3.0 EXISTING CONDITIONS

The Municipal Class Environmental Assessment (MCEA) process requires that existing natural, cultural, economic and social environments be examined so that any potential impacts from the proposed design solution can be evaluated and mitigated. The following sub-sections provide an overview of the existing features within the study area, including the Natural Environment (**Section 3.1**), Socio-Economic Environment (**Section 3.2**), Cultural Environment (**Section 3.3**), Transportation Features (**Section 3.4**), Existing Traffic Conditions (**Section 3.5)** and Utilities (**Section 3.6**).

The assessment presented in this chapter was developed with consideration of secondary source information (including but not limited to the Functional Planning Study (FPS), aerial photography and mapping), correspondence with regulatory agencies (including but not limited to the Ministry of Natural Resources and Forestry (MNRF), the Ministry of the Environment, Conservation and Parks (MECP), Infrastructure Ontario, TTC, Metrolinx, Toronto and Region Conservation Authority (TRCA) and the City of Toronto), and field investigations.

3.1 Natural Environment

3.1.1 Vegetation

The Natural Environment existing conditions are documented in **Appendix A**. Four general vegetation communities were identified and categorized within the study area, as further described in **Exhibit 3-1**, and shown in **Exhibits 3-2 a-b**.

There are limited natural environment features, due to the urbanized nature of the study area. Many of the vegetation communities identified in the study area are heavily anthropologically influenced. Cultural meadows, cultural thickets and woodlands exist within the study area. There is one natural vegetation community, a forested area that surrounds a small drainage feature which is located south of the terminus of Keele Street, east of the railway corridor and is referred to as the Lavender Creek Ravine. This is area is shown in **Exhibit 3-2a**.

Exhibit 3-1: Description of Vegetation Communities

Vegetation Community	Ecological Land Classification	Description
Dry to Moist Old Field Meadow Type	CUM1-1	The majority of the vegetated areas in the study area are dry to moist old field meadows that have become established on abandoned lots. There were five units identified, and each of these was slightly different in composition but all shared a common contingent of Canada Goldenrod, Wild Carrot), Common Tansy, Bird's-foot trefoil, Smooth Brome, Crown Vetch, and Fescues as common components.
Dry to Moist Old Field Meadow Type/Mineral Cultural Thicket Ecosite	CUM1-1/CUT1	Two small units with these vegetation types were found in the study area. The first, located just south of St. Clair Avenue West, west of the railway corridor was a lot cleared for development, upon which some opportunistic species of meadows and some small shrubs had begun to grow. The second unit of this vegetation type was located north of the townhouse development at Brickworks Lane, west of the railway corridor. This unit exists adjacent to the tracks. Occasional small Manitoba Maple existed in the shrub layer. The ground layer was abundant with Canada Goldenrod and Crown Vetch. It contained occasional Wild Carrot, Common Tansy, and Bird's Foot.
Mineral Cultural Woodland	CUW1	Units of this vegetation type exist in the vicinity of Weston Road and Gunns Road and at the edges of the forest unit south of the dead end of Keele Street. These units were dominated by non-

Vegetation Community	Ecological Land Classification	Description
		native and opportunistic species. The sparse to moderate canopy of these woodlands was dominated by Manitoba Maple, Black Locust, and Red Ash. The subcanopy was dense and was dominated by younger specimens of the aforementioned species as well as Siberian Elm, large Staghorn Sumac, and rarely small Norway Maple, American Elm, and Trembling Aspen. The dense shrub layers contained Choke Cherry, Japanese Knotweed, Hawthorns, and Riverbank Grape. The ground layers were dominated by Cow Vetch, Bittersweet Nightshade, Choke Cherry Seedlings, Garlic Mustard, Canada Goldenrod, Common Tansy, and Motherwort. These units are heavily anthropogenically influenced.
Fresh – Moist Manitoba Maple Lowland Deciduous Forest Type	FODM7-7	This forest unit represents the only natural feature in the study area. The forest exists on the slopes of a drainage feature. The forest unit was dominated by a canopy of mid- aged to mature trees. Manitoba Maple was abundant, while occasional American Elm, Crack Willow were also a main component. Other trees noted included Poplars, Maples, Oaks and Siberian Elm. The sparse shrub layer contained occasional Virginia creeper, Riverbank Grape, Choke Cherry, and Staghorn Sumac. The moderate ground layer contained occasional Canada Goldenrod, Wood Sorrel, Motherwort, Buttercups, Yellow Avens, Bittersweet Nightshade, and Asters.

Legend

TORONTO **St. Clair Avenue West Transportation Master Plan**

Exhibit 3-2a
Existing Natural Environment

Legend

TORONTO St. Clair Avenue West Transportation Master Plan

Exhibit 3-2b
Existing Natural Environment

3.1.2 Wildlife

Wildlife habitat is limited due to the developed nature of the study area. Those species observed tend to be tolerant of humans and development. Wildlife species observed are indicated below by habitat in which they were observed:

Forest

- American Robin Raccoon
- Grey Squirrel American Goldfinch

Cultural Woodland

- European Starling Grey Squirrel
- Mourning Dove Rock Dove
- Ring-billed Gull American Crow

Cultural Meadows

- Sparrows Rock Dove

Developed Areas

- European Starling Rock Dove
- Ring-billed Gull
- House Sparrow American Crow

3.1.3 Avifauna

A field investigation was carried out on October 14, 2015, to document bird species, and bird nesting. Although the investigation was completed outside of the general breeding bird season of April to August, observations for remnant nests were completed. No bird nests were observed under the St. Clair Avenue West bridges during the 2015 investigations. However, the bridge does contain elements underneath the structure which could provide nesting habitat, and a survey of breeding birds should be conducted during the appropriate breeding bird window in the subsequent stages of design.

An additional site-specific field survey was conducted on July 24, 2018, at 153 Weston Road which confirmed the presence of bird nests inhabiting the wooden structures on the property. Not all of the nests observed were confirmed to be active.

3.1.4 Species at Risk and Species of Conservation Concern

Species at Risk (SAR) are species designated Extirpated, Endangered (END), Threatened (THR) or Special Concern (SC) under the provincial *Endangered Species Act, 2007 (ESA)* and/or the federal *Species at Risk Act (SARA)* that are protected through provisions of the designations.

Provincially rare species (S-Rank S1-S3) are species that have been found to be rare / uncommon in the Province of Ontario, but which, at present, are not protected by the ESA or SARA. Provincially Rare Species may have traditionally low numbers in this province, be extirpated from the province, in decline, or in recovery. There is no provincial or federal legal protection for these species. As Species of Conservation Concern (SCC), their preservation, when found, is encouraged to preserve Ontario's biodiversity.

The Natural Heritage Information Centre (NHIC) on-line database was searched for records of Species of Conservation Concern (SCC) and Ministry of Natural Resources and Forestry (MNRF), Aurora District, was contacted to determine potential Species at Risk (SAR) in the vicinity of the study corridor.

19 provincially rare species records were indicated by the NHIC database search, as shown in **Exhibit 3-3**. Of these, nine species are considered extirpated, and all other records are considered historical (>30 years old). Based on the age of date last observed and developed nature of the study area, it is unlikely that any of these species still exist in the study area.

Exhibit 3-3: Summary of Historic Species of Conservation Concern

Common Name	S-Rank
Erect Knotweed	SH
Geyer's Yellow Monkeyflower	S1
Old-field Toadflax	S1
Tall Nutrush	S1
Southern Slender Ladies'-tresses	S1
White-haired Panicgrass	S3
Stiff Gentian	S2
Eastern Burning Bush	S3
Ram's Head Lady's Slipper	S3
Yellow stargrass	S3
Bowman's-root	SX

Common Name	S-Rank
American Gromwell	S3
Sharp-fruited Rush	S3
Woodland Flax	S2
Biennial Guara	S3
Sundial Lupine	S3
Unicorn Clubtail	S2S3
Black Cohosh	S2
Giant Lacewing	SH

No SAR was observed during the field investigations. The SAR identified by MNRF that may occur in the study area comprise of: Barn Swallow), Blanding's Turtle, Bank Swallow, Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis. None of the SAR assessed is considered likely to be found in the study area.

No Barn Swallows or SAR nests were observed under the St. Clair Avenue West Bridge. However, an additional site-specific field survey conducted on July 24, 2018, at 153 Weston Road confirmed the presence of Barn Swallows (SAR) inhabiting the wooden structures on the abandoned lumber yard on Weston Road across from Gunns Road. At least ten individuals were observed flying between the structures and foraging. At least eight Barn Swallow nests were documented in the wooden building to the east, and another 29 were observed in the larger building to the northwest. Not all of the nests observed were confirmed to be active.

There may additionally be potential for SAR bat roosting in the abandoned buildings within the study area. No evidence of bat SAR was observed during the July 2018 survey.

3.1.5 Fish and Fish Habitat

A small watercourse was found to exist in the wooded area south of the terminus of Keele Street during the 2015 field investigations. The watercourse flows south from the terminus of Keele Street to the railway tracks, at which point it is piped and conveyed to the west. Beyond the study area, the watercourse is conveyed west through an open, concrete lined channel. This watercourse was not documented in the Functional Planning Study, nor was it noted on Toronto and Region Conservation Authority (TRCA) regulation mapping, or in the watercourse information received from TRCA (2015).

Upstream of the assessed reach, the watercourse flows through a series of storm sewers. The watercourse enters the assessed reach at the break in Keele Street, south of Lavender Road, as stormwater that outlets a twin concrete culvert into an open channel. The watercourse flows south through a defined channel naturalized with riparian vegetation for approximately 170 m before it flows into another culvert. The watercourse is conveyed through the culvert for approximately 450 m under the railway crossing, Weston Road and an open area of parkland consisting of manicured lawn. Downstream of the open area, outside of the study area, the watercourse discharges from the culvert into a concrete lined channel and continues to flow west in a straight path for approximately 700 m. The watercourse then discharges into Black Creek beyond the assessed reach, which consists of a larger concrete lined channel.

The isolated, naturalized reach of the watercourse, located upstream of the railway crossing, has a mean wetted width of 1.5 m and a mean depth of 0.05 m through run habitat with limited riparian cover. The channel provides suitable cover and habitat for fish; however, barriers to upstream fish movement are likely preventing fish from being able to access this habitat and persist within this reach. The barriers to the upstream movement of fish that likely prevent fish from accessing this naturalized reach consist of:

- an intermittent flow regime;
- water velocity barrier during storm events caused by the lack of habitat features in the concrete channel; and,
- the length of piped channel.

As such, the assessed reach of the watercourse within the study area was determined to function as indirect fish habitat by contributing flow to direct fish habitat downstream. Correspondence with TRCA in 2017 confirmed this water feature is not a fisheries habitat.

Landscape Composition

The landscape in the majority of the study area can be characterized as a developed urban / industrial neighbourhood, with limited natural environment features. There are several small parks (private and public) within the study area, and many street trees have been planted in the urban landscape located on public and private property. Trees that occur within the study area are a mix of native and non-native, generally consisting of: Manitoba Maple, Chinese Elm, Red Maple, Trembling Aspen, London Plane Tree, Basswood, Pear, Northern Catalpa, White Ash, Freeman Maple, Silver Maple, Red Oak, Black Walnut, Norway Maple, Hackberry, Siberian Elm, and Colorado Blue Spruce. The existing tree inventory and assessment are documented in **Appendix B**.

There is one natural feature, the Lavender Creek Ravine that exists within the study area and is located south of the existing Keele Street terminus which is classified as Fresh – Moist Manitoba Maple Lowland Deciduous Forest Type and was calculated to have a basal area of 1256 m^2. This forest exists on the slopes of a drainage feature. It was dominated by a canopy of mid-aged to mature trees. Manitoba Maple was abundant, while occasional American Elm and Crack Willow were also a main component. Other trees noted included Poplars, Maples, Oaks, and Siberian Elm. The sparse shrub layer contained occasional Virginia Creeper, Riverbank Grape, Choke Cherry, and Staghorn Sumac. The moderate ground layer contained occasional Canada Goldenrod, Wood Sorrel, Motherwort, Yellow Avens, Bittersweet Nightshade and Asters.

The single Black Oak observed in this unit is a species rare in Toronto (R5, Varga et al. 2000) and the TRCA (L2). Black Oak are typically found in Oak Savannah Systems, not in riparian forests but the vicinity to High Park Oak Woodlands and the presence of other mature Oaks indicates that this species may be a remnant from forest cover of the land prior to development. No other rare plants were found.

3.1.6 Contamination

A Phase One Environmental Site Assessment (ESA) was undertaken to identify areas / properties with actual or potential site contamination that may impact evaluation and selection of the preferred alternatives, future roadway design and construction activities. The Phase One ESA, which is documented in **Appendix C**, was based on the current and former land uses and activities within and surrounding the study area. Secondary source information reviewed included: aerial photography, historical records, Environmental Risk Information Services Ecolog database, Ministry of the Environment, Conservation and Park (MECP) records (including incidents of spills, well records, etc.) and a field investigation was completed to broadly identify properties / areas that pose potential for site contamination.

Areas of Potential Environmental Concern (APECs) were identified within the Contamination Overview Study completed as part of the study, and have been categorized into three categories (high, moderate and low) by assessing the overall relative potential of contamination from the findings. The APECs with high and moderate potential for contamination are summarized below.

High Potential for Contamination

Properties within the study area with the following uses were observed and are classified as having high potential for contamination due to the nature of the activities that typically occurs at these types of facilities:

- Railway;
- Former and/or existing manufacturing facilities;

- Former and/or existing gas station(s) and automotive repair facility; Historic dry-cleaning facility; and,
- Abandoned lumber yard.

Moderate Potential for Contamination

These areas represent land uses that are small commercial / light industrial properties, suspected of using chemical compounds or performing activities that could impact soil and / or groundwater. Former and/or existing land uses within the study area include:

- Current automotive report and engine rebuilding facilities;
- Current cement and asphalt manufacturing facility, and
- Current rubber manufacturing facility.

Low Potential for Contamination

APECs with low potential for contamination are areas generally classified as open space/vacant areas or residential areas that are not suspected of using chemical compounds harmful to the environment or human health.

Exhibits 3-4 a-c illustrates the areas with high and medium APECs within the study area.

Section 7.1.7 contains both the recommendations of the Phase I ESA and summarizes mitigation measures that will be implemented during construction to address the findings.

3.1.7 Groundwater and Geotechnical Investigation

The study area is located within the Toronto and Region Source Protection Area protected under the *Clean Water Act*. The study area is not located within a sensitive groundwater recharge area, however, the area is located in a highly vulnerable aquifer.

Groundwater investigations were completed as part of the study and are documented in **Appendix D**. The ground water study was completed in collaboration with the Geotechnical Investigation Report (GIR) to understand the subsurface conditions. A borehole drilling program was completed where 12 boreholes were drilled throughout the study area, ten of which were equipped with monitoring wells. Locations were selected for spatial coverage of the Study Area and to investigate the areas with high potential environmental concern. They are illustrated in **Exhibit 3-5**. Groundwater samples were also collected from five monitoring well locations on May 2, 2016, and May 3, 2016, for analysis of metals, inorganic parameters, Polycyclic Aromatic Hydrocarbons (PAHs), Petroleum Hydrocarbons (PHCs), and Volatile Organic Compounds (VOCs).

REFERENCE
Imagery © 2016 Microsoft Corporation and its data suppliers
http://www.bing.com/maps
Projection: UTM Zone 17N Datum: NAD 83

0 200 400 600 800 Meters

Scale: As Shown

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Exhibit 3-4a
Areas of Potential Environmental Concern

REFERENCE

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Projection: UTM Zone 17N Datum: NAD 83

0 200 400 600 800 Meters

Scale: As Shown

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Exhibit 3-4b
Areas of Potential Environmental Concern

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Scale: As Shown

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Exhibit 3-4c
Areas of Potential Environmental Concern