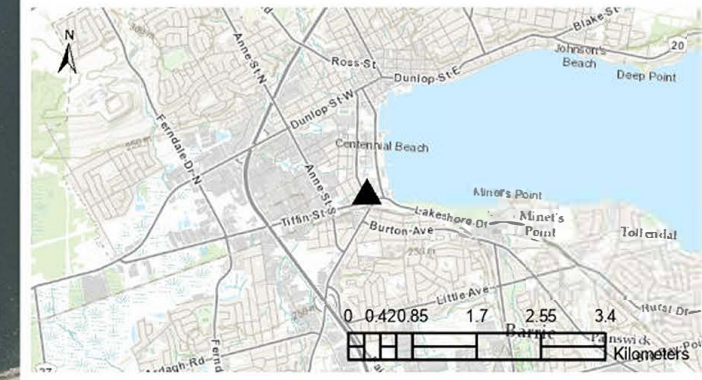




Appendix D: Natural Environment Supporting Materials



- Site boundary
--- Watercourse
- ### ELC Communities
- CGL-2 - Parkland
 - CVC-1 - Business Sector
 - CVI-1 - Transportation
 - CVR-2 - High Density Residential
 - MEMM3 - Dry-Fresh Mixed Meadow
 - THDM5 - Fresh-Moist Deciduous Thicket
 - THDM5 - Round-leaved Dogwood Deciduous Shrub Thicket



Spatial Reference:

PCS: NAD 1983 CSRS Ontario MNR Lambert
 GCS: GCS North American 1983 CSRS
 Datum: North American 1983 CSRS
 Projection: Lambert Conformal Conic
 Scale: 1:5,000

Sources:

- Terrestrial Survey, CIMA+, 2021
- Basemap : City of Barrie, City of Brampton, City of Toronto, County of Simcoe, York Region, Province of Ontario, Ontario MNR, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCan, City of Barrie, Maxar

General Notes:

Dimensions on the plan should be read and not measured.
 Any errors or omissions should be reported to CIMA+. The boundaries, areas, and title deeds must be verified by a surveyor.

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Figure 5 - Ecological Land Classification Map

Natural Heritage Investigation
 Bradford Street and Adjacent Roadways
 Bradford Street, Barrie, ON
 City of Barrie
 Ref # : B001361-300-080

Survey by : C. Little
 Figure by : J. Scott
 Concept by : J. Scott
 Verified by : K. Markvorsen



Appendix D - Table 1: Species at Risk with the Potential to Occur in Bradford Street Widening Study Area

Common Name Scientific Name Status ⁱ	Information Source ⁱⁱ	Species Specific Information	Species Observed in Study Area	Suitable Habitat in Study Area	Impact Assessment
Blanding's Turtle <i>Emydoidea blandingii</i> Federal - THR Provincial – THR	ORAA - Square #17PK01	The Blanding's Turtle is a medium-sized turtle easily identified by its bright yellow throat and chin. They have a domed shell that resembles an army helmet. The Blanding's Turtle is a semi-aquatic species. They use aquatic habitats for overwintering, mating, foraging, thermoregulation, summer inactivity, and movement. They favour relatively shallow water, soft highly organic substrates, and abundant vegetation such as wetlands, slow flowing rivers, and creeks as well as artificial channels. Terrestrial habitat and especially upland forest, is important for many activities of the Blanding's Turtle during the active season, including nesting, thermoregulation, summer inactivity, and movement. Blanding's Turtles can also use or move through human-altered habitats, generally open areas, such as agricultural fields, road shoulders, and quarries.	No	Yes	Suitable habitat may be present in Bunkers Creek within the Study Area. Both Dymment Creek, and HotchKiss Creek are not suitable for this species due to the length of culvert that extends underground within the Study Area (>100 m at both locations) as this species generally will not use tunnel lengths >25 m. Mitigations should be implemented prior to project construction to protect this species and its habitat.
Bank Swallow <i>Riparia riparia</i> Federal - THR Provincial - THR	OBBA - Square # 17PK01	The Bank Swallow is a small songbird with brown upperparts, white underparts, and a distinctive dark breast band. It averages 12 cm long and weighs between 10 and 18 grams. Males and females are similar in size and colour. Bank swallows' nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits or former ones where the banks remain suitable.	No	No	Suitable habitat requirements have not been observed in the Study Area. Therefore, it is anticipated that this species will not be impacted by this Project.
Bobolink <i>Dolichonyx oryzivorus</i> Federal - THR Provincial - THR	NHIC - Square #17PK0415 OBBA - Square # 17PK01	The Bobolink is a medium sized songbird found in grasslands and hayfields. In their summer breeding season, male Bobolinks are black with a white back and yellow collar. By late summer, males lose their breeding plumage to resemble the female's tan colour with black stripes. Bobolinks often build their small nests on the ground in dense grasses. Bobolinks spend much of their time out of sight on the ground feeding on insects and seeds.	No	No	Suitable habitat requirements have not been observed in the Study Area. Therefore, it is anticipated that this species will not be impacted by this Project.
Chimney Swift <i>Chaetura pelagica</i> Federal – THR Provincial – THR	NHIC - Square #17PK0415 OBBA - Square # 17PK01	The Chimney Swift is a relatively small bird, about 12 to 14 cm long, with a sooty brown, cigar-shaped body, long slender wings, and a lighter throat. It can be distinguished by its telltale acrobatic and erratic flight pattern. The Chimney Swift spends most of its time flying and even forages in the air, catching its prey (flying insects) in flight. Primarily found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. They also tend to stay close to water as this is where the flying insects that they eat congregate.	No	Yes	Residential buildings meeting the habitat requirements for this species are not proposed for removal. As such, impacts to the species or its habitat are not anticipated because of the proposed Project.
Eastern Meadowlark <i>Sturnella magna</i> Federal - THR Provincial - THR	NHIC - Square #17PK0415 OBBA - Square # 17PK01	The Eastern Meadowlark is a medium-sized, migratory songbird (about 22 to 28 cm long) with a bright yellow throat and belly, a black "V" on its breast and white flanks with black streaks. They are most common in native grasslands and prairies, but they also occur in pastures, hayfields, agricultural fields, airports, and other grassy areas.	No	No	Suitable habitat requirements have not been observed in the Study Area. Therefore, it is anticipated that this species will not be impacted by this Project.
Eastern Small-footed Bat <i>Myotis leibii</i> Federal – Not listed Provincial – END	AMO	The Eastern Small-footed Bat is about 8 cm long and weighs just 4-5 grams. Their wingspan is 21-25 cm. This bat's fur has black roots and shiny light brown tips, giving it a yellowish-brown appearance. Its face mask, ears and wings are black, and its underside is grayish brown. Males and females are similar in color and size. In the spring and summer, Eastern Small-footed Bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. In the winter, these bats hibernate, most often in caves and abandoned mines.	No	No	Suitable habitat requirements have not been observed in the Study Area. Therefore, it is anticipated that this species will not be impacted by this Project.
Little Brown Myotis <i>Myotis lucifugus</i> Federal - END Provincial - END	AMO	Little Brown Myotis have glossy brown fur and usually weigh between four and 11 grams – about as much as a Canadian loonie or toonie. Little Brown Myotis inhabit forested lands near water but may also be found in dry climates where water is not readily available. They prefer to roost in buildings, trees, under rocks, and in piles of wood.	No	Yes	Suitable habitat in the form of trees >10 cm diameter at breast height are present within the Study Area. Mitigations should be implemented prior to project construction to protect this species and its habitat.

Common Name Scientific Name Status ⁱ	Information Source ⁱⁱ	Species Specific Information	Species Observed in Study Area	Suitable Habitat in Study Area	Impact Assessment
Northern Myotis <i>Myotis septentrionalis</i> Federal – END Provincial – END	AMO	Northern Long-eared Bats have dull yellow-brown fur with pale grey bellies. They are typically about eight cm long, with a wingspan of about 25 cm. Northern Long-eared Bats usually weigh between six and nine grams. They have long (rounded) ears and look like the more common Little Brown Myotis. They can be distinguished by the fleshy projection that covers the entrance to the ear, which is long and thin, with a pointed tip. They are found in a variety of forested habitats with day roosts and maternity colonies in older forest. They forage over water and along streams in the forest. At the end of the summer, they swarm, generally near the cave or underground location where they will overwinter.	No	Yes	Suitable habitat in the form of trees >10 cm diameter at breast height is present within the Study Area. Mitigations should be implemented prior to project construction to protect this species and its habitat.
Tri-colored Bat <i>Perimyotis subflavus</i> Federal - END Provincial - END	AMO	The Tri-colored Bat is a small pale brown bat that weighs about 7 gm (the weight of a two-dollar coin) and has a wingspan of 23 cm. They are named for the hairs on its back which are black, yellow, and brown. The Tri-colored Bat is found in a variety of forested habitats with day roosts and maternity colonies in older forest and occasionally in barns or other structures. They forage over water and along streams in the forest. At the end of the summer, they swarm, generally near the cave or underground location where they will overwinter.	No	Yes	Suitable habitat in the form of trees >10 cm diameter at breast height is present within the Study Area. Mitigations should be implemented prior to project construction to protect this species and its habitat.

ⁱ Status under the federal Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and provincial Committee on the Status of Species at Risk in Ontario (COSSARO) – END = Endangered, THR = Threatened

ⁱⁱ NHIC = Natural Heritage Information Center (Ministry of Natural Resources and Forestry), ORAA = Ontario Reptile and Amphibian Atlas (Ontario Nature), OBBA = Ontario Breeding Bird Atlas (Cadman et al., 2007), AMO = Atlas of the Mammals of Ontario (Dobbyn, 1994)