

APPENDIX G

Natural Environment Technical Report

Courtneypark Drive East – Natural Environment Technical Report

Municipal Class Environmental
Assessment and Preliminary Design



Prepared for:
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Mississauga
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Table of Contents

| | | |
|------------|--|------------|
| 1.0 | INTRODUCTION | 1.1 |
| 1.1 | STUDY AREA | 1.1 |
| 2.0 | METHODS..... | 2.1 |
| 2.1 | AGENCY CONSULTATION | 2.1 |
| 2.1.1 | Ministry of Natural Resources and Forestry | 2.1 |
| 2.1.2 | Toronto and Region Conservation Authority | 2.1 |
| 2.1.3 | Ministry of the Environment and Climate Change | 2.2 |
| 2.2 | BACKGROUND REVIEW | 2.2 |
| 2.3 | NATURAL FEATURES..... | 2.2 |
| 2.3.1 | Vegetation..... | 2.3 |
| 2.3.2 | Wildlife..... | 2.3 |
| 2.4 | ANALYSIS OF SIGNIFICANCE AND SENSITIVITY | 2.3 |
| 3.0 | EXISTING NATURAL ENVIRONMENT FEATURES | 3.1 |
| 3.1 | PHYSIOGRAPHY AND SOILS..... | 3.1 |
| 3.2 | DESIGNATED FEATURES | 3.1 |
| 3.3 | VEGETATION | 3.2 |
| 3.4 | AQUATIC HABITAT..... | 3.2 |
| 3.5 | WILDLIFE | 3.3 |
| 3.5.1 | Breeding Birds | 3.3 |
| 3.5.2 | Mammals..... | 3.3 |
| 3.5.3 | Reptiles and Amphibians..... | 3.3 |
| 3.6 | SPECIES AT RISK | 3.3 |
| 4.0 | PROPOSED WORK | 4.1 |
| 5.0 | IMPACT ASSESSMENT..... | 5.1 |
| 5.1.1 | Permitting | 5.2 |
| 6.0 | MITIGATION MEASURES..... | 6.1 |
| 6.1 | GENERAL SEDIMENT AND EROSION CONTROL MEASURES | 6.1 |
| 6.2 | VEGETATION | 6.2 |
| 6.3 | WETLANDS AND AQUATICS..... | 6.2 |
| 6.4 | WILDLIFE | 6.3 |
| 7.0 | CLOSURE..... | 7.1 |
| 8.0 | REFERENCES..... | 8.1 |

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

LIST OF TABLES

| | | |
|-----------|---|-----|
| Table 3-1 | Ecological Land Classification (ELC) Vegetation Types | 3.2 |
| Table 3-2 | Species at Risk in Vicinity of Study Area..... | 3.4 |

LIST OF FIGURES

| | | |
|----------|---------------------------------|-----|
| Figure 1 | Site Location | A.2 |
| Figure 2 | Natural Heritage Features | A.3 |

LIST OF APPENDICES

| | | |
|-------------------|------------------------------------|------------|
| APPENDIX A | FIGURES..... | A.1 |
| APPENDIX B | WILDLIFE LIST | B.1 |
| APPENDIX C | RECORD OF CONSULTATION..... | C.1 |

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Introduction
April 28, 2015

1.0 Introduction

Stantec Consulting Ltd. (Stantec) has been retained by the City of Mississauga (the City) to undertake and complete the Schedule “C” Municipal Class Environmental Assessment (Class EA) Study and Preliminary Design for Courtneypark Drive East, on behalf of both the City and the Region of Peel. The Class EA is conducted in accordance with the “Municipal Class Environmental Assessment” document by the Municipal Engineers (October 2000, as amended in 2007), which is approved under the *Ontario Environmental Assessment Act*.

The preferred solution selected during the Class EA process includes widening Courtneypark Drive East to three travel lanes both eastbound and westbound between Kennedy Road and Dixie Road, as well as improvements at each intersection within those limits (i.e. Kennedy Road, Highway 410 West Ramp Terminal, Highway 410 East Ramp Terminal, Tomken Road, Shawson Drive, Vipond Drive, Ordan/Shawson Drive, and Dixie Road). The existing partial interchange with Highway 410 will also be upgraded to a full interchange as part of the preferred solution, which will include construction of an off-ramp from southbound Highway 410 to Courtneypark Drive East, an on-ramp from eastbound Courtneypark Drive East to northbound Highway 410, and widening of the existing Courtneypark Drive East bridge across Highway 410 to accommodate an eight-lane cross-section (i.e. three travel lanes both eastbound/westbound and eastbound/westbound deceleration lanes for the Highway 410 on-ramps).

This Natural Environment Technical Report (NETR) provides a description of the existing terrestrial resources that may be affected by the proposed road widening and is based on background data. It also recommends mitigation measures to minimize potential effects of the Project on vegetation, wildlife, and wetland habitat.

1.1 STUDY AREA

The Study Area is the portion of Courtneypark Drive East from Kennedy Road to Dixie Road including intersections and the Courtneypark Drive East/Highway 410 interchange. The Project location is shown on **Figure 1 – Appendix A**, and the Study Area on **Figure 2 – Appendix A**.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Methods

April 28, 2015

2.0 Methods

Data were collected from agency consultation and background sources including aerial photography, wildlife atlases, Ministry of Natural Resources and Forestry (MNR) Land Information Ontario (LIO) base mapping GIS data, and online databases.

No detailed field work was conducted in support of this report as the Project is in the preliminary design stage; background data agency consultation and a reconnaissance site visit did not indicate any significant natural features. Fieldwork to confirm background biological data should be completed prior to the detailed design phase in order to confirm any biological constraints that could influence the final design. Further field studies should be completed during the detailed design phase when details such as the final Project footprint are confirmed and the exact area(s) of potential impacts and mitigation measures can be assessed in detail.

2.1 AGENCY CONSULTATION

A Notice of Commencement was submitted to the Toronto and Region Conservation Authority (TRCA), the Ministry of the Environment and Climate Change (MOE) and the Ministry of Natural Resources and Forestry (MNR) on 12 November 2013.

2.1.1 Ministry of Natural Resources and Forestry

Stantec submitted a Notice of Commencement to Jackie Burkart, District Planner for Aurora District MNR on 12 November 2013. Stantec received a response on 22 November 2013 and the MNR advised that, after review of the environmental information for the Class EA to be undertaken, there were no concerns with the proposed project. Correspondence is included in **Appendix C**.

2.1.2 Toronto and Region Conservation Authority

Stantec received a response from the TRCA via email on 09 January 2014, in which it was noted that various natural features may be present in, or adjacent to (within 120 m of), the Study Area. These included: two Regulated Areas, Regulation Limit and Wetlands; two TRCA program and Policy Areas, terrestrial species and habitats, and terrestrial natural heritage strategy area. The TRCA's mapping indicated wetlands on the north side of Courtneypark Drive East.

Stantec received a follow-up response from the TRCA on October 10, 2014 and the TRCA advised that the feature that runs parallel to Courtneypark Drive East is a drainage ditch which feeds into a wetland. The TRCA indicated that they had no concerns with the proposed project as long as drainage is maintained to the area northwest of Courtneypark Drive East and Highway 410, and requested a draft copy of the Environmental Assessment, once available.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Methods
April 28, 2015

2.1.3 Ministry of the Environment and Climate Change

Stantec received a response from the MOE on 15 November 2013 in the form of an email with an attached letter (refer to Appendix C). The letter acknowledges that the City of Mississauga has indicated that its study is following the approved environmental planning process for a Schedule C project under the *Municipal Engineers Association Municipal Class Environmental Assessment (EA)*. The MOE identified and commented on several areas of interest with regards to the natural environment, including: Ecosystem Protection and Restoration, Planning and Policy, Surface Water and Groundwater, Mitigation and Monitoring, and the Class EA Process.

2.2 BACKGROUND REVIEW

The following background documents and sources of information were consulted during the preparation of this report:

- Land Information Ontario data from the MNR, including wetlands, woodlands, and other natural areas;
- TRCA Regulatory Mapping, O. Reg. 166/06, (TRCA, 2013);
- Natural Heritage Information Centre (NHIC) database (MNR, 2013);
- Atlas of Breeding Bird of Ontario (OBBA) (Cadman *et al.*, 2007);
- The Physiography of Southern Ontario, Third Edition (Chapman and Putnam, 1984);
- Aerial Photography (First Base Solutions, 2014);
- Highway 410 From South of Highway 401 to Queen Street Transportation Environmental Study Report and Appendices (TESR) (Morrison Hershfield, January 2010);
- Mississauga Natural Areas Survey site information ET03 (City of Mississauga, 2011);
- Valley and Stream Corridor Management Program (TRCA, 2013);
- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2014).

The MTO TESR Study Area included the Highway 410 right-of-way as well as the adjacent 200 m along the right-of-way, from Eglinton Avenue north to Queen Street,

These information sources were reviewed to provide an understanding of the Study Area, and to identify and map the known environmental constraint areas and any significant features; such as watercourses, wetlands, floodplains and potential wildlife occurrences. A brief reconnaissance visit of the site was completed in December 2014 to visually confirm the results of the background data review.

2.3 NATURAL FEATURES

One growing season site visit should be undertaken during the detailed design phase in order to review and modify, if necessary, the natural features identified during review of background information and agency consultation, and to develop appropriate mitigation strategies.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Methods

April 28, 2015

2.3.1 Vegetation

Vegetation communities were identified based on review of the Highway 410 TESR and Appendices (Morrison Hershfield, 2010), TRCA (mapping data provided 2013) and by the City (mapping data provided 2013). Community characterizations are based on the Ontario Ecological Land Classification (ELC) system (Lee *et al.*, 1998).

2.3.2 Wildlife

The following wildlife atlases were reviewed to determine the potential species occurring within the region of the Study Area:

- Ontario Breeding Bird Atlas (Cadman *et al.*, 2007);
- Atlas of the Mammals of Ontario (Dobbyn, 1994); and,
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2014).

Additional wildlife information was obtained from the Highway 410 TESR and Appendices (Morrison Hershfield, 2010).

2.4 ANALYSIS OF SIGNIFICANCE AND SENSITIVITY

Existing data were evaluated to establish the significance of the recorded natural heritage features.

The provincial status of flora and fauna was provided by the Natural Heritage Information Centre (NHIC, 2010). Status rankings (SRANKs) for plants, vegetation communities and wildlife are based on the number of occurrences in Ontario.

The global, federal and provincial status of wildlife was determined by reviewing species accounts published by the Natural Heritage Information Centre (NHIC, 2007). *Species At Risk* (SAR) protected under the *Endangered Species Act* (ESA) include those listed on the current *Species at Risk* in Ontario (SARO) List, while the federal species include those listed on current Schedules issued under the *Species at Risk Act* (SARA).

Provincial significance of vegetation communities is based on the draft rankings assigned by the Natural Heritage Information Centre (Bakowsky, 1996). The provincial status of all plant species is based on Newmaster *et al.* (1998), with updates from the database of the Natural Heritage Information Centre (NHIC, 2001). Identification of potentially sensitive plant species is based on assignment of a coefficient of conservatism value (CC) to each native species in southern Ontario (Oldham *et al.*, 1995). The value of CC, ranging from 0 (low) to 10 (high), is based on a species' tolerance of disturbance and fidelity to a specific natural habitat. Species with a CC value of 9 or 10 generally exhibit a high degree of fidelity to a narrow range of habitat parameters.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Existing Natural Environment Features
April 28, 2015

3.0 Existing Natural Environment Features

Terrestrial features considered include designated natural features, vegetation communities, vascular plant species, and wildlife and wildlife habitat (including amphibians, reptiles, mammals, and bird species). These are described below.

3.1 PHYSIOGRAPHY AND SOILS

The Study Area falls within the Peel Plain Physiographic Region. This physiographic region is a level-to-undulating tract of clay soils which covers 300 mi² across the Regional Municipalities of Halton, Peel and York, sloping gradually towards Lake Ontario (Chapman and Putnam, 1984).

The Peel Plain is underlain by till containing large amounts of shale and limestone, which has been modified by a veneer of clay. Soils are sometimes well-drained, however most are imperfectly drained. Peel clay is distinguished by a very dark brown, crumb-structured, stone-free, surface horizon of 5 to 6 inches in thickness; with a sub-surface layer of brownish grey, clay loam (*ibid*).

3.2 DESIGNATED FEATURES

The Study Area is in the vicinity of the following Official Plan designations:

- Mississauga OP (2013):
 - Urban System – Green System (Schedule 1a)
 - Drainage to north-east is designated “Linkages” and further east, at Dixie Road, part of “Natural Areas” and “Natural Hazards” (Schedule 3: Natural System)
 - “Parkway Belt West” (Schedule 10)
 - “Public and Private Open Spaces” (Schedule 4: Parks and Open Spaces)
- Peel Region OP (2013):
 - Etobicoke Creek Watershed (per Peel OP, Figure 3)
 - Area with Special Policies (PPBWPA) per Schedule A of Peel OP

Natural features that occur in, or near by the Study Area are shown on Figure 2. Including:

- TRCA Regulated Areas:
 - Regulation Limit
 - Wetlands
- Existing and potential natural coverage areas from (TRCA)

The Project area is located south, and to the outside of the City of Mississauga Natural Area ET03, Etobicoke Creek (City of Mississauga 2011).

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Existing Natural Environment Features
April 28, 2015

3.3 VEGETATION

Although largely developed and urbanized in nature, the Study Area is located within the Deciduous Forest Region, D.1 – Niagara (Rowe, 1972).

Based on mapping provided by the TRCA (2013), the Study Area is dominated by urban uses. Even areas designated by TRCA as “existing natural cover” are heavily altered and managed landscapes associated with the rights-of-way of Highway 410, associated roadways (including Courtneypark Drive East) and an electrical transmission line.

Naturalized vegetation communities (in the form of wetlands), identified through background literature review, are shown on **Figure 2 (Appendix A)** and described in Table 3-1 below. These marsh areas may provide some value or function for amphibians, which should be confirmed during the field studies. None of the vegetation communities listed are considered rare in the province.

The rest of the naturalized cover identified by TRCA consists of managed grassland associated with road rights-of-way.

Table 3-1 Ecological Land Classification (ELC) Vegetation Types

| ELC Types | Community Description |
|-----------|---|
| MAM2-2 | Reed-canary grass mineral meadow marsh |
| MAM2-a | Common reed mineral marsh |
| MAS2-1b | Narrow-leaved cattail mineral shallow marsh |

3.4 AQUATIC HABITAT

The hydrology of the small scattered wetlands west of Highway 410 is dominated by storm water flows from surrounding highway rights-of-way. Outflows from the small wetland/stormwater pond at the NW quadrant of the interchange cross Highway 410 (flowing eastward, through an existing concrete box culvert) via a mapped watercourse and ultimately discharge into Tributary 3 of Etobicoke Creek (Morrison Hershfield, 2010). The background data do not identify any aquatic habitat function within the Study Area and the drainage traversed by the proposed Highway 410 southbound off-ramp is not identified as part of Tributary 3 to Etobicoke Creek (TRCA 2010). The portions of the mapped watercourse under the Highway 410 ROW are not functionally part of Tributary 3 to Etobicoke Creek, only contributing flows.

In discussing Redside Dace, The NETR (Morrison Hershfield 2010) identified that the Ministry of Natural Resources has specified that “all tributaries of Etobicoke Creek be regarded as habitat for this species and protected accordingly.” This position is not supported by the consultation with MNRF and TRCA for this current project nor the most recent Fisheries and Oceans Canada (DFO) Aquatic Species At Risk Mapping (DFO 2014). In this mapping, Etobicoke Creek is not

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Existing Natural Environment Features
April 28, 2015

mapped as supporting any aquatic species at risk, indicating that Redside Dace is not present in the watershed.

Based on the available information and the consultation process for this project there is no aquatic habitat in the Study Area. However, water from the Study Area does ultimately drain to Etobicoke Creek and its tributaries, and the quality and quantity of water draining from the Study Area should be maintained appropriately to protect habitats in downstream receiving waters.

3.5 WILDLIFE

The Courtnepark Drive East Study Area is highly urbanized in nature, surrounded by residential, commercial and industrial/institutional land uses. Little to no natural wildlife habitat is associated with the transportation corridor. Wildlife that can be expected to be using the area would be common species acclimatized to urban conditions.

3.5.1 Breeding Birds

The Ontario Breeding Bird Atlas (Cadman *et al.*, 2007) indicates that 92 bird species are known to breed in the 10 km by 10 km map square which includes the Study Area and its surroundings (**Appendix B**). The 10 km by 10 km Atlas square covers a variety of natural habitat types that do not occur in the Study Area; as such, it is likely many of the species recorded in the OBBA would not be found in the Study Area.

3.5.2 Mammals

A review of the Atlas of the Mammals of Ontario (Dobbyn, 1994) indicates that 27 species of mammals may occur within the Study Area or its surroundings (**Appendix B**). Many of these species are tolerant of urbanized environments.

3.5.3 Reptiles and Amphibians

Review of the Eastern Ontario Herpetofaunal Atlas (Ontario Nature) indicates that there 11 species of amphibians and eight species of reptiles that may occur in the vicinity of the Study Area. A list is provided in **Appendix B**. Habitat in the Study area is poor to non-existent for all of these species and no significant populations are likely to be present.

3.6 SPECIES AT RISK

The potential for SAR to occur within the Study Area was assessed through consultation with agencies. Desktop review of available data (including MNR's LIO GIS data) indicated the following SAR may occur within the Study Area:

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Existing Natural Environment Features
April 28, 2015

Table 3-2 Species at Risk in Vicinity of Study Area.

| Common Name | Scientific Name | SARO Status |
|----------------------|---------------------------------|-------------|
| Jefferson Salamander | <i>Ambystoma jeffersonianum</i> | END |
| Chimney Swift | <i>Chaetura pelagica</i> | THR |
| Barn Swallow | <i>Hirundo rustica</i> | THR |
| Bobolink | <i>Dolichonyx oryzivorus</i> | THR |
| Eastern Meadowlark | <i>Sturnella magna</i> | THR |
| Northern Bobwhite | <i>Colinus virginianus</i> | END |
| Henslow's Sparrow | <i>Ammodramus henslowii</i> | END |
| Little Brown Myotis | <i>Myotis lucifugus</i> | END |
| Redside Dace | <i>Clinostomus elongates</i> | END |

There is no suitable habitat for the majority of these species in the Study Area.

It is possible that urban tolerant SAR bird species may occur in the study area. While it is unlikely, Barn Swallow may nest on structures associated with the Courtneypark Drive East overpass and Eastern Meadowlark may occur in managed highway margins. Neither of these species is an issue at the time of EA design alternative consideration, but nests should be searched for prior to construction of the final design, and, if encountered, mitigation measures will be necessary.

The **Barn Swallow** is ranked as S4B provincially (apparently secure breeding status rank) and is designated a provincially and federally threatened species. This species is afforded general habitat protection under the ESA (2007). As their name suggests, Barn Swallows nest on walls or ledges of barns as well as on other human-made structures such as bridges, culverts or other buildings (Cadman *et al.*, 2007). Where suitable nesting structures occur, Barn Swallow often forms small colonies, sometimes mixed with Cliff Swallows. Barn Swallows feed on aerial insects while foraging in open habitat (COSEWIC, 2011). Barn Swallows are generally considered grassland species, foraging over meadows, hay, pasture or even mown lawn. They will also frequently forage in woodland clearings, over wetland habitats or open water where insect prey is abundant.

The **Eastern Meadowlark** is ranked as S4B provincially (apparently secure breeding status rank) and is designated as a provincially and federally threatened species. It is afforded general habitat protection under the ESA (2007). Meadowlarks are ground nesting birds (Harrison, 1975), which are often associated with human-modified habitats where they sing from prominent perches such as roadside wires, trees, and fenceposts. As a grassland species, the Eastern Meadowlark typically occurs in meadows, hayfields and pastures. However, it will utilize a wider range of habitat than most grassland species, including mown lawn (e.g. golf course, parks), wooded city ravines, young conifer plantations and orchards (Peck and James 1983). The Eastern Meadowlark is generally tolerant of habitat with early succession of trees or shrubs. As

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Existing Natural Environment Features
April 28, 2015

with other grassland species, current threats are primarily the result of expanding urbanization and intensive farming practices (Cadman *et al.*, 2007).

Consultation with the MNR was undertaken in 2013, and a response was received 22 November 2013 indicating that MNR had no concerns with this project at the time. Follow-up consultation with the MNR should be undertaken at the detailed design phase of the project to capture any changes in site conditions or to Ontario Regulation 242/08 *Endangered Species Act* (2007) at that time. If necessary, field surveys could also be conducted at that point.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Proposed Work
April 28, 2015

4.0 Proposed Work

The preliminary design for the Courtnepark Drive East Project involves widening of Courtnepark Drive East to the three travel lanes both eastbound and westbound from Kennedy Road to Dixie Road. The Project includes modifications to all of the intersections between these roads and the addition of concrete sidewalks and multi-use ways along the north and south boundaries of Courtnepark Drive East. In addition, the connection between Courtnepark Drive East and Highway 410 will be upgraded to a full interchange and will include widening of the bridge across Highway 410 (Figure 2).

These works will result in encroachment into the hedgerow trees planted along the Courtnepark Drive East right-of-way and adjacent cultural meadows (Figure 2). The small wetland located north of Courtnepark Drive East and west of Highway 410 will be outside of the Courtnepark Drive East widening. However, the Courtnepark Drive East/Highway 410 interchange (as discussed in the NETR, Morrison Hershfield, 2010) will include construction through these small wetlands for the southbound Highway 410 off-ramp. Details of the encroachments and opportunities to improve habitat will be finalized by MTO (as proponent) during the detailed design phase.

5.0 Impact Assessment

Based on the best available information, the Study Area does not include any of the significant natural heritage features specified in the PPS. The Study Area includes small areas of wetland which are regulated by the TRCA, but these wetlands are man-made and are associated with managed right-of-way and stormwater management for Highway 410 and surrounding development. While it is unlikely, two bird SAR (Barn Swallow and Eastern Meadowlark) may be present seasonally in the Study Area. The presence/absence of these SAR can only be determined during the breeding season, therefore, their presence/absence (as well as any other SAR) will be confirmed in the breeding season just prior to construction.

Based on the preliminary design, the widening of Courtnepark Drive East and the Courtnepark Drive East interchange improvements will result in the removal of trees, some cultural meadow, and portions of wetlands/stormwater ponds located west of Highway 410. Specifically, the Project will encroach into the cultural meadows that surround Courtnepark Drive East from Kennedy Road to Tomken Road, and will include development within the hedgerows on either side of Courtnepark Drive East, particularly between Tomken Road and Dixie Road. Future work will include the construction of the southbound Highway 410 off-ramp and this work will affect the narrow-leaved cattail mineral shallow marsh located around the edges of the stormwater facilities west of Highway 410. The construction of the new full interchange at Courtnepark Drive East and Highway 410 will involve grading within the wetlands and permanent disturbance to the wetland (*i.e.* the southbound exit off of Highway 410).

In addition, the off-ramp from southbound Highway 410 will cross a mapped watercourse, which was assessed as part of MTO TESR (Morrison Hershfield 2010) in support of the Class EA undertaken for the widening of Highway 410. The MTO TESR indicated that this watercourse would require a culvert extension in order to accommodate the additional lanes, and concluded that “good construction practices and proper erosion and sediment controls should suffice to protect these watercourses.” Similarly, with the use of appropriate mitigation measures, including properly sized culverts, no permanent impacts are anticipated to the watercourse crossed by the Project, or to Tributary 3 of Etobicoke Creek into which the outflows from this watercourse eventually discharge.

An impact assessment of the Project on these natural features will be completed during the detailed design phase once Project specifics are known. At that time, fieldwork may be completed to accurately capture any potential impacts and refine mitigation strategies.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Impact Assessment
April 28, 2015

5.1.1 Permitting

TRCA permit requirements, City of Mississauga Tree Permit requirements, Fisheries and Oceans Canada, and ESA permitting or registration requirements, if any, can only be determined when final design is complete, timely surveys for SAR have been conducted, and consultation with appropriate regulatory agencies has been completed. Consultation with the regulatory agencies should be resumed at the detailed design phase. If TRCA permits or ESA authorizations are required, there is no reason, in principle why such would not be readily obtained subject to standard conditions, and they can be incorporated in the final design and construction phases.

In general, given the highly urbanized nature of the Study Area, and the implementation of appropriate mitigation measures (Section 6.0), impacts to the natural environment are expected to be minimal.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Mitigation Measures
April 28, 2015

6.0 Mitigation Measures

Appropriate mitigation measures will be developed during the detailed design phase. Mitigation measures should include, but not be limited to the best practices described below.

6.1 GENERAL SEDIMENT AND EROSION CONTROL MEASURES

The primary principles associated with sedimentation and erosion protection measures are to: (1) minimize the duration of soil exposure; (2) retain existing vegetation, where feasible; (3) encourage re-vegetation; (4) divert runoff away from exposed soils; (5) keep runoff velocities low; and (6) trap sediment as close to the source as possible. To address these principles, the following mitigation measures should be considered during detailed design:

- Silt fencing and/or barriers along all construction areas adjacent to natural areas and the boundaries of the site.
- No equipment permitted to enter any natural areas beyond the silt fencing or tree protection fencing (site boundaries) during construction.
- All materials requiring stockpiling (fill, topsoil, etc.) stabilized and kept a safe distance from any sensitive natural features as well as isolated with silt fencing.
- Rock flow checks installed in ditches to trap sediments for off-site disposal.
- All exposed soil areas stabilized and re-vegetated, through the placement of seed and mulching or seed and an erosion control blanket, promptly upon completion of construction activities.
- Refueling of equipment carried out a minimum of 120 m from wetlands and watercourses to avoid potential impacts, in the event that an accidental spill occurs.
- In addition to any specified requirements, additional silt fence available on site, prior to grading operations, to provide a contingency supply in the event of an emergency.
- All sediment and erosion controls monitored regularly and properly maintained, as required. Controls removed only after the soils of the construction area have been stabilized and adequately protected until cover is re-established.
- The limits of construction adjacent to all natural features flagged and fenced prior to construction, and monitored during construction (along with sediment and erosion control measures) to ensure the limits are maintained with respect to vehicular traffic and soil or equipment stockpiling.
- Once construction is completed, disturbed areas reclaimed.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Mitigation Measures
April 28, 2015

6.2 VEGETATION

Wherever possible, the existing vegetation beyond the grading limits to the ROW should be maintained, keeping the area to be cleared of vegetation to a minimum. The clearing area should be scaled back as appropriate. Special efforts should be made to limit the exposure of adjacent vegetation communities to sedimentation from erosion and dewatering operations, hazardous materials spills, herbicide and pesticide spraying.

Compensation for any permanent impacts to wetlands, vegetation, or trees resulting from the Courtneypark Drive East Project will be discussed with the TRCA, the City of Mississauga, MNR, MTO, and other agencies, as required.

6.3 WETLANDS AND AQUATICS

During the detailed design phase, an assessment of the proposed southbound Highway 410 off ramp crossing of the mapped watercourse should be performed. At a minimum, the following standard construction practices and erosion and sediment control measures should be implemented, as detailed in the MTO TESR (Refer to Section 7.2.1 of the TESR):

- Store all toxic material in secure enclosures away from the watercourses and wetlands to prevent leaks and spills into the environment, and to minimize opportunities for vandalism;
- Recommend that the construction activities are monitored by an on-site Environmental Specialist to ensure that the contract constraints and provisions are adhered to and to recommend remedial action in the event of an emergency or unforeseen situation;
- Recommend that contract constraints and provisions include the placement of silt fence barrier in areas of fill placement or earth grubbing to contain sediment generated from exposed soils;
- Protect watercourses from direct drainage by controlling storm water during and after construction, through the use of storm water detention facilities, where feasible, within the highway right-of-way;
- Use of existing vegetated ditches and swales, with widened bottom widths or enhanced swales in sections of the highway where feasible;
- Recommend that the amount of clearing and grubbing be minimized to reduce the potential for slope erosion and sedimentation;
- The duration that disturbed soils are exposed should be limited by requiring that the disturbed soils are restored with vegetation, erosion control blanket or rock protection promptly;
- Avoid or at least minimize movement of heavy machinery on slopes that are prone to erosion;

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Mitigation Measures
April 28, 2015

- Temporary silt fence barrier along the perimeter of the designated work area to limit construction impacts on watercourses and wetlands;
- Ensure temporary disruptions to fish habitat are properly restored;
- No heavy equipment to enter the stream channel during construction;
- Minimized vegetation removal;
- Install a containment system underneath the deck in areas where there is a potential for debris to fall into the water the deck or off the sides of the structure;
- No fuel to be stored within the project area and all equipment to be refueled and maintained at a single, designated fuelling/maintenance area located a minimum of 100 m from the watercourses and wetlands;
- The contractor will be required to specify construction access routes and fuelling areas to avoid watercourse and groundwater contamination and siltation;
- Capture, contain and clean up spills and leaks immediately;
- The contractor will be reminded of the requirement to report contaminant spills as per the *Environmental Protection Act*. All toxic chemicals and contaminants must be disposed of off-site in approved disposal sites under appropriate MOE regulations; and
- Maintain an adequate supply of spills cleanup materials at the work site.

Additional mitigation measures will be dependent on the construction methods and if any in-water works are required. Mitigation measures should include the installation of appropriately sized culverts as needed, maintaining flow during construction via flume or dam and pump methods, sediment and erosion controls to prevent the migration of sediment from the work zone into the watercourse, and the implementation of proper construction dewatering techniques.

The detailed design needs to incorporate details that will ensure that an appropriate culvert design will be developed and that drainage is maintained in the areas west of Highway 410.

6.4 WILDLIFE

During the detailed design phase, prior to construction, surveys for Barn Swallow and Eastern Meadowlark should be conducted. If either species is encountered, the appropriate registration and mitigation measures in place at that time should be implemented.

As a an alternative, under existing regulations, if there are any areas that might support Barn Swallow nests, and that would be disturbed as part of the construction operation, measures to prevent the establishment of nests, such as blocking access to the potential nesting sites may be completed as long as the measures are taken outside the breeding season and do not pose any risk of harm to individual members of the species.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Mitigation Measures
April 28, 2015

Barriers, such as silt fencing, should be installed around work areas adjacent to natural areas to prevent wildlife from entering. Each day, the work area should be checked for wildlife which have managed to by-pass the protective barriers, prior to commencing the work.

The Migratory Birds Convention Act (MBCA) prohibits the killing or capturing of migratory birds, as well as any damage, destruction, removal or disturbance of active nests. The main tool used to avoid contravention of this Act is to restrict vegetation removal during the potential nesting period, typically April 10 through August 9. Should vegetation removal during this time frame be unavoidable, a nest search of the area that is scheduled for removal will be undertaken by qualified avian biologists to ensure no active nests covered by the MBCA are destroyed. Nest searches must be completed within seven days of clearing. If clearing is not completed within seven days following the nest search, the search must be repeated to ensure that no birds have established new nests during that period. If no nests are found, clearing may proceed in the area searched. If a nest is located a designated buffer will be marked off, within which no activity will be allowed while the nest is active. The radius of the buffer will range from 5- 60 m depending on the species. The nest will be checked every few days to determine its status. Once the nest is determined to be inactive, clearing of that area may proceed.

COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

Closure
April 28, 2015

7.0 Closure

This NETR has been prepared to support the 30% preliminary design phase of this Project. It has been prepared to summarize existing natural heritage features in the Study Area and recommend mitigation measures that should be considered during the detailed design and construction phases of the project.

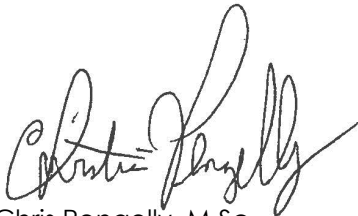
This Report has been prepared by Stantec Consulting Ltd. for the sole benefit of City of Mississauga and the Region of Peel, and may not be used by any third party without the express written consent of the City or Region. Any use which a third party makes of this Report is the responsibility of such third party.

The data presented in this Report are in accordance with our understanding of the Project as it was presented at the time of our Report. In the event that changes or alterations are made to the Project, we reserve the right to review our data with respect to any such changes.

We trust this Report meets your current requirements. Please do not hesitate to contact us if you should have any questions or require further information.

Respectfully Submitted,

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COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

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COURTNEYPARK DRIVE EAST – NATURAL ENVIRONMENT TECHNICAL REPORT

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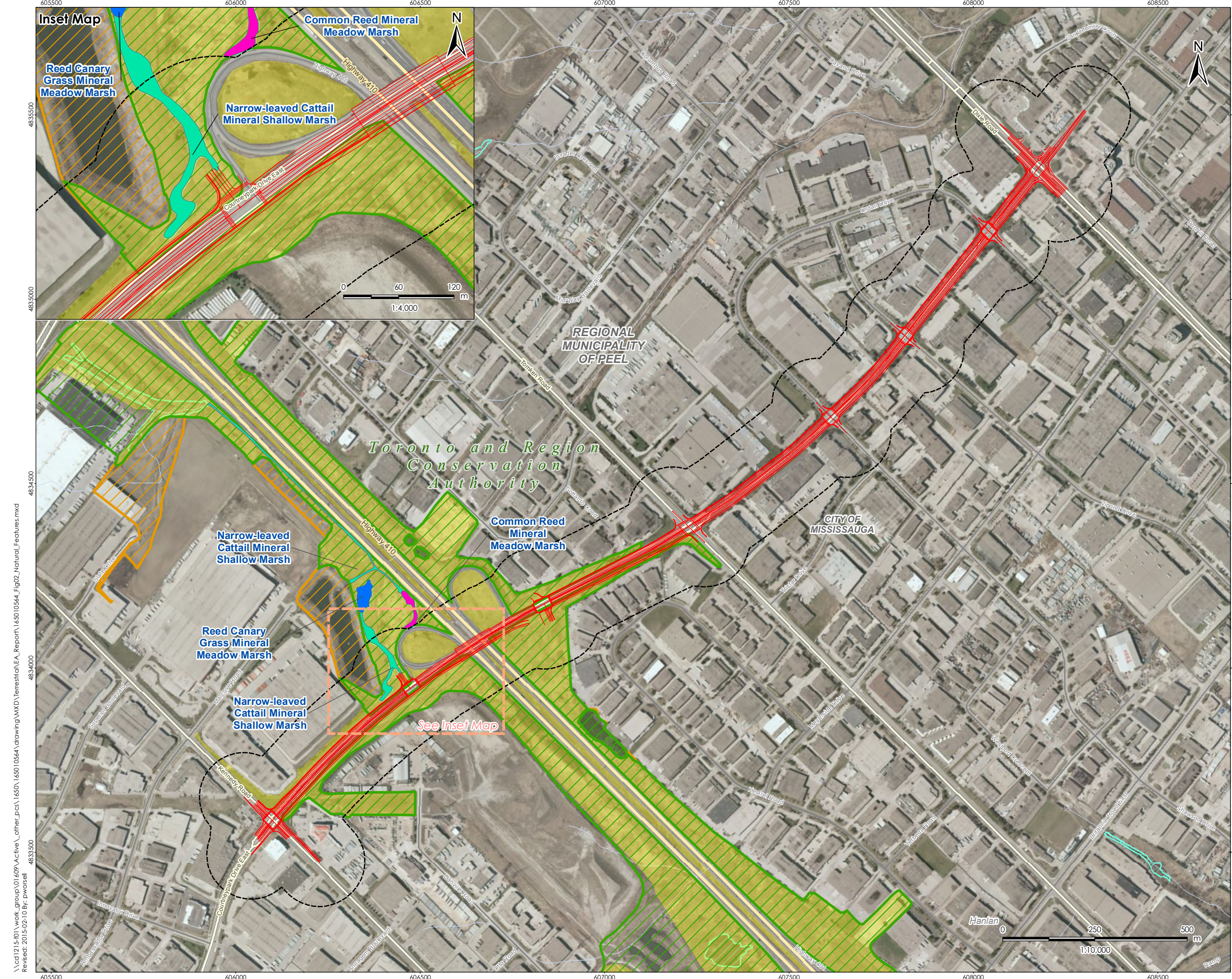
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Appendix A Figures



- Legend**
- Site Plan
 - 120m Buffer
 - Highway
 - Major Road
 - Road
 - Watercourse
 - Wetland, Unevaluated
 - Municipal Boundary, Upper
 - Municipal Boundary, Lower
- Wetland ELC Code (TRCA)**
- MAM2-2
 - MAM2-a
 - MAS2-1b
- Toronto Natural Heritage System (TRCA)**
- Existing Natural Cover
 - Potential Natural Cover
- Natural Cover (TRCA)**
- Forest
 - Meadow

- Notes**
- Coordinate System: NAD 1983 UTM Zone 17N
 - Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015; Toronto and Region Conservation Authority, 2015.
 - Orthoimagery © First Base Solutions, 2015. Imagery taken in 2013.

February 2015
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Client/Project
City of Mississauga
Courtney Park Drive
Environmental Assessment

Figure No.
2

Title
Natural Heritage Features

Appendix B Wildlife List

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|--|----------------------------------|----------------|---------------|---------|---------|--------------------------|--------------------------------|----------------------|--|--------|
| BUTTERFLIES | | | | | | | | | | |
| Least Skipper | <i>Ancyloxypha numitor</i> | S5 | G5 | | | | | | | OBA |
| Peck's Skipper | <i>Polites peckius</i> | S5 | G5 | | | | | | | OBA |
| Dun Skipper | <i>Euphyes vestris</i> | S5 | G5 | | | | | | | OBA |
| Black Swallowtail | <i>Papilio polyxenes</i> | S5 | G5 | | | | | | | OBA |
| Giant Swallowtail | <i>Papilio cresphontes</i> | S3 | G5 | | | | | | | OBA |
| Canadian Tiger Swallowtail | <i>Papilio canadensis</i> | S5 | G5 | | | | | | | OBA |
| Eastern Tiger Swallowtail | <i>Papilio glaucus</i> | S5 | G5 | | | | | | | OBA |
| Cabbage White | <i>Pieris rapae</i> | SNA | G5 | | | | | | | OBA |
| Clouded Sulphur | <i>Colias philodice</i> | S5 | G5 | | | | | | | OBA |
| Orange Sulphur | <i>Colias eurytheme</i> | S5 | G5 | | | | | | | OBA |
| Harvester | <i>Feniseca tarquinius</i> | S4 | G4 | | | | | | | OBA |
| Eastern Comma | <i>Polygonia comma</i> | S5 | G5 | | | | | | | OBA |
| Milbert's Tortoiseshell | <i>Nymphalis milberti</i> | S5 | G5 | | | | | | | OBA |
| Red Admiral | <i>Vanessa atalanta</i> | S5 | G5 | | | | | | | OBA |
| Viceroy | <i>Limenitis archippus</i> | S5 | G5 | | | | | | | OBA |
| Little Wood-Satyr | <i>Megisto cymela</i> | S5 | G5 | | | | | | | OBA |
| Common Ringlet | <i>Coenonympha tullia</i> | S5 | G5 | | | | | | | OBA |
| Monarch | <i>Danaus plexippus</i> | S4B, S2N | G5 | SC | SC | | | | | OBA |
| AMPHIBIANS | | | | | | | | | | |
| Jefferson Salamander | <i>Ambystoma jeffersonianum</i> | S2 | G5 | END | END | | | L1 | | RAO |
| Spotted Salamander | <i>Ambystoma maculatum</i> | S4 | G5 | | | | | L1 | | RAO |
| Northern Redback Salamander | <i>Plethodon cinereus</i> | S5 | G5 | | | | | | | RAO |
| American Toad | <i>Anaxyrus americanus</i> | S5 | G5 | | | | | | | RAO |
| Tetraploid Gray Treefrog | <i>Hyla versicolor</i> | S5 | G5 | | | | | L2 | | RAO |
| Western Chorus Frog (great lakes - shield) | <i>Pseudacris triseriata</i> | S3 | G5 | NAR | THR | | | L2 | | RAO |
| Spring Peeper | <i>Pseudacris crucifer</i> | S5 | G5 | | | | | L2 | | RAO |
| Bullfrog | <i>Lithobates catesbeiana</i> | S4 | G5 | | | 1 | | L1 | | RAO |
| Northern Green Frog | <i>Lithobates clamitans</i> | S5 | G5 | | | | | | | RAO |
| Wood Frog | <i>Lithobates sylvatica</i> | S5 | G5 | | | | | L2 | | RAO |
| Northern Leopard Frog | <i>Lithobates pipiens</i> | S5 | G5 | NAR | NAR | | | L3 | | RAO |
| REPTILES | | | | | | | | | | |
| Snapping Turtle | <i>Chelydra serpentina</i> | S3 | G5 | SC | SC | | | L3 | | RAO |
| Eastern Musk Turtle | <i>Sternotherus odoratus</i> | S3 | G5 | THR | SC | | | L2 | | NHIC |
| Midland Painted Turtle | <i>Chrysemys picta marginata</i> | S5 | G5T5 | | | | | | | RAO |
| Eastern Gartersnake | <i>Thamnophis sirtalis</i> | S5 | G5 | | | | | | | RAO |
| Northern Watersnake | <i>Nerodia sipedon sipedon</i> | S5 | G5T5 | NAR | NAR | 1 | | L2 | | RAO |

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|---------------------------|----------------------------------|----------------|---------------|---------|---------|--------------------------|--------------------------------|----------------------|--|--------|
| Redbelly Snake | <i>Storeria occipitomaculata</i> | S5 | G5 | | | | | L3 | | RAO |
| Brown Snake | <i>Storeria dekayi</i> | S5 | G5 | | NAR | | | | | RAO |
| Eastern Milksnake | <i>Lampropeltis triangulum</i> | S3 | G5 | SC | SC | | | L3 | | RAO |
| | | | | | | | | | | |
| BIRDS | | | | | | | | | | |
| Canada Goose | <i>Branta canadensis</i> | S5 | G5 | | | | | | | OBBA |
| Wood Duck | <i>Aix sponsa</i> | S5 | G5 | | | | | L3 | | OBBA |
| Gadwall | <i>Anas strepera</i> | S4 | G5 | | | | | | | OBBA |
| Mallard | <i>Anas platyrhynchos</i> | S5 | G5 | | | | | | | OBBA |
| Hooded Merganser | <i>Lophodytes cucullatus</i> | S5B, S5N | G5 | | | | | L2 | | OBBA |
| Common Merganser | <i>Mergus merganser</i> | S5B, S5N | G5 | | | | | | | OBBA |
| Ring-necked Pheasant | <i>Phasianus colchicus</i> | SNA | G5 | | | | | | | OBBA |
| Northern Bobwhite | <i>Colinus virginianus</i> | S1 | G5 | END | END | | | | X | NHIC |
| Green Heron | <i>Butorides virescens</i> | S4B | G5 | | | | | | | OBBA |
| Turkey Vulture | <i>Cathartes aura</i> | S5B | G5 | | | | | | | OBBA |
| Northern Harrier | <i>Circus cyaneus</i> | S4B | G5 | NAR | NAR | 55 | Sandilands 2 | L3 | X | OBBA |
| Sharp-shinned Hawk | <i>Accipiter striatus</i> | S5 | G5 | NAR | NAR | 20-30 | Sandilands 2 | L3 | | OBBA |
| Cooper's Hawk | <i>Accipiter cooperii</i> | S4 | G5 | NAR | NAR | 4-50+ | Sandilands 2 | L3 | | OBBA |
| Red-tailed Hawk | <i>Buteo jamaicensis</i> | S5 | G5 | NAR | NAR | | | | | OBBA |
| American Kestrel | <i>Falco sparverius</i> | S5B | G5 | | | | | | X | OBBA |
| Sora | <i>Porzana carolina</i> | S4B | G5 | | | | | L3 | | OBBA |
| Killdeer | <i>Charadrius vociferus</i> | S5B, S5N | G5 | | | | | | | OBBA |
| Spotted Sandpiper | <i>Actitis macularia</i> | S5 | G5 | | | | | | | OBBA |
| American Woodcock | <i>Scolopax minor</i> | S4B | G5 | | | | | L3 | | OBBA |
| Rock Pigeon | <i>Columba livia</i> | SNA | G5 | | | | | | | OBBA |
| Mourning Dove | <i>Zenaida macroura</i> | S5 | G5 | | | | | | | OBBA |
| Yellow-billed Cuckoo | <i>Coccyzus americanus</i> | S4B | G5 | | | | | L3 | | OBBA |
| Black-billed Cuckoo | <i>Coccyzus erythrophthalmus</i> | S5B | G5 | | | | | L3 | X | OBBA |
| Eastern Screech-Owl | <i>Megascops asio</i> | S5 | G5 | NAR | NAR | | | | | OBBA |
| Great Horned Owl | <i>Bubo virginianus</i> | S5 | G5 | | | | | | | OBBA |
| Common Nighthawk | <i>Chordeiles minor</i> | S4B | G5 | SC | THR | | | | | OBBA |
| Chimney Swift | <i>Chaetura pelagica</i> | S4B, S4N | G5 | THR | THR | | | | X | OBBA |
| Ruby-throated Hummingbird | <i>Archilochus colubris</i> | S5B | G5 | | | | | | | OBBA |
| Belted Kingfisher | <i>Ceryle alcyon</i> | S4B | G5 | | | | | | X | OBBA |
| Yellow-bellied Sapsucker | <i>Sphyrapicus varius</i> | S5B | G5 | | | 30-50 | | L3 | | OBBA |
| Downy Woodpecker | <i>Picoides pubescens</i> | S5 | G5 | | | | | | | OBBA |
| Hairy Woodpecker | <i>Picoides villosus</i> | S5 | G5 | | | 10 | | | | OBBA |
| Northern Flicker | <i>Colaptes auratus</i> | S4B | G5 | | | | | | X | OBBA |
| Pileated Woodpecker | <i>Dryocopus pileatus</i> | S5 | G5 | | | 30-50* | Naylor et al. | L3 | | OBBA |
| Eastern Wood-Pewee | <i>Contopus virens</i> | S4B | G5 | SC | SC-NS | | | | X | OBBA |
| Alder Flycatcher | <i>Empidonax alnorum</i> | S5B | G5 | | | | | | | OBBA |

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|-------------------------------|-----------------------------------|----------------|---------------|---------|---------|-----------------------|--------------------------|-------------------|--|--------|
| Willow Flycatcher | <i>Empidonax traillii</i> | S5B | G5 | | | | | | X | OBBA |
| Least Flycatcher | <i>Empidonax minimus</i> | S4B | G5 | | | | | L3 | | OBBA |
| Eastern Phoebe | <i>Sayornis phoebe</i> | S5B | G5 | | | | | | | OBBA |
| Great Crested Flycatcher | <i>Myiarchus crinitus</i> | S4B | G5 | | | | | | | OBBA |
| Eastern Kingbird | <i>Tyrannus tyrannus</i> | S4B | G5 | | | | | | X | OBBA |
| Warbling Vireo | <i>Vireo gilvus</i> | S5B | G5 | | | | | | | OBBA |
| Red-eyed Vireo | <i>Vireo olivaceus</i> | S5B | G5 | | | | | | | OBBA |
| Blue Jay | <i>Cyanocitta cristata</i> | S5 | G5 | | | | | | | OBBA |
| American Crow | <i>Corvus brachyrhynchos</i> | S5B | G5 | | | | | | | OBBA |
| Horned Lark | <i>Eremophila alpestris</i> | S5B | G5 | | | | | | | OBBA |
| Purple Martin | <i>Progne subis</i> | S4B | G5 | | | | | | | OBBA |
| Tree Swallow | <i>Tachycineta bicolor</i> | S4B | G5 | | | | | | | OBBA |
| Northern Rough-winged Swallow | <i>Stelgidopteryx serripennis</i> | S4B | G5 | | | | | | | OBBA |
| Bank Swallow | <i>Riparia riparia</i> | S4B | G5 | THR | THR-NS | | | | X | OBBA |
| Cliff Swallow | <i>Petrochelidon pyrrhonota</i> | S4B | G5 | | | | | | | OBBA |
| Barn Swallow | <i>Hirundo rustica</i> | S4B | G5 | THR | THR-NS | | | | | OBBA |
| Black-capped Chickadee | <i>Poecile atricapillus</i> | S5 | G5 | | | | | | | OBBA |
| Red-breasted Nuthatch | <i>Sitta canadensis</i> | S5 | G5 | | | 0 | | | | OBBA |
| White-breasted Nuthatch | <i>Sitta carolinensis</i> | S5 | G5 | | | 10 | | | | OBBA |
| House Wren | <i>Troglodytes aedon</i> | S5B | G5 | | | | | | | OBBA |
| Winter Wren | <i>Troglodytes hiemalis</i> | S5B | G5 | | | 30 | Hejl et al. 20 | L3 | | OBBA |
| Blue-gray Gnatcatcher | <i>Poliophtila caerulea</i> | S4B | G5 | | | 30 | | | | OBBA |
| Veery | <i>Catharus fuscescens</i> | S4B | G5 | | | 10-20 | | L2 | | OBBA |
| Wood Thrush | <i>Hylocichla mustelina</i> | S4B | G5 | SC | THR-NS | | | L3 | X | OBBA |
| American Robin | <i>Turdus migratorius</i> | S5B | G5 | | | | | | | OBBA |
| Gray Catbird | <i>Dumetella carolinensis</i> | S4B | G5 | | | | | | | OBBA |
| Brown Thrasher | <i>Toxostoma rufum</i> | S4B | G5 | | | | | L3 | X | OBBA |
| Northern Mockingbird | <i>Mimus polyglottos</i> | S4 | G5 | | | | | | | OBBA |
| European Starling | <i>Sturnus vulgaris</i> | SNA | G5 | | | | | | | OBBA |
| Cedar Waxwing | <i>Bombycilla cedrorum</i> | S5B | G5 | | | | | | | OBBA |
| Mourning Warbler | <i>Geothlypis philadelphia</i> | S4B | G5 | | | 30 | | | | OBBA |
| Common Yellowthroat | <i>Geothlypis trichas</i> | S5B | G5 | | | | | | | OBBA |
| American Redstart | <i>Setophaga ruticilla</i> | S5B | G5 | | | 20-30 | | L3 | | OBBA |
| Yellow Warbler | <i>Setophaga petechia</i> | S5B | G5 | | | | | | | OBBA |
| Chestnut-sided Warbler | <i>Setophaga pensylvanica</i> | S5B | G5 | | | | | L3 | | OBBA |
| Chipping Sparrow | <i>Spizella passerina</i> | S5B | G5 | | | | | | | OBBA |
| Field Sparrow | <i>Spizella pusilla</i> | S4B | G5 | | | | | L3 | X | OBBA |
| Vesper Sparrow | <i>Pooecetes gramineus</i> | S4B | G5 | | | | | L3 | X | OBBA |
| Savannah Sparrow | <i>Passerculus sandwichensis</i> | S4B | G5 | | | | | | X | OBBA |
| Henslow's Sparrow | <i>Ammodramus henslowii</i> | SHB | G4 | END | END | 50 | Herkert, 199 | L1 | X | NHIC |
| Song Sparrow | <i>Melospiza melodia</i> | S5B | G5 | | | | | | | OBBA |

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|-----------------------------|--------------------------------|----------------|---------------|---------|---------|--------------------------|--------------------------------|----------------------|--|--------|
| Swamp Sparrow | <i>Melospiza georgiana</i> | S5B | G5 | | | | | | | OBBA |
| White-throated Sparrow | <i>Zonotrichia albicollis</i> | S5B | G5 | | | 20 | | L3 | | OBBA |
| Northern Cardinal | <i>Cardinalis cardinalis</i> | S5 | G5 | | | | | | | OBBA |
| Rose-breasted Grosbeak | <i>Pheucticus ludovicianus</i> | S4B | G5 | | | | | | X | OBBA |
| Indigo Bunting | <i>Passerina cyanea</i> | S4B | G5 | | | | | | | OBBA |
| Bobolink | <i>Dolichonyx oryzivorus</i> | S4B | G5 | THR | THR-NS | 10 | | | X | OBBA |
| Red-winged Blackbird | <i>Agelaius phoeniceus</i> | S5 | G5 | | | | | | | OBBA |
| Eastern Meadowlark | <i>Sturnella magna</i> | S4B | G5 | THR | THR-NS | | | | X | NHIC |
| Common Grackle | <i>Quiscalus quiscula</i> | S5B | G5 | | | | | | | OBBA |
| Brown-headed Cowbird | <i>Molothrus ater</i> | S4B | G5 | | | | | | | OBBA |
| Orchard Oriole | <i>Icterus spurius</i> | S4B | G5 | | | | | | | OBBA |
| Baltimore Oriole | <i>Icterus galbula</i> | S4B | G5 | | | | | | X | OBBA |
| House Finch | <i>Haemorhous mexicanus</i> | SNA | G5 | | | | | | | OBBA |
| American Goldfinch | <i>Carduelis tristis</i> | S5B | G5 | | | | | | | OBBA |
| House Sparrow | <i>Passer domesticus</i> | SNA | G5 | | | | | | | OBBA |
| MAMMALS | | | | | | | | | | |
| Virginia Opossum | <i>Didelphis virginiana</i> | S4 | G5 | | | | | | | AMO |
| Northern Short-tailed Shrew | <i>Blarina brevicauda</i> | S5 | G5 | | | | | | | AMO |
| Star-nosed Mole | <i>Condylura cristata</i> | S5 | G5 | | | | | | | AMO |
| Little Brown Myotis | <i>Myotis lucifugus</i> | S5 | G5 | END | END-NS | | | | | AMO |
| Big Brown Bat | <i>Eptesicus fuscus</i> | S5 | G5 | | | | | | | AMO |
| Hoary Bat | <i>Lasiurus cinereus</i> | S4 | G5 | | | | | | | AMO |
| Eastern Cottontail | <i>Sylvilagus floridanus</i> | S5 | G5 | | | | | | | AMO |
| Snowshoe Hare | <i>Lepus americanus</i> | S5 | G5 | | | 20 | | L3 | | AMO |
| European Hare | <i>Lepus europaeus</i> | SNA | G5 | | | | | | | AMO |
| Eastern Chipmunk | <i>Tamias striatus</i> | S5 | G5 | | | | | | | AMO |
| Woodchuck | <i>Marmota monax</i> | S5 | G5 | | | | | | | AMO |
| Grey Squirrel | <i>Sciurus carolinensis</i> | S5 | G5 | | | | | | | AMO |
| Red Squirrel | <i>Tamiasciurus hudsonicus</i> | S5 | G5 | | | | | | | AMO |
| Beaver | <i>Castor canadensis</i> | S5 | G5 | | | | | L3 | | AMO |
| White-footed Mouse | <i>Peromyscus leucopus</i> | S5 | G5 | | | | | | | AMO |
| Deer Mouse | <i>Peromyscus maniculatus</i> | S5 | G5 | | | | | | | AMO |
| Muskrat | <i>Ondatra zibethicus</i> | S5 | G5 | | | | | | | AMO |
| Meadow Vole | <i>Microtus pennsylvanicus</i> | S5 | G5 | | | | | | | AMO |
| Norway Rat | <i>Rattus norvegicus</i> | SNA | G5 | | | | | | | AMO |
| House Mouse | <i>Mus musculus</i> | SNA | G5 | | | | | | | AMO |
| Porcupine | <i>Erethizon dorsatum</i> | S5 | G5 | | | | | L2 | | AMO |
| Coyote | <i>Canis latrans</i> | S5 | G5 | | | | | | | AMO |
| Red Fox | <i>Vulpes vulpes</i> | S5 | G5 | | | | | | | AMO |
| Raccoon | <i>Procyon lotor</i> | S5 | G5 | | | | | | | AMO |

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|--|-------------------------------|----------------|---------------|---------|---------|--------------------------|--------------------------------|----------------------|--|--------|
| Mink | <i>Mustela vison</i> | S4 | G5 | | | | | L3 | | AMO |
| Striped Skunk | <i>Mephitis mephitis</i> | S5 | G5 | | | | | | | AMO |
| White-tailed Deer | <i>Odocoileus virginianus</i> | S5 | G5 | | | | | | | AMO |
| | | | | | | | | | | |
| SUMMARY | | | | | | | | | | |
| | | | | | | | | | | |
| Total Butterflies: | | 18 | | | | | | | | |
| Total Amphibians: | | 11 | | | | | | | | |
| Total Reptiles: | | 8 | | | | | | | | |
| Total Breeding Birds: | | 92 | | | | | | | | |
| Total Mammals: | | 27 | | | | | | | | |
| | | | | | | | | | | |
| SIGNIFICANT SPECIES | | | | | | | | | | |
| | | | | | | | | | | |
| Global: | | 0 | | | | | | | | |
| National: | | 17 | | | | | | | | |
| Provincial: | | 16 | | | | | | | | |
| Regional (PIF): | | 21 | | | | | | | | |
| Local (TRCA): | | 39 | | | | | | | | |
| | | | | | | | | | | |
| Explanation of Status and Acronyms | | | | | | | | | | |
| AMO: Atlas of the Mammals of Ontario (Dobbyn, 1994) | | | | | | | | | | |
| NHIC: Natural Heritage Information Centre (2013) | | | | | | | | | | |
| OBA: Ontario Butterfly Atlas (Jones et al., 2013). | | | | | | | | | | |
| OBBA: Ontario Breeding Bird Atlas (Cadman et al, 2007) | | | | | | | | | | |
| RAO: Reptiles and Amphibians of Ontario (Ontario Nature) | | | | | | | | | | |
| COSSARO: Committee on the Status of Species at Risk in Ontario | | | | | | | | | | |
| COSEWIC: Committee on the Status of Endangered Wildlife in Canada | | | | | | | | | | |
| REGION: Rare in a Site Region | | | | | | | | | | |
| S1: Critically Imperiled—Critically imperiled in the province (often 5 or fewer occurrences) | | | | | | | | | | |
| S2: Imperiled—Imperiled in the province, very few populations (often 20 or fewer), | | | | | | | | | | |
| S3: Vulnerable—Vulnerable in the province, relatively few populations (often 80 or fewer) | | | | | | | | | | |
| S4: Apparently Secure—Uncommon but not rare | | | | | | | | | | |
| S5: Secure—Common, widespread, and abundant in the province | | | | | | | | | | |
| SX: Presumed extirpated | | | | | | | | | | |
| SH: Possibly Extirpated (Historical) | | | | | | | | | | |
| SNR: Unranked | | | | | | | | | | |
| SU: Unrankable—Currently unrankable due to lack of information | | | | | | | | | | |

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|--|-----------------|----------------|---------------|---------|---------|--------------------------|--------------------------------|----------------------|--|--------|
| SNA: Not applicable—A conservation status rank is not applicable because the species is not a suitable target for conservation activities. | | | | | | | | | | |
| S#S#: Range Rank—A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species | | | | | | | | | | |
| S#B- Breeding status rank | | | | | | | | | | |
| S#N- Non Breeding status rank | | | | | | | | | | |
| ?: Indicates uncertainty in the assigned rank | | | | | | | | | | |
| G1: Extremely rare globally; usually fewer than 5 occurrences in the overall range | | | | | | | | | | |
| G1G2: Extremely rare to very rare globally | | | | | | | | | | |
| G2: Very rare globally; usually between 5-10 occurrences in the overall range | | | | | | | | | | |
| G2G3: Very rare to uncommon globally | | | | | | | | | | |
| G3: Rare to uncommon globally; usually between 20-100 occurrences | | | | | | | | | | |
| G3G4: Rare to common globally | | | | | | | | | | |
| G4: Common globally; usually more than 100 occurrences in the overall range | | | | | | | | | | |
| G4G5: Common to very common globally | | | | | | | | | | |
| G5: Very common globally; demonstrably secure | | | | | | | | | | |
| GU: Status uncertain, often because of low search effort or cryptic nature of the species; more data needed. | | | | | | | | | | |
| GNR: Unranked—Global rank not yet assessed. | | | | | | | | | | |
| T: Denotes that the rank applies to a subspecies or variety | | | | | | | | | | |
| Q: Denotes that the taxonomic status of the species, subspecies, or variety is questionable . | | | | | | | | | | |
| END: Endangered | | | | | | | | | | |
| THR: Threatened | | | | | | | | | | |
| SC: Special Concern | | | | | | | | | | |
| 2, 3 or NS after a COSEWIC ranking indicates the species is either on Schedule 2, Schedule 3 or No Schedule of the Species At Risk Act (SARA) | | | | | | | | | | |
| NAR: Not At Risk | | | | | | | | | | |
| IND: Indeterminant, insufficient information to assign status | | | | | | | | | | |
| DD: Data Deficient | | | | | | | | | | |
| 6: Rare in Site Region 6 | | | | | | | | | | |
| 7: Rare in Site Region 7 | | | | | | | | | | |
| Area: Minimum patch size for area-sensitive species (ha) | | | | | | | | | | |
| H- highly significant in Hamilton Region (i.e. rare) | | | | | | | | | | |
| m- moderately significant in Hamilton Region (i.e. uncommon) | | | | | | | | | | |
| L1- extremely rare locally (Toronto Region) | | | | | | | | | | |
| L2- very rare locally (Toronto Region) | | | | | | | | | | |
| L3- rare to uncommon locally (Toronto Region) | | | | | | | | | | |
| HR- rare in Halton Region, highly significant | | | | | | | | | | |
| HU- uncommon in Halton Region, moderately significant | | | | | | | | | | |
| * The Pileated Woodpecker will incorporate smaller woodlots into its homerange, therefore it may not be a true area-sensitive species (Naylor et al. 1996) | | | | | | | | | | |
| | | | | | | | | | | |

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|--|-----------------|----------------|---------------|---------|---------|--------------------------|--------------------------------|----------------------|--|--------|
| LATEST STATUS UPDATE | | | | | | | | | | |
| Odonata: July 2014 | | | | | | | | | | |
| Butterflies: July 2014 | | | | | | | | | | |
| Bumble Bees: July 2014 | | | | | | | | | | |
| Other Arthropods: July 2014 | | | | | | | | | | |
| Amphibians: July 2014 | | | | | | | | | | |
| Reptiles: July 2014 | | | | | | | | | | |
| Birds: July 2014 | | | | | | | | | | |
| Mammals: July 2014 | | | | | | | | | | |
| S and G ranks and explanations: December 2011 | | | | | | | | | | |
| NOTE | | | | | | | | | | |
| All rankings for birds refer to breeding birds unless the ranking is followed by N | | | | | | | | | | |
| REFERENCES | | | | | | | | | | |
| COSSARO Status | | | | | | | | | | |
| Endangered Species Act, 2007 (Bill 184). Species at Risk in Ontario List. | | | | | | | | | | |
| COSEWIC Status | | | | | | | | | | |
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| Local Status | | | | | | | | | | |
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| Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/147 | | | | | | | | | | |
| Herkert, J.R. 1991. An ecological study of the breeding birds of grassland habitats within Illinois. Ph.D. dissertation. University of Illinois, Urbana, IL. 112 pp. | | | | | | | | | | |
| PA: The Birds of North America, Inc. 31 pp. | | | | | | | | | | |
| Hejl, S.J., J.A. Holmes, and D.E. Kroodsma. 2002. Winter Wren (<i>Troglodytes troglodytes</i>). In Poole, A., and F. Gill, eds. The birds of North America, No. 623. Philadelphia, | | | | | | | | | | |
| of Natural Resources, Forest Management Branch, Sault Ste. Marie, Ontario. 26 pp. | | | | | | | | | | |
| Naylor, B. J., J. A. Baker, D. M. Hogg, J. G. McNicol and W. R. Watt. 1996. Forest Management Guidelines for the Provision of Pileated Woodpecker Habitat. Ontario Ministry | | | | | | | | | | |

Appendix B

Wildlife List

| COMMON NAME | SCIENTIFIC NAME | ONTARIO STATUS | GLOBAL STATUS | COSSARO | COSEWIC | AREA SENSITIVITY (ha) | Area Sensitive Reference | Local Status TRCA | Local Status PIF Priority Species (BCR 13) | Source |
|--|-----------------|----------------|---------------|---------|---------|--------------------------|--------------------------------|----------------------|--|--------|
| Page, A.M., and M.D. Cadman. 1994. Status report on the Acadian Flycatcher Empidonax virescens in Canada. Prepared for the Committee on the Status of | | | | | | | | | | |
| Endangered Wildlife in Canada. 27 pp | | | | | | | | | | |
| Robbins, C.S. 1979. Effect of forest fragmentation on bird populations. Pp. 198-212 in DeGraaf, R.M., and K.E. Evans, eds. Management of northcentral and northeastern forests for | | | | | | | | | | |
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Appendix C Record of Consultation



Stantec Consulting Ltd.
300 - 675 Cochrane Drive West Tower
Markham ON L3R 0B8
Tel: (905) 944-7777
Fax: (905) 474-9889

Attention: Mr. Steven Strong, District Planner

Ministry of Natural Resources
Aurora District
50 Bloomington Rd W
Aurora, ON L4G 3G8

November 11, 2013

File: 165010564

Dear Mr. Strong,

Reference: Notice of Commencement

**Municipal Class Environmental Assessment Study for Courtneypark Drive East
City of Mississauga**

Stantec Consulting Ltd., on behalf of the City of Mississauga, has initiated a Class Environmental Assessment (Class EA), including the preliminary design, for the section of Courtneypark Drive East, from Kennedy Road to Dixie Road (see enclosed map).

This Class EA is being undertaken to address transportation network demand challenges for the immediate study area and beyond, identify/address roadway safety concerns, accommodate enhanced active transportation measures, and rehabilitate the roadway surface, while accounting for existing land use conditions and any future considerations. This study will follow a comprehensive, sound, and open planning process, during which the overall impact of any potential improvements to Courtneypark Drive East on the social, cultural, and natural environment will be analyzed.

This letter, along with the accompanying notice, signals the commencement of a Class EA – a study which will define the need, identify/evaluate alternative solutions, and determine a preferred design in consultation with regulatory agencies, the public, and other affected stakeholders. The study will be conducted in accordance with the planning and design process for Schedule 'C' projects, outlined in the *Municipal Class Environmental Assessment* (October 2000, amended in October 2011) and approved under the Ontario *Environmental Assessment Act*.

A key component of the study will be consultation with interested stakeholders (public and agencies). Two Public Information Centres will be held to allow the public, agencies, and other stakeholders to meet with the project team and provide input on the proposed project. Additionally, a comment form is included with this letter so that you may advise the project team of any interest that you or your organization may have in this study.



November 11, 2013
Page 2 of 2

**Reference: Notice of Commencement
Municipal Class Environmental Assessment Study for Courtenypark Drive East
City of Mississauga**

Upon completion of the study, an Environmental Study Report (ESR) will be prepared and made available for public review and comment. If you have any questions or require additional information, please contact the undersigned at gordon.murray@stantec.com or (905) 944-7786.

Regards,

STANTEC CONSULTING LTD.

Gordon Murray, P.Eng., PE, PTOE, MBA
Consultant Project Manager
Phone: (905) 944-7786

Attachment: Notice of Study Commencement
Notification response sheet

c. Farhad Shahla, City of Mississauga



Stantec Consulting Ltd.
300 - 675 Cochrane Drive West Tower
Markham ON L3R 0B8
Tel: (905) 944-7777
Fax: (905) 474-9889

Attention: Ms. Chunmei Liu, Environmental Assessment & Project Coordinator

Ministry of Environment
Central Region
5775 Yonge St, 9th floor, north
North York, ON M2M 4J1

November 11, 2013

File: 165010564

Dear Ms. Liu,

Reference: Notice of Commencement

**Municipal Class Environmental Assessment Study for Courtneypark Drive East
City of Mississauga**

Stantec Consulting Ltd., on behalf of the City of Mississauga, has initiated a Class Environmental Assessment (Class EA), including the preliminary design, for the section of Courtneypark Drive East, from Kennedy Road to Dixie Road (see enclosed map).

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This letter, along with the accompanying notice, signals the commencement of a Class EA – a study which will define the need, identify/evaluate alternative solutions, and determine a preferred design in consultation with regulatory agencies, the public, and other affected stakeholders. The study will be conducted in accordance with the planning and design process for Schedule 'C' projects, outlined in the *Municipal Class Environmental Assessment* (October 2000, amended in October 2011) and approved under the Ontario *Environmental Assessment Act*.

A key component of the study will be consultation with interested stakeholders (public and agencies). Two Public Information Centres will be held to allow the public, agencies, and other stakeholders to meet with the project team and provide input on the proposed project. Additionally, a comment form is included with this letter so that you may advise the project team of any interest that you or your organization may have in this study.



November 11, 2013
Page 2 of 2

**Reference: Notice of Commencement
Municipal Class Environmental Assessment Study for Courtenypark Drive East
City of Mississauga**

Upon completion of the study, an Environmental Study Report (ESR) will be prepared and made available for public review and comment. If you have any questions or require additional information, please contact the undersigned at gordon.murray@stantec.com or (905) 944-7786.

Regards,

STANTEC CONSULTING LTD.

Gordon Murray, P.Eng., PE, PTOE, MBA
Consultant Project Manager
Phone: (905) 944-7786

Attachment: Notice of Study Commencement
Notification response sheet

c. Farhad Shahla, City of Mississauga



Stantec Consulting Ltd.
300 - 675 Cochrane Drive West Tower
Markham ON L3R 0B8
Tel: (905) 944-7777
Fax: (905) 474-9889

Attention: Ms. Sharon Lingertat, Senior Planner, Environmental Assessment Planning
Toronto & Region Conservation Authority
5 Shoreham Dr
Downsview, ON M3N 1S4

November 11, 2013
File: 165010564

Dear Ms. Lingertat,

Reference: Notice of Commencement
Municipal Class Environmental Assessment Study for Courtneypark Drive East
City of Mississauga

Stantec Consulting Ltd., on behalf of the City of Mississauga, has initiated a Class Environmental Assessment (Class EA), including the preliminary design, for the section of Courtneypark Drive East, from Kennedy Road to Dixie Road (see enclosed map).

This Class EA is being undertaken to address transportation network demand challenges for the immediate study area and beyond, identify/address roadway safety concerns, accommodate enhanced active transportation measures, and rehabilitate the roadway surface, while accounting for existing land use conditions and any future considerations. This study will follow a comprehensive, sound, and open planning process, during which the overall impact of any potential improvements to Courtneypark Drive East on the social, cultural, and natural environment will be analyzed.

This letter, along with the accompanying notice, signals the commencement of a Class EA – a study which will define the need, identify/evaluate alternative solutions, and determine a preferred design in consultation with regulatory agencies, the public, and other affected stakeholders. The study will be conducted in accordance with the planning and design process for Schedule 'C' projects, outlined in the *Municipal Class Environmental Assessment* (October 2000, amended in October 2011) and approved under the Ontario *Environmental Assessment Act*.

A key component of the study will be consultation with interested stakeholders (public and agencies). Two Public Information Centres will be held to allow the public, agencies, and other stakeholders to meet with the project team and provide input on the proposed project. Additionally, a comment form is included with this letter so that you may advise the project team of any interest that you or your organization may have in this study.



November 11, 2013
Page 2 of 2

**Reference: Notice of Commencement
Municipal Class Environmental Assessment Study for Courtenypark Drive East
City of Mississauga**

Upon completion of the study, an Environmental Study Report (ESR) will be prepared and made available for public review and comment. If you have any questions or require additional information, please contact the undersigned at gordon.murray@stantec.com or (905) 944-7786.

Regards,

STANTEC CONSULTING LTD.

Gordon Murray, P.Eng., PE, PTOE, MBA
Consultant Project Manager
Phone: (905) 944-7786

Attachment: Notice of Study Commencement
Notification response sheet

c. Farhad Shahla, City of Mississauga



CITY OF MISSISSAUGA NOTIFICATION RESPONSE SHEET

Municipal Class Environmental Assessment Study for Courtneypark Drive East

Please respond by Friday, December 6, 2013

ATTENTION:

Gordon Murray
Consultant Project Manager
Stantec Consulting Ltd.

MAILING ADDRESS:

300-675 Cochrane Dr, West Tower
Markham, ON L3R 0B8

E-MAIL ADDRESS:

gordon.murray@stantec.com

FAX NUMBER:

(905) 474-9889

FROM:

RE:

Municipal Class Environmental Assessment Study for Courtneypark Drive East

☐

We have no concerns and do not wish to be involved in this study.

☐

We have no concerns at this time, but we wish to remain on the contact list for this study.

☐

We have the following comment(s) and/or information requirements:



CITY OF MISSISSAUGA

NOTICE OF STUDY COMMENCEMENT

Municipal Class Environmental Assessment Study for Courtneypark Drive East

THE STUDY:

The City of Mississauga has initiated a Class Environmental Assessment (Class EA) Study, including Preliminary Design, for the section of Courtneypark Drive East, from Kennedy Road to Dixie Road (see map). In light of current roadway conditions, the intent of this study is to address network demand challenges, identify/address safety concerns, accommodate active transportation measures, and rehabilitate the roadway surface. The alternative solutions may include (but are not limited to) the potential widening of Courtneypark Drive East, the examination of the transportation benefits of a full movement interchange at Highway 410 (per the MTO's approved 2010 TESR), as well as various improvements to selected intersections, traffic operations, transit, and/or active transportation. The overall impact of such improvements on the social, cultural, and natural environments will also be analyzed.

THE PROCESS:

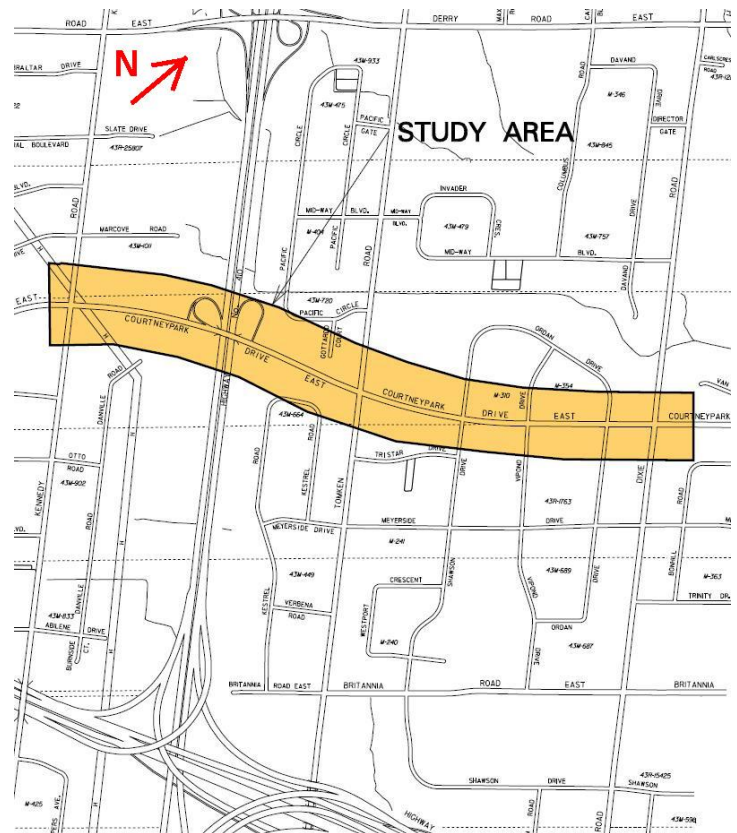
This notice signals the commencement of the Class EA, a study which will define the problem, identify/evaluate alternative solutions, and determine a preferred design in consultation with regulatory agencies and the public. The study is being undertaken in accordance with the planning and design process for Schedule 'C' projects, as outlined in the "Municipal Class Environmental Assessment" document (October 2000, amended in 2011), which is approved under the Ontario *Environmental Assessment Act*.

PUBLIC CONSULTATION:

A key component of the study will be consultation with interested stakeholders (public and agencies). Two Public Information Centres (PICs) will be held to present the project, review the study scope, and discuss issues related to the project, including alternative solutions and evaluation criteria, as well as environmental impacts and mitigation measures. Details regarding forthcoming PICs will be advertised as the study progresses. Upon completion of the study, an Environmental Study Report (ESR) will be prepared and made available for public review and comment. If you have any questions or comments regarding the study, or wish to be added to the study mailing list, please contact either of the following team members:

Farhad Shahla, M.Eng., P.Eng
Project Manager
City of Mississauga
201 City Centre Dr, Suite 800
Mississauga, ON L5B 2T4
(905) 615-3200, ext. 3377
farhad.shahla@mississauga.ca

Gord Murray, P. Eng.
Consultant Project Manager
Stantec Consulting Ltd.
300 – 675 Cochrane Dr, West Tower
Markham, ON L3R 0B8
(905) 944-7786
gordon.murray@stantec.com



Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

This notice was first issued on November 13th, 2013.

Bradley, Michael

From: Murray, Gordon
Sent: Friday, November 22, 2013 12:44 PM
To: Bradley, Michael; Korpijaakko, Carla; Stuart, Sean
Subject: RE: Class EA for Courtneypark Drive East, Mississauga

FYI
Mike – Please file.
Gord

From: Burkart, Jackie (MNR) [<mailto:Jackie.Burkart@ontario.ca>]
Sent: Friday, November 22, 2013 12:34 PM
To: Murray, Gordon
Subject: Class EA for Courtneypark Drive East, Mississauga

Good morning Gordon,

MNR has reviewed the subject Class EA and environmental information and advises that we have no concerns with this project.

Sincerely,

Jackie Burkart

District Planner

Ministry of Natural Resources | 50 Bloomington Road, Aurora, ON L4G 0L8 | Phone: 905-713-7368 | Fax: 905-713-7360 | Email: jackie.burkart@ontario.ca |

Central Region
Technical Support Section

Région du Centre
Section d'appui technique

5775 Yonge Street, 8th Floor
North York, Ontario M2M 4J1

5775, rue Yonge, 8^{ème} étage
North York, Ontario M2M 4J1

Tel.: (416) 326-6700
Fax: (416) 325-6347

Tél.: (416) 326-6700
Télec.: (416) 325-6347

November 15, 2013

File: EA01-06-05

Farhad Shahla, M.Eng., P. Eng.
Project Manager
City of Mississauga
21 City Centre Dr., Suite 800
Mississauga ON L5B 2T4

**RE: Courtneypark Drive East
City of Mississauga
Class Environmental Assessment
Notice of Study Commencement**

This letter is our response to the Notice of Study Commencement for the above noted project. This response acknowledges that the City of Mississauga has indicated that its study is following the approved environmental planning process for a Schedule C project under the *Municipal Engineers Association Municipal Class Environmental Assessment* (Class EA).

Based on the information submitted, we have identified the following areas of interest with respect to the proposed undertaking:

- Ecosystem Protection and Restoration
- Planning and Policy
- Surface Water and Groundwater
- Air Quality, Dust and Noise
- Contamination and Waste
- Mitigation and Monitoring
- Class EA Process
- Aboriginal Consultation

We are providing the following general comments to assist your project team in effectively addressing these areas of interest:

Ecosystem Protection and Restoration

- Any impacts to ecosystem form and function must be avoided where possible. The Environmental Study Report (ESR) should describe any proposed mitigation measures and how project planning will protect and enhance the local ecosystem.
- All natural heritage features should be identified and described in detail to assess potential impacts and to develop appropriate mitigation measures. Our records confirm that the sensitive environmental features including a watercourse and woodlots are located within or adjacent to the study area.

We recommend consulting with the Ministry of Natural Resources (MNR), Fisheries and Oceans Canada (DFO) and your local conservation authority to determine if special measures or additional study will be necessary to preserve and protect these sensitive features.

The Region of Peel and City of Mississauga Official Plan policies related to ecosystem protection within the study area should be referenced to ensure that all environmental protection policies are satisfied. The ESR should also discuss the levels of growth proposed for the area, how this proposal addresses those levels of growth, and how any proposed road improvements will affect local traffic flows.

Planning and Policy

- The 2005 *Provincial Policy Statement* contains policies that protect Ontario's Natural Heritage. Applicable policies should be referenced in the ESR, and you should demonstrate how this proposed project is consistent with these policies.
- The Places to Grow Plan contains policies which guide decisions on a range of issues such as infrastructure planning and land-use planning to ensure that stronger and more prosperous communities are built in the Greater Golden Horseshoe. The ESR should demonstrate how this project adheres to the relevant policies of the Places to Grow Plan, including Sections 3, which contain specific policies for Infrastructure to Support Growth.

Surface Water and Groundwater

- The ESR must include a sufficient level of information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the study area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking.
- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. The ministry's *Stormwater Management Planning and Design Manual* (2003) should be referenced in the ESR and utilized when designing stormwater control methods. We recommend that a Stormwater Management Plan should be prepared as part of the Class EA process that includes:
 - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
 - Watershed information, drainage conditions, and other relevant background information
 - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
 - Information on maintenance and monitoring commitments.
- The status of, and potential impacts to any well water supplies should be addressed. If the project involves groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the ESR.

- If the potential construction or decommissioning of water wells is identified as an issue, the ESR should refer to Ontario Regulation 903, Wells, under the *Ontario Water Resources Act*.
- Potential impacts to groundwater-dependent natural features should be addressed. Any changes to groundwater flow or quality from groundwater taking may interfere with the ecological processes of streams, wetlands or other surficial features. In addition, discharging contaminated or high volumes of groundwater to these features may have direct impacts on their function. Any potential effects should be identified, and appropriate mitigation measures should be recommended. The level of detail required will be dependent on the significance of the potential impacts.
- Any potential approval requirements for groundwater taking or discharge should be identified in the ESR. In particular, a Permit to Take Water (PTTW) under the *Ontario Water Resources Act* will be required for any water takings that exceed 50,000 litres per day.

Air Quality, Dust and Noise

- Any potential air quality impacts should be assessed and used in the evaluation of alternatives for the proposed project. Appropriate mitigation measures of any potential effects should be identified.
- Dust and noise control measures should be addressed and included in the construction plans to ensure that nearby residential and other sensitive land uses within the study area are not adversely affected during construction activities.
- The ESR should consider the potential impacts of increased noise levels during the operation of the undertaking due to potentially higher traffic volumes resulting from this project. The proponent should explore all potential measures to mitigate significant noise impacts during the assessment of alternatives.

Contamination and Waste

- Since the removal or movement of soils may be required, appropriate tests to determine contaminant levels from previous land uses or dumping should be undertaken. If the soils are contaminated, you must determine how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act (EPA)* and Ontario Regulation 153/04, Records of Site Condition, which details the new requirements related to site assessment and clean up. We recommend contacting the ministry's Halton Peel District Office in Burlington for further consultation if contaminated sites are present.
- The location of any underground storage tanks within or adjacent to the study area should be investigated in the ESR. Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The ministry's Spills Action Centre must be contacted in such an event.
- Any current or historical waste disposal sites within or adjacent to the study area should be identified in the ESR. The status of these sites should be determined to confirm whether approval pursuant to Section 46 of the *Environmental Protection Act* may be required for land uses on former disposal sites.

- The ESR should identify any underground transmission lines within or adjacent to the study area. The owners should be consulted to avoid impacts to this infrastructure, including potential spills.

Mitigation and Monitoring

- All waste generated during construction must be disposed of in accordance with ministry requirements.
- Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.
- Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation are met. Mitigation measures should be clearly referenced in the ESR and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly. The proponent's construction and post-construction monitoring plans should be documented in the ESR.

Class EA Process

- The ESR should provide clear and complete documentation of the planning process in order to allow for transparency in decision-making. The ESR must also demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all public consultation efforts undertaken during the planning process. Additionally, the ESR should identify all concerns that were raised and how they have been addressed throughout the planning process. The Class EA also directs proponents to include copies of comments submitted on the project by interested stakeholders, and the proponent's responses to these comments.
- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment. The ESR should include a level of detail (e.g. hydrogeological investigations, terrestrial and aquatic assessments) such that all potential impacts can be identified and appropriate mitigation measures can be developed. Any supporting studies conducted during the Class EA process should be referenced and included as part of the ESR.
- Please include in the ESR a list of all subsequent permits or other approvals that may be required for the implementation of the preferred alternative, including Permits to Take Water, Environmental Compliance Approvals, approval under the *Canadian Environmental Assessment Act* (CEAA), and conservation authority permits.
- Please note that ministry guidelines and other information related to the issues noted above are available at www.ene.gov.on.ca under the publications link. We encourage the proponent to review all the available guides and to reference any relevant information in the ESR.

Consultation with First Nation and Métis Communities

The Crown has a duty to consult First Nation and Métis communities if there is a potential impact to Aboriginal or treaty rights. As the proponent of this project, you have a responsibility to conduct adequate consultation with First Nation and Métis communities as part of the environmental assessment process. The Crown is therefore, delegating the procedural aspects of consultation to you as outlined in the attached document.

You must contact the Director, Environmental Approvals Branch if a project may adversely affect an Aboriginal or treaty right, or if a Part II Order request is anticipated; the Ministry will then determine whether the Crown has a duty to consult. Information and resources to assist you in fulfilling this requirement are provided as an attachment.

Thank you for the opportunity to comment on this project. A draft copy of the ESR should be sent to this office prior to the filing of the final draft, allowing approximately 30 days review time for the ministry's technical reviewers to provide comments. Please also forward our office the Notice of Completion and ESR when completed. Should your project team have any questions regarding the above, please contact me at 416-326-4886.

Yours sincerely,



Chunmei Liu
Environmental Resource Planner and EA Coordinator
Air, Pesticides and Environmental Planning

- c. T. Dufresne, Manager, Halton Peel District Office, MOE
Central Region EA File
A & P File

ABORIGINAL CONSULTATION INFORMATION

Interest-based consultation with First Nation and Métis Communities

Proponents subject to the *Environmental Assessment Act* are required to consult with interested First Nation and Métis communities in addition to consultation with interested persons. Special effort may be required to ensure that First Nation and Métis communities are made aware of the project and are afforded an opportunity to provide comments.

Proponents are required to contact the Ministry of Aboriginal Affairs (MAA) and Aboriginal Affairs and Northern Development Canada (AANDC) to help identify which First Nation and Métis communities may be impacted by your project. **It is important to ensure that MAA and AANDC are advised of any communities identified for consultation during previous stages of the project when making this request.** For more information in this regard, refer to the Aboriginal Information Resources web page of the Ministry of the Environment's internet site at: <http://www.ene.gov.on.ca/en/eaab/aboriginal-resources.php>. You are advised to provide notification directly to all of the First Nation and Métis communities who may be interested in the project.

Rights-based consultation with First Nation and Métis Communities

Proponents should also be aware that certain projects may affect the ability of a First Nation or Métis community to exercise their confirmed or asserted Aboriginal or treaty rights. In such cases, Ontario may have a duty to consult to ensure the protection of the potentially affected right. Activities which may restrict access to unoccupied Crown lands, or could result in a potential to impact to land or water resources, generally have the potential to impact Aboriginal or treaty rights. For assistance in determining whether your project could affect these rights, refer to the attached "Preliminary Assessment Checklist: First Nation and Métis Community Interest."

If there is an impact to Aboriginal or treaty rights, accommodation may be required to avoid or minimize the adverse impacts. Accommodation is an outcome of consultation and includes any mechanism used to avoid or minimize adverse impacts to Aboriginal or treaty rights and traditional uses. Solutions could include adjustments in the timing or geographic location of the proposed activity; accommodation does not necessarily require the provision of financial compensation.

The proponent must contact the Director, Environmental Approvals Branch if a project may **adversely affect an Aboriginal or treaty right**, or if a **Part II Order or an elevation request is anticipated**; the Ministry will then determine whether the Crown has a duty to consult. The Director of the Environmental Approvals Branch can be notified either by email with the subject line "Potential Duty to Consult" to EAASIBgen@ontario.ca or by mail or fax at the address provided below:

| | |
|-----------------|--|
| Email: | EAASIBgen@ontario.ca Subject: Potential Duty to Consult |
| Fax: | 416-314-8452 |
| Address: | Environmental Approvals Branch 12A Flr., 2 St Clair Ave W Toronto ON M4V1L5 |

Delegation of Procedural Aspects of Consultation

Proponents, by virtue of their knowledge and participation in project activities, have an important and direct role in the consultation process to ensure both success and certainty. Where the Crown's duty to consult is triggered, **Ontario is delegating these procedural aspects of this rights-based consultation to you as the proponent of the project.**

Ontario will have an oversight role as the consultation process unfolds but will be relying on the steps undertaken and information you obtain to ensure adequate consultation has taken place. To ensure that First Nation and Métis communities have the ability to assess a project for its potential to impact on an Aboriginal or treaty right, there are certain procedural aspects of consultation that Ontario requires proponents to undertake.

The responsibilities of the proponent for procedural aspects of consultation include:

- Providing notice to the elected leadership of the First Nation and/or Métis communities (e.g., First Nation Chief) as early as possible regarding the project;
- Providing First Nation and/or Métis communities with information about the proposed project including anticipated impacts, information on timelines and your environmental assessment process;
- Following up with First Nation and/or Métis communities to ensure they received project information and that they are aware of the opportunity to express comments and concerns about the project; **if you are unable to make the appropriate contacts (e.g. are unable to contact the Chief) please contact the Ministry of the Environment for further direction.**
- Providing First Nation and/or Métis communities with opportunities to meet with appropriate representatives to discuss the project;
- Gathering information about how the project may adversely impact the Aboriginal and/or Treaty rights (for example, hunting, fishing) or sites of cultural significance (for example, burial grounds, archaeological sites);
- Considering the comments and concerns provided by First Nation and/or Métis communities and providing responses;
- Where appropriate, discussing potential mitigation strategies with First Nation and/or Métis communities;
- Bearing the reasonable costs associated with these procedural aspects of consultation.
- Maintaining a Consultation Record and upon request, providing copies of the Consultation Record to Ontario. The Consultation Record should:
 - summarize the nature of any comments and questions received from First Nation and/or Métis communities
 - describe the response to comments and how concerns were considered
 - include a communications log indicating the dates and times of all communications; and
 - document activities in relation to consultation.

Successful consultation depends, in part, on early engagement by proponents with First Nation and Métis communities. Information shared with communities must be clear, accurate and complete, and in plain language where possible. The consultation process must maintain sufficient flexibility to respond to new information, and we trust you will make all reasonable efforts to build positive relationships with all First Nation and Métis communities contacted.

Preliminary Assessment Checklist: First Nation and Métis Community Interest

Some main concerns of First Nation and Métis communities deal with gathering, trapping, and fishing – these activities generally occur on Crown land or water bodies, or changes to them, may be of concern. Address rights for hunting, own land or water bodies.

Where you have identified that your project may trigger rights-based concerns, a pre-consultation meeting with the ministry and project proponent will provide an early opportunity to confirm whether Ontario's duty to consult is triggered and to discuss roles and responsibilities in that event.

Please answer the following questions. A "yes" response will indicate a potential impact on Aboriginal or treaty rights.

| | YES | NO |
|--|-----|----|
| 1. Are you aware of concerns from First Nation and Métis communities about your project or a similar project in the area? The types of concerns can range from interested inquiries to environmental complaints, and even to land use concerns. You should consider whether the interest represents on-going, acute and/or widespread concern. | | |
| 2. Is your project occurring on Crown land, or is it close to a water body, or might it change access to either? | | |
| 3. Is the project located in an open or forested area where hunting or trapping could take place? | | |
| 4. Does the project involve the clearing of forested land? | | |
| 5. Is the project located away from developed, urban areas? | | |
| 6. Is your project close to, or adjacent to, an existing reserve? Projects in areas near reserves may be of interest to your First Nation and Métis community neighbours. | | |
| 7. Will the project affect First Nations and/or Métis right of access? | | |
| 8. Is the area subject to a land claim? Information about land claims filed in Ontario is available from the Ministry of Aboriginal Affairs; information about claims filed with the federal government is available from Aboriginal Affairs and Northern Development Canada. | | |
| 9. Does the project have potential to cause cumulative effects at the present time or over a long period of time (e.g. several small expansions of an urban area)? | | |
| 10. Does the project have the potential to impact any archaeological sites? | | |

January 8, 2014

CFN 50250

BY E-MAIL ONLY (farhad.shahla@mississauga.ca)

Farhad Shahla
City of Mississauga
201 City Centre Drive, Suite 800
Mississauga, ON L5B 2T4

**Re: Response to Notice of Study Commencement
Municipal Class Environmental Assessment - Schedule C
Courtneypark Drive East (Kennedy Road to Dixie Road)
Etobicoke Creek Watershed; City of Mississauga; Regional Municipality of Peel**

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Study Commencement for the above noted Environmental Assessment (EA) on November 13, 2013. It is our understanding that this undertaking will address network demand challenges, safety concerns, active transportation measures and will involve rehabilitating the road surface.

TRCA Areas of Interest

Staff has identified the following Areas of Interest within the study area:

Regulated Areas

- Regulation Limit
- Wetlands

TRCA Program and Policy Areas

- Terrestrial Species and Habitat
- Terrestrial Natural Heritage Strategy

TRCA mapping currently shows a wetland on the north side of Courtneypark Drive, west of the Highway 410 ramp. It is unclear whether this feature still exists and will need to be confirmed by TRCA staff on site at a later date when ground conditions permit.

In the meantime, available mapping and program information regarding these Areas of Interest will be sent under separate cover for your reference. Please ensure that the status, potential impacts and opportunities for enhancement related to these Areas of Interest are documented and assessed through a review of background material, technical study, field assessment and detailed evaluation, as appropriate.

Selection of Alternatives

Based on the results of a site visit, in consideration of TRCA's *Valley and Stream Corridor Management Program*, Ontario Regulation 166/06, and TRCA's other programs and policies, staff requires that the preferred alternative meets the following criteria:

1. Prevents the risk associated with flooding, erosion or slope instability.
2. Protects and rehabilitates existing landforms, features and functions.
3. Provides for aquatic, terrestrial and human access.
4. Minimizes water/energy consumption and pollution.
5. Addresses TRCA property and heritage resource concerns.

TRCA staff recommends that a summary of detailed design commitments be included in the EA as a Pre-design Brief. This summary should include, but not be limited to:

- a. An aerial photo indicating the study area, regulated area, existing conditions and preferred solution/design;
- b. Text indicating the preferred alternative solution/design;
- c. A Reference list of alternative solutions and designs considered;
- d. A synopsis of all TRCA requirements and technical commitments.

It is intended that the proponent and their consultants, as well as TRCA, would use the Pre-design Brief during the preliminary stages of detailed design. In the Pre-design Brief, commitments made during the EA would be clearly articulated in order to facilitate a 90 % detailed design submission to TRCA for all required permits. TRCA staff would then be able to review the required studies, reports or plans; and confirm any additional study requirements or revisions to the submitted materials. Ideally, the completion of the Pre-Design Brief will result in a more timely and streamlined permit approval process in the future.

TRCA Review

Prior to selecting the preferred alternative solution and design, please arrange a meeting to discuss issues that relate to our program and policy concerns. In addition, please add TRCA's Etobicoke/Mimico Creek Watershed Specialist, Chandra Sharma, to the project mailing list to receive any public information updates.

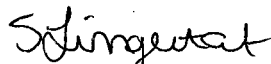
Please provide the following submissions to expedite TRCA review:

- Notices of public meetings and display material and handouts
- Four hard copies of the Phases 1 and 2 Report
- Four hard copies of the Phase 3 Report
- Four hard copies of the Draft EA Document
- One hard copy of the Final EA Document.

Please include a digital copy of all submitted material. Materials must be submitted in PDF format, with drawings pre-scaled to print on 11"x17" pages. Materials may be submitted on discs, via e-mail (if less than 2.5 MB), or through file transfer protocol (FTP) sites (if posted for a minimum of two weeks).

Should you have any questions, please contact me at extension 5717 or at slingertat@trca.on.ca.

Yours truly,



Sharon Lingertat
Senior Planner, Environmental Assessment Planning
Planning and Development

Encl.: TRCA Areas of Interest Summary Table

BY E-MAIL

cc: Stantec: Gord Murray (gordon.murray@stantec.com)
TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
Chandra Sharma, Watershed Specialist, Etobicoke/ Mimico Creek

EA Requirements

Document and assess the status, potential impacts and opportunities for enhancement that relate to the following Areas of Interest through a review of background material, technical study, field assessment and detailed evaluation, as appropriate. Make reference to the applicable Program and Policy documents. Include in the EA Document appendices any minutes, structure summary sheets for watercourses or wetlands, or other material collected through meetings with TRCA staff. Natural features may need to be confirmed on site by TRCA staff.

| Area of Interest / Data Availability | Program and Policy Concerns |
|---|--|
| TRCA REGULATED AREAS | |
| Regulation Limit | <p>In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any development (e.g. construction) if, in the opinion of TRCA, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected. The Regulation Limit defines the greater of the natural hazards associated with Ontario Regulation 166/06 (listed below).</p> <p>NOTE: The Regulation Limit provides a geographical screening tool for determining if Ontario Regulation 166/06 will apply to a given proposal. Through site assessment or other investigation, it may be determined that areas outside of the defined Regulation Limit require permits under Ontario Regulation 166/06. In these instances, it is the text of the regulation that will prevail; modifications to the regulation line may be required.</p> <p>Any development within the Regulation Limit must comply with the applicable sections of TRCA's <i>Valley and Stream Corridor Management Program</i>.</p> |
| Wetlands | <p>Wetlands are sensitive natural habitats that play an important role in numerous physical, chemical and biological processes, including storm water control, natural habitat and water quality improvement. Most wetlands are designated by the Ministry of Natural Resources as Provincially Significant or Locally Significant. Other wetlands have also been identified on a site specific basis by TRCA. All of these are regulated under Ontario Regulation 166/06. TRCA may require an environmental study or site confirmation of wetlands locations.</p> |
| TRCA PROGRAM AND POLICY AREAS | |
| <i>Note: Additional program and policy information may be available at www.trca.on.ca, or by request.</i> | |
| Terrestrial Natural Heritage System Strategy | <p>TRCA has identified the need to improve both the quality and quantity of terrestrial habitat. TRCA's <i>Terrestrial Natural Heritage System Strategy</i> sets measurable targets for attaining a healthier natural system by creating an expanded and targeted land base. It includes strategic directions for stewardship and securement of the land base, a land use policy framework to help achieve the target system, and other implementation mechanisms.</p> |
| Terrestrial Species and Habitat | <p>The terrestrial system includes landscape features, vegetation communities and flora and fauna species. Terrestrial species and habitat should be assessed based on their conservation status according to sensitivity to disturbance and specialized ecological needs, as well as rarity.</p> <p>TRCA may require a site assessment and terrestrial inventory to confirm impacts to these resources. TRCA's <i>Terrestrial Natural Heritage Strategy</i> may be applicable to any work that impacts terrestrial species and habitat. In addition, relevant legislation (e.g. <i>Migratory Bird Convention Act</i>, <i>Species at Risk Act</i>) should be applied.</p> |

From: [Sharon Lingertat](#)
To: [Pengelly, Chris](#)
Cc: [Bradley, Michael](#)
Subject: RE: City of Mississauga Courtneypark Dr E Class EA - Regulation Limit mapping data
Date: Tuesday, October 28, 2014 3:36:37 PM

This message has been archived.

Hi Chris,

The feature that runs parallel to Courtney Park Dr. appears to be a drainage ditch which feeds into the wetland area around the pond. At this point we have no concerns with the road widening, however, please ensure that drainage is maintained to the area northwest of Courtney Park and Hwy 410. Please also provide us with a draft copy of the EA report in digital form for our review, once available.

Thanks
Sharon

Sharon Lingertat, MCIP, RPP | Senior Planner, Environmental Assessment Planning |
Toronto and Region Conservation Authority | 5 Shoreham Drive | Toronto, ON | M3N
1S4 | (416-661-6600 ext. 5717 | * slingertat@trca.on.ca | 8 www.trca.on.ca
<<http://www.trca.on.ca/>>

From: "Bradley, Michael" <Mike.Bradley@stantec.com>
To: Sharon Lingertat <SLingertat@trca.on.ca>,
Cc: "Pengelly, Chris" <Chris.Pengelly@stantec.com>
Date: 10/14/2014 01:28 PM
Subject: RE: City of Mississauga Courtneypark Dr E Class EA - Regul