



**Stage 1 Archaeological Assessment: Municipal
Class Environmental Assessment for Four Bridges
(2-WG, 7-E, 5-E, 3-E), Part of Municipal ROWs
between Concessions 2 and 6, former Townships of
Eramosa and Garafraxa, now Township of Centre
Wellington, Wellington County, Ontario**

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Executive Summary

Parslow Heritage Consultancy Inc. (PHC) was retained by R.J. Burnside & Associates Limited (the Proponent) to conduct a Stage 1 archaeological assessment for four bridges in the Township of Centre Wellington, identified as 2-WG, 7-E, 5-E, and 3E, former Townships of Eramosa and Garafraxa, now Township of Centre Wellington, County of Wellington, Ontario. The four bridges are located within municipally owned road right-of-way (ROW) of 3 Line (2-WG), Third Line (7-E), Fourth Line (5-E), and 6 Line (3-E) (Map 1, Map 2) and are located between the following historical lots:

- ▶ 2-WG – Between Lot 1, Concession 3 and Lot 1, Concession 4, Former Township of Garafraxa
- ▶ 7-E – Between Lot 28, Concession 2 and Lot 28, Concession 3, Former Township of Eramosa
- ▶ 5-E – Between Lot 28, Concession 3 and Lot 28, Concession 4, Former Township of Eramosa
- ▶ 3-E – Between Lot 29, Concession 5 and Lot 29, Concession 6, Former Township of Eramosa

The objectives of the Stage 1 archaeological assessment are defined in the Ministry of Citizenship and Multiculturalism's (MCM) *Standards and Guidelines for Consultant Archaeologists* (2011). A Stage 1 archaeological assessment provides compiled information about the study area's geography, history, current land conditions as well as any previous archaeological research and listed archaeological sites on or within the vicinity, as well as specific direction for the protection, management and/or recovery of these resources.

The study areas consist of municipal ROWs, which include gravel roads with manicured lawn on either side, steep ditches, and overgrown shorelines. A negative indicator of archaeological potential is extensive, below-grade land disturbance. Disturbance associated with soil manipulation, grading, and stockpiling of soils were encountered in association with the construction of the bridges and gravel roads within the study areas. Areas of low archaeological potential were also encountered in the form of low-lying wet environments and steep ditches.

A property inspection was conducted by Chris Lemon (R289) on 13 May 2024, under favourable weather conditions. Based on the findings of the property inspection, it has been determined that the study areas have been subject to extensive disturbance.

Based on the results of the Stage 1 archaeological assessment, the following recommendations are provided:

1. The study areas were identified to exhibit low archaeological potential due to previous disturbance or poorly drained conditions. The study areas are considered free of archaeological concerns and no further archaeological assessment is recommended (Map 6).

It is requested that this report be entered into the Ontario Public Register of Archaeological Reports, as provided for in Section 65.1 of the Ontario Heritage Act.

Project Personnel

Project Manager/Licensee	Jamie Lemon, M.A. (P1056)
Field Director	Chris Lemon, B.Sc., Dip. Heritage, CAHP (R289)
Report Preparation	Jamie Lemon
Graphics	Gabriel Dunk-Gifford

Acknowledgements

Andrew Dawson	R.J. Burnside and Associates Ltd.
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Project Context

This section of the report provides the context for the archaeological assessment and covers three areas: development context, historical context, and archaeological context.

Development Context

Parslow Heritage Consultancy Inc. (PHC) was retained by R.J. Burnside & Associates Limited (the Proponent) to conduct a Stage 1 archaeological assessment for four bridges in the Township of Centre Wellington, identified as 2-WG, 7-E, 5-E, and 3E, former Townships of Eramosa and Garafraxa, now Township of Centre Wellington, County of Wellington, Ontario. The four bridges are located within municipally owned road right-of-way (ROW) of 3 Line (2-WG), Third Line (7-E), Fourth Line (5-E), and 6 Line (3-E) (Map 1, Map 2) and are located between the following historical lots:

- ▶ 2-WG – Between Lot 1, Concession 3 and Lot 1, Concession 4, Former Township of Garafraxa
- ▶ 7-E – Between Lot 28, Concession 2 and Lot 28, Concession 3, Former Township of Eramosa
- ▶ 5-E – Between Lot 28, Concession 3 and Lot 28, Concession 4, Former Township of Eramosa
- ▶ 3-E – Between Lot 29, Concession 5 and Lot 29, Concession 6, Former Township of Eramosa

The objectives of the Stage 1 archaeological assessment are to gather information about the study area's geography, history, current land conditions, as well as any previous archaeological research and listed archaeological sites on or within the vicinity. Methods to achieve these objectives include:

- ▶ Review of relevant historic and environmental literature pertaining to the study area
- ▶ Review of an updated listing of archaeological sites within 1 km from the Ontario Archaeological Sites Database (OASD)
- ▶ Review of all archaeological assessments within 50 m of the study area
- ▶ Consultation with individuals knowledgeable about the study area, as necessary
- ▶ Review of historic maps and aerial imagery of the study area
- ▶ A property inspection

Permission to access the study area was provided by the Proponent and no limits were placed on this access. All archaeological work documented in this report was completed under the Ministry of Citizenship and Multiculturalism's (MCM) *Standards and Guidelines for Consultant Archaeologists* (2011).

Historical Context

This section describes the past and present land use and settlement history of the property, and any other relevant historical information gathered through the background research.

Indigenous History

Most of the archaeological record found in Ontario – the tools, animals, plants, structures, soils, and contexts recovered from the landscape – are the direct heritage of the Indigenous communities that currently live in south-central Ontario and adjacent provinces and states. Archaeology is the sole non-verbal means of reconstructing this ancient past; thus, understanding the lives and histories of these early peoples is both a challenge and a responsibility. Every new site identified and documented provides a unique opportunity to learn more about the over 11,000-year history in Ontario. Table 1 provides an archaeological timeline for the presence of Indigenous people in Ontario, drawn from Ellis and Ferris (1990).

TABLE 1: OVERVIEW OF THE CULTURAL CHRONOLOGY OF SOUTHERN ONTARIO

Period	Characteristics	Time	Comments
Early Paleo	Fluted Points	9,000 – 8,400 BC	Caribou hunters
Late Paleo	Hi-Lo Points	8,400 – 8,000 BC	Smaller but more numerous sites
Early Archaic	Kirk, Nettling, and Bifurcate Base Points	8,000 – 6,000 BC	Slow population growth
Middle Archaic I	Stanley/Neville, Stemmed Points	6,000 – 4,000 BC	Environment similar to present
Middle Archaic II	Thebes, Otter Creek Points	4,000 – 3,000 BC	
Middle Archaic III	Brewerton Side and Corner Notched Points	3,000 – 2,000 BC	
Late Archaic I	Narrow Point (Lamoka, Normanskill)	2,000 – 1,800 BC	Increasing site size

	Broad Point (Genesee, Adder Orchard)	1,800 – 1,500 BC	Large chipped lithic tools
	Small Point (Crawford Knoll, Innes, Ace-of- Spades)	1,500 – 1,100 BC	Introduction of bow hunting
Terminal Archaic	Hind Points	1,100 – 950 BC	Emergence of true cemeteries
Early Woodland	Meadowood Points	950 – 400 BC	Introduction of pottery
Middle Woodland	Dentate/Pseudo- Scallop Pottery	400 BC – AD 500	Increased sedentism
	Princess Point	AD 550 – 900	Introduction of corn
Late Woodland	Early Ontario	AD 900 – 1,300	Emergence of agricultural villages
	Middle Ontario	AD 1,300 – 1,400	Large longhouses (100m+)
	Late Ontario (Neutral)	AD 1,400 – 1,650	Tribal warfare and displacement
Contact	Various Algonkian and Iroquoian Groups	AD 1,700 – 1,875	Early written records and treaties

Paleo and Archaic Time Periods

The first human settlement in south-central Ontario can be traced back 11,000 years, just after the end of the Wisconsin Glacial Period, when this area was settled by Indigenous groups that had been living south of the Great Lakes. The period of these first inhabitants is known as the Paleo (Ellis and Deller 1990), a time in which bands of small hunter gatherer, consisting of probably no more than 25-35 individuals, followed a pattern of seasonal mobility extending across wide-ranging territories shaped extensively by the ebb and flow of glaciers.

The Paleo period was a time of rapid environmental change. As the glaciers retreated sparse tundra and evergreen forests gave way to extensive deciduous forests and water levels in the Great Lakes rose dramatically (Ellis et al 1990). By the end of this period (8000 BC), many of the large game species that Paleo hunters had relied upon either moved further north, or as in the case of the mastodons and mammoths, become extinct. Thus, the end of the Late Paleo Period was heralded by numerous technological and cultural innovations, likely as responses to the dynamic nature of the post-glacial environment and region-wide population increases. These innovations continue to be found in sites belonging to the direct descendants of the Paleo, groups of people known by archaeologists as “Archaic.”

The term “Archaic” designates preagricultural sites lacking in pottery and other specific artefact forms (Ellis et al 1990) and are primarily distinguished from Paleo sites by a significantly greater degree of artefact diversity and regional variety. Archaic people began to make stone tools out of coarser raw material by laboriously grinding the rock into the desired shape. The introduction of ground stone tools such as celts and axes, suggests the beginnings of a simple woodworking industry and an increased use of localized stone sources indicates that Archaic populations may have been less nomadic than their Paleo ancestors (Munson and Jamieson 2013). It is likely that gradual infilling of the landscape resulting from rising water levels and population growth necessitated the development of strategies to support more people from smaller areas of liveable land.

During the Late Archaic Period (2,500-950 BC) the trends towards decreased territory size, a broadening subsistence base, population growth and increasing sedentism continued and it is during this period that the first true cemeteries appeared. During the Late Archaic Period, if an individual died while his or her group happened to be at some distance from their group cemetery, the bones would be kept until they could be placed in the cemetery, suggesting that people returned with greater frequency to the same areas. These first cemeteries may have served as visible reminders of a group’s cultural history and demarcated their rights to an area. Living in a time before farming or pottery, early hunter gatherers hunted, fished, and travelled in a land that was dynamic, ever-changing, and far removed from modern or historic ways of life.

Woodland Time Period

The Early Woodland Period (950 to 400 BC) is distinguished from the Late Archaic Period primarily by the gradual adoption of ceramic technology. However, in many ways the life ways of people in this period show a high degree of continuity with the preceding Late Archaic and it is not until the Middle Woodland (300 BC to AD 500) that there is an evident shift in settlement and subsistence patterns towards a sedentary way of life.

Middle Woodland peoples relied much more extensively on ceramic technology and vessels were often heavily decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. The Middle Woodland provides a major point of departure from the Archaic and Early Woodland; fish was becoming an increasingly important part of diets and sites along the margins of major lakes and rivers

appear to have functioned as base camps instead of seasonally utilized locations, indicating a greater degree of sedentism and reliance on fishing technology.

The Late Woodland Period is widely accepted as the beginning of a truly agricultural way of life in south-central Ontario. Researchers have suggested that a warming trend during this period may have encouraged the spread of maize into southern Ontario by providing a greater number of frost-free days (Stothers and Yarnell 1977). The presence of carbonized corn kernels and cob fragments recovered from sub-floor storage pits indicates that agriculture was becoming a vital part of the Early Iroquoian economy.

The Middle Ontario Iroquoian Period (AD 1300-1400) witnessed several interesting developments in terms of settlement patterns and artefact assemblages. The size of villages and houses increased dramatically, with house lengths almost doubling to an average of 30m. Possible explanations for these shifts involve changes in economic and socio-political organization (Dodd et al. 1990); small villages may have amalgamated to form larger communities for mutual defence (Dodd et al. 1990). These large villages were often heavily defended with numerous rows of wooden palisades, suggesting that defence may have been one of the rationales for smaller groups banding together.

By the late 1400s major villages covered as many as 4-5 hectares and would have contained over 2,000 individuals each. A change in the orientation of longhouses at this time may indicate the initial development of the tribes and nations which were a characteristic of the historically known Iroquoian peoples (Dodd et al. 1990).

After AD 1450, house lengths begin to decrease, with houses dating between AD 1500-1580 averaging a mere 30 m in length. The even shorter houses witnessed on Historical Period sites can be at least partially attributed to the population reductions associated with the introduction of European diseases such as smallpox (Lennox and Fitzgerald 1990) which, in the span of a few years, had reduced the population to a mere 30,000 people. With the deaths of many bearers of oral history in the 1630's much of the ancient oral history in Ontario was lost. Archaeology provides an alternative means of understanding pre-European history by providing unique information on the movement of people throughout the landscape, their interactions with one another and with the environment, over the course of 13,000 years.

Historic Indigenous Period

At the time of first contact with the French, in 1615 AD, the traditional territory of the Huron-Wendat, known as Wendake, roughly stretched between the Canadian Shield, Lake Ontario and the Niagara Escarpment; it has been suggested the Huron-Wendat population at this time was approximately 30,000 individuals (Warrick 2008; Heidenreich 1978).

In the 1640s the Haudenosaunee, whose territory was located south of the lower Great Lakes, invaded Huron-Wendat territory, largely due to the decrease of available beaver pelts. The majority of the Huron-Wendat population sought sanctuary within the communities of the Petun, Neutral and other neighbouring groups, after numerous Huron-Wendat village were destroyed (Stone and Chaput 1978). Commencing in the 1660s, the Haudenosaunee controlled most of southern Ontario (Schmalz 1991;

Williamson 2013). Four hundred years ago Ontario was home to an estimated 75,000 Indigenous people, divided into two major cultural groups – Algonquians (Anishinaabeg or Anishinaabe) and Iroquoians (Haudenosaunee).

During the mid-17th century, several Algonquin-speaking linguistic and cultural groups within the Anishinaabeg (or Anishinaabe) began to challenge the Haudenosaunee dominance in the region (Johnston 2004; Gibson 2006). Prior to this, the Anishinaabeg were located primarily inland from the north shore of Lake Huron (MCFN nd). From 1653 to 1662, following a series of attacks against the Haudenosaunee by groups within the Anishinaabeg, Haudenosaunee dominance in the region began to fail (Warrick 2008; Schmalz 1991). By the 1690s, Haudenosaunee settlements along the northern shores of Lake Ontario were abandoned (Williamson 2013). Following several battles throughout southern Ontario, the Anishinaabeg replaced the Haudenosaunee in area at the start of the 18th century (Gibson 2006; Schmalz 1991).

European Treaties and Deeds

The study areas are located on lands that were part of the Between the Lakes Treaty (Treaty 3, 1792) as well as lands that were part of Treaty 4, 1793, known as the Simcoe Patent. As described by Wybenga (2017:6):

Recognizing that under the terms of the Royal Proclamation of 1763 the land needed to be purchased from its owners before the resettlement of the Grand River Valley could begin, Col. John Butler was sent to negotiate with the Mississaugas at the western end of Lake Ontario. On May 22, 1784, for the sum of £1180 worth of trade goods, the Mississaugas of the Credit ceded to the Crown approximately 3 000 000 acres of land located between Lakes Huron, Ontario, and Erie. Of those lands, some 550 000 acres were granted to the Six Nations in the Haldimand Proclamation of October 25, 1784, with the remainder to be utilized for the settlement of other Loyalists.

The British issued the Haldimand Proclamation in 1784. The Proclamation granted a tract of land, often referred to as the Haldimand Tract, to the Six Nations in recognition of their support of the Crown during the American Revolution (Filice 2016). This tract of land extended for 10 km on either side of the Grand River. In May of 1784, Haldimand signed an accord with the Mississauga chiefs to cede, with the largest portion of this going to the Haudenosaunee (Filice 2016).

In 1791, the Crown appointed surveyor Augustus Jones to refine the boundaries of the tract. During this process, Jones established straight-lined boundaries, rather than following the curves of the river; thus, reducing the boundaries of the Haldimand Tract. (Filice 2016). With the reduction in territory, the Thayendanegea petitioned John Graves Simcoe to gain control over the Haldimand Tract. Simcoe made the decision to remedy the situation by creating a compromise between the Crown and Six Nations (Filice 2016).

The Simcoe Patent, which was issued in 1793, confirmed the newly established boundaries as marked by Augustus Jones. The patent imposed a limit of 111,000 hectares on the Haldimand Tract, which was to be used exclusively by the Six Nations.

Stage 1 Archaeological Assessment: Municipal Class Environmental Assessment for Four Bridges (2-WG, 7-E, 5-E, 3-E), Part of Municipal ROWs between Concessions 2 and 6, former Townships of Eramosa and Garafraxa, now Township of Centre Wellington, Wellington County, Ontario

After the Haudenosaunee had ceded some of their land to the Crown, the remaining land was available to be leased, surrendered or sold. According to the patent, any land transactions of the Six Nations had to be approved by the Crown. Nevertheless, the document allowed the Six Nations to sell parts of the territory to the government when needed (Filice 2016).

The Simcoe Patent, however, did not address the issue of land title to the territories by the headwaters of the Grand River resulting in a continuing dispute between the Haudenosaunee and the Ontario government. Still, the Thayendangegea of the Six Nations view this patent as a reinforcement of the Crown's trusteeship interpretation of the title; rejecting the Simcoe Patent claiming it was not binding on them (Filice 2016).

Euro-Canadian Settler History

Following The Clergy Endowments (Canada) Act of 1791, what was then the Province of Quebec (including the study area) was divided into four political districts within the Province of Upper Canada; the four political districts were renamed Eastern, Midland, Home, and Western, after previously being called Kunenburg, Mechlenburg, Nassau, and Hesse (Hall 2023). The study area fell within the former Hesse District and later the Western District.

The Western District initially included all lands between an arbitrary "north and south line intersecting the extreme projection of Long Point into the Lake Erie, on the northerly side of the said Lake Erie" (Lloyd 1906). In 1793, John Graves Simcoe, the first Lieutenant Governor of Upper Canada, further subdivided each district into counties and townships, and European settlement began shortly after (Hunter 1909). The study area is located in the County of Wellington, in the former Geographic Townships of Eramosa and Garafraxa, now the Township of Centre Wellington.

Wellington County and the Townships of Eramosa and Garafraxa

Initially set apart from the Western District in 1838, the District of Wellington was formed to contain the present counties of Wellington, Waterloo, and Grey, as well as a portion of the County of Dufferin (Lloyd 1906). By 1852, Wellington separated from Waterloo, and a year later Wellington County was established consisting of several townships and towns, including, Amaranth, Arthur, Eramosa, Erin, Guelph, Garafraxa, Maryborough, Nichol, Peel, Pilkington, and Puslinch (Wellington County 2023). By 1879, the City of Guelph was incorporated and withdrawn from the county. The amalgamation of the county in 1999 resulted in the formation of seven new municipalities, including the Township of Centre Wellington which included the town of Fergus, Village of Elora and the Townships of Nichol, Pilkington, West Garafraxa and a portion of Eramosa. (Wellington County 2023).

The Township of Eramosa was first surveyed in 1819 by Samuel Ryckman. It is thought that Robert Ramsey was the first European descendant settler in Eramosa, on Lot 1, Concession 3. In 1827, there were 27 households in the township, with a population of 112. The township was regarded as one of the finest farming areas in Ontario (Middleton 1927). Settlement was slow in Eramosa in the first few decades after the 1819 survey. Initially lots were offered free to settlers (with settlement conditions); a large portion of the township was granted to United Empire Loyalists, who held the land

for speculation (Chapple 1964). More rapid settlement in the township commenced in the 1840s, mostly immigrants from the British Isles; in this decade small urban hamlets developed to serve the surround farm areas (Chapple 1964). From 1851 to 1871, Eramosa experienced a period of prosperity, attributed in part to the establishment of the Grand Trunk Railway through Eramosa, including a station in Rockwood. The population of Eramosa peaked in 1871, and then steadily declined until the 1951 census.

Garafraxa Township was surveyed in 1821 by Samuel Ryckman. Like Eramosa Township, European descendant settlement in the first half of the 19th century was slow, with no major urban centres established in the township. In 1869, the eastern portion of the township was ceded to Dufferin County, creating West Garafraxa (including bridge 2-WG) and East Garafraxa. A key feature of the Geographic Township of West Garafraxa is Lake Belwood, located northwest of the bridge. Lake Belwood is a reservoir on the Grand River created by the construction of the Shand Dam in 1942 for flood control and the generation of hydroelectricity.

Past and Current Land Uses of Study Areas

The study areas are situated within the right-of-way (ROW) between the following historical lots:

- ▶ 2-WG – Between Lot 1, Concession 3 and Lot 1, Concession 4, Former Township of Garafraxa
- ▶ 3-E – Between Lot 29, Concession 5 and Lot 29, Concession 6, Former Township of Eramosa
- ▶ 5-E – Between Lot 28, Concession 3 and Lot 28, Concession 4, Former Township of Eramosa
- ▶ 7-E – Between Lot 28, Concession 2 and Lot 28, Concession 3, Former Township of Eramosa

Table 2 provides an overview of the owners of each lot and concession as well as notable archaeological features associated with the 1861 *County Map of Wellington County* and the 1877 *Illustrated Historical Atlas of Wellington County* maps (Map 3, Map 4). No archaeological features are depicted within the study areas on either map; this does not mean the properties were vacant, only that the landowners did not subscribe to the map publisher.

TABLE 2: OVERVIEW OF LOT AND CONCESSION OWNERSHIP

Bridge Identifier	Lot	Con.	1861 Map Occupants	1877 Map Occupants
2-WG	1	3	Part Lot 1, Concession 3 illustrated as 'Non-resident', no historical features are depicted.	J. <i>Illegible</i> shown as owning the east quarter of lot; no historical features are depicted.

	1	4	William Rutherford shown as owning lot, no historical features are depicted.	O. Allen shown as owning the west half of lot; one residential structure illustrated, north of study area (and possibly representing extant house north of study area).
3-E	29	5	Isaac Williams shown as owning the east half of lot; no historical features are depicted.	John Leslie shown as owning the east half of lot; Shiloh post office depicted within lot, north of study area.
	29	6	John Awrey shown as owning the entire lot; a school house is illustrated in the northwest corner of the lot, outside the study area.	No owner shown as owning west half of the lot; sawmill depicted, possibly within study area and school house illustrated north of study area.
5-E	28	3	Phil Frewre shown as owning the east half of lot; no historical features are depicted.	F. Fruer shown as owning the east half of lot; no historical features are depicted.
	28	4	Patrick Malone shown as owning the west half of lot; no historical features are depicted.	P. Mellon shown as owning the west half of lot; one residential structure illustrated north of study area.
7-E	28	2	John Wood shown as owning the east half of lot; no historical features are depicted.	No owner shown as owning east half of the lot; no historical features are depicted.
	28	3	James Armstrong shown as owning the west half of lot; no historical features are depicted.	J. Wood shown as owning the west half of lot; one residential structure illustrated southeast of study area.

A review of the 1954 aerial photograph depicts the study areas as unmodified during this time, no structures are illustrated within or immediately adjacent to the study areas.

Archaeological Context

Archaeological Sites and Previous Assessments

The registered archaeological site records kept by the MCM were consulted so that an inventory of archaeological resources could be compiled. In Ontario, information

concerning archaeological sites is stored in the Ontario Archaeological Sites Database maintained by the MCM. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden block is approximately 13km east to west and approximately 18.5km 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.

According to the *Standards and Guidelines for Consultant Archaeologists*, all registered or known archaeological sites within a minimum 1 km distance from the study areas must be listed. No archaeological sites were found within 1 km of the bridges.

A search on archaeological fieldwork carried out within the limits of, or immediately adjacent (within 50 metres) to, the study areas was conducted. No archaeological reports have been registered adjacent to, or within the study areas.

The Natural and Physical Environment

The study areas are situated within the Guelph Drumlin Field physiographic region, which is described as:

The drumlins of this field are not so closely grouped as those of some other areas and there is more intervening low ground, which is largely occupied by fluvial materials. The till in these drumlins is loamy and calcareous, and was derived mostly from dolostone of the Amabel Formation so strategically exposed along the Niagara Cuesta...The till throughout is rather stony, with large surface boulders being more numerous in some localities than others...The ice which moulded this drumlin field advanced from the southeast and the front of the melting receding glacier was at right angles to this, that is, down slope of the plain. The drainage of the ice front was consequently able to find progressively lower and lower outlets, so that the drumlin field is furrowed by more or less parallel valleys running almost at right angles to the trend of the drumlins themselves. There are also numerous interconnecting cross valleys which occupy deeper depressions between drumlins. Along the sides of these valleys there are broad sand and gravel terraces, while the bottoms are often swampy...Incidental to this pattern are the several gravel ridges or eskers which cross the plain in the same general direction as the drumlins.

Chapman and Putnam 1984:138

The soil of the bridge study areas consist of the following types:

- ▶ 2-WG – Fox Sandy Loam and Guelph Loam
- ▶ 3-E – Brady Sandy Loam and Gilford Loam
- ▶ 5-E – Brady Sandy Loam and Gilford Loam
- ▶ 7-E – Guelph Loam and muck soils

The Guelph Loam soil series is a well-draining soil forming gently rolling hills and steeply rolling drumlins throughout the region. Generally, these soils are ideal for agriculture. The Fox Sandy Loam series is a calcareous sand with good natural drainage deposited as glacial outwash and is often found beside present-day streams, often associated with gently undulating topography. Brady series soils are imperfectly drained and are similar in composition to the Fox series; these soils are found in smooth areas with very little slope. Gilford series soils are outwash soils with poor natural drainage and are found in depressional areas. All soil series descriptions are taken from (Hoffman and Matthews (1963).

The study areas are located within the Grand River watershed and are located on tributaries of the Grand River. The study areas are located between approximately 3-6.6 km east and southeast of the Grand River. The study areas range from approximately 392-425 m above sea level.

Field Methods

The Stage 1 archaeological assessment was conducted under archaeological consulting license P1056 issued to Jamie Lemon by the MCM (P1056-0263-2024). Field director duties were delegated to Chris Lemon (R289) per Section 12 of the MCM 2013 *Terms and Conditions for Archaeological Licenses*, issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act*.

The Stage 1 property assessment was conducted on 13 May 2024. Assessment conditions were good and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. The weather was cloudy, with a temperature of 10°C.

The study areas consist of municipal ROWs, which include gravel roads with steep ditches, overgrown shorelines, and in some cases manicured lawn. A negative indicator of archaeological potential is extensive, below-grade land disturbance. Disturbance associated with soil manipulation, grading, and stockpiling of soils were encountered in association with the construction of the bridges and gravel roads within the study areas. Areas of low archaeological potential were also encountered in the form of low-lying wet environments and steep ditches.

The property inspection was carried out systematically, reviewing the extent of the existing road ROW to identify the presence or absence of archaeological potential, for a distance of 20 m from the end of each bridge. Photographic images of the study areas are presented within Images 1 - 16. Location and orientation information associated with all photographs taken in the field is provided on Map 6.

Record of Documentation

TABLE 4 - RECORD OF DOCUMENTATION

Document Type	Location of Document	Additional Comments	Quantity
Field Notes	PHC Office	1 lined sheet stored in project file	1 page
Maps Provided by Client	PHC Office	In project file (Site Map)	1 map
Digital Photographs	PHC Office	Stored digitally in project file	156 photographs

Analysis and Conclusion

Archaeological Potential

Archaeological Potential for the Study Area

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. In accordance with the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- ▶ Previously identified archaeological sites;
- ▶ Water sources:
 - ▶ Primary water sources (lakes, rivers, streams, creeks);
 - ▶ Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
 - ▶ Features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
 - ▶ Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
- ▶ Elevated topography (eskers, drumlins, large knolls, 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;
 - ▶ Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
 - ▶ Early Euro-Canadian industry (fur trade, mining, logging);
 - ▶ Areas of Euro-Canadian settlement; and,
 - ▶ Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for a study area, MCM stipulates the following:

- ▶ No areas within 300 m of a previously identified site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge or informants can be recommended for exemption from further assessment;

- ▶ No areas within 100 m of early transportation routes can be recommended for exemption from further assessment; and,
- ▶ No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.

Archaeological Integrity

A negative indicator of archaeological potential is extensive land disturbance. This includes widespread earth movement activities that would have eradicated or relocated any cultural material to such a degree that the information potential and cultural heritage value or interest has been lost.

Section 1.3.2 of the MCM 2011 Standards and Guidelines for Consultant Archaeologists states that:

Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources (MCM 2011:18)

The types of disturbance referred to above include, but are not restricted to, quarrying, sewage and infrastructure development, building footprints, and major landscaping involving grading below topsoil.

Potential for Archaeological Resources Within Study Area

Following the criteria outlined above to determine archaeological potential, background research identified the study area to exhibit archaeological potential for the following reasons:

- ▶ Tributaries of the Grand River flow through the study areas.
- ▶ The majority of the soils of the study areas would have been suitable for Indigenous and Euro-Canadian agricultural practices.
- ▶ The study areas are located along historical transportation routes.
- ▶ A 19th century sawmill was located within or adjacent to 3-E.

Conclusion

The study areas consist of municipal ROWs, which include gravel roads with steep ditches to poorly drained environs. Although background research indicated the potential for archaeological research, a negative indicator of archaeological potential is extensive, below-grade land disturbance. Disturbance associated with soil manipulation and grading were encountered in association with the construction of the bridges and gravel roads within the study areas. Areas of low archaeological potential were also encountered in the form of low-lying wet environments and steep ditches, the result of extensive soil disturbance.

Recommendations

Based on the results of the Stage 1 archaeological assessment, the following recommendations are provided:

1. The study areas were identified to exhibit low archaeological potential due to previous disturbance or poorly drained conditions. The study areas are considered free of archaeological concerns and no further archaeological assessment is recommended (Map 6).

It is requested that this report be entered into the Ontario Public Register of Archaeological Reports, as provided for in Section 65.1 of the Ontario Heritage Act.

Advice on Compliance with Legislation

Advice on the compliance with legislation is not part of the archaeological record. However, for the benefit of the proponent and approval authority in the land use planning and development process, the report must include the following standard statements:

- ▶ This report is submitted to the Minister of Heritage, Sport, Tourism and Cultural Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c O.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 fieldwork and report recommendations ensure the conservation, protection, and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regards 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 fieldwork on the site, submitted a report to the Minister stating 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 representative of a new archaeological site or sites 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 Section 48(1) of the *Ontario Heritage Act*.
- ▶ The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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Images



IMAGE 1: 2-WG WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING SOUTHEAST



IMAGE 2: 2-WG WITH STEEP DITCHES, FACING SOUTH



IMAGE 3: 2-WG WITH STEEP DITCHES, FACING NORTH



IMAGE 4: 2-WG WITH STEEP DITCHES, FACING SOUTHEAST



IMAGE 5: 3-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING NORTHWEST



IMAGE 6: 3-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING SOUTHEAST



IMAGE 7: 3-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING SOUTHEAST



IMAGE 8: 3-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING NORTHWEST



IMAGE 9: 5-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING SOUTHEAST



IMAGE 10: 5-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING NORTHWEST



IMAGE 11: 5-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING NORTHWEST



IMAGE 12: 5-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING NORTHWEST



IMAGE 13: 7-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING SOUTHEAST



IMAGE 14: 7-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING NORTHWEST



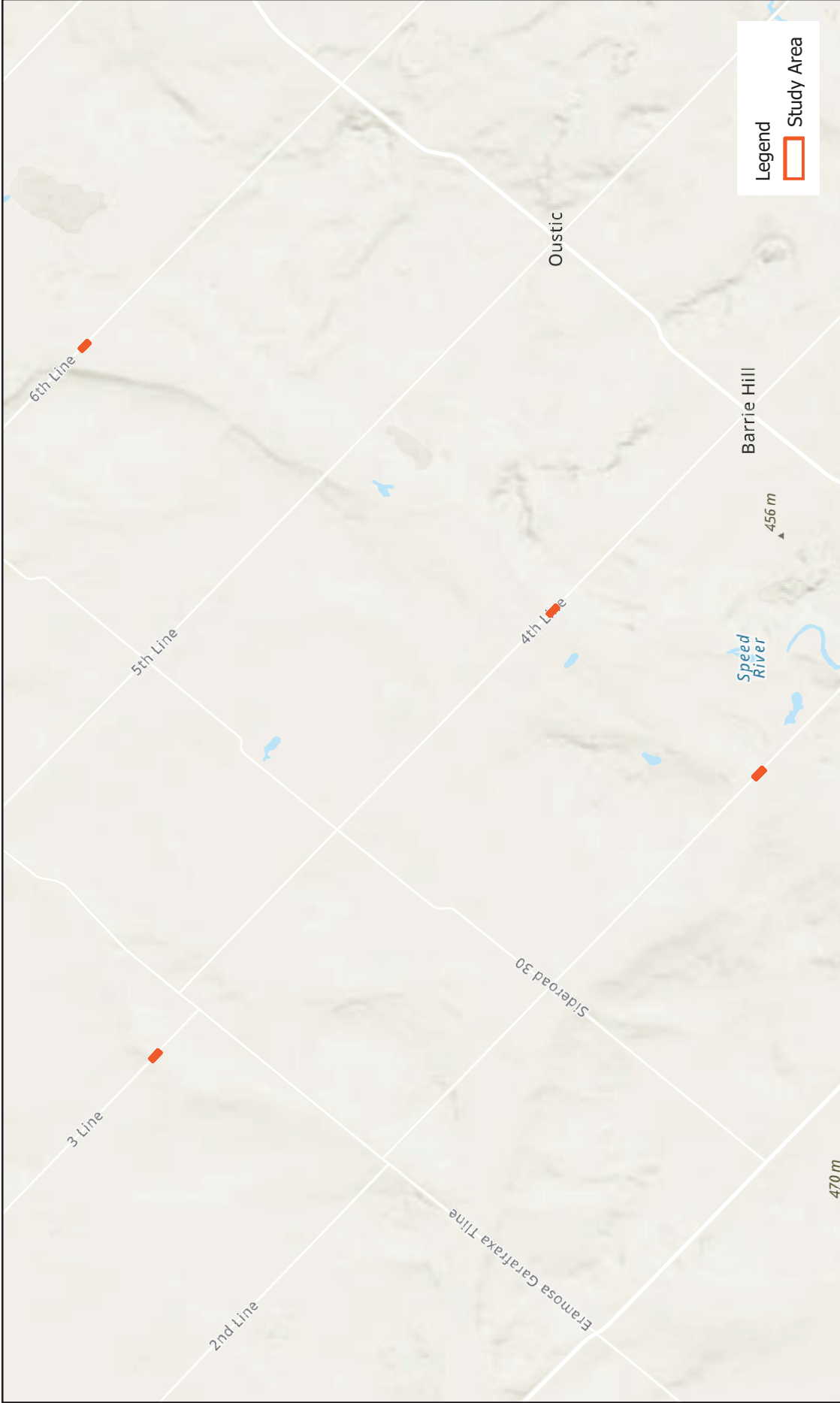
IMAGE 15: 7-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING SOUTHEAST



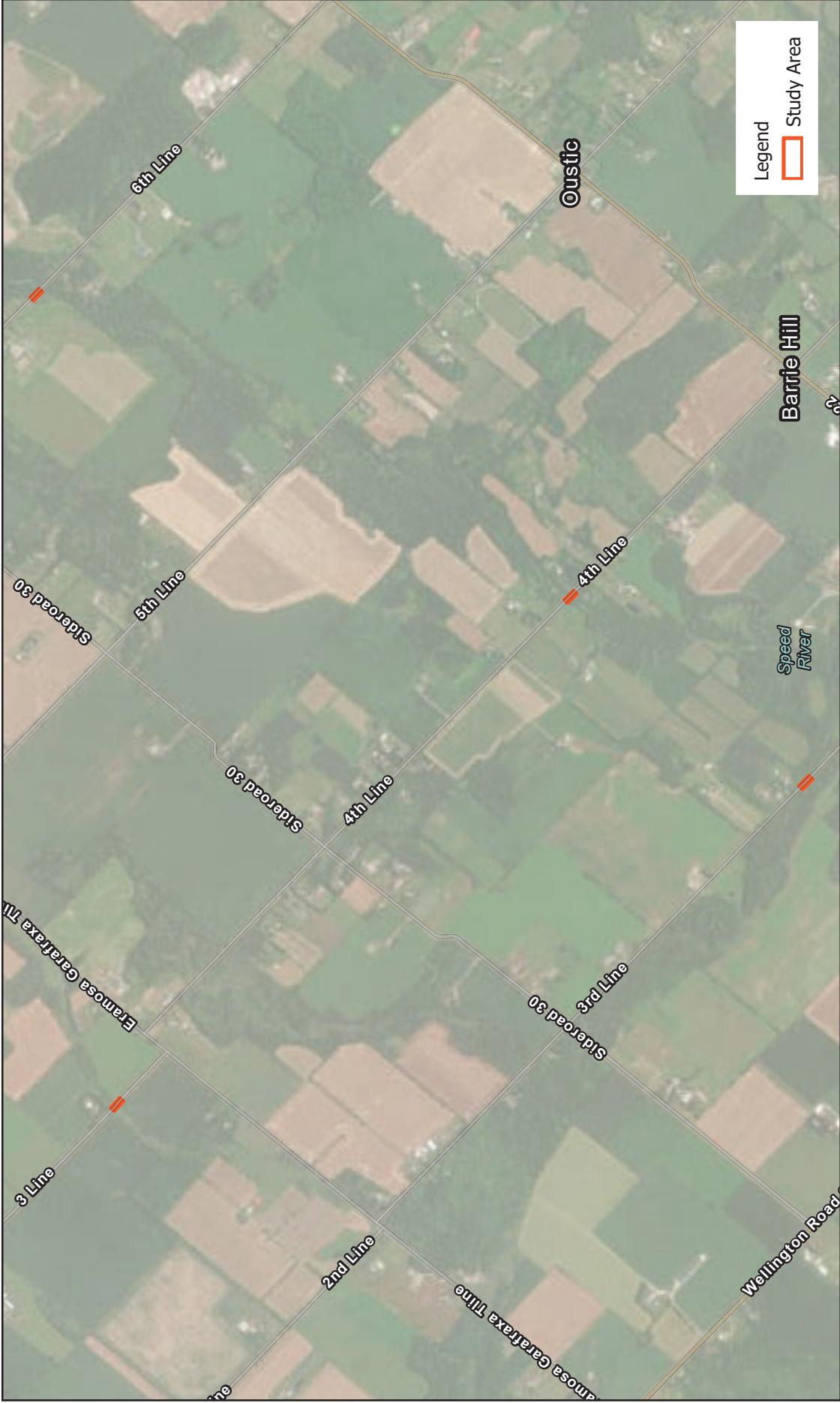
IMAGE 16: 7-E WITH STEEP DITCHES TO POORLY DRAINED ENVIRONS, FACING NORTHWEST

Maps

All maps on subsequent pages.



	Stage 1 Archaeological Assessment	
	Centre Wellington Bridges	
	Map 1 - Study Area on Topographic Map	Esri, NASA, NGA, USGS, FEMA, Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, MET/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada
Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere		

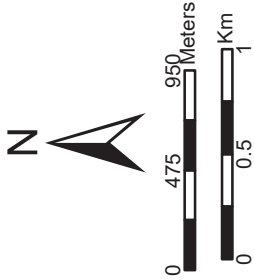


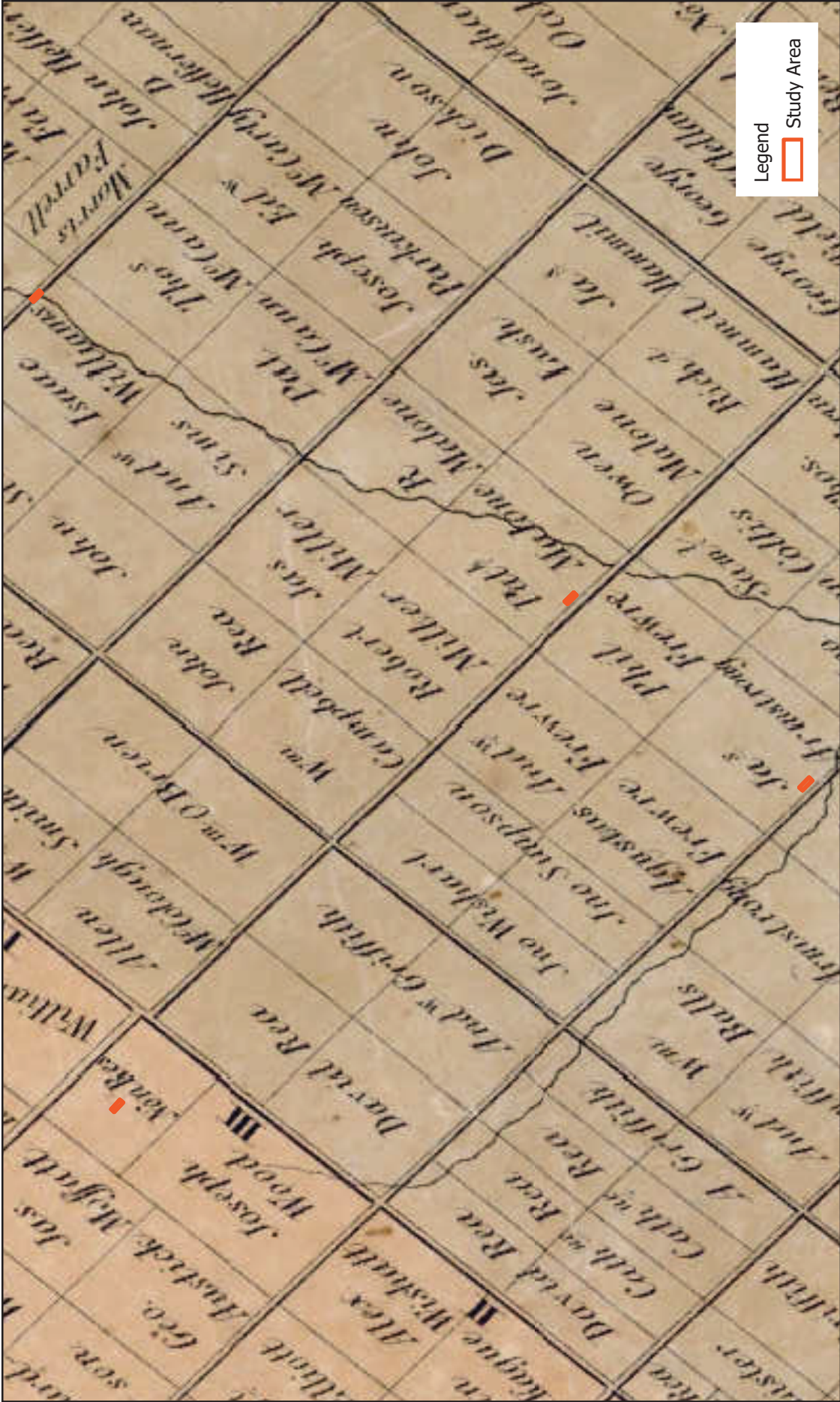
Stage 1 Archaeological Assessment Centre Wellington Bridges

Map 2 - Study Area on Modern Aerial Image

Province of Ontario, Esri Canada, Esri, TomTom,
Garmin, SafeGraph, GeoTechnologies, Inc, METI/
NASA, USGS, EPA, NPS, US Census Bureau, USDA,
NRCan, Parks Canada, Maxar

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere



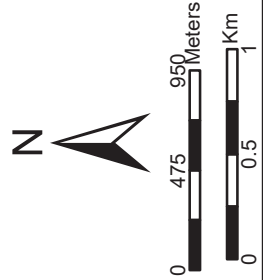


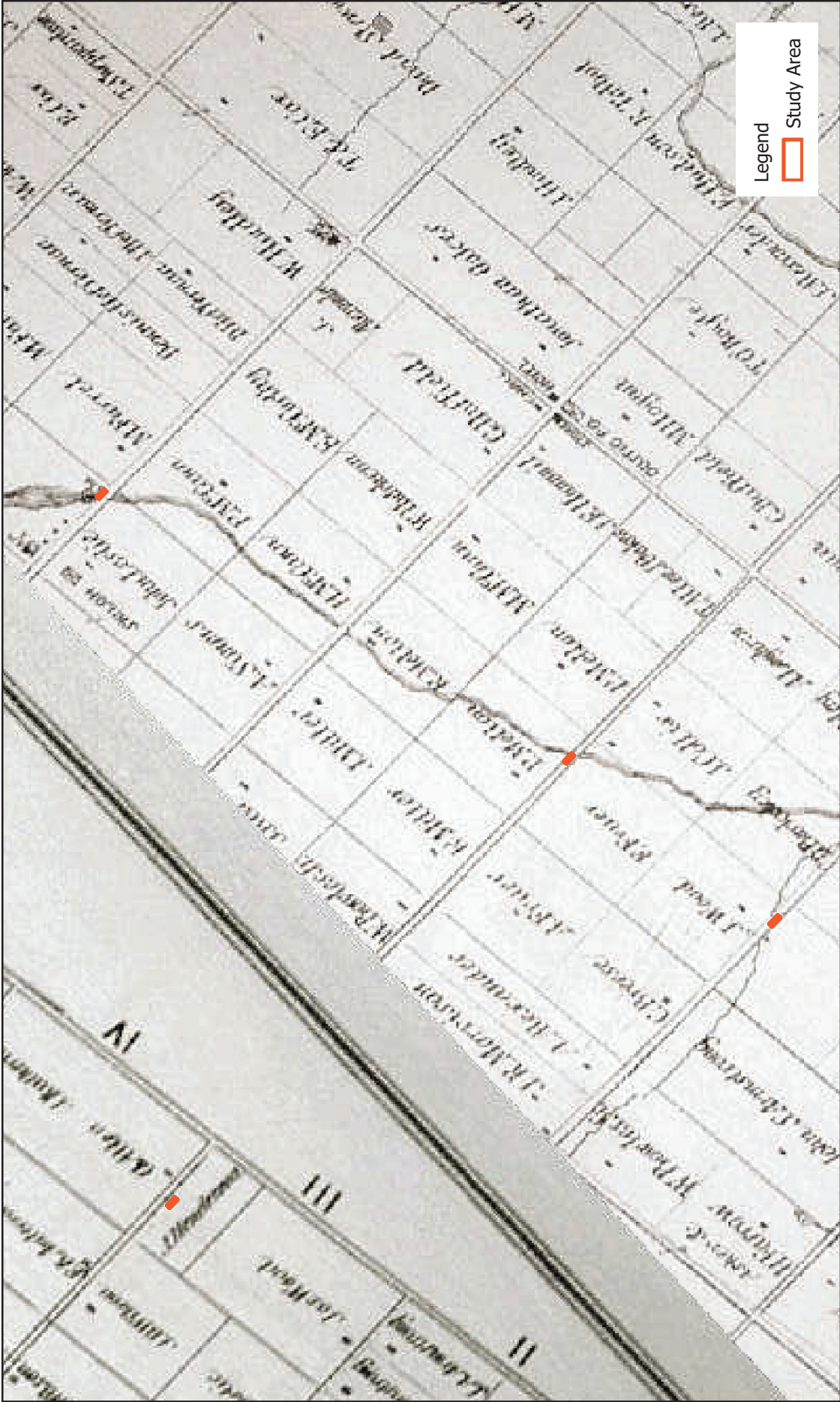
Stage 1 Archaeological Assessment Centre Wellington Bridges

Map 3 - Study Areas on 1861 Map of
Wellington County

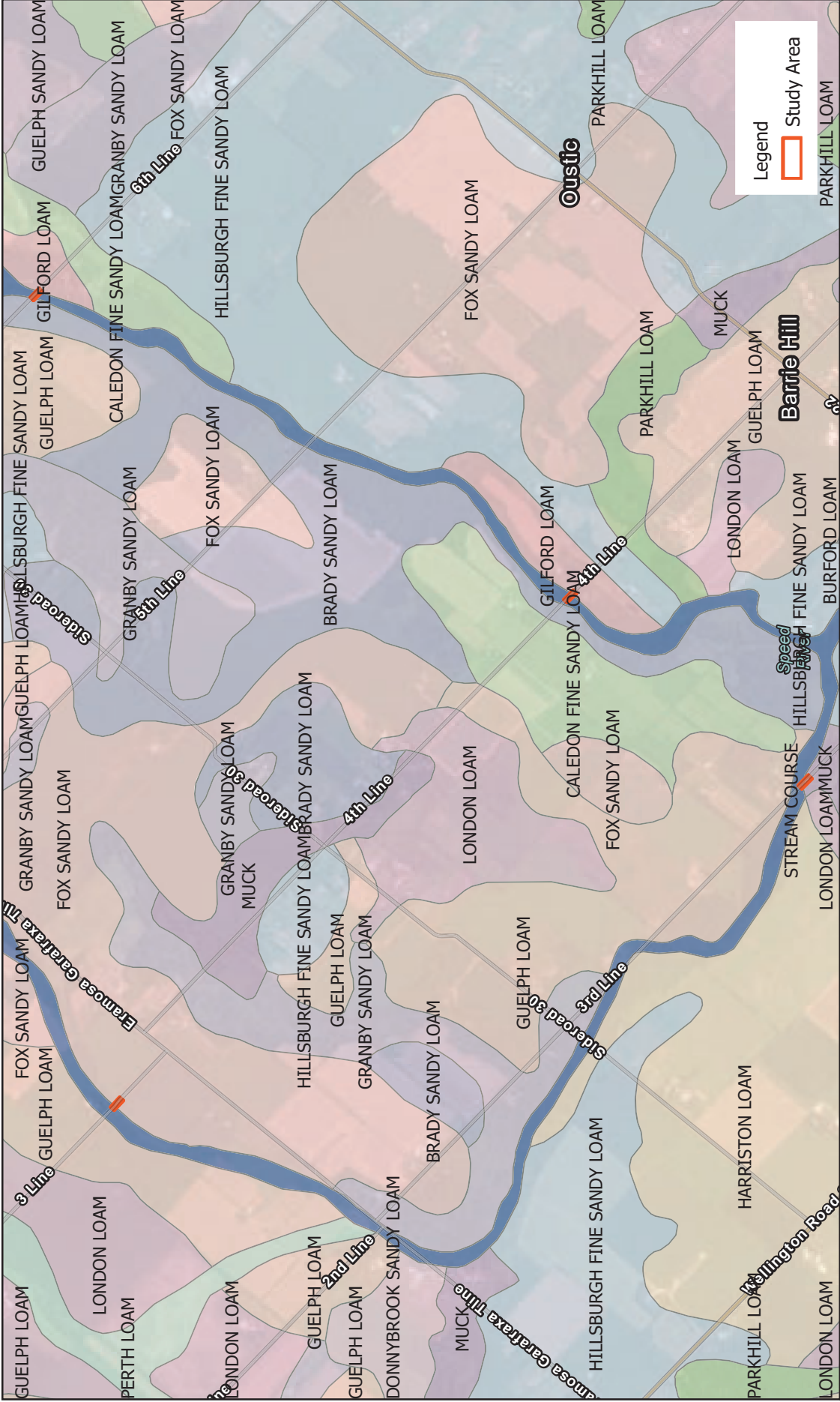
Maxar

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere





	Stage 1 Archaeological Assessment	
	Centre Wellington Bridges	
	Map 4 - Study Areas on 1877 Illustrated Historical Atlas	
Maxar		0 500 1,000 Meters
Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere		0 0.75 1.5 Km



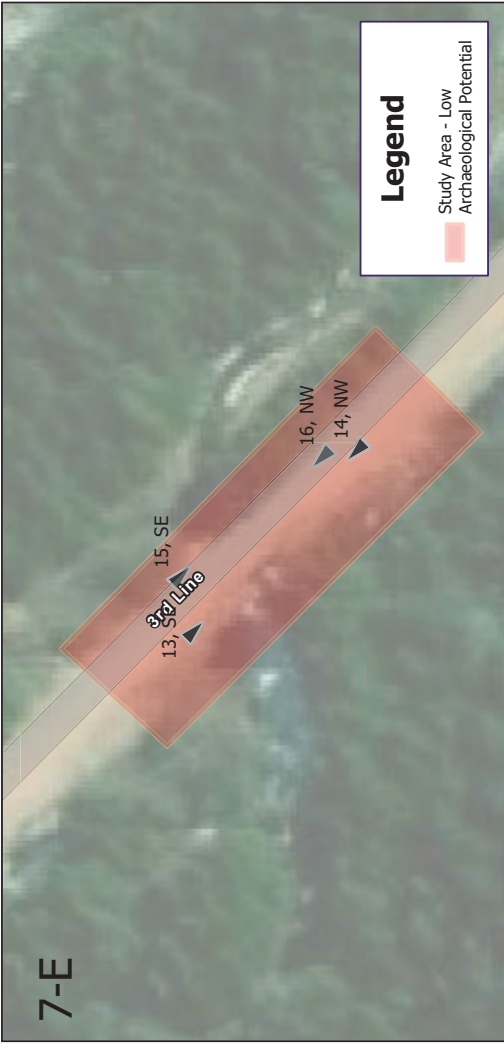
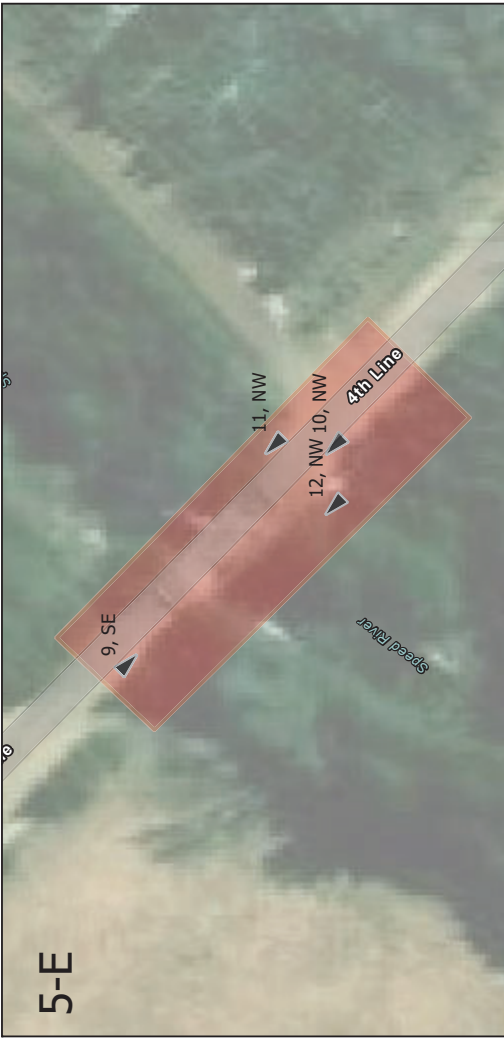
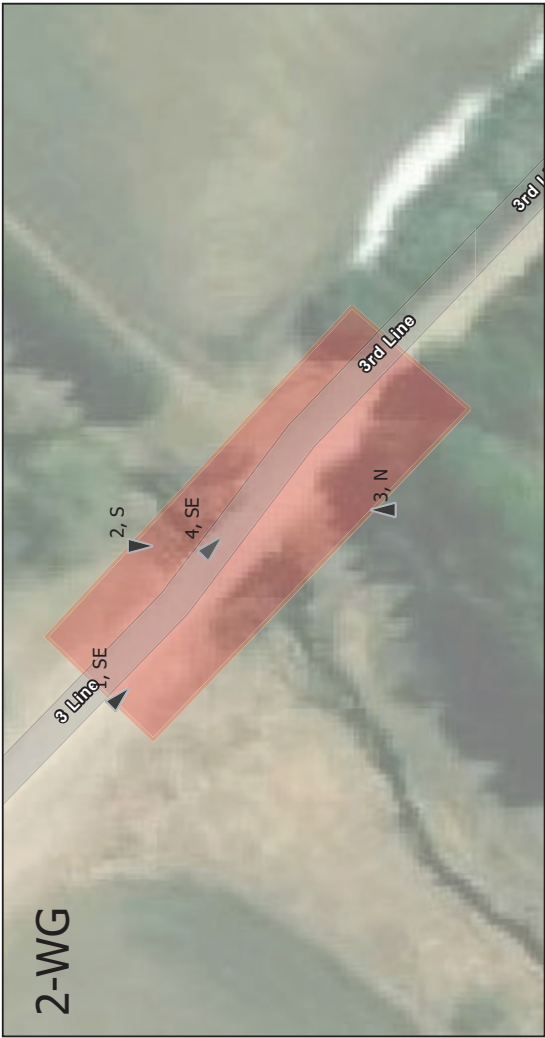
Stage 1 Archaeological Assessment Centre Wellington Bridges

Map 5 - Study Areas on Soils Map

Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada, Maxar

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere





Stage 1 Archaeological Assessment Centre Wellington Bridges

Map 6 - Stage 1 Assessment Results, Photo Locations and Directions

Map data: Microsoft, Region of Waterloo, Mapbox, Microsoft, Esri Community Maps Contributors, Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, MET/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere



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