

# **DRAFT NATURAL SCIENCES REPORT – EXISTING CONDITIONS**

## **JARVIS STREET STREETScape IMPROVEMENT MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**

*prepared for:*

**iTRANS CONSULTING INC.  
AND  
THE CITY OF TORONTO**

*prepared by:*



environmental research associates

**SEPTEMBER 2007**

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## 1.0 INTRODUCTION

The City of Toronto is conducting a Municipal Class Environmental Assessment (MEA 2000) to develop streetscape improvement plans, including lane modifications along Jarvis Street from Bloor Street East to Queen Street East, in the City of Toronto (Figure 1). iTRANS Consulting Inc. is conducting the study on behalf of the City of Toronto. LGL Limited, as a sub-consultant to iTRANS, is providing natural sciences services. This Natural Science Report documents the results of data collection and analysis and forms an appendix to the Environmental Study Report.



FIGURE 1. KEY PLAN OF THE STUDY AREA

## 2.0 EXISTING CONDITIONS

The following discussion outlines the existing environmental conditions within the study area and identifies natural heritage areas and/or features of environmental sensitivity and/or significance.

### 2.1 Physiography and Soils

The study area is located within the Iroquois Plain physiographic region, a well-drained sloping sand plain that extends around the western part of Lake Ontario, from the Niagara River to the Trent River. This physiographic region is a lowland bordering Lake Ontario, which was inundated in late Pleistocene times by a body of water known as Lake Iroquois (Chapman and Putnam 1984). The soil is largely developed upon red clay derived from the underlying Queenston shale. This soil is heavy in texture and of low permeability.

### 2.2 Aquatic Habitats and Communities

The study area falls within the Don River watershed. No watercourses that directly support fish habitat are located within the project limits. A number of historic watercourses were located within the project limits including: Crookshank Creek, a tributary of the Don River located between Gerrard Street and Carleton Street; Moss Park Creek, a tributary of Taddle Creek located between Shuter Street and Dundas Street; and, Taddle Creek located at Queen Street. These streams, enclosed in the 1800s, now flow to the Don River and Lake Ontario through the storm sewer system.

### 2.3 Vegetation and Vegetation Communities

The geographical extent, composition, structure and function of vegetation communities were identified through air photo interpretation and field investigations. Air photos were interpreted to determine the limits and characteristics of vegetation communities. A reconnaissance level field investigation of natural/semi-natural vegetation was conducted within the study area by LGL on August 14, 2007. The investigation included vegetation communities adjacent to Jarvis Street from Queen Street East to Bloor Street.

Vegetation communities were classified according to the *Ecological Land Classification for Southern Ontario: First Approximation and Its Application* (Lee *et al.* 1998). The community was sampled using a plotless method for the purpose of determining general composition and structure of the vegetation. Plant species status was reviewed for Ontario (Oldham 1999), Toronto (Varga *et al.* 2000) and for the Toronto Region Conservation Authority (TRCA 2003a). Vascular plant nomenclature follows Newmaster *et al.* (1998), with a few exceptions that have been updated to Newmaster *et al.* (2005).

A detailed inventory of specimen trees located along Jarvis Street was conducted by a Certified Arborist using differential GPS surveying equipment to pin-point tree locations. Data on location, species type, diameter-at-breast height (DBH) (1.37 m from the ground), condition (good, fair or poor), setback from the curb, drip line, and City of Toronto Tree Category were recorded and mapped. Tree and shrub locations are delineated in Figure 2 and described in Appendix A.

[Figure 2: Tree Resources]

### 2.3.1 Vegetation Communities

All of the vegetation within the study area is of anthropogenic origin, resulting from existing residential, commercial, institutional and recreational land use. Allan Gardens Conservatory, Jarvis Street Collegiate Institute and Moss Park Armory are located within the study area. The majority of the study area land use consists of retail establishments, restaurants and apartment buildings. There are no vegetation communities present that are sufficiently large enough to be classified according to the *Ecological Land Classification for Southern Ontario* (Lee *et al.* 1998).

#### Cultural Features

Ornamental plantings of trees and shrubs are found along the right-of-way within the study area. These trees are either located immediately adjacent to the road or 5 to 9 m from the road within mowed lawn or flower beds.

#### Parkland

The Allan Gardens Conservatory is located along Jarvis Street and has the largest cluster of trees within the study area. This park consists of a mixture of scattered sugar maple (*Acer saccharinum* ssp. *saccharinum*), Freeman's maple (*Acer saccharinum*), little leaf linden (*Tilia cordata*) and European beech (*Fagus sylvatica*). The grounds consist of manicured grass with scattered flowerbeds containing ornamental plantings.

### 2.3.2 Roadside Trees & Shrubs

Jarvis Street between Bloor Street and Queen Street is heavily urbanized with few remaining natural heritage features. Urban trees and human tolerant wildlife survive along Jarvis Street and in adjacent park lands. Tree cover is scarce and typically consists of ornamental and exotic species. The mature, ornamental trees present form an integral part of the City of Toronto's "Urban Forest" and are an essential component of the landscape. These urban trees have several ecological and amenity functions including: providing habitat for wildlife, producing shade, producing oxygen through respiration, enhancing air quality, stabilizing soil, retaining rainfall, and providing aesthetically appealing landscaping. The alternative designs for Jarvis Street will need to consider protecting existing trees and incorporation of these trees into the streetscape design.

Tree condition was assessed on standard tree health measures based on Trunk Integrity, Crown Structure, and Crown Vigour. The majority of the trees found within the study area consisted of introduced species, including Norway maple (*Acer platanoides*), tree-of-heaven (*Ailanthus altissima*), little leaf linden, and a honey locust variety (*Gleditsia triacanthos* var. *inermis* 'shademaster'). Tree size ranged between < 10 cm in DBH upwards to 96 cm, with the majority of the trees ranging in size from 20 to 40 cm in DBH. There were no significant, rare or threatened species found within the study site.

A summary of these tree and shrub species is presented in Appendix B and their locations are delineated in Figure 2.

### 2.3.3 Flora

To date, a total of 39 vascular plant taxa have been recorded within the study area. Twenty-six (26) taxa, or 66.6 percent of the recorded flora, are considered introduced and non-native to Ontario. A list of vascular plants identified within the study area is presented in Table 1.

Plant species status was reviewed for the City of Toronto (Varga *et al.* 2000), Toronto and Region Conservation Authority (TRCA 2003a) and Ontario (NHIC 2007). No plant species considered rare, threatened or endangered (R, T, or E) were noted during field investigations.

**TABLE 1.**  
**WORKING VASCULAR PLANT CHECKLIST OF THE STUDY AREA**

Scientific Name	Common Name	GRank	SRank	Local Status	ROW	Parkland
<b>GINKGOACEAE</b>	<b>GINKGO FAMILY</b>					
* <i>Ginkgo biloba</i>	maiden-hair tree				X	
<b>PINACEAE</b>	<b>PINE FAMILY</b>					
* <i>Picea pungens</i>	Colorado spruce	G5	SE1		X	
* <i>Pinus nigra</i>	Austrian pine	G?	SE2		X	X
<b>CUPRESSACEAE</b>	<b>CEDAR FAMILY</b>					
<i>Juniperus communis</i> cv.	common juniper	G5	S5	R <sup>1</sup> , U <sup>2</sup>	X	
<i>Juniperus virginiana</i> cv.	red cedar	G5T	S5		X	
<i>Thuja occidentalis</i> cv.	eastern white cedar	G5	S5		X	
<b>TAXACEAE</b>	<b>YEW FAMILY</b>					
* <i>Taxus cuspidata</i>	Japanese Yew				X	X
<b>MAGNOLIACEAE</b>	<b>MAGNOLIA FAMILY</b>					
* <i>Magnolia</i> ssp.	cultivated magnolia				X	X
<b>BERBERIDACEAE</b>	<b>BARBERRY FAMILY</b>					
* <i>Berberis thunbergii</i>	Japanese barberry	G?	SE5		X	
<b>ULMACEAE</b>	<b>ELM FAMILY</b>					
* <i>Ulmus glabra</i>	Scotch elm	G?	SE1		X	
* <i>Ulmus pumila</i>	Siberian elm	G?	SE3		X	
<b>MORACEAE</b>	<b>MULBERRY FAMILY</b>					
* <i>Morus alba</i>	white mulberry	G?	SE5		X	X
<b>FAGACEAE</b>	<b>BEECH FAMILY</b>					
* <i>Fagus sylvatica</i>	European beech					X
* <i>Quercus robur</i>	English oak	G?	SE1		X	
<i>Quercus rubra</i>	red oak	G5	S5		X	
<b>TILIACEAE</b>	<b>LINDEN FAMILY</b>					
* <i>Tilia cordata</i>	little leaf linden	G?	SE1		X	X
<b>HYDRANGEACEAE</b>	<b>HYDRANGEA FAMILY</b>					
* <i>Hydrangea</i> ssp.	cultivated hydrangea	G?	SE1		X	
<b>ROSACEAE</b>	<b>ROSE FAMILY</b>					
* <i>Malus baccata</i>	Siberian crabapple	G?	SE1		X	
<i>Rosa</i> ssp.	rose				X	X
* <i>Spiraea japonica</i>	Japanese meadow-sweet	G5	SE1		X	X
<b>FABACEAE</b>	<b>PEA FAMILY</b>					
<i>Gleditsia triacanthos</i> var. <i>inermis</i>	honey locust				X	
* <i>Robinia pseudo-acacia</i>	black locust	G5	SE5		X	
<b>CORNACEAE</b>	<b>DOGWOOD FAMILY</b>					
<i>Cornus</i> ssp.	variegated dogwood				X	
<b>CELASTRACEAE</b>	<b>STAFF-TREE FAMILY</b>					
* <i>Euonymus fortunei</i>	euonymus	G?	SE1		X	

**TABLE 1.**  
**WORKING VASCULAR PLANT CHECKLIST OF THE STUDY AREA**

Scientific Name	Common Name	GRank	SRank	Local Status	ROW	Parkland
<b>VITACEAE</b>	<b>GRAPE FAMILY</b>					
<i>Parthenocissus inserta</i>	inserted Virginia-creeper	G5	S5		X	
<b>HIPPOCASTANACEAE</b>	<b>BUCKEYE FAMILY</b>					
* <i>Aesculus hippocastanum</i>	horse chestnut	G?	SE2		X	X
<b>ACERACEAE</b>	<b>MAPLE FAMILY</b>					
* <i>Acer platanoides</i>	Norway maple	G?	SE5		X	X
<i>Acer saccharum ssp. saccharum</i>	sugar maple	G5T?	S5		X	X
<i>Acer saccharinum</i>	silver maple	G5	S5		X	X
<i>Acer X freemanii</i>	Freeman's maple					X
<b>SIMAROUBACEAE</b>	<b>AILANTHUS FAMILY</b>					
* <i>Ailanthus altissima</i>	tree-of-heaven	G?	SE5		X	
<b>PLANTAGINACEAE</b>	<b>PLANTAIN FAMILY</b>					
* <i>Plantago major</i>	common plantain	G5	SE5		X	
<b>OLEACEAE</b>	<b>OLIVE FAMILY</b>					
* <i>Forsythia viridissima</i>	golden-bells	G?	SE2		X	
<i>Fraxinus excelsior</i>	European Ash	G?	SE2		X	X
<i>Fraxinus pennsylvanica</i>	red ash	G5	S5		X	
<b>ASTERACEAE</b>	<b>ASTER FAMILY</b>					
* <i>Taraxacum officinale</i>	common dandelion	G5	SE5		X	X
<b>POACEAE</b>	<b>GRASS FAMILY</b>					
<i>Poa pratensis ssp. pratensis</i>	Kentucky bluegrass	G5T	S5		X	X
<b>LILIACEAE</b>	<b>LILY FAMILY</b>					
* <i>Hemerocallis fulva</i>	orange day-lily	G?	SE5		X	X

X Present

\* Introduced Species

GRANK – Global Rank:

G1 – Extremely Rare

G2 – Very Rare

G3 – Rare to Uncommon

G4 - Common

G5 – Very Common

GH – Historic Record

GU – Status Uncertain

GX – Globally Extinct

G? – Uncertain Rank

T – Rank for Subspecies or Variety

SRANK - Provincial Rank:

S1 - Critically imperiled

S2 - Imperiled

S3 - Vulnerable

S4 - Apparently Secure

S5 – Secure

SE - Exotic

SX - Presumed Extirpated

SH - Possibly Extirpated

SNR - Unranked—

SU - Unrankable

SNA - Not Applicable

S#S# - Range Rank

Local Status:

Level of Conservation Concern in

Toronto<sup>1</sup> and GTA<sup>2</sup> (Varga *et al.* 2000)

R - Rare

U - Uncommon

## **2.4 Wildlife and Wildlife Habitat**

Field investigations along Jarvis Street between Bloor Street East to Queen Street East were conducted within and directly adjacent to the right-of-way on July 24, 2007 to document wildlife and wildlife habitat, and to characterize the nature, extent and significance of animal usage within the study limits. Direct observations, calls, tracks, scats and runways were used to record wildlife present within the study area. Weather conditions on July 24, 2007 were 15°C with a mix of sun and cloudy skies.

### **2.4.1 Wildlife Habitat**

The entire study area along Jarvis Street consists of highly disturbed and human impacted habitat. The study area is situated within the urbanized downtown district and therefore contains very little natural heritage features. Wildlife habitat was limited to a small treed park, Allan Gardens Conservatory located just southeast of the Jarvis Street/Carleton Street intersection. The impacted area mentioned above supports minimal habitat diversity and consequently supports few wildlife species.

### **2.4.2 Fauna**

Four species of wildlife could be verified in the study area based on field observations and the majority of these recordings came from the presence of resident bird species. However, by combining the habitat types found in the study area and with the secondary source information that described the wildlife previously recorded within this region, the potential number of wildlife species for the area can be increased to eleven species.

Four species of birds were observed in the study area, and a further four species are likely to inhabit the study area based on habitat type and secondary source information. No mammal species were directly observed nor was any evidence of mammals observed from signs such as tracks, feces and runways during field investigations. Based on habitat types and secondary source information, three species likely inhabit the study area. A summary of wildlife documented in the study area during field investigations and through secondary source information is presented in Table 2.

### **2.4.3 Species at Risk**

Background information indicates that of the eleven wildlife species recorded within the study area, none are protected federally under COSEWIC (*Committee on the Status of Endangered Wildlife in Canada*) or provincially under COSSARO (*Committee on the Status of Species at Risk in Ontario*). Three of the bird species recorded are protected under the *Migratory Birds Convention Act* (MBCA). Two of the three mammal species are offered protection under the *Fish and Wildlife Conservation Act* (FWCA). No terrestrial wildlife listed under the *Species at Risk Act* or the *Endangered Species Act* were recorded in the study area.

## **2.5 Designated Natural Areas**

Designated natural areas include areas identified for protection by the OMNR, TRCA and upper and lower tier municipalities. There are no Environmentally Significant/Sensitive Areas (ESAs), Evaluated Wetlands or Areas of Natural and Scientific Interest (ANSIs) within or adjacent to the study area. According to the City of Toronto Official Plan (2006) there are no designated Natural Heritage areas within the study area.

**TABLE 2.  
WILDLIFE SPECIES DOCUMENTED IN THE STUDY AREA BY LGL AND OTHERS**

<b>Wildlife</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>COSEWIC</b>	<b>OMNR</b>	<b>Local</b>	<b>Legal Status</b>	<b>Others</b>
<b>Birds</b>	<i>Larus delawarensis</i>	Rig-billed Gull				MBCA	
	<i>Columba livia</i>	Rock Dove					
	<i>Zenaida macroura</i>	Mourning Dove				MBCA	*
	<i>Turdus migratorius</i>	American Robin				MBCA	*
	<i>Sturnus vulgaris</i>	European Starling					
	<i>Quiscalus quiscula</i>	Common Grackle					*
	<i>Passer domesticus</i>	House Sparrow					
<b>Mammals</b>	<i>Procyon lotor</i>	Raccoon				FWCA(F)	*
	<i>Mus Musculus</i>	House Mouse					*
	<i>Mephitis mephitis</i>	Striped Skunk				FWCA(F)	*

\* Species recorded by others within the secondary study area.

COSEWIC - Committee on the Status of Endangered Wildlife in Canada:

END - Endangered  
THR - Threatened  
SC - Special Concern

OMNR - Ontario Ministry of Natural Resources:

END - Endangered  
THR - Threatened  
SC - Special Concern

Legal Status:

MBCA - Migratory Birds Convention Act  
ESA - Endangered Species Act  
SARA - Species at Risk Act  
FWCA - Fish and Wildlife Conservation Act: (P) Protected Species, (G) Game species, or (F) Furbearing mammals

Local Status

BSC – Bird Studies Canada species of conservation concern

## 6.0 REFERENCES

- Cadman, M.D. et al. 1987. *Atlas of the Breeding Birds of Ontario*. University of Waterloo Press, Don Mills, Ontario.
- Chapman, L.J. and D.F. Putnam. 1984. *The Physiography of Southern Ontario, 3<sup>rd</sup> Edition*. Ontario Geological Survey Special Volume 2.
- City of Toronto. 2006. *City of Toronto Official Plan*.
- Committee on the Status of Endangered Wildlife in Canada. 2003. *Canadian Species at Risk*. Ottawa, Ontario.
- Courtier, A. 1999. *Conservation Priorities for the Birds of Southern Ontario*. Unpublished Bird Studies Canada Report. 17pp.
- Crow, G.E. and C.B. Hellquist. 2000. *Aquatic and Wetland Plants of Northeastern North America. Volume One Pteridophytes, Gymnosperms, and Angiosperms: Dicotyledons*. The University of Wisconsin Press. Madison, Wisconsin.
- Crow, G.E. and C.B. Hellquist. 2000. *Aquatic and Wetland Plants of Northeastern North America. Volume Two Angiosperms: Monocotyledons*. The University of Wisconsin Press. Madison, Wisconsin.
- Dobbyn, J.S. 1994. *Atlas of the Mammals of Ontario*. Federation of Ontario Naturalists, Don Mills, Ontario.
- Farrar, J.L. 1995. *Trees in Canada*. Fitzhenry and Whiteside Limited and the Canadian Forest Service. Markham, Ontario. 502 pp.
- Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. New York Botanical Garden Press. New York.
- Havinga, D. and the Ontario Invasive Plants Working Group. 2000. *Sustaining Biodiversity: A Strategic Plan for Managing Invasive Plants in Southern Ontario*. City of Toronto. Society for Ecological Restoration, Ontario. Ecological Outlook.
- Holmgren, N.H., P.K. Holmgren, R.A. Jess, K.M. McCauley, and L. Vogel. 2004. *Illustrated Companion to Gleason and Cronquist's Manual. Illustrations of the Vascular Plants of Northeastern United States and Adjacent Canada*. New York Botanical Garden Press. New York.
- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. *Ecological Land Classification for Southern Ontario: First Approximation and Its Application*. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02. North Bay, Ontario. 225 pp.
- Natural Heritage Information Centre. 1997. *Southern Ontario Vegetation Communities List*. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. Last revised January 1997.
- Natural Heritage Information Centre. 2007. *Lists of Ontario Plants, Birds, Reptiles, Amphibians, Mammals, Fish and Crustaceans*. Peterborough, Ontario.
- Natural Resources, Ministry of. *Natural Heritage Information Centre website* (<http://www.mnr.gov.on.ca/MNR/nhic/nhic.cfm>). Ministry of Natural Resources. Peterborough, Ontario.

- Newcomb, L. 1977. *Newcomb's Wildflower Guide*. Little, Brown and Company. Boston, Massachusetts. 490 pp.
- Newmaster 2005. Flora Ontario - Integrated Botanical Information System (FOIBIS) 2006 species scientific names obtained March 2007 from the University of Guelph.
- Oldham, M.J. and W.F. Weller. 2000. *Ontario Herpetofaunal Atlas*. Natural Heritage Information Centre, Ontario Ministry of Natural Resources.
- Oldham, M.J. 1999. *Natural Heritage Resources of Ontario: Rare Vascular Plants*. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. 56 pp.
- Ontario Breeding Bird Atlas. 2005. ([www.birdsontario.org/atlas/atlasmain.html](http://www.birdsontario.org/atlas/atlasmain.html)).
- Ontario Ministry of Natural Resources. 2007. *Special Concern, Threatened, Endangered, Extirpated or Extinct Species of Ontario*. Species at Risk Project. Peterborough, Ontario.
- Ontario Ministry of Natural Resources. 2000. *Significant Wildlife Habitat Technical Guide*. Peterborough, Ontario.
- Ontario Ministry of Natural Resources. 2003. *Vulnerable, Threatened, Endangered, Extirpated or Extinct Species of Ontario*. Species at Risk Project. Peterborough, Ontario.
- Soper, J.H. and M.L. Heimburger. 1982. *Shrubs of Ontario*. The Royal Ontario Museum. Toronto, Ontario. 495 pp.
- Toronto Region Conservation Authority. 2003a. Flora Scores and Ranks.
- Toronto Region Conservation Authority. 2003b. Vegetation Community Scores.
- Varga, S., D. Leadbeater, J. Webber, J. Kaiser, B. Crins, J. Kamstra, D. Banville, E. Ashley, G. Miller, C. Kingsley, C. Jacobsen, K. Mewa, L. Tebby, E. Mosley and E. Zajc. 2000. *Distribution and Status of the Vascular Plants of the Greater Toronto Area*. Ontario Ministry of Natural Resources. Aurora, Ontario. 103 pp.
- Voss, E.G. 2001. *Michigan Flora. A Guide to the Identification and Occurrence of the Naturalized Seed-plants of the State. Part I Gymnosperms and Monocots*. Cranbrook Institute of Science Bulletin 55 and University of Michigan Herbarium 1972. Edwards Brothers, Inc.
- Voss, E.G. 2001. *Michigan Flora. A Guide to the Identification and Occurrence of the Naturalized Seed-plants of the State. Volume 2 Dicots (Saururaceae - Cornaceae)*. Cranbrook Institute of Science Bulletin 59 and University of Michigan Herbarium 1985. Edwards Brothers, Inc.
- Voss, E.G. 1996. *Michigan Flora. A Guide to the Identification and Occurrence of the Naturalized Seed-plants of the State. Volume 3 Dicots (Pyrolaceae - Compositae)*. Cranbrook Institute of Science Bulletin 61 and University of Michigan Herbarium 1996. Edwards Brothers, Inc.

**APPENDIX A**  
**PHOTOGRAPHIC RECORD**

**APPENDIX B**  
**TREE INVENTORY SUMMARY TABLE**

**APPENDIX B.  
TREE AND SHRUB INVENTORY SUMMARY TABLE**

ID	Location	Species	DBH (cm)	Condition	Distance From Curb (m)	Drip Line	City of Toronto Tree Category*	Notes
W1	550 Jarvis St.	Norway maple ( <i>Acer platanoides</i> )	26	F	4	6	5	Crown Structure - fair: pruned to a globe (pollarding)
W2	550 Jarvis St.	Norway maple	15	F	4	6	5	Crown Structure - fair: pruned to a globe (pollarding)
W3	550 Jarvis St.	Norway maple	21	F	4	6	5	Crown Structure - fair: pruned to a globe (pollarding)
W4	550 Jarvis St.	Norway maple	23	F	4	6	5	Crown Structure - fair: pruned to a globe (pollarding)
W5	550 Jarvis St.	Norway maple	25	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding)
W6	550 Jarvis St.	Norway maple	15	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding)
W7	550 Jarvis St.	Norway maple	24	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding); dieback
W8	550 Jarvis St.	Norway maple	21	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding)
W9	550 Jarvis St.	Norway maple	20	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding); dieback
W10	550 Jarvis St.	Norway maple	22	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding); dieback
W11	550 Jarvis St.	Norway maple	16	F	4	3	5	Crown Structure - fair: pruned to a globe (pollarding)
W12	550 Jarvis St.	tree-of-heaven ( <i>Ailanthus altissima</i> )	20	G	9	7	NA	
W13	105 Isabella St.	Norway maple	27	F	4	3	5	
W14	105 Isabella St.	Norway maple	22	F	4	4	5	Crown Structure - fair: pruned to a globe (pollarding)
W15	105 Isabella St.	Norway maple	26	F	4	4	5	Crown Structure - fair: pruned to a globe (pollarding)
W16	105 Isabella St.	Norway maple	21	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding)
W17	105 Isabella St.	Norway maple	22	F	4	5	5	Crown Structure - fair: pruned to a globe (pollarding)
W18	105 Isabella St.	Norway maple	29	G	4	7	5	
W19		Norway maple	19	F	4	4	5	Crown Structure - fair: pruned to a globe (pollarding); dieback
W20		Norway maple	19	F	4	2	5	Crown Structure - fair: pruned to a globe (pollarding); dieback
W21		Norway maple	15	F	4	3	5	Crown Structure - fair: pruned to a globe (pollarding)
W22		Norway maple	20	P	4	4	5	Crown Structure - fair: pruned to a globe (pollarding); lots of dieback
W23		Norway maple	21	F	4	4	5	
W24		red oak ( <i>Quercus rubra</i> )	22	G	4	5	5	small amount of dieback
W25		silver maple ( <i>Acer saccharinum</i> )	~60 -70	G	8	10	2	
W26		Norway maple	15	G	4	5	5	
W27		little leaf linden ( <i>Tilia cordata</i> )	48	G	8	5	2	
W28		little leaf linden	46	G	8	4	2	
W29		little leaf linden	48	G	8	4	2	
W30		little leaf linden	46	G	8	4	2	

**APPENDIX B.  
TREE AND SHRUB INVENTORY SUMMARY TABLE**

ID	Location	Species	DBH (cm)	Condition	Distance From Curb (m)	Drip Line	City of Toronto Tree Category*	Notes
W31		little leaf linden	58	G	6	6	5	
W32		little leaf linden	54	G	8	5	2	
W33	440 Jarvis St.	Scots pine ( <i>pinus sylvestris</i> )	21	G	7	3	NA	
W34	440 Jarvis St.	Scots pine	31	G	7	4	2	
W35	440 Jarvis St.	silver maple	54	F	6	10	5	trunk Integrity - Fair: scarring on trunk and exposed roots
W36	440 Jarvis St.	black locust ( <i>Robinia pseudo-acacia</i> )	94	F-G	6	9	5	
W37		red ash ( <i>Fraxinus pennsylvanica</i> )	15	G	4	4	5	ash flower gall
W38		red ash	18	G	4	5	5	
W39	414 Jarvis St.	Norway maple	21	G	4	5	5	
W40	414 Jarvis St.	Norway maple	20	F-G	4	2	5	
W41	412 Jarvis St.	Norway maple	22	G	4	3	5	
W42	412 Jarvis St.	Norway maple	22	G	4	6	5	
W43	410 Jarvis St.	Norway maple	26	G	4	2	5	
W44	410 Jarvis St.	Norway maple	22	G	4	4	5	
W45		red maple ( <i>Acer rubrum</i> )	23	G	6	4	5	
W46	354 Jarvis St.	red ash	21	G	4	5	5	
W47	354 Jarvis St.	red ash	16	G	4	3	5	
W48	340 Jarvis St.	scotch elm ( <i>Ulmus glabra</i> )	40	G	7	8	2	
W49	338 Jarvis St.	red oak	20	G	4	5	5	
W50	336 Jarvis St.	red oak	15	G	4	2	5	
W51	314 Jarvis St.	Ornamental cherry species ( <i>Prunus</i> sp.)	26	G	7	4	NA	Trunk Integrity: tree has a small lean
W52	314 Jarvis St.	tree-of-heaven	56	G	5	8	5	
W53	314 Jarvis St.	tree-of-heaven	34	G	5	8	5	some scarring on trunk
W54		honey locust ( <i>Gleditsia triacanthos</i> var. <i>inermis</i> 'shademaster')	48	G	7	10	2	
W55	280 Jarvis St.	tree-of-heaven	30	G	7	8	2	
W56	280 Jarvis St.	tree-of-heaven	66	G	8	10	2	
W57	280 Jarvis St.	tree-of-heaven	39	G	7	10	2	some dieback
W58	280 Jarvis St.	tree-of-heaven	31	G	7	11	2	some dieback
W59	280 Jarvis St.	tree-of-heaven	29	G	7	10	NA	some dieback

**APPENDIX B.  
TREE AND SHRUB INVENTORY SUMMARY TABLE**

ID	Location	Species	DBH (cm)	Condition	Distance From Curb (m)	Drip Line	City of Toronto Tree Category*	Notes
W60	280 Jarvis St.	tree-of-heaven	22	F	6	6	5	Crown Structure - Fair: crown is split very wide (structural weakness)
W61	280 Jarvis St.	black locust	56	F	6	7	5	
W62	262 Jarvis St.	ginkgo ( <i>Ginkgo biloba</i> )	53	G	5	7	5	
W63	262 Jarvis St.	ginkgo	27	G	5	5	5	
W64	262 Jarvis St.	ginkgo	35	G	5	5	5	
W65	262 Jarvis St.	ginkgo	17	G	5	4	5	
W66	250 Jarvis St.	honey locust	19	G	1	5	5	planted in a large concrete box above sidewalk; some wilt
W67	240 Jarvis St.	Norway maple	16	F	1	4	5	planted in a large concrete box above sidewalk; wilt dying
W68	222 Jarvis St.	little leaf linden	39	F	5	3	5	
W69	222 Jarvis St.	little leaf linden	16	G	5	3	5	
W70	161 Dundas St.	red ash	16	F-G	1	2	5	Crown Structure - Fair: dieback; natural branch scaring on trunk
W71	161 Dundas St.	red ash	16	F-G	1	3	5	Crown Structure - Fair: dieback; natural branch scaring on trunk
W72	161 Dundas St.	red ash	18	F-G	1	3	5	Crown Structure - Fair: dieback; natural branch scaring on trunk
W73	190 Jarvis St.	red ash	24	G	1	5	5	natural branch scaring on trunk
W74		red ash	26	G	1	6	5	natural branch scaring on trunk
W75		red ash	23	F-G	1	6	5	natural branch scaring on trunk
W76		red ash	17	G	1	6	5	
W77	178 Jarvis St.	red ash	41	G	1	5	5	
W78	178 Jarvis St.	red ash	16	G	1	3	5	
W79	178 Jarvis St.	red ash	15	G	1	3	5	
W80	178 Jarvis St.	tree-of-heaven	48	G	6	5	5	
E1	130 Queen St.	red ash	52	G	13	11	2	
E2	130 Queen St.	red ash	36	G	13	6	2	
E3	130 Queen St.	red ash	45	F-G	13	6	2	
EC11	131 Queen St.	red ash	~20-40	F-G	13	5-12	2	
E4	130 Queen St.	red ash	41	G	13	7	2	
E5	130 Queen St.	red ash	46	G	13	8	2	
E6		little leaf linden	21	F	5	3	5	
E7	207 Jarvis St.	little leaf linden	34	G	5	4	5	
E8	209 Jarvis St.	little leaf linden	39	G	5	7	5	
E9	213 Jarvis St.	little leaf linden	41	G	5	5	5	
E10	217 Jarvis St.	little leaf linden	30	G	5	4	5	
E11	219 Jarvis St.	American basswood ( <i>Tilia americana</i> )	35	G	5	5	5	

**APPENDIX B.  
TREE AND SHRUB INVENTORY SUMMARY TABLE**

ID	Location	Species	DBH (cm)	Condition	Distance From Curb (m)	Drip Line	City of Toronto Tree Category*	Notes
E12	225 Jarvis St.	red ash	32	G	10	10	2	
E13	225 Jarvis St.	red ash	23	G	10	6	N/A	
E14	225 Jarvis St.	little leaf linden	27	G	5	6	5	
E15	225 Jarvis St.	tree-of-heaven	16	G	7	3	NA	
E16	225 Jarvis St.	tree-of-heaven	38	G	7	9	2	
E17	225 Jarvis St.	tree-of-heaven	35	G	7	9	2	
E18	225 Jarvis St.	tree-of-heaven	19	G	7	7	NA	
E19	225 Jarvis St.	tree-of-heaven	14, 13	G	7	6	NA	
E20	225 Jarvis St.	DEAD	19	P	5	4	5	tree is dead
E21		Norway maple	22	P	7	3	NA	Crown Vigor - Poor: major dieback
EC12	261 Jarvis St.	10 red ash	<15	F-G	5	3-5	5	10 trees
EC13	279 Jarvis St.	12 Callery pear ( <i>Pyrus calleryana</i> )	<10	P-F	<1	<1	5	12 trees; not enough water - planted in sidewalk
E22	287 Jarvis St.	red ash	24	G	7	7	NA	
E23	287 Jarvis St.	red ash	24	G	7	7	NA	
E24	287 Jarvis St.	red ash	18	G	7	3	NA	
E25	227 Jarvis St.	honey locust	37	G	6	10	5	
E26	228 Jarvis St.	honey locust	33	G	6	8	5	
E27	229 Jarvis St.	honey locust	32	F	6	7	5	Trunk Integrity - Fair: large open scar on trunk
E28	230 Jarvis St.	honey locust	38	G	6	9	5	
E29	231 Jarvis St.	Norway maple	21	F	6	4	5	Crown Structure - fair: pruned to a globe (pollarding)
E30	311 Jarvis St.	Norway maple	26	F	6	4	5	Crown Structure - fair: pruned to a globe (pollarding)
E31	311 Jarvis St.	Norway maple	25	F	6	3	5	Crown Structure - fair: pruned to a globe (pollarding)
E32	312 Jarvis St.	columnar English oak ( <i>Quercus robur</i> 'Fastigiata')	37, 14	F	6	3	5	Crown Vigor - Fair: lots of dieback in crown
E33	19 Horticultural Ave.	European beech ( <i>Fagus sylvatica</i> )	96	F	8	11	3	Trunk Integrity - Fair: signs of decay on trunk
E34	19 Horticultural Ave.	Norway maple	21	G	8	4	3	
E35	19 Horticultural Ave.	tree-of-heaven	74	G	8	10	3	
E36	19 Horticultural Ave.	little leaf linden	61	G	8	8	3	long compartmentalized scar on trunk
E37	19 Horticultural Ave.	little leaf linden	58	G	8	8	3	compartmentalized scar on trunk
E38	19 Horticultural Ave.	little leaf linden	61	G	8	8	3	

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TREE AND SHRUB INVENTORY SUMMARY TABLE**

ID	Location	Species	DBH (cm)	Condition	Distance From Curb (m)	Drip Line	City of Toronto Tree Category*	Notes
E39	19 Horticultural Ave.	little leaf linden	48	G	8	6	3	
E40	19 Horticultural Ave.	little leaf linden	42	G	8	6	3	some natural branch scarring on trunk
E41	19 Horticultural Ave.	little leaf linden	54	G	1	6	3	
E42	441 Jarvis St.	Norway maple	31	G	5	6	5	
E43	441 Jarvis St.	Norway maple	27	G	5	6	5	Crown Vigor - Poor: crown is mostly dead
E44		Norway maple	21	P	5	6	5	
E45		Norway maple	25	G	5	5	5	
E46	449 Jarvis St.	Norway maple	29	G	5	6	5	
E47	449 Jarvis St.	Norway maple	14	F-G	5	5	5	Crown Structure - Fair - Good: dead leader
E48	469 Jarvis St.	Norway maple	20	F	5	6	5	Crown Vigor - Fair: some dieback
E49	471 Jarvis St.	Norway maple	28	F	5	6	5	Crown Vigor - Fair: some dieback
E50	471 Jarvis St.	Norway maple	34	G	5	6	5	
E51	471 Jarvis St.	Norway maple	43	G	5	6	5	
E52	471 Jarvis St.	little leaf linden	28	F	7	3	NA	Crown Vigor - Fair: some dieback
E53		Siberian elm	43	G	6	6	5	
E54		Norway maple	53	G	8	7	2	
E55		Siberian elm	78	G	12	11	2	
E56		little leaf linden	61	G	12	6	2	
E57		red oak	18	F-G	5	4	NA	Crown Vigor - Fair - Good: some dieback
E58		little leaf linden	59	G	12	8	2	
E59		little leaf linden	63	G	12	9	2	ash flower gall
E60		red ash	20	G	4	3	5	
E61		red oak	22	G	4	3	5	some dieback
E62	545 Jarvis St.	white mulberry ( <i>Morus alba</i> )	~80	G	6	10	5	
E63	545 Jarvis St.	Norway maple	23	G	6	6	5	
E64	545 Jarvis St.	Norway maple	22	G	6	6	5	
E65	545 Jarvis St.	Norway maple	23	G	6	2	5	
E66		red oak	27	G	6	5	5	
E67	561 Jarvis St.	tree-of-heaven	47	P	6		5	dead - hazard
E68	561 Jarvis St.	red ash	17	G	4	5	5	
E69		common juniper ( <i>Juniperus communis</i> )	19	G	6	2	5	
E70		common juniper	20	G	6	2	5	
E71		tree-of-heaven	59	P				dead - hazard
E72		little leaf linden	~60-70	G	8	9	2	
E73		Norway maple	24	F	5	4	5	Crown Structure - Poor - Fair: unbalanced canopy - all to one side; some dieback

**APPENDIX B.  
TREE AND SHRUB INVENTORY SUMMARY TABLE**

ID	Location	Species	DBH (cm)	Condition	Distance From Curb (m)	Drip Line	City of Toronto Tree Category*	Notes
E74		Norway maple	24	P-F	5	5	5	Crown Structure - Poor - Fair: unbalanced canopy - all to one side; some dieback
E75		Norway maple	28	F	5	5	5	
E76		Norway maple	28	P-F	5	3	5	Crown Vigor - Poor - Fair: dieback; wilting; scars on trunk
E77		Norway maple	28	G	5	6	5	
E78		honey locust	30	G	5	7	5	
E79		honey locust	29	G	5	7	5	
E80		honey locust	23	G	5	7	5	
E81		honey locust	27	G	5	6	5	
E82		honey locust	33	G	7	8	2	
E83		honey locust	25	G	7	6	NA	
E84		honey locust	27	G	5	8	5	
E85		honey locust	36	G	5	8	5	
E86		honey locust	27	G	5	8	5	
E87		honey locust	28	G	5	7	5	
E88		honey locust	27	G	5	7	5	
E89		honey locust	31	G	5	7	5	