

Stage 1 Archaeological Assessment James Snow Parkway South - North Halton Coordinated Municipal Class Environmental Assessment (Lots 13-15 of Concession 4 and Lots 5-14, of Concession 5, Geographical Trafalgar Township, County of Halton), Town of Milton, Halton Region

Original Report

Prepared for:

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PIF P1066-0340-2023
Archaeological Services Inc. File: 22EA-244

April 29, 2024



Executive Summary

Archaeological Services Inc. was retained by HDR, on behalf of Halton Region, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the North Halton Coordinated Municipal Class Environmental Assessment study. This project involves the review of potential improvements to James Snow Parkway from Britannia Road to Highway 401 in the Town of Milton.

The Stage 1 Study Area consists of a 50-metre-wide corridor along James Snow Parkway from Britannia Road to Highway 401 in the Town of Milton and will encompass the potential improvements.

Background research determined there are 63 previously registered archaeological sites located within one kilometre of the Study Area and that part of the Study Area has been previously assessed. Of the sites within 50 metres, none have been noted to have further cultural heritage value or interest. The property inspection determined that parts of the Study Area exhibit archaeological potential.

The following recommendations are made:

- 1) Parts of the Study Area exhibit archaeological potential. If impacted, these lands require Stage 2 archaeological assessment by test pit survey at five metre intervals, prior to any construction activities;
- 2) The Study Area does not retain archaeological potential on account of deep and extensive land disturbance and being previously assessed. These lands do not require further archaeological assessment; and,
- 3) Should the potential work extend beyond the current Study Area, further archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.



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1.0 Project Context

Archaeological Services Inc. (ASI) was retained by HDR, on behalf of Halton Region, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the North Halton Coordinated Municipal Class Environmental Assessment (MCEA) study. This project involves the review of potential improvements to James Snow Parkway from Britannia Road to Highway 401 in the Town of Milton.

These improvements may include:

- Six (6) lanes of through capacity;
- On-road and off-road active transportation facilities;
- Transit Priority Corridor – Priority Bus Corridor (as identified in the Defining Major Transit Requirements (DMTR) in Halton 2031 and 2041 Transit Priority Corridor Networks); and
- Development of vertical and horizontal alignments, including new or modified structures (where required).

The Stage 1 Study Area consists of a 50-metre-wide corridor along James Snow Parkway from Britannia Road to Highway 401 in the Town of Milton (Figure 1) and will encompass the potential improvements.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (1990, as amended in 2019) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Citizenship and Multiculturalism (MCM 2011).

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (Environmental Assessment Act, R.S.O. c. E.18, 1990 as amended 2022) and regulations made under the Act, and are therefore subject to all associated legislation.



This project is being conducted in accordance with the *Municipal Class Environmental Assessment* process (Municipal Engineers Association, 2023).

The *Master Plan of Archaeological Resources of the Regional Municipality of Halton 2008 Update* (ASI, 2009a) was also consulted.

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment and property inspection was granted by HDR on March 21, 2023.

1.1.1 Treaties

The Study Area is within Treaty 13a, signed on August 2, 1805, by the Mississaugas and the British Crown in Port Credit at the Government Inn. A provisional agreement was reached with the Crown on August 2, 1805, in which the Mississaugas ceded 70,784 acres of land bounded by the Toronto Purchase of 1787 in the east, the Brant Tract in the west, and a northern boundary that ran six miles back from the shoreline of Lake Ontario. The Mississaugas also reserved the sole right of fishing at the Credit River and were to retain a one-mile strip of land on each of its banks, which became the Credit Indian Reserve. On September 5, 1806, the signing of Treaty 14 confirmed the Head of the Lake Purchase between the Mississaugas of the Credit and the Crown (Mississauga of the New Credit First Nation, 2001; Mississaugas of the Credit First Nation, 2017).

The Study Area is within the Area of Interest for archaeology of the Huron-Wendat Nation.

1.2 Historical Context

1.2.1 Indigenous Land Use and Settlement

Current archaeological evidence indicates humans were present in southern Ontario approximately 13,000 years before present (B.P.) (Ferris, 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 B.P., the



environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (Ellis & Deller, 1990).

Between approximately 10,000-5,500 B.P., the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 B.P.; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest archaeological evidence for cemeteries dates to approximately 4,500-3,000 B.P. and is interpreted by archaeologists to be indicative of increased social organization and the investment of labour into social infrastructure (J. Brown, 1995, p. 13; Ellis et al., 1990, 2009).

Between 3,000-2,500 B.P., populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 B.P. and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by approximately 2,000 B.P., evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 B.P. there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2,300 B.P. – it is likely that once similar analyses are conducted on Ontario ceramic vessels of the same period, the same evidence will be found (Birch & Williamson, 2013, pp. 13–15). As is evident in detailed Anishinaabek ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers, 1962). It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.



From the beginning of the Late Woodland period at approximately 1,000 B.P., lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (C.E.), larger settlement sites focused on horticulture begin to dominate the archaeological record. Seasonal dispersal of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson, 1990, p. 317). By 1300-1450 C.E., archaeological research focusing on these horticultural societies note that this episodic community dispersal was no longer practised and these populations now occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities (Birch et al., 2021). Through this process, the socio-political organization of these First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. Other First Nation communities continued to practice residential mobility and to harvest available resources across landscapes they returned to seasonally/annually.

By 1600 C.E., the Confederation of Nations were encountered by the first European explorers and missionaries in Simcoe County. Samuel de Champlain in 1615 reported that a group of Iroquoian-speaking people situated between the Haudenosaunee and the Huron-Wendat were at peace and remained “la nation neutre”. Like the Huron-Wendat, Petun, and Haudenosaunee, the Neutral or Attawandaron people were settled village agriculturalists. By the 1640s, devastating epidemics and the traditional enmity between the Haudenosaunee and the Attawandaron and the Huron-Wendat (and their Algonquian allies such as the Nippissing and Odawa) led to their dispersal from southern Ontario. The Huron-Wendat eventually resettled in what is known today as Wendake, Quebec. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.



1.2.2 Post-Contact Settlement

Historically, the Study Area is located in the Geographical Trafalgar Township, County of Halton, in Lots 13 to 15 of Concession 4 and Lots 5 to 14 of Concession 5.

The S & G stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the Ontario Heritage Act or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those that are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be located in proximity to water. The development of the network of concession roads and railroads through the course of the nineteenth century frequently influenced the siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 metres of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites.

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Indigenous trails, both along the lakeshore and adjacent to various creeks and rivers (ASI 2006).

Trafalgar Township

Dundas Street had been surveyed in 1793, as a military road connecting Lake Ontario, Lake Erie, Lake St. Clair and Lake Huron, as well as a road to aid Loyalist settlement and deter expansionist claims in Upper Canada. The concessions



lying on either side of Dundas Street were formally surveyed in 1806 and are known as the Old Survey. Additional lands were acquired through a treaty with the Mississauga Nation in 1818 which extended the boundaries of Trafalgar Township, and this portion of the township became known as the New Survey. After the two concessions south of Dundas Street were opened up, two new east-west concession line access roads, the Upper Middle Road and the Lower Middle Road, were surveyed. These early east-west roads were later complemented in 1832, by the Lakeshore Road, which was constructed nearby and parallel to an Indigenous pathway skirting Lake Ontario. The concession roads of the 1806 survey and the line roads running perpendicular, blocked out the township in areas a mile and quarter square with five 200-acre lots to a square. Between every five lots ran a line road (Mathews, 1953).

Trafalgar was known as Township Number 2 when it was first surveyed by Samuel S. Wilmot and was subsequently renamed Alexander Township in honour of Alexander Grant, who was President and Administrator of the Province of Upper Canada (Mathews, 1953). Shortly thereafter the names of two townships in the county were changed to Nelson and Trafalgar. The New Survey of Trafalgar was undertaken by Richard Bristol between April and June 1819 which shows that the survey of the township proceeded westward from Concession 11 along the Peel County line towards Milton. Smith (Smith, 1850) noted that the settlement of Trafalgar commenced about 1807. By 1817, the population had increased to 548 and the township contained one grist mill and four saw mills. In 1846, the township was described as “well settled... containing numerous well cleared and cultivated farms, most which have good orchards” (Smith, 1846). By 1850, the population had increased to 4,513 and the township contained three grist and nineteen saw mills (Smith, 1850). The timber cover in the township was described as “principally hardwood with a little pine intermixed” (Smith, 1850).

The earliest families to settle within the township included those of Sovereign, Proudfoot, Katting, Freeman, Post, Biggar, Mulholland, Kenney, Chalmer, Albertson, Chisholms, Sproat, Brown, and Hagar.

Village of Omagh

This post office village was founded in 1818 on a tributary of the Sixteen Mile Creek on part Lots 5 and 6, Concessions 4 and 5, Trafalgar Township, and is the only village in Milton from the township that retains elements of its original



character (Town of Milton, 2019). In 1877, it contained three churches, a school and post office, drill shed and temperance hall. The population numbered about 100 inhabitants (Crossby, 1873; Matthews, 1953).

Credit Valley Railway

The Credit Valley Railway was constructed between 1877 and 1879 to improve trade opportunities in southern Ontario (Town of Caledon, 2009). The project was backed by George Laidlaw and was intended to connect Toronto with Orangeville via Streetsville. Construction began in 1874 and over several subsequent years several branches were added to the proposed line. The first section of track from Parkdale (Toronto) to Milton was opened in 1877. In 1873, survey work was completed, and track was first laid in 1876. Construction on the railway reached the Forks of the Credit by 1879 with a station at the northern end of the longest curved timber trestle of the time, which spanned 1,146 feet through the river valley at a height of 85 feet (Town of Caledon 2009:7,30). The line was completed in 1881 but nearly bankrupted the company. It was established in direct competition with the Toronto, Grey and Bruce Railway in the hopes of stimulating trade and economic opportunities in the outlying areas. In 1883, the line was taken over by the Canadian Pacific Railway (Heritage Mississauga, 2009; Town of Caledon, 2009).

In 1885, the Canadian Pacific Railway (CPR) was completed, linking west and east Canada. The CPR was intended to link British Columbia with the east coast, and to bring it into the Canadian Confederacy. A condition of British Columbia for joining the Confederacy in 1868 was the construction of a 'transcontinental wagon road' within two years of their admission. However, a range of setbacks and issues with policy and funding, including dependency on American interests, delayed the construction of the CPR until the early 1880s. On October 21, 1880, the contract for the construction of the railroad was signed. The CPR was given Royal Assent on February 15th, 1881 and a Royal Charter shortly after. The terms of the charter, which incorporated the company, stipulated a subsidy of \$25,000,000 and 25,000,000 acres of land, in addition to several railways also contracted by the government. In January 1882, William Cornelius Van Horne was appointed as General Manager of the CPR. Within his first summer as manager, Van Horne pushed a total of 480 miles of track through the Prairies. In



May 1885, the final spike was set within the eastern section of the CPR and on November 8th of the same year the last spike in the transcontinental railway was driven in. Van Horne marked the occasion with his famous fifteen-word speech, “All I can say is that the work has been well done in every way” (Churcher, 2013; Innes, 1923, pp. 19–21).

By 1908, the CPR line connected Toronto with Sudbury and achieved significant engineering accomplishments to compensate for varied topography and geography. During the First World War, CPR committed to serving the British Empire by providing not only trains but ships, shops, hotels, and people. In 1923, several bankrupt railways were amalgamated into Canadian National Railways (later CN) by the government, with CN becoming CPR’s main competitor. The Great Depression hit companies heavily, but CPR less so due to being debt-free, unlike CNR which was affected from 1929 until 1939. The end of the Second World War in 1945 increased the availability of cars, trucks, and airplanes and significantly diminished CPR’s need for passenger services, with the majority of CPR business shifting to hauling freight and bulk commodities. In 1955, new luxury transcontinental train service was introduced, named The Canadian. By the 1960s, the company began to pull out of passenger services and in 1970, they were unsuccessful in discontinuing The Canadian. Since the Federal Government considered passenger rail service a national priority, every effort was made to encourage CP and CN to maintain passenger cars. In 1977, VIA Rail was established by the Federal Government as a Crown Corporation to ensure there were reliable passenger train services across Canada using existing CP and CN lines and infrastructure. CPR began construction in 1984 into the Mount Macdonald Tunnel to augment the Connaught Tunnel under the Selkirk Mountains. By 1988, the first revenue train passed through the tunnel. The Canada – U.S. Free Trade Agreement in 1989 influenced CPR’s expansion during the early 1990s.

In 2001, the parent company, Canadian Pacific Limited, spun off its five subsidiaries, which included CPR, into independent companies. After several unsuccessful mergers in 2014 to 2017, CPR continued to operate freight traffic in bulk commodities that contributes significantly to their revenue. Passenger service by GO Transit began operating on the CP Galt Subdivision (the Metrolinx



Milton GO rail corridor) in 1981 (Canadian Pacific Railway, 2017; Canadian Railway Hall of Fame, 2003; Heritage Mississauga, 2009).

1.2.3 Map Review

The 1858 *Tremaine's Map of Halton County* (Tremaine, 1858) and the 1877 *Illustrated Historical Atlas of Halton County* (Pope, 1877), 1909 topographic map Brampton Sheet (Department of Militia and Defence, 1909), and the 1994 National Topographic Series Brampton Sheet (Department of Energy, Mines and Resources, 1994) were examined to determine the presence of historic features within the Study Area during the nineteenth and twentieth centuries (Figure 2 to Figure 5).

The 1858 map (Figure 2) shows Britannia Road, Derry Road, and the original Fourth Line concession road as historically surveyed roads. The village of Omagh is located west of the Study Area at the Fourth Line and Britannia Road intersection. The Study Area is within a rural area and has tributaries of East Sixteen Mile Creek running through it.

The 1877 map (Figure 3) shows the Credit Valley Railway was surveyed transecting the northern part of the Study Area in a roughly east to west direction. The Study Area passes through many large lots with homesteads and associated orchards, two of which are located immediately adjacent to the Study Area.

The 1909 map (Figure 4) shows Beatty Train Station on the west side of Fourth Line adjacent to the Study Area. It also illustrates a bridge drawn on the southwest corner of the Study Area carrying Fourth Line over a tributary of East Sixteen Mile Creek. No structures are shown adjacent to the Study Area.

The 1994 map (Figure 5) shows the north part of the Study Area (Fourth Line) connecting to Highway 401 and indicates that James Snow Parkway had not yet been constructed. The hydro corridor is illustrated to the east. Two built structures are located within the southern half of the Study Area. The majority of the Study Area and the lands adjacent to it remain largely vacant.



1.2.4 Aerial and Orthoimagery Review

Historical aerial imagery from 1954 (Hunting Survey Corporation Limited, 1954) shows the Study Area in agricultural fields passing through small woodlots and a tributary of East Sixteen Mile Creek (Figure 6). The railway tracks from the company now named Canadian National are visible traversing through the Study Area.

A review of available Google satellite imagery from 1985 to 2023 indicate significant land altering activities within and adjacent to the Study Area. This includes the development of the southern extension of the James Snow Parkway over agricultural land in 2009. Comparative satellite images from November 2004 and May 2023 reveal the breadth of development within the Study Area (Figure 7 to Figure 10).

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Study Area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research: the site record forms for registered sites available online from the MCM through “Ontario’s Past Portal”; published and unpublished documentary sources; and the files of ASI.

1.3.1 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the Study Area.

The S & G stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated



by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 B.P. (Karrow & Warner, 1990, fig. 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include elevated topography (eskers, drumlins, large knolls, and plateaux), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings, or carvings. Resource areas, including; food or medicinal plants (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (S & G, Section 1.3.1).

The Study Area is located within the Bevelled Till plains physiographic landforms of the Peel Plain physiographic region of southern Ontario (Chapman & Putnam, 1984). The Peel Plain is a level-to-undulating area of clay soil which covers an area of approximately 77,700 hectares across the central portions of the Regional Municipalities of York, Peel, and Halton. The Peel Plain has a general elevation of between 500 and 750 feet above sea level with a gradual uniform slope towards Lake Ontario. The Peel Plain is sectioned by the Credit, Humber, Don, and Rouge Rivers with deep valleys as well as a number of other streams such as the Bronte, Oakville, and Etobicoke Creeks. These valleys are in places



bordered by trains of sandy alluvium. The region is devoid of large, undrained depressions, swamps, and bogs though nevertheless the dominant soil possesses imperfect drainage.

The Peel Plain overlies shale and limestone till which in many places is veneered by occasionally varved clay. This clay is heavy in texture and more calcareous than the underlying till and was presumably deposited by meltwater from limestone regions and deposited in a temporary lake impounded by higher ground and the ice lobe of the Lake Ontario basin. The Peel Plain straddles across the contact of the grey and red shales of the Georgian Bay and Queenston Formations, respectively, which consequently gives the clay southwest of the Credit River a more reddish hue and lower lime content than the clay in the eastern part of the plain. Additionally, the region exhibits exceptional isolated tracts of sandy soil specifically in Trafalgar Township, near Unionville, and north of Brampton where in the latter location there is a partly buried esker. The region does not possess any good aquifers and the high level of evaporation from the clay's now deforested surface is a disabling factor in ground-water recharge. Further, deep groundwater accessed by boring is often found to be saline (Chapman & Putnam, 1984, pp. 174–175).

Figure 11 depicts surficial geology for the Study Area (Ontario Geological Survey, 2010). The surficial geology mapping demonstrates that the Study Area is underlain by:

- Fine-textured glaciolacustrine deposits of silt, clay, minor sand and gravel
- Modern alluvial deposits of clay, silt, sand, gravel and possible organic remains
- Till ranging from clay to silt derived from glaciolacustrine deposits or shale

Soil in the Study Area consists of Chinguacousy, a clay loam till with imperfect drainage, and Jeddo a clay loam with poor drainage (Ontario Agricultural College & Department of Agriculture, 1971). Soil drainage for the Study Area is shown in Figure 12.



Tributaries of the East Sixteen Mile Creek intersect the Study Area. The Sixteen Mile Creek watershed is approximately 360 square kilometres that includes both rural and urban land uses. The creek drains parts of Halton Hills, Milton, Mississauga, and Oakville then, outlets into Lake Ontario. There are three water control reservoirs used to manage floods and low flows within the Sixteen Mile Creek watershed (*Watersheds: Sixteen Mile Creek*, n.d.).

1.3.2 Previously Registered Archaeological Sites

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database maintained by the MCM. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been 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 located in Borden block AjGx.

According to the Ontario Archaeological Sites Database, 63 previously registered archaeological sites are located within one kilometre of the Study Area (MCM 2022). Four sites are within 50 metres of the Study Area and do not have further cultural heritage value or interest (CHVI). A summary of all sites is provided below in Table 1. The four sites within 50 metres of the Study Area are bolded within the table.

Table 1: Registered Sites within One Kilometre of the Study Area

Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGx-98		Early Archaic	Findspot	ASI 1998
AjGx-97	Lake	Post-Contact	Homestead	ASI 1999



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGx-96		Post-Contact	Homestead	ASI 1998
AjGx-279	Caldwell Farm	Post-Contact	Homestead	AMICK 2008
AjGx-278		Indigenous	Campsite	AMICK 2018
AjGx-238	John Robinson	Post-Contact	Homestead	ASI 2013
AjGx-235		Post-Contact	Homestead	ASI 2013
AjGx-234		Post-Contact	Homestead	Archaeological Assessments Ltd. 2013
AjGx-231	Patterson Location 2	Post-Contact, Early Woodland	Homestead, Findspot	Golder Associates Ltd. 2013
AjGx-230	Patterson Location 1	Post-Contact	Homestead	Golder Associates Ltd. 2012
AjGx-164		Late Archaic	Findspot	Archeoworks Inc. 2005
AjGx-161	Chingua	Indigenous	Scatter	ASI 2004



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGx-157	Burning Man	Indigenous	Scatter	ASI 2004
AjGx-156	Strike	Indigenous	Scatter	ASI 2004
AjGx-147	Zdunic II	Indigenous Campsite	Campsite	Archaeological Assessments Ltd. 2004
AjGx-146	Zdunic I	Indigenous Campsite	Campsite	Archaeological Assessments Ltd. 2004
AjGx-145	Clarke	Post-Contact	Homestead	Archaeological Assessments Ltd. 2004
AjGx-116	Shipp #4	Middle Archaic	Findspot	Richard Sutton 1999
AjGx-115	Graywood #9	Indigenous	Campsite	Richard Sutton 1999
AjGx-114	Graywood #8	Indigenous	Campsite	Richard Sutton 1999
AjGx-113	Graywood #7	Late Archaic	Findspot	Richard Sutton 1999



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGx-111	Graywood #5	Indigenous	Campsite	Richard Sutton 1999
AjGx-109	Brush	Post-Contact	Homestead	Richard Sutton 1999
AjGx-104	Graywood #4	Indigenous	Scatter	Richard Sutton 1999
AjGw-639	H3	Post-Contact	Midden	Wood 2020
AjGw-636	Paleo Point	Indigenous	Findspot	This Land Archaeology Inc. 2000
AjGw-635	Britannia Site	Post-Contact	Homestead	This Land Archaeology Inc. 2000
AjGw-617	Omagh	Post-Contact, Indigenous	Homestead, Findspot	Archaeological Research Associates Ltd. 2019
AjGw-577	H2	Post-Contact	Homestead	Amec Foster Wheeler 2017
AjGw-571	Earl II	Irish	Homestead	ASI 2018
AjGw-570	Earl I	Irish	Homestead	ASI 2018



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGw-531		Late Archaic	Findspot	Archaeological Assessments Ltd. 2013
AjGw-511	Omagh III	Indigenous	Campsite	Archaeological Assessments Ltd. 2011
AjGw-510	Omagh II	Indigenous	Campsite	Archaeological Assessments Ltd. 2011
AjGw-509	Omagh	Indigenous	Campsite	Archaeological Assessments Ltd. 2011
AjGw-491	Halton Hills Pipeline	Post-Contact		Timmins Martelle Heritage Consultants Inc. 2008
AjGw-422		Indigenous	Findspot	Stantec Consulting 2006
AjGw-419		Archaic	Campsite	Stantec Consulting 2006



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGw-418		Post-Contact	Homestead	Stantec Consulting 2006
AjGw-417	Britannia Farms Location 1	Archaic	Campsite	Stantec Consulting 2006
AjGw-410		Indigenous	Campsite	Stantec Consulting 2006
AjGw-409		Post-Contact	Homestead	Stantec Consulting 2006
AjGw-408		Indigenous	Findspot	Stantec Consulting 2006
AjGw-407		Indigenous	Findspot	Stantec Consulting 2006
AjGw-406		Indigenous	Findspot	Stantec Consulting 2006
AjGw-403		Indigenous	Campsite	Stantec Consulting 2006



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGw-402		Indigenous	Campsite	Stantec Consulting 2006
AjGw-401		Indigenous	Campsite	Stantec Consulting 2006
AjGw-400		Indigenous	Campsite	Stantec Consulting 2006
AjGw-399		Late Archaic	Campsite	Stantec Consulting 2006
AjGw-397		Indigenous	Campsite	Stantec Consulting 2006
AjGw-356	Manor Park	Indigenous	Findspot	Richard Sutton 2003
AjGw-311	Lemery	Post-Contact	Homestead	ASI 1999
AjGw-309	Beatty	Early Archaic, Post-Contact	Findspot, Homestead	ASI 2000
AjGw-304		Late Archaic	Findspot	ASI 1999



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGw-303		Indigenous	Findspot	ASI 1999
AjGw-302		Early Archaic	Findspot	ASI 1999
AjGw-558	Two Streams Knoll	Indigenous	Campsite	AMICK Consultants Limited 2013
AjGw-555	Mclean II	Post-Contact	Homestead	AMICK Consultants Limited 2013
AjGw-554	Mclean 1	Post-Contact	Homestead	AMICK Consultants Limited 2014
AjGw-639	H3	Post-Contact	Refuse Pit / Incidental Deposit	Wood 2020
AjGw-617		Post-Contact	Homestead	Archaeological Research Associates Ltd. 2019
AjGw-614	Omagh	Post-Contact	Farmstead	Archaeological Research Associates Ltd. 2019



Borden number	Site Name	Temporal/ Cultural Affiliation	Site type	Researcher
AjGw-572	Paterson-Ford	Post-Contact	Farmstead	ASI 2017
AjGw-571	Earl II	Post-Contact	Homestead	Parslow Heritage Consultancy Inc. 2020
AjGw-570	Earl I	Post-Contact	Homestead	Parslow Heritage Consultancy Inc. 2020
AjGw-531		Late Archaic	Findspot	Archaeological Assessments Ltd. 2013
AiGw-555	Mclean II	Post-Contact	Homestead	AMICK Consultants Limited 2014

1.3.3 Previous Archaeological Assessments

ASI reviewed previous archaeological assessments that detail fieldwork within 50 metres of the Study Area. Only those specific archaeological assessments of direct relevance to the present undertaking other will be included here:



(ASI, 2000a) Stage 1 and 2 Archaeological Assessment of Proposed Subdivision 24T-99005/M Part of Lot 11, Concession 5, Geographic Township of Trafalgar, Now the Town of Milton, Regional Municipality of Halton, Ontario (CIF# 99-007-091/ 2000-016-064) 98MY-002

This project area overlaps with the current Study Area north of Derry Road. This project was assessed by pedestrian survey conducted at five metre intervals within ploughed, weathered fields. Despite careful scrutiny no cultural material was encountered. No further archaeological assessments are required.

(ASI, 2000b) Stage 1-2 Archaeological Assessment of Proposed Subdivision 24T-99007/M, Part of Lot 10, Concession 5, Former Township of Trafalgar, Now the Town of Milton, Regional Municipality of Halton Ontario (CIF#99-007-125) 99MY-04

This project area overlaps with the current Study Area on the west side of James Snow Parkway South, south of Derry Road. Approximately 780 test units were excavated at five metre intervals in the two-hectare woodlot situated at the eastern edge of the project area. Test units were excavated into sterile subsoil and screened through six-millimetre mesh. The remainder of the project area was ploughed and weathered. Visibility was excellent and during the course of the survey Indigenous site AjGw-304 was encountered. This is within 50 metres of the current Study Area. This site consisted of a projectile point base manufactured from Onondaga chert. After the point base was identified, pedestrian survey was reduced to one metre intervals within a 30 by 30 metre area surrounding the site. Despite careful scrutiny no cultural material was encountered. No further archaeological assessments are required.

(ASI, 2000c) Stage 1-2 Archaeological Assessment of Subdivision 24T-00002/M Kunica Property, Part of Lots 8-9, Concession 5, Geographic Township of Trafalgar, Now the Town of Milton, Regional Municipality of Halton, Ontario (CIF# 1999-007-127, 2000-116-064, 2001-020-157) 99MY-06

This project area overlaps with the current Study Area approximately 840 metres north of Louis St. Laurent Avenue along the west side of James Snow Parkway South. This project area was assessed by test pit survey and pedestrian survey each conducted at five metre intervals. Test pit units were excavated into



sterile subsoil and all soil was screened through six-millimetre mesh. Approximately 1480 test pit units were completed during this assessment. During pedestrian survey site, AjGw-302, site AjGw-303 and findspot P3 were identified. Findspot P3 consists of one retouched Onondaga shatter fragment. Site AjGw-302 consists of the mid-section of a serrated projectile point made of Onondaga chert. AjGw-303 comprises an end scraper manufactured from Fossil Hill chert. After each artifact was found, the pedestrian survey interval was reduced to one metre in a 30 x 30 metre area surrounding both sites and the findspot. Because of the material type, it was considered that AjGw-303 could date to the Paleo period. With the importance of that time period, AjGw-303 was revisited on two separate occasions in order to try and identify any additional artifacts in the vicinity of the site. On both occasions, a 150 x 100 metre area was surveyed around the find at a one metre interval. Although field conditions were excellent and surface visibility was 100%, no additional cultural material was encountered. One historic site was also identified during this archaeological assessment approximately 10 metres north of P3. The Lemery site (AjGw-311) comprised a 25 x 25 metre surface scatter of mid to late 19th century artifacts. The results of this archaeological assessment determined that Indigenous findspot P3, site AjGw-302, and site AjGw-303 warrant no further work. Because of the relatively early date of the Lemery Site, AjGw-311 was recommended for a Stage 3 and Stage 4 archaeological assessment. AjGw-311 is located over 500 metres away from the westside of the Study Area. The balance of the project area is considered free of further archaeological concern.

(ASI, 2000b) Stage 1-2 Archaeological Assessment of Proposed Subdivision 24T-99007/M, Part of Lot 10, Concession 5, Former Township of Trafalgar, Now the Town of Milton, Regional Municipality of Halton, Ontario (CIF# 99-007-125) 99MY-04

This project area is adjacent to the current Study Area approximately 600 metres south of Derry Road along the west side of James Snow Parkway South. This project area was assessed by test pit survey and pedestrian survey each conducted at five metre intervals. Test pit units were excavated into sterile subsoil and all soil was screened through six-millimetre mesh. Approximately 780 test pit units were completed during this assessment. During pedestrian survey, one Indigenous site, AjGw-304 was encountered. Site AjGw-304 consists



of a projectile point base manufactured from Onondaga chert. After the artifact was found, the pedestrian survey interval was reduced to one metre in a 30 x 30 metre area surrounding the site. Despite careful scrutiny, no other cultural material was encountered. No further archaeological assessments are required within the project area.

(ASI, 2009b) Stage 1 Archaeological Assessment of Boyne Survey Secondary Plan, Part of Lots 6-9, Concession 7, Geographic Township of Nelson, Lots 6 and 7, Part of Lot 8, Concession 1-5, Geographic Township of Trafalgar North, Town of Milton, Regional Municipality of Halton (PIF# P049-357-2008) 08TS-129

This project area overlaps with the current Study Area south of Louis St. Laurent Avenue and north of Britannia Road on the east and west side of James Snow Parkway South. The 2009 Stage 1 assessment determined that the overlapping areas have archaeological potential. A Stage 2 archaeological assessment is recommended before any further work.

(ASI, 2012) Stage 1 Archaeological Assessment (Background Study and Property Inspection) Britannia Road Transportation Corridor Improvements Tremaine Road to Highway 407 Class Environmental Assessment Study, Town of Milton, Regional Municipality of Halton, Ontario (PIF# 094-046-2011) 10EA-182

This project area overlaps with the current Study Area at the James Snow Parkway South and Britannia Road intersection. It was determined that the overlapping areas beyond the road and disturbed right-of-way retain archaeological potential and a Stage 2 archaeological assessment is required before any further work.

(ASI, 2016) Stage 1 and 2 Archaeological Assessment of the Southwest Corner of James Snow Parkway and Louis St. Laurent Avenue, Part of Lot 8, Concession 5, Geographic Township of Trafalgar, Halton County, Town of Milton, Regional Municipality of Halton, Ontario (P046-0204-2016) 16TS-144

This project area partially overlaps with the current Study Area on the westside of James Snow Parkway South, south of the Louis St. Laurent Avenue intersection. The project area was assessed by pedestrian survey and test pit survey conducted at five metre intervals. Despite careful scrutiny, no



archaeological resources were encountered. No further archaeological assessments are required.

(Archaeologix, 2006b) Archaeological Assessment (Stages 1, 2 & 3) James Snow Parkway Extension Part of Lots 6-10, Concession 5, Geographic Township of Trafalgar, City of Milton, Regional Municipality of Halton, Ontario (P084-019-2006, P084-031-2006)

This project area partially overlaps with the majority of the current Study Area along James Snow Parkway South between Derry Road and Britannia Road. The project covered the James Snow Parkway South extension project which covered an area 3,125 metres in length and 35 metre in width. The Stage 1 portion determined archaeological potential. During the Stage 2, portion of the assessment pedestrian survey occurred at two metre intervals and test pit survey occurred at five metre intervals. All soil was screened through six-millimetre mesh. The Stage 2 survey identified Indigenous site AjGw-410 (Location 1) which contained a dense concentration of 15 non-diagnostic Indigenous artifacts. Stage 3 fieldwork was recommended and conducted two weeks later beginning April 21, 2006. A series of one-by-one metre units were strategically located to test the nature and density of the artifact distribution and a permanent datum was established to set up a five-metre grid. All units excavated were into subsoil and screened through six-millimetre screen. 22 additional artifacts including 19 pieces of chipping detritus, one biface, one scraper, and one utilized flake. As a result, a Stage 4 archaeological assessment was recommended.

The OASD places AjGw-410 west of the current Study Area, however the Archaeologix report places it within James Snow Parkway and its 35-metre right-of-way.

(Archaeologix, 2006a) Archaeological Assessment (Stage 4) James Snow Parkway Extension Part of Lots 6-10, Concession 5, Geographic Township of Trafalgar, City of Milton, Regional Municipality of Halton, Ontario (P084-040-2006)

In May of 2006, the Stage 4 excavation of AjGw-410 occurred and resulted in the documentation of a small, temporary camp. During this phase of the project, 28 additional one-metre units were excavated into subsoil and screened through



six-millimetre screen. An additional 73 artifacts were recovered including 66 pieces of chipping detritus, four utilized flakes, two scrapers, and one biface. No diagnostic artifacts were recovered as such it was not possible to determine when the site was occupied. Site AjGw-410 has been fully documented. No further archaeological assessments are recommended.

(Archaeological Assessments Ltd, 2015) The Stage 1-3 Archaeological Assessment of The Sundial Homes (4th Line) Limited Property, Part Of Lot 6, Concession 5, Geographic Township Of Trafalgar, Town Of Milton, Regional Municipality Of Halton (P013-564-2011)

This project area is within 50 metres of the current Study Area, along the west side of James Snow Parkway South, north of Britannia Road. A Stage 1-3 archaeological assessment of the 95-acre property was conducted in 2010 and 2011. A total of eight archaeological resources were discovered which include five Indigenous findspots (all composed of single Onondaga flake fragments) and three Indigenous campsites registered as Omagh (AjGw-509), Omagh II (AjGw-510) and Omagh III (AjGw-511). Each findspot underwent intensive survey at one metre intervals within a radius of 25 metres surrounding each spot and no additional artifacts were found. Only Omagh III (AjGw-511) is within 50 metres of the current Study Area. It contained less than five non-diagnostic Indigenous surface artifacts and therefore did not require a Stage 3 assessment.

2.0 Property Inspection

2.1 Field Methods

A Stage 1 property inspection must adhere to the S & G, Section 1.2, Standards 1-6, which are discussed below. The entire property and its periphery must be inspected. The inspection may be either systematic or random. Coverage must be sufficient to identify the presence or absence of any features of archaeological potential. The inspection must be conducted when weather conditions permit good visibility of land features. Natural landforms and watercourses are to be confirmed if previously identified. Additional features such as elevated topography, relic water channels, glacial shorelines, well-



drained soils within heavy soils and slightly elevated areas within low and wet areas should be identified and documented, if present. Features affecting assessment strategies should be identified and documented such as woodlots, bogs or other permanently wet areas, areas of steeper grade than indicated on topographic mapping, areas of overgrown vegetation, areas of heavy soil, and recent land disturbance such as grading, fill deposits and vegetation clearing. The inspection should also identify and document structures and built features that will affect assessment strategies, such as heritage structures or landscapes, cairns, monuments or plaques, and cemeteries.

The Stage 1 archaeological assessment property inspection was conducted under the field direction of Andrew Clish (P046) of ASI, on June 26, 2023, in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the Study Area. It was a systematic visual inspection from public right-of-ways only and did not include excavation or collection of archaeological resources. Fieldwork was conducted when weather conditions were deemed clear with good visibility (sunny with seasonal temperatures), per S & G, Section 1.2., Standard 2. Field photography is presented in Section 7.0 (Image 1 to Image 28) and field observations are overlaid onto the existing conditions of the Study Area in Section 8.0 (Figure 14 to Figure 24).

2.2 Current Land Use and Field Conditions

The north section of the Study Area extends into Highway 401 and two of the on ramps. Travelling roughly from north to south, there is a built-up roadbed northwest of Main Street along James Snow Parkway North. East of the road in this section, there is a commercial plaza and to the west, there is a ditch and a stormwater pond. Southeast of Main Street along James Snow Parkway South, there is a raised and flattened area in the right-of-way north of the road and an artificial slope and ditched area along the southern right-of-way. Near the railway tracks, there is ongoing construction and a newly developed business park with a berm between it and James Snow Parkway South. On the south side of the road, there are recreational sports fields and several large developed suburban neighbourhoods. From Main Street East to Louis St. Laurent Avenue



along the west side of James Snow Parkway, there is a recreational multi-use path within the right-of-way. From Louis St. Laurent Avenue to Britannia Road, lands east and west of the Study Area is currently undergoing construction, including topsoil stripping and grading. Ditches and utilities line the east and west right-of-way of James Snow Parkway South.

3.0 Analysis of Archaeological Potential

The S & G, Section 1.3.1, lists criteria that are indicative of archaeological potential. The Study Area meets the following criteria indicative of archaeological potential:

- Previously identified archaeological sites (See Table 1);
- Water sources: primary, secondary, or past water source (East Sixteen Mile Creek);
- Proximity to early settlements (Omagh); and,
- Early historic transportation routes (Britannia Road, Derry Road, Fourth Line)

According to the S & G, Section 1.4 Standard 1e, no areas within a property containing locations listed or designated by a municipality can be recommended for exemption from further assessment unless the area can be documented as disturbed. The Milton Designated Heritage Properties Register and the Milton Heritage List (Town of Milton, 2022) were consulted and no properties within the Study Area are Listed or Designated under the *Ontario Heritage Act*.

The *Master Plan of Archaeological Resources of the Regional Municipality of Halton 2008 Update* (ASI, 2009a) was reviewed for background information and to help inform any indicators of archaeological potential not captured in other research. Generally speaking, archaeological management plans are high-level analyses of archaeological potential for non-specialists but cannot be considered a replacement for Stage 1 archaeological assessments. ASI's review of the above archaeological master plan indicates the Study Area has archaeological potential.



The property inspection determined that parts of the Study Area exhibit archaeological potential. If impacted, these areas will require Stage 2 archaeological assessment, prior to any construction activities. According to the S & G Section 2.1.2, test pit survey is required on terrain where ploughing is not viable, such as wooded areas, properties where existing landscaping or infrastructure would be damaged, overgrown farmland with heavy brush or rocky pasture, and narrow linear corridors up to 10 metres wide (Images 8, 9; Figure 15: area highlighted in green).

The majority of the Study Area has been previously assessed (CIF# 99-007-091/2000-016-064, CIF# 1999-007-127, 2000-116-064, 2001-020-157, CIF#99-007-125, P046-0204-2016, P084-031-2006 / P084-031-2006) and does not require further archaeological assessments (Figure 17 to Figure 24: areas highlighted in dark orange).

Part of the Study Area has been subjected to deep soil disturbance events due to the railway tracks, the construction of Highway 401 on- and off-ramps, the construction of James Snow Parkway North and South, raised roadbeds, ditches, recreational paths, residential and commercial development, stormwater management, and above and below ground utilities. According to the S & G, Section 1.3.2, these areas do not retain archaeological potential (Image 1 to 7, 10-19, 21-28; Figure 14 to Figure 24: areas highlighted in yellow) and do not require further survey.

3.1 Conclusions

The Stage 1 background research determined there are 63 previously registered archaeological sites located within one kilometre of the Study Area and that most of the Study Area has been previously assessed. Of the sites within 50 metres, none have been noted to have further cultural heritage value or interest. The property inspection determined that parts of the Study Area exhibit archaeological potential (Figure 15 and Figure 20: areas highlighted in green and light orange).



4.0 Recommendations

The following recommendations are made:

- 1) Parts of the Study Area exhibit archaeological potential. If impacted, these lands require Stage 2 archaeological assessment by test pit survey at five metre intervals (Figure 15 and Figure 20), prior to any construction activities;
- 2) The Study Area does not retain archaeological potential on account of deep and extensive land disturbance and being previously assessed. These lands do not require further archaeological assessment; and,
- 3) Should the potential work extend beyond the current Study Area, further archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

NOTWITHSTANDING the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Archaeology Programs Unit of the MCM should be immediately notified.

The above recommendations are subject to MCM approval, and it is an offence to alter any archaeological site without MCM concurrence. No grading or other activities that may result in the destruction or disturbance of any archaeological sites are permitted until notice of MCM approval has been received.

5.0 Legislation Compliance Advice

ASI advises compliance with the following legislation:

- This report is submitted to the MCM as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 2005, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological



field work and report recommendations ensure the conservation, preservation, and protection 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 MCM, a letter will be issued by the MCM stating that there are no further concerns with regards to alterations to archaeological sites by the potential development.

- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* 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 archaeological field work 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 Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- 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*. 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 sec. 48 (1) of the *Ontario Heritage Act*.
- The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33*, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.
- Archaeological sites recommended for further archaeological field work or protection remain subject to Section 48(1) of the *Ontario Heritage Act* and may not be altered, nor may artifacts be removed from them, except by a person holding an archaeological license.



6.0 Bibliography and Sources

Archaeological Assessments Ltd. (2015). The Stage 1-3 Archaeological Assessment Of The Sundial Homes (4th Line) Limited Property, Part Of Lot 6, Concession 5, Geographic Township Of Trafalgar, Town Of Milton, Regional Municipality Of Halton (P013-564-2011). Report on file with the Ministry of Citizenship and Multiculturalism.

Archaeological Services Inc. (2006). Historical Overview and Assessment of Archaeological Potential Don River Watershed, City of Toronto. Report on file with the Ontario Ministry of Tourism, Culture and Sport.

Archaeological Services Inc., (ASI). (2001). Stage 1 and 2 Archaeological Resource Assessment of the Proposed Community Watermain Mid-Block Arterial and 4th Line ROW Town of Milton, Regional Municipality of Halton, Ontario (CIF #2000-016-060). Report on file with the Ministry of Citizenship and Multiculturalism.

Archaeologix. (2006a). Archaeological Assessment (Stage 4) James Snow Parkway Extension Part of Lots 6-10, Concession 5, Geographic Township of Trafalgar, City of Milton, Regional Municipality of Halton, Ontario (P084-040-2006). Report on File with the Ministry of Citizenship and Multiculturalism.

Archaeologix. (2006b). Archaeological Assessment (Stages 1, 2 & 3) James Snow Parkway Extension Part of Lots 6-10, Concession 5, Geographic Township of Trafalgar, City of Milton, Regional Municipality of Halton, Ontario (P084-019-2006, P084-031-2006). Report on File with the Ministry of Citizenship and Multiculturalism.

ASI. (2009a). Master Plan of Archaeological Resources of the Regional Municipality of Halton: 2008 Update.

ASI, (Archaeological Services Inc.). (2000a). Stage 1 and 2 Archaeological Assessment of Proposed Subdivision 24T-99005/M Part of Lot 11, Concession 5, Geographic Township of Trafalgar, Now the Town of Milton, Regional Municipality of Halton, Ontario (CIF# 99-007-091/ 2000-016-064). Report on file with the Ministry of Citizenship and Multiculturalism.



ASI, (Archaeological Services Inc.). (2000b). Stage 1-2 Archaeological Assessment of Proposed Subdivision 24T-99007/M, Part of Lot 10, Concession 5, Former Township of Trafalgar, Now the Town of Milton, Regional Municipality of Halton, Ontario (CIF# 99-007-125). Report of file with Ministry of Citizenship and Multiculturalism.

ASI, (Archaeological Services Inc.). (2000c). Stage 1-2 Archaeological Assessment of Subdivision 24T-00002/M Kunica Property, Part of Lots 8-9, Concession 5, Geographic Township of Trafalgar, Now the Town of Milton, Regional Municipality of Halton, Ontario (CIF # 1999-007-127, 2000-116-064, 2001-020-157). Report on File with the Ministry of Citizenship and Multiculturalism.

ASI, (Archaeological Services Inc.). (2009b). Stage 1 Archaeological Assessment of Boyne Survey Secondary Plan, Part of Lots 6-9, Concession 7, Geographic Township of Nelson, Lots 6 and 7, Part of Lot 8, Concession 1-5, Geographic Township of Trafalgar North, Town of Milton, Regional Municipality of Halton (PIF# P049-357-2008). Report on File with the Ministry of Citizenship and Multiculturalism.

ASI, (Archaeological Services Inc.). (2012). Stage 1 Archaeological Assessment (Background Study and Property Inspection) Britannia Road Transportation Corridor Improvements Tremaine Road to Highway 407 Class Environmental Assessment Study, Town of Milton, Regional Municipality of Halton, Ontario (P094-046-2011. Report on File with the Ministry of Citizenship and Multiculturalism.

ASI, (Archaeological Services Inc.). (2016). Stage 1 and 2 Archaeological Assessment of the Southwest Corner of James Snow Parkway and Louis St. Laurent Avenue, Part of Lot 8, Concession 5, Geographic Township of Trafalgar, Halton County, Town of Milton, Regional Municipality of Halton, Ontario (P046-0204-2016). Report on File with the Ministry of Citizenship and Multiculturalism.

Birch, J., Manning, S. W., Sanft, S., & Conger, M. A. (2021). Refined Radiocarbon Chronologies for Northern Iroquoian Site Sequences: Implications for Coalescence, Conflict, and the Reception of European Goods. *American Antiquity*, 86(1), 61–89.



Birch, J., & Williamson, R. F. (2013). *The Mantle Site: An Archaeological History of an Ancestral Wendat Community*. Rowman & Littlefield Publishers, Inc.

Brown, J. (1995). On Mortuary Analysis – with Special Reference to the Saxe-Binford Research Program. In L. A. Beck (Ed.), *Regional Approaches to Mortuary Analysis* (pp. 3–23). Plenum Press.

Canadian Pacific Railway. (2017). Building the Railway.
<https://cpconnectingcanada.ca/#building-the-railway>

Canadian Railway Hall of Fame. (2003). The Mount Macdonald Tunnel.
https://web.archive.org/web/20060620072230/http://railfame.ca/sec_ind/technology/en_2003_MountMacdonaldTunnel.asp

Chapman, L. J., & Putnam, F. (1984). *The Physiography of Southern Ontario* (3rd ed., Vol. 2). Ontario Ministry of Natural Resources.

Churcher, C. (2013). Significant Dates in Canadian Railway History.
<http://www.railways.incanada.net/candate.htm>

Crossby, P. A. (1873). *Lovell's Gazetteer of British North America*. John Lovell.

Department of Energy, Mines and Resources. (1994). Brampton Sheet 30M/12 [Map].

Department of Militia and Defence. (1909). Brampton Sheet No. 35 [Map].

Dodd, C. F., Poulton, D. R., Lennox, P. A., Smith, D. G., & Warrick, G. A. (1990). The Middle Ontario Iroquoian Stage. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 321–360). Ontario Archaeological Society Inc.

Edwards, T. W. D., & Fritz, P. (1988). Stable-Isotope Paleoclimate Records from Southern Ontario, Canada: Comparison of Results from Marl and Wood. *Canadian Journal of Earth Sciences*, 25, 1397–1406.



Ellis, C. J., & Deller, D. B. (1990). Paleo-Indians. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 37–64). Ontario Archaeological Society Inc.

Ellis, C. J., Kenyon, I. T., & Spence, M. W. (1990). The Archaic. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 65–124). Ontario Archaeological Society Inc.

Ellis, C. J., Timmins, P. A., & Martelle, H. (2009). At the Crossroads and Periphery: The Archaic Archaeological Record of Southern Ontario. In T. D. Emerson, D. L. McElrath, & A. C. Fortier (Eds.), *Archaic Societies: Diversity and Complexity across the Midcontinent*. (pp. 787–837). State University of New York Press.

Ferris, N. (2013). Place, Space, and Dwelling in the Late Woodland. In M. K. Munson & S. M. Jamieson (Eds.), *Before Ontario: The Archaeology of a Province* (pp. 99–111). McGill-Queen's University Press.
<http://www.jstor.org/stable/j.ctt32b7n5.15>

Golder Associates. (2012). Stage 4 Archaeological Mitigation, Patterson Property Location 1 (AjGx-230), Part Lot 12, Concession 5 New Survey, Geographic Township of Trafalgar, Now Town of Milton, Regional Municipality of Halton, Ontario (P319-035-2012). Report on file with the Ministry of Citizenship and Multiculturalism.

Golder Associates. (2013). Stage 3 Archaeological Assessment of the Patterson Property, Part of Lot 12, Concession 5 New Survey, Geographic Township of Trafalgar, Now Town of Milton, Regional Municipality of Halton, ON (P319-027-2012; P319-028-2012; P346-011-2013). Report on File with the Ministry of Citizenship and Multiculturalism.

Golder Associates Ltd. (2013). Stage 4 Archaeological Mitigation, Mattamy Patterson Property Location 2 (AjGx-231) Part of Lot 12, Concession 5, Geographic Township of Trafalgar, Now Town of Milton, Regional Municipality of Halton, Halton County, Ontario (P346-009-2013). Report on File with the Ministry of Citizenship and Multiculturalism.



Heritage Mississauga. (2009). Railways in Mississauga. Heritage Mississauga.
<http://www.heritagemississauga.com/page/Railways-in-Mississauga>

Innes, H. A. (1923). A History of the Canadian Pacific Railway. McClelland and Stewart.

Karrow, P. F., & Warner, B. G. (1990). The Geological and Biological Environment for Human Occupation in Southern Ontario. In *The Archaeology of Ontario to A.D. 1650* (pp. 5–36). London Chapter, Ontario Archaeological Society.

Mathews, H. C. (1953). Oakville and the Sixteen. The History of an Ontario Port. University of Toronto Press.

Matthews, H. C. (1953). Oakville and the Sixteen. The History of an Ontario Port. University of Toronto Press.

Ministry of Citizenship and Multiculturalism. (1990). Ontario Heritage Act, R.S.O. c. O.18.

Ministry of Citizenship and Multiculturalism. (2022). Ontario's Past Portal. PastPortal. <https://www.pastport.mtc.gov.on.ca>

Environmental Assessment Act, R.S.O. c. E.18, (1990).

Mississauga of the New Credit First Nation. (2001). Toronto Purchase Specific Claim: Arriving at an Agreement.

Mississaugas of the Credit First Nation. (2017). Treaty Lands and Territory. <http://mncfn.ca/category/treaty-lands-and-territory/>

MTC, (Ministry of Tourism and Culture). (2011). Standards and Guidelines for Consultant Archaeologists. Archaeology Programs Branch, Ontario Ministry of Tourism and Culture.

Municipal Engineers Association. (2023). Municipal Class Environmental Assessment.



Ontario Agricultural College, & Department of Agriculture. (1971). Soil Map of Halton County [Map].

Ontario Geological Survey. (2010). Surficial geology of Southern Ontario. Miscellaneous Release—Data 128 – Revised. [Map].
http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=MRD128-REV

Pope, J. H. (1877). Illustrated Historical Atlas of the County of Halton, Ont. [Map]. Walker and Miles.

Rogers, E. S. (1962). The Round Lake Ojibwa. Royal Ontario Museum.

Smith, W. H. (1850). Canada: Past, Present and Future Being a Historical, Geographical, Geological and Statistical Account of Canada West (volume II). Thomas Maclear.

Smith, W. H. (1846). Smith's Canadian Gazetteer.

Spence, M. W., Pihl, R. H., & Murphy, C. (1990). Cultural Complexes of the Early and Middle Woodland Periods. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650*. Ontario Archaeological Society Inc.

Town of Caledon. (2009). Cultural Heritage Landscape Inventory Report.

Town of Milton. (2019). Omagh Village – Heritage and Character Value Assessment and Conservation Approach (PD-050-19).
<https://calendar.milton.ca/meetings/Detail/2019-12-16-1900-Council-Meeting/6cec1ab7-8218-4f5f-9693-acf600abd41c>

Town of Milton. (2022). Milton Designated Heritage Properties Register.
<https://discover-milton.hub.arcgis.com/apps/designated-heritage-properties-register-/explore>

Tremaine, G. R. (1858). Tremaine's Map of the County of Halton, Canada West [Map]. George C. Tremaine.



University of Toronto Map and Data Library, & Hunting Survey Corporation Limited. (1954). 1954 Air Photos of Southern Ontario.
<https://mdl.library.utoronto.ca/collections/air-photos/1954-air-photos-southern-ontario/index>

Watersheds: Sixteen Mile Creek. (n.d.). Conservation Halton. Retrieved August 17, 2022, from <https://www.conservationhalton.ca/watersheds/>

Williamson, R. F. (1990). The Early Iroquoian Period of Southern Ontario. In C. J. Ellis & N. Ferris (Eds.), *The Archaeology of Southern Ontario to A.D. 1650* (pp. 291–320). Ontario Archaeological Society Inc.



7.0 Images

7.1 Field Photography



Image 1: Disturbed, no archaeological potential.



Image 2: Disturbed, no archaeological potential.



Image 3: Disturbed, no archaeological potential.



Image 4: Disturbed, no archaeological potential.



Image 5: Disturbed, no archaeological potential.



Image 6: Disturbed, no archaeological potential.



Image 7: Disturbed, no archaeological potential.



Image 8: Archaeological potential; test pit survey required.



Image 9: Archaeological potential; test pit survey required.

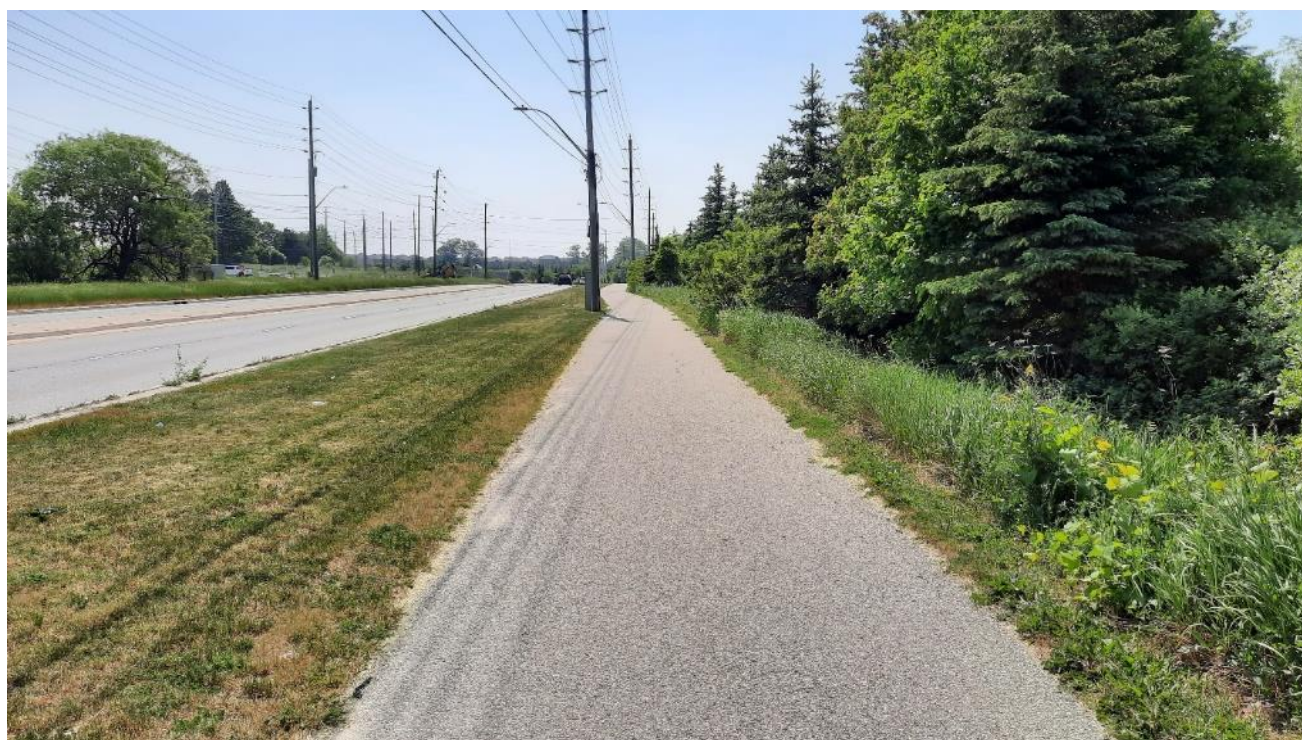


Image 10: Disturbed, no archaeological potential.



Image 11: Disturbed, no archaeological potential.



Image 12: Disturbed, no archaeological potential.



Image 13: Disturbed, no archaeological potential.



Image 14: Disturbed, no archaeological potential.



Image 15: Disturbed, no archaeological potential.



Image 16: Disturbed, no archaeological potential.



Image 17: Disturbed, no archaeological potential.



Image 18: Disturbed, no archaeological potential.



Image 19: Disturbed, no archaeological potential.



Image 20: Archaeological potential; test pit survey required.



Image 21: Disturbed, no archaeological potential.



Image 22: Disturbed, no archaeological potential.



Image 23: Disturbed, no archaeological potential.



Image 24: Disturbed, no archaeological potential.



Image 25: Disturbed, no archaeological potential.



Image 26: Disturbed, no archaeological potential.



Image 27: Disturbed, no archaeological potential.



Image 28: Disturbed, no archaeological potential.

8.0 Maps

Available Upon Request