



**Stage 2 Archaeological Assessment:  
Highway 401 Expansion at Shelter  
Valley Road**

Part of Lots 13, 15, and 16, Concession 1,  
Geographic Township of Haldimand,  
now Township of Alnwick/Haldimand,  
Northumberland County, Ontario

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**ORIGINAL REPORT**



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## Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by the Ministry of Transportation Ontario (MTO) to undertake a Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study on Highway 401 for the replacement and rehabilitation of structures, interchange modifications, establishing the footprint of future interim six and ultimate eight lanes of the highway, and commuter parking lot expansions, from 2 km east of Nagle Road to 800 m east of Percy Street (the Project). As part of the Project, Stantec was also retained to complete Stage 2 archaeological assessment in advance of geotechnical investigations required to support the preliminary design of retaining walls located along portions of Highway 401 near Shelter Valley Road and Creek (the study area). The study area is located in part of Lots 13, 15, and 16, Concession 1, Geographic Township of Haldimand, now Township of Alnwick/Haldimand, Northumberland County, Ontario. The western study area, located in part of Lots 15 and 16, west of Shelter Valley Road and north of Highway 401 adjacent to the Shelter Valley Golf Course, is approximately 0.64 hectares in size. The eastern study area, located in part of Lot 13, east of Shelter Valley Road, south of Highway 401, is approximately 0.83 hectares in size. The combined study area is approximately 1.47 hectares. The Class EA and, by extension, the Stage 2 archaeological assessment, has followed the approved planning process for a Group B project under the *Class Environmental Assessment for Provincial Transportation Facilities* (Government of Ontario 2000).

A Stage 1 archaeological assessment, completed by Stantec in 2019 for portions of the Highway 401 corridor between Cobourg and Colborne (Stantec 2019), determined that the study area for the Project retained potential for the identification of archaeological resources. The Stage 2 archaeological assessment of the study area for the Project was conducted on October 14, 2021 and November 24, 2021 under Project Information Form number P415-0319-2021 issued to Patrick Hoskins, MA, by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI).

No archaeological resources were identified during the Stage 2 archaeological assessment of the study area. Thus, in accordance with Section 2.2 and Section 7.8.4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **no further archaeological assessment of the study area is required**.

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



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## Acknowledgements

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### Project Context

## 1.0 PROJECT CONTEXT

### 1.1 DEVELOPMENT CONTEXT

Stantec Consulting Ltd. (Stantec) was retained by the Ministry of Transportation Ontario (MTO) to undertake a Planning, Preliminary Design, and Class Environmental Assessment (Class EA) Study on Highway 401 for the replacement and rehabilitation of structures, interchange modifications, establishing the footprint of future interim six and ultimate eight lanes of the highway, and commuter parking lot expansions, from 2 km east of Nagle Road to 800 m east of Percy Street (the Project). As part of the Project, Stantec was also retained to complete Stage 2 archaeological assessment in advance of geotechnical investigations required to support the preliminary design of retaining walls located along portions of Highway 401 near Shelter Valley Road and Creek (the study area) (Figure 1). A Stage 1 archaeological assessment was previously completed for the Project by Stantec (2019) and is further discussed in Section 1.3.4 of this report.

The study area is located in part of Lots 13, 15, and 16, Concession 1, Geographic Township of Haldimand, now Township of Alnwick/Haldimand, Northumberland County, Ontario. The western study area, located in part of Lots 15 and 16, west of Shelter Valley Road and north of Highway 401 adjacent to the Shelter Valley Golf Course, is approximately 0.64 hectares in size (Figure 2.1). The eastern study area, located in part of Lot 13, east of Shelter Valley Road, south of Highway 401, is approximately 0.83 hectares in size (Figure 2.2). The combined study area is approximately 1.47 hectares. The Class EA and, by extension, the Stage 2 archaeological assessment, has followed the approved planning process for a Group B project under the *Class Environmental Assessment for Provincial Transportation Facilities* (Government of Ontario 2000).

#### 1.1.1 Objectives

In compliance with the provincial standards and guidelines set out in the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 2 property assessment are as follows:

- Document archaeological resources within the study area.
- Determine whether the study area contains archaeological resources requiring further assessment.
- Recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

Permission to enter lands associated with the study area for the purposes of the Stage 2 assessment was jointly arranged by Stantec and MTO.



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## 1.2 HISTORICAL CONTEXT

### 1.2.1 Post-contact Indigenous Resources

“Contact” is typically used as a chronological benchmark when discussing Indigenous archaeology in Canada and describes the contact between Indigenous and European cultures. Contact in what is now the province of Ontario is broadly assigned to the 16<sup>th</sup> century (Loewen and Chapdelaine 2016).

By the turn of the 16th century, the region of the study area appears to have been abandoned of permanent settlements. It has long been the understanding of archaeologists that, prior to the 16th century, the north shore of Lake Ontario was occupied by Iroquoian-speaking populations (Birch and Williamson 2013; Birch 2012; Dermarkar et al. 2016). Recently, the direct correlation in Ontario between archaeology and ethnicity, and especially regional identity, has been questioned (cf. Fox 2015:23; Gaudreau and Lesage 2016:9-12; Ramsden 2016:124). Recent considerations of Indigenous sources on culture history have led to the understanding that, prior to the 16th century, the north shore of Lake Ontario was co-habited by more mobile Anishnaabeg populations (Kapyrka 2018) who have not been represented in previous analyses of the archaeological record and who most likely have left a more ephemeral archaeological record than that of more densely populated agricultural settlements. The apparent void of permanent settlement along the north shore of Lake Ontario continued through the first half of the 17th century; however, this does not preclude the occupation of the region by mobile Anishnaabeg peoples.

The Mississauga traditional territory was located between two powerful confederacies, the Three Fires Confederacy (consisting of the Odawa, Ojibwa, and Pottawatomi) located to the north and west, and the Haudenosaunee (Five Nations Iroquois) Confederacy on the south shore of Lake Ontario in present-day New York State. In this geo-political context, the Mississauga acted as peacekeepers among the various Indigenous nations, acting as negotiators and emissaries (Kapyrka 2018). In the 1640s, the Five Nations began an aggressive campaign of territorial expansion, in particular between the north shore of Lake Ontario and what is now central Ontario. In 1649, raiding by the Seneca and Mohawk north of Lake Ontario, coinciding with wide-spread occurrence of infectious disease and famine among the Huron-Wendat, Tionontati (Petun), and Atawandaron (Neutral) resulted in the latter groups’ dispersal from the region, and the Seneca establishing regional dominance (Heidenreich 1978).

At this time, the semi-permanent settlements associated with the ancestral Huron-Wendat (the Huron) were abandoned, and the Mississauga retreated from the area along the north shore of Lake Ontario into the hinterlands of their territory, waiting until the conflicts had ended and the political situation had stabilized before returning (Heidenreich 1990; Kapyrka 2018; Ramsden 1990). The Huron permanently left the region, moving to the east in Quebec and to the southwest in the present-day United States. By the 1680s, Mississauga people had begun to re-enter the lower Great Lakes basin (Curve Lake First Nation n.d.; Konrad 1981). Upon their return, the Mississauga began to reestablish their role as peacekeepers in the region, extending that to include incoming Euro-Canadian settlers (Kapyrka 2018).

Despite the differentiation among these groups in Euro-Canadian sources, there was a considerably different view by Indigenous groups concerning their self-identification during the first few centuries of



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European contact. Indigenous peoples relied upon kinship ties that cut across European notions of nation identity (Bohaker 2006:277-283). Many of the British-imposed nation names such as Chippewa, Ottawa, Potawatomi, or Mississauga artificially separated how self-identified Indigenous peoples' classified themselves; these groups were culturally and socially more alike than contemporary European documentation might indicate (Bohaker 2006:1-8).

The expansion of the fur trade led to increased interaction between European and Indigenous people, and ultimately intermarriage between European men and Indigenous women. During the 18<sup>th</sup> century the progeny of these marriages began to identify as Métis, and no longer identified directly with either their paternal or maternal cultures. The ethnogenesis of the Métis progressed with the establishment of distinct Métis communities along the major waterways in the Great Lakes of Ontario. Métis communities were primarily focused around the upper Great Lakes and along Georgian Bay, however Métis people have historically lived throughout Ontario (Métis Nation of Ontario 2022; Stone and Chaput 1978:607-608).

The study area falls within the territory of the seven Anishnaabeg First Nations which are signatories to the Williams Treaties. These include the Mississaugas of Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Scugog Island First Nation, the Chippewas of Beausoleil First Nation, Georgina Island First Nation, and the Rama First Nation (Williams Treaties First Nations 2022). Since contact with European explorers and immigrants, and, later, with the establishment of provincial and federal governments (the Crown), the lands within Ontario have been included in various treaties, land claims, and land cessions. Though not an exhaustive list, Morris (1943) provides a general outline of some of the treaties within the Province of Ontario from 1783 to 1923. While it is difficult to exactly delineate treaty boundaries today, an approximate outline of the treaty lands described by Morris (1943) is provided in Figure 3. The Williams Treaty (marked as "AG" on Figure 3 and incorporating part of one of Crawford's Purchases, marked as "B2") between the Crown and the Anishnaabeg First Nations in this area are part of "[t]hree separate and large parcels of land in southern and central Ontario...acquired by the Government of Canada in 1923" (Surtees 1986:1). This particular parcel includes:

*parts of the Counties of Northumberland, Durham, Ontario and York...[c]ommencing at the point where the easterly limit of that portion of the lands said to have been ceded...[as part of Treaty Number 13] intersects the northerly shore of Lake Ontario; thence northerly along the said easterly and northerly limits of the confirmed tract to the Holland River; thence northerly along the Holland River and along the westerly shore of Lake Simcoe and Kempenfeldt Bay to the narrows between Lake Couchiching and Lake Simcoe; thence south easterly along the shores of Lake Simcoe to the Talbot River; thence easterly along the Talbot River to the boundary between the Counties of Victoria and Ontario; thence southerly along that boundary to the north west angle of the Township of Darlington; thence along the northern boundary of the Township of Darlington, Clarke, Hope and Hamilton to Rice Lake; thence along the southern shore of said Lake to River Trent, and along the River Trent to Bay of Quinte; thence westerly and southerly along the shore of the Bay of Quinte to the road leading to Carrying Place and Wellers Bay; then westerly along the northern shore of Lake Ontario to the place of beginning*

(Morris 1943:62)



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It is also worth noting that this area also “included substantial portions of land that had been the object of previous land cession treaties” (Surtees 1986:1).

As demonstrated above, the nature of Indigenous settlement size, population distribution, and material culture shifted as European settlers encroached upon their territory. Despite this shift, however, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to … systems of ideology and thought” (Ferris 2009:114). As a result, Indigenous peoples have left behind archaeological resources throughout southern Ontario which show continuity with past peoples, even if they have not been recorded in historical Euro-Canadian documentation.

### 1.2.2 Euro-Canadian Resources

#### 1.2.2.1 Northumberland County

In 1791, the Provinces of Upper Canada and Lower Canada were created from the former Province of Quebec by an act of British Parliament. At this time, Colonel John Graves Simcoe was appointed as the Lieutenant Governor of Upper Canada and was tasked with governing the new province, directing its settlement and establishing a constitutional government modelled after that of Britain (Coyne 1895). In 1792, Simcoe divided Upper Canada into 19 counties consisting of previously-settled lands, new lands opened for settlement, and lands not yet acquired by the Crown. These new counties stretched from Essex in the west to Glengarry in the east. By 1798, population levels in Upper Canada had increased to a point where it was desirable to create smaller administrative regions and thus, the counties of Northumberland and Durham were partitioned from the Home District and joined as the Newcastle District (Armstrong 2004). In 1837 the northern part of Newcastle District was used to form the Colborne District (later Peterborough County).

In 1850, the Newcastle District was dissolved and the constituent counties joined as the United Counties of Northumberland and Durham (Armstrong 2004). This larger county was subsequently dissolved in 1974 when half of the original Durham County was merged with the former Ontario County to establish the Regional Municipality of Durham. The Township of Haldimand was retained by Northumberland County during this municipal re-alignment and is bounded on the north by the Township of Alnwick; on the west by the Township of Hamilton; on the south by Lake Ontario; and on the east by the Township of Cramahe.

#### Haldimand Township

Historically, the Township of Haldimand was bounded on the north by the Township of Alnwick, on the west by the Township of Hamilton, on the south by Lake Ontario and on the east by the Township of Cramahe. Survey of the township began in 1791 by Augustus Jones, and finished by Aaron Greeley in 1793 (Haldimand’s History Committee 1997:16). Haldimand Township was named in honour of Sir Frederick Haldimand, a Swiss-born general of the British army who served as Governor-in-Chief of Canada between 1778 and 1786 (Haldimand’s History Committee 1997:16). As early as 1804, the township was home to 356 Euro-Canadian settlers, and by 1830 the population had risen to 1,699



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(Haldimand's History Committee 1997:17). The growth of Haldimand Township continued throughout the 19<sup>th</sup> century and by 1855 the population of the township exceeded 4,600 (Dodds & Bro. 1880:332).

Survey records obtained from the Ministry of Natural Resources and Forestry were examined for evidence of Indigenous and early Euro-Canadian settlements (Jones 1792). The original survey map of Haldimand Township illustrates no specific historical features within the study area (Figure 4). Later additions to the survey map show that the lots associated with the study area, and much of the township, had been granted during the early part of the 19<sup>th</sup> century. Lot 13, Concession 1 was granted to Dan Alger. The northern portion of Lot 15, Concession 1, where the study area is located, was granted to Thomas McNaughton. Lot 16, Concession 1 was granted to William Rus.

The map of Haldimand Township in the 1878 *Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont.* (Belden & Co. 1878) depicts a rural landscape with numerous farmsteads, homesteads, a local road and railway system, and a number of villages and hamlets, including Colborne, Grafton, Vernonville, Eddystone, Centreton, Burnley, and Fenella (Figure 5). Table 1 summarizes applicable landowner information from the 1878 map of Haldimand Township relevant to this report.

**Table 1: Property Owners and Historical Features Depicted in the 1878 Map of Haldimand Township**

Lot	Concession	Portion	Owner / Resident	Euro-Canadian Features
13	1	North Half	T. Roberts	One structure depicted in the southwest corner of the parcel, near the corner of the former connecting road between Dudley and Skyview Road and Wicklow Road. This structure is approximately 80 metres south of the study area.
15	1	North Half	Wm. Mellis	One structure is depicted in the south portion of the parcel. This structure is approximately 300 metres south of the study area.
16	1	Entire Lot	A.A. Burnham	Shelter Valley Creek crosses lot in southeast corner. Grist mill and residence shown in south end of lot, south of Shelter Valley Road.

In discussing the late 19<sup>th</sup> century historical mapping, it must be remembered that historical county atlases were produced primarily to identify factories, offices, residences, and landholdings of subscribers and were funded by subscription fees. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100). As such, structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984). Further, historical mapping, including treaty maps, also has inherent accuracy difficulties due to potential error in geo-referencing. Geo-referencing is conducted by assigning spatial coordinates to fixed locations and using these points to spatially reference the remainder of the map. Due to changes in "fixed" locations over time (e.g., road intersections, road alignments, shorelines, watercourses, etc.), errors/difficulties of scale and the relative idealism of the historical cartography, historical maps may not translate accurately into real space points. This may provide obvious inconsistencies during historical map review.



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## 1.3 ARCHAEOLOGICAL CONTEXT

### 1.3.1 The Natural Environment

The study area falls within the Iroquois Plain physiographic region. Chapman and Putnam (1984:190) describe the Iroquois Plain as the:

*... lowland bordering Lake Ontario, when the last Glacier was receding but still occupied the St. Lawrence Valley, was inundated with a body of water known as Lake Iroquois which emptied eastward at Rome, New York State. Its old shorelines, including cliffs, bars, beaches, and boulder pavements are easily identifiable features.... The Iroquois plain extends around the western part of Lake Ontario, from the Niagara River to the Trent River..., its width varying from a few hundred meters to about eight miles.*

(Chapman and Putnam 1984:190)

Soils within the study area are composed of Pontypool sand, and are separated by a band of Colborne sand loam which exists on either side of Shelter Valley Creek. Pontypool sand is a rapidly draining soil with rolling topography and some stones. The soils are not noted as agricultural soils and are predominantly used for pasture and occasionally grain crops where topography allows (Hoffman and Acton 1974). The nearest water source to the study area is Shelter Valley Creek, which flows along Shelter Valley Road between the two study area parcels. The creek is approximately 275 metres east of the western study area and 300 metres west of the eastern study area.

### 1.3.2 Pre-contact Indigenous Resources

It has been demonstrated that Indigenous people began occupying Ontario as the Laurentide glacier receded, as early as 9000 Before Common Era (BCE) (Ferris 2013:13). Much of what is understood about the lifeways of Indigenous peoples is derived from archaeological evidence and ethnographic analogy. In Ontario, Indigenous culture prior to the period of contact with European peoples has been distinguished into cultural periods based on observed changes in material culture. These cultural periods are largely based on observed changes in formal lithic tools, and separated into the Early Paleo-Indian, Late Paleo-Indian, Early Archaic, Middle Archaic and Late Archaic periods. Following the advent of ceramic technology in the Indigenous archaeological record, cultural periods are separated into the Early Woodland, Middle Woodland, and Late Woodland periods, based primarily on observed changes in formal ceramic decoration. It should be noted that these cultural periods do not necessarily represent specific cultural identities but are a useful tool for understanding changes in Indigenous culture through time. The current understanding of Indigenous archaeological culture is summarized in Table 2 below (Ellis and Ferris 1990).

**Table 2: Generalized Cultural Chronology for Southern Ontario**

Cultural Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 BCE	Spruce parkland / caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 - 8000 BCE	Smaller but more numerous sites



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Cultural Period	Characteristics	Time Period	Comments
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 BCE	Slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 BCE	Environment similar to present
Late Archaic	Lamoka (narrow points)	2500 - 1800 BCE	Increasing site size
	Broad Points	1800 - 1500 BCE	Large chipped lithic tools
	Small Points	1500 - 1100 BCE	Introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 BCE	Emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 BCE	Introduction of pottery
Middle Woodland	Dentate / Pseudo-Scallop Pottery	400 BCE - 550 CE	Increased sedentism
	Princess Point	550 - 900 CE	Introduction of corn
Late Woodland	Early Late Woodland Pottery	900 - 1300 CE	Emergence of agricultural villages
	Middle Late Woodland Pottery	1300 - 1400 CE	Long longhouses (100+ metres)
	Late Late Woodland Pottery	1400 - 1650 CE	Tribal warfare and displacement

The following summary of the pre-contact occupation of southern Ontario is based on syntheses in Archaeologix Inc. (2008), Damkar (1990), Ellis and Ferris (1990), Jacques Whitford (2008), Ramsden (1989), and Sutton (1990).

Between 9000 and 8000 BCE, Indigenous populations were sustained by hunting, fishing, and foraging and lived a relatively mobile existence across an extensive geographic territory. Despite these wide territories, social ties were maintained between groups. One method of maintaining social ties was gift exchange, evident through exotic lithic material documented on many sites (Ellis 2013:35-40).

By approximately 8000 BCE, evidence exists and becomes more common for the production of groundstone tools such as axes, chisels, and adzes. These tools themselves are believed to be indicative specifically of woodworking. This evidence can be extended to indicate an increase in craft production and arguably craft specialization. This latter statement is also supported by evidence, dating to approximately 7000 BCE of ornately carved stone objects which would be laborious to produce and have explicit aesthetic qualities (Ellis 2013:41). This is indirectly indicative of changes in social organization which permitted individuals to devote time and effort to craft specialization. Since 8000 BCE, the Great Lakes basin experienced a low-water phase, with shorelines significantly below modern lake levels (Stewart 2013: Figure 1.1.C). It is presumed that most human settlements would have been focused along these former shorelines. At approximately 6500 BCE, the climate had warmed considerably since the recession of the glaciers and the environment had grown more like the present day. Evidence exists at this time for an increase in population and the contraction of group territories. By approximately 4500 BCE, evidence exists from southern Ontario for the utilization of native copper, i.e., naturally occurring pure copper metal (Ellis 2013:42). The known origin of this material along the north shore of Lake Superior indicates the existence of extensive exchange networks across the Great Lakes basin.

At approximately 3500 BCE, the isostatic rebound of the North American plate following the melt of the Laurentide glacier had reached a point which significantly affected the watershed of the Great Lakes basin. Prior to this, the Upper Great Lakes had drained down the Ottawa Valley via the French and



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Mattawa river valleys. Following this shift in the watershed, the drainage course of the Great Lakes basin had changed to its present course. This also prompted a significant increase in water-level to approximately modern levels (with a brief high-water period); this change in water levels is believed to have occurred catastrophically (Stewart 2013:28-30). This change in geography coincides with the earliest evidence for cemeteries (Ellis 2013:46). By 2500 BCE, the earliest evidence exists for the construction of fishing weirs (Ellis *et al.* 1990: Figure 4.1). Construction of these weirs would have required a large amount of communal labour and are indicative of the continued development of social organization and communal identity. The large-scale procurement of food at a single location also has significant implications for permanence of settlement within the landscape. This period is also marked by further population increase and by 1500 BCE evidence exists for substantial permanent structures (Ellis 2013:45-46).

By approximately 950 BCE, the earliest evidence exists for populations using ceramics. Populations are understood to have continued to seasonally exploit natural resources. This advent of the ceramic technology is correlated, however, with the intensive exploitation of seed foods such as goosefoot and knotweed as well as mast such as nuts. The use of ceramics implies changes in the social organization of food storage as well as in the cooking of food and changes in diet. Fish also continued to be an important facet of the economy at this time. Evidence continues to exist for the expansion of social organization (including hierarchy), group identity, ceremonialism (particularly in burial), interregional exchange throughout the Great Lakes basin and beyond, and craft production (Williamson 2013:48-54).

By approximately 550 CE, evidence emerges for the introduction of maize into southern Ontario. This crop would have initially only supplemented Indigenous peoples' diet and economy (Birch and Williamson 2013:13-14). The archaeological evidence is supported by Mississauga oral history that speak of people coming into the Mississauga territory between 500 and 1000 CE and seeking permission to establish villages and an agricultural-based economy. Maize-based agriculture gradually became more important to societies and by approximately 900 CE permanent communities emerge which are primarily focused on agriculture and the storage of crops, with satellite locations oriented toward the procurement of other resources such as hunting, fishing, and foraging. This archaeologically defined culture, known as the Late Woodland in southern Ontario, is often divided into three temporal components: Early, Middle and Late Late Woodland. Sites associated with the Early Late Woodland period indicate that there was a continuation of similar subsistence practices and settlement patterns as the Middle Woodland. Villages tended to be small, with small longhouse dwellings that housed either nuclear or, with increasingly, extended families. Smaller camps and hamlets associated with villages served as temporary bases from which wild plant and game resources were acquired. Horticulture appears to have been for the most part a supplement to wild foods, rather than a staple.

The Middle Late Woodland period marks the point at which a fully developed horticultural system emerged, and at which point cultivars became the staple food source. By approximately 1250 CE, evidence exists for the common cultivation of historic Indigenous cultigens, including maize, beans, squash, sunflower, and tobacco. In this period villages become much larger than in the Early Late Woodland period, and longhouses also become much larger, housing multiple, though related, nuclear families. For those Indigenous peoples who began practicing cultivation, food production through horticulture resulted in the abandonment of seasonal mobility. Hunting, fishing, and gathering of wild food



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activities continued to occur at satellite camps. However, for the most part, most Iroquoian people inhabited large, sometimes fortified villages throughout southern Ontario.

During the Late Late Woodland period longhouses became smaller again, although villages became even larger. Several Huron village sites have been discovered in the region that contain material culture associated with both Huron and St. Lawrence Iroquoians, suggesting that St. Lawrence Iroquoians who had abandoned their home territory along the north shore of the St. Lawrence River and found refuge in the Trent Valley and Kawartha Lakes area (Ramsden 2016). The villages were abandoned in the 16th century and the region was used as a buffer between the Huron and the Five Nations Iroquois.

The Late Late Woodland period in the Trent River system and along the north shore of Lake Ontario is marked by the emergence of the Huron Iroquoian people, one of several discrete groups that emerge out of the Middle Late Woodland period. Pre-contact Huron villages have been documented in clusters along the north shore of Lake Ontario from just west of Toronto to Bellville, and north up through the Kawartha Lakes region. The Huron were similar to other Iroquoian societies in many ways, including material culture, semi-permanent settlement practices, and a tendency toward agricultural mixed with hunting and gathering subsistence strategy (Ramsden 1990). Huron settlements include large villages of several longhouses and camps for specialized extractive activities such as hunting and fishing, although there is discussion that these camps may actually be ancestral Mississauga sites. During the Late Late Woodland period, Huron settlements along the north shore of Lake Ontario begin to move through the Humber River, Don River, Duffins Creek/Rouge River and Trent River systems and eventually coalesce into what is now Simcoe County and the area traditionally identified as "Huronia" (Birch 2012).

These communities living within the region of the study area are believed to have possessed many cultural traits similar to the historical Indigenous Nations (Williamson 2013:55). Both Huron-Wendat and Anishnaabeg traditional history indicate that the Huron-Wendat and Anishnaabeg cohabited the region (Kapyrka 2018).

### 1.3.3 Registered Archaeological Sites and Surveys

In Canada, archaeological sites are registered within the Borden system, a national grid system designed by Charles Borden in 1952 (Borden 1952). The grid covers the entire surface area of Canada and is divided into major units containing an area that is two degrees in latitude by four degrees in longitude. Major units are designated by upper case letters. Each major unit is subdivided into 288 basic unit areas, each containing an area of 10 minutes in latitude by 10 minutes in longitude. The width of basic units reduces as one moves north due to the curvature of the earth. In southern Ontario, each basic unit measures approximately 13.5 kilometres east-west by 18.5 kilometres north-south. In northern Ontario, adjacent to Hudson Bay, each basic unit measures approximately 10.2 kilometres east-west by 18.5 kilometres north-south. Basic units are designated by lower case letters. Individual sites are assigned a unique, sequential number as they are registered. These sequential numbers are issued by the MHSTCI who maintain the *Ontario Archaeological Sites Database*. The project area is located within Borden block BaGI.



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

### Project Context

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

An examination of the *Ontario Archaeological Sites Database* has shown that no archaeological sites have been registered within one kilometre of the study area (Government of Ontario 2022a). A query of the *Ontario Public Register of Archaeological Reports* (Government of Ontario 2022b) identified one previous archaeological report documenting work within 50 metres of the study area, the Stage 1 assessment for the Project described in Section 1.3.4.

### 1.3.4 Summary of Previous Work

Stantec (2019) conducted a Stage 1 archaeological assessment as part of the Highway 401 Planning Study from Cobourg to Colborne, which includes the current study area. The Stage 1 study area began two kilometres to the east of Nagle Road and extended 18 kilometres to just west of Percy Street and included the current Highway 401 right-of-way and a 50 metre buffer to the north and south. The Stage 1 archaeological assessment (Stantec 2019) identified the current study area for the Project as retaining potential for the identification of archaeological resources.

### 1.3.5 Existing Conditions

There are two study areas, each of which are proposed to include a retaining wall, within the current assessment. One study area is located on the north side of Highway 401, adjacent to the Shelter Valley Golf Course, approximately 300 metres west of Shelter Valley Road and is approximately 0.64 hectares in size (Figure 2.1). This study area includes a 340 metre by 20 metre linear workspace within the Highway 401 right-of-way (ROW), and four 15 metre by 15 metre areas surrounding planned borehole workspaces along the northern edge of the main workspace outside of the Highway 401 ROW. This western study area comprises manicured lawn, scrubland, wooded area, and disturbed engineered foreslope or berm next to Highway 401. The second study area is located on the south side of Highway 401, approximately 207 metres east of Shelter Valley Road, and is approximately 0.83 hectares in size (Figure 2.2). This study area is an irregular shape measuring approximately 185 metres long by 50 metres wide. Generally, the northern half of this study area comprises the Highway 401 ROW, while the southern half is located outside of the Highway 401 ROW. This eastern study area comprises manicured lawn, scrubland, wooded area, and disturbed engineered foreslope or berm next to Highway 401.



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

### Field Methods

## 2.0 FIELD METHODS

Stage 2 archaeological assessment of the study area was conducted on October 14, 2021, and November 24, 2021, under Project Information Form (PIF) number P415-0319-2021 issued to Patrick Hoskins, MA, by the MHSTCI. As discussed in Section 1.3.5 and illustrated in Figure 2.1 and 2.2, the study area comprises two locations: the western study area of 0.64 hectares and the eastern study area of 0.83 hectares. For the Stage 2 archaeological assessment, a map of the study area for the Project was provided by the MTO and geo-referenced by Stantec's Geographical Information Services (GIS) team and a digital file (i.e., a shape file) created of the study areas. The digital file was uploaded to ArcGIS Field Maps powered by ESRI, customized by Stantec for archaeological survey and assessment, for digital data recording in the field. Data was recorded in the field on a handheld mobile device paired with a Trimble R1 Global Navigation Satellite System (GNSS) receiver to an accuracy of less than one metre.

During the Stage 2 archaeological survey, field, weather, and lighting conditions were suitable for the identification and recovery of archaeological resources. At no time was the archaeological assessment conducted when the field, weather, or lighting conditions were detrimental to the recovery of archaeological material (Table 3). Photographic documentation in Section 8.1 of this report confirms that field conditions met the requirements for a Stage 2 archaeological assessment, as per the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Section 7.9.6 Standard 1.a.; Government of Ontario 2011). Figures 6.1 and 6.2 provide an illustration of the Stage 2 assessment methods, as well as photograph locations and directions.

**Table 3: Weather and Field Conditions**

Date	Field Director	Activity	Weather	Field Conditions
October 14, 2021	Christian Meier (P1122)	Test pit survey, photo documentation	Warm and sunny	Soil was dry, friable, screens well
November 24, 2021	Lucas Hillcoat (R1145)	Test pit survey, photo documentation	Cool and sunny	Soil was dry, friable, screens well

Approximately 72.8% of the study area was inaccessible for ploughing and was subject to test pit survey at a five-metre interval in accordance with Section 2.1.2 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Each test pit was at least 30 centimetres in diameter and excavated five centimetres into sterile subsoil. The soils were then examined for stratigraphy, cultural features, or evidence of fill. Excavated soil was passed through six-millimetre mesh and the screened soil was used to backfill the excavated test pit. Soils consisted of brown sandy loam over top of yellow-white to orange sterile sand subsoils. As no archaeological resources were encountered during the test pit survey no additional test pit survey field methods were required. Photos 1 to 8 illustrate the test pit survey of the study area.



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

### Field Methods

Approximately 27.2% of the study area was composed of disturbed areas, including a gravel pathway along the borehole locations in the western study area, and engineered foreslope or berms associated with Highway 401 and its associated ROW. These areas were not surveyed as per Section 2.1 Standard 2.a of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011) but were photo documented as per Section 2.1 Standard 6 and Section 7.8.6 Standard 1.b of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Photos 9 to 11 illustrate typical examples of disturbance encountered within the study area.



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

Record of Finds

### 3.0 RECORD OF FINDS

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 4.

**Table 4: Documentary Records**

Document Type	Current Location of Document Type	Additional Comments
4 pages of field notes	Stantec office in Stoney Creek, Ontario	In original field book and photocopied in project file
1 digital map and data files	Stantec GIS server in Markham, Ontario	Stored digitally on central GIS server
54 digital photographs	Stantec server in London, Ontario	Stored digitally in project file and on central GIS server

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



## **STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

### Analysis and Conclusions

## **4.0 ANALYSIS AND CONCLUSIONS**

Stantec's (2019) Stage 1 archaeological assessment determined that the study area retained potential for the recovery of archaeological resources and Stage 2 archaeological assessment was required. Stantec was retained by the MTO to conduct Stage 2 archaeological assessment for the study area associated with the Project. The Stage 2 archaeological assessment of the study area was conducted on October 14, 2021 and November 24, 2021. No archaeological resources were identified during the Stage 2 assessment.



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

### Recommendations

## 5.0 RECOMMENDATIONS

No archaeological resources were identified during the Stage 2 archaeological assessment of the study area. Thus, in accordance with Section 2.2 and Section 7.8.4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **no further archaeological assessment of the study area is required**.

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



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

Advice on Compliance with Legislation

### 6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

*In accordance with Section 7.5.9 of the MHSTCI's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), the following standard statements are a required component of archaeological reporting and are provided verbatim from the MHSTCI's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011).*

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c O.18 (Government of Ontario 1990b). The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the study area of a development proposal have been addressed to the satisfaction of the MHSTCI, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

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

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (Government of Ontario 2002), requires that any person discovering 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 Government and Consumer Services is also immediately notified.



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

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## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

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## STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD

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**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Images

## 8.0 IMAGES

### 8.1 PHOTOGRAPHS

**Photo 1: Test pit survey of the western study area, facing northwest**



**Photo 2: Test pit survey of the western study area, facing east**



**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Images

**Photo 3: Test pit survey of the western study area, facing east**



**Photo 4: Test pit survey of the western study area, facing southwest**



**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Images

**Photo 5: Test pit survey of the eastern study area, facing northeast**



**Photo 6: Test pit survey of the eastern study area, facing northwest**



**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Images

**Photo 7: Test pit survey of the eastern study area, facing northeast**



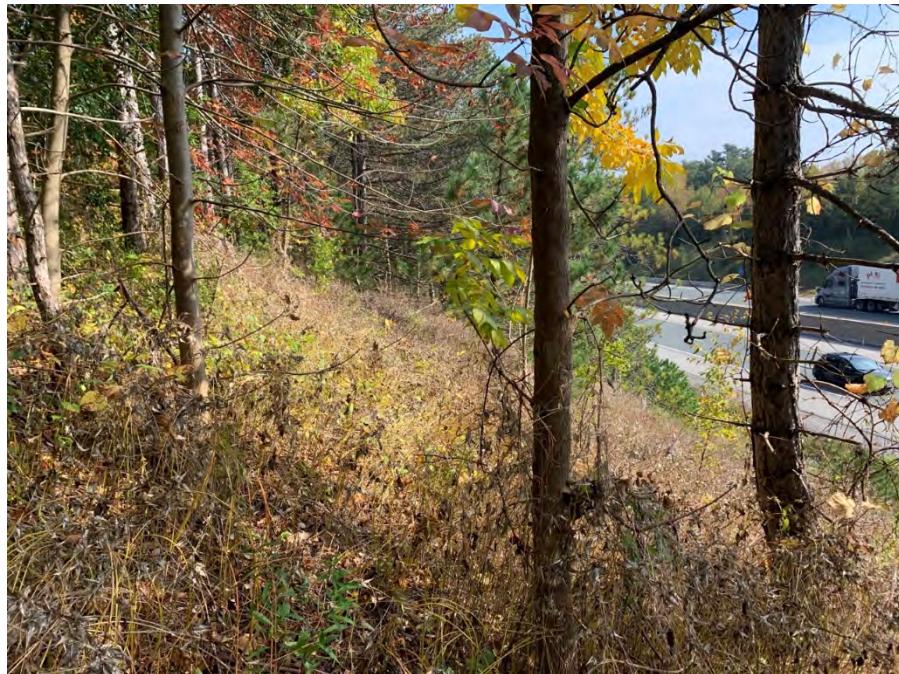
**Photo 8: Test pit survey of the eastern study area, facing southwest**



**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Images

**Photo 9: Previously disturbed engineered foreslope in the western study area, not surveyed, facing east**



**Photo 10: Previously disturbed engineered foreslope in the western study area, not surveyed, facing west**



**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Images

**Photo 11: Previously disturbed engineered foreslope in the eastern study area, not surveyed, facing southwest**



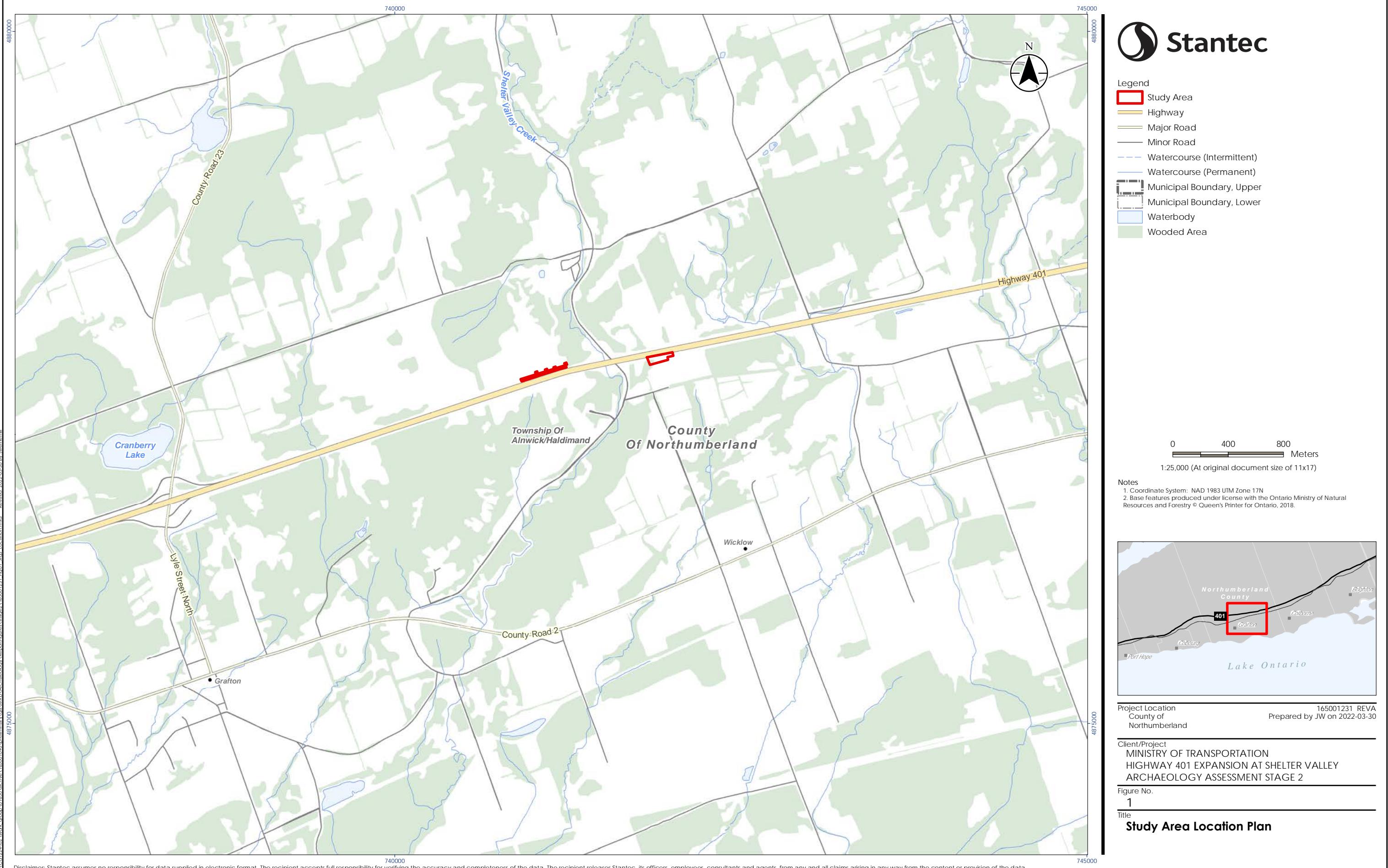
**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Maps

## **9.0 MAPS**

Maps of the Stage 2 archaeological assessment of the study area follow on succeeding pages.







Legend



MTO Right-Of-Way

Study Area

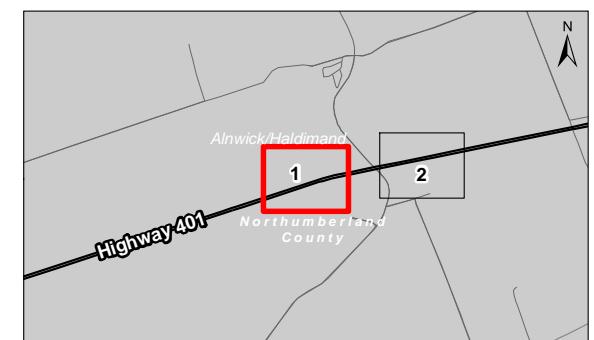
A scale bar with markings at 0, 50, and 100 meters. The text 'Meters' is written to the right of the bar.

0                    50                    100                    Meters

1:2 000 (At original document size of 11x17)

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.
3. Orthoimagery obtained from Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



Project Location 165001231 REVA  
County of Prepared by JWH on 2022-03-30

Client/Project  
**MINISTRY OF TRANSPORTATION**  
**HIGHWAY 401 EXPANSION AT SHELTER VALLEY**  
**ARCHAEOLOGY ASSESSMENT STAGE 2**

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Figure No.  
2 - 1

## Title

# Location of Study Area - Western Study Area



Legend

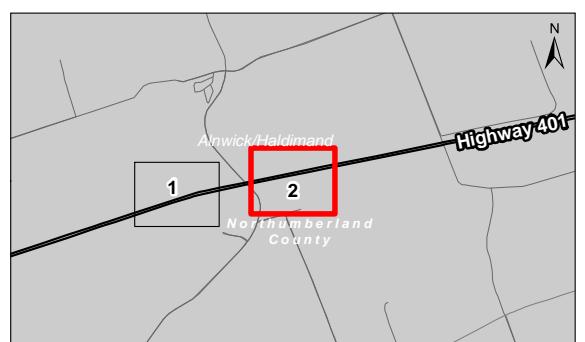
MTO Right-Of-Way

Study Area



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.
3. Orthoimagery obtained from Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



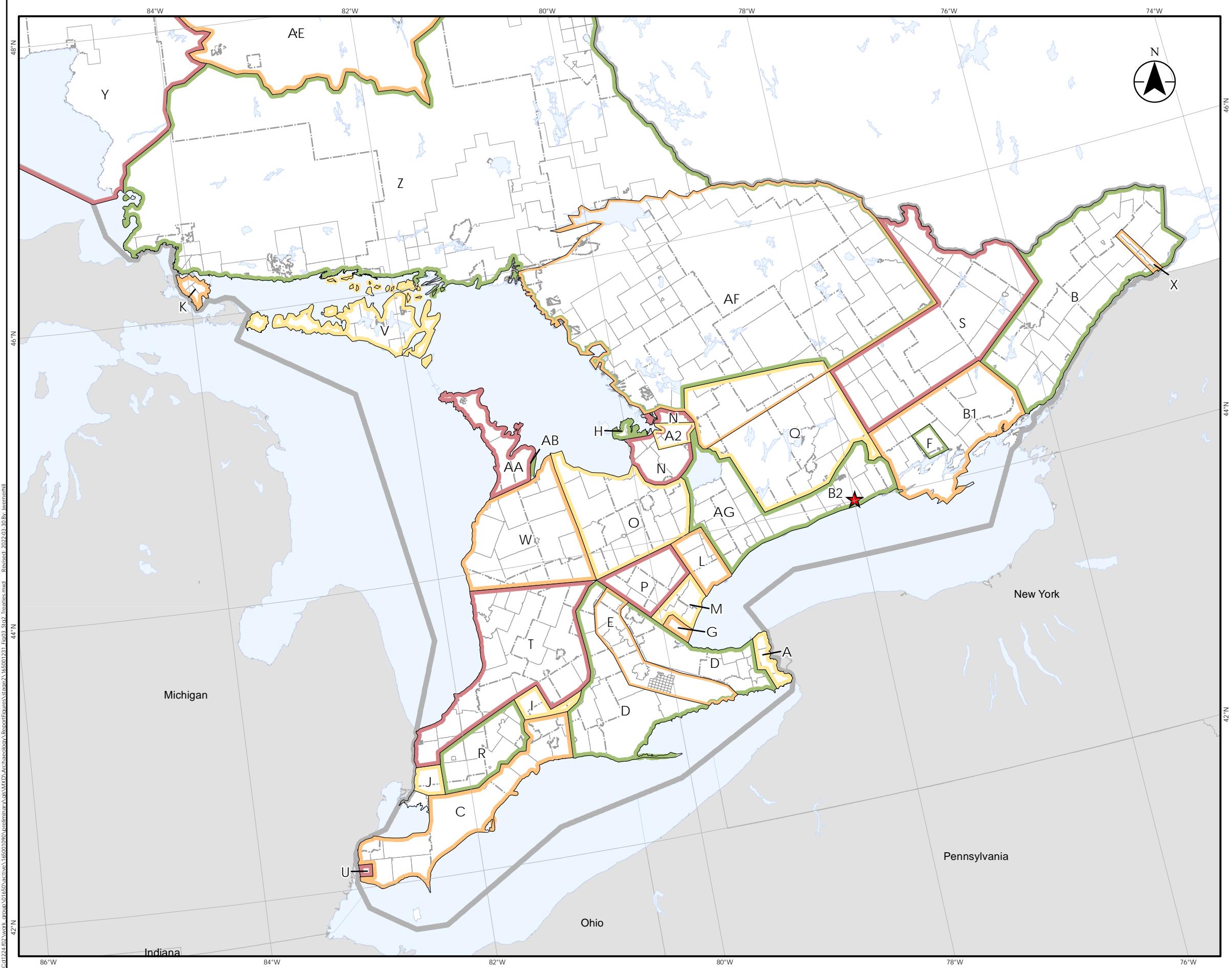
Project Location 165001231 REVA  
County of Prepared by JWH on 2022-03-30

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Client/Project  
**MINISTRY OF TRANSPORTATION**  
**HIGHWAY 401 EXPANSION AT SHELTER VALLEY**  
**ARCHAEOLOGY ASSESSMENT STAGE 2**

Figure No.  
2 - 2

## Location of Study Area - Eastern Study Area



#### Legend

- Study Area (Red Star)
- Municipal Boundary - Upper Tier (Dashed Line)
- Municipal Boundary - Lower or Single Tier (Solid Line)
- Waterbody (Blue)

#### Ontario Treaties (from Morris 1943)

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

#### Notes

- Coordinate System: NAD 1983 Statistics Canada Lambert
- Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2022.
- Treaty boundaries adapted from Morris 1943 (1964 reprint).

Project Location  
Province of Ontario

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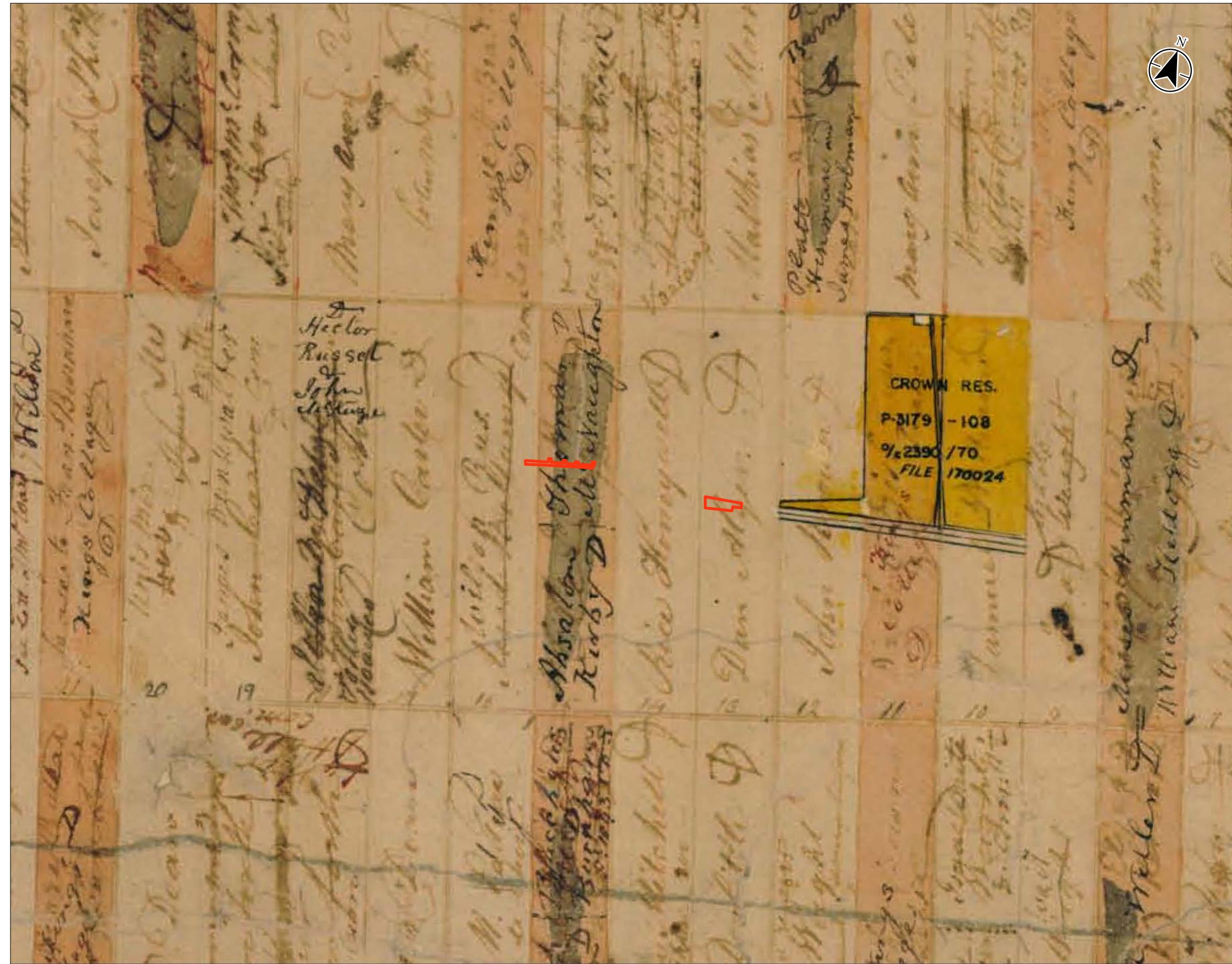
Client/Project  
MINISTRY OF TRANSPORTATION  
HIGHWAY 401 EXPANSION AT SHELTER VALLEY  
ARCHAEOLOGY ASSESSMENT STAGE 2

Figure No.

3

title

**Treaties and Purchases  
(Adapted from Morris 1943)**



Legend  
Study Area (Approximate)

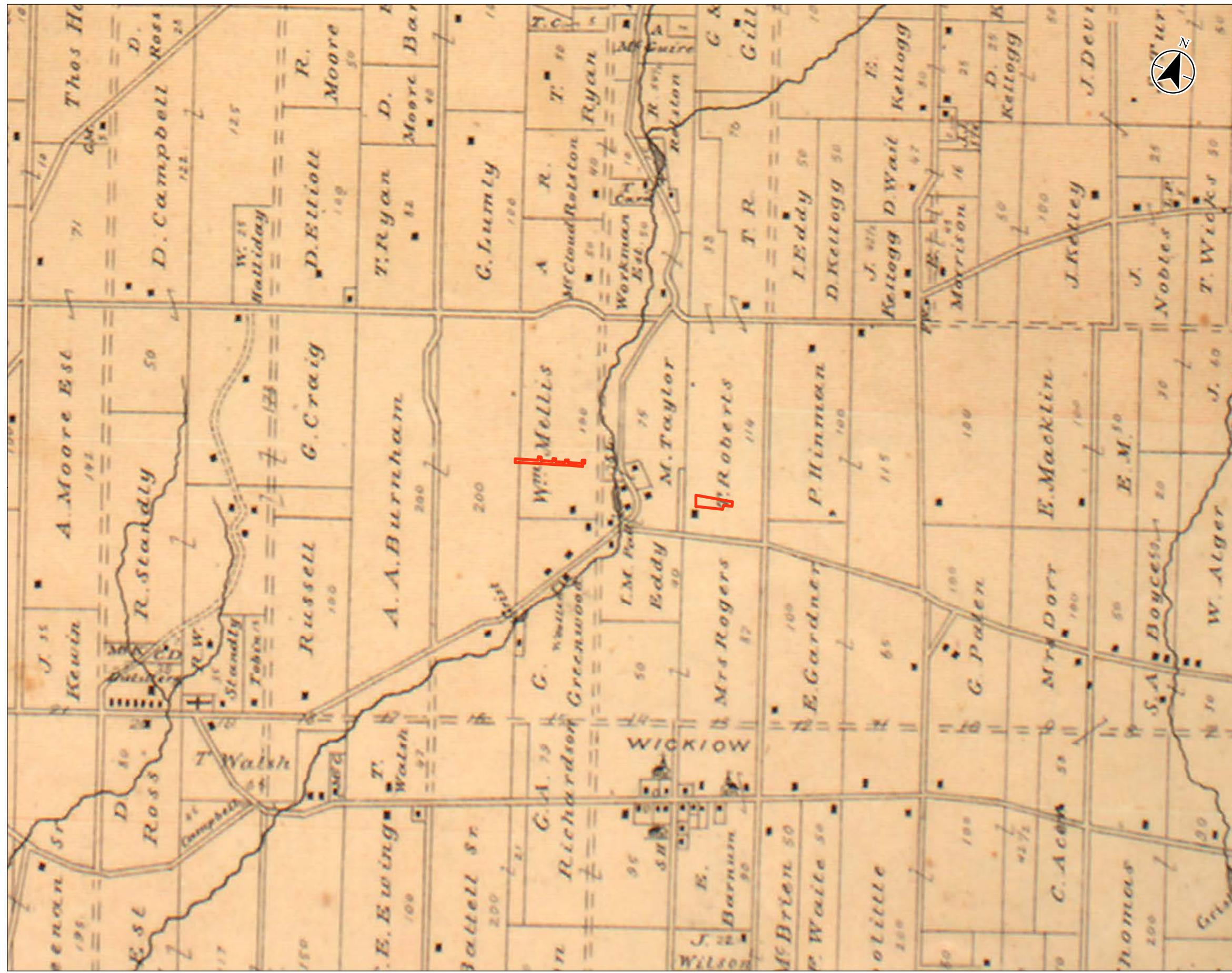
Notes  
1. Historical image not to scale  
2. Reference: Jones, Augustus. 1792. Survey Map of the Township of Haldimand.  
Peterborough: Ministry of Natural Resources, Office of the Surveyor General.



Project Location  
County of  
Northumberland  
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HIGHWAY 401 EXPANSION AT SHELTER VALLEY  
ARCHAEOLOGY ASSESSMENT STAGE 2

Figure No.  
4  
Title  
Portion of the 1829 Survey of Haldimand  
Township



### Legend

## Notes

Historical image not to scale  
1. Reference: Belden & Co. 1878. Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont. Toronto: H. Belden & Co.



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**Project Location**  
County of  
Northumberland

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**HIGHWAY 401 EXPANSION AT SHELTER VALLEY**  
**ARCHAEOLOGY ASSESSMENT STAGE 2**

Figure No.

5

## Portion of the 1878 Map of Haldimand Township



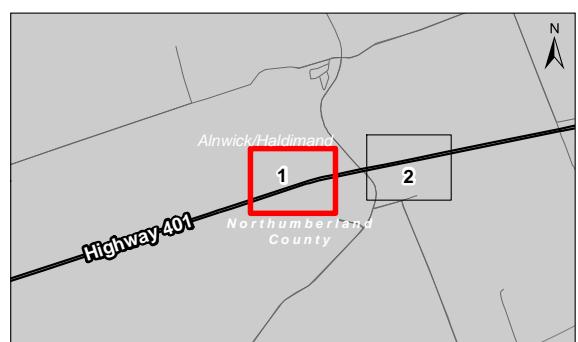
Legend

- Photo Location and Direction
- MTO Right-Of-Way
- Study Area
- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
- Test Pit Survey, 5 m Intervals

1:2,000 (At original document size of 11x17)

Notes

- Coordinate System: NAD 1983 UTM Zone 17N
- Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.
- Orthoimagery obtained from Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



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HIGHWAY 401 EXPANSION AT SHELTER VALLEY  
ARCHAEOLOGY ASSESSMENT STAGE 2

Figure No.  
6 - 1  
Title  
Stage 2 Methods and Results - Western  
Study Area



Legend

- Photo Location and Direction
- MTO Right-Of-Way
- Study Area
- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
- Test Pit Survey, 5 m Intervals

Notes

- Coordinate System: NAD 1983 UTM Zone 17N
- Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.
- Orthoimagery obtained from Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



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HIGHWAY 401 EXPANSION AT SHELTER VALLEY  
ARCHAEOLOGY ASSESSMENT STAGE 2

Figure No.  
6 - 2

Title  
Stage 2 Methods and Results - Eastern Study Area

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT: HIGHWAY 401 EXPANSION AT SHELTER VALLEY ROAD**

Closure

## **10.0 CLOSURE**

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

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

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Quality Review \_\_\_\_\_  
(signature)

**Colin Varley - Senior Associate, Senior Archaeologist**

Independent Review \_\_\_\_\_  
(signature)

**Parker Dickson – Senior Associate, Senior Archaeologist**

