

**Square One Drive Extension Municipal Class Environmental Assessment
Environmental Study Report**

Appendix F Stage 1 & 2 Archaeological Assessments

Appendix F STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENTS

**Stage 1 Archaeological
Assessment: Square One Drive
Extension Class EA**

Part of Lot 19, Concession 2 North
of Dundas Street,
Geographic Township of Toronto,
now City of Mississauga,
Regional Municipality of Peel,
Ontario



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Project Number: 165011005

ORIGINAL REPORT

May 12, 2017

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Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by the City of Mississauga (the City) to complete a Stage 1 archaeological assessment for an approximate three hectare study area located in part of Lot 19, Concession 2 North of Dundas Street, Geographic Township of Toronto, now City of Mississauga, Region of Peel, Ontario. The City of Mississauga proposes to extend Square One Drive southwest from Confederation Parkway to Rathburn Road West. The Stage 1 archaeological assessment was conducted as part of the preliminary planning and design process for a Schedule C Class Environmental Assessment under the Ontario *Environmental Assessment Act* (Government of Ontario 1990a). This assessment was conducted to meet the requirements of the Ministry of Tourism, Culture and Sport's (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

The Stage 1 assessment was conducted under the PIF P083-0312-2017 issued to Arthur Figura, MA (P083), by the MTCS. The Stage 1 archaeological assessment, involving background research and a property inspection, resulted in the determination that the study area retains potential for the identification and recovery of archaeological resources in a portion of the study area. Thus, in accordance with Section 7.7.4 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **the portion of the study area that falls within the undeveloped segment fronting Confederation Parkway, the manicured lawn, and the manicured parkland fronting Rathburn Road West require Stage 2 archaeological assessment.** Since the study area is inaccessible for ploughing, the Stage 2 archaeological assessment will consist of a test pit survey at five metre intervals as outlined in Section 2.1.2 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). The MTCS standards require that each test pit be approximately 30 centimetres in diameter, excavated to at least five centimetres in to subsoil, and have all soil screened through six millimetre hardware cloth to facilitate the recovery of any cultural material that may be present. Prior to backfilling, each test pit will be examined for stratigraphy, cultural features, or evidence of fill. The remainder of the study area has been disturbed by modern day construction and no further archaeological assessment is required in those areas.

The MTCS is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Additional archaeological assessment is still required for portions of the study area and so these portions recommended for further archaeological fieldwork remain subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and may not be altered, or have artifacts removed, except by a person holding an archaeological license.

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.

Project Personnel

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Acknowledgements

Proponent Contact:	Dana Glofcheskie, City of Mississauga
Ministry of Tourism, Culture and Sport:	Robert von Bitter

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1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

Stantec Consulting Ltd. (Stantec) was retained by the City of Mississauga (the City) to complete a Stage 1 archaeological assessment for an approximate three hectare study area located in part of Lot 19, Concession 2 North of Dundas Street (NDS), Geographic Township of Toronto, now City of Mississauga, Region of Peel, Ontario (Figure 1). The City of Mississauga proposes to extend Square One Drive southwest from Confederation Parkway to Rathburn Road West in order to fulfil the objectives of the City of Mississauga's Strategic Plan (City of Mississauga 2009), Official Plan (City of Mississauga 2016), Downtown21 Master Plan (City of Mississauga 2010), and Downtown Core Local Area Plan/MOPA8 (City of Mississauga 2015). The Stage 1 archaeological assessment was conducted as part of the preliminary planning and design process for a Schedule C Class Environmental Assessment under the Ontario *Environmental Assessment Act* (Government of Ontario 1990a). This assessment was conducted to meet the requirements of the Ministry of Tourism, Culture and Sport's (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

The study area consists of proposed route options for the extension of Square One Drive between Confederation Parkway and Rathburn Road West. The study area falls in former Lot 19 of the Geographic Township of Toronto. Permission to access the study area to conduct the Stage 1 archaeological assessment was provided by Dana Glofcheskie of the City of Mississauga.

1.1.1 Objectives

The objectives of the Stage 1 archaeological assessment were to compile all available information about the known and potential archaeological heritage resources within the study area and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the provincial standards and guidelines set out in the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 1 Archaeological Overview/Background Study are as follows:

- To provide information about the study area's geography, history, previous archaeological field work, and current land conditions;
- To evaluate in detail the study area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 survey.

To meet these objectives, Stantec archaeologists employed the following research strategies:



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- A review of relevant archaeological, historic, and environmental literature pertaining to the study area;
- A review of the land use history, including pertinent historic maps;
- An examination of the Ontario Archaeological Sites Database (ASDB) to determine the presence of known archaeological sites in and around the project area; and
- A property inspection of the study area.

1.2 HISTORICAL CONTEXT

1.2.1 Post-contact Aboriginal Resources

“Contact” is typically used as a chronological benchmark in discussing Aboriginal archaeology in Canada and describes the contact between Aboriginal and European cultures. The precise moment of *contact* is a constant matter of discussion. Contact in what is now the province of Ontario is broadly assigned to the 16th century (Loewen and Chapdelaine 2016).

By the turn of the 16th century, the region of the study area was abandoned of permanent settlement and was situated within the extended political geography of the ancestral Huron-Wendat (Heidenreich 1990; Ramsden 1990). By the turn of the 17th century, the entire north shore of Lake Ontario was void of permanent settlement (Birch and Williamson 2013:40). In 1649, the Seneca with the Mohawk led a campaign into the north shore of the Lake Ontario and dispersed the Huron-Wendat, Tionontate (Petun), and Attiwandaron (Neutral) Nations and the Seneca established dominance over the region (Heidenreich 1978).

By 1690, Ojibwa speaking people had begun moving south into the lower Great Lakes basin (Konrad 1981; Rogers 1978); particularly the Mississauga Nations gained dominance in the region. The Mississauga economy since the turn of the 18th century focused on fishing and the fur trade, supplemented by agriculture and hunting. The study area falls within the historic territory of the formerly Credit River Mississauga Nation, modernly the Mississaugas of the New Credit First Nation. The epithet of “Credit River” was made based on the Nation’s promptness to repay any debts (Mississaugas of the New Credit First Nation n.d.).

The expansion of the fur trade led to increased interaction between European and Aboriginal people, and ultimately intermarriage between European men and Aboriginal women. During the 18th century the progeny of these marriages began to no longer identify with either their paternal or maternal cultures, but instead as Métis. The ethnogenesis of the Métis progressed with the establishment of distinct Métis communities along the major waterways in the Great Lakes of Ontario. Métis communities were primarily focused around the upper Great Lakes and along Georgian Bay, however Métis people have historically lived throughout Ontario (Métis Nation of Ontario 2016; Stone and Chaput 1978:607-608).

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The study area is located within the “Old Survey” of the Geographic Township of Toronto which lies within the bounds of Treaty 13A. On August 2, 1805, the Principal Chiefs of the Mississauga Nation and William Claus, Esquire, Deputy Superintendent General and Deputy Inspector General of Indians and their Affairs, signed Treaty 13A (Morris 1943). The area of Treaty 13A is described as follows;

Commencing at the eastern bank of the mouth of the River Etobicoke, being in the limit of the western boundary line of the Toronto Purchase, in the year 1787; then north twenty-two degrees west, six miles; thence south 38 degrees west, twenty-six miles more or less, until it intersects a line on the course north 45 degrees west, produced from the outlet of Burlington Bay; then along the said produced line, one mile more or less to the lands granted to Captain Brant; then north 45 degrees east, one mile and a half; then south 45 degrees east, three miles and a half more or less to Lake Ontario; then north easterly along the waters edge of Lake Ontario to the eastern bank of the River Etobicoke being the place of beginning:

(Morris 1943:22)

In this treaty, known as the “First Purchase”, the Crown acquired over 74,000 acres of land, excluding a one mile strip on each side of the Credit River which became known as the Credit River Indian Reserve. While it is difficult to exactly delineate treaty boundaries today, Figure 2 provides an approximate outline of the area encompassed by Treaty Number 13A (identified by the letter “M”).

1.2.2 Euro-Canadian Resources

Treaty 19, known as the “Second Purchase”, was signed on October 28, 1818. This treaty gave the Crown an additional 600,000 acres of land north Treaty 13A (and north of the study area), incorporating most of today’s Region of Peel. In 1819 this land was divided under the “New Survey” into the townships of Albion, Caledon, Chinguacousy, Toronto Gore and the northern portion of Toronto. On February 28, 1820 the “Credit Treaties” 22 and 23 were signed whereby the Mississaugas surrendered much of the lands along the Credit River that was set aside in Treaty 13A. Dundas Street received much of the early settlement, with numerous mills built along the Credit River.

The Township of Toronto left York County in 1851 and formed part of the newly created Peel County. In 1873, the Toronto Township council was formed to oversee various affairs of the unincorporated villages within Toronto Township. The majority of the region surrounding the study area was subject to European-style agricultural practices for approximately a century, having been settled by Euro-Canadian farmers by the mid-to-late 19th century.

An examination of the map of the southern portion of the Geographic Township of Toronto in the *Illustrated Historical Atlas of the County of Peel* (Walker & Miles 1877) does not depict any structures within the study area (Figure 3). The study area falls into the southern half of Lot 19,

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owned by Mrs. Laird according to the mapping. Although no structures are illustrated within the study area, earlier structures could have existed within the study area or domestic refuse associated with the depicted structures could have been discarded within the study area. Also, the 19th century road grid depicted on the mapping, while augmented by late 20th century development, is still visible today in the vicinity of the study area.

In discussing the late 19th century historical mapping it must be remembered that historical county atlases were produced primarily to identify factories, offices, residences, and landholdings of subscribers and were funded by subscription fees. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100), although this map is quite detailed. Nonetheless, all structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

Modern development immediately to the east of the study area began in the late 1960s with the construction of the Mississauga Square One Mall, opened in 1973 (Duquette 2016). In 1968, Toronto Township became the Town of Mississauga, later incorporated as the City of Mississauga in 1974.

1.2.3 Recent Reports

Other than the existing historic documentation, no other reports are known to have been published within 50 metres of the study area according to the MTCS (Government of Ontario 2017).

1.3 ARCHAEOLOGICAL CONTEXT

1.3.1 The Natural Environment

The study area is broadly situated along the north shore region of Lake Ontario in an area characterized by the South Slope physiographic region. This physiographic region is a broad, relatively featureless till plain that covers approximately 2,400 square kilometres and extends from the Niagara Escarpment to the Trent River (Chapman and Putnam 1984:172). The underlying bedrock of the South Slope is comprised of grey and black shale with some inter-bedded limestone (Freeman 1979). The central portion of the South Slope, located in the Regional Municipality of Durham, consists of scattered long thin drumlins which tend to be oriented directly up the slope (Chapman and Putnam 1984). The South Slope region contains a variety of soils, many of which have proved to be excellent through more than a century of agricultural use. In general, the soils are developed upon tills that tend to be sandy in the eastern portion of the region and clayey in the west (Chapman and Putnam 1984). It is further noted that sloping within the South Slope is more pronounced in the east than in the west (Chapman and Putnam 1984). The South Slope is truncated along its southern edge by the Iroquois Plain, a beach ridge and narrow plain that represents the remnant of glacial Lake Iroquois. The Iroquois Plain extends around the western shores of Lake Ontario, from the Niagara River to the Trent River (Chapman and Putnam 1984).



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Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. The closest potable water source would have been Mary Fix Creek, approximately 50 metres south of the study area. While no longer visible today, its watercourse was within the vicinity of the study area, eventually travelling southeast and draining into Lake Ontario.

1.3.2 Pre-contact Aboriginal Resources

This portion of southern Ontario has been occupied by First Nations peoples since the retreat of the Wisconsin glacier approximately 11,000 years ago. Table 1 provides a breakdown of the cultural and temporal history of the Aboriginal occupations in the City of Mississauga area.

Table 1: Cultural Chronology for City of Mississauga (Ellis and Ferris 1990)

Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 B.C.	spruce parkland/caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 - 8000B.C.	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 B.C.	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 B.C.	environment similar to present
Late Archaic	Lamoka (narrow points)	2000 - 1800 B.C.	increasing site size
	Broad Points	1800 - 1500 B.C.	large chipped lithic tools
	Small Points	1500 - 1100B.C.	introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 B.C.	emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 B.C.	introduction of pottery
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 B.C. - A.D.500	increased sedentism
	Princess Point	A.D. 550 - 900	introduction of corn
Late Woodland	Early Ontario Iroquoian	A.D. 900 - 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	A.D. 1300 - 1400	long longhouses (100m +)
	Late Ontario Iroquoian	A.D. 1400 - 1650	tribal warfare and displacement
Contact Aboriginal	Various Algonkian Groups	A.D. 1700 - 1875	early written records and treaties
Late Historic	Euro-Canadian	A.D. 1796 – present	European settlement

1.3.3 Previously Identified Archaeological Sites and Surveys

In order to compile an inventory of archaeological resources, the registered archaeological site records kept by the MTCS were consulted. In Ontario, information concerning archaeological

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sites stored in the ASDB is maintained by the MTCS. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13 kilometres east to west and approximately 18.5 kilometres north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The study area under review is within Borden Block AjGv.

Information concerning specific site locations is protected by provincial policy, and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990c). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MTCS will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

An examination of the ASDB indicates that there are four archaeological sites, presented in Table 2, registered within a one kilometre radius of the study area (Government of Ontario 2017), but no archaeological reports dealing with lands within 50 metres or overlapping the study area.

Table 2: Archaeological Sites Within One Kilometre of the Study Area

Borden Number	Site Name	Site Type	Cultural Affiliation	Researcher
AjGv-26	Dark	Isolated findspot	Pre-contact Aboriginal	Spittal n.d.
AjGv-52	-	Isolated findspot	Pre-contact Aboriginal	Archaeological Services Inc. 2001
AjGv-53	-	Isolated findspot	Pre-contact Aboriginal	Archaeological Services Inc. 2001
AjGw-312	-	Lithic scatter	Pre-contact Aboriginal	Archaeological Services Inc. 2001

All four sites located to the northwest of the study area are pre-contact Aboriginal sites. Information concerning David Spittal's Dark site is incomplete in the ASDB. Otherwise, Archaeological Services Inc. documented two Onondaga chert lithic findspots (AjGv-52 and AjGv-53) and the site AjGw-312 which consisted of two Onondaga chert artifacts: a biface and a primary thinning flake (Archaeological Services 2001).

1.3.4 Existing Conditions

The study area consists of parts of Lot 19, Concession 2 NDS, Geographic Township of Toronto, now City of Mississauga, Region of Peel, Ontario. It includes the proposed extension of Square One Drive which is situated along paved municipal roads, parking lots, residential lands, parklands, and overgrown lands. The parcel is approximately three hectares in size.

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Field Methods
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2.0 FIELD METHODS

The Stage 1 archaeological assessment compiled the available information concerning any known and/or potential archaeological heritage resources within the study area. A property inspection was conducted to document areas that are deemed to be disturbed, wet, or steeply sloped. This Stage 1 archaeological assessment was conducted under the archaeological consulting license P083 issued to Arthur Figura, MA, of Stantec by the MTCS. The site visit was completed on April 22, 2017 under PIF P083-0312-2017 in accordance with Section 1.2 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). The entire study area was viewed in order to identify the presence or absence of any features of archaeological potential. During the property inspection, the weather was warm and sunny with cloudy periods. Visibility of land features was suitable. At no time were field, lighting, or weather conditions detrimental to the identification of features of archaeological potential.

The proposed extension of Square One Drive begins at Confederation Parkway and extends southwest to Rathburn Road West. The intersection at Square One Drive and Confederation Parkway is already extensively disturbed by previous road and sidewalk construction (Photo 1). Travelling southwest along the proposed route, the study area transitions into an undeveloped segment that consists of trees and overgrown grassy areas (Photos 1 to 4) but shows some signs of disturbance (Photo 4). Beyond this undeveloped segment of the study area to the southwest is manicured lawn with hydro boxes (Photo 5) and then an ancillary building (Photo 6). This building abuts parking lots extending to Rathburn Road West (Photos 6 to 8) and a tennis court (Photo 7). As the study area reaches Rathburn Road West, there are a manicured lawn (Photo 9) and manicured parkland (Photos 10 and 11) which is part of Zonta Meadows Park. The park is adjacent to the extensively disturbed roadway and sidewalk, with a residential subdivision across the street (Photos 12 and 13). The apartment complex within the northeastern portion of the study area shows evidence of extensive disturbance, including a manicured lawn landscaped over an underground parking garage (Photo 14), a tennis court, (Photo 15), and other paved parking lots (Photo 16). The areas of trees, grass, manicured lawn outside of the apartment complex, and the manicured parkland might be disturbed, but this cannot be determined through visual inspection alone, unlike the disturbance evident at the ancillary building, the park's tennis court, the roadways, the apartment complex, and the residential subdivision.

3.0 ANALYSIS AND CONCLUSIONS

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Stantec applied archaeological potential criteria commonly used by the MTCS (Government of Ontario 2011) to determine areas of archaeological potential within the region under study. These variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography and the general topographic variability of the area. However, it is worth noting that extensive land disturbance can eradicate archaeological potential (Wilson and Horne 1995).

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to water is one of the most commonly used variables for predictive modeling of archaeological site location in Ontario. Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential.

Distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect sites locations and types to varying degrees. The MTCS (Government of Ontario 2011) categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, creeks;
- Secondary water sources: intermittent streams and creeks, springs, marshes and swamps;
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

Within the lot where the study area is situated, the closest source of potable water would have been Mary Fix Creek, 50 metres south of the study area. In addition, four Aboriginal archaeological sites are located within one kilometre of the study area. Based upon these considerations, the Aboriginal archaeological potential of the study area is deemed moderate to high.

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For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements, early transportation routes, and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990b) or property that local histories or informants have identified with possible historical events. Considering the study area's proximity to early Euro-Canadian settlement roads and structures on the lots but outside of the study area, the Euro-Canadian archaeological potential of the study area is deemed moderate to high.

As noted above, a negative indicator of archaeological potential is extensive land disturbance. This includes widespread earth movement activities that would have eradicated or relocated any cultural material to such a degree that the information potential and cultural heritage value or interest has been lost. The types of disturbance referred to above include, but are not restricted to, quarrying, sewage and infrastructure development, building footprints and major landscaping involving grading below topsoil. While background research has demonstrated that the area may have once retained archaeological potential, the property inspection has determined that extensive land disturbance within the study area has eradicated archaeological potential for portions of the study area (Figure 4).

As photographically documented during the property inspection, portions of the study area have obviously been impacted by development within the last 40 years, such as the existing roadways (Photos 1, 12, and 13), the hydro boxes (Photo 5), the ancillary building (Photo 6), the parking lots (Photos 6 to 8), the tennis court (Photos 7, 10, and 11), and the apartment complex (Photos 14 to 16). There is also some disturbance within the undeveloped portion (Photo 4) but it is difficult to fully evaluate visually. The undeveloped portion with scrub and trees (Photos 1 to 4), the manicured lawn (Photos 5 and 9), and the manicured parkland (Photos 10 and 11) might be previously disturbed but this is not possible to determine based solely upon the property inspection.

In summary, while the archaeological potential for pre-contact Aboriginal, post-contact Aboriginal, and Euro-Canadian sites is deemed to be moderate to high within the study area based on existing documentation, the Stage 1 property inspection has determined that a portion of the study area has been subject to extensive land disturbance which has removed archaeological potential. These areas include the existing roadways, parking lots, the tennis court, the ancillary building, the apartment complex, and the residential subdivision. In accordance with Section 7.7.3 Standard 2 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), this portion of the study area has been subject to extensive and deep land alterations that have severely damaged the integrity of potential archaeological resources. This disturbance negates the archaeological potential as per Section 1.3.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). However, based upon visual evaluation alone, the undeveloped segment fronting Confederation Parkway, the manicured lawn, and the manicured parkland fronting Rathburn Road West has not been obviously disturbed and may still retain archaeological potential, therefore requiring Stage 2 archaeological assessment as per Section 7.7.3 Standard 1

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of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

Recommendations
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4.0 RECOMMENDATIONS

The Stage 1 archaeological assessment of the study area, involving background research and a property inspection, resulted in the determination that the study area retains potential for the identification and recovery of archaeological resources in a portion of the study area. Thus, in accordance with Section 7.7.4 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **the portion of the study area that falls within the undeveloped segment fronting Confederation Parkway, the manicured lawn, and the manicured parkland fronting Rathburn Road West require Stage 2 archaeological assessment.** Since the study area is inaccessible for ploughing, the Stage 2 archaeological assessment will consist of a test pit survey at five metre intervals as outlined in Section 2.1.2 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). The MTCS standards require that each test pit be approximately 30 centimetres in diameter, excavated to at least five centimetres in to subsoil, and have all soil screened through six millimetre hardware cloth to facilitate the recovery of any cultural material that may be present. Prior to backfilling, each test pit will be examined for stratigraphy, cultural features, or evidence of fill. The remainder of the study area has been disturbed by modern day construction and no further archaeological assessment is required in those areas.

The MTCS is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports. Additional archaeological assessment is still required for portions of the study area and so these portions recommended for further archaeological fieldwork remain subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and may not be altered, or have artifacts removed, except by a person holding an archaeological license.

Advice on Compliance with Legislation
May 12, 2017

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18 (Government of Ontario 1990b). The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* (Government of Ontario 1990b) for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act* (Government of Ontario 1990b).

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b). The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b).

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (Government of Ontario 2002) requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Government and Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

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May 12, 2017

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

May 12, 2017

7.0 IMAGES

7.1 PHOTOS

Photo 1: Proposed entry to the Square One Drive extension along Confederation Parkway beyond the fence to the right, disturbance from modern construction, and overgrown grassy area in the centre, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, facing northwest



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

May 12, 2017

Photo 2: Overgrown grassy area, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, facing northeast



Photo 3: Treed and grassy area, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, facing southeast



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

May 12, 2017

Photo 4: Overgrown grassy area, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, and possible disturbance in foreground, facing southeast



Photo 5: Manicured lawn, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, and modern disturbance from hydro boxes in the background, facing northwest



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

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Photo 6: Ancillary building, disturbance from modern construction, facing southeast



Photo 7: Parking lot beside ancillary building and tennis court, disturbance from modern construction, facing south



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

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Photo 8: Parking lot leading to Rathburn Road West, disturbance from modern construction, facing west



Photo 9: Manicured lawn, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, facing southeast



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

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Photo 10: Parkland, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, and tennis court with disturbance from modern construction in background, facing east



Photo 11: Parkland, possibly undisturbed and therefore requiring Stage 2 archaeological assessment, and tennis court with disturbance from modern construction in background, facing east



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

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Photo 12: Sidewalk and road at proposed entry to the Square One Drive extension along Rathburn Road West, disturbance from modern construction, facing north



Photo 13: Rathburn Road West and residential subdivision in background, disturbance from modern construction, facing west



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

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Photo 14: Disturbed manicured lawn overlying an underground parking garage; note covered staircase building in the background and ventilation grate in centre of lawn, facing northeast



Photo 15: Extensive landscaping and tennis court in apartment complex, disturbance from modern construction, facing southwest



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Images

May 12, 2017

Photo 16: Extensive landscaping and parking in apartment complex, disturbance from modern construction, facing northeast



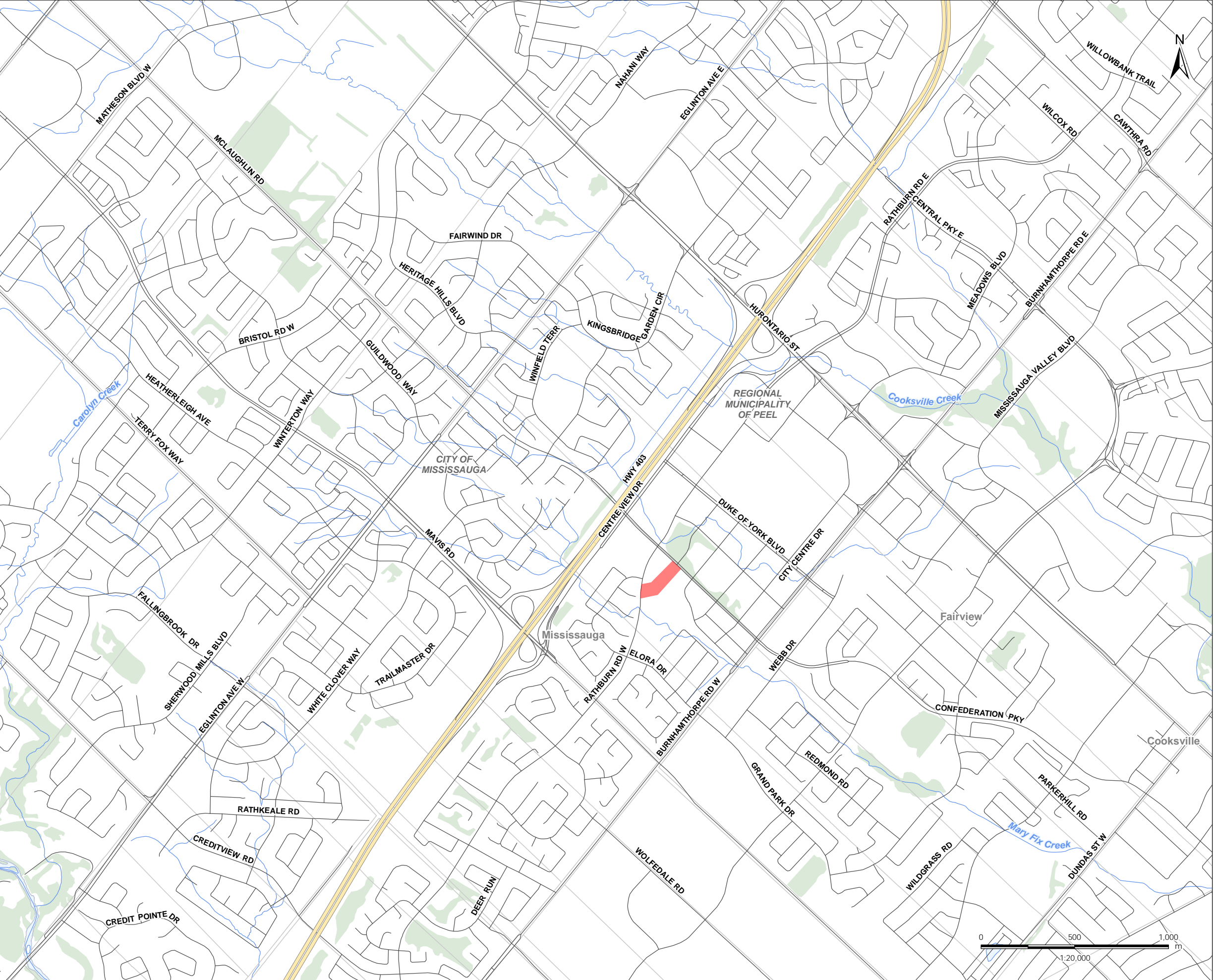
STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Maps

May 12, 2017

8.0 MAPS

All maps will follow on succeeding pages.



Legend

- Location of Study Area
- Road
- Highway
- Watercourse
- Concession/Lot Boundary
- Municipal Boundary
- Waterbody
- Woodlot

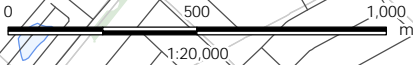


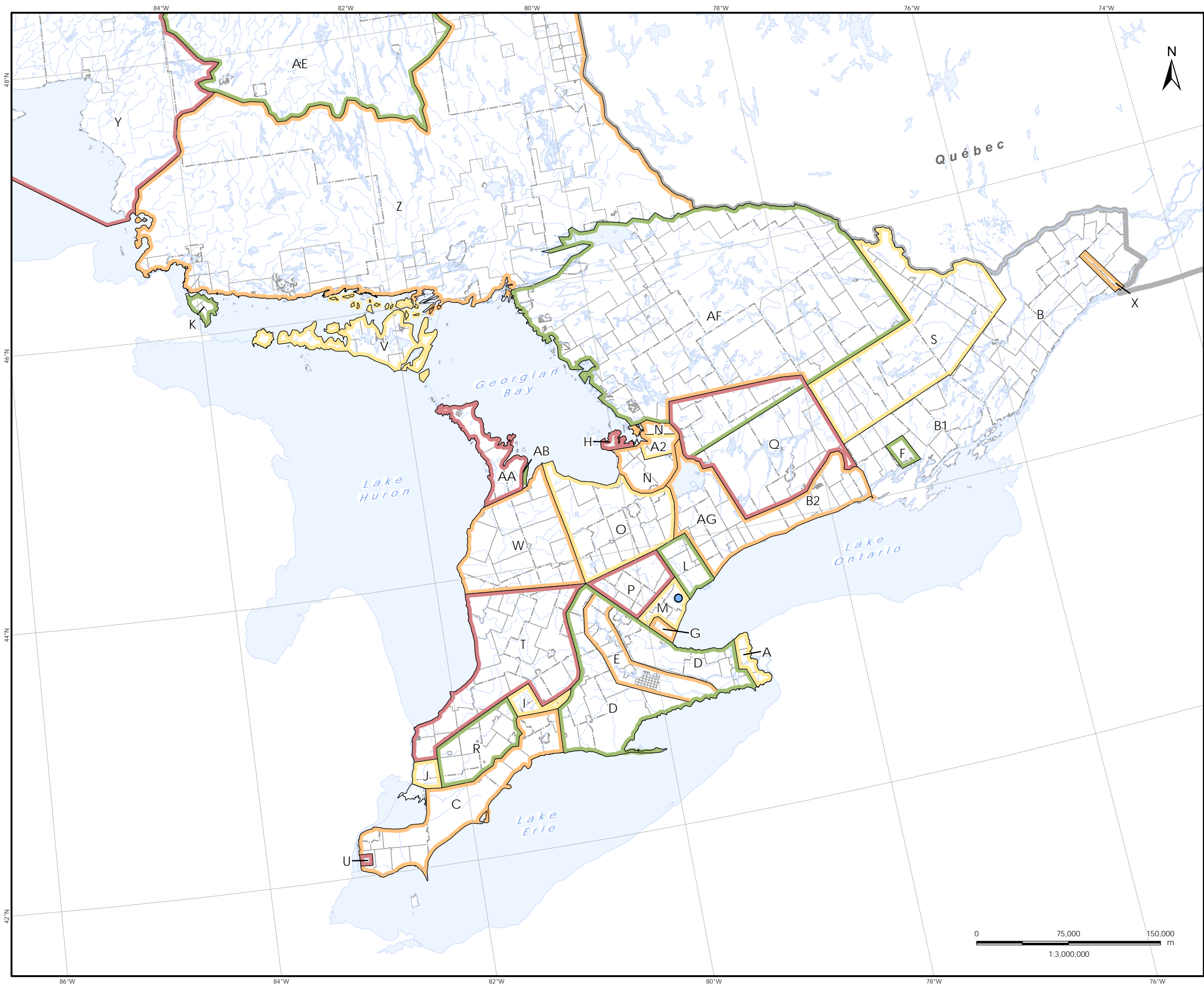
- Notes
- Coordinate System: NAD 1983 UTM Zone 17N
 - Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

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City of Mississauga
Stage 1 Archaeological Assessment
Square One Drive Extension Class EA

Figure No.
1

Title
Location of Study Area





- Legend
- Approximate Study Area Location
 - ▭ Municipal Boundary - Upper Tier
 - ▭ Municipal Boundary - Lower or Single Tier
 - Watercourse
 - Waterbody

- A Treaty No. 381, May 9th, 1781 (Mississauga and Chippewa)
- B1 Crawford's Purchase, October 9th, 1783 (Mississauga)
- B2 Crawford's Purchases, 1784, 1787 And 1788 (Mississauga)
- A2 John Collins' Purchase, 1785 (Chippewa)
- C Treaty No. 2, May 19th, 1790 (Odawa, Chippewa, Pottawatomi, and Huron)
- D Treaty No. 3, December 2nd, 1792 (Mississauga)
- E Haldimand Tract:from the Crown to the Mohawk, 1793
- F Tyendinaga:from the Crown to theMohawk, 1793
- G Treaty No. 3 3/4:from the Crown to Joseph Brant, October 24th, 1795
- H Treaty No. 5, May 22nd, 1798 (Chippewa)
- U Treaty No. 6, September 7th, 1796 (Chippewa)
- J Treaty No. 7, September 7th, 1796 (Chippewa)
- L Treaty No. 13, August 1st, 1805 (Mississauga)
- M Treaty No. 13A, August 2nd, 1805 (Mississauga)
- N Treaty No.16, November 18th, 1815 (Chippewa)
- O Treaty No. 18, October 17th, 1818 (Chippewa)
- P Treaty No. 19, October 28th 1818 (Chippewa)
- Q Treaty No. 20, November 5th, 1818 (Chippewa)
- R Treaty No. 21, March 9th, 1819 (Chippewa)
- S Treaty No. 27, May 31st, 1819 (Mississauga)
- T Treaty No. 27½, April 25th, 1825 (Ojibwa and Chippewa)
- U Treaty No. 35, August 13th, 1833 (Wyandot or Huron)
- V Treaty No. 45, August 9th, 1836 (Chippewa and Odawa, "For All Indians To Reside Thereon")
- W Treaty No. 45½, August 9th, 1836 (Saugeen)
- X Treaty No. 57, June 1st, 1847 (Iroquois of St. Regis)
- Z Treaty No. 61, September 9th, 1850 (Robinson Treaty:Ojibwa)
- AA Treaty No. 72, October 30th, 1854 (Chippewa)
- AB Treaty No. 82, February 9th, 1857 (Chippewa)
- AF Williams Treaty, October 31st and November 15th, 1923 (Chippewa and Mississauga)
- AG Williams Treaty, October 31st, 1923 (Chippewa)

- Notes
- Coordinate System: NAD 1983 Statistics Canada Lambert
 - Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.
 - Treaty boundaries based on map compiled by J.L. Morris 2 March 1943. For cartographic representation only.

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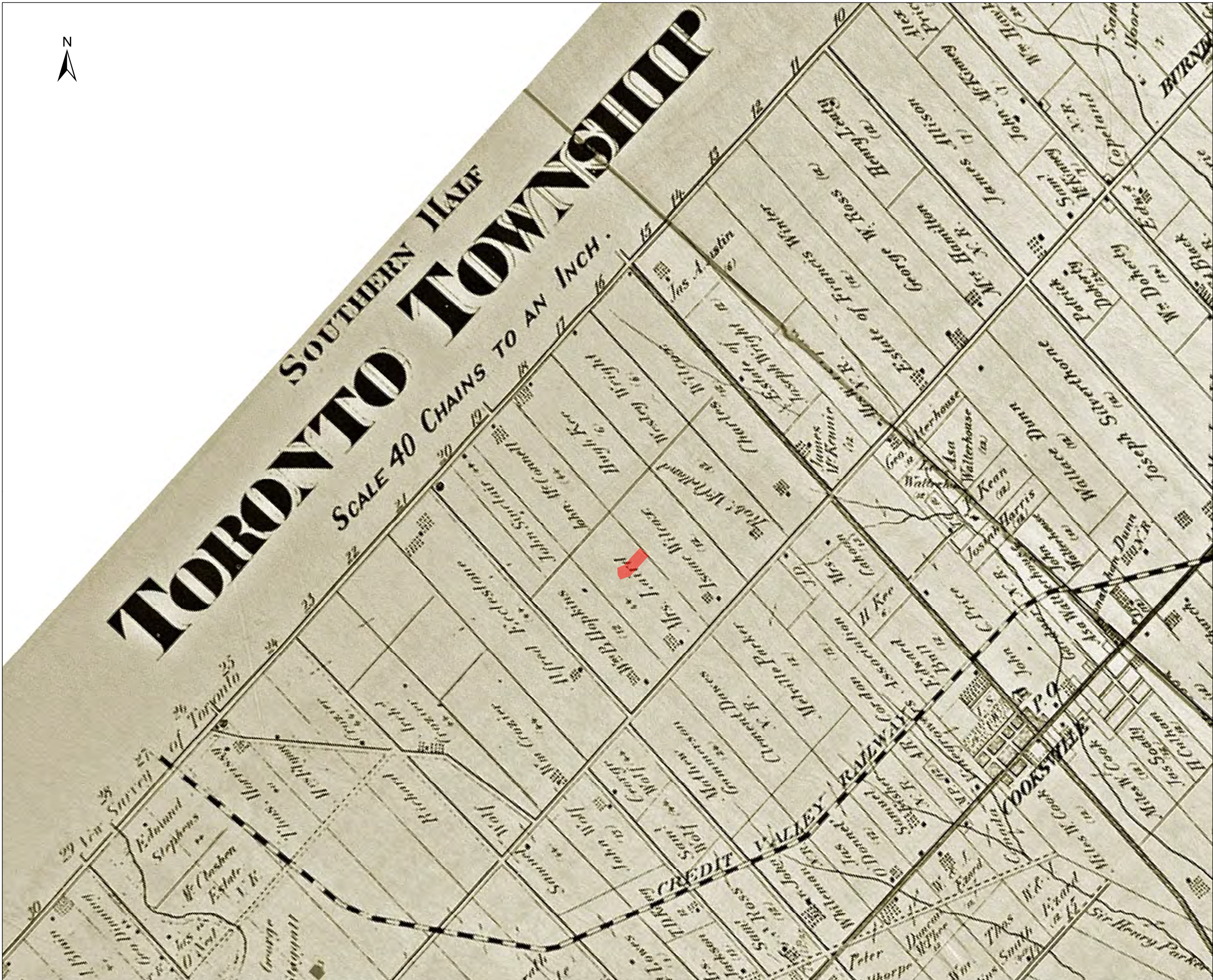
City of Mississauga
Stage 1 Archaeological Assessment
Square One Drive Extension Class EA

Figure No.

2

Title

Treaties and Purchases
(Adapted from Morris 1943)



- Notes
- 1. Not to Scale
 - 2. Walker and Miles. 1877. Illustrated Historical Atlas of the County of Peel, Ont. Toronto.

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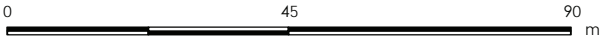
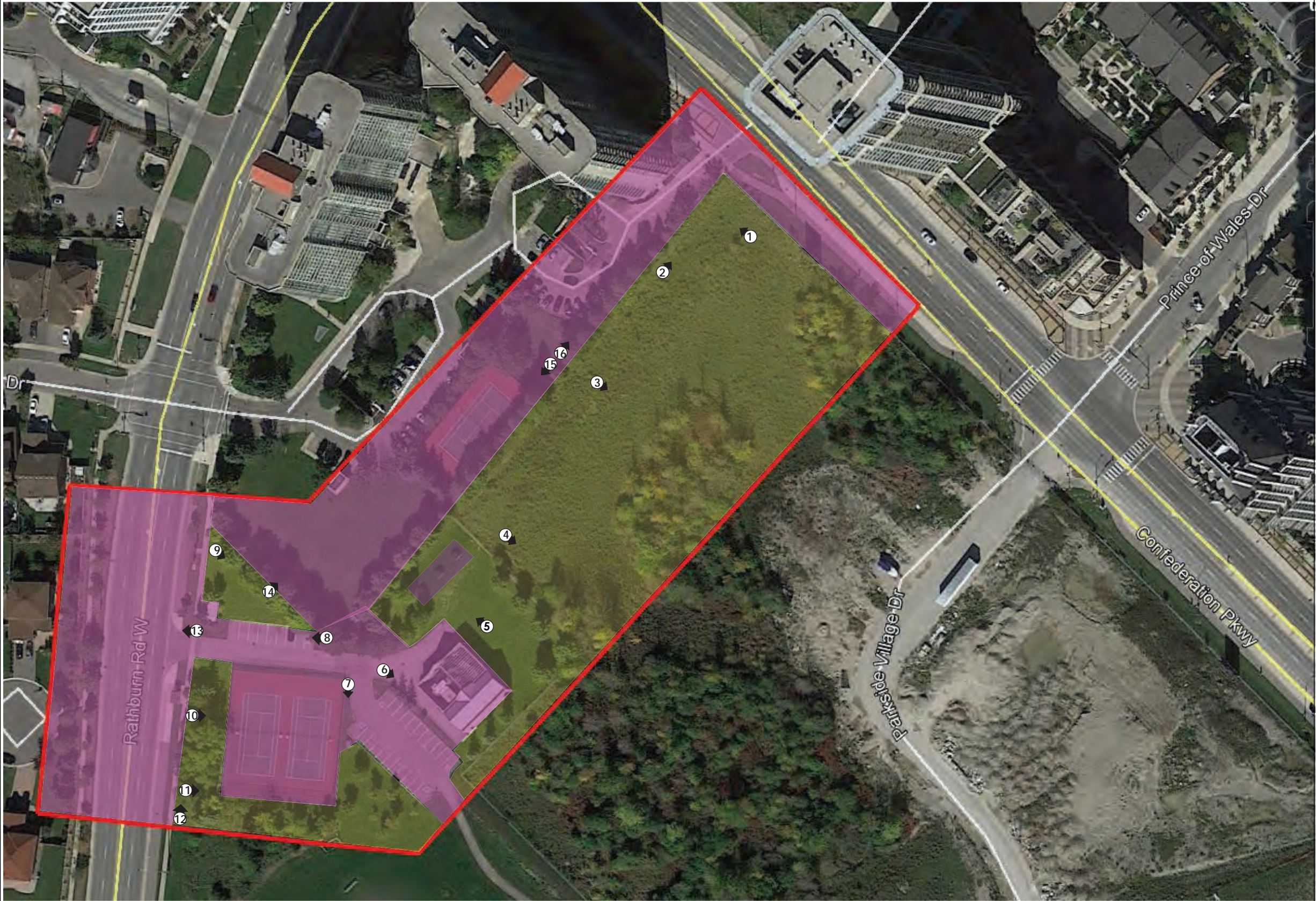
City of Mississauga
Stage 1 Archaeological Assessment
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Figure No.





3

Title

Portion of the 1877 **Historic**
Map of Toronto Township



Legend

-  Limits of Study Area
-  Photo Location and Direction
-  Area of Archaeological Potential;
Stage 2 Archaeological Assessment Recommended
-  No Archaeological Potential; Disturbed

Notes

- 1. Coordinate System: NAD 1983 UTM Zone 17N

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Figure No.
4

Title
Areas of Archaeological Potential

STAGE 1 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Closure
May 12, 2017

9.0 CLOSURE

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential archaeological resources associated with the identified property.

All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report, and are based solely on the scope of work described in the report, the limited data available and the results of the work. The conclusions are based on the conditions encountered by Stantec at the time the work was performed. Due to the nature of archaeological assessment, which consists of systematic sampling, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire property.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities or claims, howsoever arising, from third party use of this report. We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

STANTEC CONSULTING LTD.

Quality Review Jeffrey Muir
(signature)

Jeffrey Muir, BA, CAHP (R304)

Independent Review Tracie Carmichael
(signature)

Tracie Carmichael, BA, B.Ed. (R140)



**Stage 2 Archaeological Assessment:
Square One Drive Extension Class EA**

Part of Lot 19, Concession 2 North of
Dundas Street,
Geographic Township of Toronto,
now City of Mississauga,
Regional Municipality of Peel, Ontario



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License Number: P392
PIF Number: P392-0205-2017
Project Number: 165011005

ORIGINAL REPORT

September 29, 2017

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Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by the City of Mississauga (the City) to complete a Stage 2 archaeological assessment for an approximate three-hectare study area located in part of Lot 19, Concession 2 North of Dundas Street, Geographic Township of Toronto, now City of Mississauga, Regional Municipality of Peel, Ontario. The City proposes to extend Square One Drive southwest from Confederation Parkway to Rathburn Road West. The Stage 2 archaeological assessment was conducted as part of the preliminary planning and design process for a Schedule C Class Environmental Assessment under the Ontario *Environmental Assessment Act* (Government of Ontario 1990a), following the recommendations made in Stantec's Stage 1 archaeological assessment report for the same project (Stantec 2017). This assessment was conducted to meet the requirements of the Ministry of Tourism, Culture and Sport's (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

The Stage 2 assessment was conducted under the PIF number P392-0205-2017 issued to Paul David Ritchie, MA (P392), by the MTCS. The Stage 2 archaeological assessment of the study area was completed on June 2, 2017. No archaeological resources were documented during the Stage 2 archaeological assessment of the study area. Thus, in accordance with Section 2.2 and Section 7.8.4 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **no further archaeological assessment is required for the study area.**

The MTCS is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports.

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.

Project Personnel

Task Manager:	Jeffrey Muir, BA, CAHP (R304)
Licensed Archaeologist:	Paul David Ritchie, MA (P392)
Licensed Field Director:	Kristen Hahne, BA (R1154)
Field Technicians:	Rebecca Bourgeois, Carolyn Spelt, Roisin Thompson
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Acknowledgements

Proponent Contact:	Dana Glofcheskie, City of Mississauga
Ministry of Tourism, Culture and Sport:	Robert von Bitter

Project Context
September 29, 2017

1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

Stantec Consulting Ltd. (Stantec) was retained by the City of Mississauga (the City) to complete a Stage 2 archaeological assessment for an approximate three-hectare study area located in part of Lot 19, Concession 2 North of Dundas Street (NDS), Geographic Township of Toronto, now City of Mississauga, Regional Municipality of Peel, Ontario (Figure 1). The study area consists of proposed route options for the extension of Square One Drive between Confederation Parkway and Rathburn Road West.

The City proposes to extend Square One Drive southwest from Confederation Parkway to Rathburn Road West to fulfil the objectives of the City of Mississauga's Strategic Plan (City of Mississauga 2009), Official Plan (City of Mississauga 2016), Downtown21 Master Plan (City of Mississauga 2010), and Downtown Core Local Area Plan/MOPA8 (City of Mississauga 2015). The Stage 2 archaeological assessment was conducted as part of the preliminary planning and design process for a Schedule C Class Environmental Assessment under the Ontario *Environmental Assessment Act* (Government of Ontario 1990a).

1.1.1 Objectives

The Stage 2 assessment has been conducted to meet the requirements of the Ministry of Tourism, Culture and Sport's (MTCSS) *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). In compliance with the provincial standards and guidelines set out in the MTCSS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 2 Archaeological Assessment are as follows:

- To document archaeological resources within the study area;
- To determine whether the study area contains archaeological resources requiring further assessment; and,
- To recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

Permission to access the study area to conduct the Stage 2 archaeological assessment was provided by Dana Glofcheskie of the City.

1.2 HISTORICAL CONTEXT

1.2.1 Post-contact Aboriginal Resources

“Contact” is typically used as a chronological benchmark in discussing Aboriginal archaeology in Canada and describes the contact between Aboriginal and European cultures. The precise moment of *contact* is a constant matter of discussion. Contact in what is now the province of Ontario is broadly assigned to the 16th century (Loewen and Chapdelaine 2016).

By the turn of the 16th century, the region of the study area was abandoned of permanent settlement and was situated within the extended political geography of the ancestral Huron-Wendat (Heidenreich 1990). By the turn of the 17th century, the entire north shore of Lake Ontario was void of permanent settlement (Birch and Williamson 2013:40). In 1649, the Seneca with the Mohawk led a campaign into the north shore of the Lake Ontario and dispersed the Huron-Wendat, Tionontate (Petun), and Attiwandaron (Neutral) Nations and the Seneca established dominance over the region (Heidenreich 1978).

By 1690, Ojibwa speaking people had begun moving south into the lower Great Lakes basin (Konrad 1981; Rogers 1978); particularly, the Mississauga Nations gained dominance in the region. The Mississauga economy since the turn of the 18th century focused on fishing and the fur trade, supplemented by agriculture and hunting. The study area falls within the historic territory of the formerly Credit River Mississauga Nation, modernly the Mississaugas of the New Credit First Nation. The epithet of “Credit River” was made based on the Nation’s promptness to repay any debts (Mississaugas of the New Credit First Nation n.d.).

The expansion of the fur trade led to increased interaction between European and Aboriginal people, and ultimately intermarriage between European men and Aboriginal women. During the 18th century the progeny of these marriages began to no longer identify with either their paternal or maternal cultures, but instead as Métis. The ethnogenesis of the Métis progressed with the establishment of distinct Métis communities along the major waterways in the Great Lakes of Ontario. Métis communities were primarily focused around the upper Great Lakes and along Georgian Bay, however Métis people have historically lived throughout Ontario (Métis Nation of Ontario 2016; Stone and Chaput 1978:607-608).

The study area is located within the “Old Survey” of the Geographic Township of Toronto which lies within the bounds of Treaty 13A. On August 2, 1805, the Principal Chiefs of the Mississauga Nation and William Claus, Esquire, Deputy Superintendent General and Deputy Inspector General of Indians and their Affairs, signed Treaty 13A (Morris 1943). The area of Treaty 13A is described as follows;

Commencing at the eastern bank of the mouth of the River Etobicoke, being in the limit of the western boundary line of the Toronto Purchase, in the year 1787; then north twenty-two degrees west, six miles; thence south 38 degrees west, twenty-six miles more or less, until it intersects a line on the course north 45 degrees west, produced from the

STAGE 2 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

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outlet of Burlington Bay; then along the said produced line, one mile more or less to the lands granted to Captain Brant; then north 45 degrees east, one mile and a half; then south 45 degrees east, three miles and a half more or less to Lake Ontario; then north easterly along the waters edge of Lake Ontario to the eastern bank of the River Etobicoke being the place of beginning:

(Morris 1943:22)

In this treaty, known as the "First Purchase", the Crown acquired over 74,000 acres of land, excluding a one mile strip on each side of the Credit River which became known as the Credit River Indian Reserve. While it is difficult to exactly delineate treaty boundaries today, Figure 2 provides an approximate outline of the area encompassed by Treaty Number 13A (identified by the letter "M").

1.2.2 Euro-Canadian Resources

Treaty 19, known as the "Second Purchase", was signed on October 28, 1818. This treaty gave the Crown an additional 600,000 acres of land north Treaty 13A (and north of the study area), incorporating most of today's Regional Municipality of Peel. In 1819, this land was divided under the "New Survey" into the townships of Albion, Caledon, Chinguacousy, Toronto Gore and the northern portion of Toronto. On February 28, 1820, the "Credit Treaties" 22 and 23 were signed whereby the Mississaugas surrendered much of the lands along the Credit River that was set aside in Treaty 13A. Dundas Street received much of the early settlement, with numerous mills built along the Credit River.

The Township of Toronto left York County in 1851 and formed part of the newly created Peel County. In 1873, the Toronto Township council was formed to oversee various affairs of the unincorporated villages within Toronto Township. The majority of the region surrounding the study area was subject to European-style agricultural practices for approximately a century, having been settled by Euro-Canadian farmers by the mid-to-late 19th century.

An examination of the map of the southern portion of the Geographic Township of Toronto in the *Illustrated Historical Atlas of the County of Peel* (Walker & Miles 1877) does not depict any structures within the study area (Figure 3). The study area falls into the southern half of Lot 19, owned by Mrs. Laird according to the mapping. Although no structures are illustrated within the study area, earlier structures could have existed within the study area or domestic refuse associated with the depicted structures could have been discarded within the study area. Also, the 19th century road grid depicted on the mapping, while augmented by late 20th century development, is still visible today in the vicinity of the study area.

In discussing the late 19th century historical mapping it must be remembered that historical county atlases were produced primarily to identify factories, offices, residences, and landholdings of subscribers and were funded by subscription fees. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100), although the 1877 map of

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Toronto Township is quite detailed. Nonetheless, all structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

Modern development immediately to the east of the study area began in the late 1960s with the construction of the Mississauga Square One Mall, opened in 1973 (Duquette 2016). In 1968, Toronto Township became the Town of Mississauga, later incorporated as the City of Mississauga in 1974.

1.2.3 Recent Reports

Other than the existing historic documentation, and the previous Stage 1 archaeological assessment report for this Project (Stantec 2017), no other archaeological reports are known to have been published within 50 metres of the study area according to the MTCS (Government of Ontario 2017). The Stage 1 archaeological assessment report was entitled *Stage 1 Archaeological Assessment: Square One Drive Extension Class EA. Part of Lot 19, Concession 2 North of Dundas Street, Geographic Township of Toronto, now City of Mississauga, Regional Municipality of Peel, Ontario*, produced under PIF number P083-0312-2017.

1.3 ARCHAEOLOGICAL CONTEXT

1.3.1 The Natural Environment

The study area is broadly situated along the north shore region of Lake Ontario in an area characterized by the South Slope physiographic region. This physiographic region is a broad, relatively featureless till plain that covers approximately 2,400 square kilometres and extends from the Niagara Escarpment to the Trent River (Chapman and Putnam 1984:172). The underlying bedrock of the South Slope is comprised of grey and black shale with some inter-bedded limestone (Freeman 1979). The central portion of the South Slope, located in the Regional Municipality of Durham, consists of scattered long thin drumlins which tend to be oriented directly up the slope (Chapman and Putnam 1984). The South Slope region contains a variety of soils, many of which have proved to be excellent through more than a century of agricultural use. In general, the soils are developed upon tills than tend to be sandy in the eastern portion of the region and clayey in the west (Chapman and Putnam 1984). It is further noted that sloping within the South Slope is more pronounced in the east than in the west (Chapman and Putnam 1984). The South Slope is truncated along its southern edge by the Iroquois Plain, a beach ridge and narrow plain that represents the remnant of glacial Lake Iroquois. The Iroquois Plain extends around the western shores of Lake Ontario, from the Niagara River to the Trent River (Chapman and Putnam 1984).

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. The closest potable water source would have been Mary Fix Creek, approximately 50 metres south of the study area. While no longer visible today, its

STAGE 2 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

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watercourse was within the vicinity of the study area, eventually travelling southeast and draining into Lake Ontario.

1.3.2 Pre-contact Aboriginal Resources

This portion of southern Ontario has been occupied by First Nations peoples since the retreat of the Wisconsin glacier approximately 11,000 years ago. Table 1 provides a breakdown of the cultural and temporal history of the Aboriginal occupations in the City of Mississauga area.

Table 1: Cultural Chronology for City of Mississauga (Ellis and Ferris 1990)

Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 B.C.	spruce parkland/caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 – 8000 B.C.	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 B.C.	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 B.C.	environment similar to present
Late Archaic	Lamoka (narrow points)	2000 - 1800 B.C.	increasing site size
	Broad Points	1800 - 1500 B.C.	large chipped lithic tools
	Small Points	1500 – 1100 B.C.	introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 B.C.	emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 B.C.	introduction of pottery
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 B.C. - A.D. 500	increased sedentism
	Princess Point	A.D. 550 - 900	introduction of corn
Late Woodland	Early Ontario Iroquoian	A.D. 900 - 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	A.D. 1300 - 1400	long longhouses (100m +)
	Late Ontario Iroquoian	A.D. 1400 - 1650	tribal warfare and displacement
Contact Aboriginal	Various Algonkian Groups	A.D. 1700 - 1875	early written records and treaties
Late Historic	Euro-Canadian	A.D. 1796 – present	European settlement

1.3.3 Previously Identified Archaeological Sites and Surveys

In Canada, archaeological sites are registered within the Borden system, a national grid system designed by Charles Borden in 1952 (Borden 1952). The grid covers the entire surface area of Canada and is divided into major units containing an area that is two degrees in latitude by four degrees in longitude. Major units are designated by upper case letters. Each major unit is subdivided into 288 basic unit areas, each containing an area of 10 minutes in latitude by 10 minutes in longitude. The width of basic units reduces as one moves north due to the curvature of the earth. In southern Ontario, each basic unit measures approximately 13.5 kilometres east-

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west by 18.5 kilometres north-south. In northern Ontario, adjacent to Hudson Bay, each basic unit measures approximately 10.2 kilometres east-west by 18.5 kilometres north-south. Basic units are designated by lower case letters. Individual sites are assigned a unique, sequential number as they are registered. These sequential numbers are issued by the MTCS who maintain the *Ontario Archaeological Sites Database* (ASDB). The study area is located within Borden block AjGv.

Information concerning specific site locations is protected by provincial policy, and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990c). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MTCS will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

An examination of the ASDB indicates that there are four archaeological sites, presented in Table 2, registered within a one kilometre radius of the study area (Government of Ontario 2017). There are no archaeological reports dealing with lands within 50 metres or overlapping the study area, other than the Stage 1 archaeological assessment report for this project (Stantec 2017).

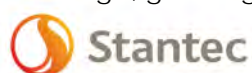
Table 2: Archaeological Sites Within One Kilometre of the Study Area

Borden Number	Site Name	Site Type	Cultural Affiliation	Researcher
AjGv-26	Dark	Isolated findspot	Pre-contact Aboriginal	Spittal n.d.
AjGv-52	-	Isolated findspot	Pre-contact Aboriginal	Archaeological Services Inc. 2001
AjGv-53	-	Isolated findspot	Pre-contact Aboriginal	Archaeological Services Inc. 2001
AjGw-312	-	Lithic scatter	Pre-contact Aboriginal	Archaeological Services Inc. 2001

All four sites located to the northwest of the study area are pre-contact Aboriginal sites. Information concerning David Spittal's Dark site is incomplete in the ASDB. Otherwise, Archaeological Services Inc. documented two Onondaga chert lithic findspots (AjGv-52 and AjGv-53) and the site AjGw-312 which consisted of two Onondaga chert artifacts: a biface and a primary thinning flake (Archaeological Services Inc. 2001).

1.3.4 Summary of Previous Investigations

The Stage 1 archaeological assessment report (Stantec 2017) for the study area assessed the archaeological potential of the study area by determining the likelihood that archaeological resources may be present on a subject property. Stantec applied archaeological potential criteria commonly used by MTCS (Government of Ontario 2011) to determine areas of archaeological potential within the study area. These variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic



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variability of the area. Extensive land disturbance can eradicate archaeological potential (Wilson and Horne 1995).

Within the lot where the study area is situated, the closest source of potable water would have been Mary Fix Creek, 50 metres south of the study area. In addition, four Aboriginal archaeological sites are located within one kilometre of the study area. Based upon these considerations, the Aboriginal archaeological potential of the study area was deemed moderate to high.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements, early transportation routes, and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990b) or property that local histories or informants have identified with possible historical events. Considering the study area's proximity to early Euro-Canadian settlement roads and structures on the lots but outside of the study area, the Euro-Canadian archaeological potential of the study area was deemed moderate to high.

While the Stage 1 background research demonstrated that the area may have once retained archaeological potential, the Stage 1 property inspection determined that extensive land disturbance within the study area has eradicated archaeological potential for portions of the study area. Portions of the study area have been impacted by development within the last 40 years, such as existing roadways, hydro boxes, an ancillary building, parking lots, a tennis court, and an apartment complex. It was also determined that there was some disturbance within the undeveloped portion but it is difficult to fully evaluate visually. The undeveloped portion with scrub and trees, manicured lawn, and manicured parkland might be previously disturbed but it was determined that it was not possible to determine based solely upon the Stage 1 property inspection.

In summary, while the archaeological potential for pre-contact Aboriginal, post-contact Aboriginal, and Euro-Canadian sites was deemed to be moderate to high within the study area based on existing documentation, the Stage 1 property inspection determined that a portion of the study area has been subject to extensive land disturbance which has removed archaeological potential. These areas include the existing roadways, parking lots, the tennis court, the ancillary building, the apartment complex, and the residential subdivision. In accordance with Section 7.7.3 Standard 2 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), this portion of the study area has been subject to extensive and deep land alterations that have severely damaged the integrity of potential archaeological resources. This disturbance negates the archaeological potential as per Section 1.3.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). However, based upon visual evaluation alone, the undeveloped segment fronting Confederation Parkway, the manicured lawn, and the manicured parkland fronting Rathburn Road West has not been obviously disturbed and may still retain archaeological potential. Therefore, the Stage 1 archaeological assessment report recommended that these areas be subject to Stage 2 test pit survey at five metre intervals (Stantec 2017). However, those

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portions of the study area found to be disturbed upon commencement of the test pit survey were then surveyed at a reduced interval of 10 metres to confirm disturbance and those areas found to be permanently low and wet were photo documented instead, as explained in Section 2.0 of this report.

1.3.5 Existing Conditions

The study area consists of parts of Lot 19, Concession 2 NDS, Geographic Township of Toronto, now City of Mississauga, Regional Municipality of Peel, Ontario. It includes the proposed extension of Square One Drive which is situated along paved municipal roads, parking lots, residential lands, parklands, and overgrown lands. The parcel is approximately three hectares in size.

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Field Methods
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2.0 FIELD METHODS

The Stage 2 property assessment of the study area was conducted on June 2, 2017, under PIF number P392-0205-2017 issued to Paul David Ritchie, MA (P392), by the MTCS. The weather was sunny and warm. The weather and lighting conditions were adequate and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Figure 4 indicates the results of the Stage 2 property assessment, as well as photograph locations and directions.

The study area comprises approximately three hectares of land. Approximately 1.80 hectares (60%) of the study area has been previously assessed as disturbed by the Stage 1 archaeological assessment (Stantec 2017) and was not surveyed as part of the Stage 2 assessment. The remaining portion of the study area, approximately 1.20 hectares (40%), was subject to Stage 2 archaeological survey.

Approximately 21% (0.25 hectares) of the Stage 2 archaeological survey area was subject to test pit assessment at five metre intervals (Photos 1 and 2) in accordance with Section 2.1.2 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Approximately 63% (0.75 hectares) of the Stage 2 archaeological survey area was subject to judgmental test pit survey at 10 metre intervals to confirm disturbance (Photos 3 to 7) in accordance with Section 2.1.8 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). This portion was originally going to be test pitted at five metre intervals but the interval was increased to 10 metres once a disturbed soil profile was observed.

Each test pit was approximately 30 centimetres in diameter and excavated five centimetres into sterile subsoil. The soils were then examined for stratigraphy, cultural features, or evidence of fill. All soil was screened through six millimetre mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit. No other methods were employed as no archaeological artifacts were found.

Lastly, a low and wet area, representing approximately 17% (0.20 hectares) (Photo 8) of the Stage 2 archaeological survey area, was documented during the Stage 2 property assessment of the study area and was not be surveyed. While this area was not surveyed, it was photographically documented. Photo 8 confirms that physical features affected the ability to survey portions of the study area in accordance with Section 2.1 Standards 2a and 6 and Section 7.8.6 Standard 1b of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011).

Indigenous groups were invited to participate during the Stage 2 archaeological assessment. Their involvement is documented in the Record of Aboriginal Engagement.

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Record of Finds
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3.0 RECORD OF FINDS

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0 of this report. An inventory of the documentary record generated by fieldwork is provided in Table 3.

Table 3: Inventory of Documentary Record

Document Type	Current Location of Document Type	Additional Comments
6 pages of field notes	Stantec office in Hamilton	In original field book and photocopied in project file
1 hand drawn map	Stantec office in Hamilton	In original field book and photocopied in project file
1 map provided by the City	Stantec office in Hamilton	Hard and digital copies in project file
118 digital photographs	Stantec office in Hamilton	Stored digitally in project file

No archaeological resources were identified during the Stage 2 archaeological assessment of the study area and so no material culture was collected. As a result, no artifact storage arrangements were required.

4.0 ANALYSIS AND CONCLUSIONS

Previously, a Stage 1 archaeological assessment determined that portions of the study area retained potential for the identification of archaeological resources and a Stage 2 archaeological assessment was recommended (Stantec 2017). A Stage 2 archaeological assessment for the study area was conducted on June 2, 2017 using the test pit survey method at a five-metre interval or ten-metre interval as appropriate. An additional low and wet area was documented during the Stage 2 property assessment of the study area and was not surveyed. No archaeological resources were identified during the Stage 2 archaeological assessment.

Recommendations
September 29, 2017

5.0 RECOMMENDATIONS

Stantec was retained by the City to complete a Stage 2 archaeological assessment for an approximate three-hectare study area located in part of Lot 19, Concession 2 NDS, Geographic Township of Toronto, now City of Mississauga, Regional Municipality of Peel, Ontario, for the proposed extension of Square One Drive. No archaeological resources were documented during the Stage 2 archaeological assessment of the study area. Thus, in accordance with Section 2.2 and Section 7.8.4 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **no further archaeological assessment is required for the study area.**

The MTCS is asked to review the results presented and to accept this report into the Ontario Public Register of Archaeological Reports.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18 (Government of Ontario 1990b). The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* (Government of Ontario 1990b) for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act* (Government of Ontario 1990b).

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b). The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b).

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (Government of Ontario 2002) requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Government and Consumer Services.

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Bibliography and Sources
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Images

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8.0 IMAGES

8.1 PHOTOS

Photo 1: Test Pit Survey at Five Metre Intervals, facing southwest



Photo 2: Field Conditions for Test Pit Survey at Five Metre Intervals, facing northeast



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Images

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Photo 3: Test Pit Survey at 10 Metre Intervals, facing east



Photo 4: Test Pit Survey at 10 Metre Intervals, facing south



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Images

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Photo 5: Test Pit Survey at 10 Metre Intervals, facing northwest



Photo 6: Test Pit Survey at 10 Metre Intervals, facing southwest



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Images

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Photo 7: Test Pit Survey at 10 Metre Intervals, facing northeast



Photo 8: Low and Wet Area, Not Surveyed, facing southeast



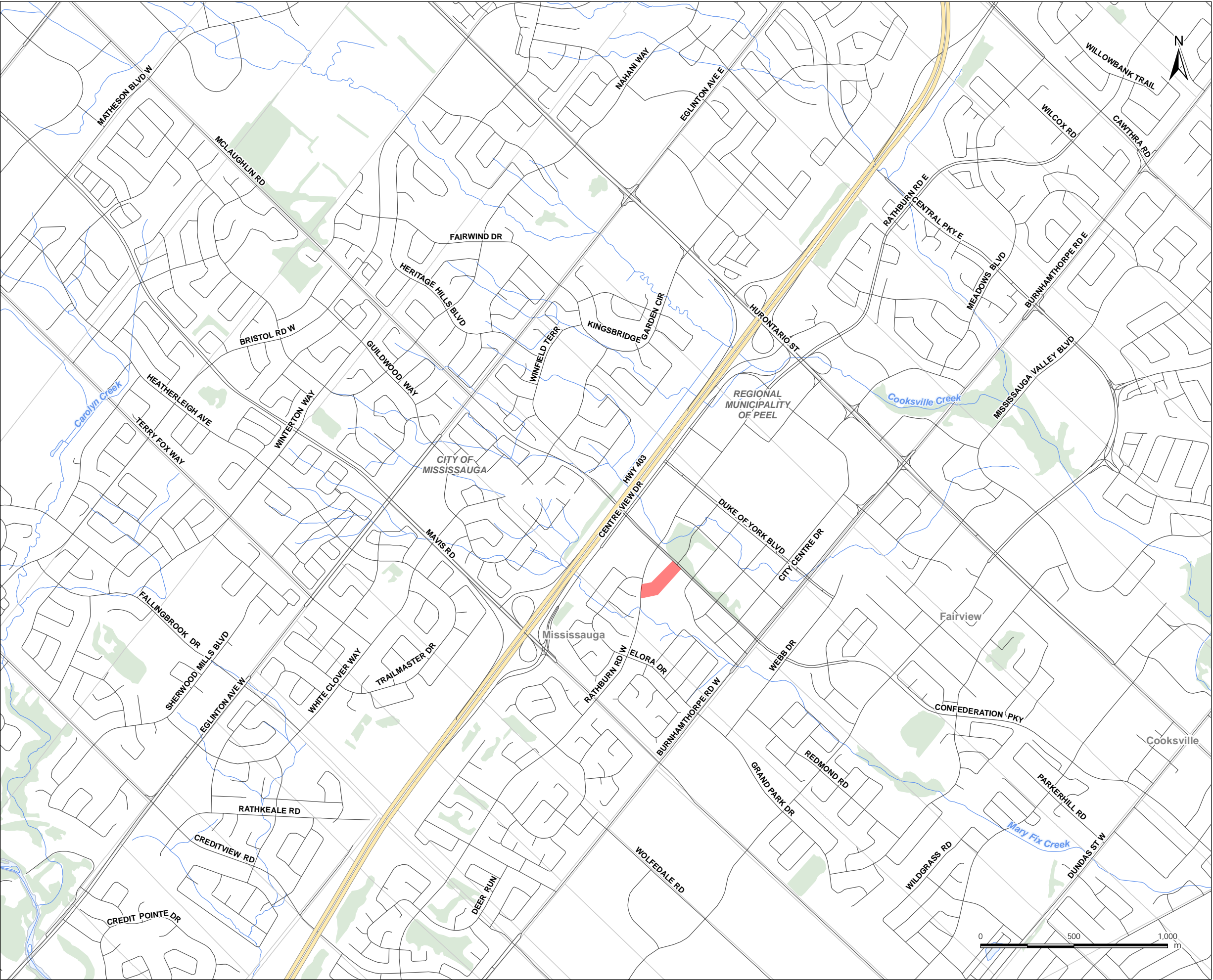
STAGE 2 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Maps

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9.0 MAPS

All maps will follow on succeeding pages.



Legend

- Location of Study Area
- Road
- Highway
- Watercourse
- Concession/Lot Boundary
- Municipal Boundary
- Waterbody
- Woodlot



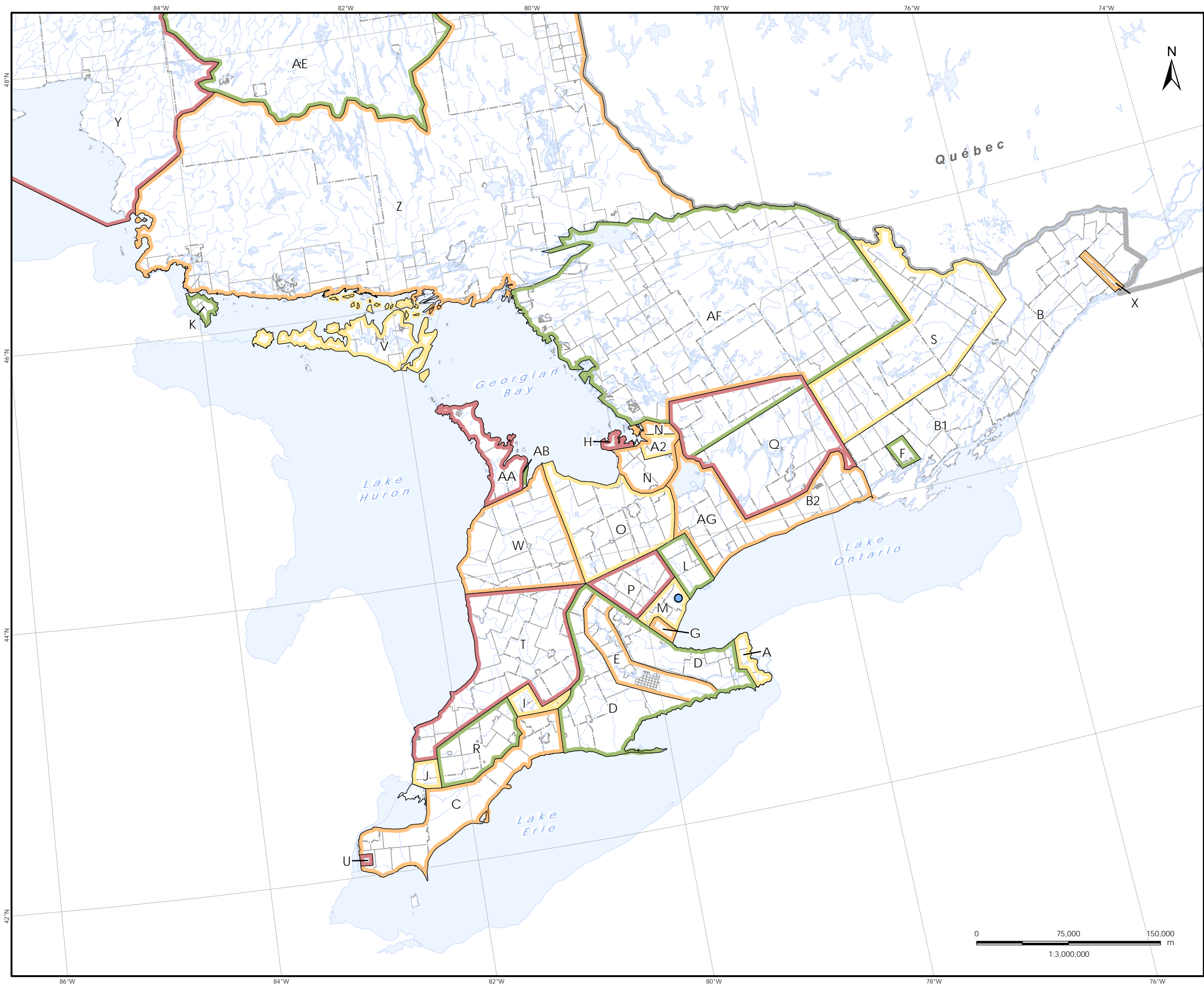
- Notes
- Coordinate System: NAD 1983 UTM Zone 17N
 - Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

Client/Project
City of Mississauga
Stage 2 Archaeological Assessment
Square One Drive Extension Class EA

Figure No.
1

Title
Location of Study Area

165011005



- Legend
- Approximate Study Area Location
 - ▭ Municipal Boundary - Upper Tier
 - ▭ Municipal Boundary - Lower or Single Tier
 - Watercourse
 - Waterbody

- A Treaty No. 381, May 9th, 1781 (Mississauga and Chippewa)
- B1 Crawford's Purchase, October 9th, 1783 (Mississauga)
- B2 Crawford's Purchases, 1784, 1787 And 1788 (Mississauga)
- A2 John Collins' Purchase, 1785 (Chippewa)
- C Treaty No. 2, May 19th, 1790 (Odawa, Chippewa, Pottawatomi, and Huron)
- D Treaty No. 3, December 2nd, 1792 (Mississauga)
- E Haldimand Tract:from the Crown to the Mohawk, 1793
- F Tyendingaga:from the Crown to theMohawk, 1793
- G Treaty No. 3 3/4:from the Crown to Joseph Brant, October 24th, 1795
- H Treaty No. 5, May 22nd, 1798 (Chippewa)
- U Treaty No. 6, September 7th, 1796 (Chippewa)
- J Treaty No. 7, September 7th, 1796 (Chippewa)
- L Treaty No. 13, August 1st, 1805 (Mississauga)
- M Treaty No. 13A, August 2nd, 1805 (Mississauga)
- N Treaty No.16, November 18th, 1815 (Chippewa)
- O Treaty No. 18, October 17th, 1818 (Chippewa)
- P Treaty No. 19, October 28th 1818 (Chippewa)
- Q Treaty No. 20, November 5th, 1818 (Chippewa)
- R Treaty No. 21, March 9th, 1819 (Chippewa)
- S Treaty No. 27, May 31st, 1819 (Mississauga)
- T Treaty No. 27½, April 25th, 1825 (Ojibwa and Chippewa)
- U Treaty No. 35, August 13th, 1833 (Wyandot or Huron)
- V Treaty No. 45, August 9th, 1836 (Chippewa and Odawa, "For All Indians To Reside Thereon")
- W Treaty No. 45½, August 9th, 1836 (Saugeen)
- X Treaty No. 57, June 1st, 1847 (Iroquois of St. Regis)
- Z Treaty No. 61, September 9th, 1850 (Robinson Treaty:Ojibwa)
- AA Treaty No. 72, October 30th, 1854 (Chippewa)
- AB Treaty No. 82, February 9th, 1857 (Chippewa)
- AF Williams Treaty, October 31st and November 15th, 1923 (Chippewa and Mississauga)
- AG Williams Treaty, October 31st, 1923 (Chippewa)

- Notes
- Coordinate System: NAD 1983 Statistics Canada Lambert
 - Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.
 - Treaty boundaries based on map compiled by J.L. Morris 2 March 1943. For cartographic representation only.

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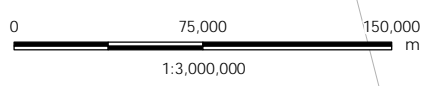
City of Mississauga
Stage 2 Archaeological Assessment
Square One Drive Extension Class EA

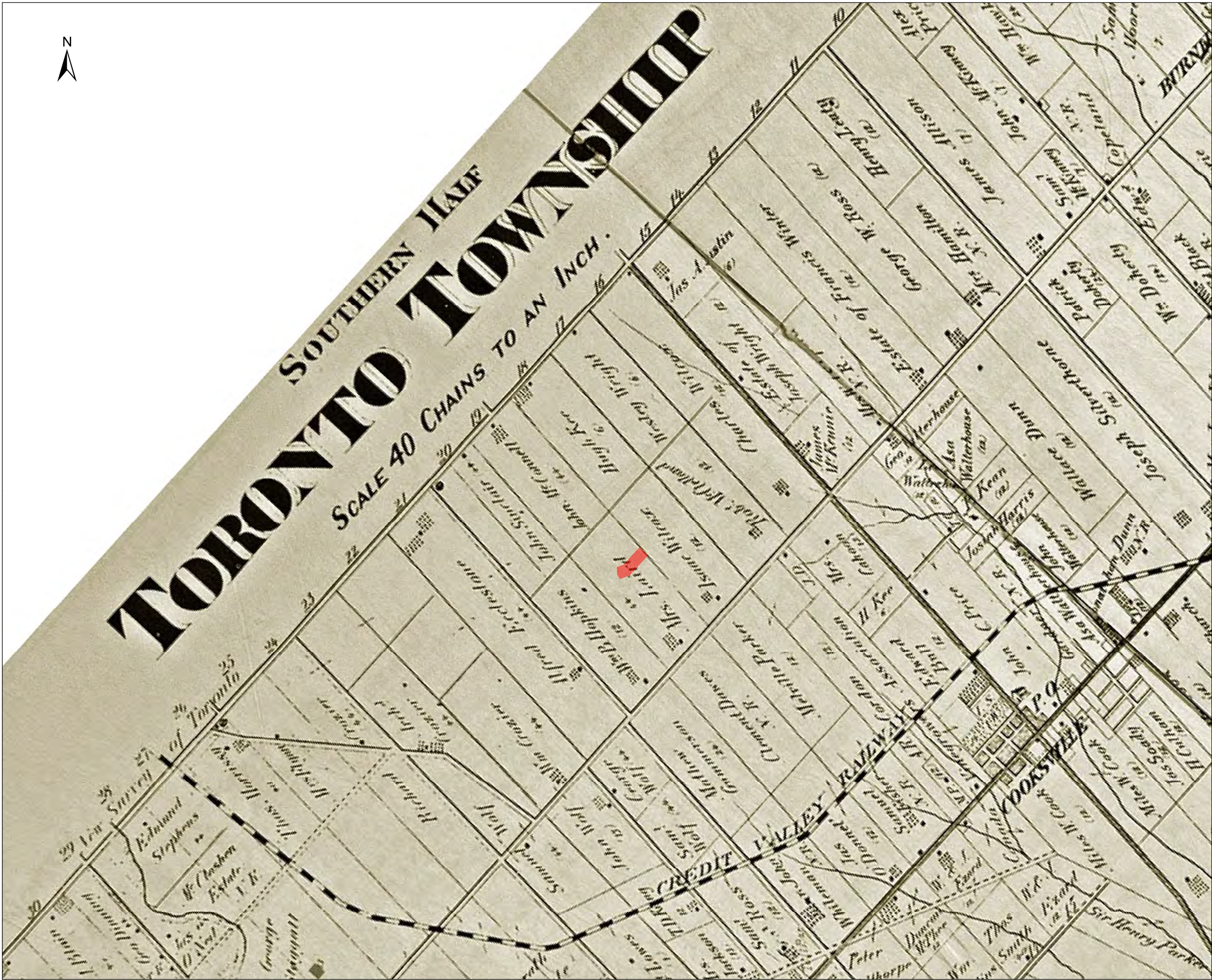
Figure No.

2

Title

Treaties and Purchases
(Adapted from Morris 1943)





- Notes
1. Not to Scale
 2. Walker and Miles. 1877. Illustrated Historical Atlas of the County of Peel, Ont. Toronto.

Client/Project

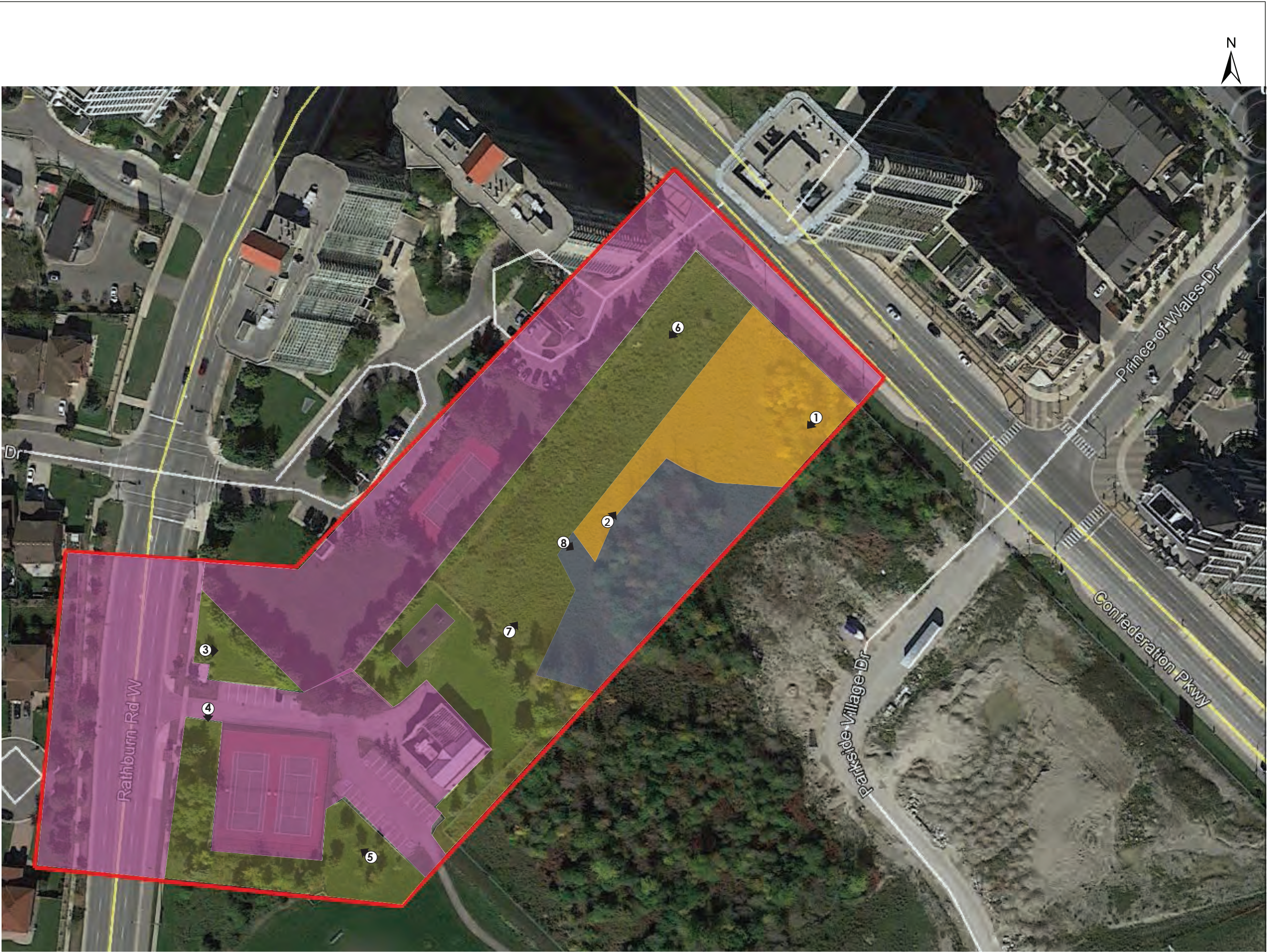
City of Mississauga
Stage 2 Archaeological Assessment
Square One Drive Extension Class EA

Figure No.







3

Title

Portion of the 1877 **Historic**
Map of Toronto Township



Legend

-  Limits of Study Area
-  Photo Location and Direction
-  Test Pit Survey - 10 Metre Interval
-  Test Pit Survey - 5 Metre Interval
-  Not Surveyed - Low and Wet
-  Disturbed - Previously Assessed in Stage 1 Archaeological Assessment (Stantec 2017)

Notes

- 1. Coordinate System: NAD 1983 UTM Zone 17N

165011005

Client/Project
City of Mississauga
Stage 2 Archaeological Assessment
Square One Drive Extension Class EA

Figure No.

4

Title

Stage 2 Survey Methods and Results

STAGE 2 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Closure
September 29, 2017

10.0 CLOSURE

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential archaeological resources associated with the identified property.

All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report, and are based solely on the scope of work described in the report, the limited data available and the results of the work. The conclusions are based on the conditions encountered by Stantec at the time the work was performed. Due to the nature of archaeological assessment, which consists of systematic sampling, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire property.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities or claims, howsoever arising, from third party use of this report. We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

STANTEC CONSULTING LTD.



Quality Review _____
(signature)

Parker Dickson, MA (P256)



Independent Review _____
(signature)

Tracie Carmichael, BA, B.Ed. (R140)



**Stage 2 Archaeological Assessment:
Square One Drive Extension Class EA**

Part of Lot 19, Concession 2 North of
Dundas Street,
Geographic Township of Toronto,
now City of Mississauga,
Regional Municipality of Peel, Ontario



Prepared for:
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License Number: P392
PIF Number: P392-0205-2017
Project Number: 165011005

**RECORD OF ABORIGINAL
ENGAGEMENT**

September 29, 2017

Table of Contents

1.0	ABORIGINAL ENGAGEMENT	1.1
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STAGE 2 ARCHAEOLOGICAL ASSESSMENT: SQUARE ONE DRIVE EXTENSION CLASS EA

Aboriginal Engagement
September 29, 2017

1.0 ABORIGINAL ENGAGEMENT

The Ontario Government's 2011 *Engaging Aboriginal Communities in Archaeology* draft technical bulletin states in Section 1.2 that for archaeological projects in Ontario it is encouraged that Aboriginal communities are engaged during the following:

1. Stage 1, when conducting background study;
2. Stage 1, when evaluating potential;
3. Stage 2, when assessing a property and determining whether a site should go to Stage 3; and
4. Stage 3, when making recommendations to excavate or preserve Aboriginal sites.

This document provides a description of the engagement practices that were conducted during the Stage 2 assessment. No additional documentation arose from the engagement process.

The City of Mississauga contacted Aboriginal communities, including the Mississaugas of the New Credit First Nation, the Six Nations of the Grand River, and the Haudenosaunee Development Institute. The Haudenosaunee Development Institute expressed interest in providing an archaeological monitor during the Stage 2 field work component.

The Stage 2 assessment was conducted on June 2, 2017. During the Stage 2 field assessment and survey, Stantec archaeologists were joined by Coleman Powless of the Haudenosaunee Development Institute. Representatives from other communities contacted by the City of Mississauga did not attend the Stage 2 archaeological assessment.

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Oct 4, 2017

Paul Ritchie (P392)
Stantec Consulting
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RE: Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "Stage 2 Archaeological Assessment: Square One Drive Extension Class EA. Part of Lot 19, Concession 2 North of Dundas Street, Geographic Township of Toronto, now City of Mississauga, Regional Municipality of Peel, Ontario. ", Dated Sep 29, 2017, Filed with MTCS Toronto Office on N/A, MTCS Project Information Form Number P392-0205-2017, MTCS File Number 0004633

Dear Mr. Ritchie:

The above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18, has been entered into the Ontario Public Register of Archaeological Reports without technical review.¹

Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require further information, please do not hesitate to send your inquiry to Archaeology@Ontario.ca

cc. Archaeology Licensing Officer
Dana Glofcheskie, City of Mississauga
Mansoor Mahmood, MOECC, Operations, Environmental Approvals, Approval Services

¹In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.