

## 4. EXISTING AND FUTURE CONDITIONS

This chapter describes the existing and future conditions (without the implications of the Eglinton Crosstown LRT) found along the LRT corridor. The description of existing and future conditions provided a baseline for the generation of alternatives, assessment of environmental impacts and the identification of environmental protection measures and a monitoring plan. The identification of the environmental features (i.e. transportation infrastructure, natural, social and cultural environment) involved collection of primary and secondary sourced data including consultation with technical agencies. This was done in two steps, an inventory and analysis of existing conditions and an investigation as to how these conditions might change in the future. In general, the existing and future conditions can be categorized into the following topics and are presented in the associated sections:

- Natural Environment;
- Social Environment;
- Cultural Environment; and
- Transportation System.

### 4.1 Existing Conditions

#### 4.1.1 Natural Environment

##### 4.1.1.1 Physiography and Drainage

The Eglinton Crosstown LRT corridor is located within the Iroquois Plain and South Slope physiographic region. The Iroquois Plain physiographic region is characterized by shoreline, beach and lake plain deposits associated with the Pleistocene-aged glacial Lake Iroquois. Surficial soil within the corridor is predominantly stratified clays, silt and sand. Deposits of alluvial sand and gravel with minor amounts of clay and silt can be expected in the flood plains of existing rivers and streams, and in the vicinity of glacial lakes and rivers that existed during the Pleistocene. The South Slope physiographic region is underlain by carbonate rich Palaeozoic rock with a variety of glacial deposits overlying the bedrock.

On a regional scale, the topography of the Eglinton Crosstown LRT study area slopes southward towards Lake Ontario. The topography of the study area varies significantly from west to east due to the incision of rivers and streams. For example, the intersection of Eglinton Avenue and Kipling Avenue is at an elevation of approximately 159 metres above sea level (masl) whereas, at the Humber River, ground surface is at an elevation of 108 masl. Further to the east at the intersection of Jane Street, ground surface is about elevation 99 masl. Eastward from that point, ground surface elevations progressively increase to around 180 masl, and then flatten out at that elevation before dropping to around elevation 100 masl at the East Don River; ground surface then progressively rises to about 164 masl at Kennedy Road.

The general direction of drainage and shallow groundwater flow on a local scale is expected to be towards the closest watercourse. Groundwater flow may also be influenced by utility trenches and other subsurface structures that intersect the water table and can only be confirmed by long-term groundwater monitoring data in the study area. There are several suspected former stream channels that are no longer apparent along the LRT corridor. These buried or channelized features may also be areas requiring further attention from a dewatering perspective. The micro drainage system is comprised of ditches in rural sections. Micro drainage in urban sections is comprised of curbs and gutters leading to storm sewers or discharging

directly to surface ditches or watercourses. The existing sewer systems are generally designed to accommodate only minor runoff events for the existing level of development.

The Eglinton Crosstown LRT corridor spans three major watersheds, the Mimico Creek, the Humber River and the Don River (east and west branches). The Toronto and Region Conservation Authority (TRCA) Regulation Limit extends along each of the major watercourses found in the study area including Mimico Creek, Silver Creek, Lower Main Humber River, Black Creek, Lower West Don River, Lower East Don River, Wilson Brook and Massey Creek. The Regulation Limit established under Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) of the *Conservation Authorities Act* allows the TRCA to control development that may affect the control of flooding, erosion, dynamic beaches or pollution of the streams, or the conservation of land.

##### 4.1.1.2 Bedrock and Surficial Geology

The bedrock beneath the study area consists predominantly of blue-grey shale with some limestone, dolostone and siltstone layers or interbeds. Bedrock is expected to be deeper than the maximum depth of excavation/ tunnelling that is proposed. The surficial soil in the study area is predominantly stratified clays, silt and sand. Deposits of alluvial sand and gravel with minor amounts of clay and silt can be expected in the flood plains of existing rivers and streams, and in the vicinity of glacial lakes and rivers that existed during the Pleistocene. Based on the geotechnical information provided for the study area, it appears that the clays, silts and sands may extend to depths of greater than 8 metres.

The naturally deposited soils and fill are typically underlain by hard and very dense clayey and sandy silt till deposits of Wildfield Till and Halton Till. Thin lenses of poorly graded sand and gravel can be found interbedded within these Tills. Glacially derived boulders (generally <1m diameter), originating from igneous and metamorphic rocks of the Canadian Shield, may also be encountered.

Silt and clay deposited in a deep water glacial lake and shallow water sand (Thornccliffe Formation) underlies these sediments to depths of greater than 25 metres. In some areas the total overburden thickness may be in excess of 65 metres. Deposits of beach cobble, sand and gravel, associated with the Pleistocene Lake Iroquois Shoreline, may be encountered along Eglinton Avenue between Royal York and Caledonia Road. Shallow water sand and silty sand deposits associated with Lake Iroquois, can also be found between Royal York Road and Keele Street and between Laird Drive and Bermondsey Road.

In addition to naturally deposited soils, fill has been recorded in geotechnical boreholes at depths of up to 9 metres. The fill has usually been described as sand and silty sand. Fill including industrial and building waste and engineering and landscape fill may also be encountered during excavation in the study area.

A closed landfill is known to be located in the southwest quadrant of the intersection of Eglinton Avenue and Black Creek Drive where silty sand to sand and gravel fill (with variable proportions of foreign material) may be as much as 11 metres deep.

##### 4.1.1.3 Fish and Fish Habitat

Eight watercourses are located along Eglinton Avenue including: the Mimico Creek; the Humber River and two of its tributaries, Silver Creek and Black Creek; the East Don and West Don Rivers and two East Don River tributaries, Wilson Brook and Massey Creek. These watercourses fall under the jurisdiction of TRCA and Ontario Ministry of Natural Resources Aurora District. **Exhibit 150 to 153** presents the location of the watercourses.

Mimico Creek

Mimico Creek flows in a southerly direction across Eglinton Avenue approximately 200 metres east of Highway 427. The watercourse crosses under Eglinton Avenue in a concrete channel, through a bridge. The TRCA characterizes Mimico Creek as a warmwater tolerant fish community.

Silver Creek

Silver Creek, a tributary of the Humber River, flows in a southerly direction across Eglinton Avenue approximately 330 metres west of Royal York Road. The watercourse daylights on the south side of Eglinton Avenue from a 3.5 metre culvert, likely the outflow of an upstream sewershed. The TRCA characterizes Silver Creek as small riverine warmwater habitat and it is located in Management Zone 4 that targets darter species.

Lower Main Humber River

The Lower Main Humber River flows in a southerly direction across Eglinton Avenue approximately 80 metres east of Scarlett Road. It travels under Eglinton Avenue through a concrete bridge. A large riffle is continuous from 100 metres upstream to 60 metres downstream of Eglinton Avenue. The TRCA characterizes the Lower Main Humber River as large riverine warmwater habitat and it is located in Management Zone 9 that targets smallmouth bass and rainbow darter.

Black Creek

Black Creek, a tributary of the Humber River, flows in a southerly direction across Eglinton Avenue approximately 130 metres east of Black Creek Drive. It travels under Eglinton Avenue through a concrete bridge. The TRCA characterizes Black Creek as intermediate riverine warmwater habitat and it is located in Management Zone 4 that targets darter species.

West Don River

The West Don River flows in a south easterly direction across Eglinton Avenue approximately 180 metres west of Leslie Street. It passes under Eglinton Avenue through a concrete bridge. The TRCA characterizes the Lower West Don River as intermediate riverine warmwater habitat and management targets for this habitat category include redbside dace, rainbow darter and smallmouth bass.

East Don River

The East Don River flows in a south westerly direction across Eglinton Avenue approximately 250 metres east of Wynford Drive. It travels under Eglinton Avenue through a concrete bridge. The TRCA characterizes the Lower East Don River as intermediate riverine warmwater habitat and management targets for this habitat category include redbside dace, rainbow darter and smallmouth bass.

Wilson Brook

Wilson brook crosses Eglinton Avenue in a south westerly direction approximately 530 metres west of Victoria Park Avenue. It enters into a concrete box culvert inlet on the upstream side of Eglinton Avenue and is enclosed for a distance of approximate 750 metres downstream of Eglinton Avenue, with only a remnant ditch. The TRCA characterizes Wilson Brook as small riverine warmwater habitat and management targets for this habitat category include redbside dace, johnny darter and brook stickleback.

Massey Creek

Massey Creek flows in a south easterly direction across Eglinton Avenue approximately 280 metres east of Birchmount Road. The watercourse crosses Eglinton Avenue through a concrete box culvert. The TRCA characterizes Massey Creek as small riverine warmwater habitat and management targets for this habitat category include redbside dace, johnny darter and brook stickleback.

No formal fish collection was undertaken at any of the watercourses. Historic fisheries data provided by TRCA indicated that the majority of fish species recorded are considered warmwater baitfish, with warmwater sportfish (including centrarchids such as pumpkinseed and largemouth bass) occurring in several of the larger river systems. No cool or coldwater fish species were recorded at the TRCA sampling stations located in proximity to Eglinton Avenue. All species historically recorded within or near the study area are considered to be either very common in Ontario (provincial rank of S5), common (provincial rank of S4) or non-native (provincial rank of SE). According to the Ministry of Natural Resources (MNR), Natural Heritage Information Centre (NHIC) database, no aquatic species at risk have been found in the study area. Redside dace (*Clinostomus elongates*) resides in the Humber River and Don River and several of their tributaries. Redside dace is listed as Endangered by the Committee on the Status of Species at Risk in Ontario and by the Committee on the Status of Endangered Wildlife in Canada. None of the historic records for redbside dace occur in the vicinity of Eglinton Avenue. TRCA has advised that the records are historical, and the aquatic habitats associated with the watercourse crossing along the LRT corridor are no longer considered to provide suitable habitat for this species. The implementation of the LRT proposed will not require permits under *Endangered Species Act*, 2007 for this species.

Further details are available in **Appendix G**.



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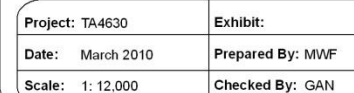




Exhibit 151: Existing Conditions

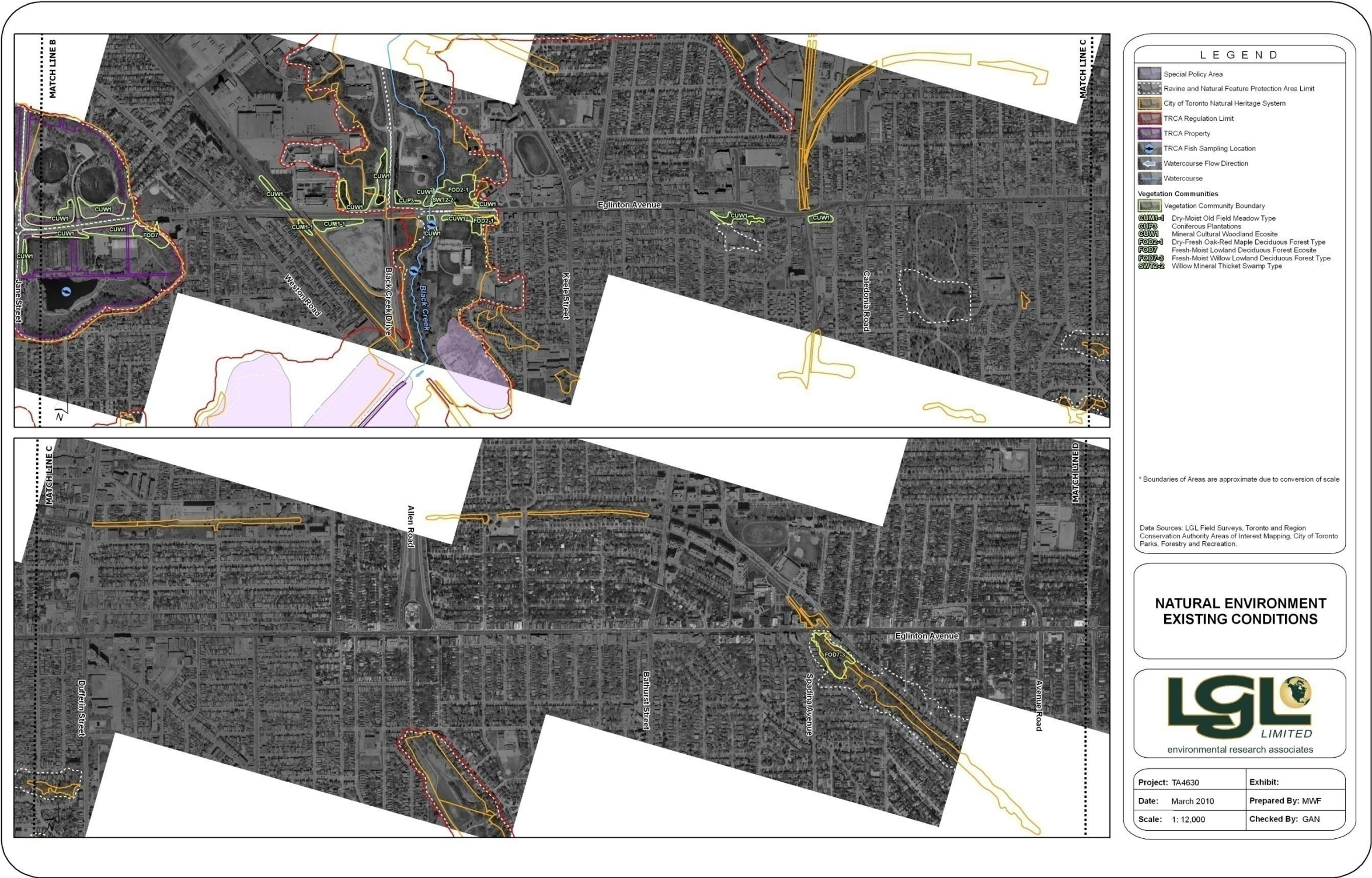




Exhibit 152: Existing Conditions

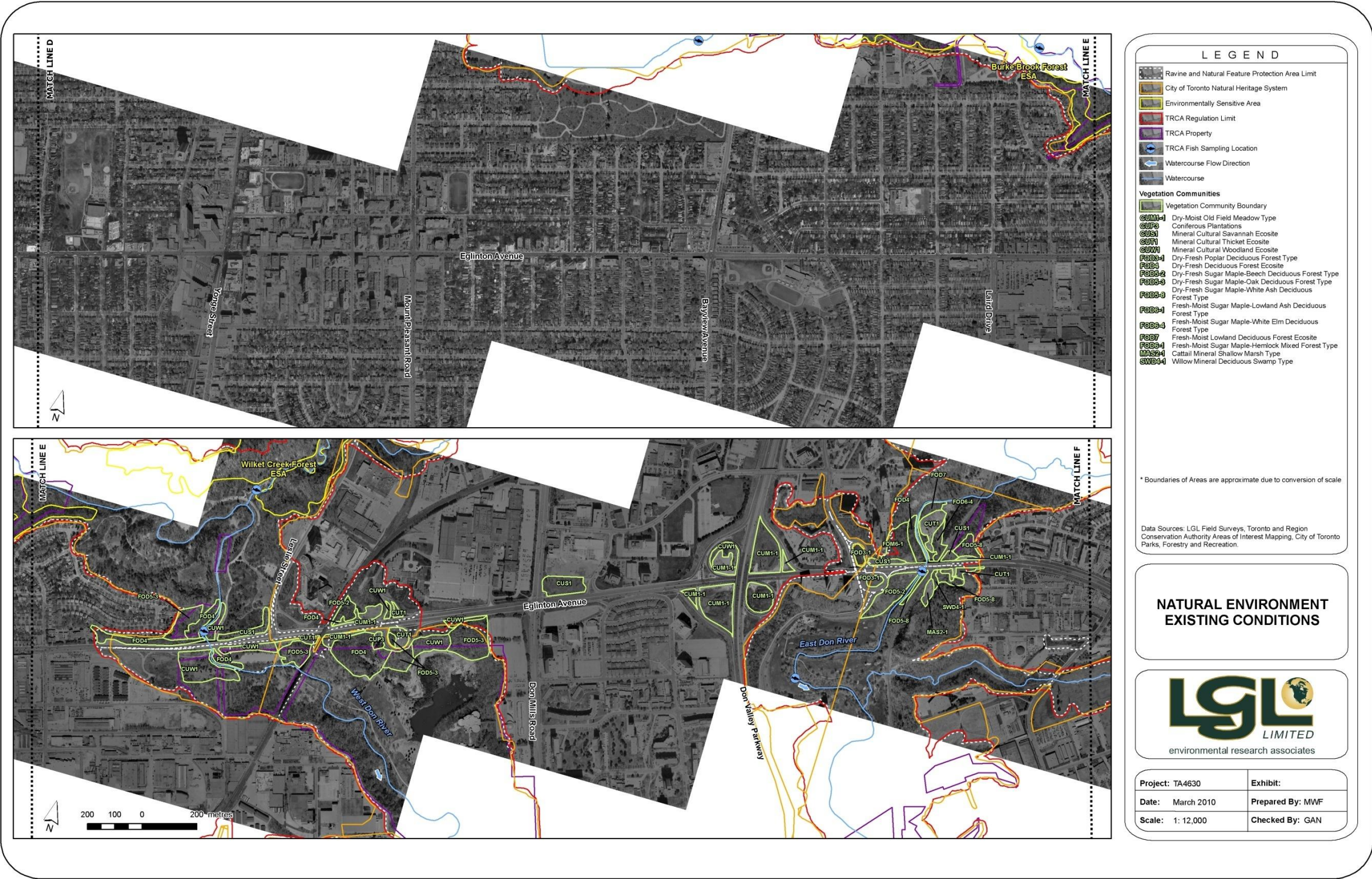




Exhibit 153: Existing Conditions



4.1.1.4 Vegetation and Vegetation Communities

The majority of the vegetation found along the LRT corridor from Martin Grove Road to Pearson International Airport is the result of past and present human disturbances. The most influential of these disturbances was the development of a major arterial road network including freeway corridors for Highways 401 and 427 as well as smaller, yet significant linear alignments associated with Highway 27, Dixon Road and Eglinton Avenue. South of Eglinton Avenue and east of Highway 401 the main land use is residential and small commercial. In contrast to this, on the north side of Eglinton Avenue, between Highways 427 and 27 and Dixon Road, the predominant land use is major industrial and recreational. As a result of these disturbances, almost all of the vegetation communities that are present are culturally influenced and represented by cultural meadows, cultural thickets, cultural savannah and cultural woodlands. Any natural vegetation communities that are present are small, fragmented and isolated pockets found adjacent to a few of the proposed routes and along the stream banks of Mimico Creek.

Vegetation communities found along Eglinton Avenue from Martin Grove Road to Kennedy Road consist of a mix of forest, cultural and wetland communities. The forests are typical of those arising from secondary growth on previously disturbed/cleared areas. Bordering the natural vegetation communities the land has been cleared of all original forest cover to accommodate industrial, commercial and residential land use.

The forest communities associated with the Humber River, Black Creek, and the West and East Don Rivers are natural, contiguous vegetation communities defined by the valley systems of each of the watercourses. These areas exhibit the best quality natural vegetation communities in relation to species composition and diversity. The remaining forested vegetation communities that are dispersed along Eglinton Avenue are generally linear in extent, relatively isolated, and are bordered on their interior side by residential or industrial/commercial development. There are also several pockets of swamp (SWT2-2, SWD2-2 and SWD4-1) and meadow marsh (MAM2 and MAM2-1) wetland communities located in close proximity to Eglinton Avenue. Cultural communities, including meadows, savannahs, thickets, and woodlands, are dominant along Eglinton Avenue; these cultural communities are heavily comprised of non-native species.

A total of twenty-five different ecological land classification (ELC) vegetation community types have been identified by LGL along the Eglinton Avenue corridor. These communities include: mixed forest (FOM6-1); deciduous forest (FOD2-1, FOD3-1, FOD4, FOD5-1, FOD5-2, FOD5-3, FOD5-8, FOD6-1, FOD6-4, FOD7, FOD7-3 and FOD8); cultural plantation (CUP3); cultural meadow (CUM1-1); cultural thicket (CUT1); cultural savannah (CUS1); cultural woodland (CUW1); deciduous swamp (SWD2-2, SWD4 and SWD4-1); swamp thicket (SWT2-2); meadow marsh (MAM2 and MAM2-2); and, shallow marsh (MAS2-1). The above vegetation communities are considered widespread and common in Ontario and secure globally (NHIC 1997). These communities are described in **Appendix G** and delineated in **Exhibits 154**.

To date, a total of three-hundred and six vascular plant taxa have been recorded along Eglinton Crosstown LRT corridor. Approximately thirty-nine percent of the recorded species are considered introduced and non-native to Ontario. Introduced species were almost entirely located within the existing right-of-way and in immediately adjacent cultural communities. A list of vascular plant taxa is presented in **Appendix G**.

Two plant species of concern were identified during field observations: Honey locust (*Gleditsia triacanthos*) and Virginia bluebells (*Mertensia virginica*). Honey locust was found within the FOD3-1 vegetation community, in the northwest quadrant of the Islington Avenue/Eglinton Avenue intersection. Honey locust is ranked as S2 (Imperilled) by the Ministry of Natural Resources (MNR). Virginia bluebells was found within a FOD4 vegetation community, south of Eglinton Avenue and Leslie Street. Virginia bluebells is ranked as S3 (Vulnerable) by MNR. However, both honey locust and Virginia bluebells are considered to

be non-native in the TRCA watershed consequently their significance is reduced. Field observation determined that these vegetation species will be not be impacted by the LRT.

In addition, forty-one plant species that are rare to uncommon in the City of Toronto and in the TRCA watershed are found within the study area, including: balsam fir (*Abies balsamea*), black maple (*Acer nigrum*), smooth juneberry (*Amelanchier laevis*), wild columbine (*Aquilegia canadensis*), Pennsylvania bitter-cress (*Cardamine pensylvanica*), fibrous rooted sedge (*Carex communis*), broad-leaved sedge (*Carex platyphylla*), stellate sedge (*Carex rosea*), blue cohosh (*Caulophyllum thalictroides*), Virginia spring beauty (*Claytonia virginica*), round-leaved hawthorn (*Crataegus chrysocarpa*), Cockspur thorn (*Crataegus crus-galli*), marginal wood fern (*Dryopteris marginalis*), running strawberry-bush (*Euonymus obovata*), woodland strawberry (*Fragaria vesca ssp. americana*), cleavers (*Galium aparine*), spotted crane's-bill (*Geranium maculatum*), witch-hazel (*Hamamelis virginiana*), cow-parsnip (*Heracleum maximum*), butternut (*Juglans cinerea*), common juniper (*Juniperus communis*), eastern red cedar (*Juniperus virginiana*), tamarack (*Larix laricina*), moonseed (*Menispermum canadense*), common evening-primrose (*Oenothera biennis*), ninebark (*Physocarpus opulifolius*), white spruce (*Picea glauca*), red pine (*Pinus resinosa*), old-field cinquefoil (*Potentilla simplex*), white rattlesnake-root (*Prenanthes alba*), white oak (*Quercus alba*), smooth rose (*Rosa blanda*), swamp rose (*Rosa carolina*), marsh rose (*Rosa palustris*), common elderberry (*Sambucus nigra ssp. canadensis*), early goldenrod (*Solidago juncea*), marsh fern (*Thelypteris palustris var. pubescens*), and white trillium (*Trillium grandiflorum*).

4.1.1.5 Wildlife and Wildlife Habitat

Wildlife in the study area is typical of urban settings and comprises species that are tolerant of human activity. Most of the wildlife observations were made in the natural heritage areas generally found along the watercourse crossings under Eglinton Avenue. These areas provided wildlife corridors for birds and mammals and nesting areas for migratory bird species. The Mimico Creek, Humber River, Black Creek, East Don River and West Don River crossings exemplify these types of conditions.

The riparian area along Mimico Creek is the main corridor for mammals from Dixon Road south to Eglinton Avenue as evidence of faecal deposits and tracks indicate. The entire length of riparian vegetation along Mimico Creek also provides a movement corridor for migratory birds. The most significant observations of migratory birds were the colonies of swallow nests found on all of the bridges over Mimico Creek. Field observations found 18 Cliff Swallow nests on the Eglinton Avenue Bridge over Mimico Creek.

The Humber River riparian zone of deciduous forest provides a seasonal north-south corridor for migratory birds. Field observations of Baltimore Oriole (*Icterus galbula*) carrying food to their young and juvenile American Robin (*Turdus migratorius*) indicated the riparian area as a migratory bird breeding area. Many other bird species, such as Gray Catbird (*Dumetella carolinensis*), American Goldfinch (*Carduelis tristis*), Warbling Vireo (*Vireo gilvus*) and Eastern Kingbird (*Tyrannus tyrannus*) observed within the area were probably nesters as well even though direct evidence was not found. Numerous mammal tracks of raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), mink (*Mustela vison*), gray squirrel (*Sciurus carolinensis*) and white-tailed deer (*Odocoileus virginianus*) found along the banks under the bridge indicate the importance of this river as a mammal wildlife corridor.

Black Creek also provided migratory bird corridors and nesting areas around Eglinton Avenue. The Black Creek bridge had three active Barn Swallow (*Hirundo rustica*) nests on three of the ceiling cross beams and a pair of nesting Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) nesting in the bank along the creek about 50 meters northwest of the bridge. Other probable nesting species, observed around the bridge, were Belted Kingfisher (*Ceryle alcyon*), Chimney Swift (*Chaetura pelagica*) and Spotted Sandpiper (*Actitis macularius*). Numerous mammal tracks, found along the banks under the bridge from

mink, striped skunk, raccoon and opossum (*Didelphis virginianus*), indicated that the banks of the stream act as an active mammal corridor connecting the habitats on both sides of Eglinton Avenue.

Both the East Don River and West Don River habitats were similar to the ones mentioned above. Both had similar migratory bird species observed and the riparian zones under the bridges were used as corridors for birds and mammals. Evidence for mammal species such as red fox (*Vulpes vulpes*), coyote (*Canis latrans*), mink, skunk and raccoon were found under the bridge of the West Don River. Massey Creek, along the west side of Rosemount Road, is channelized on the north side of Eglinton Avenue but natural on the south side. Track evidence for mink and raccoon indicated that the box culvert under Eglinton Avenue is being used as a mammal corridor.

Other linear crossings of Eglinton Avenue, such as the CN Railway Tracks just east of Blackthorne Avenue, also provided a good migration corridor for both birds and mammals. Both sides of the tracks at this location had riparian thickets that are used for wildlife protection and travel. Species observed in this area that use this habitat for nesting were Mockingbird (*Mimus polyglottos*), American Robin and Gray Catbird.

Seventy-five wildlife species were recorded in the Eglinton Crosstown LRT corridor (see **Exhibit 157**). Three wildlife species are listed by Committee on the Status of Endangered Wildlife in Canada and regulated under the Canadian *Species at Risk Act*. The Chimney Swift (*Chaetura pelagica*) is recognized as a Threatened species, whereas the milk snake (*Lampropeltis triangulum*) and map turtle (*Graptemys geographica*) are listed as Special Concern, Schedule 1. The map turtle and milk snake are also regulated under the Ontario *Endangered Species Act* (ESA) under Schedule 5 (Special Concern). However, the habitats where these three species were observed are not located in areas that will be impacted by this project and as a result, displacement of or disturbance to these species is not anticipated.

The *Fish and Wildlife Conservation Act* (FWCA) protects twenty-one species recorded in the study area including four herpetofauna, three birds and 14 mammal species. Thirty-one of the 45 bird species are also protected under the *Migratory Birds Convention Act* (MBCA). Eleven of the migratory bird species recorded in the study area are also recognized as priority species of conservation concern by Bird Studies Canada for the Toronto region.

Four herpetofauna and three mammal species recorded in the study area are also considered species of concern by TRCA.

#### 4.1.1.6 Designated Natural Ares

Designated natural areas include areas identified for protection by the MNR, TRCA, and upper and lower tier municipalities. There are no Provincially Significant Wetlands (PSWs) or Areas of Natural and Scientific Interest (ANSIs) located in the study area. Several Environmentally Significant/Sensitive Areas (ESAs) are located within 500 metres of Eglinton Avenue, but well beyond the zone of influence of the Eglinton Crosstown LRT including: Chapman Valley ESA (located north of Eglinton Avenue along a tributary of the Humber River); Burke Brook Forest ESA (located north of Eglinton Avenue along Burke Brook, a tributary of the West Don River); and, Wilket Creek Forest ESA (located north of Eglinton Avenue along Wilket Creek, a tributary of the West Don River).

The City of Toronto Official Plan Land Use Plan (Map 12) designates “Natural Areas” located along Mimico Creek, Humber River, Black Creek, West Don River, East Don River and Massey Creek. The Natural Heritage Overlay (Map 9) identifies Mimico Creek, Silver Creek, Humber River, Black Creek, West Don River, East Don River and Massey Creek as components of the City of Toronto Natural Heritage System.

The policy for these “natural areas” is to maintain them primarily in a natural state, while allowing for compatible uses and conservation projects. An overall objective of the City of Toronto Official Plan is to increase tree canopy in the City. In an effort to help maintain these areas in a natural state, the limits of the Ravine & Natural Feature Protection areas have been identified by Toronto Parks, Forestry and Recreation; Urban Forestry section (RNFP).



Exhibit 154: List of Terrestrial Vertebrates Recorded by LGL Limited and Others

Wildlife	Scientific Name	Common Name	COSEWIC	OMNR	Local	Legal Status	Others
Herpetofauna	<i>Plethodon cinereus</i>	Eastern Red-backed Salamander					*
	<i>Bufo americanus</i>	American Toad					*
	<i>Rana pipiens</i>	Northern Leopard Frog			TRCA(L3)		*
	<i>Rana clamitans</i>	Green Frog					*
	<i>Chelydra serpentine</i>	Snapping Turtle			TRCA(L3)	FWCA(G)	*
	<i>Chrysemys picta marginata</i>	Midland Painted Turtle				FWCA(P)	*
	<i>Graptemys geographica</i>	Northern Map Turtle	SC	SC		SARA(1)	*
	<i>Thamnophis sirtalis</i>	Eastern Gartersnake					*
	<i>Storeria dekayi</i>	Dekay's Brown Snake					*
	<i>Storeria occipitomaculata</i>	Northern Red-bellied Snake			TRCA(L3)		*
	<i>Opheodrys vernalis</i>	Smooth Greensnake			TRCA(L3)	FWCA(P)	*
	<i>Lampropeltis triangulum</i>	Milk Snake	SC	SC		SARA(1) / FWCA(P)	*
Birds	<i>Branta canadensis</i>	Canada Goose				MBCA	
	<i>Anas platyrhynchos</i>	Mallard				MBCA	
	<i>Ardea alba</i>	Great Egret				MBCA	
	<i>Buteo jamaicensis</i>	Red-tailed Hawk				FWCA(P)	
	<i>Charadrius vociferous</i>	Killdeer				MBCA	
	<i>Actitis macularius</i>	Spotted Sandpiper			BSC	MBCA	
	<i>Columba livia</i>	Rock Pigeon					
	<i>Zenaida macroura</i>	Mourning Dove				MBCA	
	<i>Chaetura pelagica</i>	Chimney Swift	THR			MBCA	
	<i>Ceryle alcyon</i>	Belted Kingfisher				FWCA(P)	
	<i>Picoides pubescens</i>	Downy Woodpecker				MBCA	
	<i>Picoides villosus</i>	Hairy Woodpecker				MBCA	
	<i>Colaptes auratus</i>	Northern Flicker				MBCA	
	<i>Empidonax traillii</i>	Willow Flycatcher				MBCA	*
	<i>Sayornis phoebe</i>	Eastern Phoebe			BSC	MBCA	
	<i>Tyrannus tyrannus</i>	Eastern Kingbird			BSC	MBCA	

\* Species recorded in the study area by others.

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

Local:

BSC - Bird Studies Canada Species of Conservation Priority

TRCA - Toronto and Region Conservation Authority Species of Concern - L1 -  
L3 Ranking - 2003

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

(F) Furbearing mammals

Wildlife	Scientific Name	Common Name	COSEWIC	OMNR	Local	Legal Status	Others
	<i>Vireo gilvus</i>	Warbling Vireo				MBCA	
	<i>Vireo olivaceus</i>	Red-eyed Vireo				MBCA	
	<i>Vireo philadelphicus</i>	Philadelphia Vireo				MBCA	
	<i>Cyanocitta cristata</i>	Blue Jay				FWCA(P)	
	<i>Corvus brachyrhynchos</i>	American Crow					
	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow			BSC	MBCA	
	<i>Tachycineta bicolor</i>	Tree Swallow				MBCA	*
	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow			BSC	MBCA	
	<i>Hirundo rustica</i>	Barn Swallow			BSC	MBCA	
	<i>Poecile atricapillus</i>	Black-capped Chickadee			BSC	MBCA	
	<i>Troglodytes aedon</i>	House Wren				MBCA	
	<i>Polioptila caerulea</i>	Blue-gray Gnatcatcher			BSC	MBCA	
	<i>Turdus migratorius</i>	American Robin				MBCA	
	<i>Dumetella carolinensis</i>	Gray Catbird				MBCA	
	<i>Mimus polyglottos</i>	Northern Mockingbird			BSC	MBCA	
	<i>Sturnus vulgaris</i>	European Starling					
	<i>Bombycilla cedrorum</i>	Cedar Waxwing				MBCA	
	<i>Dendroica petechia</i>	Yellow Warbler				MBCA	
	<i>Spizella passerine</i>	Chipping Sparrow				MBCA	
	<i>Melospiza melodia</i>	Song Sparrow				MBCA	
	<i>Cardinalis cardinalis</i>	Northern Cardinal				MBCA	
	<i>Agelaius phoeniceus</i>	Red-winged Blackbird					
	<i>Sturnella magna</i>	Eastern Meadowlark			BSC	MBCA	*
	<i>Quiscalus quiscula</i>	Common Grackle					
	<i>Molothrus ater</i>	Brown-headed Cowbird					
	<i>Icterus galbula</i>	Baltimore Oriole				MBCA	
	<i>Carpodacus mexicanus</i>	House Finch				MBCA	
	<i>Carduelis tristis</i>	American Goldfinch			BSC	MBCA	

\* Species recorded in the study area by others.

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

Local:  
BSC - Bird Studies Canada Species of Conservation Priority

TRCA - Toronto and Region Conservation Authority



Wildlife	Scientific Name	Common Name	COSEWIC	OMNR	Local	Legal Status	Others	
								Species of Concern - L1 - L3 Ranking - 2003
	<i>Passer domesticus</i>	House Sparrow						
Mammals	<i>Didelphis virginiana</i>	Virginia Opossum				FWCA(F)		<u>Legal Status:</u>
	<i>Blarina brevicauda</i>	N. Short-tailed Shrew				FWCA(P)	*	MBCA - Migratory Birds Convention Act
	<i>Sylvilagus floridanus</i>	Eastern Cottontail				FWCA(G)		ESA - Endangered Species Act
	<i>Marmota monax</i>	Groundhog						SARA - Species at Risk Act
	<i>Tamias striatus</i>	Eastern Chipmunk				FWCA(P)	*	FWCA - Fish and Wildlife Conservation Act
	<i>Marmota monax</i>	Woodchuck						(P) Protected Species
	<i>Sciurus carolinensis</i>	Gray Squirrel				FWCA(G)		(G) Game species
	<i>Castor canadensis</i>	Beaver			TRCA(L3)	FWCA(F)		(F) Furbearing mammals
	<i>Peromyscus sp.</i>	White-footed (Deer) Mouse					*	
	<i>Microtus pennsylvanicus</i>	Meadow Vole						
	<i>Ondatra zibethica</i>	Muskrat				FWCA(F)		
	<i>Canis latrans</i>	Coyote				FWCA(F)		
	<i>Vulpes vulpes</i>	Red Fox				FWCA(F)		
	<i>Procyon lotor</i>	Raccoon				FWCA(F)		
	<i>Mustela vison</i>	American Mink			TRCA(L3)	FWCA(F)		
	<i>Mustela ermine</i>	Short-tailed weasel			TRCA(L3)	FWCA(F)	*	
	<i>Mephitis mephitis</i>	Striped Skunk				FWCA(F)		
	<i>Odocoileus virginianus</i>	White-tailed Deer				FWCA(G)		

#### 4.1.1.7 Air Quality

Air flows coming into the City of Toronto area frequently pass over the Ohio Valley and other heavily industrialized areas of the United States and southern Ontario. This contributes as much as 50% of the air pollution burden seen in communities. Other contributors include local industrial operations, fossil fuelled power generation facilities, and the high numbers of vehicles using roads in and around the city. In the middle of the Windsor-Quebec transportation corridor, the City of Toronto is a hub of one of the most heavily travelled corridors in North America. Overall, compared to other communities in southern Ontario, the Toronto area has less frequent poor air quality than Windsor, London or Waterloo; but, with its higher population, Toronto has more people potentially affected by poor air quality. (See **Appendix A** for further details.)

Within the context of this study, the potential to reduce the emissions of “toxic contaminants” such as a range of organic pollutants and metallic compounds is small compared to the impacts that are made through the reduction of criteria pollutants. For this reason these contaminants are not explicitly addressed in terms of air quality benefits of the project. Particularly pertinent to this study are priority contaminants such as ozone and fine particulate matter (PM<sub>2.5</sub>).

PM<sub>2.5</sub> includes all particles that could remain suspended in the air for any length of time, especially those that are less than 2.5 micrometres in size. The Canada-Wide Standards (CWS) for particulate matter is 30 micrograms per cubic metre (ug/m<sup>3</sup>). It requires daily 24 hour averages be calculated from hourly values recorded by instruments. Meeting the CWS standard of 30 ug/m<sup>3</sup> requires evaluation of the 98<sup>th</sup> percentile of the 24 hour averages recorded over the three years. In 2007, the Ministry of the Environment presented the average values of six monitoring locations within the City of Toronto for the three year period, 2004 to 2006. The average value for PM<sub>2.5</sub> is just above the 30 ug/m<sup>3</sup>. (See **Appendix A** for further details).

The formation and transport of ground-level ozone are dependent on meteorological conditions. In most areas where ozone levels are notable, elevated concentrations of ground-level ozone are generally recorded on hot and sunny days. In Ontario, these occur between May and September. Furthermore, there is a diurnal variation in levels which tend to peak in the afternoon and early evening period. Vehicular traffic is responsible for a large portion of nitrogen compounds (NO<sub>x</sub>) released into the atmosphere. The CWS standard for ozone is the average of the fourth highest 8 hour rolling average value of ozone for each of the last three years. The Ministry of the Environment presented that the average value for the Toronto area was approximately 75 parts per billion (ppb) or about 10 ppb over the standard.

The Ministry of the Environment suggests that carbon monoxide and sulphur dioxide concentrations in the city have declined in recent years while total suspended particle levels show little change. However, the rate of decline of most airborne contaminants is slowing because traffic volumes continue to increase year over year. A detailed emissions inventory for criteria air contaminants and greenhouse gas emissions based on 2004 data was prepared for the City of Toronto. These data show that mobile traffic related sources are a major component in the inventory. Mobile sources, road vehicles, account for 35% of the greenhouse gas emissions in 2004 with 74% of the emissions arising from passenger and other light vehicles. Further details are available in **Appendix A**.

#### 4.1.1.8 Noise and Vibration

The Eglinton Crosstown LRT will pass through commercial, industrial, and residential neighbourhoods. The setbacks to the nearest noise sensitive receptor in the west portion of the LRT corridor, between Renforth Drive and Keele Street on Eglinton Avenue, range from 10 to 52 metres. The setbacks from the road to the nearest noise sensitive receptor in the east portion of the LRT corridor, between Leslie Street and Kennedy Road range from 19 to 40 metres. The underground portion of the LRT alignment has

setbacks that range from 10 to 16 metres. It should be noted that, especially between Avenue Road and Keele Street, the receptors immediately adjacent to Eglinton Avenue are primarily commercial/residential development, with the commercial component on the first floor and the residential component (if present) on the second and sometimes third floors.

As part of this study, a noise analysis between future conditions with and without the LRT was conducted to identify any impacts and determine any mitigation measures required due to the LRT operations. Future predicted sound levels without the LRT are presented in **Section 4.2.1.2**.

### 4.1.2 Socio-Economic Environment

#### 4.1.2.1 Land Use

The predominant land uses along the Eglinton Crosstown LRT corridor are high and low-rise residential and commercial with greater concentration of: office and industrial use in the west; low-rise residential between Bayview Avenue and Laird Drive; commercial and industrial between Victoria Park Avenue and Birchmount Road. Institutional uses (e.g. schools and libraries) and Open Space uses (e.g. parks and recreation centres) are found distributed throughout the corridor.

#### Commerce Boulevard – Convair Drive – Silver Dart Drive

This section of the Eglinton Crosstown LRT corridor is within the City of Mississauga's Airport Corporate Centre planning district, which is home to approximately ten head offices of Fortune 500 companies. The predominant land use is office and industrial. Pearson International Airport is located immediately west of Silver Dart Drive.

#### Eglinton Avenue from Commerce Boulevard to Jane Street

The study area between Commerce Boulevard and Jane Street is predominantly low-rise residential with significant concentrations of high-rise residential adjacent to Eglinton Avenue near the intersections of Martin Grove Road, Kipling Avenue, Royal York Road and Scarlett Road. There are a number of large parcels of land devoted to schools and other institutional facilities throughout the area with a large concentration located between Martin Grove Road and Kipling Avenue. The area between Scarlett Road and Jane Street is almost entirely devoted to open space use/recreational purposes but includes a major healthcare facility as well as a pocket of high-rise residential at the north end. Commercial development is limited to a few small locations along Eglinton Avenue.

#### Eglinton Avenue from Jane Street to Yonge Street

The study area from Jane Street to Yonge Street is predominantly low-rise residential with numerous mid to high-rise residential sites distributed along this section of Eglinton Avenue. In particular, there are concentrations of high-rise residential located between Bathurst Street and Spadina Road, Gabian Way, Trethewey Drive and near Yonge Street. There are major concentrations of commercial and industrial uses on the north side of Eglinton Avenue West between Keele Street and Weston Road, as well as the Caledonia Road area. There is a considerable amount of smaller scale commercial development found along the north and south sides of many sections of this segment of Eglinton Avenue West and there are a number of institutional uses distributed evenly throughout. There is a significant concentration of commercial uses at the intersection of Eglinton Avenue and Yonge Street.



Eglinton Avenue from Yonge Street to Leslie Street

The study area between Yonge Street and Leslie Street is predominantly residential. The majority of the residential lands between Yonge Street and Mount Pleasant Road are used for high-rise residential. This high-rise residential use continues on lands adjacent to both sides of Eglinton Avenue from Mount Pleasant Road to Bayview Avenue. The balance of the residential lands between Mount Pleasant Road and Bayview Avenue are used for low and medium-rise residential buildings. There are significant concentrations of commercial uses at Yonge Street, Mount Pleasant Road and Bayview Avenue with a number of major parcels devoted to commercial and industrial uses on the south side of Eglinton Avenue between Laird Drive and Leslie Street. A number of institutional uses are located throughout the area and there is a major concentration of open space use along the Don River valley.

Leslie Street to Kennedy Road

The study area between Leslie Street and Kennedy Road is generally divided between residential and non-residential uses. The north side of Eglinton Avenue between Leslie Street and Don Mills Road, is predominantly industrial with a few pockets of commercial and high-rise residential, while the south side is primarily open space and institutional. Between Don Mills Road and the Don Valley Parkway, on the north side of Eglinton Avenue, the majority of the lands are used for commercial and industrial purposes, with one large pocket of high-rise residential, while on the south side the majority of the lands are a mix of low, medium and high-rise residential with some commercial areas as well. The lands between the Don Valley Parkway and Victoria Park Avenue are predominantly residential with significant concentrations of higher rise residential adjacent to the north side of Eglinton Avenue East particularly the Wynford Drive area. On the south side of Eglinton Avenue, between the Don Valley Parkway and Victoria Park Avenue, the predominant land use is non-residential with a significant amount of land devoted to open space uses along the Don River valley, as well as industrial and commercial uses. The lands between Victoria Park Avenue and Pharmacy Avenue are almost evenly split between residential and non-residential uses with commercial uses fronting onto both sides of Eglinton Avenue and the balance of the lands being used for residential purposes. From Pharmacy Avenue to Birchmount Road, the lands on both sides of Eglinton Avenue are used for commercial and industrial purposes with some institutional uses as well. The lands between Birchmount Road and Kennedy Road are predominantly residential with significant concentrations of high-rise residential adjacent to both sides of Eglinton Avenue. There is a small amount of commercial development at the intersection of Eglinton Avenue and Kennedy Road.

There are a large number of parks and open spaces of various sizes, throughout the study area, including 41 parks and parkettes, as well as two golf courses. Also, the study area contains numerous educational facilities, including; 21 public and eight elementary schools: nine public and two catholic secondary schools; two colleges, and; three private schools. In addition numerous community facilities which include: nine libraries; three medical institution campuses; eight community recreation centres; 52 places of worship, and: the York Civic Centre. The locations of these facilities are identified **Exhibit 155-158**.

4.1.2.2 Contaminated Property and Waste

Most of Eglinton Avenue has been urbanized for many years with commercial and industrial land uses. Therefore, there is potential for encountering impacted soil and/or groundwater in many locations along Eglinton Avenue. A review of historical records identified several areas to have known soil or groundwater impacts from previous and current operations:

- Eglinton Avenue and Black Creek Drive, Former Kodak Manufacturing Plant (now vacant);
- Eglinton Avenue and Gabian Way (east of Keele Street);

- Eglinton Avenue, east of Allen Road; and
  - Eglinton Avenue and Yonge Street, including the TTC Yard, Bus Terminal and Eglinton Subway Station.
- Two intersections have or have had a high concentration of gas stations and are consequently regarded as having high potential for environmental impact:
- Eglinton Avenue and Avenue Road; and
  - Eglinton Avenue and Oriole Parkway, west of Yonge Street.
- Further details are available in **Appendix I**.