Natural Environment Assessment Report

FINAL

City of Brantford, ON

Prepared for:

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1.0 INTRODUCTION

Groundwater Environmental Management Services (GEMS) was retained by MTE Consultants to complete a Natural Environmental Assessment (NEA) Report to support the Schedule C Environmental Assessment (EA) for downtown streetscaping in the City of Brantford. Since there are multiple road corridors to be included within the streetscaping, they will collectively be referred to as the 'Site'. The NEA is being completed as a required technical document for the Environmental Study Report (ESR) as per the Deliverables (xiv) section of the Terms of Reference within the RFP documents.

The road corridors to be included within the streetscaping are as follows:

- Colborne Street from Brant Avenue/Icomm Drive to Dalhousie Street/Colborne Street East junction
- Dalhousie Street from Brant Avenue to Colborne Street East /Dalhousie Street junction
- Brant Avenue from Dalhousie Street to Icomm Drive
- Clarence Street from Dalhousie Street to Colborne Street
- King Street, Queen Street and Charlotte Street all from Dalhousie Street to Colborne Street
- Market Street/Square from Dalhousie Street to Colborne Street
- Brant Avenue/Icomm Drive/Colborne Street East/Colborne Street West intersection

The location of the Site is depicted on Figure 1.

2.0 RELEVANT POLICY & LEGISLATION

A summary of natural heritage policies and legislation relevant to the Site is provided in Sections 2.1 to 2.5. Appendix A includes a natural heritage map obtained from the Natural Heritage Information Centre mapping application.

2.1 City of Brantford Official Plan

GEMS reviewed the *City of Brantford Official Plan* (OP*),* originally dated November 4, 1987 (last updated February 28, 2020) for information pertaining to the Site. Schedules 1-1 and 1-2 depict various aspects of the Site:

- Schedule 1-1: Landuse - the Site is located within *Core Commercial, Mixed Commercial and Residential, General commercial, Low Density Residential, High Density Residential lands* and contains a small pocket designated as *Neighbourhood Park and Open Space*

- Schedule 1-2: Growth Management Plan - the Site is located within an *Urban Growth Centre* and an *Intensification Corridor*

According to the Schedules within the OP the Site is not within or adjacent to any natural heritage features. Although the Grand River is approximately 100 m west of the project area there is additional built infrastructure already in place in between the river and the Site. This area will provide additional buffer between the construction works and the Grand River.

Appendix A includes copies of the OP schedules.

2.2 Conservation Authorities Act

In accordance with the available online Grand River Conservation Authority (GRCA) regulation mapping (Appendix A) the Site is not located within a regulated area. The Site area (specifically the Colborne Street and Brant Avenue/Icomm Drive intersection) is immediately adjacent to the GRCA Regulation Limit. Policies under *Ontario Regulation 150/06: Grand River Conservation Authority: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* related to adjacent lands must be considered.

2.3 Species at Risk Legislation

Ontario's *Endangered Species Act* (2007) and Canada's Species at Risk Act (2002) aim to protect species at risk (SAR) and their habitats and promote stewardship activities to assist in protection and recovery of SAR and their habitat. Should a SAR or SAR habitat be observed at a site, authorization under one or both of these Acts may be required for any proposed works that may affect SAR/their habitat.

2.4 Invasive Species Act

The Invasive Species Act (2015) came into effect in Ontario on November 3, 2016 and provides a policy framework for the management of invasive species. In accordance with this Act, an invasive species is defined as:

"*A species that is not native to Ontario, or to a part of Ontario, and,*

a) *is harming the natural environment of Ontario or of the part of Ontario in which it is present, or*
b) *is likely to harm the natural environment of Ontario or of a part of Ontario, regardless of whether it is present in Ontario or in a part of Ontario.*"

Invasive species identified at the Site may require a "Risk Assessment" in order to determine if they require regulation under the Act (MNRF, 2016).

2.5 Tree Removal Bylaws

City of Brantford

Any works being undertaken by the City of Brantford are exempt from the *Trees-Planting-Protection By-law* (Chapter 332) enacted December 1997. Road, sewer or sidewalk maintenance, construction or reconstruction activities carried out by the City or contractors acting on the City's behalf are all exempt, however reasonable care and diligence must be exercised to protect and preserve trees where possible.

3.0 PHYSICAL SETTING & BACKGROUND INFORMATION REVIEW

A review of existing available information on the environmental functions and features of the study area, species of concern, existing mapping and other available data has been completed and is discussed in sections 3.1 to 3.4.

3.1 Landscape Context

The Site area is located within the following legal addresses:

- Brantford TWP, Town of Brantford
- Brantford TWP, Concession 4, Lot C

The Site area encompasses approximately 24.77 ha of land within the downtown of Brantford.

3.2 Geological and Physiographic Features

The Site is located within the broad physiographic region known as the Norfolk Sand Plain (Chapman and Putman, 2007). The surficial geology within the general Site area is noted as comprised of both older and modern alluvial deposits and fine-textured glaciolacustrine deposits with pockets of coarse-textured glaciolacustrine deposits (OGS Earth, 2010). Bedrock geology within the area is noted as comprised of limestone, dolostone, shale, sandstone, gypsum and salt of the Salina Formation (OGS Earth, 2011).

The elevations of the area immediately within the Site areas are undulating, ranging between 213 and 202 metres above sea level (masl) (Google Earth, 2018).

3.3 Hydrogeological and Surface Water Features

The Site is located within the Grand River watershed. The Grand River is approximately 100 m west of the proposed streetscaping improvements. There is also a tributary leading into Mohawk Lake daylighting approximately 100 m south of Colborne Street E.

Groundwater flow direction within the Grand River watershed aquifer is generally in a southerly direction eventually discharging to Lake Erie (GRCA, 2001).

3.3.1 Water Well Information

Records for installed water wells throughout Ontario are publicly available for access on the Government of Ontario's "Well Records" online mapping application. GEMS reviewed a selection of records (Well IDs: 7230693, 7226197, 7230655, 1306421) for water wells located within the immediate vicinity of the Site. In general, the stratigraphy within the vicinity of the Site has been recorded as comprised primarily of sand and silt with some fill and gravel components. Well completion depths ranged from 6.1 to 7.5 metres below ground surface. Groundwater was encountered at depths ranging from 1.5 to 5.9 metres below ground surface.

3.4 Species at Risk

Since the MNRF does not deal with SAR information requests any longer GEMS has searched the NHIC Database and for any records of occurrence for SAR within the area. The NHIC is the provincially recognized database for SAR information.

GEMS has also begun the process of the new preliminary MECP SAR Screening, which has been created to encourage the client to take on a more serious and hands-on roll in acquiring SAR information before obtaining a permit under the Endangered Species Act (ESA), if necessary.

3.4.1 NHIC Database

The MNRF's Natural Heritage Information Centre (NHIC) "Make-a-Map: Natural Heritage Areas" online mapping application (MNRF, 2016) was reviewed for information pertaining to tracked species (rare or at-risk) with records of occurrence within the vicinity of the Site. GEMS conducted a search of the 1 km^2 areas that contain the Site. Records for the following species were identified:

- Black Redhorse – *Moxostoma duquesnei* *
- Eastern Sand Darter – *Ammocrypta pellucida* *
- Silver Shiner – *Notropis photogenis* *
- Wavy-rayed Lampmussel – *Lampsilis fasciola* *
- Tawny Emperor – *Asterocampa clyton*
- Eastern Wood-pewee – *Contopus virens*
- Bristly Buttercup – *Ranunculus hispidus*

The species marked with an asterisk (*) represent those found in the 1km grid associated with the Grand River. Since these species are aquatic species, it is unlikely that they will be found within the Site area. The remainder of the species may be encountered, therefore proper

precautionary and mitigation measures will be put into place prior to and during construction activities to ensure potential impacts are reduced.

3.4.2 MECP SAR Screening

The recommended preliminary screening activity provided by the MECP has been performed for the Site. Multiple sources of information for SAR are recommended to be looked at as a part of the screening activity, various online databases, the local conservation authority, local naturalist groups, indigenous communities in the area, trusts or environmental non-governmental organizations and field studies were all consulted for information.

Appendix B includes the preliminary screening completed by GEMS. At the time of issuing this report a response from MECP has not been received.

4.0 BIOPHYSICAL INVENTORY

4.1 Vegetation Communities

GEMS performed a field investigation on June 25, 2020 in order to describe the existing natural features and delineate the vegetation communities located on and immediately surrounding the Site. Vegetation communities were identified in accordance with Southern Ontario Ecological Land Classification (Lee, 2008). Vegetation community boundaries and inclusions were delineated using a combination of aerial photograph analysis and field-truthing and are illustrated on Figure 2. Appendix C includes select Site photographs.

During GEMS' field investigation, the Site was identified as *CV: Constructed* lands with some inclusions of *CGL_2: Parkland*. The Site is a mix of both commercial stores as well as residential homes. City street trees and landscaped trees within parkette areas were some of the only vegetation species present. Species noted include linden (*Tilia sp*.), Norway maple (*Acer platanoides*), freeman maple (*Acer freemanii*), poplar species (*Populus sp*.), spruce species (*Picea sp*.), pine species (*Pinus sp.),* ginkgo (*Ginkgo biloba*), thornless honey locust (*Gelditsia triacanthos f. inermis*), northern catalpa (*Catalpa speciose*), staghorn sumac (*Rhus typhina*), common lilac (*Syringa vulgaris*), and various hybrid landscape maples (Acer sp.).

4.2 Wildlife

During the June 25, 2020 Site investigation GEMS did observe some active wildlife including squirrels (*Sciuridae sp*.), sparrows (*Passeridae sp*.), American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*) and blue jays (*Cyanocitta cristata*). It is anticipated that additional species common to urban settings would be present.

5.0 POLICY CONFORMITY

Conformity of the proposed development to the relevant natural heritage policies detailed in Section 2.0 of the NHE are discussed in sections 5.1 to 5.3.

5.1 City of Brantford Official Plan

Since there are no natural heritage policies that affect the Site area, there is no policy conformity associated with the Brantford OP within this report.

5.2 Grand River Conservation Authority

In accordance with the available online GRCA regulation mapping the Site is not located within a GRCA Regulated Area. Since there is a section of the proposed streetscaping works to be conducted immediately adjacent to the regulation limit special care to avoid harm or pollution into the Grand River must be exercised during construction works. Proper Erosion and Sediment Control measures as described in Section 6.0 will help to ensure the Grand River is protected from any sediment runoff from the construction area.

5.3 SAR Legislation

Since there are potential SAR within the project area special care must be taken to not disturb the species or habitat if encountered on site. The majority of the species noted in Section 3.4.1 above, are likely to be within the Grand River and immediate surrounding area and not within the Site area. If any SAR are encountered on Site authorization under the *Endangered Species Act* or the *Species at Risk Act* may be needed.

Any proposed construction activities should adhere to the “Migratory Birds Convention Act” (1994). Any vegetation removals required within the core breeding bird season (occurs annually, generally between April 1st and August 31st) will require clearance surveys for active nesting. The removal or disturbance of active nests that contain eggs or young birds is prohibited. Such measures will ensure that no direct harm to avian species, including potentially occurring significant species will occur.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the above information it is GEMS opinion that there will *not* be significant impacts to the ecology of the adjacent natural features. The Site has received past disturbance and does not interfere with any natural heritage features or their functions. The proposed streetscaping will provide an overall improved habitat for some species due to the increased tree cover and green space.

Including proper Erosion and Sediment Control (ESC) measures into the project works prior to the start of any construction and maintaining these measures until the project is complete will severely reduce any impacts to the Grand River and the species within it. Properly installed and periodically inspected ESC will also contribute to less runoff from construction activities. Measures such as sediment control fencing and fibre rolls in certain areas to contain any sediment that would potentially runoff into the Grand River are recommended. Catch basin inserts to collect sediment flowing into the local sewers are also recommended. Active maintenance must be done on all ESC measures to ensure proper function.

Additionally, Low Impact Development (LID) and Green Infrastructure (GI) measures will reduce any increased impervious surface cover and allow for a more natural infiltration rate during precipitation events. Since the project area is so close to the Grand River any increased impervious surfaces may have a more immediate effect on the river, which could also contribute to higher erosion rates in the watercourse.

7.0 LIMITATIONS

This report is intended solely for MTE Consultants Inc. (“Client”) in providing a Natural Environmental Assessment (NEA) Report for the Schedule C Environmental Assessment (EA) for downtown streetscaping in the City of Brantford. This report is prohibited to be used by any other party without written consent by an authorized representative of Groundwater Environmental Management Services Inc. (“GEMS”). This report is considered GEMS’ professional work product and shall remain the sole property of GEMS. Any unauthorized reuse, redistribution of, or reliance on, the report shall be at the Client’s and recipient’s sole risk, without liability to GEMS. The Client shall defend, indemnify and hold GEMS harmless from any liability arising from or related to the Client’s unauthorized distribution of the report. No portion of this report may be used as a separate entity; it is to be read in its entirety and shall include all supporting drawings and appendices.

The conclusions and recommendations made in this report are in accordance with our present understanding of the proposed project, the current site use, surface and subsurface conditions, and are based on available information, a reconnaissance on the date(s) set out in the report, records review and interviews with appropriate people and the work scope provided by the Client and described in the report and should not be construed as a legal opinion. GEMS relied in good faith on the data and information provided by the Client and from other materials as noted in this report. GEMS has assumed that the information provided was factual and accurate. GEMS accepts no responsibility for any deficiency, misstatement, or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted. Reliance on this report is only extended to the Client. No other representations or warranties of any kind, either expressed or implied, are made. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the sole responsibility of such third parties. If conditions at the Site change or if any additional

information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

We trust this information will meet your current requirements. Please do not hesitate to contact the undersigned should you have any questions or require additional information.

Yours truly,

Groundwater Environmental Management Services Inc.

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Ecologist

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CAN-CISEC
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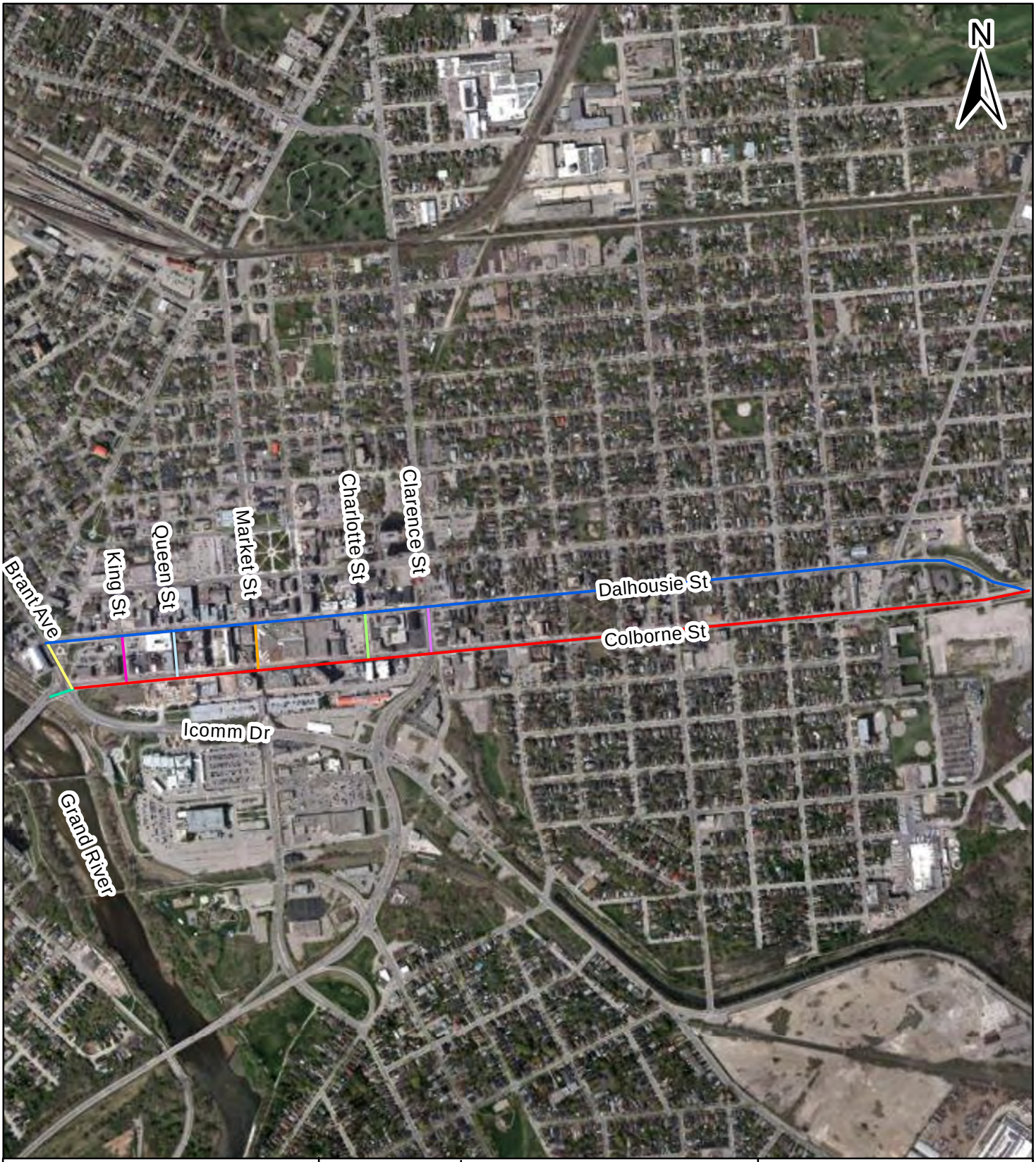
Figures



Legend

- Corridor 1
- Corridor 2
- Corridor 3
- Corridor 4
- Corridor 5
- Corridor 6
- Corridor 7
- Corridor 8
- Corridor 9

Drawn By: JP
Checked By: KL

Client: Brantford NEA Report
MTE Consultants

GEMS Groundwater Environmental Management Services Inc.
http://www.gemservicesinc.com

Source: ESRI Basemap
NAD 1983
Zone 17N

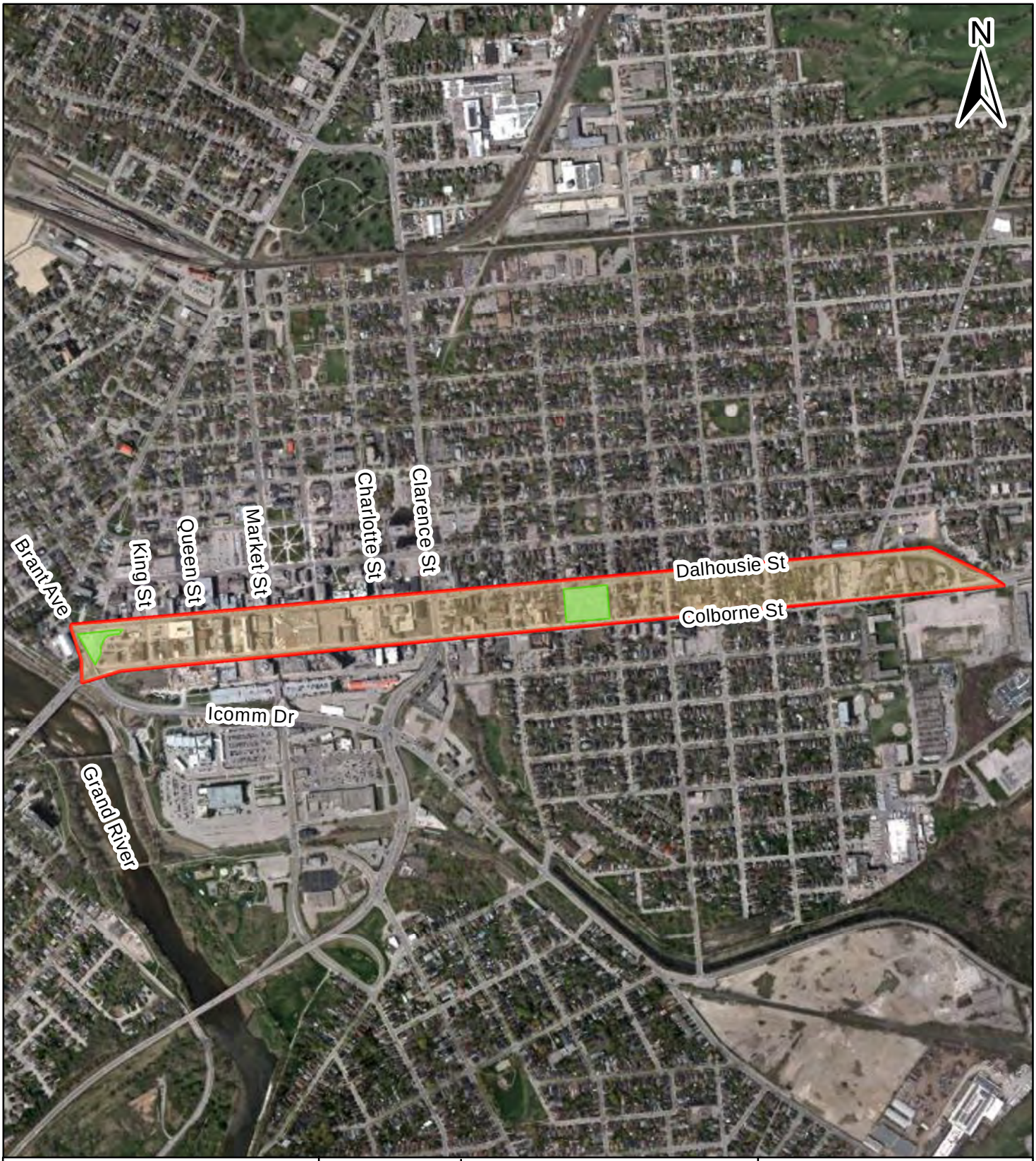
Date: October 2020

Title: Site Location

Scale: 0 130 260 520 Meters

Project No. 20-202744

Figure No. 1



Legend

- CV: Constructed
- CGL_2: Parkland
- General Site Area

Drawn By: JP Checked By: KL	Client: Brantford NEA Report MTE Consultants	GEMS Groundwater Environmental Management Services Inc. http://www.gemservicesinc.com	
Source: ESRI Basemap NAD 1983 Zone 17N	Date: October 2020	Title: Vegetation Communities	
	Scale: 0 137.5 275 550 Meters	Project No. 20-202744	Figure No. 2

Appendix A

Applicable Schedules and Maps

Ontario

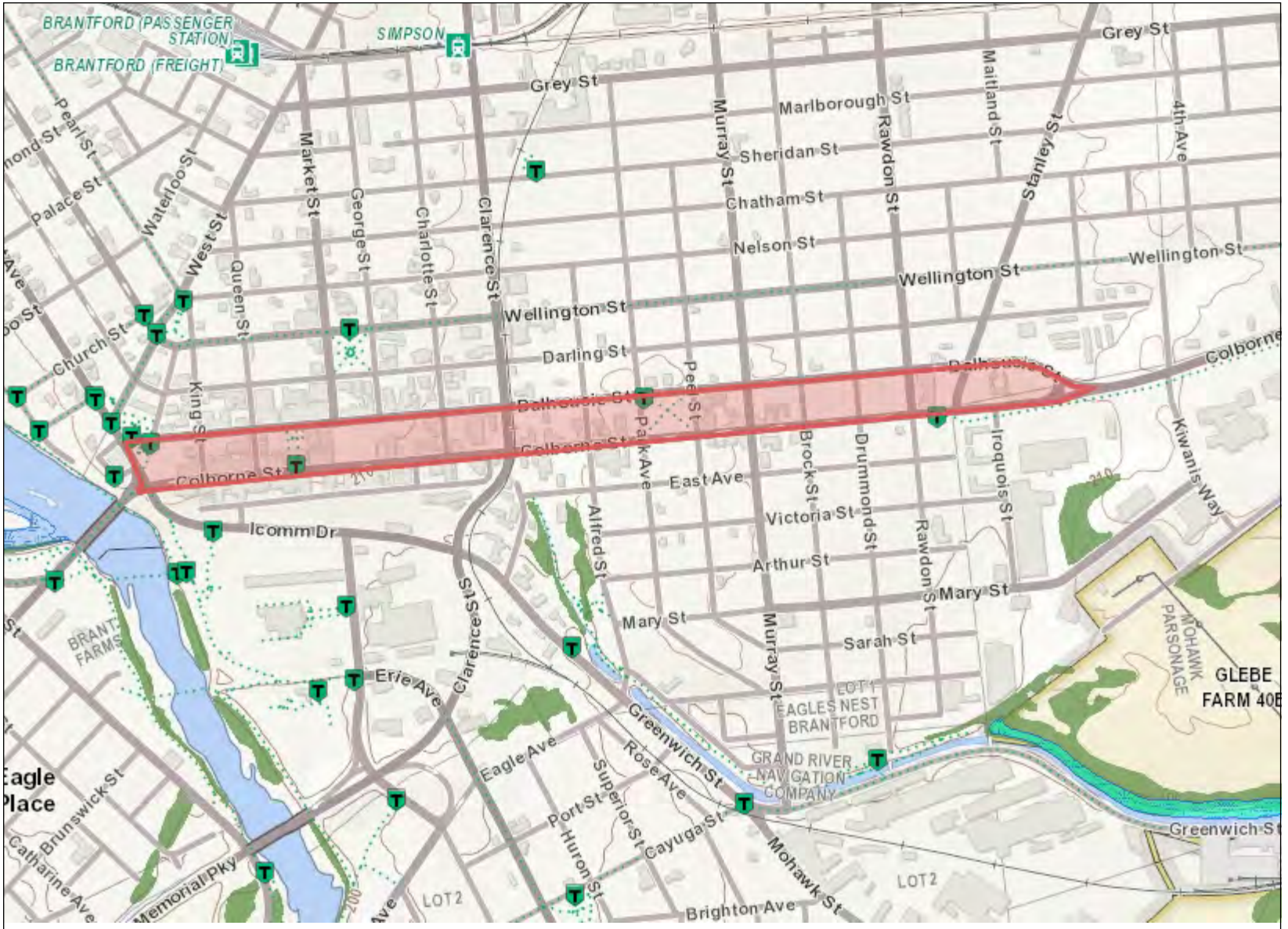
Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

City of Brantford NH Map

Map created: 4/30/2020

Notes: Enter map notes



Legend

- Assessment Parcel
- Woodland
- Conservation Reserve
- Provincial Park
- Natural Heritage System
- Ecoregion

Wetland

- Provincially Significant Wetland Evaluated
- Non - Provincially Significant Wetland Evaluated
- Unevaluated Wetland

Area of Natural Heritage & Scientific Interest (ANSI)

- Provincially Significant Life Science ANSI
- Provincially Significant Earth Science ANSI

Greenbelt Plan

- Boundary
- Greenbelt External Connections

Land Use Designations

- Protected Countryside
- Greenbelt Towns and Villages
- Greenbelt Hamlets
- Urban River Valley
- Greenbelt Specialty Crop Area

Niagara Escarpment Plan (NEP)

- Boundary
- Parks and Open Space System

Land Use Designations

- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area
- Mineral Resource Extraction Area
- Escarpment Recreation Area
- Urban Area
- Minor Urban Centre

Oak Ridges Moraine Conservation Plan (ORM)

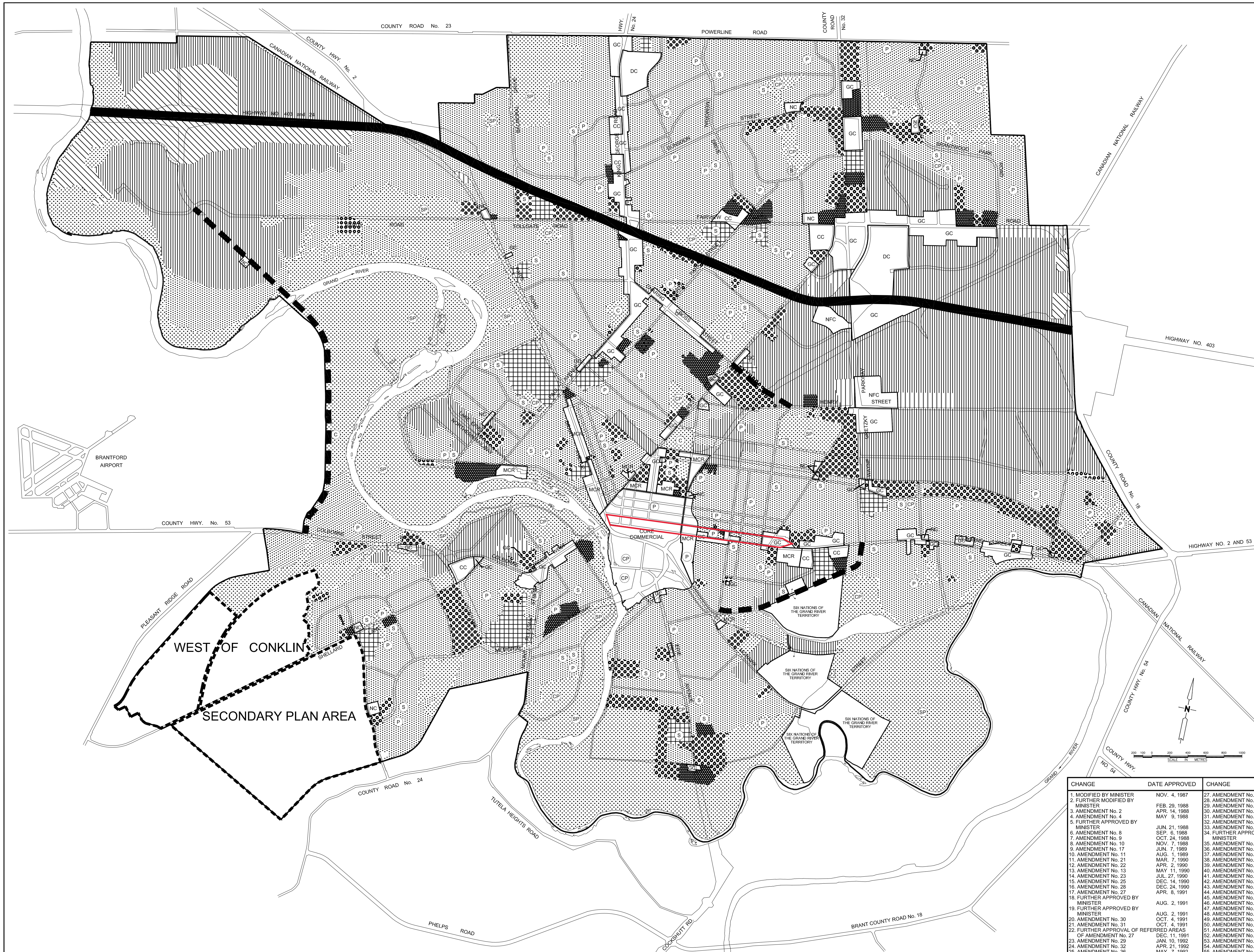
- Boundary

Land Use Designations

- Natural Core Area
- Natural Linkage Area
- Countryside Area
- Rural Settlement
- Palgrave Estates Residential Community
- Settlement Area

0.7 0 0.33 0.7 Kilometers

This map may not display all features listed in the legend because the feature layer was not turned on at the time the map was made; the features do not exist in the geographic range; or features have not been mapped. Absence of a feature in the map does not mean they do not exist in this area.



SCHEDULE 1-1
LAND USE PLAN

LEGEND

RESIDENTIAL AREA

LOW DENSITY
MEDIUM DENSITY
HIGH DENSITY

INDUSTRIAL AREA

GENERAL
MIXED INDUSTRIAL COMMERCIAL
BUSINESS PARK

COMMERCIAL AREA

CORE — CORE COMMERCIAL
DC — DISTRICT CENTRE COMMERCIAL
CC — COMMUNITY CENTRE COMMERCIAL
NC — NEIGHBOURHOOD CENTRE COMMERCIAL
GC — GENERAL COMMERCIAL
NFC — NEW FORMAT COMMERCIAL
MCR — MIXED COMMERCIAL-RESIDENTIAL

MAJOR INSTITUTIONAL

MAJOR OPEN SPACE

SYMBOLS

C — CEMETERY
S — ELEMENTARY SCHOOL
PROVINCIAL HIGHWAY
LONG TERM CORRIDOR PROTECTION
SP — SPECIALIZED PARK & OPEN SPACE
P — NEIGHBOURHOOD PARK & OPEN SPACE
CP — COMMUNITY PARK & OPEN SPACE

OFFICIAL PLAN

OF THE

CITY OF BRANTFORD

NOTES: 1. THIS SCHEDULE MUST BE READ IN CONJUNCTION WITH THE WRITTEN TEXT OF THE OFFICIAL PLAN.

2. THIS IS AN OFFICE CONSOLIDATION PREPARED FOR CONVENIENCE ONLY. FOR ACCURATE REFERENCE RECOURSE SHOULD BE HAD TO THE ORIGINAL DOCUMENT AND AMENDMENTS THERETO.

CHANGE	DATE APPROVED
1. MODIFIED BY MINISTER	NOV. 4, 1987
2. FURTHER MODIFIED BY MINISTER	FEB. 29, 1988
3. AMENDMENT No. 2	APR. 14, 1988
4. AMENDMENT No. 4	MAY 9, 1988
5. FURTHER APPROVED BY MINISTER	JUN. 21, 1988
6. AMENDMENT No. 8	SEP. 6, 1988
7. AMENDMENT No. 9	OCT. 24, 1988
8. AMENDMENT No. 10	NOV. 7, 1988
9. AMENDMENT No. 17	JUN. 7, 1989
10. AMENDMENT No. 11	AUG. 1, 1989
11. AMENDMENT No. 21	MAR. 7, 1990
12. AMENDMENT No. 22	APR. 2, 1990
13. AMENDMENT No. 13	MAY 11, 1990
14. AMENDMENT No. 23	JUL. 27, 1990
15. AMENDMENT No. 25	DEC. 14, 1990
16. AMENDMENT No. 28	DEC. 24, 1990
17. AMENDMENT No. 27	APR. 8, 1991
18. FURTHER APPROVED BY MINISTER	AUG. 2, 1991
19. FURTHER APPROVED BY MINISTER	AUG. 2, 1991
20. AMENDMENT No. 30	OCT. 4, 1991
21. AMENDMENT No. 31	OCT. 4, 1991
22. FURTHER APPROVAL OF REFERRED AREAS OF AMENDMENT No. 27	DEC. 11, 1991
23. AMENDMENT No. 29	JAN. 10, 1992
24. AMENDMENT No. 32	APR. 21, 1992
25. AMENDMENT No. 36	MAY 7, 1992
26. AMENDMENT No. 37	MAY 7, 1992
27. AMENDMENT No. 34	MAY 8, 1992
28. AMENDMENT No. 33	JUN. 4, 1992
29. AMENDMENT No. 19	JUN. 10, 1992
30. AMENDMENT No. 35	JUN. 19, 1992
31. AMENDMENT No. 40	AUG. 28, 1992
32. AMENDMENT No. 41	SEP. 25, 1992
33. AMENDMENT No. 38	JAN. 12, 1993
34. FURTHER APPROVED BY MINISTER	FEB. 1, 1993
35. AMENDMENT No. 42	FEB. 16, 1993
36. AMENDMENT No. 43	JUN. 4, 1993
37. AMENDMENT No. 44	JUN. 4, 1993
38. AMENDMENT No. 39	OCT. 8, 1993
39. AMENDMENT No. 47	DEC. 2, 1993
40. AMENDMENT No. 50	DEC. 12, 1994
41. AMENDMENT No. 48	MAY 5, 1995
42. AMENDMENT No. 49	JUN. 1, 1995
43. AMENDMENT No. 52	SEP. 1, 1995
44. AMENDMENT No. 54	JAN. 23, 1996
45. AMENDMENT No. 55	JUL. 3, 1996
46. AMENDMENT No. 56	OCT. 28, 1996
47. AMENDMENT No. 57	MAR. 11, 1997
48. AMENDMENT No. 59	NOV. 19, 1997
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50. AMENDMENT No. 66	APR. 2, 1998
51. AMENDMENT No. 67	JUN. 8, 1998
52. AMENDMENT No. 71	MAR. 3, 1999
53. AMENDMENT No. 72	APR. 22, 1999
54. AMENDMENT No. 74	MAY 6, 1999
55. AMENDMENT No. 76	MAY 27, 1999
56. AMENDMENT No. 78	SEP. 10, 1999
57. AMENDMENT No. 81	OCT. 15, 1999
58. AMENDMENT No. 82	JAN. 14, 2000
59. AMENDMENT No. 83	MAR. 31, 1999
60. AMENDMENT No. 84	JULY 14, 2000
61. AMENDMENT No. 86	JAN. 18, 2001
62. AMENDMENT No. 87	JUNE 11, 2001
63. AMENDMENT No. 88	AUG. 24, 2001
64. AMENDMENT No. 91	JAN. 10, 2002
65. AMENDMENT No. 92	MAY 1, 2002
66. AMENDMENT No. 94	JUNE 7, 2002
67. AMENDMENT No. 95	JUNE 7, 2002
68. AMENDMENT No. 96	JUNE 7, 2002
69. AMENDMENT No. 101	APR. 2, 2003
70. AMENDMENT No. 104	JAN. 9, 2004
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74. AMENDMENT No. 111	NOV. 8, 2004
75. AMENDMENT No. 113	MAR. 21, 2005
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77. AMENDMENT No. 114	APR. 11, 2005
78. AMENDMENT No. 115	APR. 11, 2005
79. AMENDMENT No. 117	JUN. 20, 2005
80. AMENDMENT No. 119	OCT. 17, 2005
81. AMENDMENT No. 121	MAR. 27, 2006
82. AMENDMENT No. 126	FEB. 5, 2007
83. AMENDMENT No. 131	AUG. 13, 2007
84. AMENDMENT No. 142	APR. 7, 2008
85. AMENDMENT No. 144	MAY 20, 2008
86. AMENDMENT No. 148	JUNE 9, 2008
87. AMENDMENT No. 125	DEC. 3, 2008
87. AMENDMENT No. 153	DEC. 17, 2008
88. AMENDMENT No. 154	DEC. 17, 2008
89. AMENDMENT No. 155	DEC. 17, 2008
90. AMENDMENT No. 157	MAY 28, 2009
91. AMENDMENT No. 158	JUNE 19, 2009
92. AMENDMENT No. 159	JUNE 19, 2009
93. AMENDMENT No. 162	FEB. 19, 2010
94. AMENDMENT No. 163	MAR. 5, 2010
95. AMENDMENT No. 164	MAR. 25, 2010
96. AMENDMENT No. 165	SEPT. 24, 2010
97. AMENDMENT No. 168	JULY 7, 2011
98. AMENDMENT No. 170	SEPT. 12, 2011
99. AMENDMENT No. 171	NOV. 29, 2011
101. AMENDMENT No. 175	APRIL 13, 2012
102. AMENDMENT No. 181	JULY 24, 2013
103. AMENDMENT No. 182	JULY 24, 2013
104. AMENDMENT No. 185	MAY 26, 2014
105. AMENDMENT No. 186	JULY 21, 2014
106. AMENDMENT No. 183	OCT. 21, 2013
107. AMENDMENT No. 187	SEPT. 26, 2014
108. AMENDMENT No. 188	OCT. 10, 2014
109. AMENDMENT No. 190	JAN. 28, 2015
110. AMENDMENT No. 193	MAY 24, 2016
111. AMENDMENT No. 197	SEPT. 27, 2016
112. AMENDMENT No. 196 (OMB)	APR. 6, 2017
113. AMENDMENT No. 199	JUNE 27, 2017
114. AMENDMENT No. 203	OCT. 24, 2017
115. AMENDMENT No. 204	JAN. 30, 2018
116. AMENDMENT No. 205	AUG. 24, 2018
117. AMENDMENT No. 206	SEPT. 18, 2018
118. AMENDMENT No. 207	OCT. 18, 2018
119. AMENDMENT No. 208	DEC. 18, 2018
120. AMENDMENT No. 209	AUG. 27, 2019
121. AMENDMENT No. 212	FEB. 28, 2020

SCHEDULE 1-2
GROWTH MANAGEMENT PLAN

LEGEND

- BUILT AREA
- URBAN GROWTH CENTRE
- GREENFIELD AREAS
- INTENSIFICATION CORRIDOR
- MAJOR TRANSIT STATION

OFFICIAL PLAN

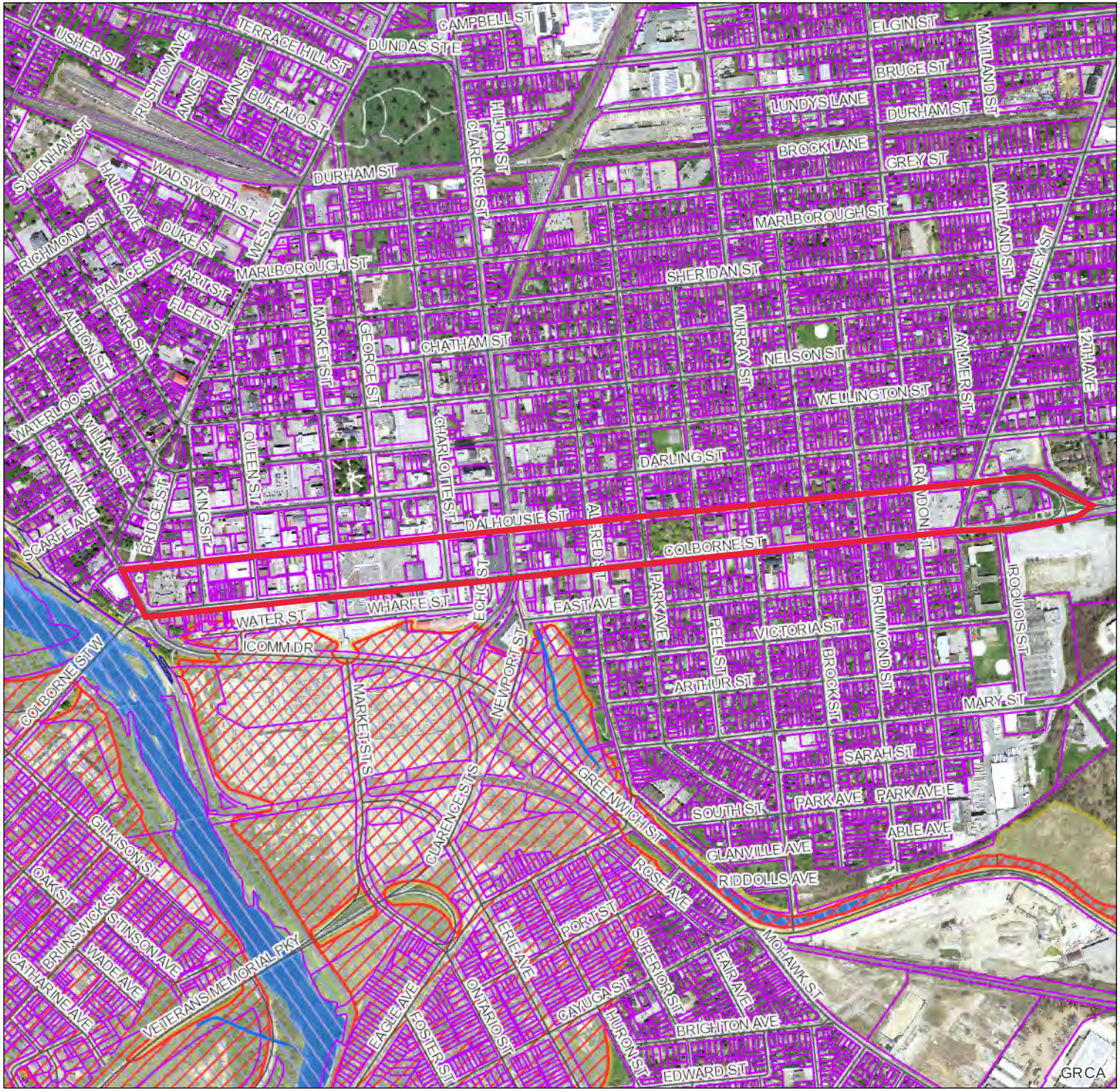
OF THE

CITY OF BRANTFORD

NOTES:
1. THIS SCHEDULE MUST BE READ IN CONJUNCTION WITH THE WRITTEN TEXT OF THE OFFICIAL PLAN.
2. THIS IS AN OFFICE CONSOLIDATION PREPARED FOR CONVENIENCE ONLY. FOR ACCURATE REFERENCE RECOURSE SHOULD BE HAD TO THE ORIGINAL DOCUMENT AND AMENDMENTS THERETO.

CHANGE	DATE APPROVED	CHANGE	DATE APPROVED	CHANGE	DATE APPROVED	CHANGE	DATE APPROVED
1. AMENDMENT No. 125 2. AMENDMENT No. 184	DEC. 3, 2008 NOV. 18, 2013						

DATE OF CONSOLIDATION: JANUARY 2014



Map Centre (UTM NAD83 z17): 560,386.22 4,776,564.61

This map is not to be used for navigation | 2015 Ortho (ON)

Grand River Conservation Authority

Date: Oct 16, 2020

Brantford EA GRCA Mapping

Legend

- Regulation Limit (GRCA)
- Regulated Watercourse (GRCA)
- Regulated Waterbody (GRCA)
- Wetland (GRCA)
- Floodplain (GRCA)
  - Engineered
  - Estimated
  - Approximate
  - Special Policy Area
- Slope Valley (GRCA)
  - Steep
  - Oversteep
  - Steep
- Slope Erosion (GRCA)
  - Oversteep
  - Toe
- Lake Erie Flood (GRCA)
- Lake Erie Shoreline Reach (GRCA)
- Lake Erie Dynamic Beach (GRCA)
- Lake Erie Erosion (GRCA)
- Parcel - Assessment (MPAC/MNRF)

This legend is static and may not fully reflect the layers shown on the map. The text of Ontario Regulation 150/06 supercedes the mapping as represented by these layers.

0 75 150 300 450 Metres

N

NAD 1983 UTM Zone 17N

Scale: 12,378

Appendix B

MECP SAR Screening

GEMS
Groundwater Environmental Management Services
303-8800 Dufferin Street.
Concord, ON L4K 0C5
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www.gemservicesinc.com

October 16, 2020

Ministry of Environment, Conservation and Parks
Permissions and Compliance Section, Species at Risk Branch

Re: Species at Risk Screening Summary and Endangered Species Act Approval

Introduction and Project Description

Groundwater Environmental Management Systems (GEMS) is currently completing a Natural Environmental Assessment (NEA) report in support a Schedule C Environmental Assessment (EA) for streetscaping in the downtown area within the City of Brantford, Ontario. As part of the NEA GEMS must complete a background review of the Site, which includes any potential SAR within the area.

The recommended preliminary screening activity provided by the MECP has been performed for the Site within the Brantford downtown area. The preliminary screening guide (hereafter referred to as “the Guide”) encourages the client to take on a more serious and hands-on roll in acquiring Species at Risk (SAR) information before obtaining a permit under the Endangered Species Act (ESA), if necessary. Multiple sources of information for SAR are recommended to be looked at as a part of the screening activity, various online databases, the local conservation authority, local naturalist groups, indigenous communities in the area, trusts or environmental non-governmental organizations and field studies are all listed within the Guide. Below is the list of the recommended resources that GEMS staff found and the results received.

Sources Reviewed

SOURCE	FINDINGS	COMMENT
Land Information Ontario (LIO)	- No results	Data restricted to the public.
Natural Heritage Information Centre (NHIC)	- Black Redhorse - Eastern Sand Darter - Silver Shiner - Tawny Emperor - Wavy-rayed Lampmussel - Eastern Wood-pewee - Bristly Buttercup	1km grids provided on the online mapping tool were searched, grid numbers searched are as follows: - 17NH5976 - 17NH6076 - 17NH6176
Breeding Bird Atlas (BBA)	- Acadian Flycatcher – breeding - Bank Swallow – breeding and abundance - Barn Swallow – breeding and abundance - Bobolink – breeding and abundance - Canada Warbler – breeding and abundance - Cerulean Warbler - breeding - Chimney Swift – breeding and abundance - Common Nighthawk – breeding - Eastern Meadowlark – breeding and abundance - Eastern Wood-Pewee – breeding and abundance - Golden-winged Warbler – breeding - Grasshopper Sparrow – breeding and abundance - Louisiana Waterthrush – breeding - Red-headed Woodpecker – breeding - Wood Thrush – breeding and abundance - Yellow-breasted Chat - breeding	Range maps showing evidence of breeding areas and relative abundance were searched. Only SAR birds listed on the Ontario Nature website were checked for appropriate ranges.
eBird	- Barn Swallow - Peregrine Falcon - Eastern Wood-Pewee	Map searched by regions to find birds that have been sighted within the area of the Site.

SOURCE	FINDINGS	COMMENT
iNaturalist and Herps of Ontario (formerly Ontario Reptile and Amphibian Atlas (ORAA))	- Queensnake	Map searched by location to find species that have been recorded within the area of the Site.
DFO Aquatic Species at Risk Mapping	- Eastern Sand Darter - Silver Shiner - Black Redhorse - Wavy-rayed Lampmussel	Map searched by location to find species that have been recorded in a waterbody within the area of the Site.
Ontario Butterfly Atlas	- Monarch	Map searched by grid location to find species that have been recorded within the area of the Site. Grid numbers searched are as follows: - 17NH57 - 17NH67
Local Conservation Authority	- None provided	Nancy Davy at the Grand River Conservation Authority was contacted and stated that the GRCA will not be providing additional review and that staff are not able to respond to SAR inquiries at this time.
Local Naturalist Groups	- None found	No local naturalists groups could be found/contacted.
Indigenous Communities	None provided	The Haudenosaunee Confederacy were contacted, and a response has not yet been received.
Local Land Trusts or Environmental Non-Government Organizations	- None provided	Carolinian Canada Coalition was contacted previously, a response was received suggesting that Ontario Nature be contacted instead. Ontario Nature was also contacted for a previous project within this area and a response was received stating to contact NHIC directly. The contact from Ontario Nature was previously a MNRF district Biologist and she stated that she understands the need for the consultant/proponent to gather more information but what the MECP is expecting is unrealistic. NHIC was emailed directly and within this correspondence is it stated directly from NHIC staff that the information that can be obtained from

SOURCE	FINDINGS	COMMENT
		the online mapping tool is suitable for initial site screening.

Species at Risk and Impacts

SAR	Description of How Proposed Activity Will Impact SAR	Significance / Likelihood
Birds (All birds listed above)	Most of the habitat impacted within the Site would be inclusive of street trees and other urbanized features. Since the project involves improving the streetscaping of a number of downtown Brantford streets, it is likely that available habitat for birds will be increased with the improvements. If additional street trees or vegetated road medians are added then additional nesting and potential feeding habitat is increased.	If nesting surveys are performed before any proposed tree removals, then it is unlikely that these SAR will be affected. If all site construction works remain outside of the Breeding Bird Window and comply with the "Migratory Birds Convention Act", which is typically between April 1st and August 31st, then it is unlikely that any SAR birds will be impacted.
Insects (Tawny Emperor and Monarch)	Insect habitat may be impacted during the construction period, but may be increased after the streetscaping improvements due to the restoration activities.	Due to the urban nature of the Site it is unlikely that the Tawny Emperor will be impacted due to its preference for wooded areas. The Monarch will also likely not be impacted due to the lack of available habitat within the vicinity of the Site. Preference for one of the nearby parks or an area with milkweed is more likely.
Reptiles (Queensnake)	It is very unlikely that this species will be present within the Site area because of the urban setting and lack of available habitat.	Queensnake prefers a semi-aquatic habitat and requires very specialized habitat requirements. Therefore, it is very unlikely it will be impacted by the proposed Site works.
Fish and Aquatic Species (All aquatic species listed above)	No aquatic species will be present within Site boundaries but since the Grand River is roughly 100 m west of the Site it is likely that sediment from	Having proper ESC measures put into place before construction works begin and maintained throughout the project will ensure no/significantly less sediment

	construction works can enter into the river.	runoff from the Site will enter into the Grand River.
Bats (All SAR bat species)	Due to the nature of bats in Ontario, it is assumed that if any building/tree removal is proposed or likely to occur that consideration must be given to SAR bats.	Bat habitat surveys can be performed to determine the likelihood of bat species present within and adjacent to the Site. Currently there is no official mitigation regulations for SAR bats in Ontario but the installation of bat boxes in specific areas to offset the potential removal/damage to roosting habitats can be considered.

Conclusion

GEMS has conducted a thorough search of the SAR within the vicinity of the Site and addressed the potential impacts of the proposed site works on the potential SAR. If there are any additional SAR potentially present within the Site area that were not listed above, an observation record would need to be submitted. If a permit under the ESA is required the appropriate actions will be taken to obtain and adhere to the policies outlined.

We trust this information will meet your current requirements.

Yours truly,
Groundwater Environmental Management Services Inc.

Kim Logan, P.Geo. (Limited), QP_{ESA}
P.Biol. (AB), Cert. Ecol. Rest., CAN-CISEC
Senior Ecologist and Project Manager

Appendix C

Site Photographs

GEMS
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303-8800 Dufferin Street,
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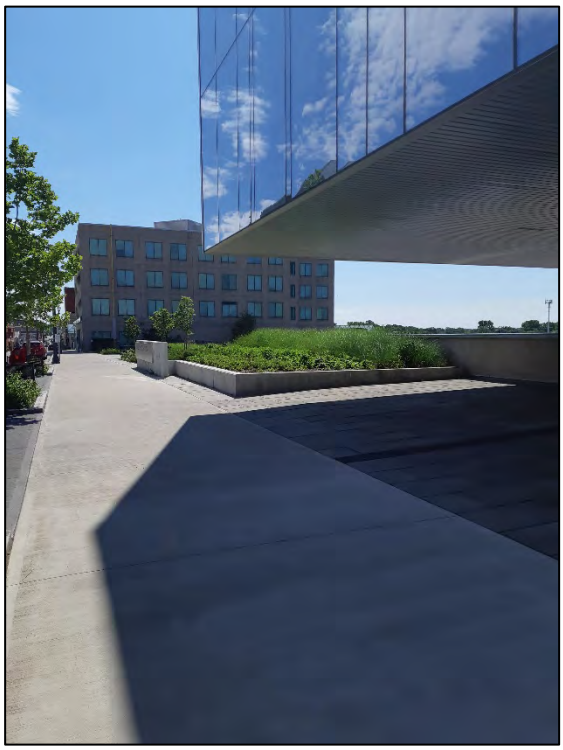
www.gemservicesinc.com

SITE PHOTOGRAPHS
(All photographs dated June 25, 2020)

Photographs 1 & 2 – Typical view of road and sidewalk conditions within the commercial area of the Site.

Photographs 3 & 4 – Photographs of the vegetation, road and sidewalk conditions within Alexandra Park.


Photographs 5 & 6 – Photographs showing the typical road and intersection conditions throughout the Site.



Photographs 7 & 8 – Vegetation within the commercial area of the Site.


Photographs 9 & 10 – Photographs of some of the street trees present within the Site Area.


Photographs 11 & 12 – View of the vegetation adjacent to the Grand River.