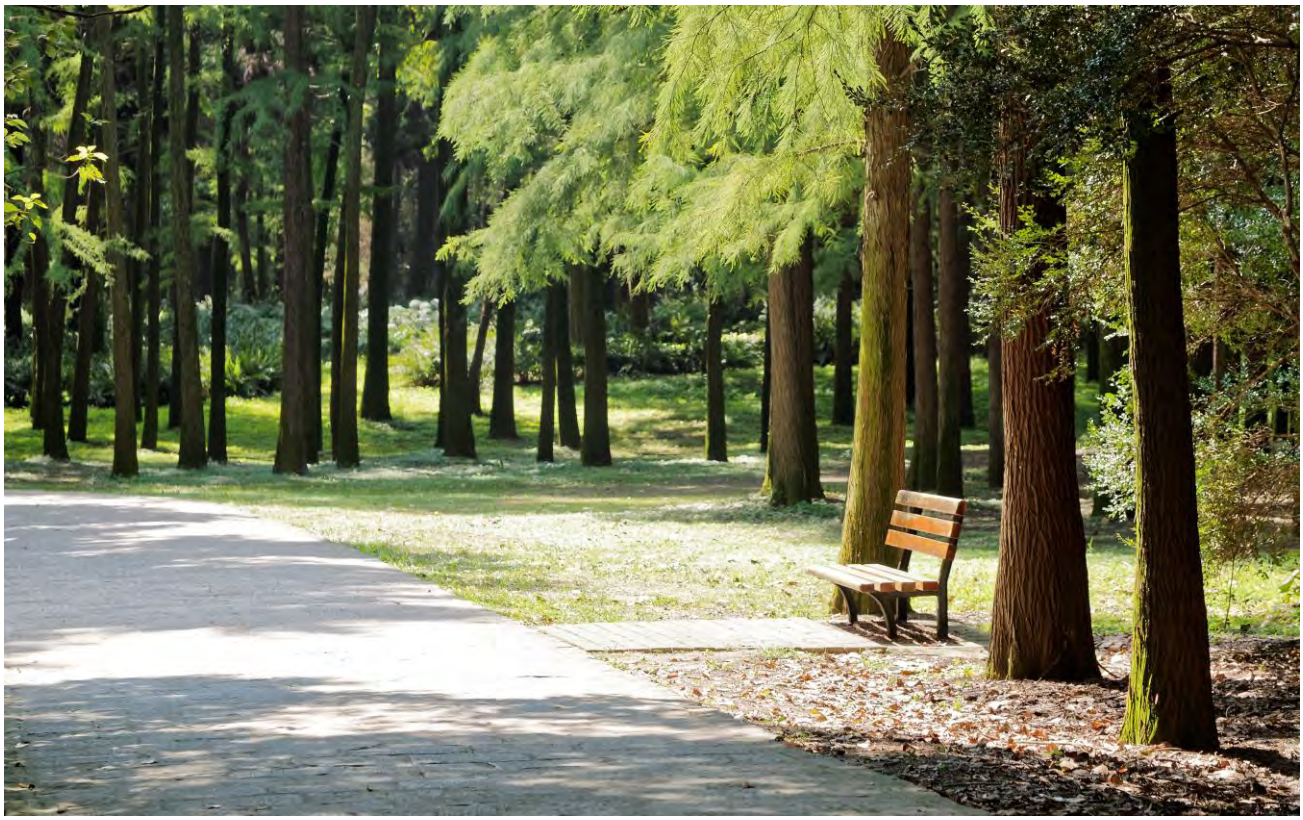
APPENDIX C: TECHNICAL SUPPORTING DOCUMENTS

APPENDIX C-10: STAGE 1 ARCHAEOLOGY ASSESSMENT REPORT (2009 - 2017)

PART 1/1



Stage 1 Archaeological Assessment

Rapid Transit Initiative,
City of Hamilton, Ontario

Submitted to

City of Hamilton
Capital Planning & Implementation
320-77 James Street North
Hamilton, ON, L8R 2K3
Tel: 905-546-2424
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ASI File 08EA-368
Archaeological License P264
MCL PIF P264-077-2009

February 2009

APPENDIX B: OVERSIZED GRAPHIC

Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

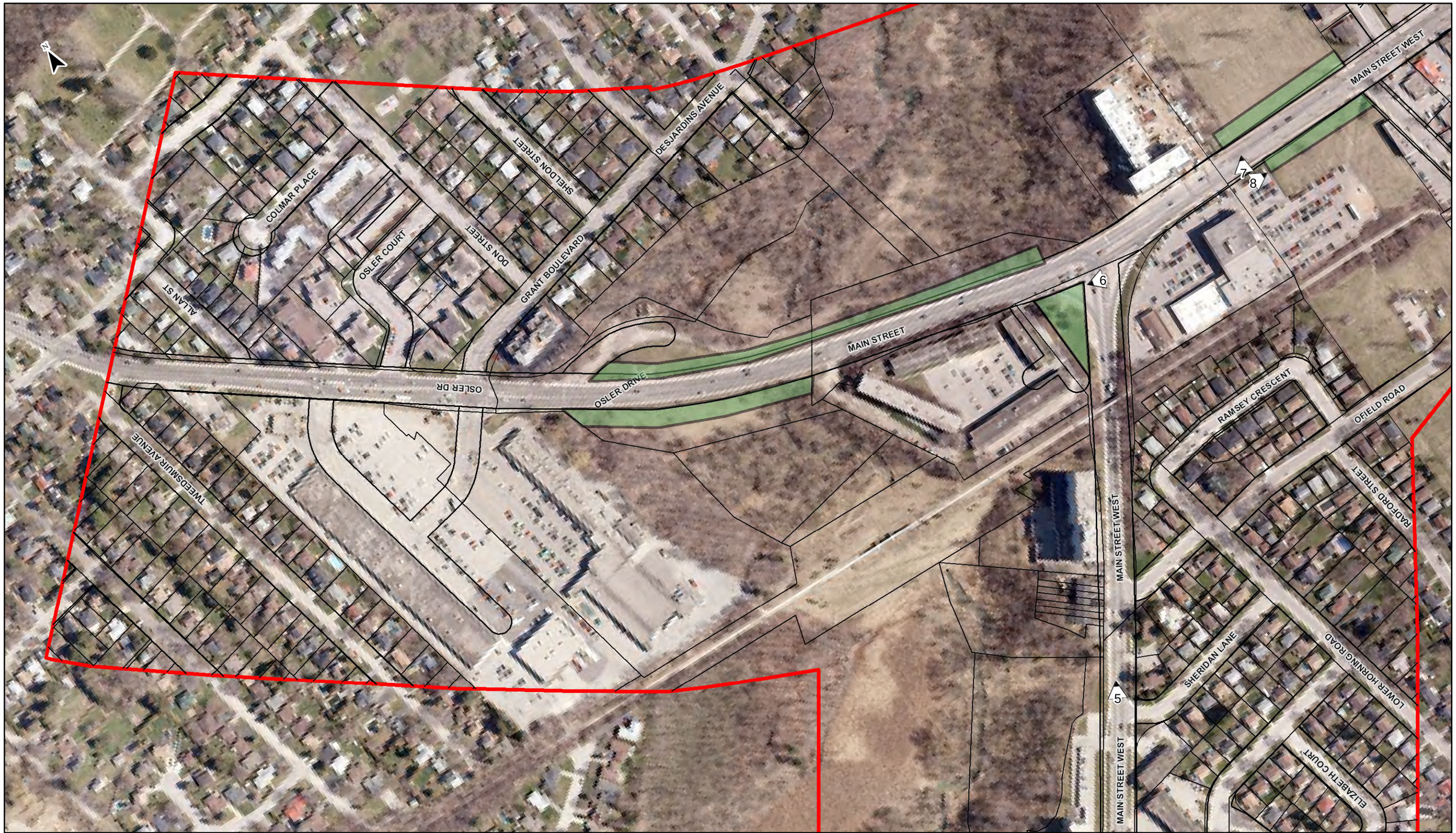
Figure 4-1: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 6th 2009

FILE: 08EA-368_Arch_Potent_Sheet1



Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-2: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 6th 2009

FILE: 08EA-368_Arch_Potent_Sheet2

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-3: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 6th 2009

FILE: 08EA-368_Arch_Potent_Sheet3

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-4: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 6th 2009

FILE: 08EA-368_Arch_Potent_Sheet4

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

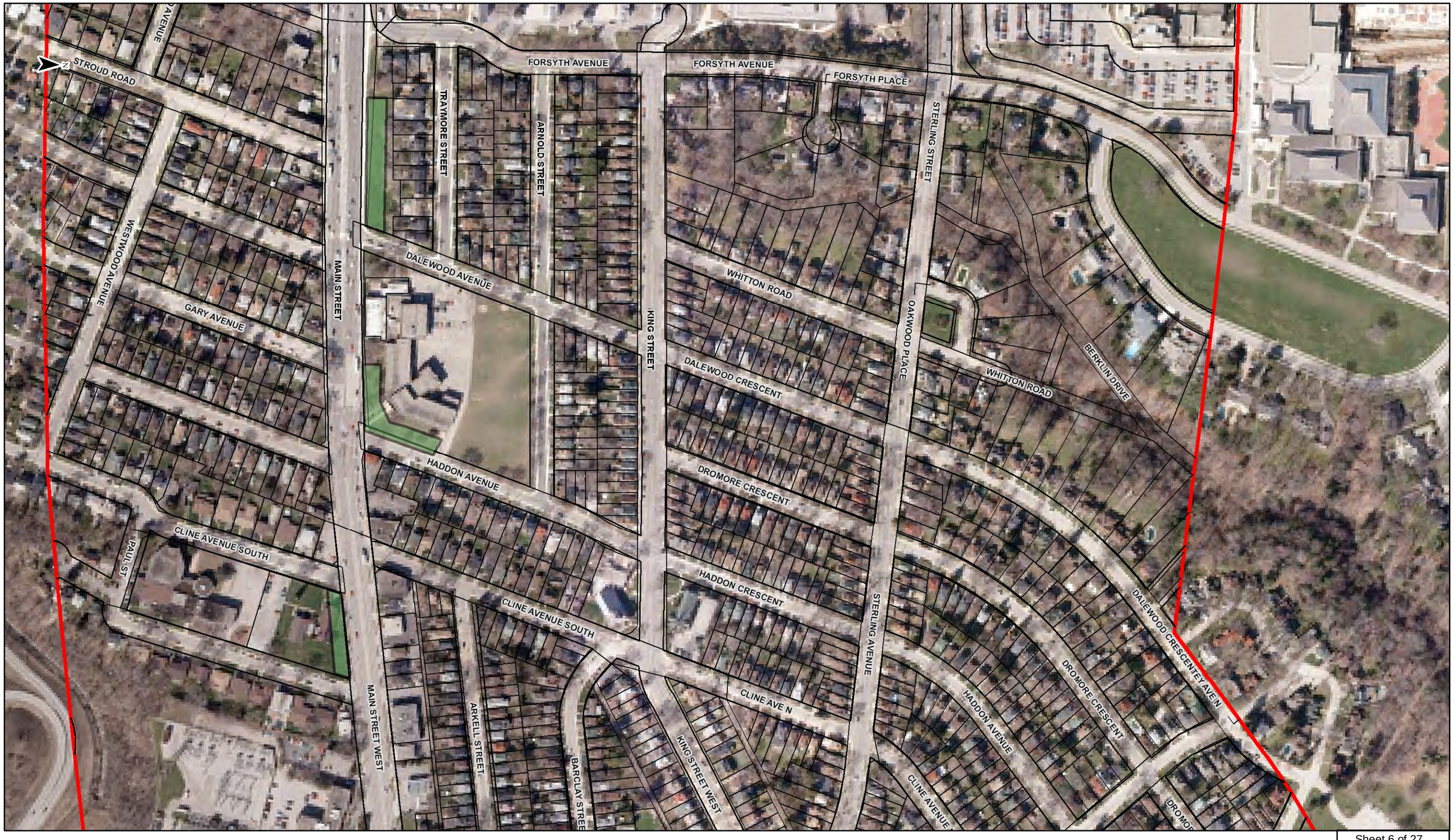
Figure 4-5: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 6th 2009

FILE: 08EA-368_Arch_Potent_Sheet5



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-6: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 6th 2009

FILE: 08EA-368_Arch_Potent_Sheet6

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-7: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet7

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-8: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet8

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

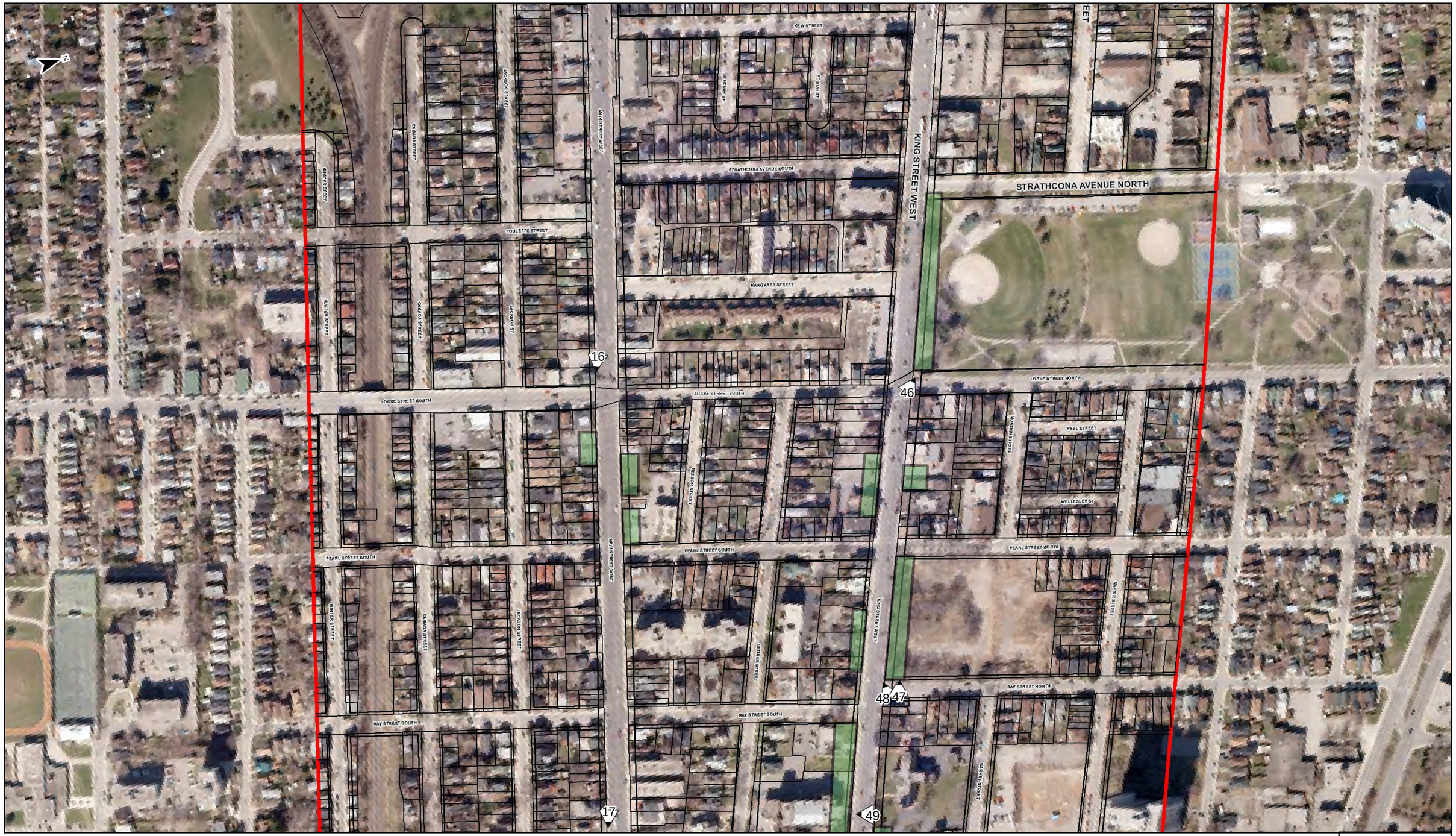
Figure 4-9: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet9



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Archaeological Potential

Study Area Boundary

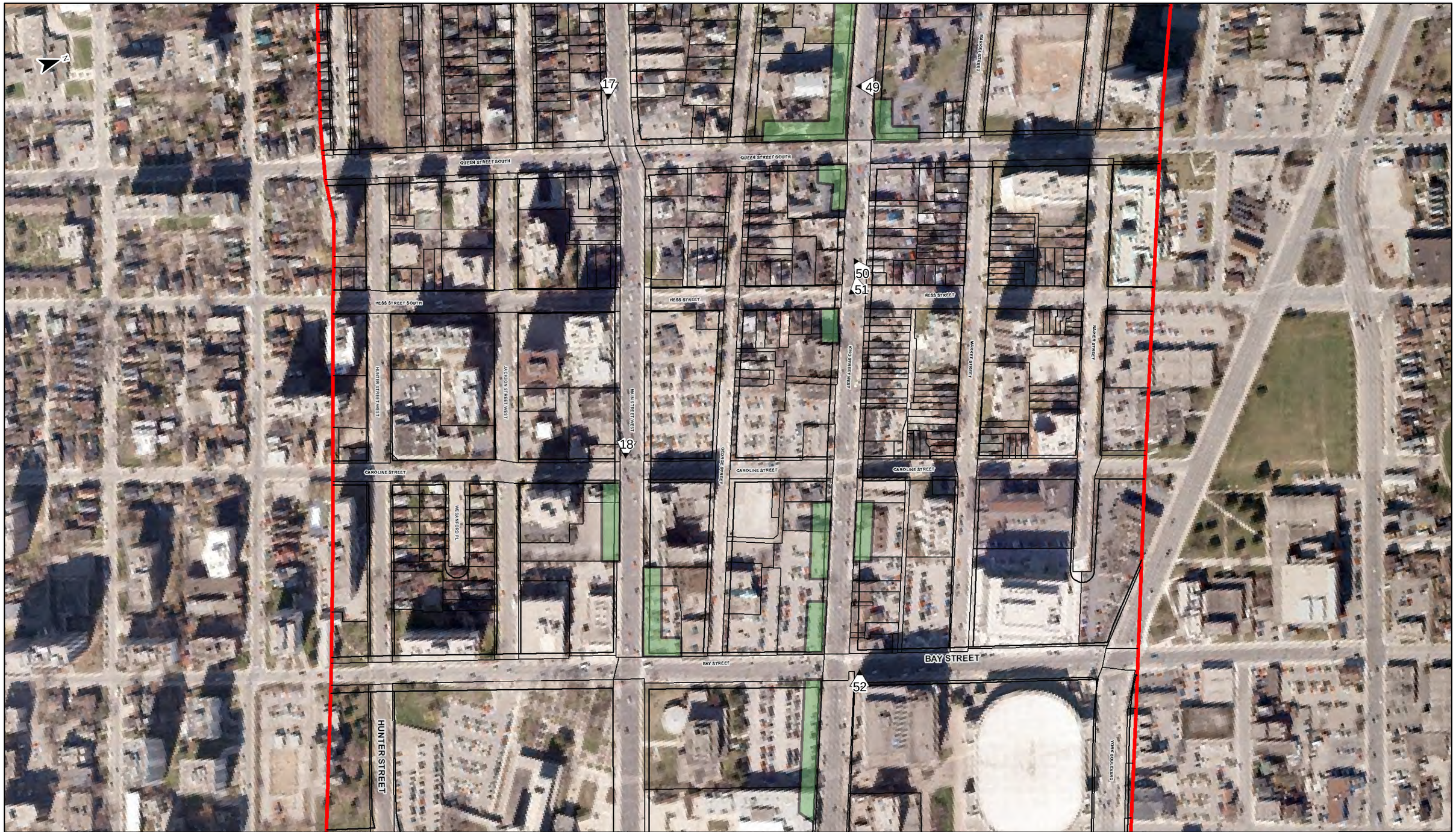
Figure 4-10: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet10



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

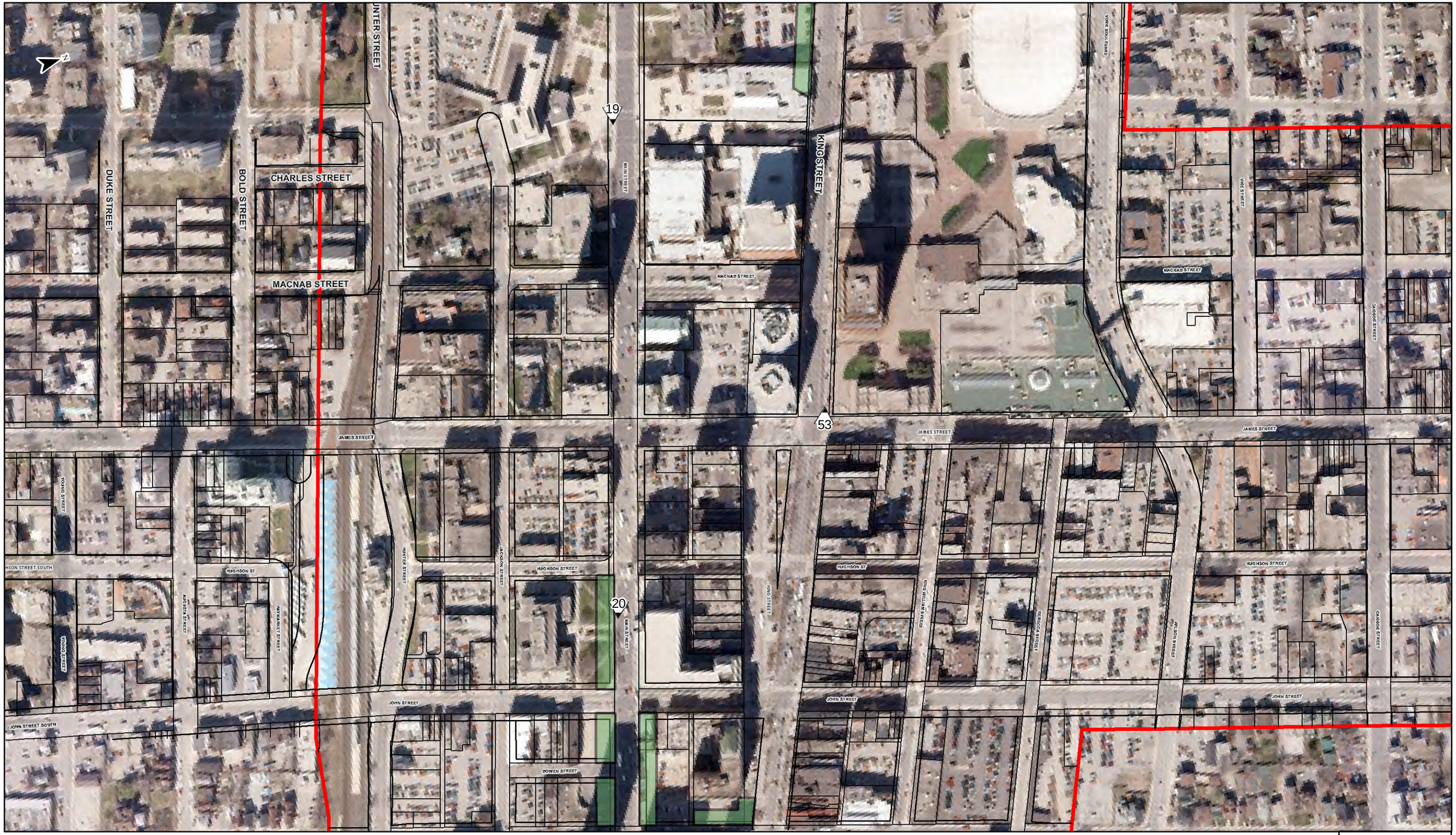
Figure 4-11: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet11



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

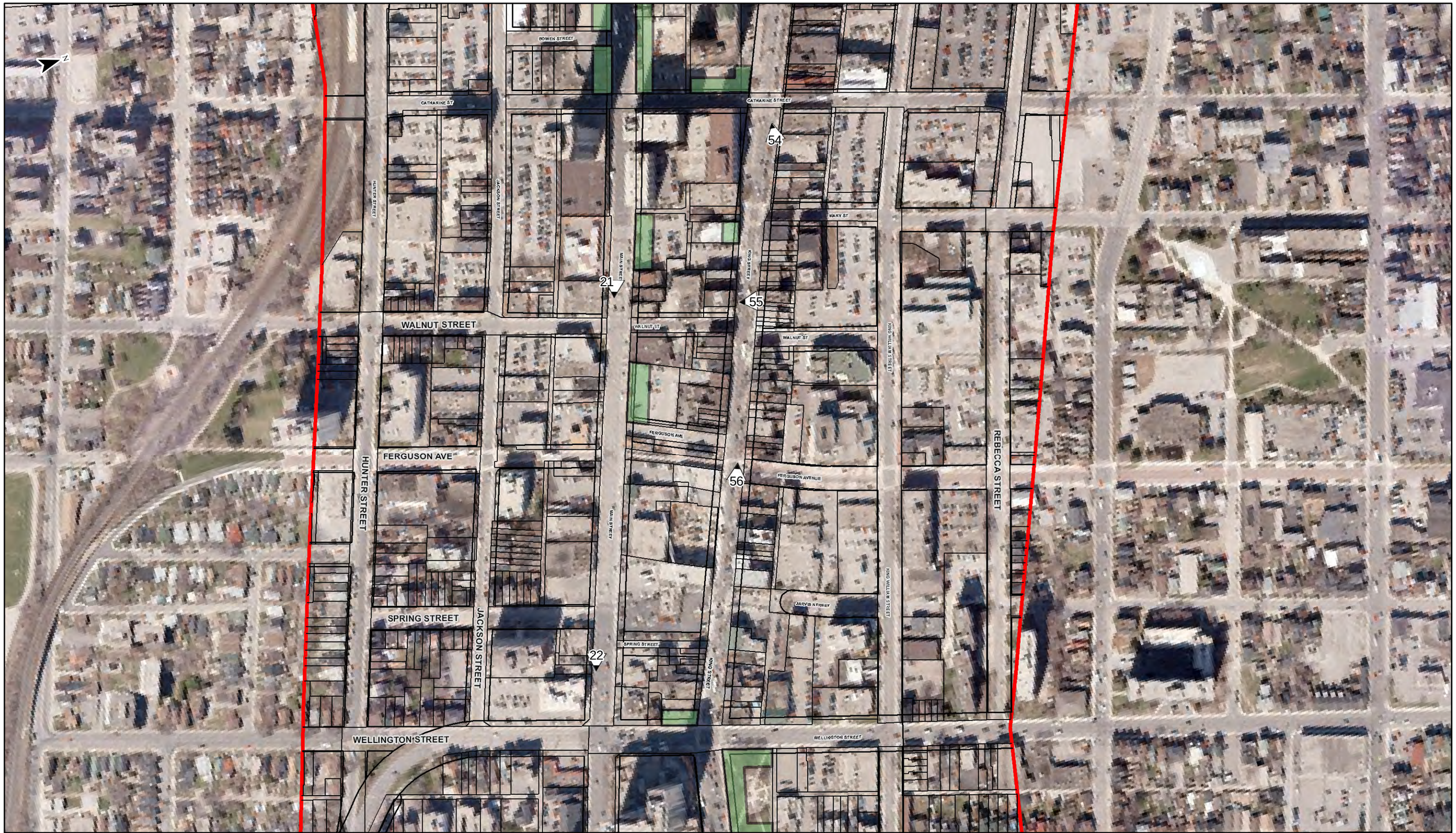
Figure 4-12: Archaeological Potential in the A and B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet12



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

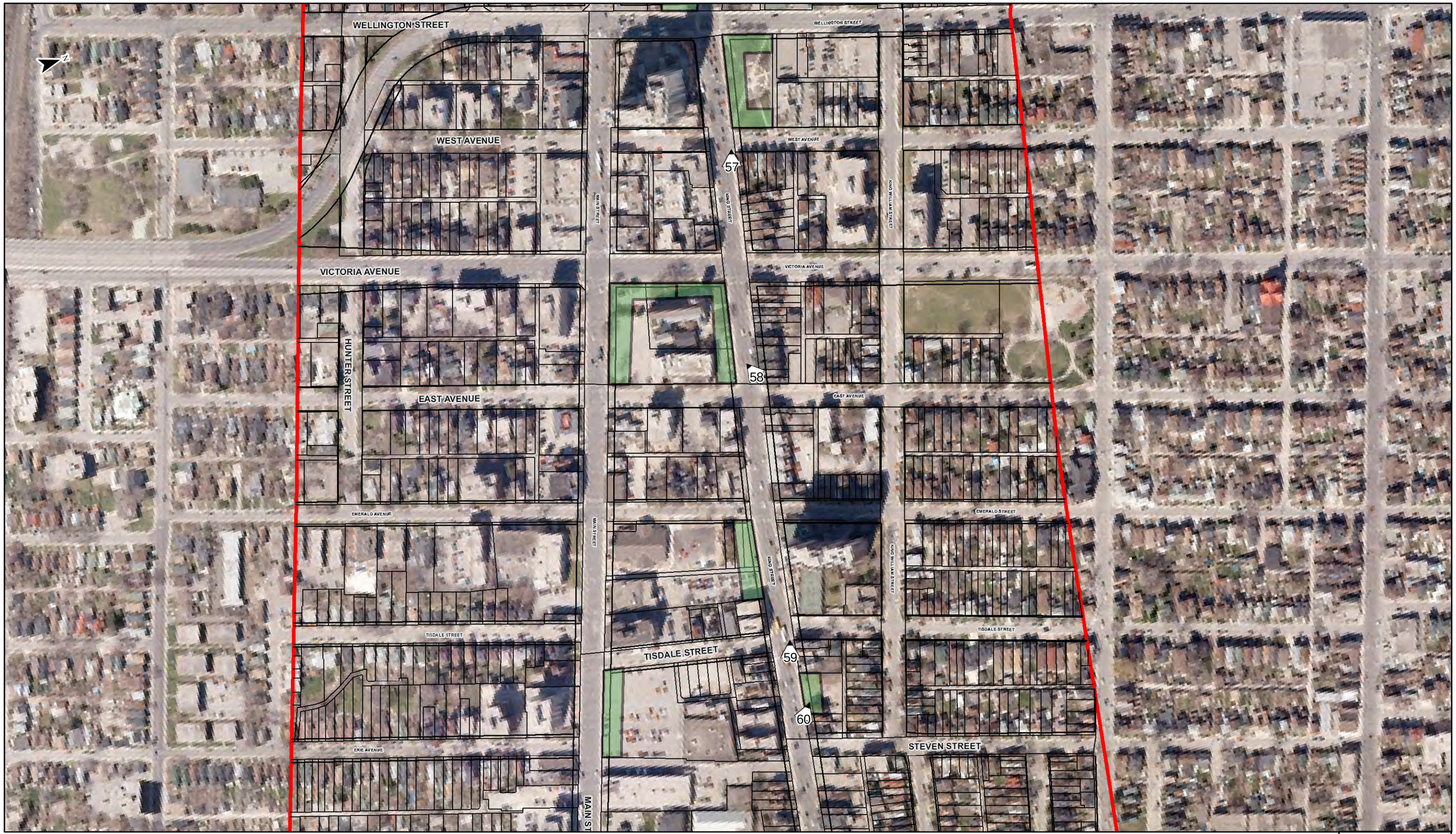
Figure 4-13: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet13



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-14: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet14

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

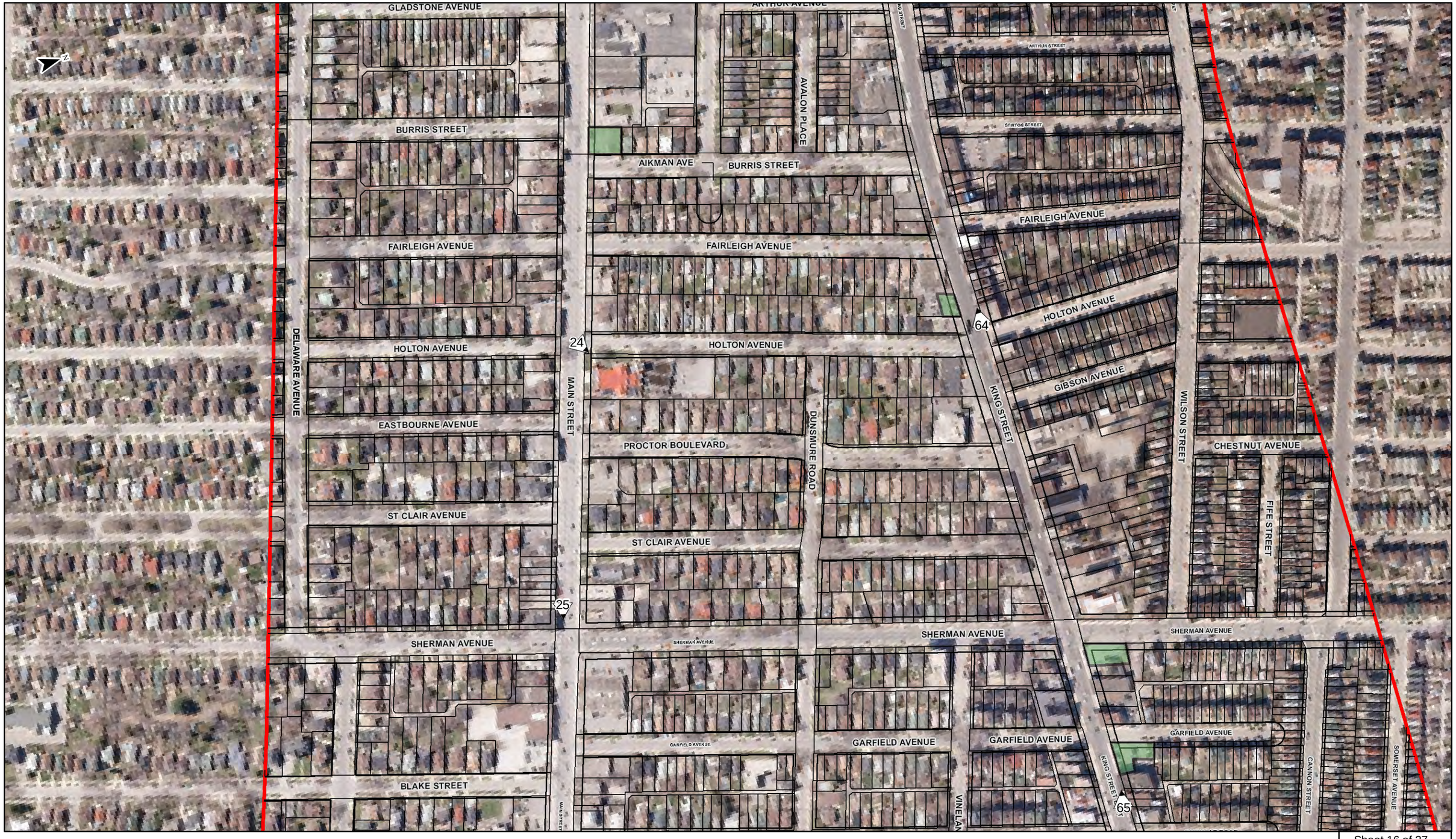
Figure 4-15: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet15



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

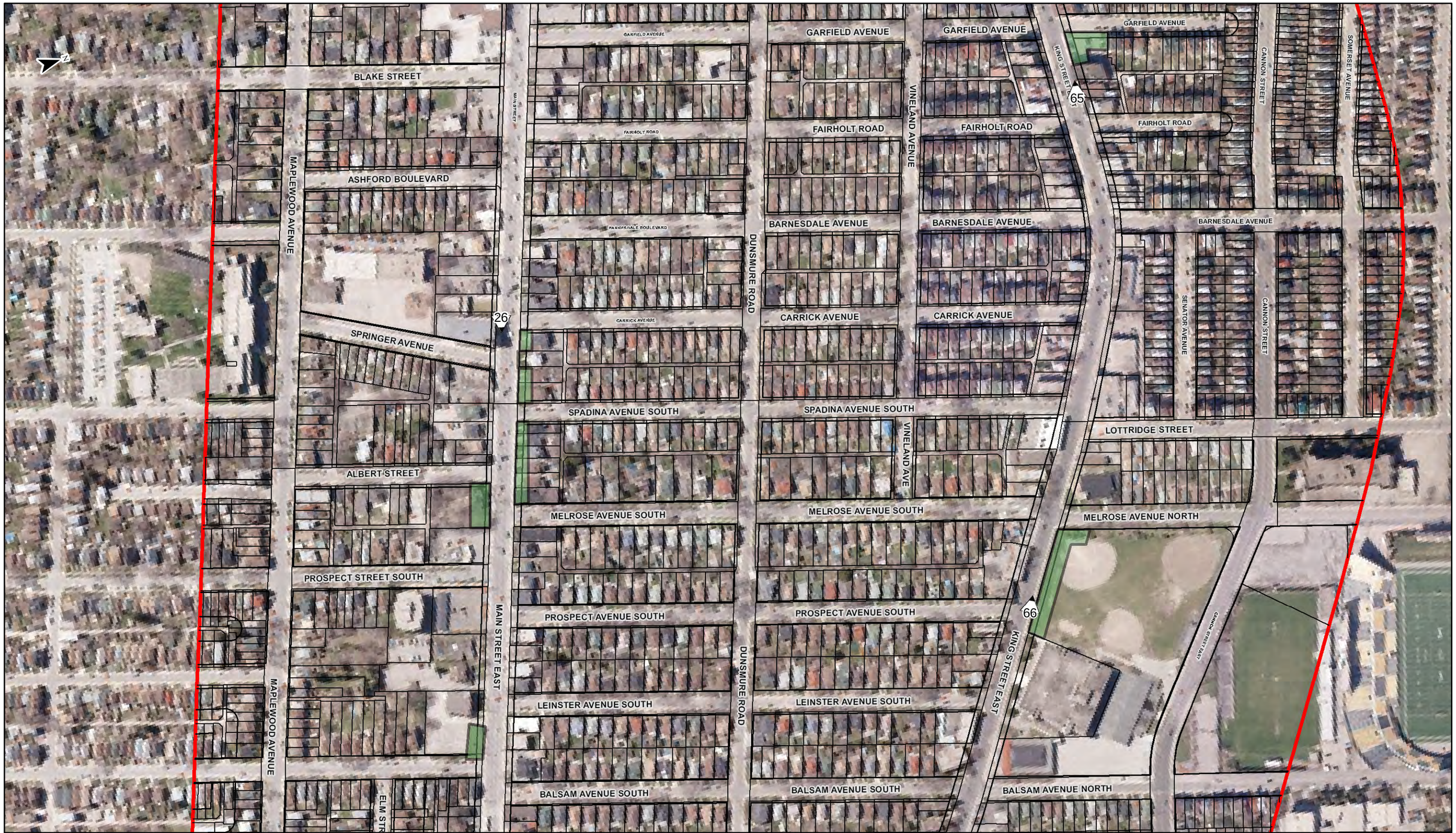
Figure 4-16: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet16



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

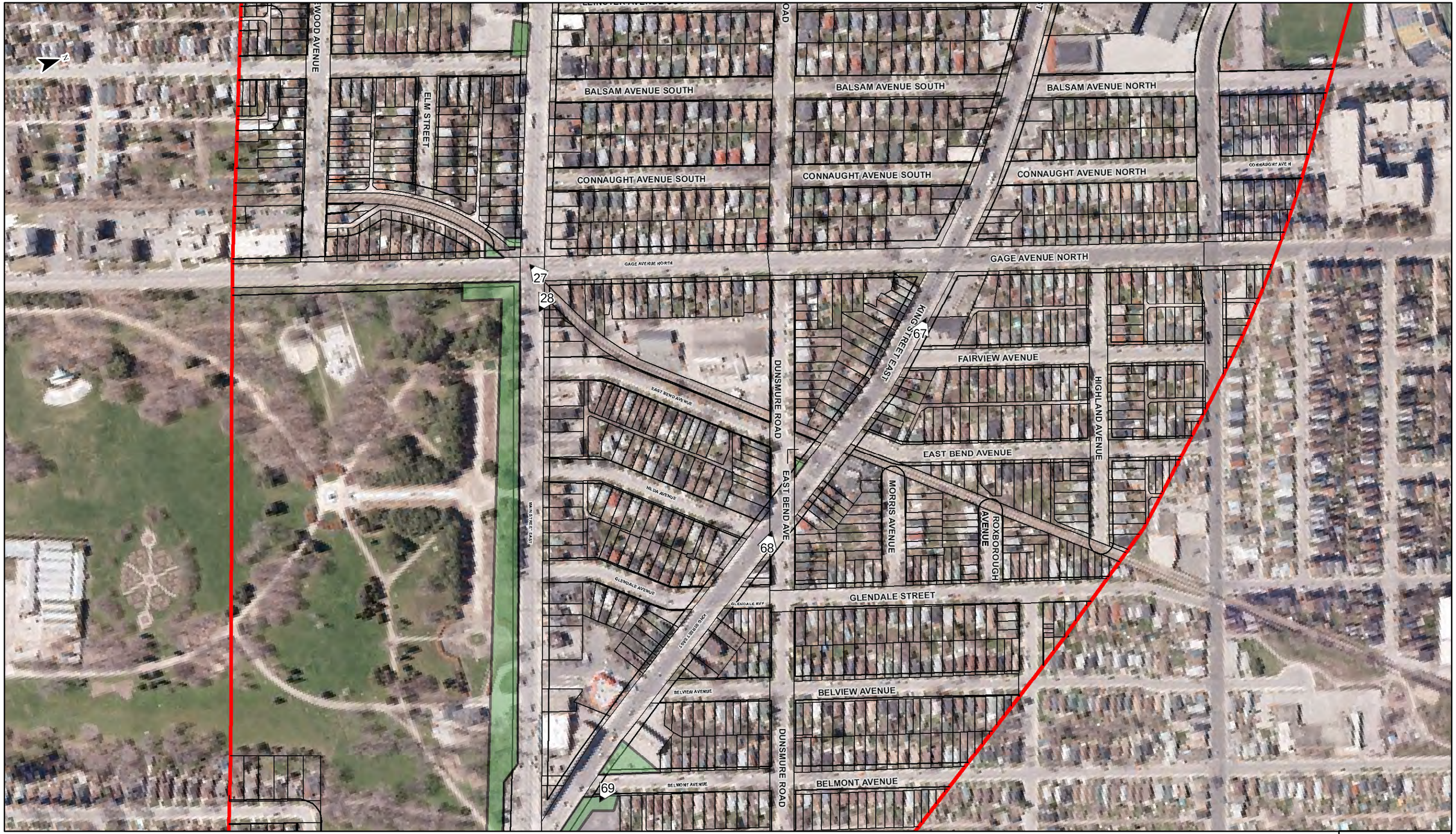
Figure 4-17: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet17



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Archaeological Potential

Study Area Boundary

Figure 4-18: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet18

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

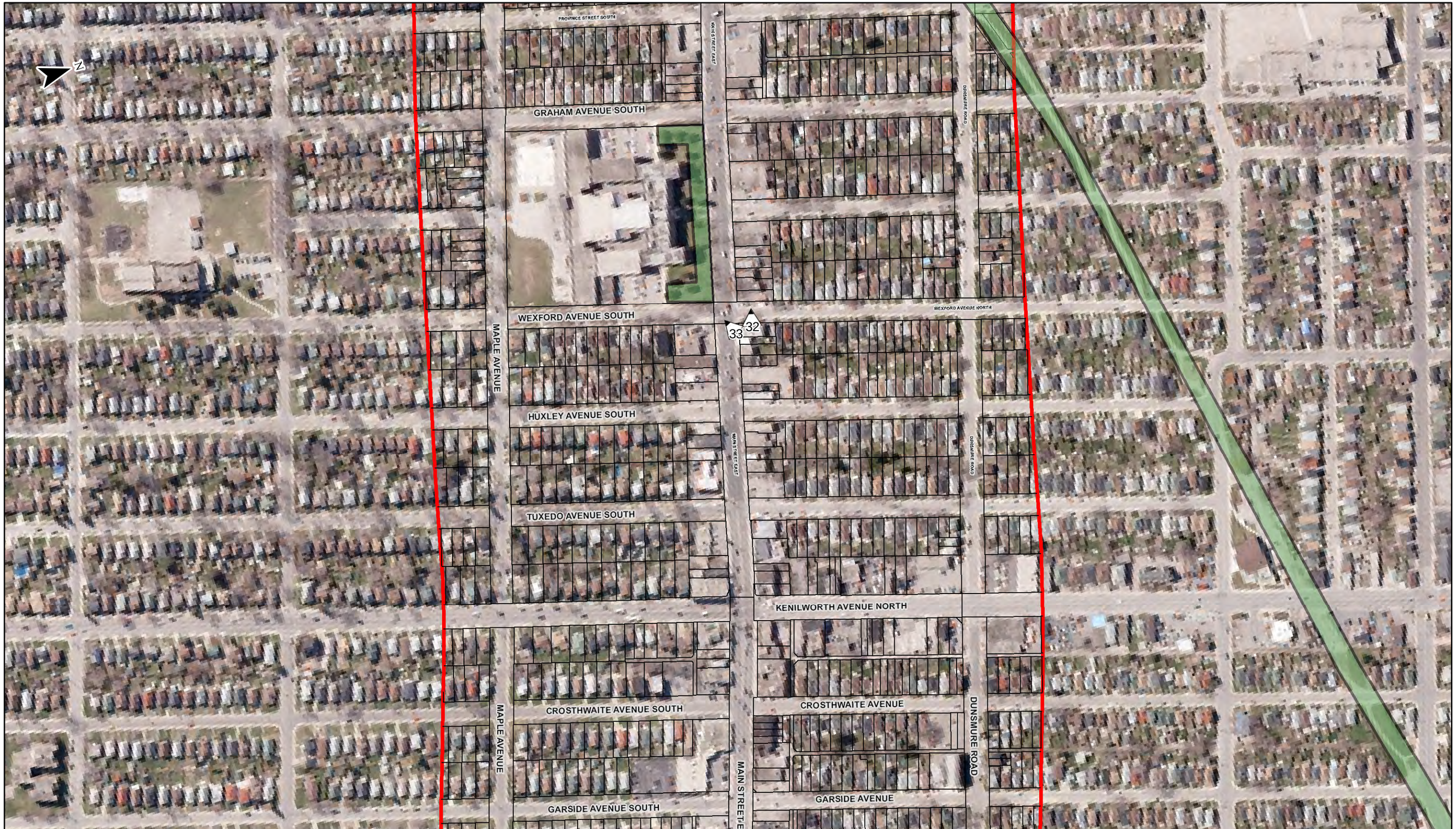
Figure 4-19: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: March 5th, 2009

FILE: 08EA-369_Arch_Potent_Sheet19



Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-20: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: March 5th, 2009

FILE: 08EA-369_Arch_Potent_Sheet20

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-21: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet21

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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

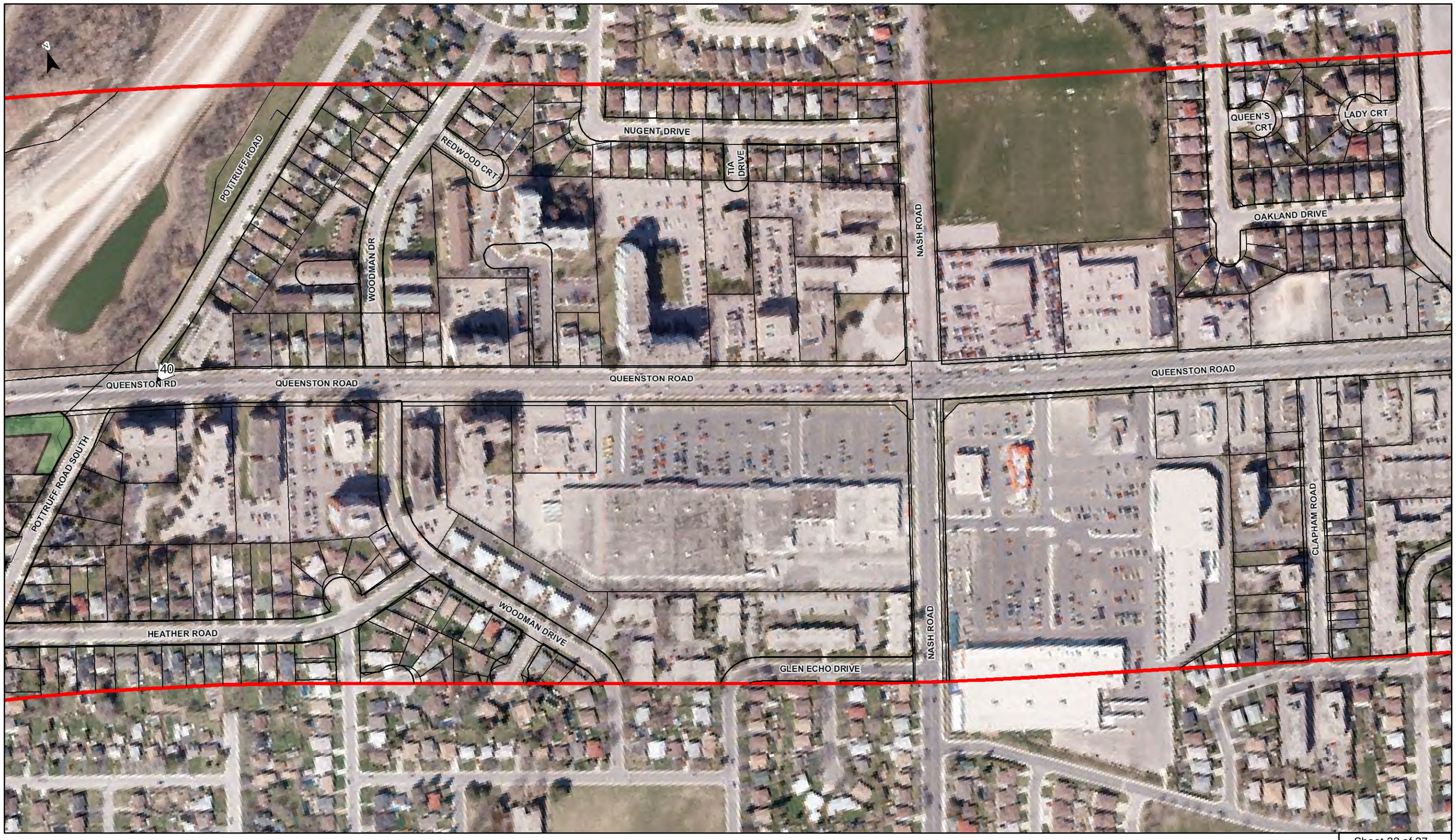
Figure 4-22: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet22



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Archaeological Potential

Study Area Boundary

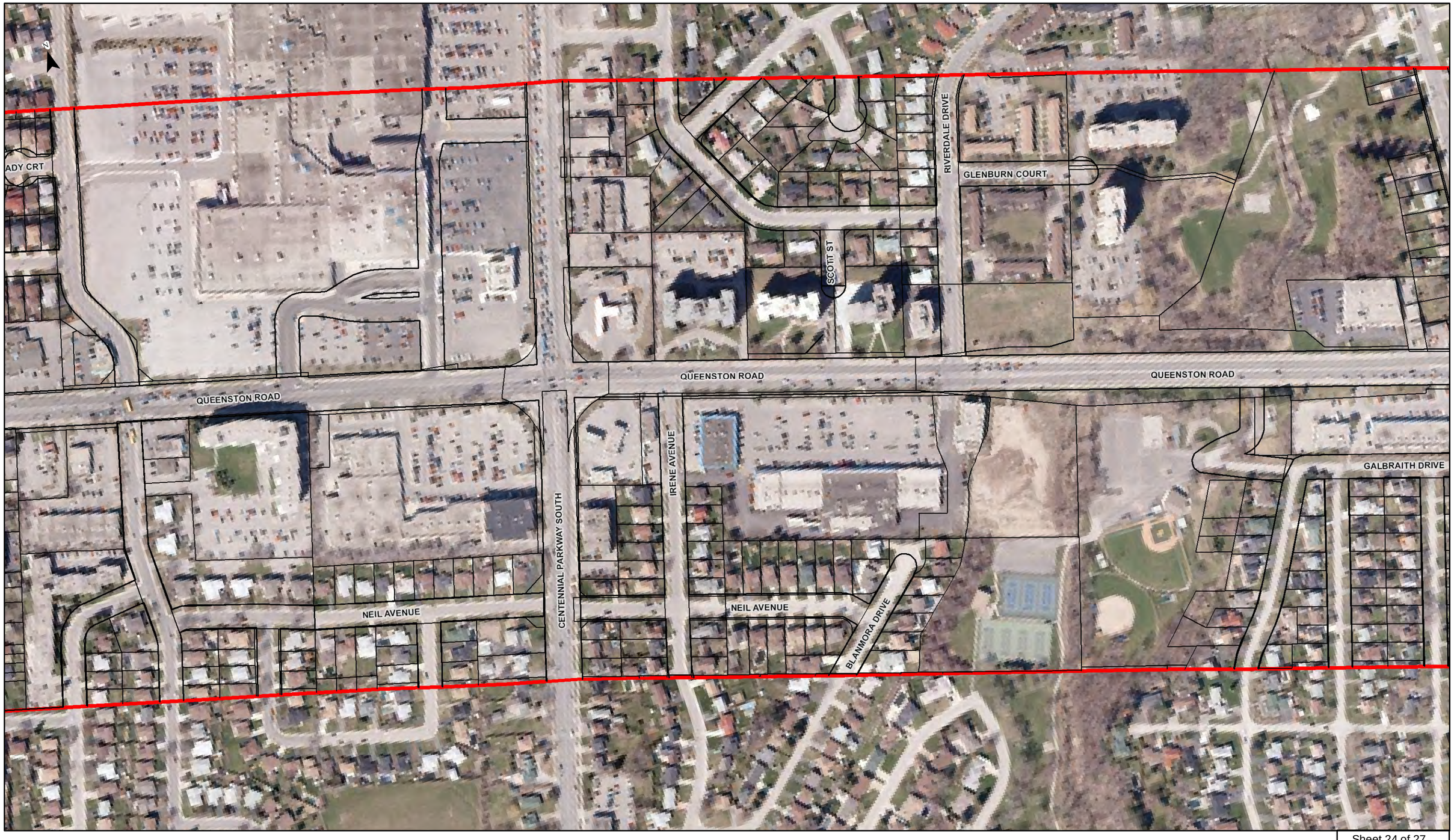
Figure 4-23: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet23



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Archaeological Potential

Study Area Boundary

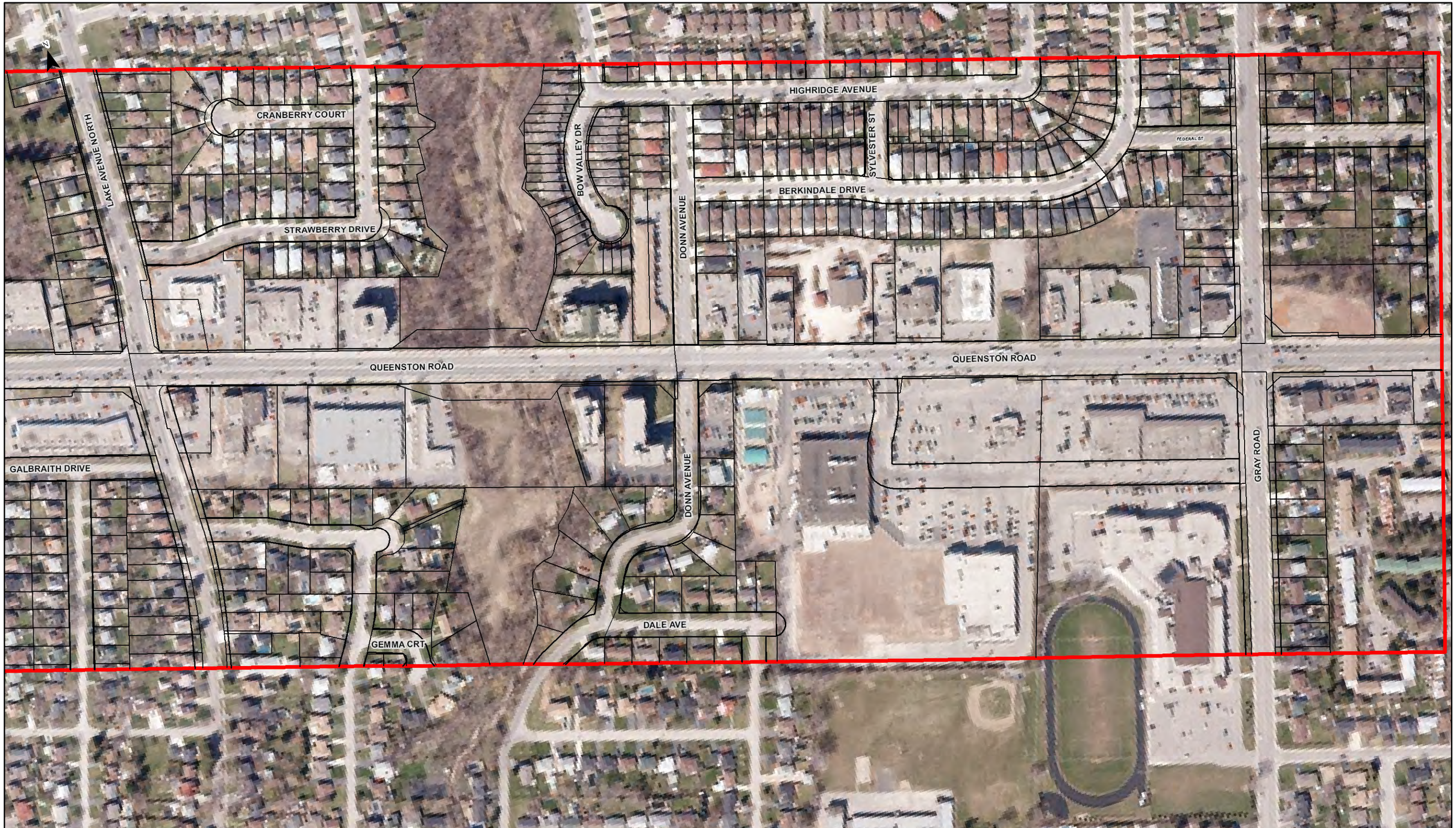
Figure 4-24: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet24



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Archaeological Services Inc.

Archaeological Potential

Study Area Boundary

Figure 4-25: Archaeological Potential in the B-Line Corridor

0 50 100 150 200

Meters

DATE: Feb. 9th 2009

FILE: 08EA-368_Arch_Potent_Sheet25

Stage 1 Archaeological Assessment
Hamilton Light Rail Transit - Environmental Project Report Addendum
Part of Lot 19-21, Concession 3
(Former Township of Barton)
County of Wentworth
City of Hamilton, Ontario

ORIGINAL REPORT

Prepared for:

J. Bruin & Associates Inc.
19 Old Orchard Grove
Toronto, Ontario M5M 2C8

&

Steer Davies Gleave
1500-330 Bay Street
Toronto, ON M5H 2S8

Archaeological Licence #P128 (Hull)
Ministry of Tourism, Culture and Sport PIF# P128-0153-2016
ASI File: 16EA-026

31 January 2017

ASI Archaeological & Cultural Heritage Services
528 Bathurst Street Toronto, ONTARIO M5S 2P9
416-966-1069 F 416-966-9723 asiheritage.ca

Stage 1 Archaeological Assessment
Hamilton Light Rail Transit - Environmental Project Report Addendum
Part of Lot 19-21, Concession 3
(Former Township of Barton)
County of Wentworth
City of Hamilton, Ontario

EXECUTIVE SUMMARY

ASI was contracted by J. Bruin & Associates Inc. and Steer Davies Gleave to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Hamilton Light Rail Transit Environmental Project Report Addendum in the City of Hamilton. The City of Hamilton and Metrolinx, an Agency of the Province of Ontario, are progressing plans to build and operate a light rail transit system (LRT) in the City of Hamilton. ASI was previously retained to complete two Stage 1 archaeological assessments as part of earlier LRT studies in the City of Hamilton. These reports were submitted and accepted into the Ministry of Tourism, Culture, and Sport's provincial register of reports on February 1, 2010 and December 19, 2012 respectively. The current Stage 1 is being undertaken as a data gap analysis to address changes that have been made to the project design. A review of ASI's recommendations from the previous Stage 1 reports for the B-Line, A-Line, and pedestrian connection are still applicable. A proposed Operation, Maintenance and Servicing Facility with associated run-in track within the existing right-of-ways on Frid Street and Longwood Road South is the only component of the revised LRT project design not captured in the previous Stage 1 reports. The current Stage 1 shall refer to this component as the Study Area.

The Stage 1 background study determined that four previously registered archaeological sites are located within one kilometre of the current Study Area. A review of the geography suggested that the Study Area has potential for the identification of Indigenous and Euro-Canadian archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance. The property inspection determined that the Study Area does not possess archaeological potential due to deep and extensive disturbance.

In light of these results, the following recommendations are made:

1. The Study Area does not retain archaeological potential on account of deep and extensive land disturbance. These lands do not require further archaeological assessment;

2. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

PROJECT PERSONNEL

Senior Project Manager:	Andrew Riddle, PhD (P347) *Partner | Director* *Mitigation Division*
Project Director (Licensee):	Katherine Hull, PhD (P128) *Partner | Director* *Cultural Heritage Division*
Project Coordinator:	Sarah Jagelewski, Hon BA (R405) *Staff Archaeologist, Assistant Manager* *Environmental Assessment Division*
Project Manager:	Eliza Brandy, MA (R1109) *Staff Archaeologist*
Field Director:	Andrew Clish (P046) *Senior Archaeologist*
Report Preparation:	Eliza Brandy
Graphics:	Blake Williams, MLitt (P383) *Staff Archaeologist, Geomatics Specialist*
Report Reviewer:	Lisa Merritt, MSc (P094) *Partner | Director* *Environmental Assessment Division*

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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by J. Bruin & Associates Inc. and Steer Davies Gleave (SDG) to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Hamilton Light Rail Transit (LRT) Environmental Project Report (EPR) Addendum in the City of Hamilton. The City of Hamilton and Metrolinx, an Agency of the Province of Ontario, are progressing plans to build and operate a light rail transit (LRT) system in the City of Hamilton (Figure 1).

ASI was previously retained to complete two Stage 1 archaeological assessments as part of earlier LRT studies in the City of Hamilton (ASI 2009, 2012). These reports were submitted and accepted into the Ministry of Tourism, Culture, and Sport's provincial register of reports on February 1, 2010 and December 19, 2012 respectively. The current Stage 1 was conducted as a data gap analysis to ensure that previous recommendations match the proposed work within the revised LRT project design, consisting of the following components:

- a revised LRT A-Line spur up James Street North to the new West Harbour GO Station and potentially down to the City's redeveloping Waterfront District, within the existing right-of-way;
- a revised LRT B-Line alignment, between McMaster University to the Queenston traffic circle, including a proposed pedestrian connection to the Hamilton GO Centre, within the existing right-of-way, and;
- a proposed Operation, Maintenance and Servicing Facility (OMSF) location and an associated run-in track within the existing right-of-ways on Frid Street and Longwood Road to Main Street West

A review of ASI's recommendations from the previous Stage 1 reports for the B-Line, A-Line, and pedestrian connection are still applicable (ASI 2009, 2012). The proposed OMSF and associated run-in track is the only component of the revised LRT project design not captured in the previous Stage 1 reports. The current Stage 1 shall refer to this component as the Study Area.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (2005), the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Tourism, Culture and Sport (MTCS).

In the S & G, Section 1, the objectives of a Stage 1 archaeological assessment are discussed as follows:

- To provide information about the history, current land conditions, geography, and previous archaeological fieldwork of the Study Area;
- To evaluate in detail the archaeological potential of the Study Area that can be used, if necessary, to support recommendations for Stage 2 archaeological assessment for all or parts of the Study Area; and,
- To recommend appropriate strategies for Stage 2 archaeological assessment, if necessary.

This report describes the Stage 1 archaeological assessment that was conducted for this project and is organized as follows: Section 1.0 summarizes the background study that was conducted to provide the

historical and archaeological contexts for the Study Area; Section 2.0 addresses the field methods used for the property inspection that was undertaken to document its general environment, current land use history and conditions of the Study Area; Section 3.0 analyses the characteristics of the Study Area and evaluates its archaeological potential; Section 4.0 provides recommendations for the next assessment steps; and the remaining sections contain other report information that is required by the S & G, e.g., advice on compliance with legislation, works cited, mapping and photo-documentation.

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (1990) and regulations made under the Act, and are therefore subject to all associated legislation.

The study will follow the Transit Project Assessment Process (TPAP) prescribed in *Ontario Regulation 231/08, Transit Projects and Metrolinx Undertakings* under the *Environmental Assessment Act*.

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted by J. Bruin & Associates Inc. and SDG on July 27, 2016.

1.2 Historical Context

The purpose of this section, according to the S & G, Section 7.5.7, Standard 1, is to describe the past and present land use and the settlement history and any other relevant historical information pertaining to the current Study Area. A summary is first presented of the current understanding of the Indigenous land use of the Study Area. This is then followed by a review of the Euro-Canadian settlement history.

1.2.1 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (BP) (Ferris 2013). Populations at this time were highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 BP, the climate had progressively warmed (Edwards and Fritz 1988) and populations now occupied less extensive territories (Ellis and Deller 1990).

Between approximately 10,000-5,500 BP, 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 BP; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 BP and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Ellis et al. 1990, 2009; Brown 1995:13).

Between 3,000-2,500 BP, populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. Exchange and interaction networks broaden at this time (Spence et al. 1990:136, 138) and by approximately 2,000 BP, evidence exists for macro-band camps,

focusing on the seasonal harvesting of resources (Spence et al. 1990:155, 164). It is also during this period that maize was first introduced into southern Ontario, though it would have only supplemented people's diet (Birch and Williamson 2013:13–15). Bands likely retreated to interior camps during the winter. It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From approximately 1,000 BP until approximately 300 BP, lifeways became more similar to that described in early historical documents. During the Early Iroquoian phase (AD 1000-1300), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson 1990:317). By the second quarter of the first millennium BP, during the Middle Iroquoian phase (AD 1300-1450), this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al. 1990:343). In the Late Iroquoian phase (AD 1450-1649) this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. By circa AD 1600 the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. In the 1640s, the traditional enmity between the Haudenosaunee (Five Nation Iroquois) and the Wendat (and their Algonquian allies such as the Nippissing and Odawa) led to the dispersal of the Wendat.

Samuel de Champlain in 1615 reported that a group of Iroquoian-speaking people situated between the New York Iroquois and the Huron-Wendat were at peace and remained "la nation neutre". In subsequent years, the French visited and traded among the Neutral, but the first documented visit was not until 1626, when the Recollet missionary Joseph de la Roche Daillon recorded his visit to the villages of the Attiwandaron, whose name in the Huron-Wendat language meant "those who speak a slightly different tongue" (the Neutral apparently referred to the Huron-Wendat by the same term). Like the Huron-Wendat, Petun, and New York Iroquois, the Neutral people were settled village agriculturalists. Several discrete settlement clusters have been identified in the lower Grand River, Fairchild-Big Creek, Upper Twenty Mile Creek, Spencer-Bronte Creek drainages, Milton, Grimsby, Eastern Niagara Escarpment and Onondaga Escarpment areas, which are attributed to Iroquoian populations. These settlement clusters are believed by some scholars to have been inhabited by populations of the Neutral Nation or pre- (or ancestral) Neutral Nation (Lennox and FItzgerald 1990).

Between 1647 and 1651, the Neutral were decimated by epidemics and ultimately dispersed by the New York Iroquois, who subsequently settled along strategic trade routes on the north shore of Lake Ontario for a brief period during the mid seventeenth-century. Compared to settlements of the New York Iroquois, the "Iroquois du Nord" occupation of the landscape was less intensive. Only seven villages are identified by the early historic cartographers on the north shore, and they are documented as considerably smaller than those in New York State. The populations were agriculturalists, growing maize, pumpkins, and squash. These settlements also played the important alternate role of serving as stopovers and bases for New York Iroquois travelling to the north shore for the annual beaver hunt (Konrad 1974).

Due, in large part, to increased military pressure from the French upon their homelands south of Lake Ontario, the Iroquois abandoned their north shore frontier settlements by the late 1680s, although they did not relinquish their interest in the resources of the area, as they continued to claim the north shore as part of their traditional hunting territory. The territory was immediately occupied or re-occupied by Anishinaabek groups, including the Mississauga, Ojibwa (or Chippewa) and Odawa, who, in the early seventeenth century, occupied the vast area from the east shore of Georgian Bay, and the north shore of Lake Huron, to the northeast shore of Lake Superior and into the upper peninsula of Michigan. Individual

bands numbered several hundred people and were politically autonomous. Nevertheless, they shared common cultural traditions and relations with one another and the land. These groups were highly mobile, with a subsistence economy based on hunting, fishing, gathering of wild plants, and garden farming. Their movement southward also brought them into conflict with the Haudenosaunee.

Peace was achieved between the Iroquois and the Anishinaabek Nations in August of 1701 when representatives of more than twenty Anishinaabek Nations assembled in Montreal to participate in peace negotiations (Johnston 2004:10). During these negotiations captives were exchanged and the Iroquois and Anishinaabek agreed to live together in peace. Peace between these nations was confirmed again at council held at Lake Superior when the Iroquois delivered a wampum belt to the Anishinaabek Nations. In 1763, following the fall of Quebec, New France was transferred to British control at the Treaty of Paris. The British government began to pursue major land purchases to the north of Lake Ontario in the early nineteenth century, the Crown acknowledged the Mississaugas as the owners of the lands between Georgian Bay and Lake Simcoe and entered into negotiations for additional tracts of land as the need arose to facilitate European settlement.

The eighteenth century saw the ethnogenesis in Ontario of the Métis when Métis people began to identify as a separate group, rather than as extensions of their typically maternal First Nations and paternal European ancestry (Métis National Council n.d.). Living in both Euro-Canadian and Indigenous societies, the Métis acted as agents and subagents in the fur trade but also as surveyors and interpreters. Métis populations were predominantly located north and west of Lake Superior, however, communities were located throughout Ontario (MNC n.d.; Stone and Chaput 1978:607,608). By the mid-twentieth century, Indigenous communities, including the Métis, began to advance their rights within Ontario and across Canada, and in 1982, the Métis were recognized as one of the distinct Indigenous peoples in Canada. Recent decisions by the Supreme Court of Canada (Supreme Court of Canada 2003, 2016) have reaffirmed that Métis people have full rights as one of the Indigenous people of Canada under subsection 91(24) of the Constitution Act, 1867.

1.2.2 Euro-Canadian Land Use: Township Survey and Settlement

Historically, the Study Area is located on part of Lots 19 through 21, Concession 3 in the Former Township of Barton, County of Wentworth.

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 m 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).

Township of Barton

The land contained within Barton Township was acquired by the British from the Mississaugas in 1784. This was confirmed by Treaty number 3, signed at Niagara in December 1792. The township was first surveyed in 1791, and the first settlers took up occupancy on their lands in that same year (Armstrong 1985:141; Department of Indian Affairs 1905:Vol 1:5).

For early administrative and land granting purposes, Barton Township originally comprised part of the District of Nassau, which was created by a proclamation issued by Lord Dorchester in July 1788. The district seat for Nassau was located in what was to eventually become the town of Newark (or Niagara), now present day Niagara-on-the-Lake. In 1792, Lieutenant-Governor John Graves Simcoe re-organized the province of Upper Canada into new electoral divisions. Barton Township fell within the limits of the first riding of Lincoln County in the Home District, with the County seat located at Newark (Armstrong 1985:160).

In 1800, under the provisions of 38 Geo. III ch. 5, the District of Niagara was created out of the Home District. See "An Act for the better Division of this Province," which received Royal Assent on January 1, 1800. Newark remained the administrative centre for the Niagara District, while the Town of York (Toronto) became the new seat for the old Home District (Stanton 1843:77–82; Armstrong 1985:138–140).

The original designation for this tract of land was "Township Number 8." The name that was finally given to the township was derived from Barton upon Humber in Lincolnshire, England. It was said to have been a place of "great strength" and commerce before the Norman Conquest. The English place name was originally spelled "Barntown." Wentworth County was named in honour of Sir John Wentworth, who served as the Lieutenant Governor of Nova Scotia between 1792 and 1808. He was also the brother-in-law of Sir Francis Gore, who was the Lieutenant Governor of Upper Canada at the time when the new County was established in 1816 (Gardiner 1899:261, 266; Rayburn 1997:24, 367).

The first settlers in the township were United Empire Loyalists and disbanded troops, mainly men who had served in Butler's Rangers during the American Revolutionary War. The earliest families to settle within the township included those of Land, Ryckman, Horning, Rymal, Terryberry and Markle.

By March 1816, the population at the Head of the Lake had grown sufficiently in size that a new district was created by an act of the Provincial Legislature. The Gore District was established under the provisions of 56 Geo. III ch. 19, "*An Act to Erect and Form a New District out of certain parts of the Home and Niagara Districts, to be called the District of Gore.*" This new district was extensive, and embraced parts of the future Counties of Haldimand, Brant, Halton, Wellington and Waterloo.

One writer described the Head of the Lake and Burlington Bay in a geographical account of Upper Canada published in the early nineteenth century, but made no particular mention of Barton Township. Settlement was slow up until the time of the War of 1812, perhaps due to the early importance of the nearby town of Dundas. By 1815, it is said that Barton Township contained just 102 families. By 1823, however, the township contained three sawmills and a gristmill. By 1841, the township population had

increased to 1,434 and it contained five saw mills and one grist mill. In 1846, the township was described as "well settled" and under cultivation (Boulton 1805:48–49; Smith 1846:8; Mika and Mika 1977:143).

Wentworth County was established following the abolition of the old Upper Canadian district system in 1849, being temporarily united with Brant and Halton Counties until 1854-55. Barton Township was annexed by the City of Hamilton in 1960. In 1973-74, the County was dissolved and succeeded by the Regional Municipality of Hamilton-Wentworth. The City of Hamilton has remained as the administrative seat or county town since the original creation of the Gore District nearly two centuries ago (Armstrong 1985:170–171; Stanton 1843:215; Jonasson 2006:191–209).

1.2.3 Historical Map Review

The 1859 *Surtees' Map of the County of Wentworth* and Page & Smith's 1875 *Map of the Township of Barton*, examined to determine the presence of historic features within the Study Area during the nineteenth century (Figures 2 and 3).The 1859 map indicates that there were no structures within the Study Area, and that it was adjacent to tributaries of the Chedoke Creek. The 1875 map indicates that Lot 19 was subdivided into town lots and one house was located in Lot 21 along Main Street at Longwood owned by Mr(?) Cline. Historic roads within the Study Area include Aberdeen Avenue, what is now Longwood Road, and what is now Dundurn Street.

Table 1: Nineteenth-century property owner(s) and historical feature(s)

		1859		1875	
Con. #	Lot #	Property Owner(s)	Historical Feature(s)	Property Owners	Historical Feature(s)
3	19	Town Lots	None	Town Lots	None
	20	Cartmer Estate	None	Cartmer Estate	None
	21	Robert Hill	None	Mrs. Ainsley	None
				Mr(?) Cline	House

It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases.

In addition, the use of historical map sources to reconstruct/predict the location of former features within the modern landscape generally proceeds by using common reference points between the various sources. These sources are then geo-referenced in order to provide the most accurate determination of the location of any property on historic mapping sources. The results of such exercises are often imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including the vagaries of map production (both past and present), the need to resolve differences of scale and resolution, and distortions introduced by reproduction of the sources. To a large degree, the significance of such margins of error is dependent on the size of the feature one is attempting to plot, the constancy of reference points, the distances between them, and the consistency with which both they and the target feature are depicted on the period mapping.

1.2.4 Twentieth-Century Mapping Review

The 1907 and 1948 National Topographic Series Hamilton sheets were examined to determine the extent and nature of development and land uses within the Study Area (Figures 4 and 5).The maps indicate that

the Study Area were rapidly industrialized through the early twentieth century. The railway continues to be shown adjacent to the Study Area, as well as the present alignment of the Chedoke Creek and Aberdeen Avenue. In 1907, the Study Area were surrounded by brick yards and by 1948, numerous commercial and industrial buildings are illustrated within and around the Study Area. The present alignment of Longwood Road South is illustrated in 1948 as intersecting Aberdeen Avenue, with structures on either side of the intersection. Chatham Street is illustrated and a small road is shown in the north and west sides of the Study Area. A section of the railway and a hopper are also shown within the Study Area.

A review of available Google satellite imagery shows that the Study Area were the site of a shipping yard and an abandoned industrial building through the early 2000s.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the current 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 MTCS through "Ontario's Past Portal"; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

A property inspection was conducted for the current Study Area, consisting of the proposed OMSF location and run-in track on the existing ROW on Frid Street at Longwood Road South. The inspection on September 6, 2016 noted that the area surrounding Frid Street operates as the McMaster Innovation Park, some of which is still under construction. The area is surrounded by industrial and commercial developments in the City of Hamilton. The proposed OMSF location is approximately seven hectares on an abandoned lot with gravel, concrete pads, and paved-over rail tracks, bounded by Chatham Street to the northeast, Longwood Road South to the west, Aberdeen Avenue to the southwest, and the CN Railway to the southeast. An abandoned Hamilton Metal Trading Inc. factory is located at the western side of the area. North of the OMSF area is the site of the Republic Steel office and shipping yard on Chatham Street.

1.3.2 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 current 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 BP (Karrow and Warner 1990: Figure 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 Iroquois Plain physiographic region of southern Ontario, which is a lowland region bordering Lake Ontario. This region is characteristically flat, and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of 300 km (Chapman and Putnam 1984:190). The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements. The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building material, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman and Putnam 1984:196).

The Niagara Escarpment, located south of the subject property, is by far one of the most prominent features in southern Ontario, and extends from the Niagara River to the northern tip of the Bruce Peninsula, continuing through the Manitoulin Islands (Chapman and Putnam 1984:114–122). Vertical cliffs along the brow mostly outline the edge of the dolostone of the Lockport and Amabel Formations, while the slopes below are carved in red shale. Flanked by landscapes of glacial origin, the rock-hewn topography stands in striking contrast, and its steep-sided valleys are strongly suggestive of non-glacial regions. From Queenston, on the Niagara River, westward to Ancaster, the escarpment is a simple topographic break separating the two levels of the Niagara Peninsula. The Niagara Escarpment is a designated UNESCO World Biosphere Reserve.

Figure 6 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by coarse-textured glaciolacustrine deposits of sand (Ontario Geological Survey 2010). No information about the soils in the Study Area could be found (Presant and Wicklund 1955).

The Study Area is located within the Chedoke Creek watershed. Chedoke Creek is a small urban creek in the western end of the City of Hamilton that flows from the top of the Niagara Escarpment over two waterfalls and is channelized under the Bruce Trail, the Chedoke Radial Trail, the CN Railway, and Aberdeen Avenue. The western tributary of the creek follows a small naturalized section adjacent to the Chedoke Civic Golf Course and is then channelized to join the eastern tributaries alongside Highway 403 to Princess Point where it drains into Cootes Paradise, one of the most biodiverse wetlands in Canada (Wong 2009). Cootes Paradise has a significant archaeological history with the presence of numerous sites from the Princess Point time period.

1.3.3 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. 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 km east to west, and approximately 18.5 km 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 are located in Borden block *AhGx.*

According to the OASD, four previously registered archaeological sites are located within one kilometre of the Study Area (MTCS 2016). None of these are within 50 metres. A summary of the sites is provided in Table 1 below.

Table 2: List of previously registered sites within one kilometre of the Study Area

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AhGx-28	Frederick Ashbaugh Redware Pottery	Euro-Canadian (c.1816)	House, Industrial	Michael 1985, 1986
AhGx-264	Chedoke	Euro-Canadian (1830s-1850s)	House	ASI 1989, 2010; Fisher 2014
AhGx-265	Chedoke Falls	Late - Middle Woodland, Glen Meyer	Camp	ASI 1989
AhGx-645	Victoria Park	Euro-Canadian (1860-1890)	Park	Fisher 1986; AMEC 2011

According to the background research, no other reports detail previous archaeological fieldwork within 50 metres of the current Study Area.

2.0 FIELD METHODS: PROPERTY INSPECTION

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 of the current Study Area was conducted under the field direction of Andrew Clish (P046) of ASI, on September 6, 2016, 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 visual inspection only and did not include excavation or collection of archaeological resources. Fieldwork was only conducted when weather conditions were deemed suitable, per S&G Section 2. Previously identified features of archaeological potential were examined; additional features of archaeological potential not visible on mapping were identified and documented as well as any

features that will affect assessment strategies. Field observations are compiled onto the existing conditions of the study area in Section 7.0 (Figures 7-10) and associated photographic plates are presented in Section 8.0 (Plates 1-7).

3.0 ANALYSIS AND CONCLUSIONS

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the current Study Area. These data are presented below in Section 3.1. Results of the analysis of the Study Area property inspection are presented in Section 3.2.

3.1 Analysis of Archaeological Potential

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

- Previously registered archaeological sites (AhGx-28, AhGx-264, AhGx-265, AhGx-645);
- Water sources: primary, secondary, or past water source (Chedoke Creek);
- Early historic transportation routes (Aberdeen Avenue, CN Railway); and
- Proximity to early settlements (City of Hamilton)

These criteria are indicative of potential for the identification of Indigenous and Euro-Canadian archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance.

3.2 Analysis of Property Inspection Results

A property inspection was conducted for the current Study Area, consisting of the proposed OMSF location and run-in track within the existing right-of-ways on Frid Street and Longwood Road South. The inspection determined that the Study Area has been subjected to deep and extensive soil disturbance events from construction of McMaster Innovation Park, construction of the ROWs, demolition of previous structures, and decades of intensive industrial land use (Plates 1-6; Figure 7: areas highlighted in yellow). According to S & G Section 1.3.2 these lands do not retain archaeological potential and do not require further archaeological assessment.

3.3 Conclusions

A review of ASI's recommendations from the previous Stage 1 reports for the B-Line, A-Line, and pedestrian connection are still applicable (ASI 2009, 2012). The proposed OMSF and associated run-in track is the only component of the revised LRT project design not captured in the previous Stage 1 reports. The current Stage 1 shall refer to this component as the Study Area. The Stage 1 background study determined that four previously registered archaeological sites are located within one kilometre of the Study Area. The entire study area has a long and complex Indigenous history due to its proximity to Cootes Paradise and Lake Ontario. A review of the geography of the Study Area suggested that the Study Area has potential for the identification of Indigenous and Euro-Canadian archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance. The property inspection determined that the Study Area does not possess archaeological potential due to deep

and extensive disturbance from industrial land use activities, and will not require Stage 2 assessment.

4.0 RECOMMENDATIONS

In light of these results, the following recommendations are made:

1. The Study Area does not retain archaeological potential on account of deep and extensive land disturbance. These lands do not require further archaeological assessment;

2. Should the proposed work extend beyond the current Study Area, further Stage 1 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 Cultural Programs Unit of the MTCS should be immediately notified.

The documentation related to this archaeological assessment will be curated by ASI until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner(s), the Ontario MTCS, and any other legitimate interest groups.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI also advises compliance with the following 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*, RSO 1990, 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 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* 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 *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

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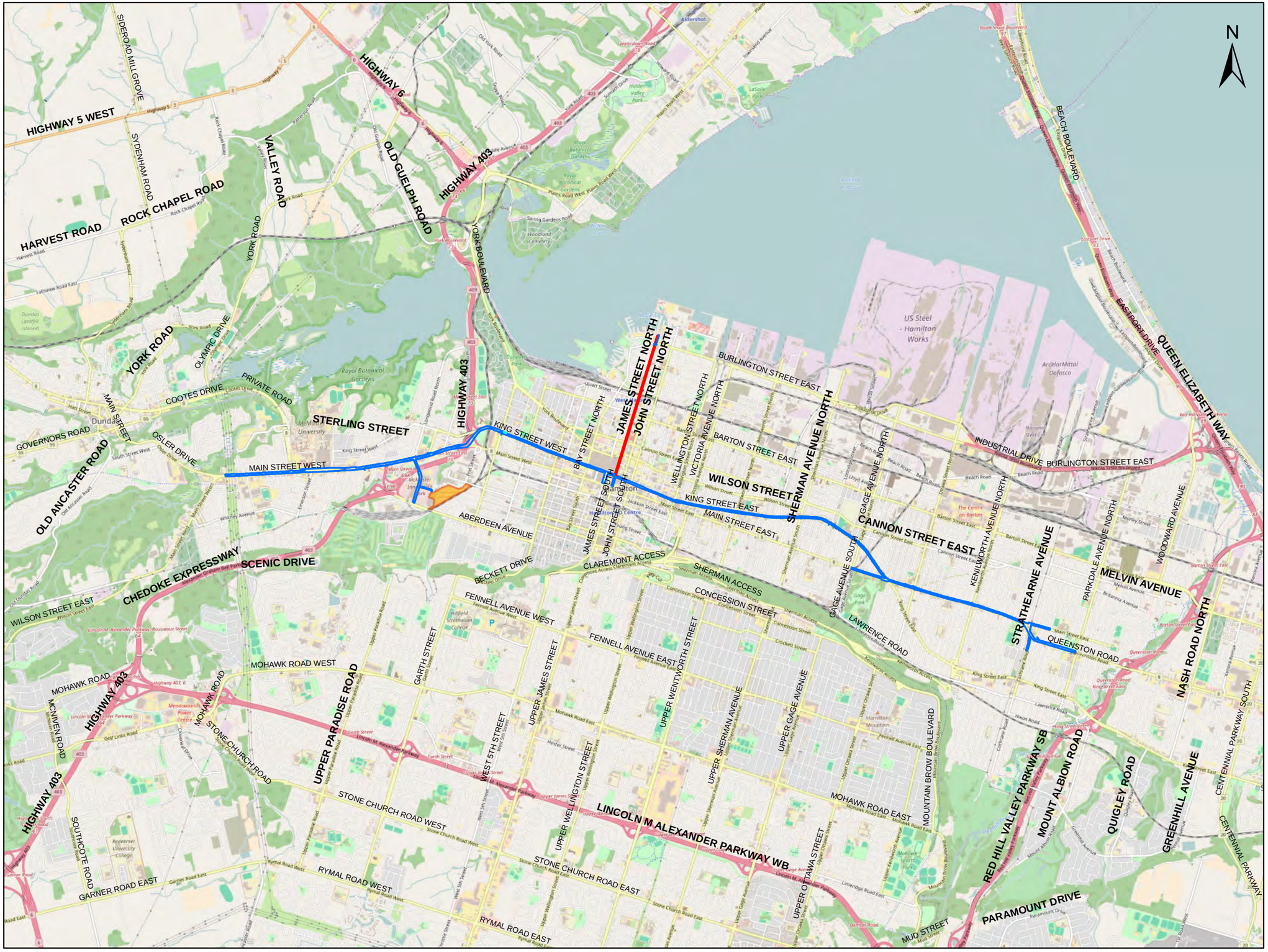
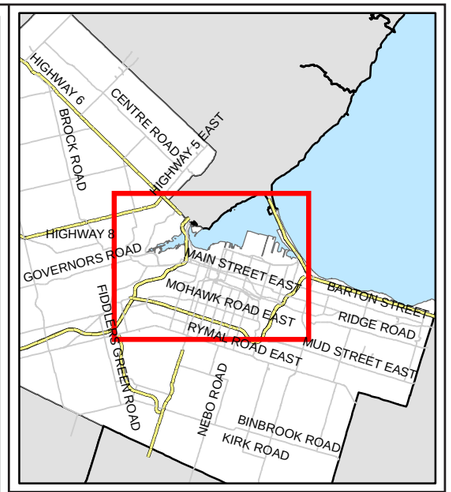
7.0 MAPS





A Line

B Line

OMSF Site

BASE:

0 3

Kilometres

ASI PROJECT NO.: 16EA-026
DATE: 28 Nov 2016

DRAWN BY: JF & BW
FILE: 16EA027_Fig1

Archaeological & Cultural Heritage Services
528 Bathurst Street Toronto, ONTARIO M5S 2P9
416-966-1069 | F416-966-9723 | asiheritage.ca

Figure 1: Hamilton LRT EPR Addendum - Location of the Revised Project Design

Figure 2: Hamilton LRT EPR Addendum Study Area (Approximate Location) Overlaid on the 1859 Map of the County of Wentworth

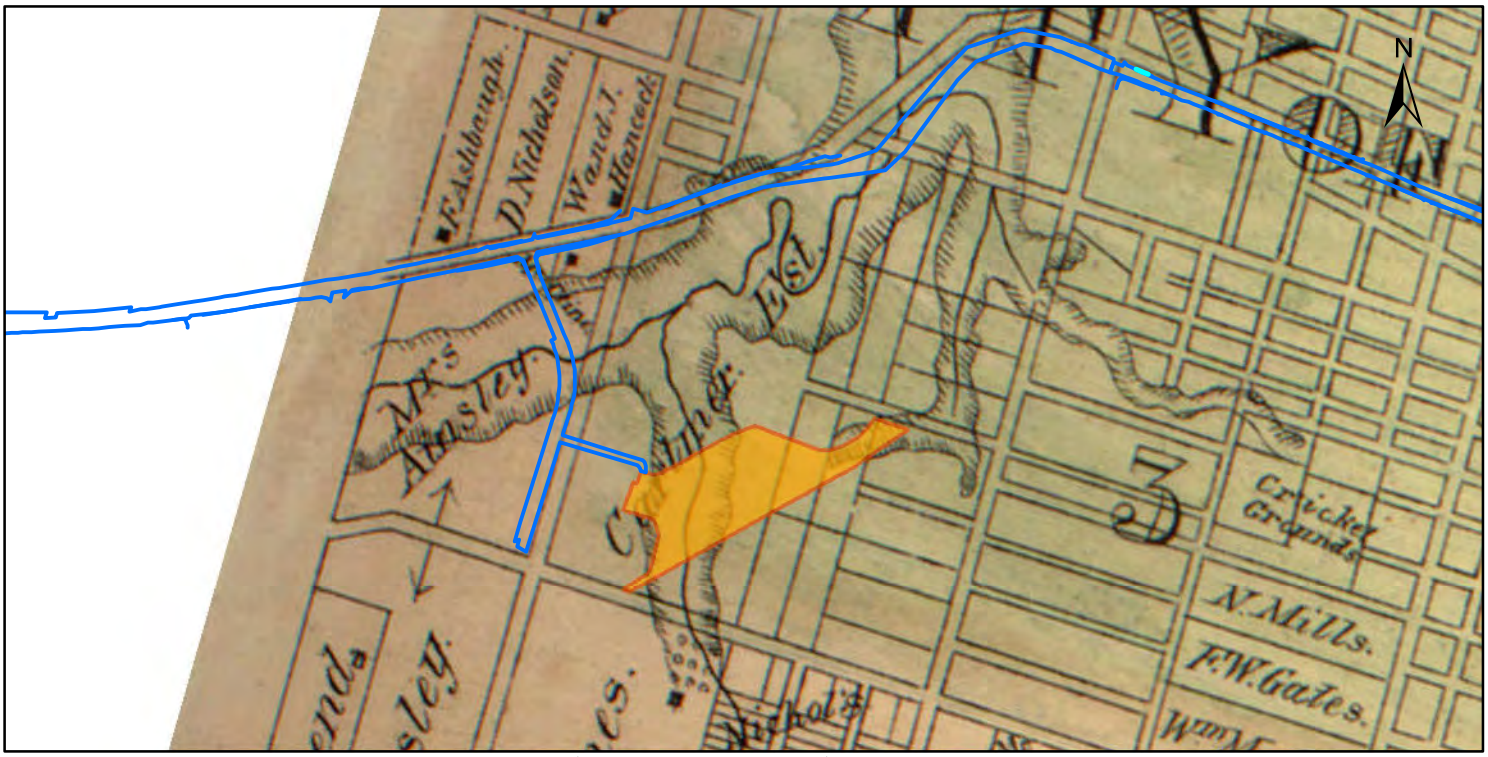


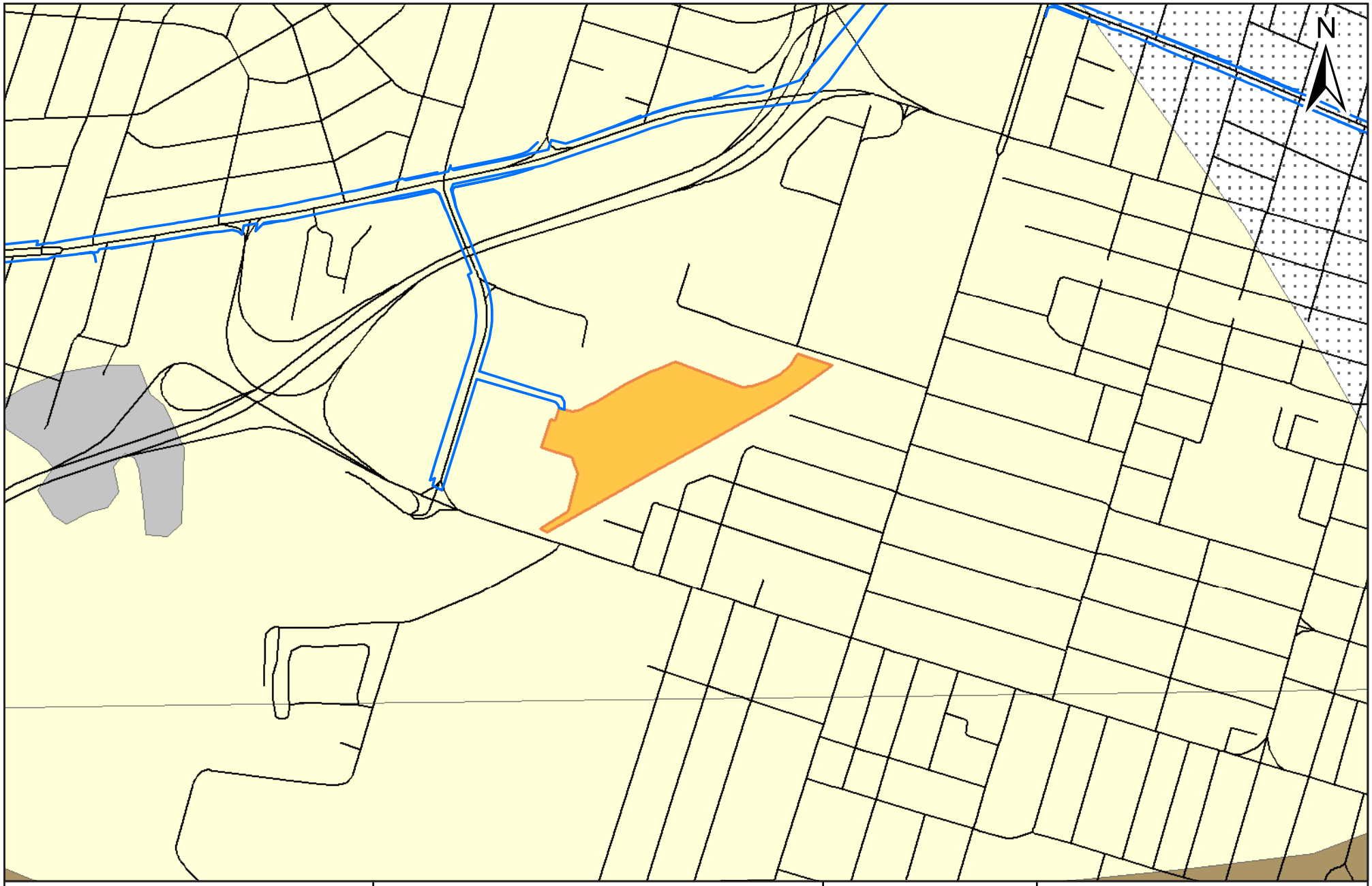
Figure 3: Hamilton LRT EPR Addendum Study Area (Approximate Location) Overlaid on the 1875 Illustrated Historical Atlas of the Township of Barton

Archaeological & Cultural Heritage Services 528 Bathurst Street Toronto, ONTARIO M5S 2P9 416-966-1069 | F416-966-9723 | asiheritage.ca	B Line OMSF Site	Datum and Projection NAD 83 UTM 17T	0 0.35 Kilometres ASI PROJECT NO.: 16EA-026 DATE: 08 Dec 2016 DRAWN BY: JF & BW FILE: 16EA026_fig2_3_hist

Figure 4: Hamilton LRT EPR Addendum Study Area (Approximate Location) Overlaid on the 1907 NTS Sheet of Hamilton

Figure 5: Hamilton LRT EPR Addendum Study Area (Approximate Location) Overlaid on the 1948 NTS Sheet of Hamilton

Archaeological & Cultural Heritage Services 528 Bathurst Street Toronto, ONTARIO M5S 2P9 416-966-1069 | F416-966-9723 | asiheritage.ca	B Line OMSF Site	Datum and Projection NAD 83 UTM 17T	0 0.25 Kilometres ASI PROJECT NO.: 16EA-026 DATE: 08 Dec 2016 DRAWN BY: JF & BW FILE: 16EA026_fig4_5_hist



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DATE: 08 Dec 2016
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FILE: 16EA026_Fig6_SGU

Figure 6: Hamilton LRT EPR Addendum Study Area – Surficial Geology

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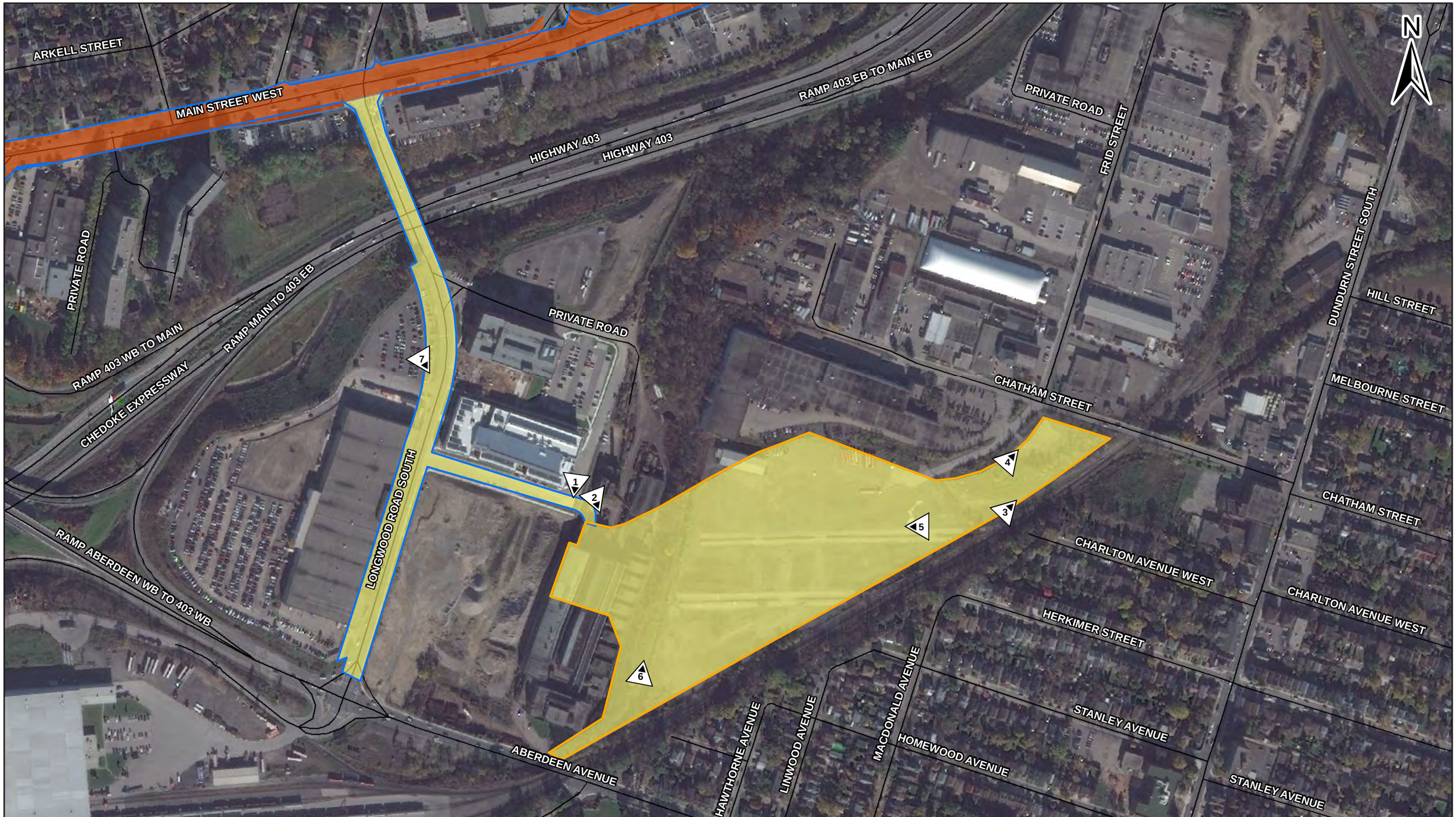

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OMSF Study Area
A Line
B Line

Stage 1 Results

Disturbed- no potential
Previously Assessed

Photo Plate and Orientation
Roads

BASE:
Ortho
Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

0 150
Metres

ASI PROJECT NO.: 16EA-026
DATE: 29 Nov 2016
DRAWN BY: BW
FILE: 16EA026_Fig7_Stg1_V2

Figure 7: Hamilton LRT EPR Addendum Study Area - Results of the Property Inspection

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8.0 IMAGES

Plate 1: South view of the study area from Frid St; area is disturbed with no archaeological potential

Plate 2: West view of the proposed OMSF site; area is disturbed with no archaeological potential

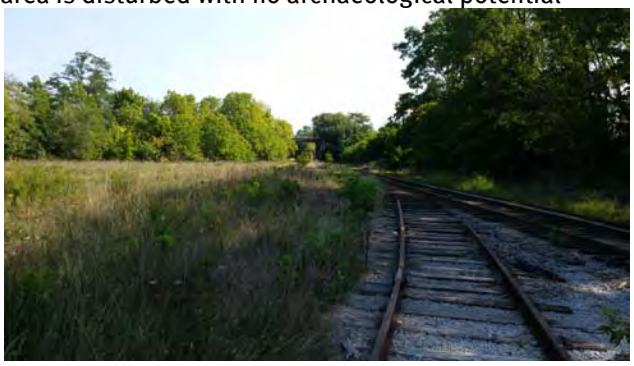

Plate 3: Northeast view of the proposed OMSF site old rail line; area is disturbed with no archaeological potential

Plate 4: Northeast view of the proposed OMSF site; area is disturbed with no archaeological potential

Plate 5: West view of the proposed OMSF site; area is disturbed with no archaeological potential

Plate 6: North view of the proposed OMSF site; area is disturbed with no archaeological potential

Plate 7: Northeast Google Street View from 2007 of what is now McMaster Innovation Park and Frid St; area is disturbed with no archaeological potential