	
328	Acer saccharum	Sugar Maple	1	12		P	G	F	1	retain	young	
329	Acer saccharinum	Silver Maple	1	99		P	G	F	10	retain	mature	
331	Syringa vulgaris	Common Lilac	1	22		G	G	G	4	retain	semi-mature	
332	Syringa vulgaris	Common Lilac	1	24		G	G	G	4	retain	semi-mature	
333	Taxus canadensis	Yew	1	27		G	G	G	4	retain	semi-mature	
334	Picea glauca	White Spruce	1	32		G	G	G		retain	mature	
335	Tilia cordata	Little-leaf Linden	1	32		G	G	G	5	retain	semi-mature	
336	Picea abies	Norway Spruce	1	27		G	G	G	5	retain	semi-mature	
337	Acer saccharum	Sugar Maple	1	11		F	G	G	1	retain	young	
338	Acer saccharum	Sugar Maple	1	9		F	G	G	1	retain	young	
341	Acer platanoides	Norway Maple	1	71		F	F	F	8	retain	mature	
342	Acer platanoides	Norway Maple	1	52		G	G	F	6	retain	mature	
343	Acer platanoides	Norway Maple	1	50		F	G	G	6	retain	mature	
344	Acer platanoides	Norway Maple	1	76		G	G	G	8	retain	mature	
347	Acer platanoides	Norway Maple	1	54		F	F	F	10	retain	mature	
1008	Quercus rubra	Red Oak	1	6		F	G	F	1	retain	young	
1008(A)	Aesculus hippocastanum	Horsechestnut	1	6		F	G	F		retain	young	
1009	Acer saccharinum	Silver Maple	1	13		P	G	F	1	retain	young	
1009(A)	Catalpa speciosa	Catalpa	1	9		G	G	F		retain	young	
1010	Quercus rubra	Red Oak	1	3		D	D	D	1	remove	young, tree w as part of inventory, but has since been removed due to 2013 winter ice storm damage	
1011	Quercus rubra	Red Oak	1	4		G	G	G	1	retain	young	
1012	Quercus rubra	Red Oak	1	4		G	G	G	1	retain	young	
1013	Acer saccharinum	Silver Maple	1	4		G	G	G	1	retain	young	
1020	Quercus macrocarpa	Bur Oak	1	1		F	G	G	1	retain	young	
1021	Acer saccharinum	Silver Maple	1	104		F	F	F	10	remove	mature, tree w as part of inventory, but has since been removed due to 2013 winter ice storm damage	
1022	Acer saccharinum	Silver Maple	1	112		P	G	F	10	retain	mature	
1023	Acer saccharinum	Silver Maple	1	2		F	F	F	1	retain	young	
1024	Acer saccharinum	Silver Maple	1	98		G	F	G	10	retain	mature	



- LEGEND
- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1L17, 2L17, AND 3L17
  - PROPOSED SHRUBS REFER TO DETAIL 4L17 AND 5L17
  - APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3L16 AND 4L16
  - EXISTING SURVEYED TREES
  - EXISTING TREE GROUPING
  - EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
  - EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3L16 AND 4L16
  - EXISTING TREE TO BE REMOVED
  - LIMIT OF WORK
  - PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
  - PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED. REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUP TO BE REMOVED
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 1 (L1 TO L11) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12) FOR TREE INVENTORY CHART
  - IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
  - TREE PROTECTION FENCING REFER TO DETAIL 1L16 AND 2L16
  - TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1L16
  - LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3L18

2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 23, 13	FINAL ARBORIST REPORT	JJZ	BTRM

No.	DATE	DESCRIPTION	BY:	CHKD.
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ISSUES/REVISIONS

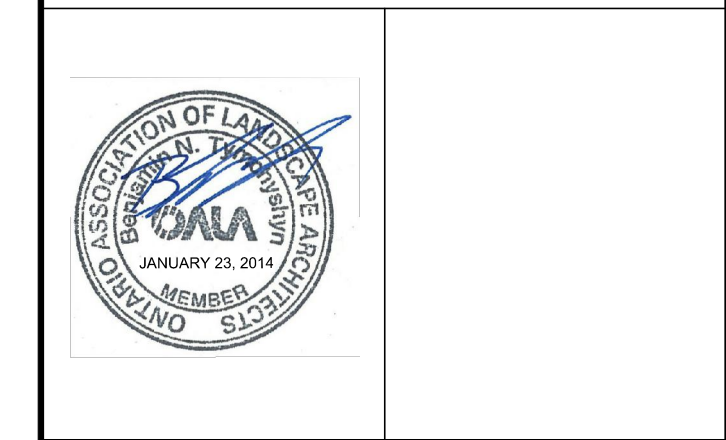
**CITY OF Guelph**

ENGINEERING SERVICES

YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN TREE INVENTORY AND LANDSCAPE RESTORATION

**MMM GROUP**

100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
 T: 905.882.1100 F: 905.882.0055 www.mmm.ca



LEGEND	SCALES:
NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6L17	HOR: 1:500 VER:
SODDING AREA FOR BOULEVARD AREA	DATE DRAWN: AUGUST 2013
SODDING AREA FOR SPORTS FIELD	DRAWN BY: JJZ
SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1L18	CHECKED BY: B.T.P.M.
ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2L18	CONSULTANT DRAWING No. L9
	CITY CONTRACT No. 12-145
	CITY REFERENCE No. REV.

PLANT LIST - L9

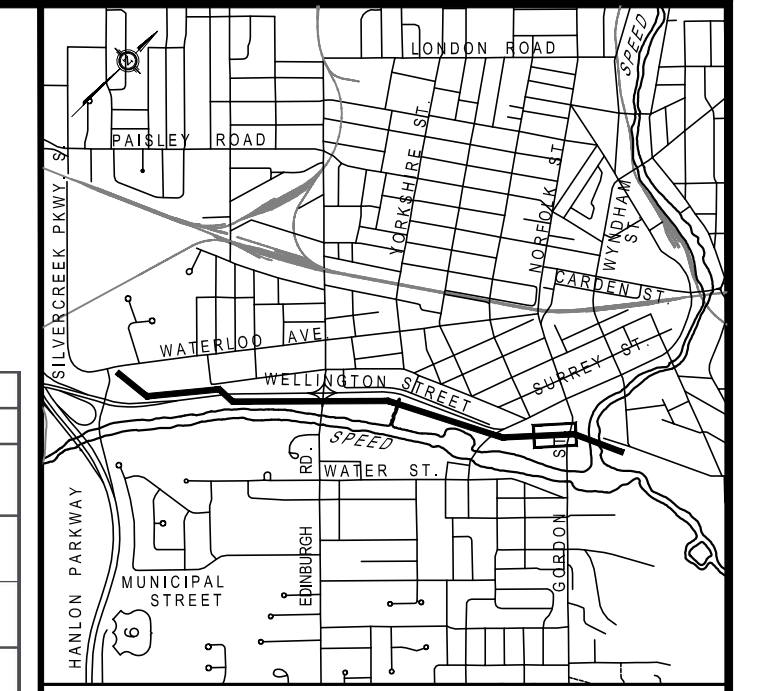
Key	Qty	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	1	Acer rubrum	Red Maple	45mm Cal	W.B	--
As	1	Acer saccharum	Sugar Maple	45mm Cal	W.B	--
Asa	3	Acer saccharinum	Silver Maple	45mm Cal	W.B	--
Qr	3	Quercus rubra	Red Oak	45mm Cal	W.B	--

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.

FILE NAME: L:\Jobs\2012\10-12-108-York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory and Landscape Restoration\Drawings\1012108\_L9\_PP\_Combined.dwg; L:\9...  
 PLOTTED ON: Wednesday, 07/22/2014



**ROYAL CITY PARK AREA -- TREE INVENTORY CHART -- TABLE 1, REFER TO SHEET L9 FOR TREE INVENTORY PLAN**

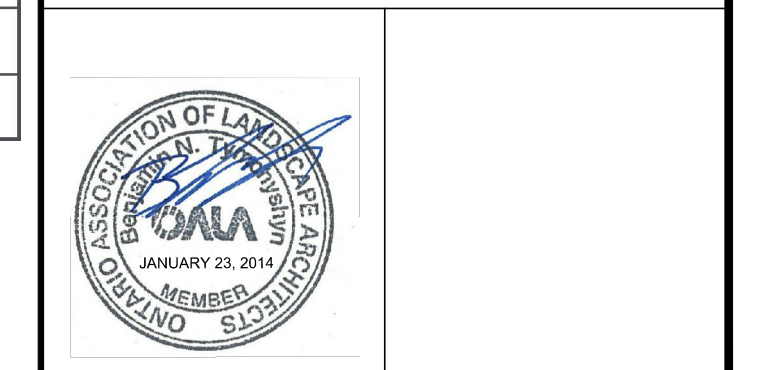
Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Ben Tymchysyn										Date of Field Work: 12/19/2012		Weather:		Conditions: G - Good, F - Fair, P - Poor, D - Dead									
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Dripline Radius	Recommendation	Remarks	Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Dripline Radius	Recommendation	Remarks		
						Trunk	Canopy	Vigour										Trunk	Canopy	Vigour					
169	Acer platanoides	Maple	1	72		G	G	G		retain		274	Acer platanoides	Norway Maple	1	73		F	F	F	8	retain	mature		
170	Acer platanoides	Maple	1	85		G	G	G		retain		275	Acer saccharum	Sugar Maple	1	6		F	G	G	1	retain	young		
G-171	Acer platanoides	Maple	4	45		P	P	P		retain	A- 8 mm Maple, B - 8 mm Maple, C - 8 mm Maple two large trunk sizes, 3 small caliper trees beside	276	Acer platanoides	Norway Maple	1	56		F	G	G	10	retain	mature		
234	Acer platanoides	Norway Maple	1	41		F	P	P	4	retain	semi-mature	277	Acer platanoides	Norway Maple	1	68		P	F	F	10	retain	mature		
235	Acer platanoides	Norway Maple	1	48		G	F	F	4	retain	semi-mature	278	Acer saccharinum	Silver Maple	1	125		F	G	F	10	remove	mature, tree was part of inventory, but has since been removed due to 2013 w inter ice storm damage		
236	Acer platanoides	Norway Maple	1	65		P	F	P	4	retain	mature	279	Gleditsia triacanthos	Honey Locust	1	41		G	G	G	8	remove	semi-mature, tree was part of inventory, but has since been removed due to 2013 w inter ice storm damage		
238	Fraxinus americana	White Ash	1	70		G	F	F	10	retain	mature	280	Quercus rubra	Red Oak	1	22		F	G	G	4	retain	semi-mature		
240	Fraxinus pennsylvanica	Green Ash	1	62		G	G	F	6	retain	mature	281	Acer saccharum	Sugar Maple	1	15		F	G	G	1	retain	young		
242	Picea glauca	White Spruce	1	27		G	G	G	3	retain	semi-mature	284	Acer platanoides	Norway Maple	1	94		F	F	F	10	retain	mature		
243	Fraxinus americana	White Ash	1	56		G	F	F	6	retain	mature	285	Acer platanoides	Norway Maple	1	26		G	G	G	4	retain	semi-mature		
244	Fraxinus americana	White Ash	1	75		G	G	G	10	retain	mature	286	Acer platanoides	Norway Maple	1	78		G	G	G	10	retain	mature		
245	Fraxinus pennsylvanica	Green Ash	1	17		G	G	G	1	retain	young	287	Acer platanoides	Norway Maple	1	56		G	G	G	6	retain	mature		
246	Picea glauca	White Spruce	1	46		G	G	G	4	retain	semi-mature	288	Acer platanoides	Norway Maple	1	46		G	G	G	5	retain	semi-mature		
246A	Refer to Mark-Up of Royal City Park Plan for the location of the following trees (associated with tag #246)										retain		289	Acer platanoides	Norway Maple	1	15		G	G	G	3	retain	young	
A	Platanus x acerifolia	London Plane Tree	1	9		G	G	G		retain		290	Acer platanoides	Norway Maple	1	17		G	G	G	2	retain	young		
B	Tilia americana	Basswood	1	9		G	G	G		retain		291	Acer saccharinum	Silver Maple	1	107		G	G	G	10	remove	mature, tree was part of inventory, but has since been removed due to 2013 w inter ice storm damage		
C	Liriodendron tulipifera	Tulip Tree	1	8		G	G	G		retain		G-292	Acer platanoides	Norway Maple (clump of 3)	3	19		G	G	G	3	retain	young, 2 Maple, 1 Ash		
D	Quercus rubrum	Red Oak	1	4		G	G	G		retain		293	Quercus rubra	Red Oak	1	10		F	G	F	2	retain	young		
247	Fraxinus americana	White Ash	1	74		G	F	F	10	retain	mature	294	Acer platanoides	Norway Maple	1	18		G	G	G	2	retain	semi-mature		
248	Fraxinus americana	White Ash	1	57		G	F	F	6	retain	mature	295	Acer saccharum	Sugar Maple	1	36		G	G	G	6	retain	semi-mature		
249	Picea glauca	White Spruce	1	25		G	F	F	3	retain	semi-mature	296	Thuja occidentalis	White Cedar	1	19		G	G	G	2	retain	semi-mature		
251	Fraxinus americana	White Ash	1	55		F	F	F	7	retain	mature	297	Thuja occidentalis	White Cedar	1	26		G	G	G	3	retain	semi-mature		
252	Picea glauca	White Spruce	1	34		G	G	G	3	retain	semi-mature	298	Picea pungens	Blue spruce	1	38		G	G	G	3	retain	semi-mature		
252 (A)	Carpinus caroliniana	Blue Beech	1	6		G	G	G		retain	young	299	Thuja occidentalis	White Cedar	1	18		G	G	G	3	retain	semi-mature		
252 (B)	Tilia americana	Basswood	1	5		G	G	G		retain	young	300	Thuja occidentalis	White Cedar	1	24		G	G	G	2	retain	semi-mature		
253	Acer saccharinum	Silver Maple	1	133		G	F	F	10	retain	mature	301	Acer platanoides	Norway Maple	1	91		G	G	G	10	retain	mature		
254	Acer platanoides	Norway Maple	1	29		G	G	G	4	retain	semi-mature	303	Acer saccharinum	Silver Maple	1	99		P	G	P	10	retain	mature		
255	Juglans cinerea	Butternut	1	100		P	F	P	8	retain	mature	304	Picea glauca	White Spruce	1	32		G	G	G	2	retain	semi-mature		
256	Fraxinus americana	White Ash	1	59		F	F	F	8	retain	mature	305	Picea glauca	White Spruce	1	37		G	G	G	2	retain	semi-mature		
257	Picea glauca	White Spruce	1	25		G	G	G	3	retain	semi-mature	306	Pinus nigra	Austrian Pine	1	32		G	G	G	3	retain	semi-mature		
258	Acer saccharinum	Silver Maple	1	165		F	F	F	10	retain	mature, "Hazard Tree"	307	Picea pungens	Blue spruce	1	21		G	G	G	2	retain	semi-mature		
259	Pinus sylvestris	Scots pine	1	20		P	F	F	2	retain	young	308	Picea pungens	Blue spruce	1	32		G	G	G	3	retain	semi-mature		
260	Acer saccharinum	Silver Maple	1	118		G	G	G	10	retain	mature	309	Picea pungens	Blue spruce	1	42		G	G	G	3	retain	semi-mature		
261	Ulmus americana	American Elm	1	14		G	G	G	2	retain	semi-mature	310	Taxus canadensis	Yew	1	24		G	G	G	5	retain	semi-mature		
262	Acer saccharinum	Silver Maple	1	109		F	G	F	10	retain	mature	311	Picea pungens	Blue spruce	1	24		G	F	G	3	retain	semi-mature		
263	Acer platanoides	Norway Maple	1	22		G	G	G	3	retain	semi-mature	312	Tilia cordata	Little leaf Linden	1	35		G	G	G	6	retain	semi-mature		
264	Acer platanoides	Norway Maple	1	14		G	G	G	3	retain	semi-mature	313	Picea glauca	White Spruce	1	26		G	G	G	3	retain	semi-mature		
265	Acer platanoides	Norway Maple	1	15		G	G	G	3	retain	semi-mature	314	Picea glauca	White Spruce	1	21		G	G	G	3	retain	semi-mature		
266	Acer platanoides	Norway Maple	1	14		G	G	G	3	retain	semi-mature	316	Fraxinus pennsylvanica	Green Ash	1	32		G	G	G	4	retain	semi-mature		
267	Acer saccharinum	Silver Maple	1	109		F	F	F		retain	mature	317	Acer platanoides	Norway Maple	1	17		G	G	G	3	retain	semi-mature		
268	Morus rubra	Mulberry	1	7		G	G	G	1	retain	young	G-317 (A)	Acer platanoides	Norway Maple (clump of 5)	5	10, 14, 22, 32, 46		G	G	G		retain	semi-mature		
269	Pinus strobus	White Pine	1	25		F	F	F	5	retain	semi-mature	319	Acer saccharinum	Silver Maple	1	41		G	G	G	5	retain	semi-mature		
270	Picea glauca	White Spruce	1	40		G	G	G	6	retain	semi-mature	320	Acer saccharinum	Silver Maple	1	24		G	G	G	5	retain	semi-mature		
271	Acer platanoides	Norway Maple	1	57		G	G	G	8	retain	mature	321	Acer saccharinum	Silver Maple	1	24		G	G	G	2	retain	semi-mature		
272	Acer platanoides	Norway Maple	1	43		G	G	G	6	retain	mature	322	Acer platanoides	Norway Maple	1	58		G	P	F	9	retain	mature		
273	Acer saccharinum	Silver Maple	1	98		P	F	F	10	retain	mature	323	Acer saccharinum	Silver Maple	1	32		G	G	G	4	retain	semi-mature		



No.	DATE	DESCRIPTION	BY:	CHKD.
2	JAN 23, 14	ORCA SUBMISSION	JJZ	BTM
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ	BTM

ISSUES/REVISIONS				


  
**ENGINEERING SERVICES**  
**YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN TREE INVENTORY AND LANDSCAPE RESTORATION**  

  
100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
 1-905-882-1100 F: 905-882-0055 www.mmm.ca

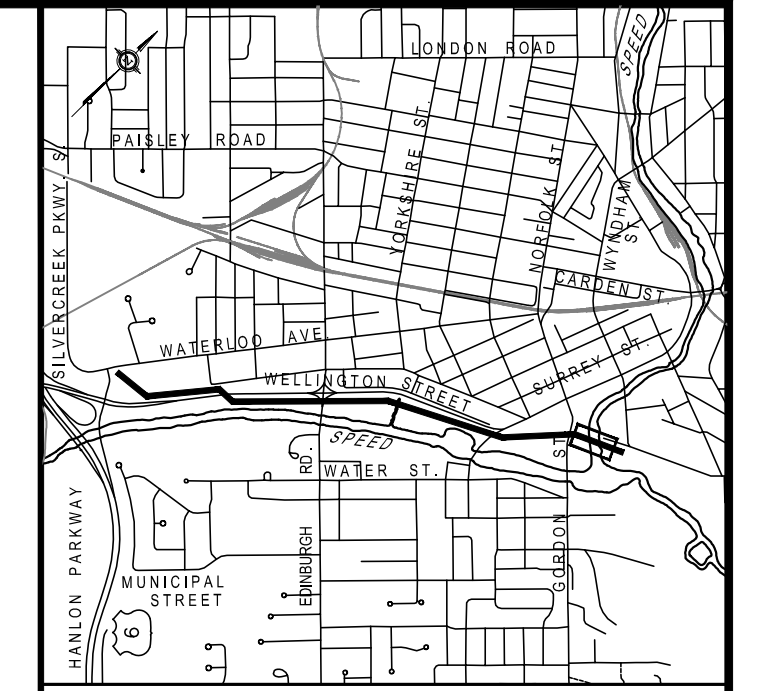
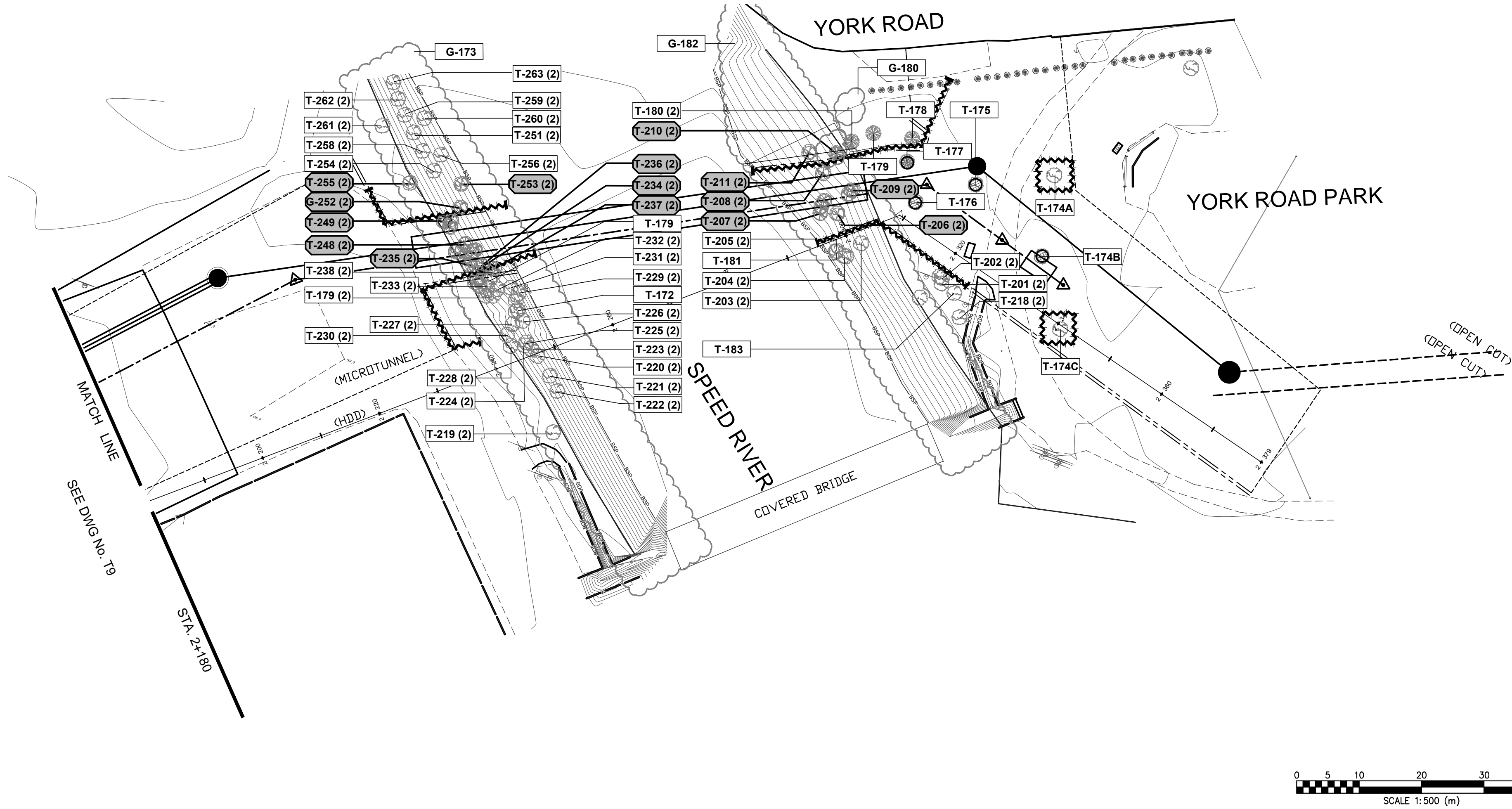


SCALES:	
HOR: 1:500	VER: _____
DATE DRAWN: AUGUST 2013	
DRAWN BY: JJZ	CHECKED BY: B.T.P.M.
CONSULTANT DRAWING No. L10	
CITY CONTRACT No. 12-145	
CITY REFERENCE No.	REV.

FILE NAME: L:\Job\1012\10-12-108-108-201 York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory and Landscape Restoration.dwg  
 PRINTED ON: Wednesday, 07/22/2014  
 PLOT: 1012\10-12-108-108-201 York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory and Landscape Restoration.dwg

NOTE:

- REFER TO SHEET L13 FOR LANDSCAPE PLAN
- REFER TO SHEETS L14, L15, L16, L17, AND L18 FOR LANDSCAPE NOTES AND DETAILS.
- ALL TREES ON SLOPED AREAS THAT MAY BE IMPACTED BY WATERMAIN CONSTRUCTION SHOULD BE REMOVED AND REPLACED WITH NEW TREES FOLLOWING WATERMAIN INSTALLATION.



KEY PLAN Scale: NOT TO SCALE

LEGEND

- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/L17, 2/L17, AND 3/L17
- PROPOSED SHRUBS REFER TO DETAIL 4/L17 AND 5/L17
- APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/L16 AND 4/L16
- EXISTING SURVEYED TREES
- EXISTING TREE GROUPING
- EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
- EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3/L16 AND 4/L16
- EXISTING TREE TO BE REMOVED
- LIMIT OF WORK
- PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
- PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED. REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUP TO BE REMOVED
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 1 (L1 TO L11) FOR TREE INVENTORY CHART
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12 TO L13) FOR TREE INVENTORY CHART
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L17) FOR TREE INVENTORY CHART
- TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
- TREE PROTECTION FENCE WITH EROSION CONTROL. REFER TO DETAIL 1/L16
- LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

TREE INVENTORY CHART -- TABLE 1, REFER TO SHEET L12 FOR TREE INVENTORY CHART -- TABLE 2

Project: Guelph Trunk Sewer 10-12-108			Field Work Completed By: Ben Tymchyshyn									
Date of Field Work: 12/19/2012			Weather:									
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Trunk	Canopy	Vigour	Drip-line Radius	Recommendation	Conditions: G - Good, F - Fair, P - Poor, D - Dead	Remarks
172	Salix sp.	Willow	1	140		P	P	P		retain		
G-173	Grouping		30	22 avg.						retain		large massing - Manitoba Maples and Ash (30 trees)
G-174	Acer sp.	Maple	3	19		G	G	G		retain/transplant		A - 8 mm Maple, B - 8 mm Maple, C - 8 mm Maple two large trunk scars, 3 small caliper trees beside
175	Acer sp.	Maple	1	10		G	G	G		transplant		may need to be transplanted due to the construction limits
176	Acer platanoides	Norway Maple	1	10		G	G	G		transplant		will need to be transplanted due to the construction limits
177	Pinus strobus	White Pine	1	20		G	G	G		retain		
178	Pinus strobus	White Pine	1	23		G	G	G		retain		
179	Pinus strobus	White Pine	1	23		G	G	G		retain		
G-180	Grouping-Thuja sp.	Cedar	3	14 avg.		P	P	P		retain		grouping of 3 Cedars
G-181	Fraxinus sp.	Ash	12	21 avg.		G	G	G		retain		grouping of 12
G-182	Grouping-Acer negundo	Manitoba Maple	2	20 avg.		G	G	G		retain		grouping of 2, multi-stem
183	Acer negundo	Manitoba Maple	1	10-15		G	G	G		retain		multi-stem

No.	DATE	DESCRIPTION	BY:	CHKD.
2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 23, 13	FINAL ARBORIST REPORT	JJZ	BT/PM

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LANDSCAPE RESTORATION

MMM GROUP

100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
T: 905.882.1100 F: 905.882.0505 www.mmm.ca

LEGEND

- NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17
- SODDING AREA FOR BOULEVARD AREA
- SODDING AREA FOR SPORTS FIELD
- SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18
- ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18

SCALES: HOR: 1:500 VER: \_\_\_\_\_

DATE DRAWN: AUGUST 2013

DRAWN BY: JJZ CHECKED BY: B.T./P.M.

CONSULTANT DRAWING No. L11

CITY CONTRACT No. 12-145

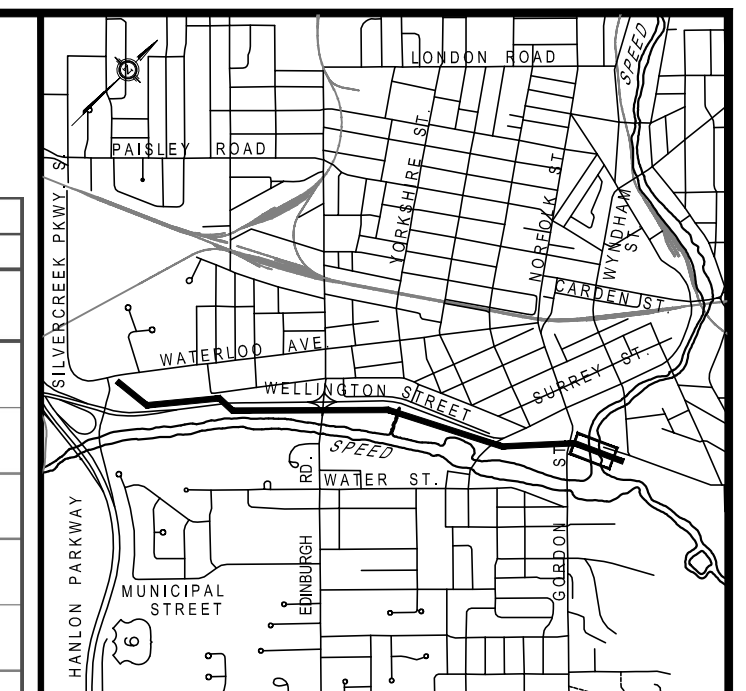
CITY REFERENCE No. REV.

FILE NAME: L:\Jobs\2012\10-12-108-108-001 York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory & Landscape Restoration\Drawings\1012108\_L11\_P\_Combined.dwg; L11 - PRINTED ON: Wednesday, 07/22/2014

**TREE INVENTORY CHART -- TABLE 2, REFER TO SHEET L11 FOR TREE INVENTORY PLAN**

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Silv-Econ Ltd. (Updated 10/10/2013 by Ben Tymchyshyn - MMM Group Ltd.)									
Date of Field Work: June 18 2008 (Updated 10/10/2013)		Weather:									
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Dripline Radius	Recommendation	Remarks
						Trunk	Canopy	Vigour			
201	Juglans nigra	Black Walnut	1	9		G	G	P	3	retain	90% dead, outside construction limit
202	Juglans nigra	Black Walnut	1	8		G	G	F	3	retain	20-30% dead
203	Juglans nigra	Black Walnut	1	32		G	G	G	5	retain	10-15% dead
204	Acer negundo	Manitoba Maple	1	49		G	G	G	5	retain	suckering @ base, tp die back
205	Acer negundo	Manitoba Maple	1	33,52		F	F	P	4.5	retain	30-40% deadw ood, multi-stem
206	Juglans nigra	Black Walnut	1	22		G	G	P	4	remove	80% deadw ood
207	Juglans nigra	Black Walnut	1	25		G	G	P	4	remove	80% deadw ood
208	Juglans nigra	Black Walnut	1	19		G	G	P	4	remove	80% deadw ood, vine in crow n
209	Acer negundo	Manitoba Maple	1	10,14		F	F	G	4	remove	lean, poor form, vine in crow n, multi-stem
210	Juniperus virginiana	Eastern Red Cedar	1	13	8	G	G	G	2.5	remove	10% die back in lower canopy, tree 212,213,214,215 associated with tree tag #210
211	Juglans nigra	Black Walnut	1	26		G	G	G	6	remove	10-20% deadw ood
212	Juglans nigra	Black Walnut	1	14		G	G	P	2.5	retain	80% deadw ood
213	Juglans nigra	Black Walnut	1	19		G	G	F	3	retain	10-25% deadw ood
214	Juglans nigra	Black Walnut	1	13		G	G	P	2.5	retain	90% deadw ood
215	Juglans nigra	Black Walnut	1	16.5		G	G	P	2.5	retain	90% deadw ood, multi-stem
216	Juglans nigra	Black Walnut	1	20		D	D	D	2.5	retain	dead, outside construction limit
217	Juglans nigra	Black Walnut	1	24		G	G	P	4	retain	90% deadw ood, outside construction limit
218	Acer negundo	Manitoba Maple	1	11,13		F	F	G	4	retain	poor form, lean, multi-stem
219	Acer negundo	Manitoba Maple	1	31,42		F	F	G	5	retain	vine in crow n, 10-20% dead, lean, conducted grow th, poor form, multi-stem
220	Ulmus sp.	Elm	1	51		G	G	G	7	retain	
221	Acer negundo	Manitoba Maple	1	22,16,21		F	F	G	4	retain	multi-stem, lean, poor form
222	Acer negundo	Manitoba Maple	1	25		P	F	F		retain	80% lean, poor form, outside construction limit
223	Acer negundo	Manitoba Maple	1	36		F	F	F	4	retain	lean, poor form, vine in crow n, 20-25% dead w ood
224	Acer negundo	Manitoba Maple	1	27		F	F	G	5	retain	lean, poor form, vine in crow n
225	Acer negundo	Manitoba Maple	1	24,38		F	F	G	8	retain	multi-stem, lean, poor form, vine in crow n
226	Acer platanoides	Norway Maple	1	20		G	G	F	4.5	retain	leaf scorch, suppressed from adjacent w ilow
227	Acer negundo	Manitoba Maple	1	13,9,6		F	F	F	3.5	retain	multi-stem
228	Acer negundo	Manitoba Maple	1	14		F	F	G	7	retain	70% lean
229	Juglans nigra	Black Walnut	1	27		F	F	G	3.5	retain	conducted grow th, closed w ilow branch leaning on tree
230	Acer negundo	Manitoba Maple	1	12		F	F	G	3.5	retain	dead w ilow branch leaning on tree, outside construction limit
231	Acer platanoides	Norway Maple	1	27		G	G	G	5	retain	tar spot

Project: Guelph Trunk Sewer 10-12-108		Field Work Completed By: Silv-Econ Ltd. (Updated 10/10/2013 by Ben Tymchyshyn - MMM Group Ltd.)									
Date of Field Work: June 18 2008 (Updated 10/10/2013)		Weather:									
Tree ID #	Botanical Name	Common Name	No.	DBH (cm)	Height (m)	Condition			Dripline Radius	Recommendation	Remarks
						Trunk	Canopy	Vigour			
232	Acer negundo	Manitoba Maple	1	11		G	G	G	3	retain	suppressed
233	Acer platanoides	Norway Maple	1	12		F	G	G	3	retain	lean, suppressed
234	Acer negundo	Manitoba Maple	1	16		F	F	G	3	remove	80% lean, poor form
235	Acer negundo	Manitoba Maple	1	19,13		F	F	G	3	remove	multi-stem, 80% lean, poor form
236	Acer negundo	Manitoba Maple	1	18,20		F	F	F	1	remove	multi-stem, 90% lean, poor form
237	Acer platanoides	Norway Maple	1	19		G	G	G	3	remove	dead w ilow branch leaning on tree
238	Acer negundo	Manitoba Maple	1	15		G	G	P	4	retain	80% deadw ood, outside construction limit
239	Acer negundo	Manitoba Maple	1	15		F	F	G	3	retain	70% lean
240	Acer negundo	Manitoba Maple	1	16,8,6		F	P	G	4	retain	multi-stem
241	Acer platanoides	Norway Maple	1	19		G	G	G	3.5	retain	
242	Acer platanoides	Norway Maple	1	16		G	G	G	3.5	retain	
243	Acer negundo	Manitoba Maple	1	11		F	F	P	1	retain	lean, poor form, 60% deadw ood
244	Acer platanoides	Norway Maple	1	11		G	G	G	3	retain	tar spot
245	Acer negundo	Manitoba Maple	1	16		F	F	F	4	retain	grow ing into tree 236
246	Acer platanoides	Norway Maple	1	20		G	G	G	4	retain	lack of vigour, tar spot
247	Acer platanoides	Norway Maple	1	26		G	G	G	4	retain	lack of vigour, tar spot
248	Acer platanoides	Norway Maple	1	18		G	G	G	4	remove	
249	Acer platanoides	Norway Maple	1	23		G	G	F	4	remove	20-30% deadw ood, tar spot, lack of vigour
250	Acer negundo	Manitoba Maple	1	22,24		F	G	P	4	retain	30-40% deadw ood, multi-stem
251	Acer negundo	Manitoba Maple	1	26		F	F	P	4	retain	lean, poor form, 60% deadw ood
G-252	Acer platanoides	Norway Maple	5	21,10,10,11,21		G	G	G	2-4	remove	tar spot, 1) 21, 2) 10, 3) 10, 4) 11, 5) 21
253	Acer platanoides	Norway Maple	1	19		G	G	G	3	remove	
254	Acer platanoides	Norway Maple	1	15		G	G	G	3	retain	
255	Acer platanoides	Norway Maple	1	20		G	G	G	3.5	remove	
256	Acer platanoides	Norway Maple	1	18,20,22		F	G	G	3	retain	co-dominant stems
257	Acer platanoides	Norway Maple	1	10		F	G	G	2.5	retain	dead w ilow leaning on tree
258	Acer platanoides	Norway Maple	1	11		G	G	G	2.5	retain	tar spot
259	Acer platanoides	Norway Maple	1	10.5		G	G	G	2.5	retain	tar sport
260	Acer platanoides	Norway Maple	1	24		F	G	F	3	retain	one stem dead
261	Acer negundo	Manitoba Maple	1	28,18,14		P	F	G	1	retain	80% lean, trunk damage, multi-stem
262	Acer platanoides	Norway Maple	1	38		G	G	G	6	retain	
263	Acer negundo	Manitoba Maple	1	18,21,26		F	F	G	6	retain	multi-stem



KEY PLAN Scale : NOT TO SCALE

2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ	BTRM
No.	DATE	DESCRIPTION	BY:	CHKD.

ISSUES/REVISIONS

**CITY OF Guelph**

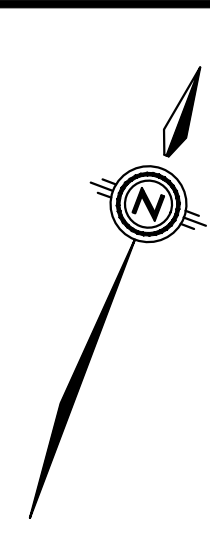
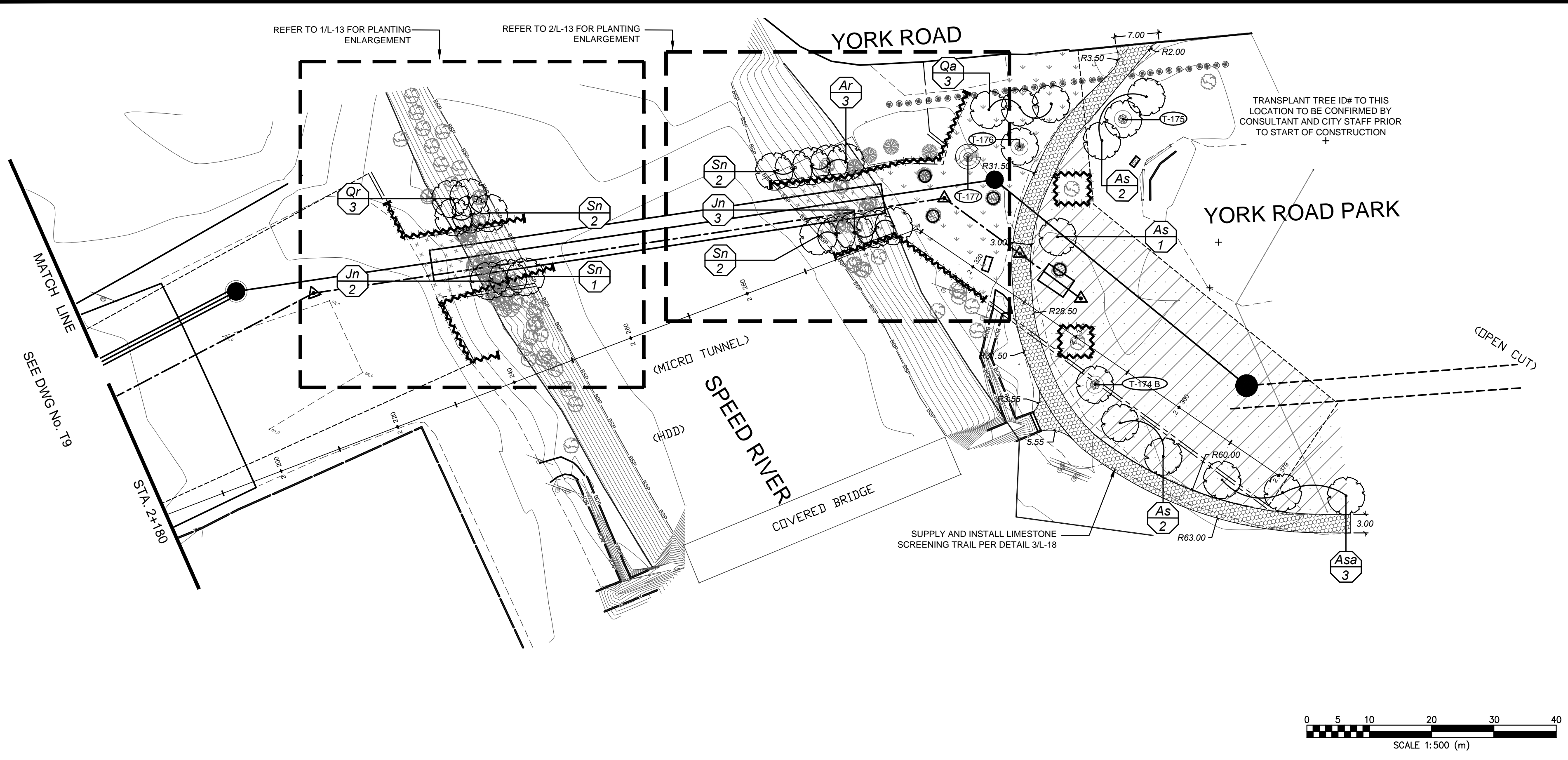
ENGINEERING SERVICES  
&  
YORK TRUNK SEWER  
&  
PAISLEY-CLYTHE WATERMAIN  
TREE INVENTORY AND  
LANDSCAPE RESTORATION

**MMM GROUP**  
100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
T: 905-882-1100 F: 905-882-0055 www.mmm.ca



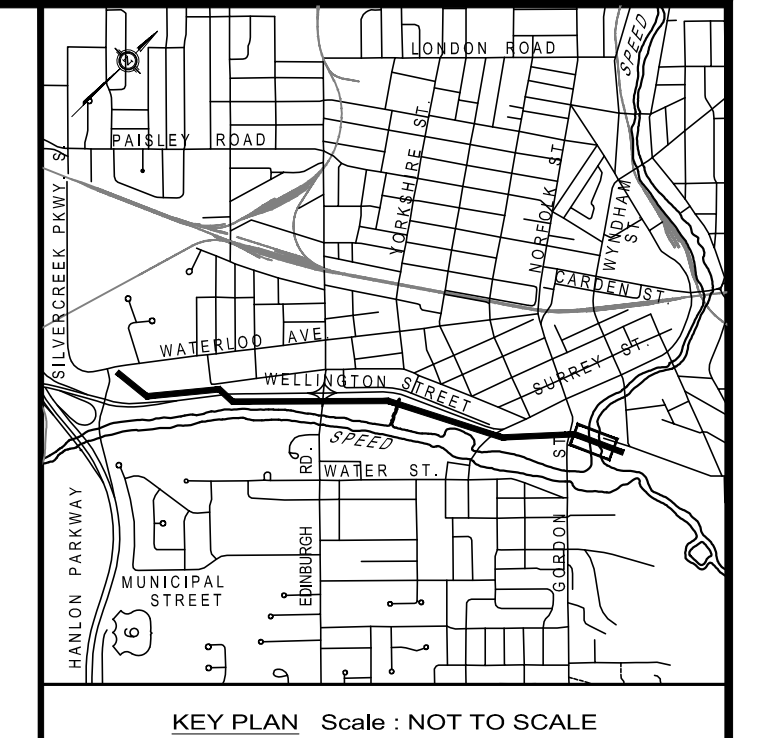
SCALES:	HOR: 1:500	VER:
DATE DRAWN:	AUGUST 2013	
DRAWN BY:	JJZ	CHECKED BY: B.T.P.M.
CONSULTANT DRAWING No.	L12	
CITY CONTRACT No.	12-145	
CITY REFERENCE No.		REV.

P.L.F. NAME: L. Vohr, 2012 (10-12-108-001 York Trunk Sewer & Paisley-Clythe Watermain) [Drawing] (10/12/108)\_LP\_PP\_Combined.dwg, L-12, PRINTED ON: Wednesday, 07/22/2014



NOTE:

- REFER TO SHEET L11, AND L12 FOR TREE INVENTORY PLAN AND TREE INVENTORY CHART.
- REFER TO SHEETS L14, L15, L16, L17, AND L18 FOR LANDSCAPE NOTES, DETAILS AND MASTER PLANT LIST.
- CONTRACTOR TO CONTACT THE CONTRACT ADMINISTRATOR FOR EXACT LOCATION PRIOR TO INSTALLATION OF TREES, SEEDING AND SODDING AREAS.
- REFER TO 1/L13 AND 2/L13 FOR PLANTING ENLARGEMENT OF RIVERBANK PLANTING AREA.
- CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY DAMAGED SIGNS



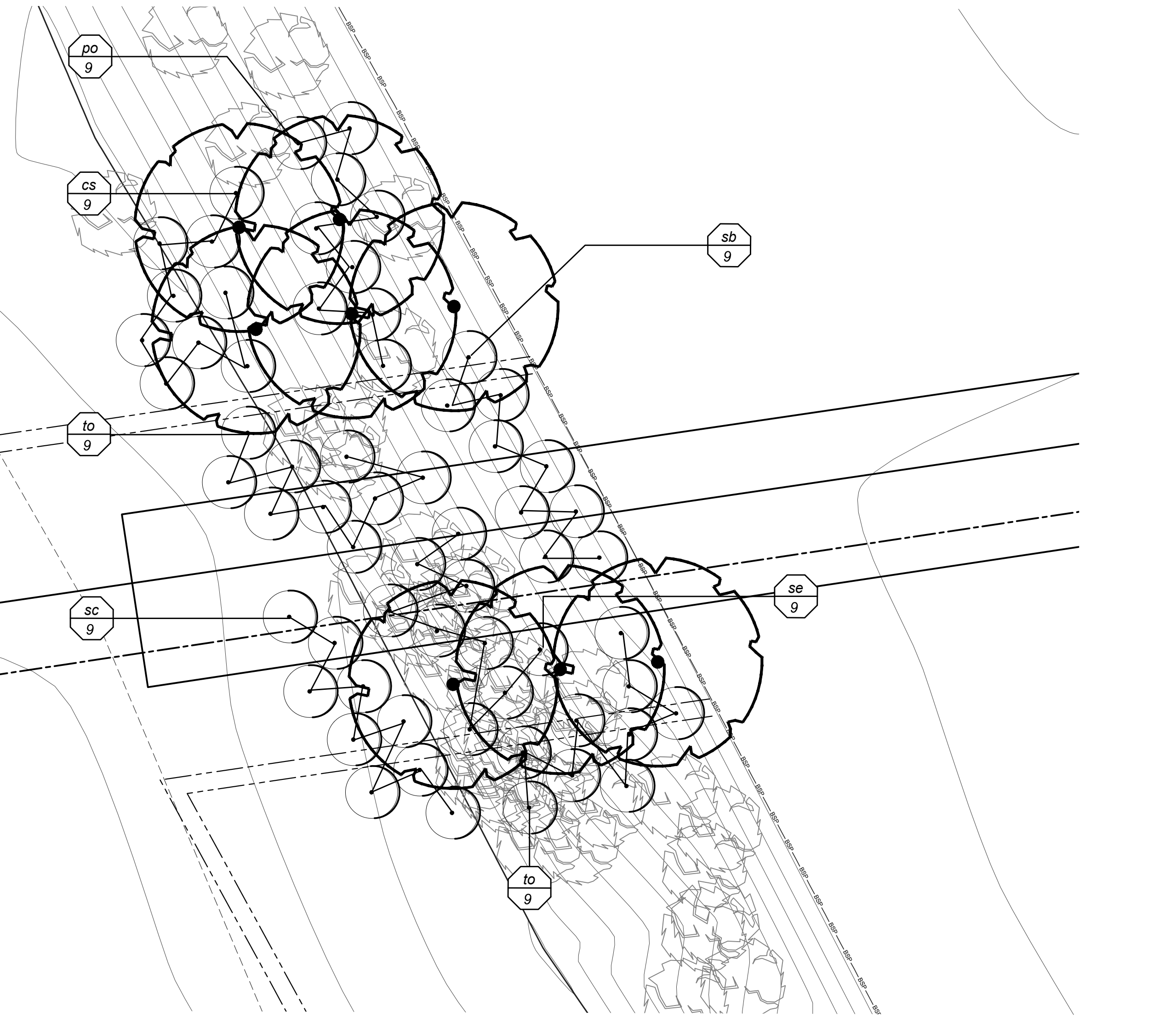
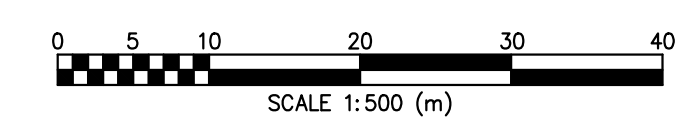
LEGEND

- PROPOSED DECIDUOUS AND CONIFEROUS TREES REFER TO DETAIL 1/L17, 2/L17, AND 3/L17
- PROPOSED SHRUBS REFER TO DETAIL 4/L17 AND 5/L17
- APPROXIMATE LOCATION OF TRANSPLANTED TREES REFER TO DETAIL 3/L16 AND 4/L16
- EXISTING SURVEYED TREES
- EXISTING TREE GROUPING
- EXISTING TREE GROUP/ WOODLOT TO BE REMOVED
- EXISTING TREE GROUP/ WOODLOT TO BE TRANSPLANTED. REFER TO DETAIL 3/L16 AND 4/L16
- EXISTING TREE TO BE REMOVED
- LIMIT OF WORK
- PLANT KEY FOR LANDSCAPE RESTORATION REFER TO L17 FOR MASTER PLAN LIST
- PLANT KEY FOR EXISTING TREES TO BE TRANSPLANTED. REFER TO TREE INVENTORY/MANAGEMENT PLAN L11 FOR EXISTING TREE LOCATION
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUP TO BE REMOVED
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 1 (L1 TO L11) FOR TREE INVENTORY CHART
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 2 (L12) FOR TREE INVENTORY CHART
- IDENTIFICATION NUMBER FOR EXISTING INDIVIDUAL TREE OR GROUPING TO REMAIN REFER TO TABLE 3 (L7) FOR TREE INVENTORY CHART
- TREE PROTECTION FENCING REFER TO DETAIL 1/L16 AND 2/L16
- TREE PROTECTION FENCE WITH EROSION CONTROL REFER TO DETAIL 1/L16
- LIMESTONE TRAIL REPLACEMENT REFER TO DETAIL 3/L18

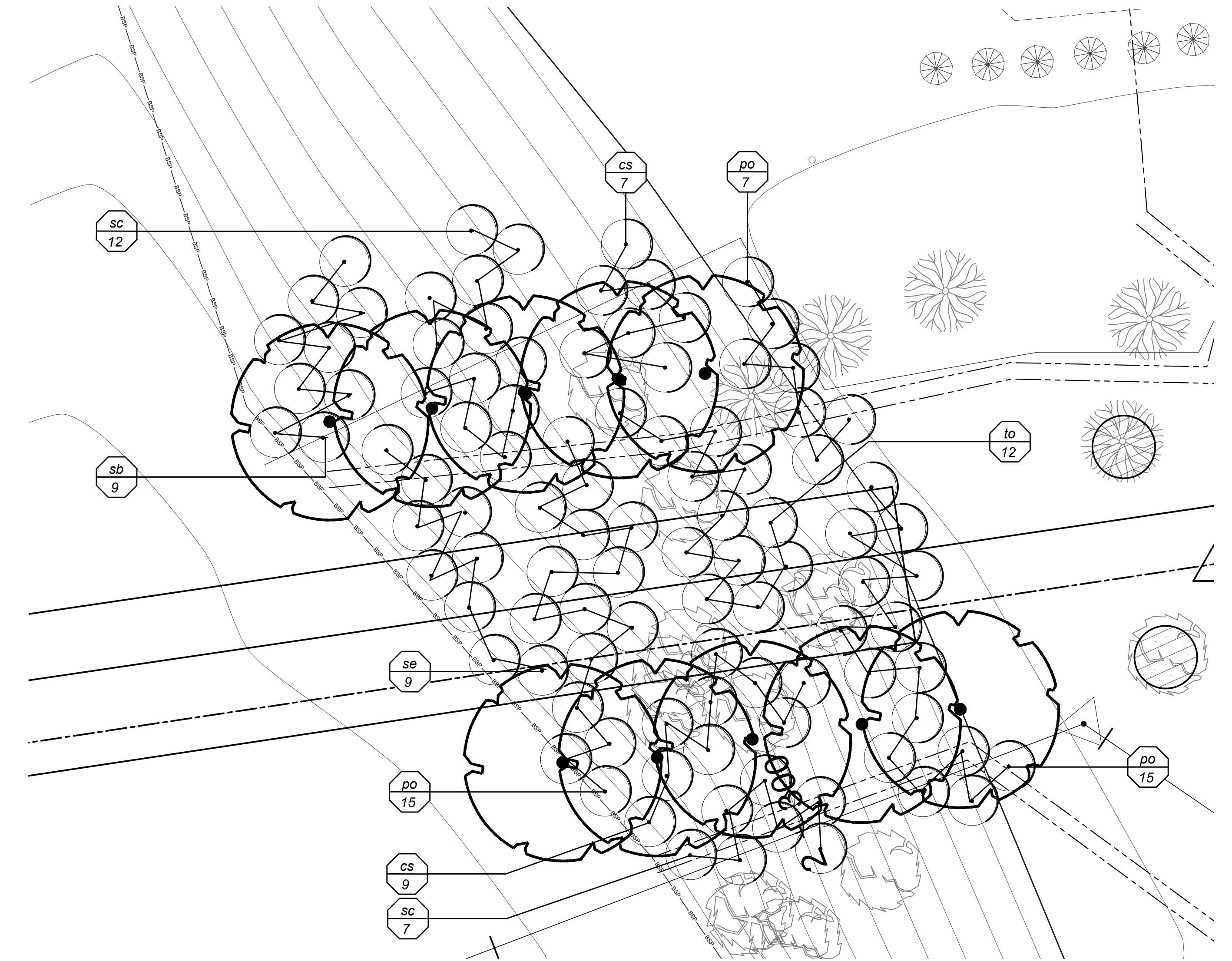
PLANT LIST - L13

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	3	<i>Acer rubrum</i>	Red Maple	45mm Cal	W.B	--
As	5	<i>Acer saccharum</i>	Sugar Maple	45mm Cal	W.B	--
Asa	3	<i>Acer saccharinum</i>	Silver Maple	45mm Cal	W.B	--
Jn	5	<i>Juglans nigra</i>	Black Walnut	45mm Cal	W.B	--
Qa	3	<i>Quercus alba</i>	White Oak	45mm Cal	W.B	--
Qr	3	<i>Quercus rubra</i>	Red Oak	45mm Cal	W.B	--
Sn	7	<i>Salix nigra</i>	Black Willow	45mm Cal	W.B	--
<b>Shrubs</b>						
cs	25	<i>Cornus sericea</i>	Red Osier Dogwood	50cm, 3gal.	pot	1.5m o.c.
po	46	<i>Physocarpus opulifolius</i>	Eastern Ninebark	50cm, 3gal.	pot	1.5m o.c.
sb	18	<i>Salix bebbiana</i>	Bebb's Willow	50cm, 3gal.	pot	1.5m o.c.
sc	28	<i>Sambucus nigra</i> ssp. <i>canadensis</i>	Common Elderberry	50cm, 3gal.	pot	1.5m o.c.
se	18	<i>Salix eriocephala</i>	Heart-leaved Willow	50cm, 3gal.	pot	1.5m o.c.
to	30	<i>Thuja occidentalis</i>	Eastern White Cedar	50cm, 3gal.	pot	1.5m o.c.

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.



1 PLANTING ENLARGEMENT  
Scale: 1:100 (m)



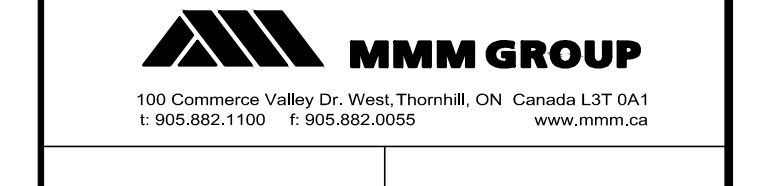
2 PLANTING ENLARGEMENT  
Scale: 1:100 (m)

No.	DATE	DESCRIPTION	BY:	CHKD.
2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ	BTRM

ISSUES/REVISIONS



ENGINEERING SERVICES  
YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN  
TREE INVENTORY AND LANDSCAPE RESTORATION



LEGEND	SCALES:
NATIVE UPLAND FORAGE AND MEADOW MIX REFER TO DETAIL 6/L17	HOR: AS SHOWN VER: _____
SODDING AREA FOR BOULEVARD AREA	DATE DRAWN: AUGUST 2013
SODDING AREA FOR SPORTS FIELD	DRAWN BY: JJZ
SAND AREA FOR VOLLEYBALL COURT REFER TO DETAIL 1/L18	CHECKED BY: B.T.P.M.
ASPHALT PATHWAY REPLACEMENT REFER TO DETAIL 2/L18	CONSULTANT DRAWING No. L13
	CITY CONTRACT No. 12-145
	CITY REFERENCE No. _____
	REV. _____

FILE NAME: L:\N\08\2013\10-12-13-10-10-08-201 York Trunk Sewer & Paisley-Clythe Watermain Tree Inventory & Landscape Restoration L13.dwg PROJECT: YORK TRUNK SEWER AND PAISLEY-CLYTHE WATERMAIN TREE INVENTORY AND LANDSCAPE RESTORATION DATE: JAN 23, 2014 11:22:28 AM DRAWN BY: JJZ

**TREE PRESERVATION NOTES AND GUIDELINES**

**ESTABLISHMENT OF TREE PROTECTION ZONE (TPZ):**

- TREE PRESERVATION MEASURES, INCLUDING THE ESTABLISHMENT OF TREE PROTECTION ZONE (TPZ) SHALL APPLY TO THE VEGETATION IDENTIFIED TO BE RETAINED AND PROTECTED. THE TREE PROTECTION ZONE SHALL CONSIST OF TREE PROTECTION FENCING AS PER CITY OF GUELPH STANDARD SD-30A AND SD-90C. PLACED AT THE DRIPLINE OF VEGETATION TO BE PRESERVED. REFER TO DETAILS ON THIS SHEET.
- NO GRADE CHANGES SHALL OCCUR WITHIN TREE PROTECTION ZONE. IN THE EVENT THAT GRADE CHANGES OCCUR EITHER AS A CUT OR FILL SITUATION, THE CONSULTING ARBORIST MUST BE NOTIFIED SO THAT PRECAUTIONS TO PRESERVE THE TREE CAN BE DETERMINED PRIOR TO THE PLACEMENT OF FILL OR EXCAVATION ACTIVITIES.
- EVERY PRECAUTION MUST BE TAKEN TO PREVENT DAMAGE TO TREES AND ROOT SYSTEMS FROM DAMAGE, COMPACTION AND CONTAMINATION RESULTING FROM THE CONSTRUCTION TO THE SATISFACTION OF THE CONSULTING ARBORIST.
- TREES THAT REQUIRE PRUNING TO PERMIT CONSTRUCTION ACTIVITIES WILL BE DONE SO IN ACCORDANCE WITH GOOD ARBORICULTURAL PRACTICES. IN THE EVENT THAT IT IS NECESSARY TO REMOVE ADDITIONAL LIMBS OR PORTIONS OF TREES, AFTER CONSTRUCTION HAS COMMENCED, TO ACCOMMODATE CONSTRUCTION, THE CONSULTING ARBORIST IS TO BE INFORMED AND UNDER THEIR DIRECTION THE REMOVAL IS TO BE EXECUTED CAREFULLY AND IN FULL ACCORDANCE WITH ARBORICULTURAL TECHNIQUES, BY A CERTIFIED ARBORIST.
- ANY DAMAGE TO TREES SUCH AS BROKEN LIMBS, DAMAGE TO ROOTS, OR WOUNDS TO THE MAIN TRUNK OR STEM SYSTEMS ARE TO BE REPORTED TO THE CONSULTING ARBORIST SO THAT THE DAMAGE CAN BE ASSESSED IMMEDIATELY AND MITIGATION CAN BE PROMPTLY IMPLEMENTED.

**TREE PROTECTION ZONE:**

APPLIES TO TREES LOCATED THE LIMIT OF GRADING OR NOTED OTHERWISE. THESE TREES ARE TO BE PRESERVED AND WILL HAVE SILT / TREE PROTECTION FENCING INSTALLED AT ALONG THE LIMIT OF GRADING / LIMIT OF WORK TO ESTABLISH THE TREE PROTECTION ZONE. ANY DAMAGE TO TREES SUCH AS BROKEN LIMBS, DAMAGE TO ROOTS, OR WOUNDS TO THE MAIN TRUNK OR STEM SYSTEMS ARE TO BE REPORTED TO THE CONSULTING ARBORIST SO THAT THE DAMAGE CAN BE ASSESSED IMMEDIATELY AND MITIGATION CAN BE PROMPTLY IMPLEMENTED. WITHIN A TREE PROTECTION ZONE THERE IS TO BE:

- NO CONSTRUCTION
- NO ALTERING OF GRADE BY ADDING FILL, EXCAVATING, TRENCHING, SCRAPING, DUMPING OR DISTURBANCE OF ANY KIND.
- NO STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, SOIL, CONSTRUCTION WASTE OR DEBRIS WITHIN THE DRIP LINE.
- NO MOVEMENT OF VEHICLES, EQUIPMENT
- NO PARKING OF VEHICLES OR MACHINERY
- NO DIGGING, BORING
- NO RIGGING CABLES SHALL BE WRAPPED AROUND OR INSTALLED IN TREES
- NO CONTAMINANTS WILL BE PLACED OVER ROOT SYSTEMS
- NO CONTAMINANTS WILL BE DUMPED OR FLUSHED WHERE FEEDER ROOTS OF TREES EXIST

**WORK WITHIN A TREE PROTECTION ZONE:**

IF WORK MUST BE CONDUCTED WITHIN A TREE PROTECTION ZONE THE CONTRACTOR SHOULD MINIMIZE SOIL COMPACTION AND MECHANICAL ROOT DAMAGE BY UTILIZING ONE OF THE FOLLOWING FOUR METHODS:

- APPLYING 150-300mm OF MULCH TO AREA. UPON COMPLETION REMOVE EXCESS MULCH LEAVING A 100mm DEPTH LAYER OF MULCH.
- LAYING 20mm THICK PLYWOOD OR 100X100mm WOOD BEAMS OVER A 100-MM THICK LAYER OF WOOD CHIP MULCH. UPON COMPLETION REMOVE PLYWOOD AND LEAVE MULCH LAYER IN PLACE.
- APPLYING 100-150mm DEPTH OF GRAVEL OVER A TAUT, STAKED GEOTEXTILE FABRIC. UPON COMPLETION REMOVE GRAVEL AND GEOTEXTILE.
- PLACING COMMERCIAL LOGGING OR ROAD MATS ON TOP OF A MULCH LAYER. UPON COMPLETION REMOVE MATS, STONE, GEOTEXTILE, AND MULCH EXCEEDING 100mm THICK WILL BE REMOVED FROM THE TREE PRESERVATION AREA ONCE THE THREAT OF SOIL OR ROOT DAMAGE HAS PASSED.

**TREE PRESERVATION AND PROTECTION RECOMMENDATIONS:**

THE SURVIVAL RATES FOR TREES, WHICH ARE IN PROXIMITY TO CONSTRUCTION SITES ARE DEPENDANT ON THE RESULTANT CHANGES TO A VARIETY OF ENVIRONMENTAL AND ANTHROPOGENIC FACTORS. THESE CONSTRUCTION ACTIVITIES BRING ABOUT CHANGES TO A VARIETY OF ENVIRONMENTAL FEATURES INCLUDING THE EXISTING MICROCLIMATE INCLUDING WINDS, TEMPERATURE, SOIL MOISTURE, AMOUNT OF AVAILABLE SUNLIGHT, SOIL QUALITY, AND THE LEVEL OF THE WATER TABLE. INCREASED HUMAN ACTIVITIES MAY ALSO DAMAGE THE STRUCTURE AND /OR PHYSIOLOGICAL ACTIVITIES OF THE TREES. THE FULL EFFECTS OF THE DAMAGE MAY NOT APPEAR UNTIL SEVERAL YEARS AFTER ITS OCCURRENCE. THUS, IT IS ESSENTIAL THAT BOTH VEGETATIVE CLEARING AND PRESERVATION METHODS FOLLOW THE GUIDELINES BELOW AND THOSE GENERALLY ACCEPTED AS KEEPING WITH GOOD HORTICULTURAL AND CONSTRUCTION PRACTICES. THE GUIDELINES ARE SUBJECT TO ADJUSTMENTS DEEMED REASONABLE AND APPROPRIATE CONSIDERING THE PROXIMITY AND NUMBER OF TREES INVOLVED AND THE SITE-SPECIFIC SERVICING REQUIREMENT.

**GENERAL RECOMMENDATIONS:**

- ALL TREES WITHIN THE TREE PRESERVATION ZONE MUST BE LEFT STANDING. THE TREE REMOVALS MUST BE COORDINATED TO BE COMPLETED OUTSIDE OF THE BIRD NESTING SEASON, **MAY 1 TO JULY 31.**
- ALL REMOVALS MUST BE FELLED INTO THE WORK AREA TO ENSURE THAT DAMAGE DOES NOT OCCUR TO THE TREES WITHIN THE TREE PRESERVATION ZONE.
- UPON COMPLETING OF THE TREE REMOVALS, ALL FELLED TREES ARE TO BE CHIPPED. THIS WORK MUST BE COMPLETED OUTSIDE OF THE BIRD NESTING SEASON, **MAY 1 TO JULY 31.**
- TREE PROTECTION FENCING / SILT FENCE MUST BE INSTALLED AS PER THE CITY OF GUELPH STANDARD SILT FENCE DETAIL AND AS SHOWN ON THE APPROVED MUNICIPAL ENGINEERING PLAN. UPON INSTALLATION OF THE FENCING, THE CONTRACTOR WILL CONTACT THE CONSULTING ARBORIST TO REVIEW AN APPROVE THE FENCING AND ITS LOCATION PRIOR TO COMMENCEMENT OF ANY GRADING WORK.

- AREAS WITHIN THE TREE PRESERVATION ZONE ARE NOT TO BE USED FOR ANY TYPE OF STORAGE (E.G. STORAGE OF DEBRIS, CONSTRUCTION MATERIAL, SURPLUS SOILS, AND CONSTRUCTION EQUIPMENT). NO TRENCHING OR TUNNELLING FOR UNDERGROUND SERVICES SHALL BE LOCATED WITHIN THE TREE PROTECTION ZONE OR DRIPLINE OF TREES DESIGNATED FOR PRESERVATION WITHIN OR ADJACENT TO THE CONSTRUCTION ZONE.

**ROOT PRUNING:**

AT THE COMMENCEMENT OF CONSTRUCTION PRUNE ROOTS CLEANLY USING ACCEPTABLE ARBORICULTURAL PRACTICES AND IMMEDIATELY BACKFILL WITH APPROPRIATE MATERIAL. ROOTS OVER 2.5cm DIAMETER THAT ARE TO BE CUT SHOULD BE PRUNED RATHER THAN LEFT TORN OR CRUSHED. THE FOLLOWING ARE GENERAL METHODS OF ROOT PRUNING:

- SOIL EXCAVATION USING SUPERSONIC AIR TOOLS. PRESSURIZED WATER OR HAND TOOLS, FOLLOWED BY SELECTIVE ROOT CUTTING
- CUTTING THROUGH THE SOIL ALONG A PREDETERMINED LINE ON THE SURFACE USING TOOL SPECIFICALLY DESIGNED TO CUT ROOTS
- MECHANICALLY EXCAVATING (e.g. BACKHOE) THE SOIL AND PRUNING WHAT IS LEFT OF THE EXPOSED ROOTS.
- CUTS TO BE MADE WITH HAND PRUNING SHEARS, BY-PASS BLADE, PRUNING SAW. DO NOT USE ANVIL TYPE PRUNERS.

**PRUNING PRACTICES:**

- ALL LIMBS DAMAGED OR BROKEN DURING THE COURSE OF CONSTRUCTION SHOULD BE PRUNED CLEANLY, UTILIZING BY-PASS SECATEURS IN ACCORDANCE WITH APPROVED HORTICULTURAL PRACTICES. SHOULD THERE BE A POTENTIAL RISK OF TRANSFER OF DISEASE FROM INFECTED TO NON-INFECTED TREES, TOOLS MUST BE DISINFECTED AFTER PRUNING EACH TREE BY DIPPING IN METHYL HYDRATE. THIS PRACTICE IS PARTICULARLY IMPORTANT DURING PERIODS OF TREE STRESS AND WHEN PRUNING MANY MEMBERS OF THE SAME GENERA, WITHIN WHICH A DISEASE COULD BE SPREAD QUICKLY (I.E., VERTICILLIUM WILT ON MAPLES OR FIRE BLIGHT ON GENERA OF THE ROSACEA FAMILY).
- DURING EXCAVATION OPERATIONS IN WHICH THE ROOT AREA IS AFFECTED, THE CONTRACTOR IS TO PRUNE ALL EXPOSED ROOTS CLEANLY. PRUNED ROOT ENDS ARE TO BE NEATLY AND SQUARELY TRIMMED AND THE AREA IS TO BE BACKFILLED WITH CLEAN NATIVE FILL AS SOON AS POSSIBLE TO PREVENT DESICCATION AND PROMOTE ROOT GROWTH. THE EXPOSED ROOTS SHOULD NOT BE ALLOWED TO DRY OUT, AND THE CONTRACTOR SHALL DISCUSS WATERING OF THE ROOTS WITH THE CONSULTING ARBORIST SO THAT THE ROOTS SHALL MAINTAIN OPTIMUM SOIL MOISTURE DURING CONSTRUCTION AND BACKFILLING OPERATIONS, YET SO NOT TO INTERFERE WITH CONSTRUCTION OPERATIONS. BACKFILLING MUST BE WITH CLEAN UNCONTAMINATED TOPSOIL FROM AN APPROVED SOURCE. TEXTURE MUST BE COARSER THAN EXISTING SOILS, AND TO COME INTO CLEAN CONTACT WITH EXISTING SOILS (REMOVE AIR POCKETS, LOD, ETC.)

- ALL PRUNING CUTS SHOULD BE MADE TO A GROWING POINT SUCH AS A BUD, TWIG OR BRANCH. CUT JUST OUTSIDE THE BRANCH COLLAR (THE SWOLLEN AREA AT THE BASE OF THE BRANCH THAT SOMETIMES HAS A BARK RIDGE), AND PERPENDICULAR TO THE BRANCH BEING PRUNED RATHER THAN AS CLOSE TO THE TRUNK AS POSSIBLE. THIS MINIMIZES THE SIZE OF THE WOUND. NO STUBS SHOULD BE LEFT. POOR CUT LOCATION, POOR CUT ANGLE AND TORN CUTS ARE NOT ACCEPTABLE.

- TREE ROOTS SHOULD NOT BE EXCAVATED WITHIN THE CRITICAL STRUCTURAL ROOTING AREA. THIS IS THE MINIMUM AREA OF THE ROOT SYSTEM NECESSARY TO MAINTAIN VITALITY OR STABILITY OF THE TREE. TYPICALLY THIS AREA EXTENDS TO THE DRIPLINE OF THE TREE. THE SEVERING OF ONE ROOT CAN CAUSE APPROXIMATELY 5-20% LOSS OF THE ROOT SYSTEM. A REDUCTION OF THIS AREA BY GREATER THAN 30% CAN POSE STABILITY CONCERNS FOR THE TREE.

- A SLOW RELEASE FERTILIZER EG. BONE MEAL OR APPROVED EQUAL TO BE APPLIED TO TREES WHERE ROOT PRUNING OR ROOT DAMAGE HAS OCCURRED. APPLY PER MANUFACTURER'S RECOMMENDATIONS

- EXTENSIVE PRUNING IS BEST COMPLETED BEFORE PLANTS BREAK DORMANCY. PRUNING SHOULD BE LIMITED TO THE REMOVAL OF NO MORE THAN ONE THIRD (1/3) OF THE TOTAL BUD AND LEAF BEARING BRANCHES. PRUNING SHOULD INCLUDE THE CAREFUL REMOVAL OF:
  - DEADWOOD,
  - BRANCHES THAT ARE WEAK, DAMAGED, DISEASED AND THOSE WHICH WILL INTERFERE WITH CONSTRUCTION ACTIVITY,
  - SECONDARY LEADERS OF CONIFERS,
  - TRUNK AND ROOT SUCKERS,
  - TRUNK WATERSPOUTS, AND
  - TIGHT V-SHAPED OR WEAK CROTCHES (INCLUDED UNIONS).

THE CONTRACTOR MUST IMMEDIATELY REPORT ANY DAMAGE TO TREES SUCH AS BROKEN LIMBS, DAMAGE TO ROOTS, OR WOUNDS TO THE MAIN TRUNK OR STEM SYSTEMS SO THAT THE DAMAGE CAN BE ASSESSED IMMEDIATELY.

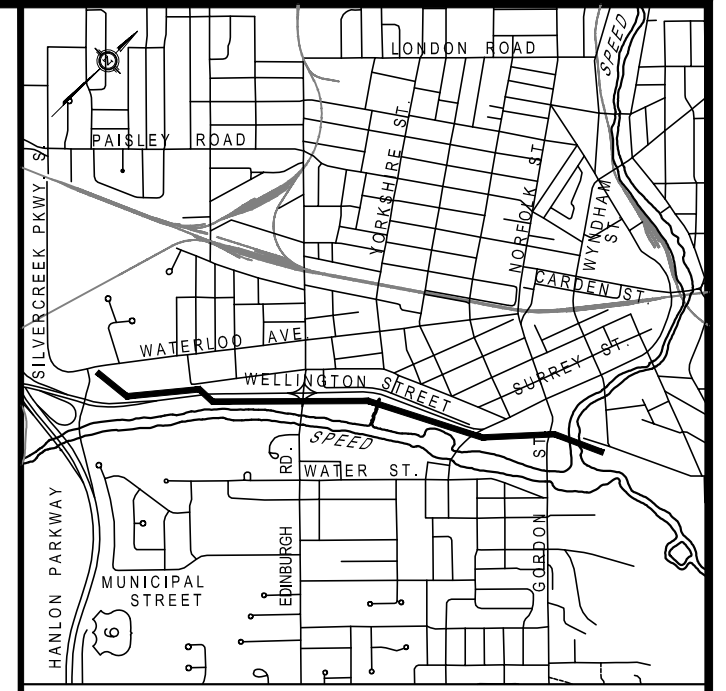
THE TREE PROTECTION FENCING WILL BE MAINTAINED UNTIL ALL CONSTRUCTION IS COMPLETED, SOILS ARE STABILIZED AND ALL OF THE EQUIPMENT HAS BEEN REMOVED FROM THE SITE.

**TREE INJURY:**

TYPICALLY TREE ROOTS EXTEND 1.5 TO 3 TIMES BEYOND THE DRIPLINE OF THE TREE AND ARE WITHIN THE TOP 150mm OF THE SOIL. TYPES OF DAMAGE FROM CONSTRUCTION INCLUDE:

- PHYSICAL INJURY
- SOIL COMPACTION
- SEVERING OF ROOTS
- SMOTHERING OF ROOTS
- SPLIT OR BROKEN BRANCHES
- EXCESSIVE PRUNING

SOIL COMPACTION REDUCES PORE SPACE, OXYGEN AVAILABLE TO ROOTS INCREASES CARBON DIOXIDE ACCUMULATION, RESTRICTS ROOT GROWTH AND THE ABILITY TO ABSORB WATER AND NUTRIENTS, AS WELL AS IMPAIRS DRAINAGE. SMOTHERING OF ROOTS: 90% OF FINE ABSORBING ROOTS ARE WITHIN THE UPPER 150-300mm OF THE SOIL. SMOTHERING WITH THE ADDITION OF SOIL CAN KILL THE ROOTS AND STRESS THE TREE. PHYSICAL INJURY: SPLIT OR BROKEN BRANCHES HINDER THE TREES ABILITY TO COMPARTMENTALIZE (CLOSE) WOUNDS PROPERLY.



KEY PLAN Scale : NOT TO SCALE

**TREE TRANSPLANTING CRITERIA AND GUIDELINES**

**TREE TRANSPLANTING CRITERIA:**

- TREE CRITERIA FOR TRANSPLANTING IS AS FOLLOWS:
  - GENERALLY, TREES WITH 25CM DBH AND LESS CAN BE TRANSPLANTED SUCCESSFULLY.
  - THE TREE NEEDS TO BE LOCATED WHERE ACCESS WITH TREE SPADE EQUIPMENT IS AVAILABLE.
  - TREES THAT HAVE A FAIR OR POOR CONDITION ARE NOT RECOMMENDED FOR TRANSPLANTING.
- FOR TREES THAT CAN BE TRANSPLANTED; THESE SHALL BE FLAGGED ON SITE BY A CERTIFIED ARBORIST PRIOR TO SITE DEMOLITION WORKS. THE TREES COULD BE RELOCATED WITHIN ADJACENT LANDS WHERE EXISTING TREES ARE BEING PRESERVED OR IN OTHER AREAS AS APPROVED BY THE OWNER. THE PROPOSED LOCATIONS SHALL BE STAKED BY A CERTIFIED ARBORIST OR LANDSCAPE ARCHITECT. THE TRANSPLANTING SHOULD BE UNDERTAKEN PER STANDARD TRANSPLANTING PROCEDURES (REFER TO TREE TRANSPLANTING GUIDELINES).
- TREES IN POOR HEALTH THAT ARE WITHIN THE LIMIT OF WORK BUT MAY BE RETAINED DURING CONSTRUCTION SHOULD BE CONSIDERED FOR REMOVAL DUE TO THE PROBABILITY OF THE TREE BECOMING A FUTURE HAZARD (FALLING DOWN) AND THE LIKELIHOOD, SHOULD THE TREE FALL, OF HITTING A TARGET (PEOPLE AND PROPERTY WITHIN THE PARK, ALONG BOULEVARDS ETC).
- TREES ADJACENT TO THE PROPOSED AREA OF WORKS ARE TO BE PROTECTED AS PER THE CITY OF GUELPH, MINISTRY OF NATURAL RESOURCES, AND GRAND RIVER CONSERVATION AUTHORITY'S REQUIREMENTS AND DETAILS FOR TREE PROTECTION (ALSO REFER TO MITIGATION MEASURES: TREE PROTECTION DURING CONSTRUCTION, AND EDGE MANAGEMENT).
- THE TREE PRESERVATION PLAN MAKES SPECIFIC RECOMMENDATIONS FOR THE TREES REVIEWED WITHIN THE WORK AREA BASED ON CURRENT DESIGN DRAWINGS; HOWEVER, UNFORESEEN FUTURE DEVELOPMENT CONSTRAINTS SUCH AS SERVICING AND CONSTRUCTION REQUIREMENTS MAY REQUIRE THE REMOVAL OF ADDITIONAL TREES.
- WHERE TREES HAVE CANOPIES OVERHANGING THE WORK AREA, PRUNING OF THE CANOPY AND/OR ROOTS THAT ARE WITHIN THE WORK AREA MAY BE REQUIRED TO FACILITATE CONSTRUCTION WORKS. THIS PRUNING IS TO BE UNDERTAKEN BY A CERTIFIED ARBORIST, AND IN ACCORDANCE WITH STANDARD PROFESSIONAL ARBORIST PRACTICES.
- DURING AND AFTER THE WORKS, THE TREES REMAINING SHOULD BE REVIEWED ANNUALLY AND/OR ON AN AS NEEDED BASIS FOR HEALTH CONDITION FOR A PERIOD UP TO A MINIMUM OF THREE YEARS. DUE TO NEGATIVE CONSTRUCTION EFFECTS, THE TREES MAY EXPERIENCE A DECLINE IN HEALTH OVER A PERIOD OF MONTHS OR YEARS. TREES FOUND TO BE HAZARDOUS SHOULD BE REMOVED AS SOON AS POSSIBLE TO MAINTAIN A SAFE ENVIRONMENT.

**TREE TRANSPLANTING GUIDELINES:**

TRANSPLANT PLANT MATERIAL TO FINAL PLANTING LOCATION AS INDICATED ON BUFFER ENHANCEMENT PLAN OR APPROVED EQUAL BY CONTRACT ADMINISTRATOR.

- TRANSPLANT SCHEDULE: THE OPTIMUM TIME FOR TRANSPLANTING TREES IS DURING THE COOLER MONTHS IN SPRING AND EARLY FALL.
- PLANT PIT PREPARATION: REMOVE ALL DEBRIS, STONES, ETC., FROM PITS. PLACE PLANTING SOIL IN PIT AND THOROUGHLY FIRM TO A LEVEL UPON WHICH PLANT WILL REST AT PROPER ELEVATION.
  - PIT SIZES:
    - BALLS LESS THAN 900MM IN DIAMETER: 2 TIMES WIDTH OF BALL AND 225MM DEEPER THAN BALL.
    - BALLS OVER 900MM DIAMETER: THE WIDTH OF THE BALL PLUS 900MM AND AT LEAST 225MM DEEPER THAN BALL.
    - SLOPES: MEASURE PIT SIZES ON SLOPES FROM THE LOWER SIDE.
- PLANTING LAYOUT: PROVIDE STAKES AND STAKE OUT ALL TREE LOCATIONS AND PLANTING AREAS. OBTAIN LAYOUT APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PLANT PITS.
- ANTI-DESICCANT: ANTI-DESICCANT EMULSION SHALL BE A PRODUCT SPECIFICALLY MANUFACTURED TO PROVIDE A FLEXIBLE SURFACE FILM TO REDUCE TRANSPIRATION YET NOT IMPEDE PASSAGE OF CARBON DIOXIDE AND OXYGEN.
- SETTING PLANTS:
  - ONE TO TWO DAYS PRIOR TO TRANSPLANTING, THE TREE SHOULD BE WATERED SO THAT THE SOIL IS SATURATED TO A MINIMUM 300MM DEPTH.
  - SET PLANTS PLUMB AND AT A LEVEL SO THAT AFTER SETTLEMENT THEY BEAR THE SAME GROUND LEVEL RELATIONSHIP AS BEFORE THEY WERE DUG.
  - BACKFILL PITS TO 1/3 DEPTH OF BALL COMPACTING IN LAYERS NOT EXCEEDING 100MM. REMOVE BURLAP AND ADJUST TO AVOID AIR POCKETS. COMPLETE BACKFILL AND SETTLE WITH WATER.
  - AFTER TRANSPLANTING, THE TREE SHOULD BE WATERED SO THAT THE SOIL IS SATURATED TO A MINIMUM 300MM DEPTH. AFTER THAT, THE TREE SHOULD BE WATERED REGULARLY TO MAINTAIN HEALTH. WHEN POSITIONED IN THE NEW PLANTING PIT, THE TREE SHOULD BE ABOUT 50-75MM ABOVE GRADE TO ALLOW FOR FUTURE SETTLEMENT.
  - TREES TRANSPLANTED FROM A WOODLOT OR FOREST AREA AND/OR GROUNTS CLOSE TO OTHER TREES SHOULD NOT BE TRANSPLANTED TO AN OPEN OR EXPOSED LOCATION.

- MULCHING: SPREAD 100MM SHREDDED BARK MULCH OVER FINISHED SURFACE OF EACH PLANT, PLANT BED OR HEDGE TRENCH - WATER PLANTS THOROUGHLY AFTER MULCHING.THE TRANSPLANTED TREE SHOULD BE MULCHED TO A DEPTH OF 100-150MM WITH SHREDDED CONIFEROUS BARK, WITH THE MULCH OFFSET A DISTANCE OF 150MM FROM THE TRUNK. THE MULCH SHOULD BE SPREAD AN AVERAGE OF 100MM PAST THE EDGE OF THE ROOT BALL.
- STAKING: SET TREE STAKES INTO SOLID GROUND BELOW BOTTOM OF PLANT BEFORE BACKFILLING. PLACE STAKES AT THE OUTER EDGE OF THE ROOTS OR BALL IN LINE WITH THE PREVAILING WIND AT A 10 DEGREE ANGLE FROM THE TREE TRUNK. THE TRANSPLANTED TREE SHOULD BE STAKED UNTIL THE TREE ROOTS ARE RE-ESTABLISHED, WITH STAKES POSITIONED TO BUTTRESS AGAINST THE PREVAILING WIND.
- WRAPPING: WRAP ALL DECIDUOUS TREES WITHIN 4 DAYS AFTER TRANSPLANTING. WRAPPING MATERIAL FOR TREE TRUNKS SHALL BE NEW BURLAP, AT LEAST 270 GM/2 IN WEIGHT AND NOT LESS THAN 150 MM NOR MORE THAN 250 MM IN WIDTH, OR A HEAVY WATERPROOF CREPE PAPER NOT LESS THAN 100 MM NOR MORE THAN 150 MM WIDE. TREES SHOULD NOT BE TRANSPLANTED ON HOT AND WINDY DAYS. THE FOLIAGE SHOULD BE PROTECTED FROM WATER LOSS DURING THE PROCESS BY WRAPPING WITH TARP DURING TRANSPORTATION.
- SURFACE FINISH: FORM A SAUCER AS INDICATED ON DRAWINGS OR AS DIRECTED. GRADE SOIL TO FORM A BASIN ON LOWER SIDE OF SLOPE PLANTINGS, WHICH WILL CATCH AND RETAIN WATER. TOP DRESS ALL BASINS WITH COMMERCIAL FERTILIZER (10-6-4) SPREAD EVENLY AT THE RATE OF 1KG/SQUARE METRE OF PLANT PIT SURFACE. BREAK BASINS BEFORE GROUND FREEZES.
- PRUNING: PRUNE IMMEDIATELY AFTER PLANTING USING SHARP TOOLS APPROVED BY THE LANDSCAPE ARCHITECT. REMOVE APPROXIMATELY 1/3 OF THE WOOD OF DECIDUOUS PLANTS, MAINTAINING THE NATURAL HABIT OF THE PLANT. CUT NO LEADERS. PAINT ALL PRUNING CUTS 3/4 INCH IN DIAMETER OR OVER WITH ANTISEPTIC, WATERPROOF, ADHESIVE AND ELASTIC TREE WOUND PAINT CONTAINING NO KEROSENE, COAL TAR, CREOSOTE OR OTHER MATERIAL HARMFUL TO CAMBIALM OR LIVING TISSUE.
- GUYING: GUY WIRE TIGHTENERS SHALL BE GALVANIZED TURNBUCKLES OR AN ACCEPTABLE MANUFACTURED DEVICE WHICH TWISTS AND LOCKS GUY WIRES. CONNECT MULTI-STEM TREES WITH PROTECTED CONNECTING WIRES MAINTAINING EACH STEM'S RELATIONSHIP TO ONE ANOTHER. MAINTAIN ALL GUYS UNTIL END OF GUARANTEE.
- FERTILIZING: TRANSPLANTED TREES WITH A SLOW RELEASE FERTILIZER EG. BONE MEAL OR APPROVED EQUAL. APPLY PER MANUFACTURER'S RECOMMENDATIONS.

L.F. AMAR, L. Vohra 2012 (D-12-108-007 York Trunk Sewer & Paisley-Clyth Watermain, Wellington, 07/22/2014 REVISED ON: Wednesday, 07/22/2014

2	JAN 25, 14	ORCA SUBMISSION	JJZ BT
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ BT/RA
No.	DATE	DESCRIPTION	BY: CHKD.

**ISSUES/REVISIONS**



**YORK TRUNK SEWER & PAISLEY-CLYTH WATERMAIN LANDSCAPE NOTES**

 **MMM GROUP**  
100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
1-905-882-1100 1-905-882-9055 [www.mmm.ca](http://www.mmm.ca)



SCALES:	
HOR: 1:500	VER: _____
DATE DRAWN: AUGUST 2013	
DRAWN BY: JJZ	CHECKED BY: B.T./P.M.
CONSULTANT DRAWING No. L14	
CITY CONTRACT No. 12-145	
CITY REFERENCE No.	REV.

**GENERAL NOTES:**

- CONTRACTOR TO REMOVE AND DISPOSE OF OFF-SITE AT NO ADDITIONAL COST TO THE CONTRACT ITEMS NOTED FOR REMOVAL INCLUDING BUT NOT LIMITED TO ALL ASPHALT PAVING, CONCRETE CURBS, CONCRETE PAVING, STUMPS, SOD, TOPSOIL, SIGNAGE AND FILL AS REQUIRED TO FACILITATE THE IMPLEMENTATION OF CHANGES AS PER PLANS AND DETAILS. ANY SIGNAGE OR ANY OTHER ITEMS IDENTIFIED BY THE CLIENT TO BE SALVAGED, SHALL BE STORED AT A LOCATION ON-SITE AS IDENTIFIED BY THE CLIENT.
- CONTRACTOR TO MAKE GOOD TO CONTRACT ADMINISTRATOR'S APPROVAL ALL DAMAGES THAT OCCUR DURING CONSTRUCTION.
- CONTRACTOR TO REVIEW DRAWINGS AND REPORT ANY ERRORS, OMISSIONS, AND / OR DISCREPANCIES TO CONTRACT ADMINISTRATOR IN WRITING PRIOR TO CONSTRUCTION. PROPERTY LINES TO BE VERIFIED PRIOR TO INITIATING ANY CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY LOCATES. CONTRACTOR TO VERIFY LOCATION AND PROTECT ALL SERVICES PRIOR TO ANY EXCAVATION.
- EXTENT OF WORK SHOWN IS TO CONVEY INTENT ONLY. EXTENT OF CONSTRUCTION IS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. IF THERE IS AMBIGUITY OR LACK OF INFORMATION, THE CONTRACTOR SHALL IMMEDIATELY INFORM THE CONTRACT ADMINISTRATOR. THE CONTRACTOR MAY BE HELD RESPONSIBLE TO REMOVE ANY CHANGES MADE WITHOUT WRITTEN PERMISSION OF THE CONTRACT ADMINISTRATOR.
- ALL CONSTRUCTION TO BE CARRIED OUT IN ACCORDANCE WITH THE MOST CURRENT DESIGN STANDARDS, CRITERIA, AND SPECIFICATIONS FORM THE ONTARIO BUILDING CODE, THE ONTARIO PROVINCIAL STANDARD DETAIL, THE ONTARIO PROVINCIAL STANDARD SPECIFICATION AND LANDSCAPE ONTARIO.
- CONTRACTOR TO ENSURE PROPER DEPTH OF EXCAVATIONS ACCOMMODATE HARD SURFACE AND LANDSCAPING AS SPECIFIED ON THESE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR ALL FEES ARISING FROM THE COMPLETION OF WORKS CONVEYED BY THESE DRAWINGS AND IN THE SPECIFICATION PACKAGE. FEES INCLUDE BUT ARE NOT LIMITED TO SECURITIES, PERMIT FEES, DEPOSITS, APPLICATION FEES, LETTERS OF CREDIT, OR ANY OTHER RELATED FUNDING REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ALL UNDERGROUND SERVICES INCLUDING LIGHT STANDARD ELECTRICAL LINES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CALL A PRIVATE LOCATING COMPANY AND PAY ALL COSTS RELATING TO ALL SERVICES NOT STAKED OUT BY GAS, HYDRO, BELL, AND CABLE.
- SUBSTITUTIONS FROM SPECIFIED PRODUCTS AND MATERIALS MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR PRIOR TO THE ORDERING OF MATERIALS.
- THESE DESIGN DRAWINGS ARE PREPARED SOLELY FOR THE USE BY THE PARTY WITH WHOM THE DESIGN PROFESSIONAL HAS ENTERED INTO A CONTRACT WITH.

**SITE PREPARATION NOTES:**

- CONTRACTOR TO ENSURE POSITIVE DRAINAGE OF ALL AREAS WITHIN THE LIMIT OF THE CONTRACT.
- CONTRACTOR TO WORK WITHIN GUIDELINES FOR THE MUNICIPALITY'S NOISE BY-LAWS.
- ANY REFUSE, GARBAGE, OR OTHER DEBRIS ON SITE MUST BE REMOVED AND DISPOSED OF OFF SITE AT THE EXPENSE OF THE CONTRACTOR.
- AREAS TO BE SODDED SHALL BE BACKFILLED WITH NATIVE SOIL TO 150mm BELOW FINISHED GRADE TO ALLOW FOR TOPSOIL INSTALLATION.
- ABSOLUTELY NO STORAGE OF EQUIPMENT OR MATERIALS OUTSIDE OF CONSTRUCTION FENCING.

**SEDIMENTATION CONTROL:**

- ALL SILTATION CONTROL FENCING SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF EXCAVATION OR GRADING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SILTATION CONTROL DEVICES IN GOOD WORKING ORDER AT ALL TIMES. CONTRACTOR SHALL INSPECT SUCH DEVICES DAILY AND AFTER EACH RAINFALL EVENT.
- FOLLOWING COMPLETION OF CONSTRUCTION, COLLECTED SILT SHALL BE DISPOSED OFF-SITE. SILT FENCE SHALL BE REMOVED AND THE AFFECTED AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS.
- ALL ON-SITE STORAGE OF GRANULAR MATERIALS WILL BE ISOLATED AND SECURED WITH SILT FENCING
- NO IN-WATER WORKS ARE PERMITTED.
- NO VEHICLES OR EQUIPMENT WILL BE REFUELLED WITHIN 30 METRES OF THE WATERCOURSE.
- NO MATERIAL WILL BE STOCKPILED ON THE WATERCOURSE BANKS.
- THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASES TO THE NATURAL ENVIRONMENT. THE CONTRACT ADMINISTRATOR SHOULD BE IMMEDIATELY CONTACTED IF THE EROSION AND SEDIMENT CONTROL PLANS CHANGE FROM THE APPROVED PLANS. FAILED EROSION AND SEDIMENTATION CONTROL MEASURES SHOULD BE REPAIRED IMMEDIATELY.

**UNDERGROUND SERVICING AND UTILITIES:**

- ALL UNDERGROUND SERVICE INFORMATION IS DERIVED FROM RECORDS AND SERVICES HAVE NOT BEEN LOCATED BY THE UTILITY COMPANIES OR BY DAYLIGHTING. MMM GROUP GEOMATICS ONTARIO LIMITED AND MMM GROUP LIMITED ASSUME NO RESPONSIBILITY AS TO THE ACCURACY, CORRECTNESS AND COMPLETENESS OF THE UNDERGROUND SERVICE INFORMATION SHOWN ON THE FACE OF THIS PLAN. UTILITIES MUST BE LOCATED BY THE UTILITY COMPANIES BEFORE CONSTRUCTION BEGINS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES WHICH OCCUR TO EXISTING SERVICES DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES ON THE SITE.
- CONTRACTOR MUST CHECK & VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB, REPORTING ALL DISCREPANCIES TO THE CONTRACT ADMINISTRATOR BEFORE PROCEEDING WITH THE WORK.
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING SERVICES WHEN EXCAVATING.

**GRADING NOTES:**

- CONTRACTOR TO ENSURE POSITIVE DRAINAGE OF ALL AREAS WITHIN THE LIMIT OF THE CONTRACT.
- ENSURE TRANSITION OF EXISTING AND NEW GRADE ELEVATIONS IS SMOOTH.
- MINIMUM PERMITTED HARDSCAPE SLOPE IS 2%; MAXIMUM PERMITTED IS 5%.
- MINIMUM GROUND SLOPE TO BE 2%, MAXIMUM PERMITTED 33%.
- PROPOSED ELEVATIONS ALONG LIMIT OF CONTRACT MUST MATCH EXISTING ELEVATIONS.
- NOTIFY CONTRACT ADMINISTRATOR IMMEDIATELY, IN WRITING, IF ANY DISCREPANCIES WITH STATED REQUIREMENTS ARE DISCOVERED.

**LAYOUT NOTES:**

- LAYOUT TO BE STAKED BY CONTRACTOR AND APPROVED BY THE CONTRACT ADMINISTRATOR.
- ALL PLANT MATERIAL TO BE INSPECTED BY CONTRACT ADMINISTRATOR PRIOR TO INSTALLATION. ALL PLANT MATERIAL MAY BE REJECTED AT ANY TIME DURING CONSTRUCTION AND WARRANTY PERIOD.
- CONTRACTOR TO REVIEW DRAWINGS AND REPORT ANY ERRORS, OMISSIONS, OR DISCREPANCIES TO THE CONTRACT ADMINISTRATOR IN WRITING.
- PROPERTY LINES TO BE VERIFIED PRIOR TO INITIATING CONSTRUCTION.
- SITE FURNISHINGS TO BE AS SPECIFIED UNLESS SUBSTITUTION IS APPROVED IN WRITING BY CONTRACT ADMINISTRATOR.
- NOTIFY CONTRACT ADMINISTRATOR IMMEDIATELY, IN WRITING, IF ANY DISCREPANCIES WITH STATED REQUIREMENTS ARE DISCOVERED.

**TOPSOIL PLANTING BED PREPARATION:**

- MIX TOPSOIL AS RECOMMENDED BY SOIL TEST RESULTS AND RECOMMENDATIONS OF SOIL TESTING AGENCY.
- TOPSOIL SHALL NOT BE USED TO CONSTRUCT PERMANENT BERMS.
- ALL TOPSOIL SHOULD BE FREE OF SUBSOILS, CLAY, STONES, ROOTS, EXCESS WATER, FROST AND OTHER EXTRANEOUS MATTER.
- PREPARE PLANTING BEDS PRIOR TO ARRIVAL OF PLANT MATERIAL ON SITE.

EXCAVATE PER PLANTING DETAILS. THE FOREGOING PROPORTIONS ARE SUBJECT TO CHANGE UPON RECEIPT OF TOPSOIL ANALYSIS.

PREPARE PLANTING SOIL BY EVENLY MIXING:

- 5 PARTS NATIVE SOIL
- 1 PART SHARP SAND
- 2 PARTS 1/2" SCREENED COMPOST
- 500g OF BONE MEAL PER CUBIC METRE.
- MIX THOROUGHLY

**SODDING NOTES:**

- ALL SOD SHALL BE GUARANTEED FOR 3 MONTHS FROM DATE OF SUBSTANTIAL PERFORMANCE.
- SODDING SHALL CONFORM TO LANDSCAPE ONTARIO'S 'GENERAL LANDSCAPE SPECIFICATIONS'.
- TOPSOIL SHALL BE EVENLY SPREAD OVER SUB-GRADE AND LOOSELY COMPACTED TO 150mm MINIMUM DEPTH.
- ALL STONES AND DEBRIS OVER 25mm DIA. SHALL BE REMOVED.
- TOPSOIL SHALL BE SUPPLEMENTED WITH A 10-6-4 FERTILIZER AND 20% SUPERPHOSPHATE APPLIED AT A RATE OF 5 KILOS PER 100 SQUARE METRES EACH, PRIOR TO PLACEMENT OF SOD.
- SOD SHALL BE PLACED WITH STAGGERED BUTT JOINTS, WATERED THOROUGHLY, AND ROLLED WHEN DRY.
- LAY SOD SECTIONS PERPENDICULAR ON SLOPES GREATER THAN 3:1 AND SECURE WITH WOODEN PEGS. WOODEN PEGS TO BE 17 X 17 X 300mm. PLACE PEGS 3 PER SQUARE METRE, 100mm BELOW TOP EDGE TO PREVENT SHIFTING OF SOD AND DRIVE PEGS FLUSH WITH TOP OF SOD SOIL. PROVIDE A MINIMUM OF 2 STAKES PER ROLL OF SOD.
- MAINTAIN SODDED AREA FROM THE TIME OF INSTALLATION UNTIL THIRTY (30) CALENDAR DAYS AFTER ALL SODDED AREAS HAVE BEEN INSPECTED BY THE CONTRACT ADMINISTRATOR AND A CERTIFICATE OF COMPLETION IS ISSUED. MINIMUM OF TWO CUTS.
- MAINTENANCE SHALL INCLUDE ALL NECESSARY MEASURES TO ESTABLISH AND MAINTAIN GRASS IN A HEALTHY, VIGOROUS GROWING CONDITION.
- MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING WORK:
  - MOWING AT REGULAR INTERVALS TO MAINTAIN A MAXIMUM HEIGHT OF 60MM. DO NOT CUT MORE THAN 1/3 OF THE GRASS HEIGHT AT ANY ONE MOWING. TRIM AND CLIP EDGES. REMOVE CLIPPINGS AFTER MOWING AND TRIMMING.
  - WATERING WHEN REQUIRED IN SUFFICIENT QUANTITIES AND AT A FREQUENCY TO PREVENT SOD FROM DRYING OUT AND TO MAINTAIN SOIL UNDER SOD CONTINUOUSLY MOIST TO A DEPTH OF 75 TO 100MM.
  - FERTILIZE SODDED AREAS ONE MONTH AFTER SODDING WITH 2:1:1 RATIO FERTILIZER. SPREAD EVENLY AT A RATE AS PER MANUFACTURER'S INSTRUCTIONS AND WATER IN WELL, WITH A MINIMUM OF 50CM INFILTRATION AS PREVIOUSLY MENTIONED.

**TERRASEEDING:**

TERRASEEDING SHALL BE APPLIED TO ALL AREAS DISTURBED BY THE CONSTRUCTION OPERATION THAT WILL NOT BE COVERED WITH ASPHALT, MULCH, SOD, PATHWAY, OR OTHER SPECIFIED SURFACE. AT TIME OF TERRASEEDING, ALL SURFACE AREAS MUST BE UNIFORMLY GRADED AND SHALL BE FREE OF EROSION, STONES GREATER THAN 50mm IN DIAMETER, WEEDS AND ANY OTHER UNWANTED VEGETATION. EXISTING SURFACE SOIL SHALL BE UNIFORMLY CULTIVATED TO A MINIMUM DEPTH 50mm TO PROVIDE A LOOSE AND FRIABLE SEEDBED TO ACCELERATE GERMINATION OF SEED.

THE BLOWER TRUCK SHALL BE EQUIPPED WITH A COMPUTER-CALIBRATED SEED INJECTION SYSTEM AND SHALL BE CAPABLE OF UNIFORMLY APPLYING COMPOSTED TOPSOIL AND SEED AT A RATE GREATER THAN 0.25 m<sup>3</sup> PER MINUTE. COMPOSTED TOPSOIL SHALL BE PRE-MIXED AND CONSIST OF A MINIMUM 60% COMPOST MATERIAL.

**NOTE:**

- SEEDING SHALL BE PLACED ON 150mm OF TOPSOIL.
- ALL SEED TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR MULCH, TACKIFIER, AND SPECIFIC SEEDING RATE AND TIMING OF APPLICATION.
- CONTRACTOR TO VERIFY SEEDING RATES RELATIVE TO SOIL TYPE PRIOR TO INSTALLATION OF SEED.
- ALL SEEDING ON SLOPES GREATER THAN 3 (HORIZONTAL) : 1 (VERTICAL) SHALL BE PROTECTED WITH 'SOIL GUARD FIBRE MATRIX' TO MANUFACTURER'S SPECIFICATIONS.

**'NATIVE UPLAND FORAGE AND MEADOW MIX' (OSC #8140)**

35% CANADIAN WILD RYE	(ELYMUS CANADENSIS)
10% FOWL BLUEGRASS	(POA PALUSTRIS)
5% FOX SEDGE	(CAREX VULPINOIDEA)
5% LITTLE BLUESTEM	(SCHIZACHYRIUM SCOPARUM)
10% SAND DROPSIDE	(SPOROBIOLUS CRYPTANDRUS)
35% VIRGINIA WILD RYE	(ELYMUS VIRGINICUS)

SEED ALL DISTURBED AREAS IDENTIFIED ON THE DRAWING WITH #8140 NATIVE UPLAND FORAGE AND MEADOW MIX, DISTRIBUTED BY ONTARIO SEED COMPANY (519) 886-0557 OR APPROVED EQUAL. SEED AT RATE OF 25KG/HA. SIMULTANEOUSLY SOW COVER CROP OF ANNUAL RYE GRASS FOR EROSION CONTROL AT A RATE OF 22KG/HA MINIMUM.

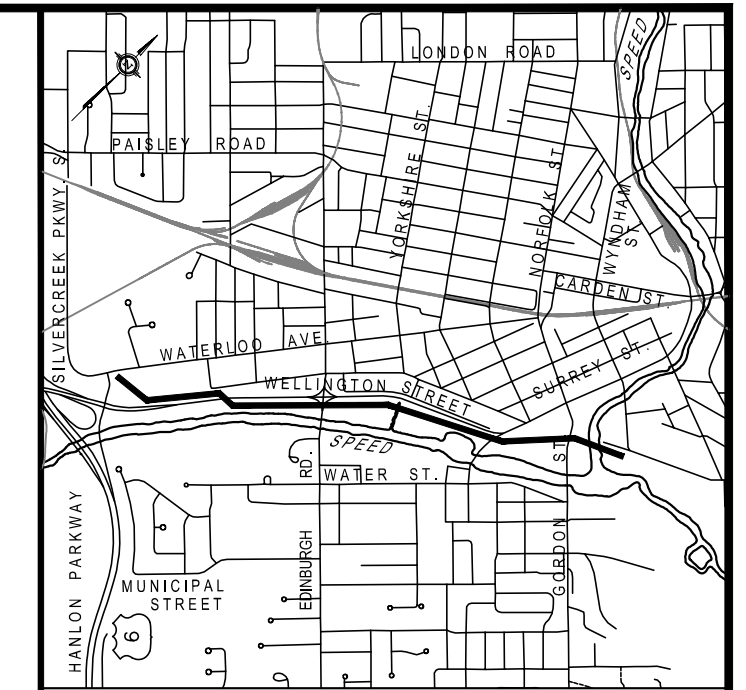
ALL PACKING SLIPS MUST BE PROVIDED TO CONTRACT ADMINISTRATOR PRIOR TO SEED PLACEMENT.

**PLANT MATERIAL ORDER, DELIVERY AND INSPECTION:**

- CONTRACTOR TO CHECK ALL QUANTITIES AND REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR IN WRITING. THE QUANTITIES INDICATED ON THE PLAN SUPERCEDE THE TOTALS OF THE PLANT LIST.
- OBTAIN CONTRACT ADMINISTRATOR'S APPROVAL ON ALL PLANT MATERIAL AT SOURCE OR UPON DELIVERY, PRIOR TO COMMENCEMENT OF PLANTING WORK.
- APPROVAL OF PLANT MATERIAL PRIOR TO PLANTING SHALL NOT IMPAIR THE RIGHT OF THE CONTRACT ADMINISTRATOR TO REJECT PLANTS AFTER PLANTING, WHICH HAVE BEEN DAMAGED, OR WHICH IN ANY WAY DO NOT CONFORM TO THE SPECIFICATIONS.
- SUBSTITUTIONS OF SIZE, OR WITH OTHER PLANT MATERIAL WILL ONLY BE ALLOWED WITH THE WRITTEN APPROVAL OF THE CONTRACT ADMINISTRATOR.
- ALL MATERIAL MUST CONFORM TO THE SIZES SHOWN ON THE PLANT LIST, EXCEPT WHERE LARGER PLANT MATERIAL IS USED WHEN APPROVED BY THE CONTRACT ADMINISTRATOR. USE OF LARGER PLANTS WILL NOT INCREASE THE CONTRACT PRICE. UNDERSIZED MATERIAL WILL BE REJECTED.
- ALL SHRUBS AND TREES SHALL CONFORM TO THE PRESENT STANDARDS OF THE CANADIAN NURSERY TRADES ASSOCIATION FOR SIZE AND SPECIES.
- PLANTS ARE TO BE NURSERY GROWN UNDER PROPER CULTURAL CONDITIONS, IN PARTICULAR WITH RESPECT TO SPACING, PEST AND DISEASE CONTROL, AND BRANCH AND ROOT PRUNING.
- TREES ARE TO HAVE STRAIGHT STURDY TRUNKS.
- TREES SHALL BE WELL BRANCHED AND BALANCED WITH A STRONG CENTRAL LEADER.
- DECIDUOUS SHADE TREES SHALL BE FREE OF BRANCHES FROM GROUND LEVEL TO A HEIGHT OF 1.8M ABOVE THE GROUND.
- TREES WITH OPEN SCARS ARE NOT ACCEPTABLE.
- KEEP ALL ROOTS AND ROOTBALLS MOIST PRIOR TO PLANTING.

**PLANT MATERIAL GUARANTEE AND FINAL INSPECTION:**

- AT THE COMPLETION OF PLANTING OPERATIONS, REMOVE ALL SURPLUS MATERIAL FROM THE SITE AT NO EXTRA CHARGE TO THE PROJECT.
- MAKE GOOD ALL DAMAGE RESULTING FROM PLANTING OPERATIONS AT NO EXTRA CHARGE TO THE PROJECT.
- PLANT MATERIAL SHALL BE GUARANTEED FOR A MINIMUM OF TWO YEARS FROM THE ISSUE DATE OF THE CERTIFICATE OF COMPLETION.
- ALL PLANTS SHALL BE INSPECTED TWICE, ONCE HALFWAY THROUGH THE GUARANTEE PERIOD, AND AGAIN AT THE END OF THE GUARANTEE PERIOD. PLANTS WHICH, AT THAT TIME, ARE NOT IN HEALTHY VIGOROUS GROWING CONDITION, TO THE CONSULTANT'S APPROVAL, SHALL BE REPLACED AT NO EXTRA CHARGE TO THE PROJECT.
- CONTRACTOR TO CONTACT CONTRACT ADMINISTRATOR AND/OR APPROVAL AGENCY/MUNICIPALITY TO REVIEW PROJECT FOR GUARANTEE INSPECTIONS.



KEY PLAN Scale : NOT TO SCALE

2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 25, 13	FINAL ARBORIST REPORT	JJZ	BT/PM

No.	DATE	DESCRIPTION	BY:	CHKD.

**ISSUES/REVISIONS**



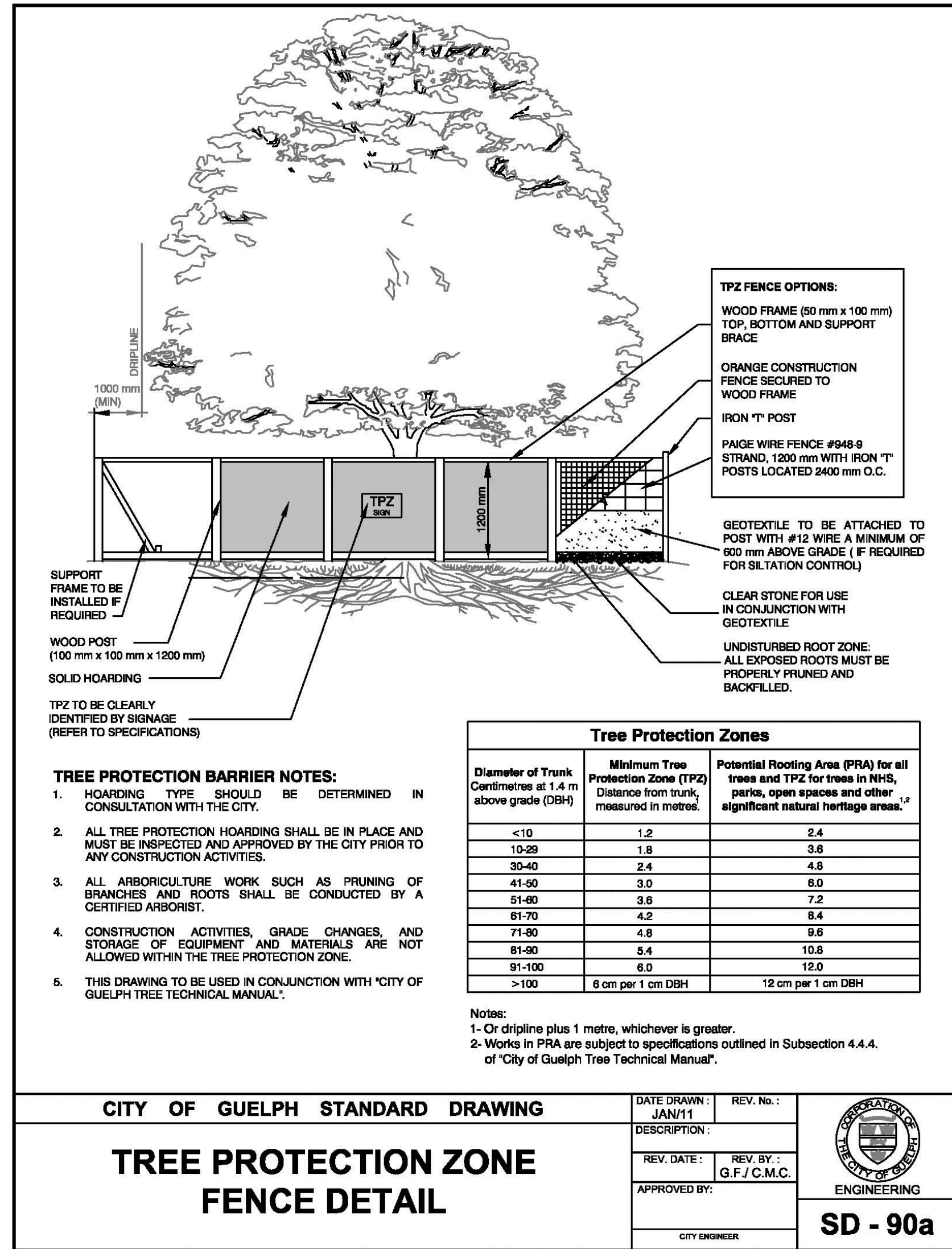
**ENGINEERING SERVICES**

**YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN LANDSCAPE NOTES**

**MMM GROUP**  
 100 Commerce Valley Dr. West, Thornhill, ON Canada L3T 0A1  
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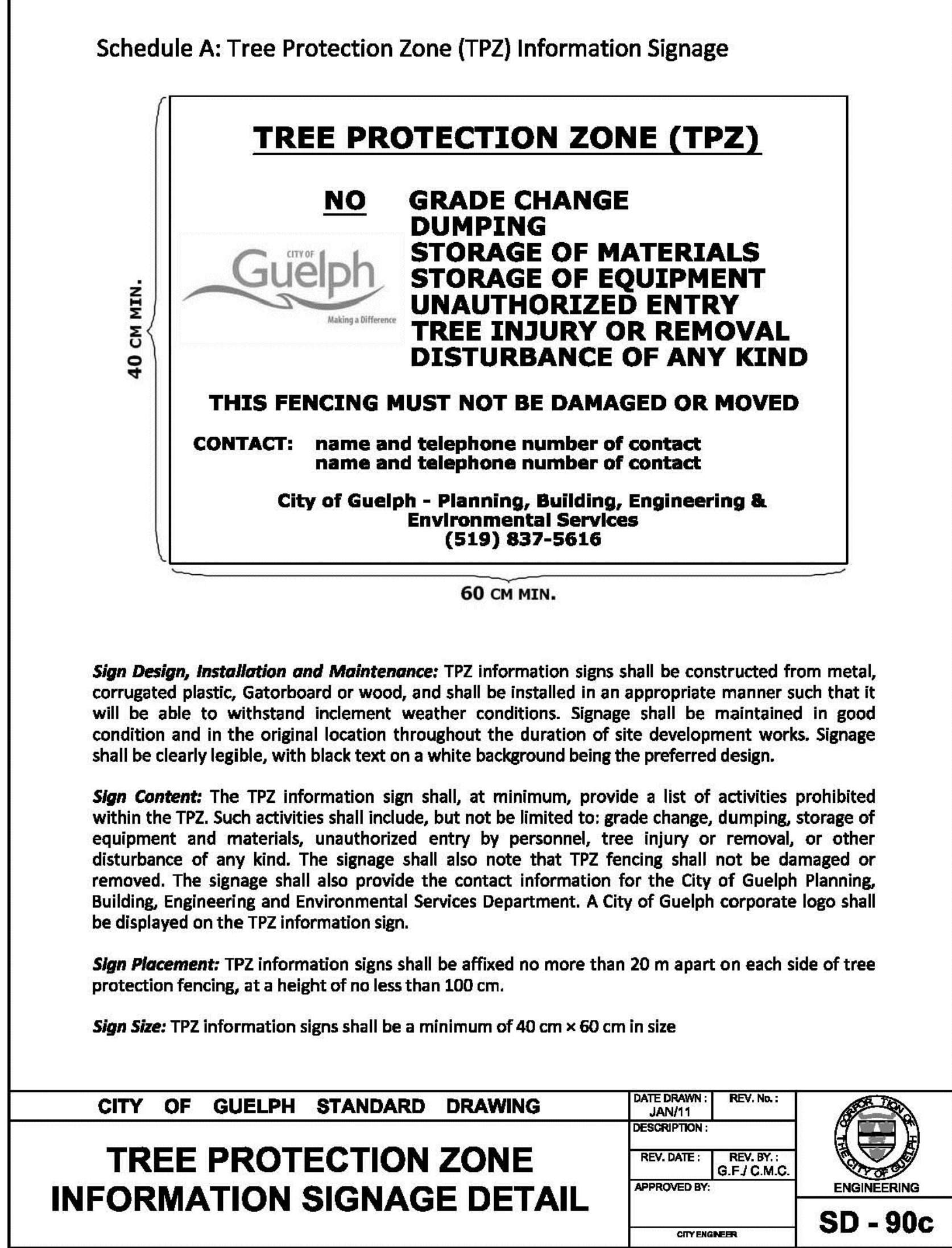
SCALES:	HOR: _____	VER: _____
DATE DRAWN:	AUGUST 2013	
DRAWN BY:	JJZ	CHECKED BY: B.T./P.M.
CONSULTANT DRAWING No.	L15	
CITY CONTRACT No.	12-145	
CITY REFERENCE No.		REV.



1 TREE PROTECTION ZONE FENCE DETAIL

L-16

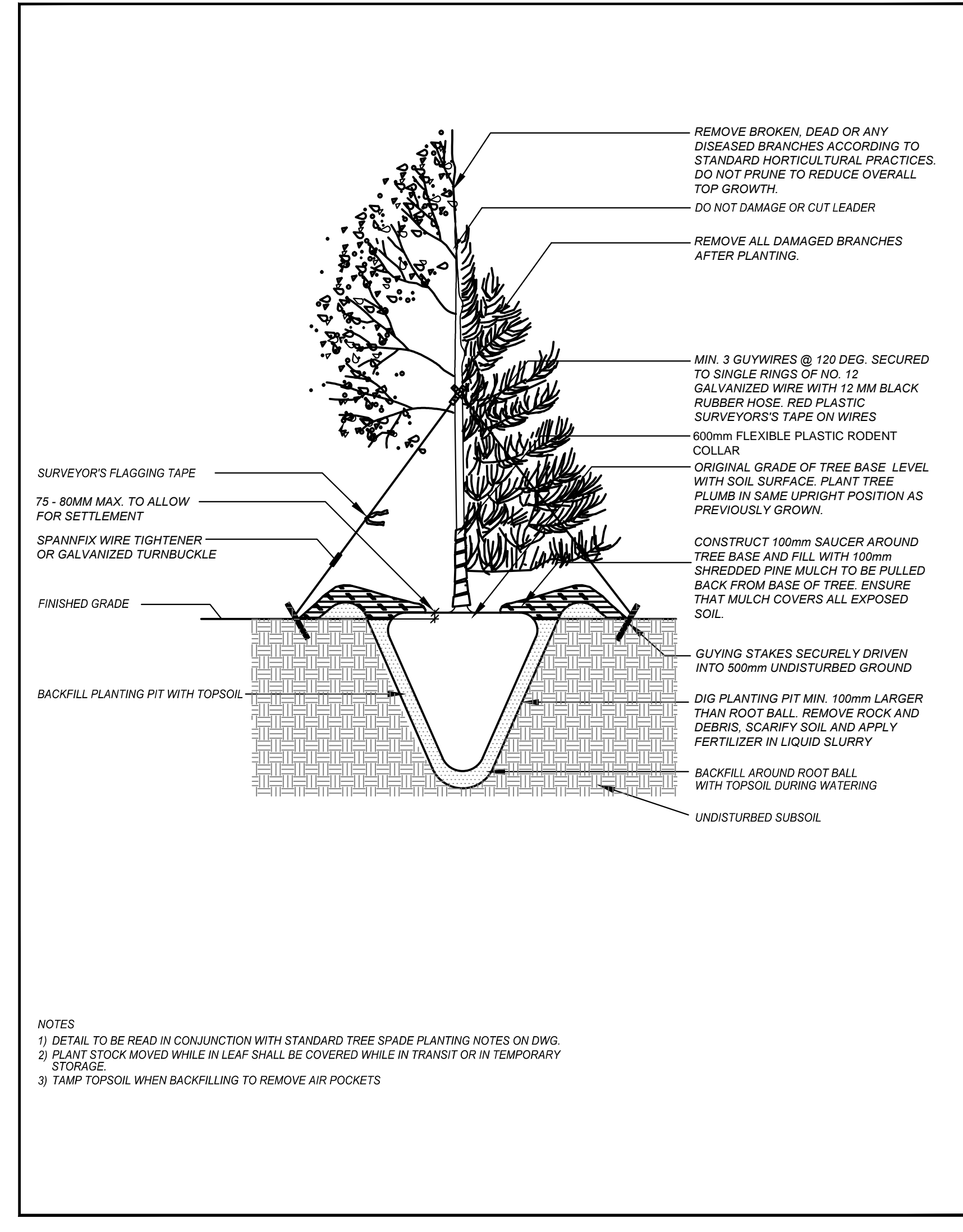
Scale: N.T.S.



2 TREE PROTECTION ZONE INFORMATION SIGNAGE DETAIL

L-16

Scale: N.T.S.

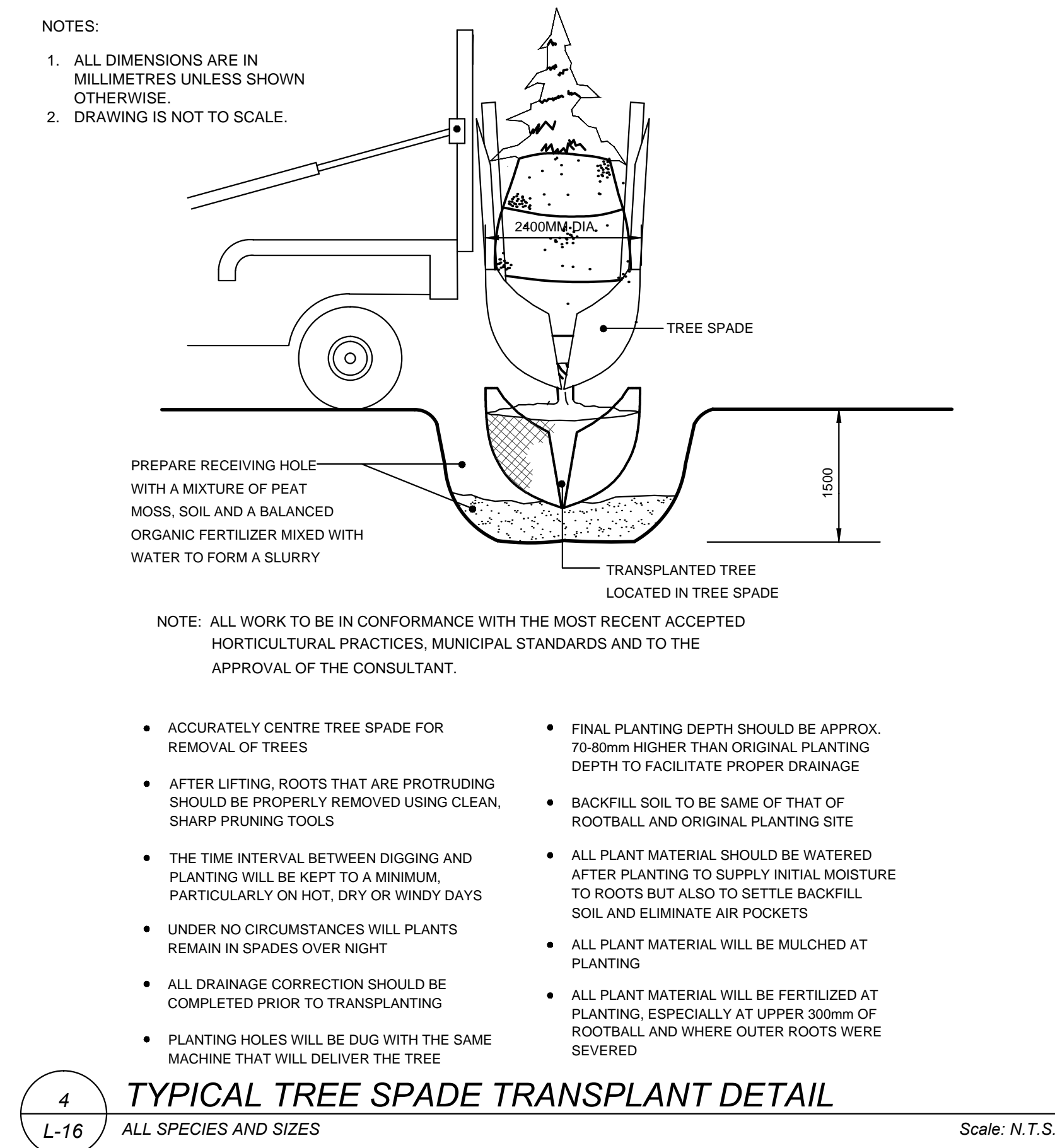


3 TYPICAL TREE SPADE STAKING AND FINISHING DETAIL

L-16

ALL SPECIES AND SIZES

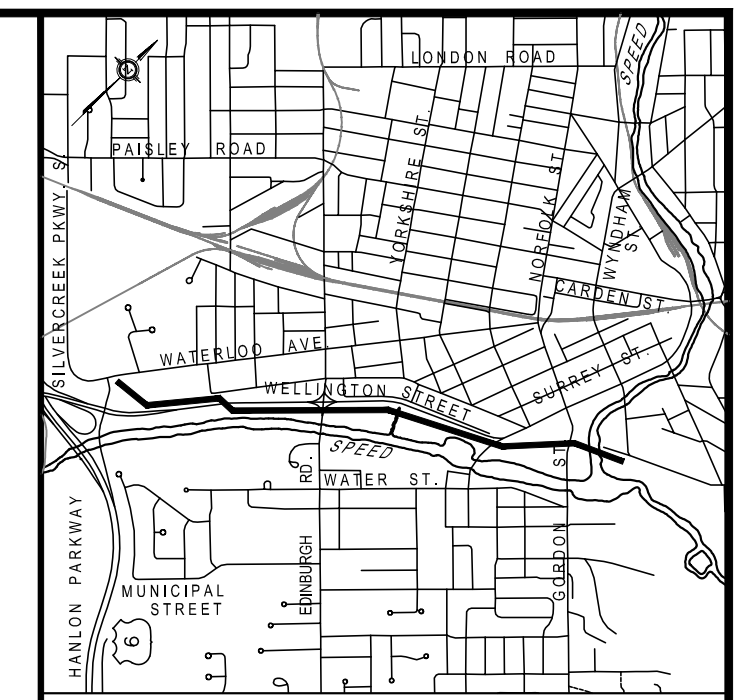
Scale: N.T.S.



4 TYPICAL TREE SPADE TRANSPLANT DETAIL

L-16

Scale: N.T.S.



**CITY OF Guelph**  
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 YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN LANDSCAPE DETAILS

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**ASSOCIATION OF LANDSCAPE ARCHITECTS OF ONTARIO**  
 MEMBER  
 JANUARY 23, 2014

2	JAN 23, 14	ORCA SUBMISSION	JJZ	BT
1	OCT 23, 13	FINAL ARBORIST REPORT	JJZ	BTRM
No.	DATE	DESCRIPTION	BY:	CHKD.

**ISSUES/REVISIONS**

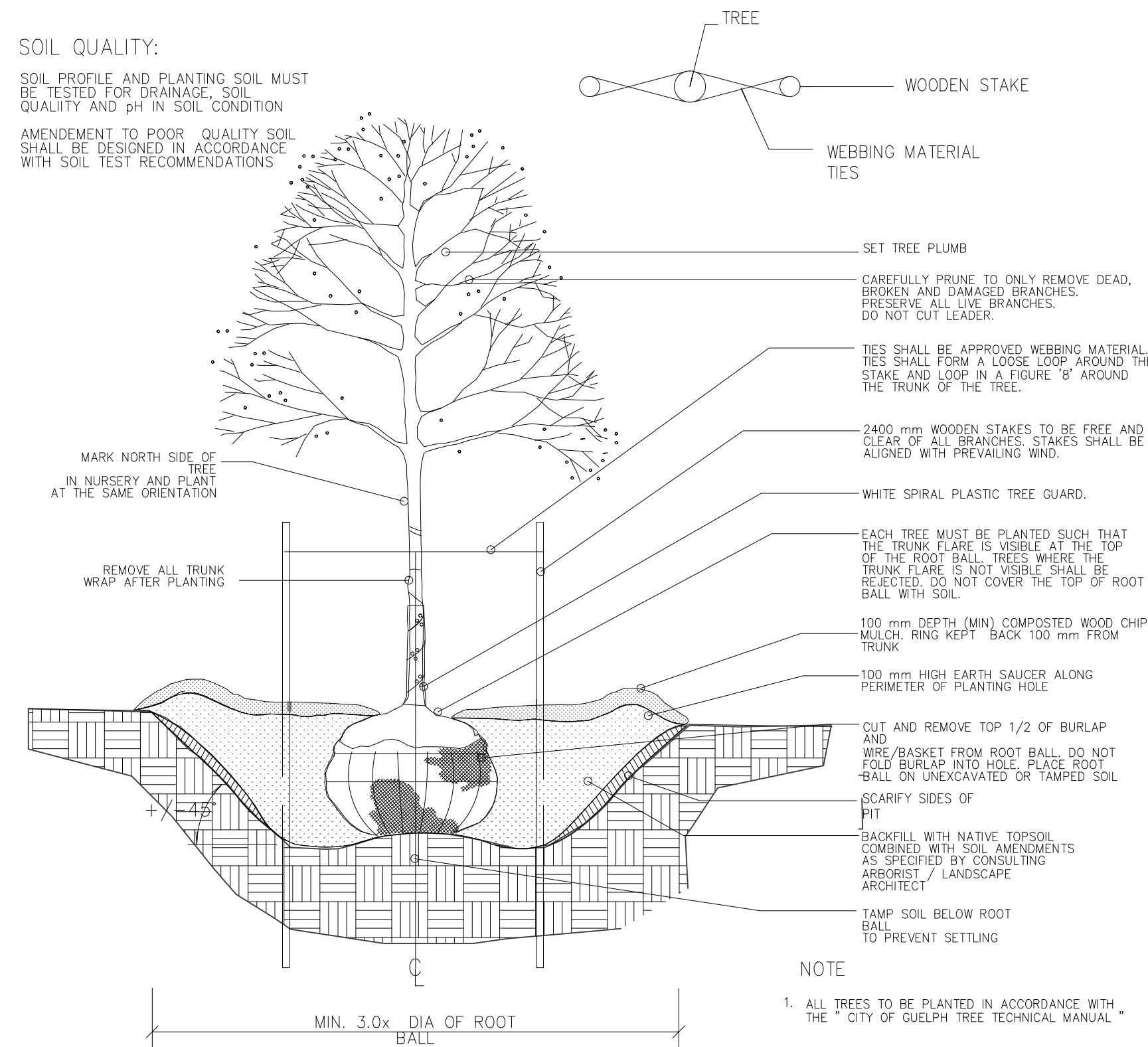
SCALES:  
 HOR: N.T.S. VER: \_\_\_\_\_  
 DATE DRAWN:  
 AUGUST 2013  
 DRAWN BY: JJZ CHECKED BY: B.T.P.M.  
 CONSULTANT DRAWING No. L16  
 CITY CONTRACT No. 12-145  
 CITY REFERENCE No. REV.



SOIL VOLUME SHALL BE PROVIDED IN ACCORDANCE WITH GUIDELINES OUTLINED IN "CITY OF GUELPH TREE TECHNICAL MANUAL"

**SOIL QUALITY:**

SOIL PROFILE AND PLANTING MUST BE TESTED FOR DRAINAGE, SOIL QUALITY AND pH IN SOIL CONDITION AMENDMENT TO POOR QUALITY SOIL SHALL BE DESIGNED IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS



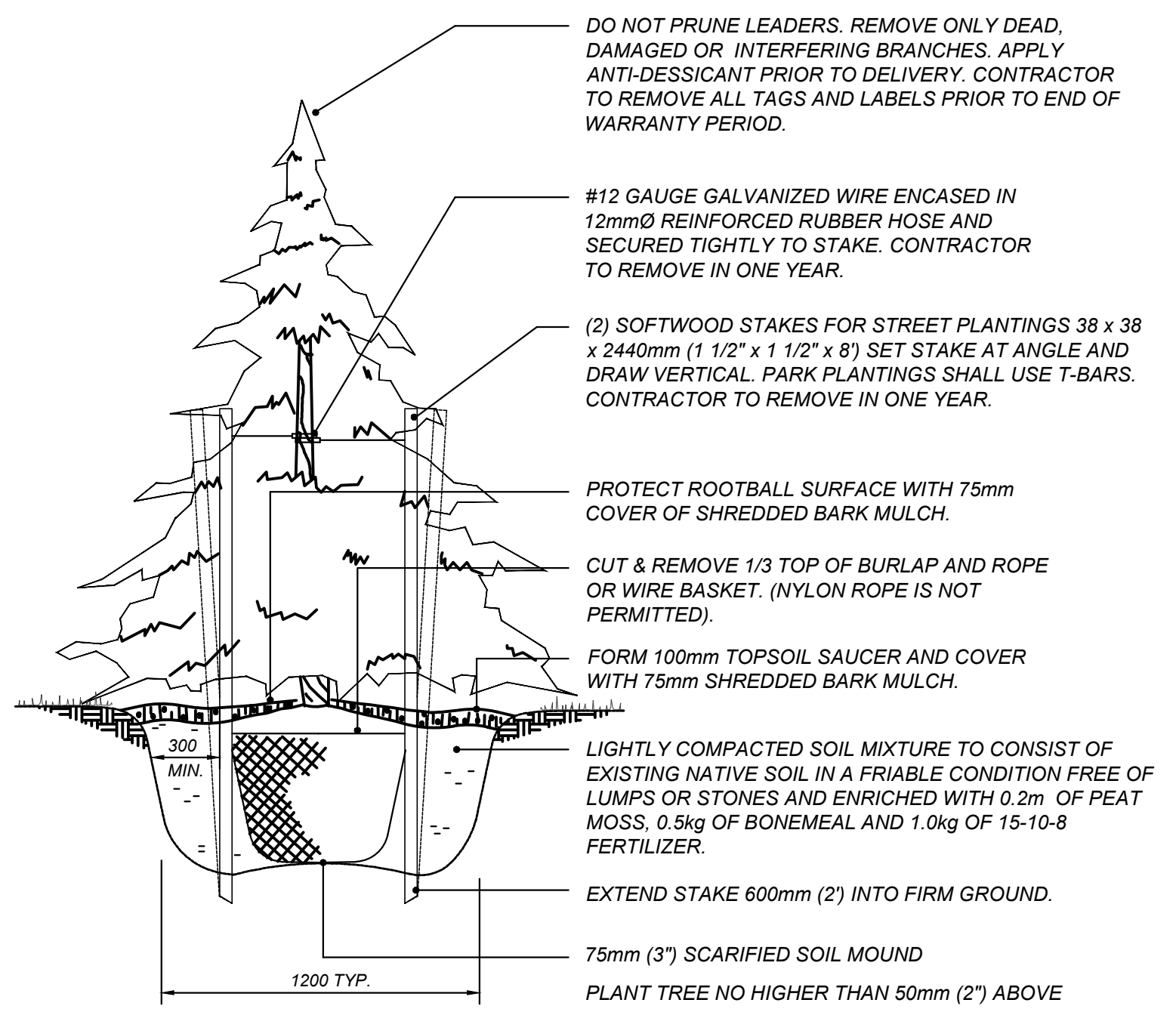
**Guelph** TREE PLANTING FOR PARKS, OPEN SPACE AND STORMWATER MANAGEMENT FACILITIES

JULY 2011 N.T.S.

DRAWING NO. 1

**1 DECIDUOUS TREE PLANTING DETAIL**  
L-17 ALL SPECIES AND SIZES Scale: N.T.S.

"WATER AT TIME OF PLANTING AND WHENEVER DEEMED NECESSARY TO MAINTAIN THE TREES IN A HEALTHY CONDITION."



PROTECT ROOTBALL SURFACE WITH 75mm COVER OF SHREDDED BARK MULCH.

CUT & REMOVE 1/3 TOP OF BURLAP AND ROPE OR WIRE BASKET. (NYLON ROPE IS NOT PERMITTED).

FORM 100mm TOPSOIL SAUCER AND COVER WITH 75mm SHREDDED BARK MULCH.

LIGHTLY COMPACTED SOIL MIXTURE TO CONSIST OF EXISTING NATIVE SOIL IN A FRIABLE CONDITION FREE OF LUMPS OR STONES AND ENRICHED WITH 0.2m<sup>3</sup> OF PEAT MOSS, 0.5kg OF BONEMEAL AND 1.0kg OF 15-10-8 FERTILIZER.

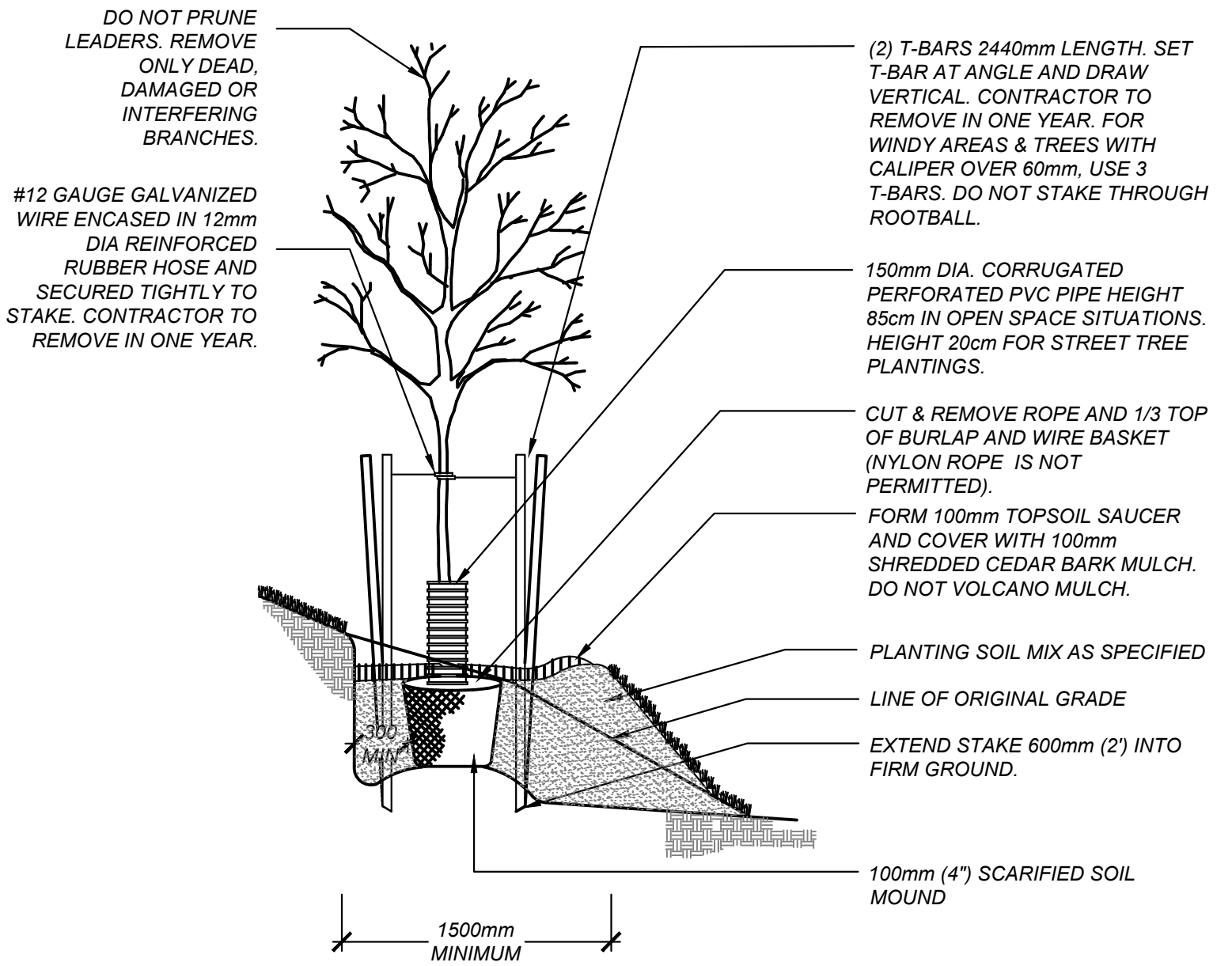
EXTEND STAKE 600mm (2") INTO FIRM GROUND.

75mm (3") SCARIFIED SOIL MOUND

PLANT TREE NO HIGHER THAN 50mm (2") ABOVE ORIGINAL GROUND GRADE TO ALLOW FOR SETTLEMENT.

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

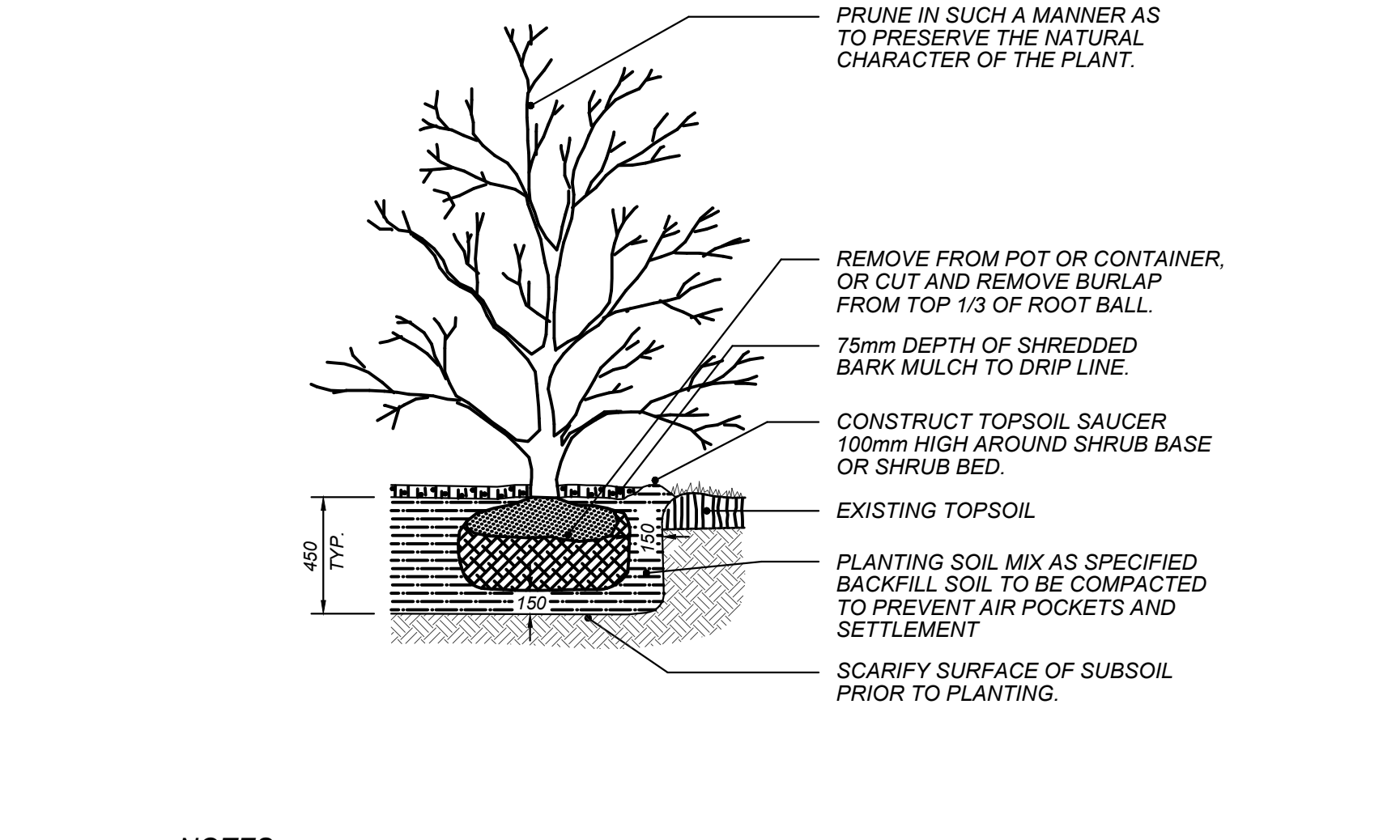
**2 CONIFEROUS TREE PLANTING DETAIL**  
L-17 ALL SPECIES AND SIZES Scale: N.T.S.



NOTES:

- APPLY ANTI-DESSICANT PRIOR TO DELIVERY.
- PLANT TREE NO HIGHER THAN 50mm ABOVE ORIGINAL GROUND GRADE TO ALLOW FOR SETTLEMENT.
- WATER AT TIME OF PLANTING AND WHENEVER DEEMED NECESSARY TO MAINTAIN TREES IN A HEALTHY CONDITION.
- ALL TAGS AND LABELS TO REMAIN UNTIL INSPECTION IS COMPLETE.
- CONTRACTOR TO REMOVE ALL STAKES, TAGS AND LABELS AT THE END OF ONE YEAR.

**3 TREE PLANTING ON A SLOPE DETAIL**  
L-17 ALL SPECIES AND SIZES Scale: N.T.S.

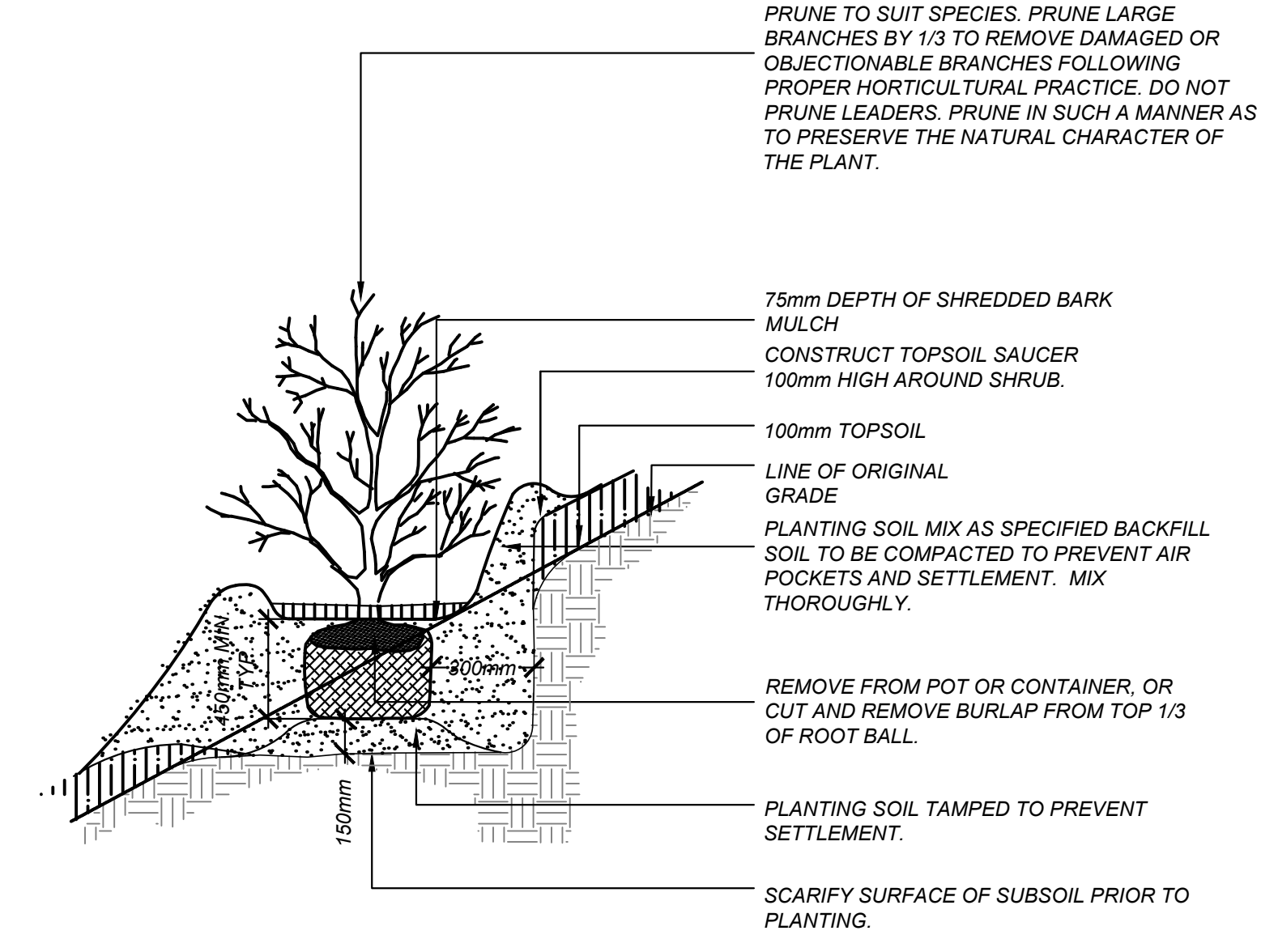


NOTES:

1. PLANTING METHOD ILLUSTRATED SHALL APPLY EQUALLY TO BARE - ROOT AND BALLED STOCK.
2. SET SHRUBS 50mm HIGHER THAN SURROUNDING GRADE TO ALLOW FOR SETTLEMENT.
3. THE ABOVE DETAIL DOES NOT REPRESENT ANY PARTICULAR SPECIES.
4. SHRUBS PLANTED IN GROUPS SHALL BE SET IN CONTINUOUS BEDS.
5. ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED.

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

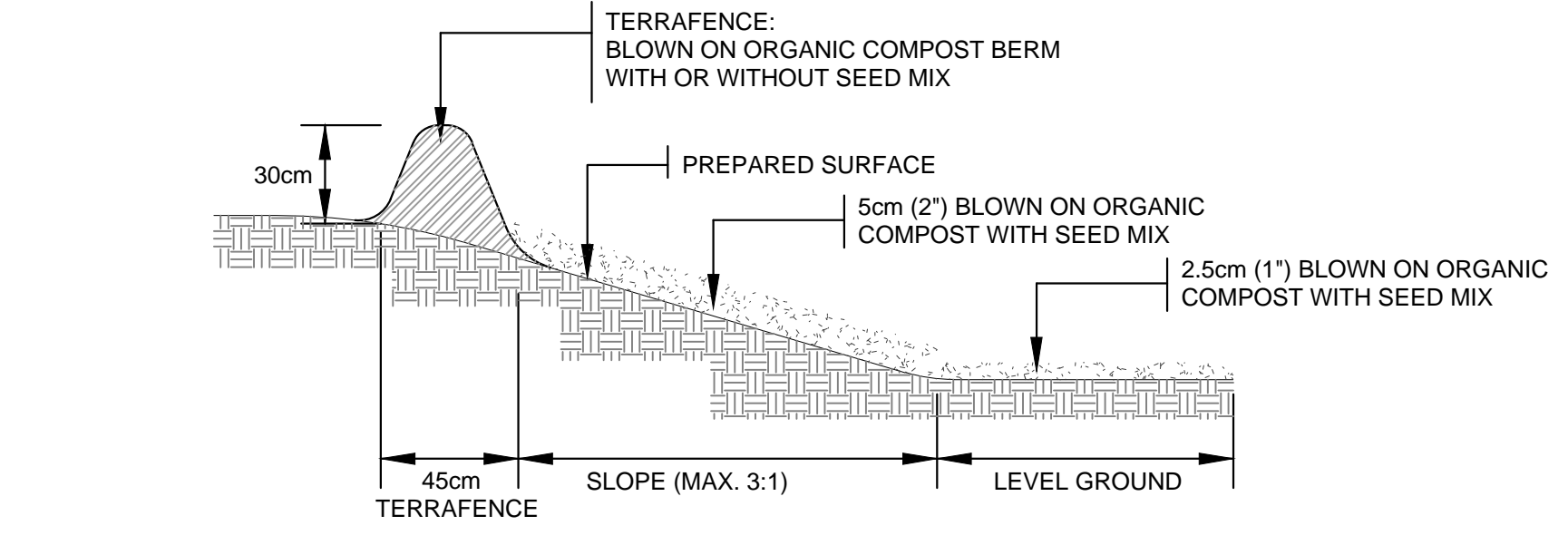
**4 SHRUB PLANTING DETAIL**  
L-17 ALL SPECIES AND SIZES Scale: N.T.S.



NOTES:

- APPLY ANTI-DESSICANT PRIOR TO DELIVERY.
- PLANT TREE NO HIGHER THAN 50mm ABOVE ORIGINAL GROUND GRADE TO ALLOW FOR SETTLEMENT.
- WATER AT TIME OF PLANTING AND WHENEVER DEEMED NECESSARY TO MAINTAIN TREES IN A HEALTHY CONDITION.
- ALL TAGS AND LABELS TO REMAIN UNTIL INSPECTION IS COMPLETE.
- CONTRACTOR TO REMOVE ALL TAGS, LABELS AND STAKES AT THE END OF ONE YEAR.

**5 SHRUB PLANTING ON A SLOPE DETAIL**  
L-17 ALL SPECIES AND SIZES Scale: N.T.S.

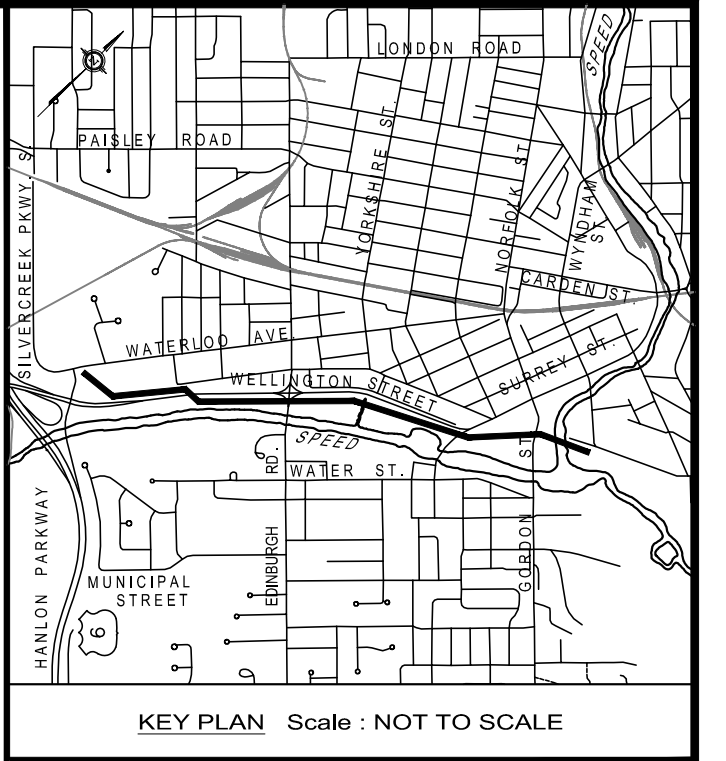


**6 TERRASEEDING DETAIL**  
L-17 Scale: N.T.S.

PLANT LIST - MASTER LIST (REFER TO L1-L9, AND L13 FOR INDIVIDUAL PLANTING PLANS)

Key	Qty.	Botanical Name	Common Name	Size	Condition	Remarks
<b>Trees</b>						
<b>Deciduous</b>						
Ar	28	<i>Acer rubrum</i>	Red Maple	45mm Cal	W.B	--
As	50	<i>Acer saccharum</i>	Sugar Maple	45mm Cal	W.B	--
Asa	25	<i>Acer saccharinum</i>	Silver Maple	45mm Cal	W.B	--
Jn	30	<i>Juglans nigra</i>	Black Walnut	45mm Cal	W.B	--
Qa	23	<i>Quercus alba</i>	White Oak	45mm Cal	W.B	--
Or	36	<i>Quercus rubra</i>	Red Oak	45mm Cal	W.B	--
Sn	7	<i>Salix nigra</i>	Black Willow	45mm Cal	W.B	--
<b>Coniferous</b>						
Pg	15	<i>Picea glauca</i>	White Spruce	200cm ht	W.B	--
Ps	6	<i>Pinus strobus</i>	Eastern White Pine	200cm ht	W.B	--
<b>Shrubs</b>						
cs	45	<i>Cornus sericea</i>	Red Osier Dogwood	50cm, 3gal.	pot	1.5m o.c.
po	66	<i>Physocarpus opulifolius</i>	Eastern Ninebark	50cm, 3gal.	pot	1.5m o.c.
sb	18	<i>Salix bebbiana</i>	Bebb's Willow	50cm, 3gal.	pot	1.5m o.c.
se	38	<i>Salix eriocephala</i>	Heart-leaved Willow	50cm, 3gal.	pot	1.5m o.c.
sc	48	<i>Sambucus nigra ssp. canadensis</i>	Common Elderberry	50cm, 3gal.	pot	1.5m o.c.
to	30	<i>Thuja occidentalis</i>	Eastern White Cedar	50cm, 3gal.	pot	1.5m o.c.

Note: Each shrub must be a minimum 3-stem specimen. Plant Quantities Indicated on the Planting Plan will Supercede the Quantities Listed Above.



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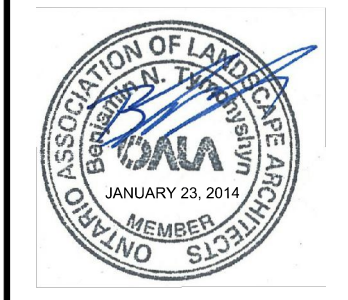
**CITY OF Guelph**

ENGINEERING SERVICES

YORK TRUNK SEWER & PAISLEY-CLYTHE WATERMAIN LANDSCAPE DETAILS

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HOR: N.T.S. VER: \_\_\_\_\_

DATE DRAWN:  
AUGUST 2013

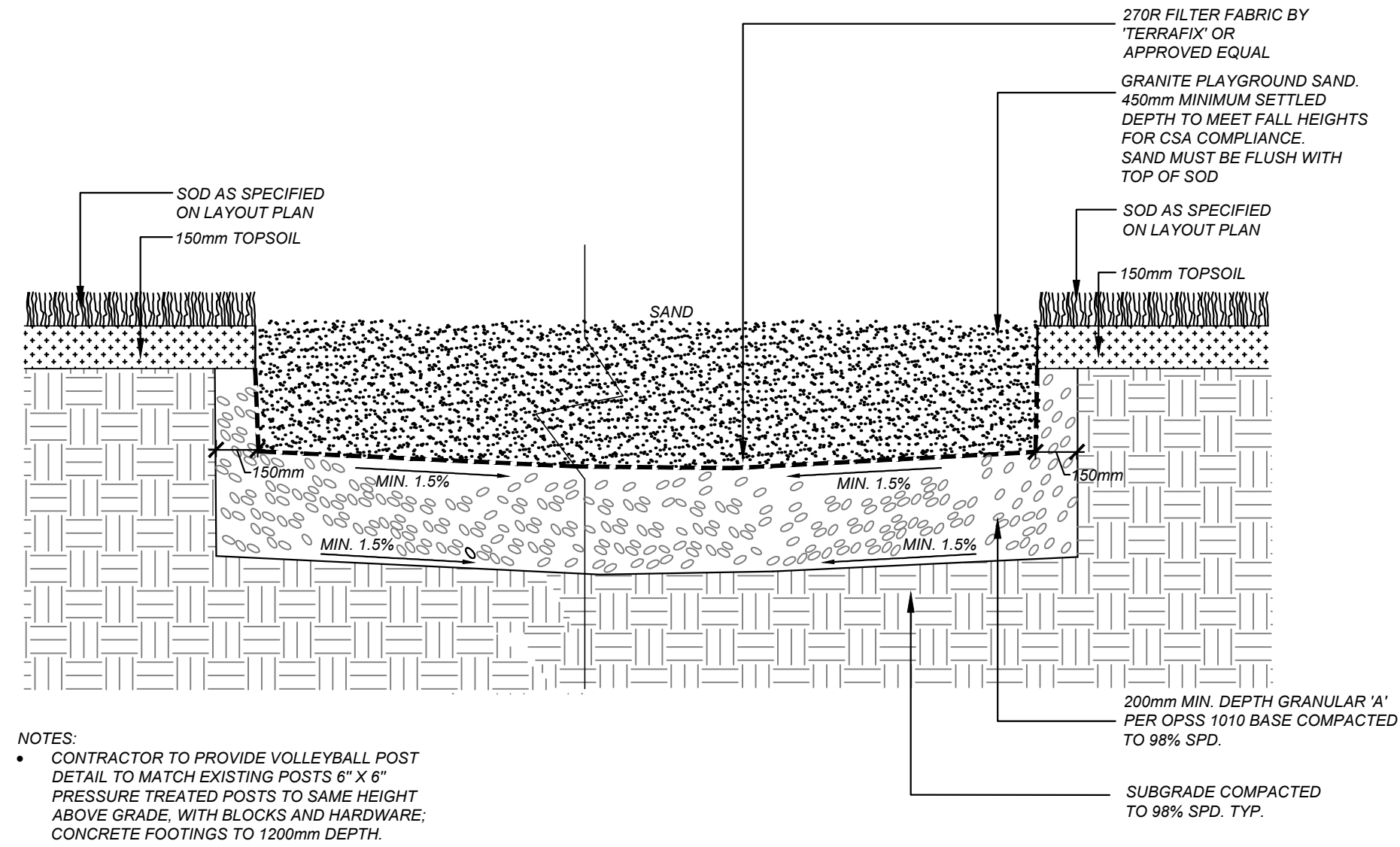
DRAWN BY: JJZ CHECKED BY: B.T.P.M.

CONSULTANT DRAWING No. L17

CITY CONTRACT No. 12-145

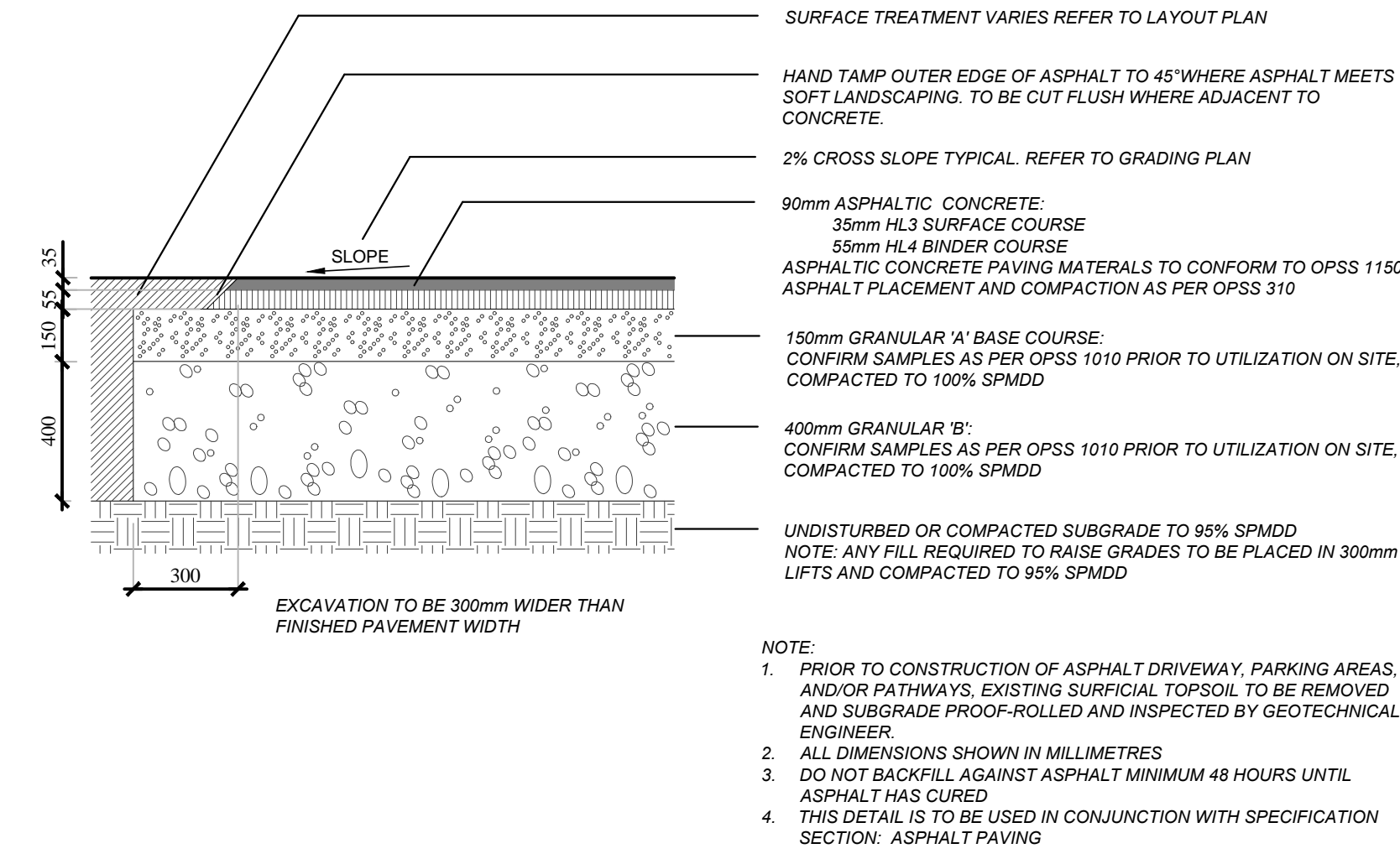
CITY REFERENCE No. REV.

P.L.F. NAME: L. Vohr (2013) (02-12-108-108-001 York Trunk Sewer & Paisley-Clythe Watermain) (02/21/2013) (L-17) REVISED: ON Wednesday, 07/22/2014



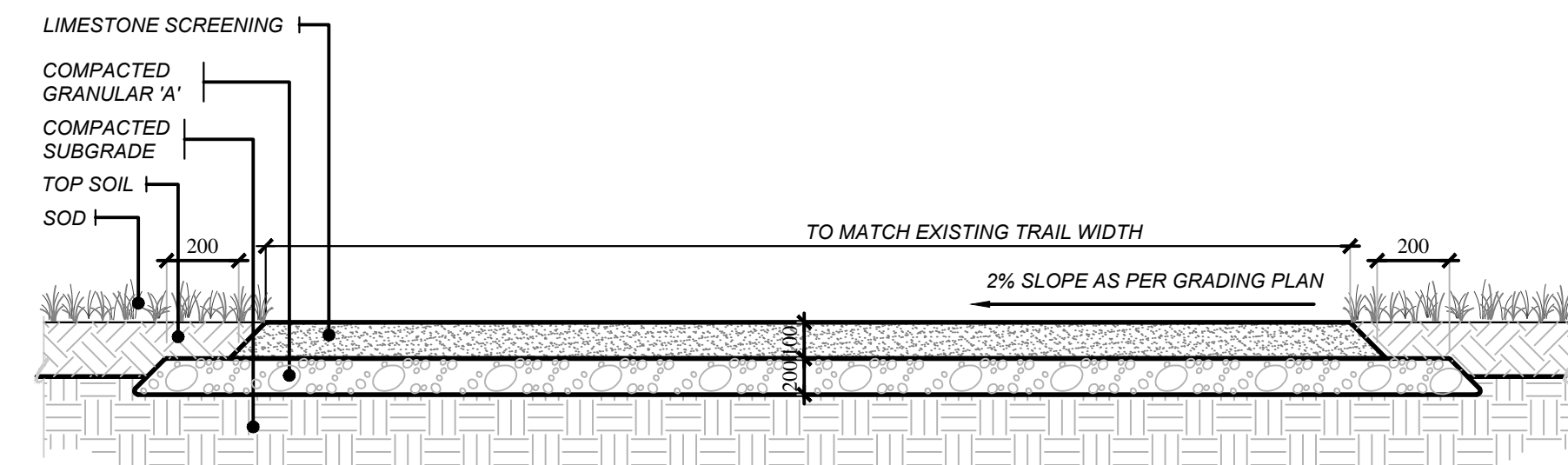
1 VOLLEYBALL COURT DETAIL  
L-18

Scale: N.T.S.



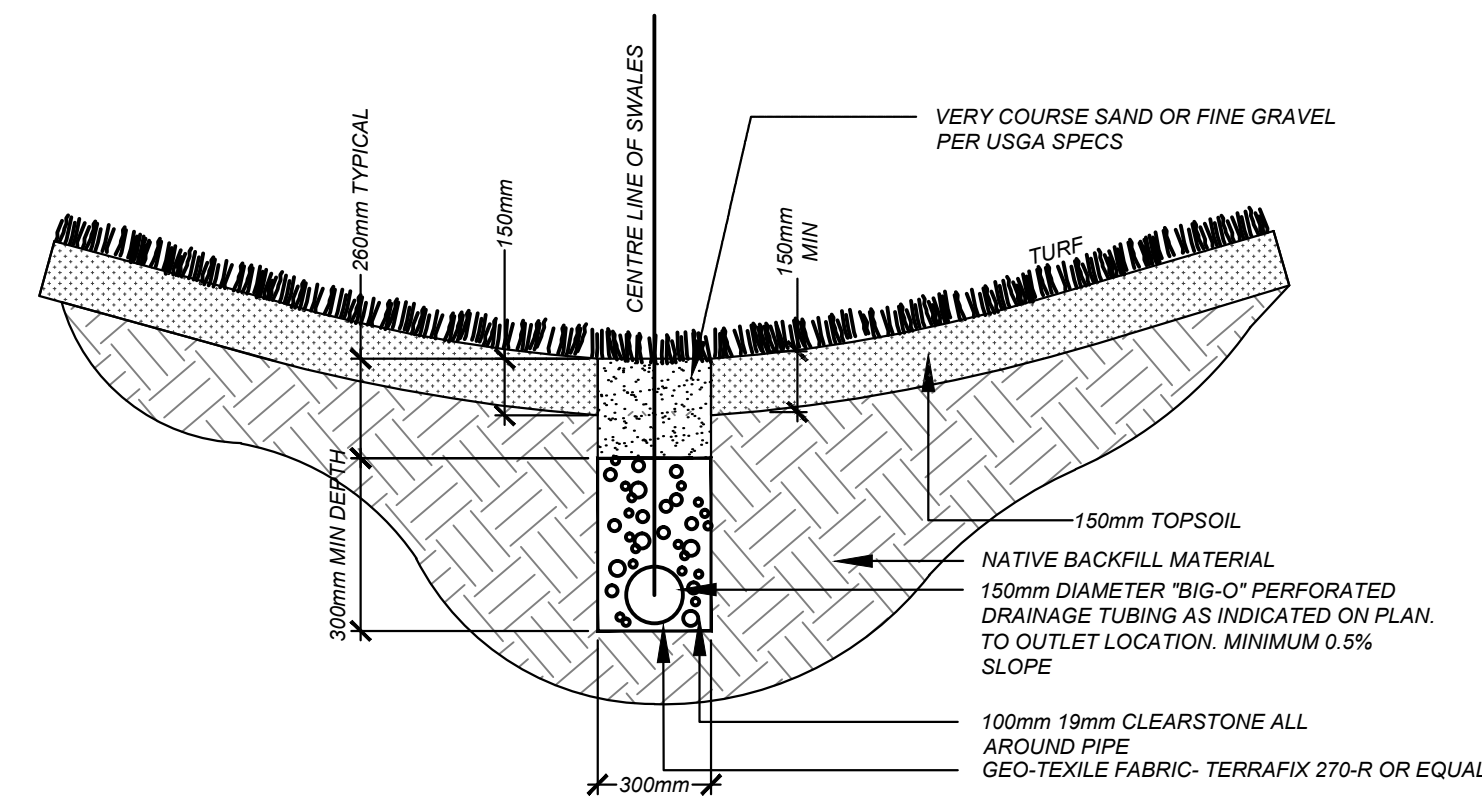
2 ASPHALT PAVING DETAIL  
L-18

Scale: N.T.S.



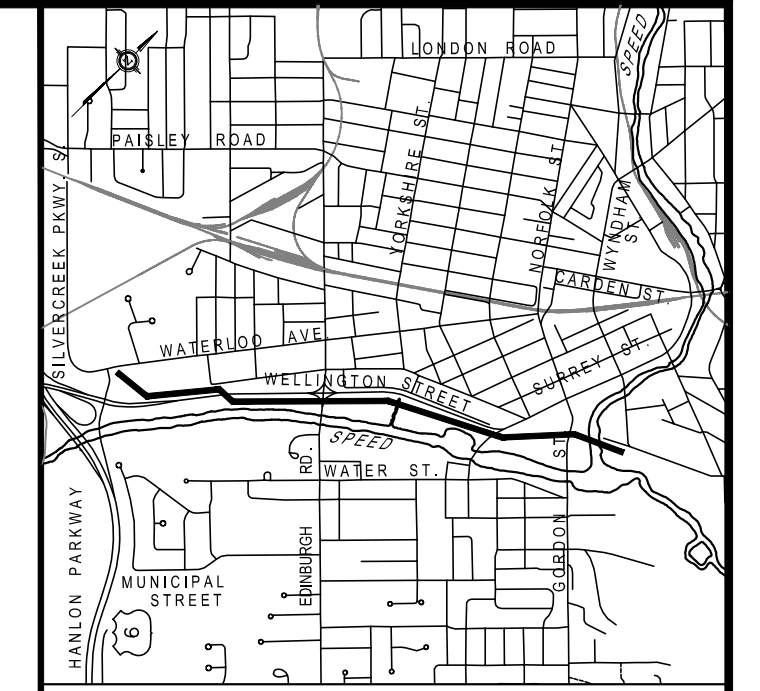
3 LIMESTONE SCREENING TRAIL DETAIL  
L-18

Scale: N.T.S.



4 BIG "O" DETAIL  
L-18

Scale: N.T.S.



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ISSUES/REVISIONS

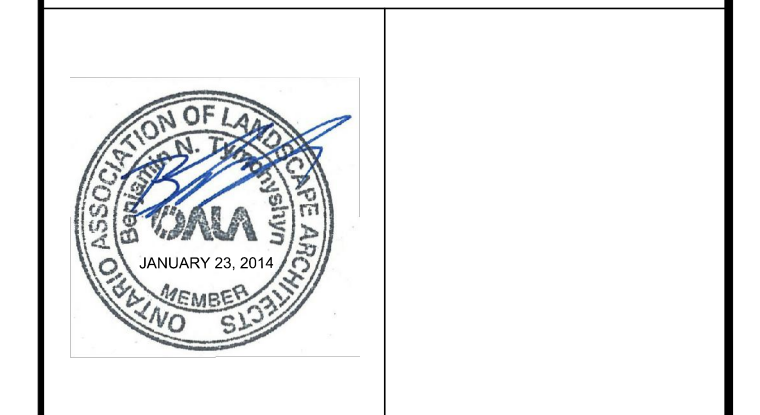
**CITY OF Guelph**

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DATE DRAWN:	AUGUST 2013	
DRAWN BY:	JJZ	CHECKED BY: B.T.P.M.
CONSULTANT DRAWING No.	L18	
CITY CONTRACT No.	12-145	
CITY REFERENCE No.		REV.

FILE NAME: L:\Jobs\2012\12-145-108-001 York Trunk Sewer & Paisley-Clythe Watermain Landscape L-18 PRINTED ON: Wednesday, 07/22/2014  
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