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REGIONAL MUNICIPALITY OF NIAGARA
SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS

Archaeological Assessments

Stage 2 AA - Preferred Black Horse SPS Site (Thorold South)

Original Report: Stage 2 Archaeological Assessment

South Niagara Wastewater Treatment Plant: Blackhorse Sewage Pumping Station, Part of Lot 94, Geographic Township of Thorold, Welland County, Now 701 Allanburg Road, City of Thorold, Regional Municipality of Niagara, Ontario

Project # OCUL2001.1001

Archaeological Consulting License #P327 (Cary)
PIF # P327-0019-2021 (Stage 2)
Associated within P327-0012-2021 (Stage 1)

April 13, 2022

Prepared for:
Niagara Region
1815 Sir Isaac Brock Way, Thorold, ON, L2V 4T7

wood.

Stage 2 Archaeological Assessment

South Niagara Wastewater Treatment Plant: Blackhorse Sewage Pumping Station, Part of Lot 94, Geographic Township of Thorold, Welland County, Now 701 Allanburg Road, City of Thorold, Regional Municipality of Niagara, Ontario

Project # OCUL2001.1001

PREPARED FOR:

Niagara Region
1815 Sir Isaac Brock Way, Thorold, ON, L2V 4T7

PREPARED BY:

Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited
50 Vogell Rd Unit No. 3 & 4
Richmond Hill, Ontario L4B 3N6
Canada

April 13, 2022

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Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

Executive Summary

Wood Environment & Infrastructure Solutions (“Wood”) was retained by the Regional Municipality of Niagara (“Niagara Region”) to complete cultural heritage and archaeological services assessments to support the Schedule “C” Municipal Class Environmental Assessment for the proposed South Niagara Falls Wastewater Treatment Plant (“SNFWWTP”) and associated infrastructure in the City of Niagara Falls and City of Thorold, Niagara Region, Ontario. The project components assessed by Wood archaeology staff are depicted in Appendix A.

The previous Stage 1 Archaeological Assessment (Wood 2021d) evaluated the South Thorold Trunk alignment and Blackhorse Sewage Pumping Station (SPS). The Stage 1 property inspection and background research determined that archaeological potential has been removed within 12.2 ha (69%) of the Stage 1 study area. The remainder of the Stage 1 study area, approximately 5.5 ha (31%), consisted of maintained lawns/mature woodlots and cultivated agricultural fields within narrow corridors (10 m) (Wood 2021d).

A review of the development plan provided in Appendix C indicates that construction of the proposed trunk sewer alignment is expected to include open-cut excavation and the Blackhorse SPS will include near surface impacts. The requirement for further archaeological assessment along the alignment will be confirmed during the detailed design phase of the project and areas that retain archaeological potential where near surface impacts are anticipated are recommended further Stage 2 archaeological assessment.

This report describes the Stage 2 archaeological assessment for the Blackhorse SPS at 701 Allanburg Road, in City of Thorold (the “Study Area”). The Study Area was historically located within part of Lot 94 in the Township of Thorold. The Stage 2 Study Area corresponds to 0.24 ha of the 17.7 ha Stage 1 study area (Appendix B: Figure 1 to Figure 2).

The Study Area was determined to have general archaeological potential and recommended for a Stage 2 property assessment for the following reasons: (1) one historical secondary water source (an unnamed creek draining into the Old Welland Canal) is located within 300 m of the Study Area; (2) the project area is largely comprised of well-drained land that is suitable for human habitation; (3) the Study Area is within 100 m of the historical transportation route that is now Davis Road; and, (4) The Study Area is within 300 m of a Euro-Canadian farmstead and orchard illustrated on the 1876 historical atlas mapping (Appendix A: Figure 5).

This Stage 2 property assessment for the Study Area was carried out in accordance with the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (“MHSTCI”) 2011 *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011) under an Ontario Professional License to Conduct Archaeological Fieldwork (P327) held by Henry Cary, Senior Archaeologist at Wood. The MHSTCI acknowledged the project

Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

information by issuing PIF P327-0019-2021 (Stage 2).

In keeping with Niagara Region's ongoing Indigenous engagement, Wood provided information sharing letters (via email on 18 September 2021) to the following Indigenous Nations: Mississaugas of the Credit First Nation ("MCFN"), the Six Nations of the Grand River Elected Council ("SNGREC"), and the Haudenosaunee Development Institute ("HDI"). The information sharing letters included project details and an invitation to participate in the Stage 2 fieldwork. Representatives of MCFN, SNCREC, and HDI agreed to participate in the fieldwork. The Indigenous Engagement completed for this assessment is included in Section One, Supplementary Documentation.

A Stage 2 archaeological survey of the Study Area was directed and conducted by Chelsea Dickinson (R1194) with the assistance of Heidi Schopf of Wood on 11 November 2021 and 12 November 2021. The weather during the assessment was sunny with some overcast periods and scattered showers; this weather did not impede the inspection in any way.

Approximately 0.24 ha (100%) of the Study Area is maintained lawn with archaeological potential and was recommended for test pit survey.

The test pit survey determined that 0.07 ha (29%) of the Study Area had undergone major landscaping involving grading below topsoil that would have severely damaged the integrity of any archaeological resources (Appendix B: Figure 11; Appendix E: Photographs 5 to 7).

Approximately 0.01 ha (4%) of the Study Area on the western edge of the property was located along a shallow drainage ditch, which suggested an extensive and deep land alteration would have severely damaged the integrity of any archaeological resources.

Test pit survey in the remaining 0.23 ha (96%) of the Study Area found four pieces of chert that were conclusively identified to be natural stone inclusions. No archaeological resources were identified through the Stage 2 test pit survey.

Based on the findings of the Stage 2 archaeological assessment of the Study Area, the following recommendations are made, subject to the conditions outlined below and in Section 5.0:

1. No archaeological resources were identified within the Stage 2 Study Area, therefore, the Stage 2 Study Area requires no further archaeological assessment.

The above recommendation is subject to approval by the Ministry of Heritage, Sport, Tourism and Culture Industries. It is an offence to knowingly alter any portion of an archaeological site except by a person holding a professional archaeological license.

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SECTION 1: INDIGENOUS ENGAGEMENT

Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

Project Personnel

Project Director:	Barbara Slim, M.A. (P348)
Project Manager:	Heidy Schopf, MES, CAHP
Field Director:	Chelsea Dickinson, B.A. Hons (R1194)
Field Technician:	Heidy Schopf, MES, CAHP
FN Monitors	William Lucas (SNGREC) Matthew LaForme (MNCFN) Jubal Jamieson (HDI)
Report Preparation:	Chelsea Dickinson, B.A. Hons.
Graphics:	Steve LaBute, CAD
Report Reviewers:	Henry Cary, Ph.D., CAHP, RPA (P327) Peter Popkin Ph.D., CAHP, MCIfA (P362)

Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

1.0 Section 1 – Project Context

1.1 Development Context

Wood Environment & Infrastructure Solutions (“Wood”) was retained by the Regional Municipality of Niagara (“Niagara Region”) to complete cultural heritage and archaeological services assessments to support the Schedule “C” Municipal Class Environmental Assessment for the proposed South Niagara Falls Wastewater Treatment Plant (“SNFWWTP”) and associated infrastructure in the City of Niagara Falls and City of Thorold, Niagara Region, Ontario. The project components assessed by Wood archaeology staff are depicted in Appendix A and summarized in the table below.

Project Component	Work Completed by Wood
Phase 1 Sewer Alignment/Construction Shaft Locations	<ul style="list-style-type: none"> Stage 1 Archaeological Assessment (P327-0013-2021; Wood 2021a)
Phase 2 Wastewater Treatment Plant	<ul style="list-style-type: none"> Stage 1 and 2 Archaeological Assessment (P348-0106-2020 and P348-0107-2020; Wood 2021b) Marine Archaeological Assessment (Marine Archaeological License 2021-222; Wood 2021c)
South Thorold Trunk and Blackhorse Sewage Pumping Station	<ul style="list-style-type: none"> Stage 1 Archaeological Assessment (P327-0012-2021; Wood 2021d) Stage 2 Archaeological Assessment for Blackhorse Sewage Pumping Station (P327-0019-2021) (Current Report)

The previous Stage 1 Archaeological Assessment (Wood 2021d) evaluated the South Thorold Trunk alignment and Blackhorse Sewage Pumping Station (SPS). The Stage 1 property inspection and background research determined that archaeological potential has been removed within 12.2 ha (69%) of the Stage 1 study area. The remainder of the Stage 1 study area, approximately 5.5 ha (31%), consisted of maintained lawns/mature woodlots and cultivated agricultural fields within narrow corridors (10 m) that have general archaeological potential and warrant Stage 2 archaeological assessment where ploughing is not viable.

This report describes the Stage 2 archaeological assessment for the Blackhorse SPS at 701 Allanburg Road, in City of Thorold (the “Study Area”). The Study Area was historically located within part of lot 94 in the Township of Thorold. The Stage 2 Study Area corresponds to 0.24 ha of the 17.7 ha Stage 1 study area (Appendix B: Figure 1 to Figure 2). A development plan is provided in Appendix C.

Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

The Stage 2 archaeological assessment was carried out in accordance with the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (“MHSTCI”) 2011 *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011), under an Ontario Professional License to Conduct Archaeological Fieldwork (P327) held by Henry Cary, Senior Archaeologist at Wood. The project information was acknowledged by the MHSTCI with the issuance of PIF number P327-0019-2021 (Stage 2).

This report summarizes the results of the previous Stage 1 background study (Wood 2021d) and presents the results of the Stage 2 property assessment and makes pertinent recommendations.

1.2 Scope of Work

As outlined in the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011:27), the objective of a Stage 2 property assessment is to document all archaeological resources within a study area, determine whether the study area contains archaeological resources requiring further assessment, and recommend appropriate Stage 3 assessment strategies if archaeological sites are identified.

The scope of work for the Stage 2 archaeological assessment consisted of the following tasks:

- Organizing public and private underground utility locates
- Contacting the MHSTCI to determine if recorded archaeological sites exist in the vicinity (1 kilometre [“km”] radius) of the study area, through a search of the *Ontario Archaeological Sites Database*, maintained by the MHSTCI.
- Contacting the MHSTCI to determine if there are any reports detailing previous archaeological field work within the study area or within a radius of 50 metres (“m”) of the study area, through a search of the *Ontario Public Register of Archaeological Reports*, maintained by the MHSTCI.
- Conducting a test-pit survey at 5 m to 10 m intervals of unploughable areas of archaeological potential employing strategies that adhere to the technical standards for Stage 2 archaeological assessments as prescribed in the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011).
- Mapping, photography, and the production of other relevant graphics.
- Artifact processing and analysis; and,
- Preparing a Stage 2 report of findings with recommendations regarding the need for further archaeological work if deemed necessary.

2.0 Stage 1 Background Study

The following sections summarize the Study Area's archaeological and historical context as described in the Stage 1 assessment conducted by Wood (2021d).

2.1 Archaeological Context

2.1.1 Registered Archaeological Sites

In Ontario, information concerning archaeology sites is stored in the *Ontario Archaeological Sites Database* maintained by the MHSTCI. This database contains archaeological sites registered within the Borden system (Borden 1952). Under the Borden system, Canada has been divided into grid blocks based on longitude and latitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referred to by a four-letter designation and sites located within the block are numbered sequentially as they are found. The Study Area is located within the *AgGt* Borden blocks. On the basis of inquiries made to Mr. Rob von Bitter, Database Co-ordinator of MHSTCI on 15 November 2021, there are 10 registered sites located within a 1 km radius of the Study Area. None of these are located within 300 m of the Study Area. Table 1 provides a summary of these sites.

Table 1: Registered Archaeological Sites within 1 km Radius of the Study Area

Borden Number	Site Name	Cultural Affiliation	Site Type	Distance from Study Area	Development Review Status
AgGt-72	Blackhorse Valve	Indigenous (Pre-Contact)	Findspot	< 1 km	Unknown
AgGt-92	Unknown	Indigenous, Euro-Canadian	Scatter; Scatter	< 1 km	No Further CHVI
AgGt-93	Unknown	Indigenous (Archaic)	Camp / Campsite	< 1 km	Unknown
AgGt-94	Unknown	Indigenous (Archaic)	Scatter	< 1 km	Unknown
AgGt-95	Unknown	Indigenous (Archaic)	Scatter	< 1 km	Unknown
AgGt-131	Robert Spencer	Euro-Canadian	Homestead	< 1 km	Unknown
AgGt-133	K Smith	Euro-Canadian	Homestead	< 1 km	Unknown

Borden Number	Site Name	Cultural Affiliation	Site Type	Distance from Study Area	Development Review Status
AgGt-136	Unknown	Unknown	Findspot	< 1 km	Unknown
AgGt-140	Glen Gordon 2	Unknown	Scatter	< 1 km	Unknown
AgGt-141	Glen Gordon 3	Unknown	Scatter	< 1 km	Unknown

2.1.2 History of Archaeological Investigations

Wood completed a search for archaeological reports within 50 m of the Study Area within the *Ontario Register of Archaeological Reports* administered by the MHSTCI on 03 November 2021. Based on this search (by address, lot and concession, and above-mentioned archaeological sites), one archaeological assessment has been conducted within the Study Area.

- *Stage 1 Archaeological Assessment South Niagara Wastewater Treatment Plant, South Thorold Trunk and Blackhorse Sewage Pumping Station, located in part of Lots 167-168, 181-184, and 201-208 in the Geographic Township of Stamford, Lincoln County, now City of Niagara Falls, and part of Lots 93-94, 112-117 and 123-140 in the Geographic Township of Thorold, Welland County, now City of Thorold, Regional Municipality of Niagara, Ontario. PIF P327-0012-2021 (Cary) (Wood 2021d)*

The previous Stage 1 background study (Wood 2021d), which encompassed the present Study Area (Blackhorse SPS) and South Thorold Truck alignment indicated that the Stage 1 Study Area had general archaeological potential for the following reasons: (1) Nine archaeological sites located within 300m of the Study Area; (2) the Study Area is largely comprised of well-drained land that is suitable for human habitation; (3) three secondary water sources (two unnamed tributaries of the Old Welland Canal and one unnamed tributary of the Welland River) cross the Study Area; (4) the Study Area follows several historical roadways and transportation routes (including Brown Road, Beechwood Road, McLeod Road, Thorold Townline Road, Barron Road, Allanport Road and Davis Road) and is crossed by the former Grand Trunk Railway; (5) the Study Area is adjacent to areas of early Euro-Canadian settlement including the Black Horse Inn and several farmsteads and orchards illustrated within 300 m of the Study Area on the 1876 historical atlas map (Appendix B:

Figure 5); and (6) according to the *Niagara Region Archaeological Management Plan* (AMP) the majority of the Study Area was identified as having overall archaeological potential.

The Stage 1 property inspection and background research determined that archaeological potential has been removed within 12.2 ha (69%) of the Stage 1 Study Area. The remainder of the Stage 1 Study Area, approximately 5.5 ha (31%), consisted of maintained lawns/mature woodlots and cultivated agricultural fields within narrow corridors (10 m) that have general archaeological potential (Wood 2021d).

A review of the development plan indicates that construction of the proposed trunk sewer alignment is expected to include open-cut excavation while the Blackhorse SPS will include near surface impacts (Appendix C). The requirement for further archaeological assessment along the alignment will be confirmed during the detailed design phase of the project and areas that retain archaeological potential where near surface impacts are anticipated are recommended further Stage 2 archaeological assessment. This corresponds to the entirety of the current Study Area (0.24 ha).

Appendix B: Figure 10 shows the results of the Stage 1 archaeological assessment in relation to the current Study Area.

2.1.3 Environmental Context

The Study Area is situated within the Haldimand Clay Plain physiographic region (Chapman and Putnam 1984). This physiographic region is made up of a series of parallel belts between Lake Erie and the Niagara Escarpment that were once submerged by Glacial Lake Warren. The highest ground adjoins the Niagara Escarpment. The soils of this region are known for their heavy clay texture and are often characterized by poor drainage; several square kilometres of the former Welland County are covered in peat bogs. However, within the Study Area the *Soil Survey of Welland County* (Acton 1935) indicates that the dominant surface soil type is Haldimand Clay, which has fair to good surface drainage. The topography of the area is described as a mix of rolling to smooth uplands.

It is crucial to consider the proximity of water sources in any evaluation of archaeological potential because the availability of water is arguably the single most important determinant of human land use, past and present. The *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011) lists proximity to water as one of the prime indicators of potential for the presence of archaeological sites. Distance from potable water has been one of the most commonly used variables for predictive modeling of archaeological site location. Water, both potable and non-potable, also facilitated the transportation of people and goods and served to focus animal and plant resources. According to the 2011 *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011), lands within 300 m of an extant or formerly mapped river or creek have potential for the presence of early Indigenous and Euro-Canadian archaeological sites. Presently there are no primary or secondary water sources located

within 300 m of the Study Area (Figure 3) but the 1876 historical atlas mapping indicates an unnamed creek draining into the Old Welland Canal within 300 m of the Study Area (see Section 2.2.2) (Appendix B: Figure 5).

2.2 Historical Context

2.2.1 A Cultural History for Southern and Eastern Ontario

The majority of interpretations of pre-contact Indigenous adaptations in Ontario derive from the analysis and interpretation of stone tools. Stone tools are made from specific types of rocks that fracture in ways that can be controlled, so that they are easily shaped into useful forms. These rocks include chert, chalcedony, quartzite, petrified wood, and volcanic glass, known as obsidian. Most stone tools found in southern Ontario are formed from types of chert that outcrop in local limestone formations, such as: Onondaga and Haldimand cherts, found near the north shore of Lake Erie; Kettle Point chert, which outcrops near Lake Huron; and Collingwood chert, which outcrops along the Niagara Escarpment near Georgian Bay.

Stone tools used as spear tips and arrowheads are the most commonly studied tool type. These are referred to as projectile points. As projectile point technology changed over time, styles and shapes of points changed also. Studying these changing point types has resulted in the development of a chronological framework for pre-contact times prior to 3,000 years ago, when Indigenous Nations began to make clay pottery. Later periods are defined both by point types and pottery characteristics. Radiocarbon dating of archaeological sites can only be done when organic materials are collected from those sites, so the dating of most sites is done by comparing the artifacts from dated sites to those from undated sites.

The following is an overview of the cultural history of southern and eastern Ontario as understood by archaeologists. It is based upon published syntheses of Indigenous cultural occupations (Wright 1972, Ellis and Ferris 1990, Adams 1994). For additional reference, Ellis and Ferris (1990) provide greater detail of the distinctive characteristics of each time period and cultural group.

The cultural history of southern Ontario began approximately 11,000 years ago when the glaciers had melted, and the land was re-exposed. The land was quickly settled by bands of hunters and gatherers who are thought to have been large game hunters. These people used large spear points that are distinctively shaped with long central grooves, called “flutes”. Archaeologists have defined a number of point types that date to this time, including Gainey, Barnes, Crowfield, and Hi-Lo types. This period is referred to as the Paleo-Period and it is thought to have lasted until approximately 9,000 years ago.

After 9,500 years ago, there was a long period when the climate was variable and the bare lands left by the glaciers were becoming re-forested, resulting in patchier, more diverse ecozones. During this time, which lasted until 3,000 years ago, people were

Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

adapting to diverse environmental settings. There appears to have been more reliance on local stone for making tools and more variable tool manufacturing technologies. The adoption of a spear-throwing board, known as an atlatl, was an important innovation, resulting in the ability to throw smaller darts with more force. Projectile points from this period, called the Archaic Period, are commonly side or corner-notched and are smaller than those of the preceding period. The Archaic adaptation is generally thought to have centered on localized resources, often forest resources, and groups of people are thought to have been less mobile, an adaptation that continued to develop until the arrival of Europeans.

In southern Ontario, the Archaic Period is divided into the Early, Middle and Late Archaic. Early point types include serrated Nettling and Bifurcate Base points. Middle types include Brewerton Corner Notched and Otter Creek, and Late types include Lamoka, Genesee, Crawford Knoll, and Innes. Most of these point types are named after archaeological sites where they were first identified.

The Archaic Period is followed by the Woodland Period. The major technological change in the Early Woodland Period is the introduction of pottery. During this time, people are thought to have developed more community organization and the manufacture of clay pottery is thought to indicate less residential mobility. Burial sites dating to this time often display evidence of ceremonial activities. Projectile points made at this time include much smaller types, probably used as arrow tips. Point types include Meadowood and Kramer and early ceramics were crudely-made vessels with conoidal (pointed) bases. The Early Woodland Period transitioned into the Middle Woodland Period approximately 2,400 years ago.

During the Middle Woodland Period in southern Ontario community and kin identity became more deeply entrenched, and more sedentary communities developed. Point types made at this time include Saugeen, Vanport, and Snyders. Ceramic vessels were conoidal in shape but were decorated with stamped designs in the soft clay. The Middle Woodland Period transitioned into the Late Woodland Period A.D. 500–900 with the earliest direct evidence for agriculture.

The Late Woodland Period saw the development of recognizable Iroquoian and Algonquian cultures in southern Ontario, characterized by the intensification of agriculture and the increased utilization of corn. Greater sedentism led to increasing settlement populations and greater complexity of settlement organization. Sites dating to this time are often found on terraces overlooking the floodplains of large rivers. Iroquoian villages tended to be small, palisaded compounds with longhouses occupied by families. As the Late Woodland Period progressed, more intercommunity communication and integration became necessary to maintain the sedentary agricultural way of life. Later Iroquoian villages were larger and more heavily palisaded, and longhouses were larger also. Algonquian settlements tended to be less populous and temporary.

When European explorers and missionaries arrived in southern Ontario in the early 17th century, they described the local Iroquoian social organization as being under the direction of elected chiefs. Tribal confederacies and allegiances resulted in intertribal warfare, which was only made worse by the European presence. Three Ontario Iroquoian confederacies, the Huron, Petun, and Neutral, were driven from their traditional territories before the middle of the seventeenth century.

Contact with Europeans changed the Late Woodland way of life at different times and to varying degrees throughout Ontario. Indigenous peoples first acquired European goods indirectly through existing exchange networks but as European incursions expanded, they accessed a wide range of materials through direct trade. Sites from this transitional period can be difficult to discern from later post-contact occupations, and the introduction of European goods may not have triggered significant social change in Indigenous communities. As European colonization has intensified from the 18th century onwards, Indigenous ways of life have adapted to change in complex and varied ways.

Table 2: Simplified Cultural Chronology of Southern and Eastern Ontario

Period	Complexes/Cultures, Some Diagnostic Artifacts
Early Paleo-Period (9000–8500 B.C.)	Small nomadic hunter-gatherer bands. Early Paleo-Indian (EPI) rarely found in eastern Ontario. Gainey, Barnes, Crowfield fluted points.
Late Paleo-Period (8500–7500 B.C.)	Small nomadic hunter-gatherer bands. Hi-Lo, Holcombe points, Lanceolate Bifaces.
Early Archaic (7500–6000/4500 B.C.)	Small nomadic hunter-gatherer bands. Nettling, Stanley/Neville points.
Middle Archaic (6000/4500–2500 B.C.)	Transition to territorial settlements. Seasonal round of subsistence introduced. Thebes (6000–5000 B.C.), Otter Creek points (4500–3000 B.C.). Brewerton Complex (3000–2500 B.C.). Brewerton points. Laurentian Complex (6000–2500 B.C.) (Eastern Ontario)

Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

Period	Complexes/Cultures, Some Diagnostic Artifacts
Late Archaic (2500–1000 B.C.)	<p>More numerous territorial hunter- gatherer bands, increasing use of exotic materials and artistic items for grave offerings, regional trade networks.</p> <p>Narrowpoint Complex (2500–1850 B.C.). Lamoka points. Broadpoint Complex (1850–1650 B.C.). Adder Orchard, Genesee points. Smallpoint Complex (1650–1000 B.C.). Crawford Knoll, Innes points. Terminal Archaic (1100–1000 B.C.) Glacial Kame Complex. Hind points.</p>
Early Woodland (1000–400 B.C.)	<p>Pottery introduced. Meadowood Notched points, Meadowood Cache Blades, Kramer, Adena points. Meadowood Complex (1000–400 B.C.). Middlesex Complex (650–400 B.C.). Introduction of true cemeteries.</p>
Middle Woodland (400 B.C.–A.D. 500/900)	<p>Saugeen, Snyders, Vanport, Port Maitland points. Point Peninsula Complex (Southcentral and eastern Ontario) Saugeen Complex (Southeast of Lake Huron and the Bruce Peninsula, London area, and possibly as far east as the Grand River) Couture Complex (Lake St. Clair and the western end of Lake Erie). Burial ceremonialism.</p>
Transitional Woodland (A.D. 500–900)	<p>Agriculture introduced. Levanna, Jacks Reef points. Princess Point Complex (Eastern end of Lake Erie and the western end of Lake Ontario). Rivière au Vase Phase of the Youngue / Western Basin Tradition (Lake St. Clair and western end of Lake Erie) Sandbanks Complex (Kingston area).</p>
Late Woodland (A.D. 900–1650)	<p>Tribal differentiation. Transition to settled village life. Dewaele, Glen Meyer Tanged, Triangular Naticoke, Notched Naticoke, Triangular Daniels/Madison points. Ontario Iroquoian and St. Lawrence Iroquoian Traditions (Southcentral and eastern Ontario, respectively). Algonkian Western Basin Tradition (Lake St. Clair and the western end of Lake Erie).</p>
Early Post-Contact (A.D. 1650–1763)	<p>Iroquoian and Algonkian migrations and resettlement during the French colonial regime in New France.</p>

Period	Complexes/Cultures, Some Diagnostic Artifacts
Late Post-Contact (A.D. 1763–1867)	Iroquoian and Algonkian migrations and resettlement during the British colonial regime in British North America.

In southern Ontario, significant post-contact archaeological sites are those that have an affiliation with an important historic event, figure, or family, but can also be anything dating to the original European settlement of a region. Often, these archaeological sites date to before A.D. 1830, but archaeologically significant Euro-Canadian sites can date into the twentieth century.

2.2.2 Review of Historical Records

Historically, the Study Area was located within the former Thorold Township, in the County of Welland. The earliest recorded European visitor to the area is Father Louis Hennepin, who explored as a missionary in 1678. He is best known for publishing an account of his travels, which include the first written description of Niagara Falls, published in 1689 (Page 1876). In the last two decades of the 18th century large numbers of United Empire Loyalists (UEL) moved into the Niagara region after receiving land grants for allying with the British during the American Revolutionary War. By 1784, at least 40 families had settled in what would become Welland County (Murphy 1887). The closest historic community to the Study Area is the Village of Chippawa, established in 1792. The first permanent Euro-Canadian settler in Chippawa was Thomas Cummings, who took up land on the south side of the Welland River 1783. Chippawa had a post office and was a centre for ship building and foundry work (Bond 1964; Jackson 1997).

Welland County was formed in 1851 from land severed from the southern section of Lincoln County (Mika and Mika 1983). The county was named after the Welland River, which had been named in 1792 by John Graves Simcoe after the Welland River in Lincolnshire, England (Middleton and Landon 1927; Rayburn 1997:366). The building of the first Welland Canal in the 1820s stimulated settlement growth in the area (Mika and Mika 1983).

Thorold Township, located in the County of Welland was first settled between 1784 or 1787 and included the hamlets of Allanburg, Beaverdams, Port Robinson, St. John's and Thorold South. Both the township and the City of Thorold are named after Sir John Thorold, Member of Parliament for Lincolnshire, England from 1779-1796 (Rayburn 1997:342). By the 1800s the township had several grist and sawmills, one of the first sawmills in the area was built in 1802 by John Darling. During the War of 1812 militia members of the township were called to defend the Niagara Peninsula which was controlled by the Americans from May to June in the year 1813. It was during this time when Laura Secord made the journey from Queenstown to Lt. James Fitzgibbons

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house, located within the township, to warn the Canadian forces of the impending attack on the Beaverdams outpost. The subsequent battle is seen as one of the major turning points for the War. By 1817 the population of Thorold was 830 and at this point the township had several interconnecting roadways and inns. This included the first inn in Welland County, the Blackhorse Inn, which was built west of Allanburg in the 1790s. On 27 November 1829, the First Welland Canal was opened through the township and was later replaced by four subsequent Welland Canals. By 1849 the population grew to 3,965 at which point the Village of Thorold was incorporated. In 1879, the Niagara, St. Catharines and Toronto Railway was extended through the Town of Thorold and township creating an opportunity for industrial and commercial growth for the township (Mika and Mika 1983: 505-507).

Historical records and mapping were examined for evidence of early Euro-Canadian use of the Study Area. The Study Area was located within Part of Lot 94 in the Geographic Township of Thorold, in the former County of Welland.

Table 3 lists the historical records examined to help determine Euro-Canadian archaeological potential within the Study Area.

Table 3: Review of Historical Records

Figure No.	Year	Map Title	Historical Feature(s)
Appendix B: Figure 4	1862	1862 <i>Tremaine's Map of the Counties of Lincoln and Welland</i> (Tremaine 1862)	<ul style="list-style-type: none"> • The Study Area is listed under the ownership of Joseph Upper • One structure located within 300 m of the Study Area in Lot 93 • Study Area located within 300 m of the Welland Railway • The Study Area is located along a historic roadway at what is now known as Davis Road • The Study Area is located within 300 m of an unnamed creek draining into the Old Welland Canal
Appendix B: Figure 5	1876	1876 <i>Illustrated Historical Atlas of Lincoln and Welland Counties</i> (Page & Co. 1876)	There appears to be no change to configuration from the 1862 historical map, apart from an orchard depicted directly north of the previously identified structure.

2.2.3 Historical Plaques

The MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011:18) stipulates that areas of early Euro-Canadian settlement, including places of early military pioneer settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries, are considered to have archaeological potential. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historic landmark or site, and properties that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations are also considered to have archaeological potential.

There are no historical plaques located within a 1 km radius of the Study Area (Ontario Heritage Trust 2021).

2.3 Recent Land Use History

Land use in the Study Area at the beginning of the 20th century continued the pattern of the previous century. However, population increase and urban expansion through the second half of the 20th century brought extensive change to the Study Area.

Historical records and mapping were examined to gain an understanding of 20th century land use in the Study Area. While the national topographic series (NTS) maps from 1906-1908, 1915, 1920, 1925, 1928, 1930, 1938, 1939, and 1942 were examined, those from the years 1906, 1925 and 1942 best illustrate change in the Study Area and surrounding areas. Table 4 summarizes analysis of these maps.

Table 4: Review of National Topographic Series (NTS) Maps

Year	Map Title	Historical Feature(s)
Appendix B: Figure 6	1906 NTS Map, Niagara Sheet (Department of Militia and Defence 1906)	<ul style="list-style-type: none"> One wood building depicted within 300 m of the Study Area One unnamed creek draining into the Old Welland Canal depicted within 300 m of the Study Area Grand Trunk Railway depicted within 300m of the Study Area
Appendix B: Figure 7	1925 NTS Map, Niagara Sheet (Department of Militia and Defence 1925)	<ul style="list-style-type: none"> One unnamed creek draining into the Old Welland Canal depicted within 300 m of the Study Area Canadian National Railway depicted within 300m of the Study Area

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Year	Map Title	Historical Feature(s)
Appendix B: Figure 8	1942 NTS Map, Sheet 30 (Department of National Defence 1942)	<ul style="list-style-type: none"> • Six buildings depicted within 300 m of the Study Area • Canadian National Railway depicted crossing Study Area • One unnamed tributary of the Old Welland Canal depicted within 300 m of the Study Area
Appendix B: Figure 9	1963 NTS Map, Allanburg Sheet (Surveys and Mapping Branch, Department of Energy, Mines and Resources 1963)	<ul style="list-style-type: none"> • 10 buildings depicted within 300 m of the Study Area • Canadian National Railway depicted crossing Study Area • One unnamed creek draining into the Old Welland Canal depicted within 300 m of the Study Area

Recent aerial photographs were also reviewed to document land use in the Study Area (Appendix D). Table 5 provides a summary of these findings.

Table 5: Review of 20th Century Aerial Imagery

Year	Features
1934 (Appendix D: Plate B1; Brock University 2016)	<ul style="list-style-type: none"> • The Study Area and surrounding lands are predominately agricultural • A railway (Canadian National Railway based on NTS mapping) is located within 300m of the Study Area
1948 (Appendix B: Plate B2; Brock University 2016)	<ul style="list-style-type: none"> • The Study Area and surrounding landscape is very stable and little change takes place.
1954/1955 (Appendix D: Plate B3; Brock University 2016)	<ul style="list-style-type: none"> • The Study Area and surrounding landscape is very stable and little change takes place.
1968 (Appendix D: Plate B4; Brock University 2016)	<ul style="list-style-type: none"> • A railway (Canadian National Railway based on NTS mapping) is located within 300m of the Study Area • Realignment of Davis Road depicted directly to the east of the Study Area. As part of the realignment a portion of the properties to the west of Davis Road have been graded subsoil suggesting the general archaeological potential of this area has been removed.
1975 (Appendix D: Plate B4; Brock University 2016)	<ul style="list-style-type: none"> • The Study Area and surrounding landscape is very stable and little change takes place.

Year	Features
Various (2000 to 2018 Brock University 2016)	<ul style="list-style-type: none"> The Study Area and surrounding landscape is very stable and little change takes place.

2.4 Archaeological Master Plans

The Region of Niagara retained Archaeological Services Inc. to prepare a Regional Archaeological Management Plan. The *Niagara Region Archaeological Management Plan* (AMP) represents best practices in municipal archaeological resource management and includes planning and management guidelines and an archaeological potential model consistent with provincial legislation and policies. According to the Region of Niagara Archaeological Management Plan, the Study Area is not identified as an area of archaeological potential (ASI 2021).

2.5 Potential for Archaeological Resources

Archaeological potential is defined as the likelihood of finding archaeological sites within a Study Area. For planning purposes, determining archaeological potential provides a preliminary indication that archaeological sites might be found within the Study Area, and consequently, that it may be necessary to allocate time and resources for archaeological survey and mitigation.

The framework for determining the presence of archaeological potential within a Study Area is drawn from provincial standards found in the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011, Sections 1.3.1 and 1.3.2). The following are features or characteristics that can indicate archaeological potential:

- previously identified archaeological sites;
- water sources (it is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees):
 - primary water sources (e.g. lakes, rivers, streams, creeks);
 - secondary water sources (e.g. intermittent streams and creeks, springs, marshes, swamps);
 - features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches); and,
 - accessible or inaccessible shoreline (e.g. high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh).
- elevated topography (e.g. eskers, drumlins, large knolls, plateaus);
- pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground;

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- distinctive land formation 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 (e.g. migratory routes, spawning areas, prairie);
 - scarce raw materials (e.g. quartz, copper, ochre or outcrops of chert); and,
 - early Euro-Canadian industry (e.g. fur trade, logging, prospecting, mining).
- areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g. pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and cemeteries. There may be commemorative markers of their history, such as local provincial, or federal monuments or heritage parks;
- early transportation routes (e.g. trails, passes, roads, railways, portages); and,
- property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial or municipal historic landmark or property that local histories or informants have identified with possible archaeological sites, historical events, activities or occupations.

Archaeological potential can be determined to not be present for either the entire Study Area or parts of it when the area under consideration has been subjected to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as “disturbed” or “disturbance” and may include:

- quarrying;
- major landscaping involving grading below topsoil;
- building footprints;
- sewage and infrastructure development; and,

However, activities such as agricultural cultivation, gardening, minor grading, and landscaping do not necessarily affect archaeological potential.

The Study Area is comprised of maintained lawn bounded on the east, west, and south by chain link fencing. North of the Study Area is the Thorold Fire Station building with rear concrete parking lot.

Several factors can be used to assess the potential for recovery of Indigenous archaeological resources within a Study Area. First, the Study Area is largely comprised of well-drained land that is suitable for human habitation. Second, one secondary water source, an unnamed creek illustrated on historical mapping, is located within 300 m of the Study Area.

Per the MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (MHSTCI

2011), any areas within 100 m of early transportation routes and 300 m of early Euro-Canadian settlement have archaeological potential. The Study Area is directly adjacent to one historical roadway (Davis Road). One farmstead is illustrated on the 1876 historical atlas mapping within 300 m of the Study Area (Appendix A: Figure 5).

Given the above, background archival research supports the conclusion that the Study Area exhibits general archaeological potential for the presence of both Indigenous and Euro-Canadian archaeological resources.

2.6 Indigenous Engagement

The Study Area is within the treaty and/or traditional territories of numerous Indigenous Nations. This area was used and shared by many Indigenous groups over the millennia, each with their own traditions as to how they arrived, lived, and the major events of their history. One perspective is provided in the MCFN treaties booklet (Appendix F), which details the history of the Mississauga of the Credit First Nation and the 1792 Between the Lakes Treaty, No.3. It should be noted that this booklet does not necessarily reflect the views of other Nations, nor the consultant archaeologist.

A draft of this report was shared with the following three Indigenous Nations:

- Haudenosaunee Development Institute (HDI)
- Mississaugas of the Credit First Nation (MCFN)
- Six Nations of the Grand River Elected Council (SNGREC)

To date no comments from HDI have been received.

Comments received from MCFN and SNGREC are summarized in the Supplementary Documentation accompanying this report.

3.0 Stage 2 Property Assessment

3.1 Methods

A Stage 2 archaeological survey of the Study Area was directed and conducted by Chelsea Dickinson (R1194) with the assistance of Heidy Schopf of Wood on 11 November 2021 and 12 November 2021. As summarized in Table 6, the weather during fieldwork met Section 2.1 Standard 3 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011) regarding weather and lighting.

Table 6: Weather Conditions for Each Field Day

Date	Weather	Field Director	Activities Conducted
11 November 2021	Partly Cloudy (Low 8°C/ High 16°C)	Chelsea Dickinson (R1194)	Test pit survey
12 November 2021	Partly Cloudy with some showers (Low 9°C/ High 13°C)	Chelsea Dickinson (R1194)	Test pit survey

All land conditions were recorded as shown in Appendix B: Figure 11 and Appendix E: Photographs 1 to 9.

The entirety of the Study Area is maintained lawn with archaeological potential but where ploughing to remove surface vegetation is not possible or viable. Per the requirements of Section 2.1.2 Standard 1 d. of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011), this land was assessed by means of test pit survey at 5 m grid intervals.

The test pit survey determined that 0.07 ha (29%) of the Study Area had undergone major landscaping involving grading below topsoil that would have severely damaged the integrity of any archaeological resources. Per Section 2.1.8 Standard 2 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011) this area was shovel tested at 5-10 m intervals according to professional judgment so as to confirm the extent of the area that was completely disturbed. Please refer to Appendix A: Figure 11 for the location and extent of this disturbed area and Appendix E: Photographs 5 to 7 showing the disturbed area and Wood archaeologists completing shovel test pitting to define the extent of this disturbance.

Approximately 0.01 ha (4%) of the Study Area on the western edge of the property was located along a shallow drainage ditch, which suggested an extensive and deep land alteration would have severely damaged the integrity of any archaeological resources. Per Section 2.1.8 Standard 2 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011) this area was shovel tested according to professional judgment at 5 m intervals so as to confirm the extent of the area that was completely

disturbed.

All test pits were a minimum of 30 centimetres (“cm”) in diameter and dug to a minimum of 5 cm into the subsoil. Soil fills were screened through 6-millimetre (“mm”) mesh screens to facilitate artifact recovery. Test pit profiles were examined for cultural deposits prior to being backfilled. All test pits were backfilled to level grade, and any sod caps were replaced and tamped down by foot.

Test pit survey in the remaining 0.23 ha (96%) of the Study Area found four pieces of chert. Two of the fragments showed no visible evidence of knapping or retouching and after engaging the Indigenous representatives were conclusively identified to be natural stone inclusions. The identification of the other two fragments was initially less clear. Per Section 2.1.2 Standard 1 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011), the test pit survey continued on the 5 m grid. As this resulted in no further finds, an intensified survey was initiated in the vicinity of the two test pits that produced the unclear lithics following Section 2.1.2 Standard 2 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011).

Since the northwest corner of Test Pit 3 showed evidence of disturbance and a small gravel pile was located to the northeast, the test pit survey intensification began by placing four test pits according to professional judgement at a 2.5 m distance from at the southwest, south, and southeast corners of Test Pit 3 to avoid the disturbed area. Test pits were also placed according to professional judgement at a 2.5 m distance from the northeast, northwest, southeast, and southwest corners of Test Pit 6. None of the intensification test pits contained archaeological resources. Subsequently, and after discussion with the Indigenous representatives, the two unclear pieces of lithic were further examined and determined to also be natural stone inclusions and not archaeological artifacts. Because no artifacts were recovered it was determined that it was not required to continue the test pit intensification strategy.

3.2 Record of Finds

3.2.1 Field Conditions within Areas of Archaeological Potential

The majority of the maintained lawn was observed to be moderately flat while the upper northern section was visibly raised indicating potential disturbance (Appendix A: Figure 11, Appendix E: Photograph 5-6).

Soil conditions encountered during the test-pit survey at the higher elevation showed evidence of disturbance, including fill and gravel inclusions at average depths between 30-70 cm. A typical test pit found within the southern half of the Study Area consisted of dark brown clay loam topsoil overlaying brown/orange clay loam. The average topsoil depth in this area ranged between 29 to 34cm.

3.2.2 Documentary Record

The inventory of documentary records accumulated as part of this assessment is provided in Table 7.

Table 7: Inventory of Documentary Record

Repository	Map and Photo(s)	Field Notes
Wood PLC (Burlington Office) 3450 Harvester Rd, Burlington, ON L7N 3W5	Copies of 6 historical maps, 9 Stage 2 photographs and 5 aerial photographs	Stage 2 photo logs and field notes

Documentation related to the archaeological assessment of this project will be curated by Wood until such time that arrangements for their ultimate transfer to Her Majesty the Queen in Right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the MHSTCI and any other legitimate interest groups.

4.0 Stage 2 Analysis and Conclusions

The Study Area was determined to have general archaeological potential and recommended for a Stage 2 property assessment for the following reasons: (1) one historical secondary water source (an unnamed creek draining into the Old Welland Canal) is located within 300 m of the Study Area; (2) the project area is largely comprised of well-drained land that is suitable for human habitation; (3) the Study Area is within 100 m of the historical transportation route that is now Davis Road; and, (4) The Study Area is within 300 m of a Euro-Canadian farmstead and orchard illustrated on the 1876 historical atlas mapping (Appendix A: Figure 5).

Approximately 0.24 ha (100%) of the Study Area is maintained lawn with archaeological potential and was recommended for test pit survey.

The test pit survey determined that 0.07 ha (29%) of the Study Area had undergone major landscaping involving grading below topsoil that would have severely damaged the integrity of any archaeological resources (Appendix A: Figure 11; Appendix E: Photographs 5 to 7).

Approximately 0.01 ha (4%) of the Study Area on the western edge of the property was located along a shallow drainage ditch, which suggested an extensive and deep land alteration would have severely damaged the integrity of any archaeological resources.

Test pit survey in the remaining 0.23 ha (96%) of the Study Area found four pieces of chert that were conclusively identified to be natural stone inclusions. No archaeological resources were identified through the Stage 2 test pit survey.

5.0 Recommendations

Based on the findings of the Stage 2 archaeological assessment of the Study Area, the following recommendations are made, subject to the conditions outlined below and in Section 6.0:

1. No archaeological resources were identified within the Stage 2 Study Area, therefore, the Stage 2 Study Area requires no further archaeological assessment.

The above recommendation is subject to approval by the Ministry of Heritage, Sport, Tourism and Culture Industries. It is an offence to knowingly alter any portion of an archaeological site except by a person holding a professional archaeological license.

6.0 Advice on Compliance with Legislation

- a. This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part IV 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 Heritage, Sport, Tourism and Culture Industries, 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.
- b. 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 a time as a licensed archaeologist has completed archaeological 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*.
- c. Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- d. The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must notify the local police or coroner and the Registrar of Cemeteries at the Ministry of Government and Consumer Services.

7.0 Assessor Qualifications

This report was prepared and reviewed by the undersigned, employees of Wood. Wood is one of North America's leading engineering firms, with more than 50 years of experience in the earth and environmental consulting industry. The qualifications of the assessors involved in the preparation of this report are provided in Appendix G.

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8.0 Closure

This report was prepared for the exclusive use of Niagara Region and is intended to provide a Stage 2 archaeological assessment of the Study Area. The property is located at the South Thorold Blackhorse Sewage Pumping Station (SPS) at 701 Allanburg Road, in City of Thorold, Regional Municipality of Niagara, Ontario (the “Study Area”). The Study Area was historically located within part of Lot 94 in the Township of Thorold, Regional Municipality of Niagara, Ontario.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third party. Should additional parties require reliance on this report, written authorization from Wood will be required. With respect to third parties, Wood has no liability or responsibility for losses of any kind whatsoever, including direct or consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The report is based on data and information collected during the Stage 2 background study conducted by Wood. It is based solely a review of historical information, property inspections conducted on 11 November 2021 and 12 November 2021 and data obtained by Wood as described in this report. Except as otherwise maybe specified, Wood disclaims any obligation to update this report for events taking place, or with respect to information that becomes available to Wood after the time during which Wood conducted the archaeological assessment. In evaluating the property, Wood has relied in good faith on information provided by other individuals noted in this report. Wood has assumed that the information provided is factual and accurate. In addition, the findings in this report are based, to a large degree, upon information provided by the current owner/occupant. Wood accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted.

Wood makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel.

This report is also subject to the further Standard Limitations contained in Appendix H.

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We trust that the information presented in this report meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact the undersigned.

Respectfully Submitted,

**Wood Environment & Infrastructure,
a Division of Wood Canada Limited**

Prepared By:

Chelsea Dickinson, B.A. (R1194)
Cultural Heritage Specialist | Research
Archaeologist

Reviewed By:

Henry Cary, Ph.D., CAHP, RPA (327)
Senior Archaeologist

Peter Popkin Ph.D., CAHP, MCIfA (P362)
Associate Archaeologist

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Ontario Heritage Trust

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Page, H. R. & Co.

1876 *Illustrated Historical Atlas of Lincoln and Welland Counties, Ontario*. H. R. Page & Co., Toronto.

Rayburn Alan

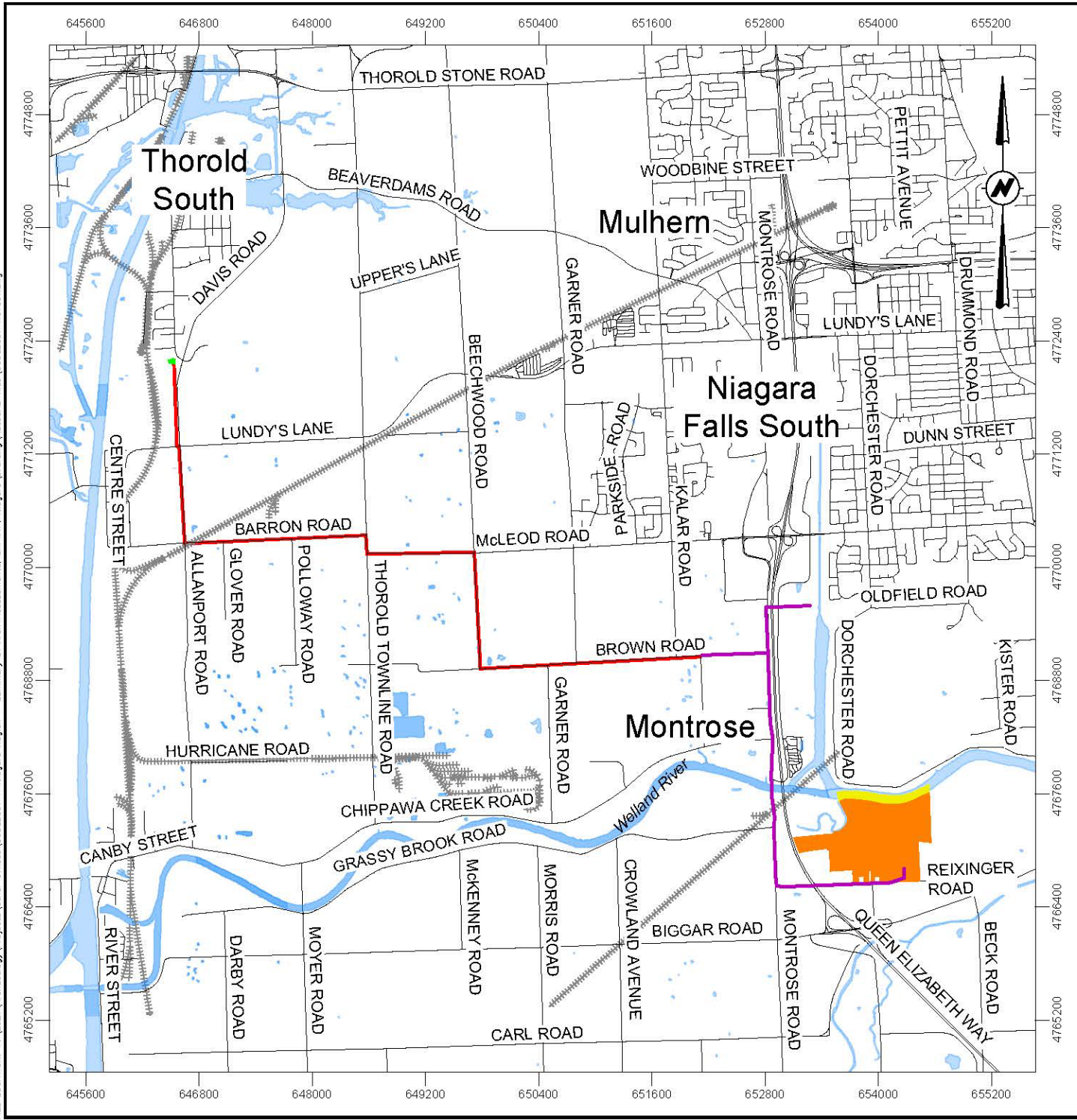
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Stage 2 AA: SNFWWTP Blackhorse Sewage Pumping Station at
701 Allanburg Road

- Surveys and Mapping Branch, Department of Energy, Mines and Resources
1963 Allanburg, Ontario. 1:25,000. Map Sheet 030M03B, ed. 2, 1963. Available online:
http://geo.scholarsportal.info/#r/details/uri@=HTDP25K030M03b_1963TIFF.
Last accessed November 5, 2021.
- Tremaine, G.R.
1862 *Tremaine's Map of the Counties of Lincoln and Welland, Canada West*. George R. Tremaine, Toronto.
- Wood PLC
- 2021a *Stage 1 Archaeological Assessment South Niagara Falls Wastewater Treatment Plant, Phase 1 Lands Part of Lots 186-187, 198 and 209-210 in the Township of Stamford, Lot 1 Broken Front at Chippewa Creek, Township of Crowland and Lots 7-10 Broken Front at Chippewa Creek, Township of Willoughby, Former County of Welland, now the City of Niagara Falls, Regional Municipality of Niagara, Ontario*. Draft Report on File with Wood. PIF P327-0013-2021.
- 2021b *Stage 1 & 2 Archaeological Assessment South Niagara Falls Wastewater Treatment Plant, Phase 2 Lands Part of Lots 7 to 10 Broken Front on Chippewa Creek, Geographic Township of Willoughby, Former County of Welland, now in the City of Niagara Falls, Regional Municipality of Niagara, Ontario*. DRAFT Report on File with Wood. PIFs P348-0106-2020 and P348-0107-2020
- 2021c *Marine Archaeological Assessment South Niagara Falls Wastewater Treatment Plant, Phase 2 Lands Welland River along Lots 7 to 9 Broken Front on Chippewa Creek, Geographic Township of Willoughby, Former County of Welland, now the City of Niagara Falls, Regional Municipality of Niagara, Ontario*. DRAFT Report on File with Wood. Marine Archaeological License 2021-222)
- 2021d *Stage 1 Archaeological Assessment South Niagara Wastewater Treatment Plant, South Thorold Trunk and Blackhorse Sewage Pumping Station, located in part of Lots 167-168, 181-184, and 201-208 in the Geographic Township of Stamford, Lincoln County, now City of Niagara Falls, and part of Lots 93-94, 112-117 and 123-140 in the Geographic Township of Thorold, Welland County, now City of Thorold, Regional Municipality of Niagara, Ontario* DRAFT Report on File with Wood. PIF P327-0012-2021
- Wright James V.
1972 *Ontario Prehistory: an eleven-thousand-year archaeological outline*. Archaeological Survey of Canada, National Museums of Canada, Ottawa.

Appendix A: Summary of Archaeological Assessments

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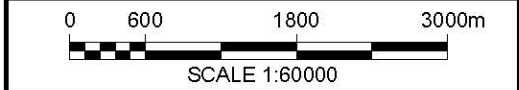


PROJECT: ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 FORMER COUNTY OF WELLAND
 NOW IN THE CITY OF NIAGARA FALLS
 REGIONAL MUNICIPALITY OF NIAGARA, ONTARIO

TITLE: SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SUMMARY OF ARCHAEOLOGICAL ASSESSMENTS

- LEGEND:
- STAGE 1 ARCHAEOLOGICAL ASSESSMENT (PIF P327-0012-2021)
 - STAGE 1 ARCHAEOLOGICAL ASSESSMENT (PIF P327-0013-2021)
 - STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT (PIF P348-0106-2020 & PIF P348-0107-2020)
 - STAGE 2 ARCHAEOLOGICAL ASSESSMENT (PIF P327-0019-2021)
 - MARINE ARCHAEOLOGICAL ASSESSMENT (MARINE ARCHAEOLOGICAL LICENSE 2021-22)

NOTES:
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 ALL LOCATIONS ARE APPROXIMATE.
ORIGINAL PAPER SIZE: 8 1/2 x 11.
 REFERENCES:
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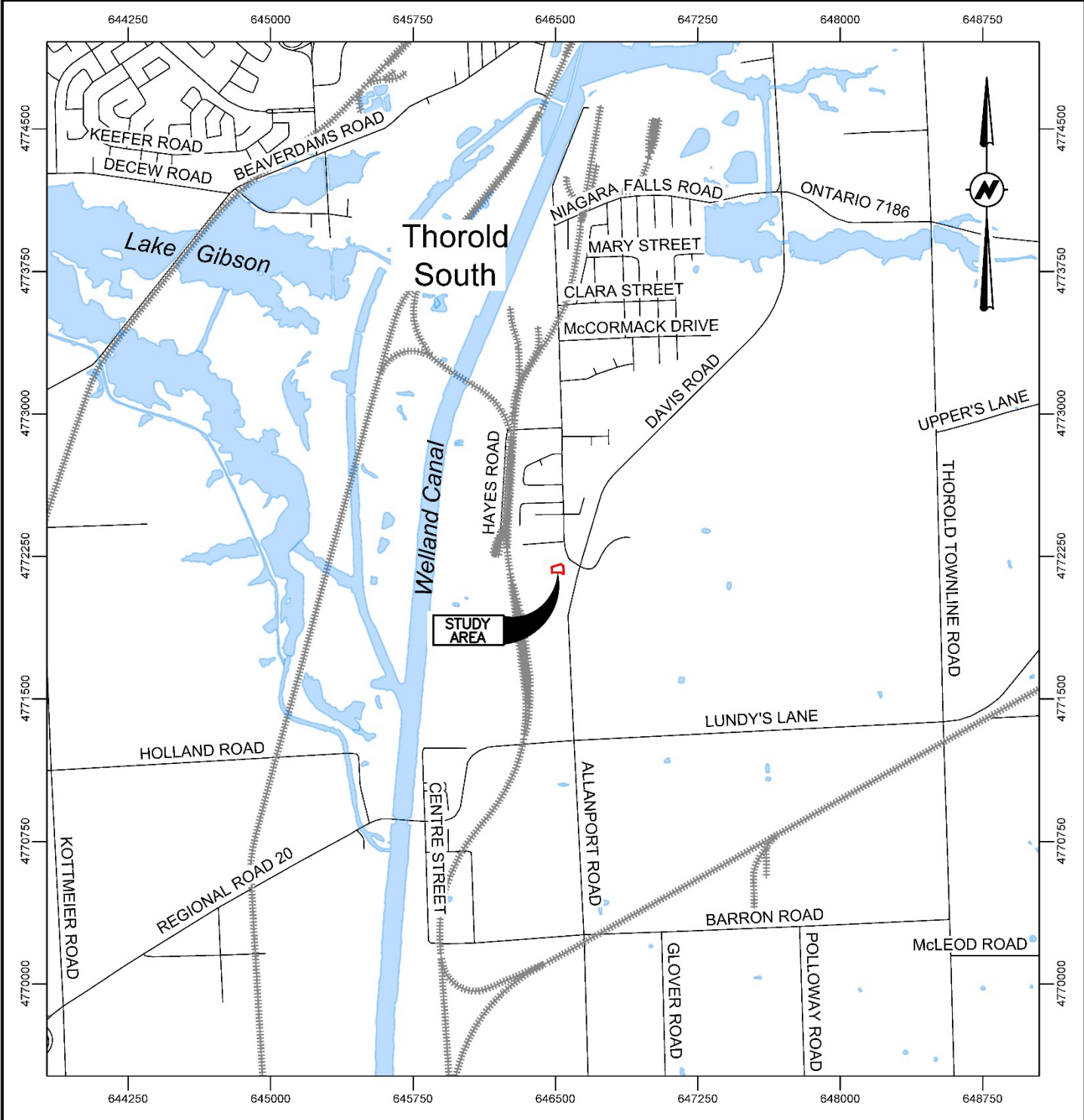
Niagara Region
 1815 SIR ISAAC BROCK WAY, P.O. BOX 1042
 THOROLD, ONTARIO, L2V 4T7

Wood
 Environment & Infrastructure Solutions
 50 VOGELL ROAD, UNIT 3
 RICHMOND HILL, ONTARIO, L4B 3K6
 647-689-4958

DWN BY: SJL	CHK'D BY: CD	DATE: FEB. 10, 2022
DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: OCUL2001
REV No: 0		

Appendix B: Figures

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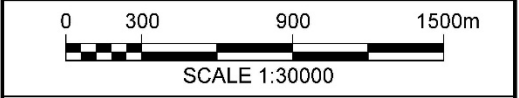


PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
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 REPORT No. OCUL2001.1001.
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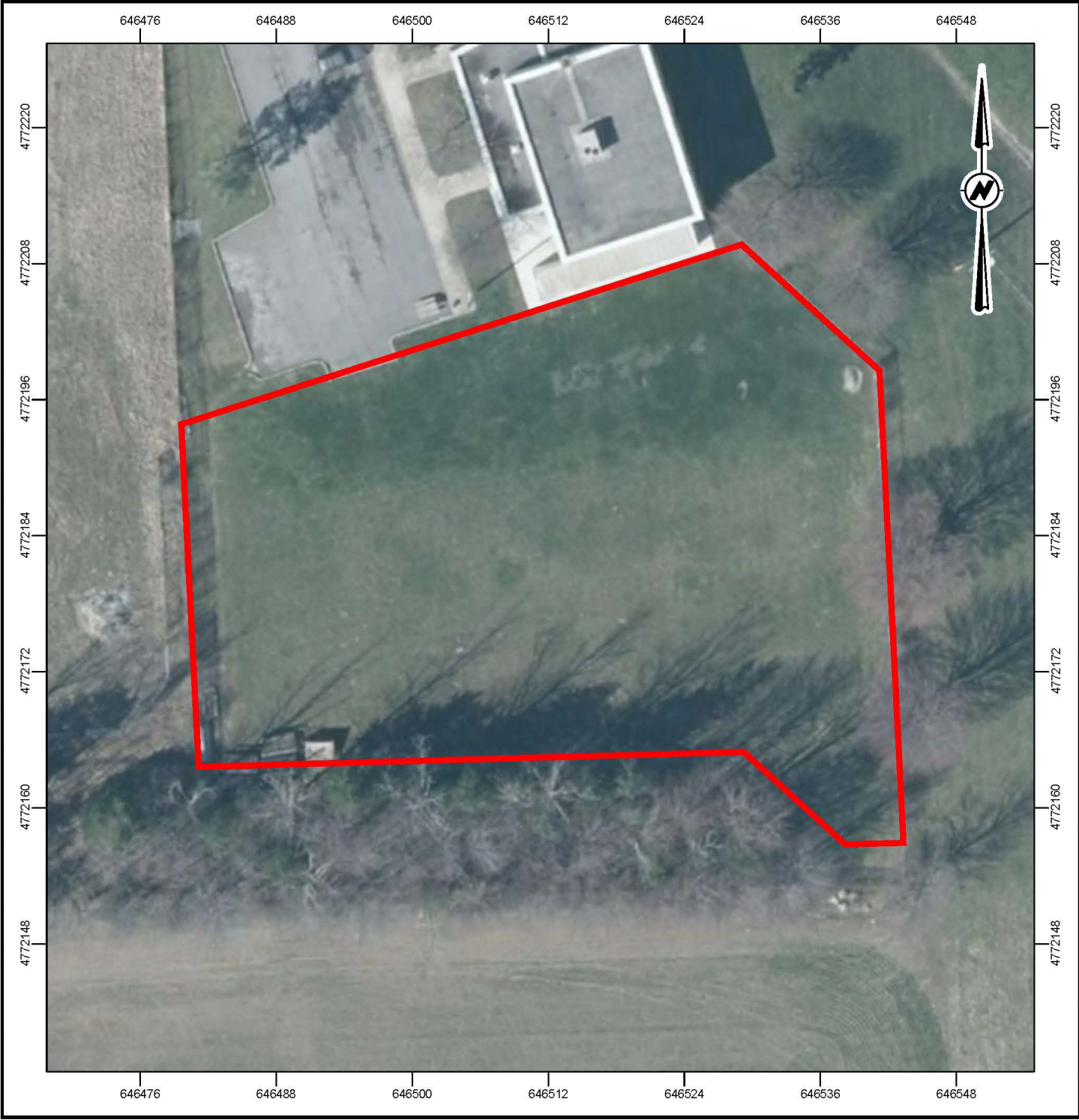


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DWN BY: SJL	CHK'D BY: CD	DATE: DEC. 17, 2021
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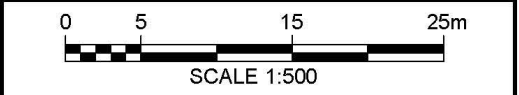


PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 AERIAL PHOTOGRAPH SHOWING THE
 LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA


NOTES:
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 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.1001.
 ALL LOCATIONS ARE APPROXIMATE.
ORIGINAL PAPER SIZE: 8 1/2 x 11.
REFERENCES:
 2020 AERIAL PHOTOGRAPHS BY THE REGION OF NIAGARA;
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Niagara Region
 1815 SIR ISAAC BROCK WAY, P.O. BOX 1042
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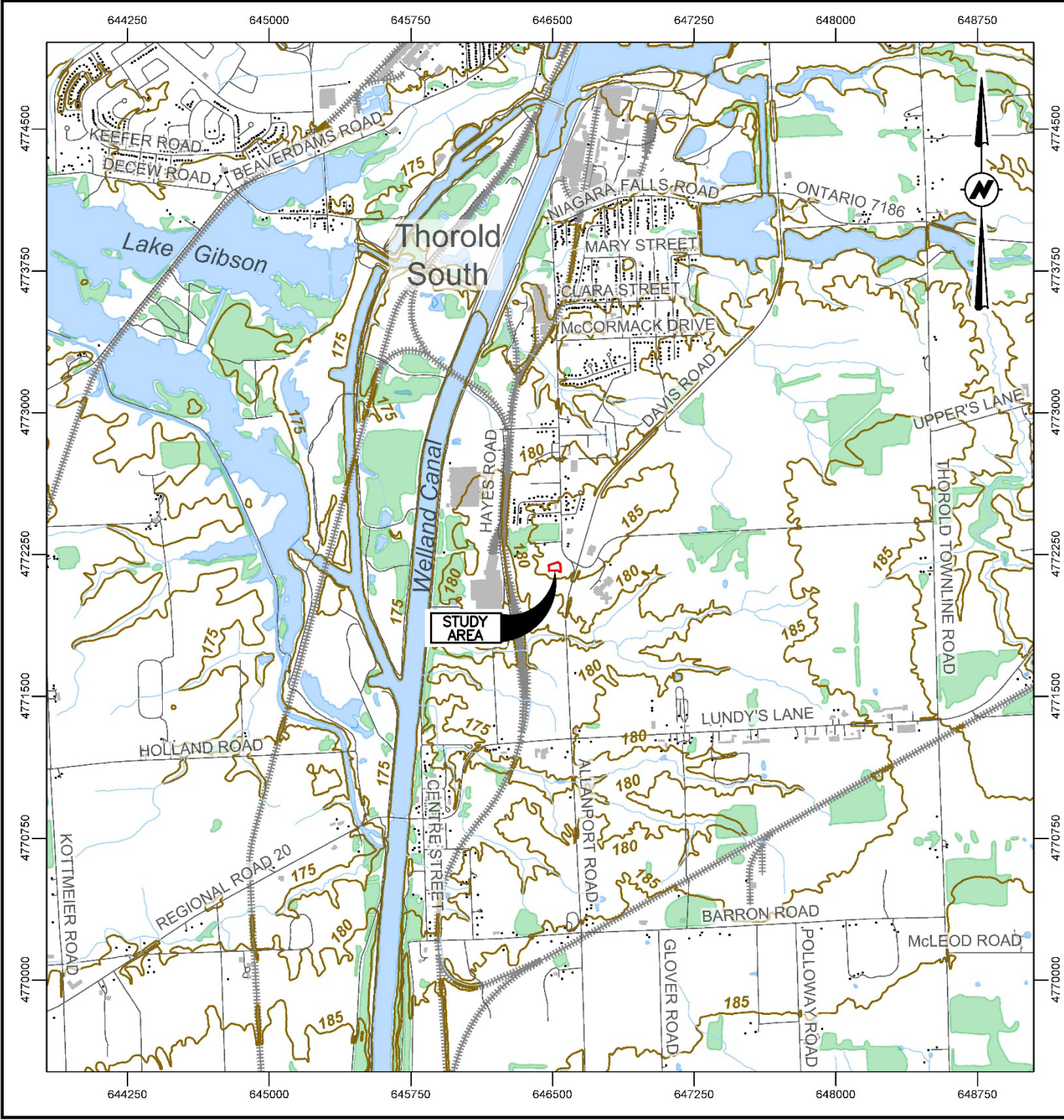


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PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 TOPOGRAPHIC MAP SHOWING THE
 LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
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 REPORT No. OCUL2001.1001.
 ALL LOCATIONS ARE APPROXIMATE.
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REFERENCES:
 ESRI CANADA, "ONTARIO BASIC MAPPING (OBM)", CANMAP
 STREETFILES V2008.4



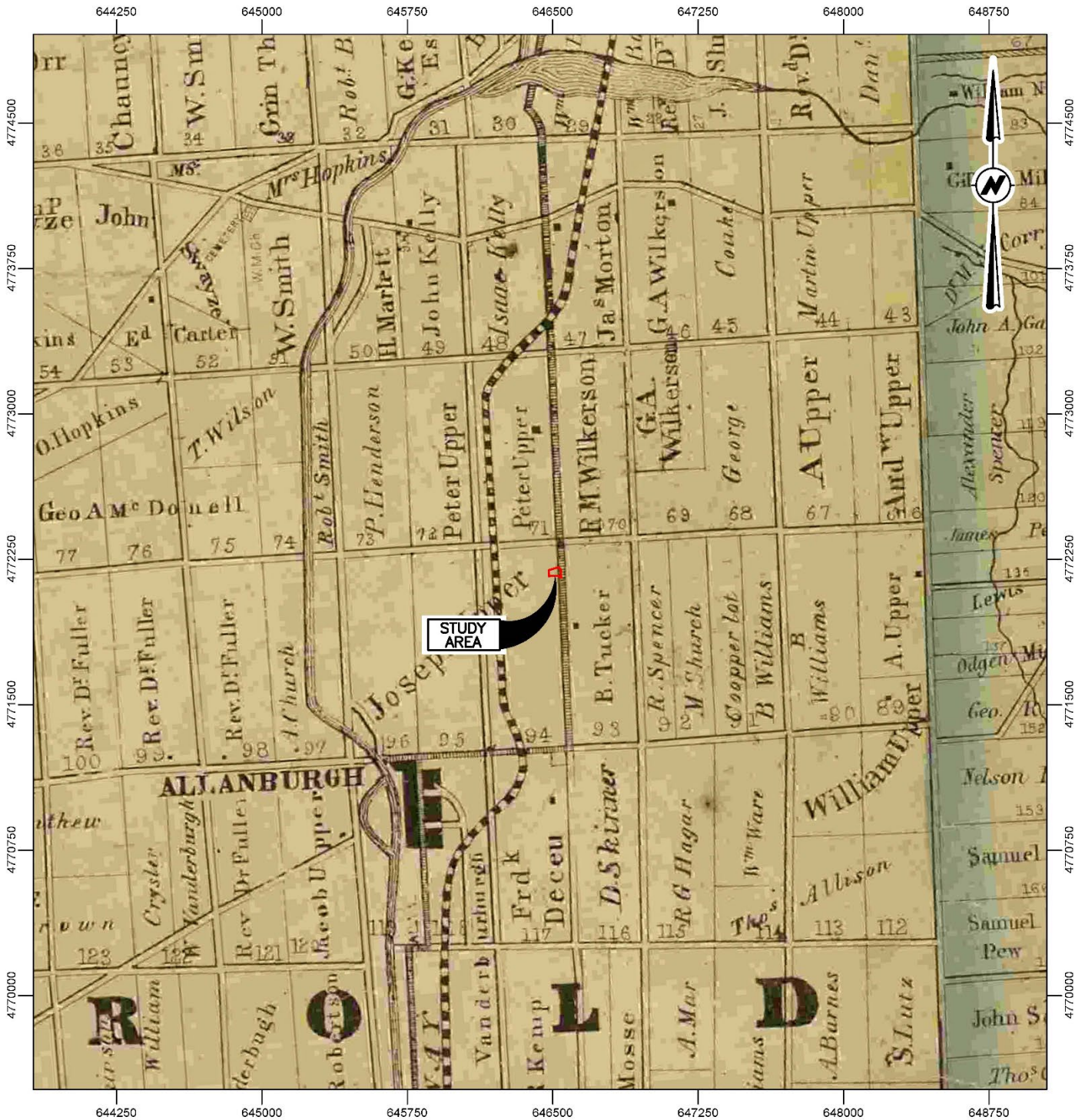
Niagara Region
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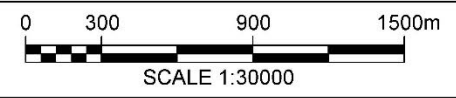
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 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1862 TREMAINE'S MAP OF THE COUNTIES
 OF LINCOLN AND WELLAND, CANADA WEST
 SHOWING THE LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.1001.
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 ORIGINAL PAPER SIZE: 8½ x 11.

REFERENCES:
 G.R. & G.M. TREMAINE, 1862; CANMAP STREETFILES V2008.4.



Niagara Region
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 THOROLD, ONTARIO, L2V 4T7



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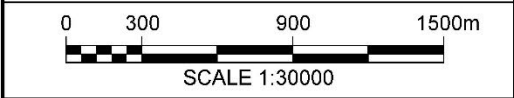


PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1876 ILLUSTRATED HISTORICAL ATLAS
 MAP OF THE COUNTIES OF LINCOLN AND WELLAND
 SHOWING THE LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
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 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.1001.
 ALL LOCATIONS ARE APPROXIMATE.
ORIGINAL PAPER SIZE: 8½ x 11.
REFERENCES:
 H.R. PAGE & Co., 1876; CANMAP STREETFILES V2008.4.



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PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1906 TOPOGRAPHIC MAP OF ONTARIO, NIAGARA SHEET
 SHOWING THE LOCATION OF THE STUDY AREA

LEGEND:
 [Red Square] STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.1001.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 8½ x 11.
 REFERENCES:
 DEPARTMENT OF MILITIA AND DEFENSE, 1906; CANMAP
 STREETFILES V2008.4.



Niagara Region
 1815 SIR ISAAC BROCK WAY, P.O. BOX 1042
 THOROLD, ONTARIO, L2V 4T7

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DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: OCUL2001.1001
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PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1925 TOPOGRAPHIC MAP OF ONTARIO, NIAGARA SHEET
 SHOWING THE LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
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 REPORT No. OCUL2001.1001.
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 ORIGINAL PAPER SIZE: 8½ x 11.
 REFERENCES:
 DEPARTMENT OF MILITIA AND DEFENSE, 1925; CANMAP
 STREETFILES V2008.4.



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PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1942 TOPOGRAPHIC MAP OF ONTARIO, NIAGARA SHEET
 SHOWING THE LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
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 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.1001.
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REFERENCES:
 DEPARTMENT OF NATIONAL DEFENCE, 1942; CANMAP
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Niagara Region
 1815 SIR ISAAC BROCK WAY, P.O. BOX 1042
 THOROLD, ONTARIO, L2V 4T7

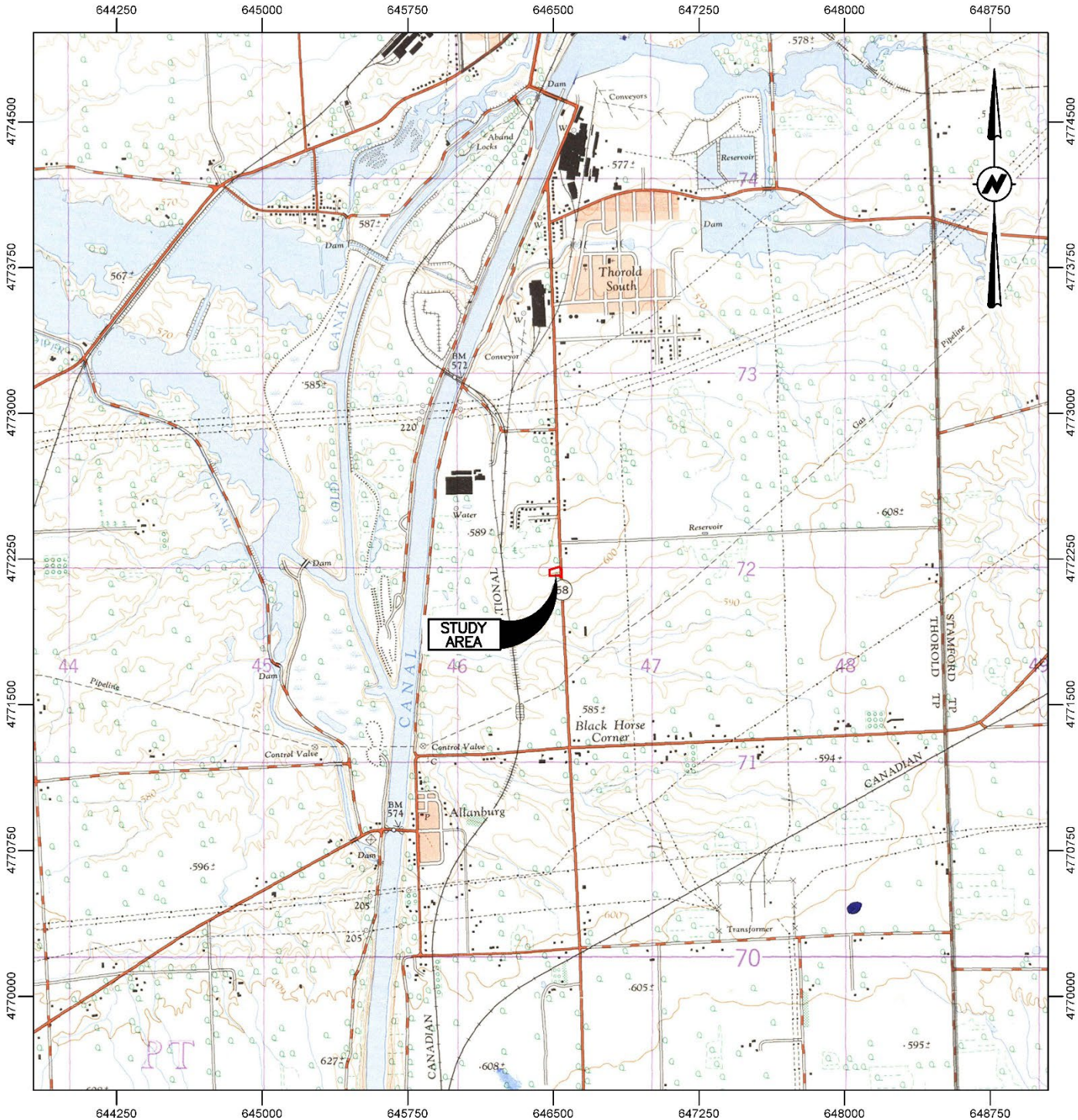


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 647-689-4958




DWN BY: SJL	CHK'D BY: CD	DATE: DEC. 17, 2021
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PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1963 TOPOGRAPHIC MAP OF
 ALLANBURG, ONTARIO SHEET SHOWING
 THE LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
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 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.1001.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 8½ x 11.
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 ARMY SURVEY ESTABLISHMENT, R.C.E., 1963; CANMAP
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Niagara Region
 1815 SIR ISAAC BROCK WAY, P.O. BOX 1042
 THOROLD, ONTARIO, L2V 4T7



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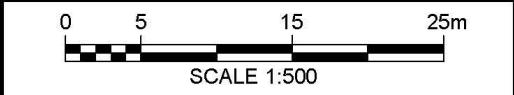
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 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 RESULTS OF PREVIOUS STAGE 1 ASSESSMENT
 COMPLETED BY WOOD (2021d)

LEGEND:

- STUDY AREA
- AREA OF ARCHAEOLOGICAL POTENTIAL
- UNPLOWABLE LAND: TO BE TEST PIT SURVEYED AT 5m INTERVALS

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS REPORT No. OCUL2001.1001.
 ALL LOCATIONS ARE APPROXIMATE.
ORIGINAL PAPER SIZE: 8 1/2 x 11.
REFERENCES:
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 CANMAP STREETFILES V2008.4.



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 647-689-4958

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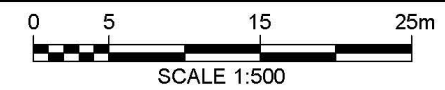


PROJECT:
 STAGE 2 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 BLACKHORSE SEWAGE PUMPING STATION
 701 ALLANBURG ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 STAGE 2 RESULTS WITH PHOTOGRAPH
 LOCATIONS AND DIRECTIONS

- LEGEND:**
- STUDY AREA
 - ① PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND IDENTIFICATION
 - AREA OF ARCHAEOLOGICAL POTENTIAL**
 - UNPLOUGHABLE LAND: TEST PIT SURVEYED AT 5m INTERVALS; NO FURTHER ASSESSMENT REQUIRED
 - AREA OF NO ARCHAEOLOGICAL POTENTIAL**
 - DISTURBED: TEST PIT SURVEYED AT 5-10m INTERVALS; NO FURTHER ASSESSMENT REQUIRED
 - DISTURBED: DRAINAGE DITCH; NO FURTHER ASSESSMENT REQUIRED


NOTES:
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REFERENCES:
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Niagara Region
 1815 SIR ISAAC BROCK WAY, P.O. BOX 1042
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Wood
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 647-689-4958



DWN BY: SJL	CHK'D BY: CD	DATE: JAN. 13, 2022
DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: OCUL2001.1001
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Appendix C: Development Plan



DATE	2021-08-19
SCALE	HOR: 1:5000 m
REF. No.	618145
DWG No.	C-1

Appendix D: Historical Aerials



Aerial Photograph
Dated: 1934
SNFWWTP South Thorold Blackhorse SPS Stage 2 AA
Plate: B1





LEGEND

 Study Area

Aerial Photograph
Dated: 1948
SNFWWTP South Thorold Blackhorse SPS Stage 2 AA
Plate: B2





Aerial Photograph
Dated: 1954/55
SNFWWTP South Thorold Blackhorse SPS Stage 2 AA
Plate: B3





LEGEND

 Study Area



Aerial Photograph
Dated: 1968
SNFWWTP South Thorold Blackhorse SPS Stage 2 AA
Plate: B4





LEGEND
Study Area



Aerial Photograph
Dated: 1975
SNFWWTP South Thorold Blackhorse SPS Stage 2 AA
Plate: B5



Appendix E: Photographs



PHOTOGRAPH 1
View facing northeast towards manicured lawn and firehouse/concrete pad north of the Study Area at 701 Allanburg Road.



PHOTOGRAPH 2
View facing north-northwest towards drainage ditching along the running parallel to the western fence line



PHOTOGRAPH 3
View facing northeast
towards manicured lawn
at 701 Allanburg Road.



PHOTOGRAPH 4
View facing northwest
towards manicured lawn
and firehouse at 701
Allanburg Road



PHOTOGRAPH 5
Crew at work, test pit survey of manicured lawn facing northeast.



PHOTOGRAPH 6
Crew at work, test pit survey of manicured lawn facing northeast.



PHOTOGRAPH 7

Example of a disturbed test-pit with thick section of disturbed mottled clay with gravel inclusions to sterile topsoil/subsoil



PHOTOGRAPH 8

Example of a typical test pit.



PHOTOGRAPH 9

View of slightly raised ground. Crew and screen used for scale.

Appendix F: Excerpts from the MCFN Treaties Booklet

Mississaugas of the Credit Treaties



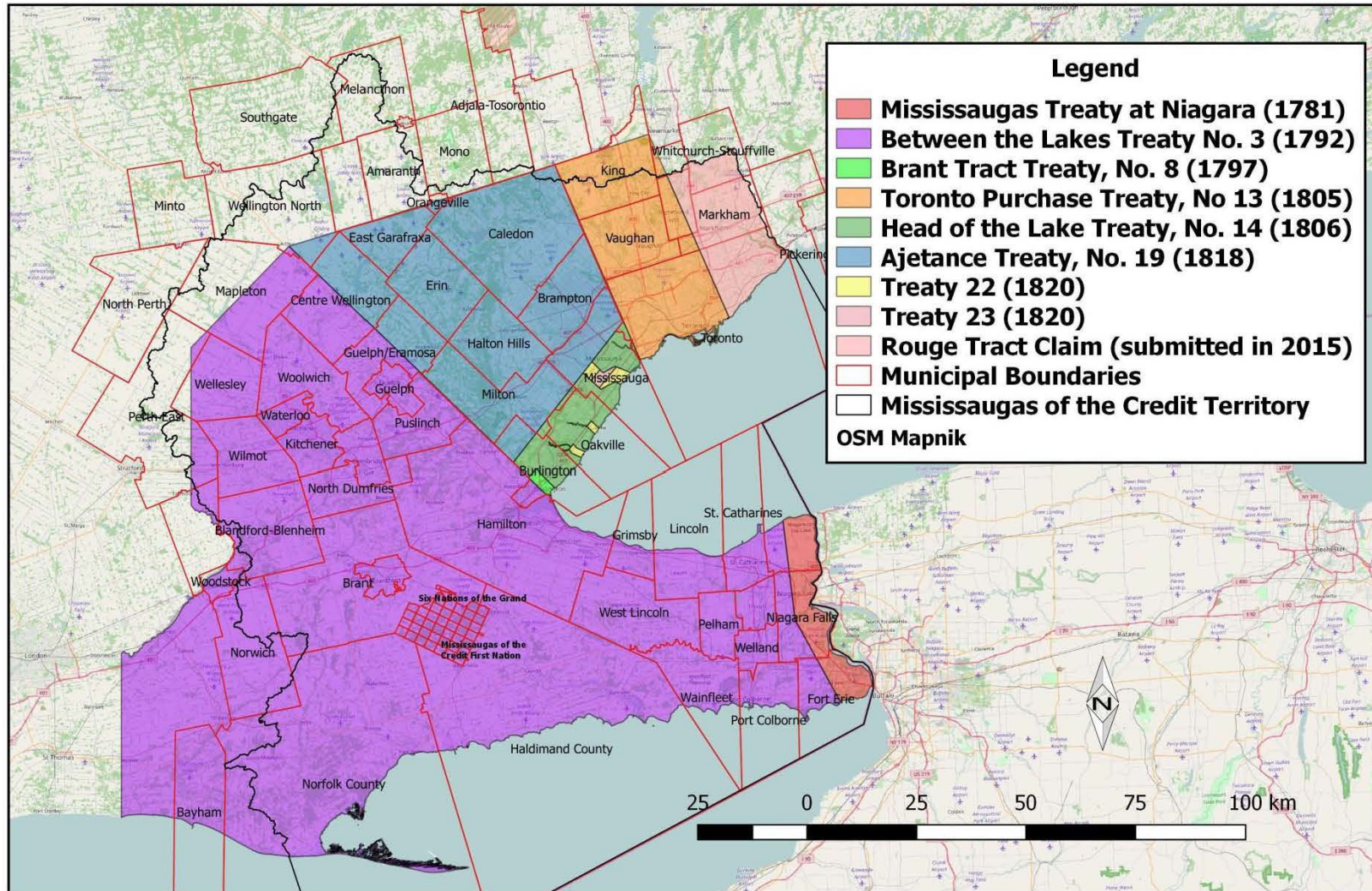
Prior to European contact, the ancestors of the Mississaugas of the New Credit First Nation occupied the lands north of Lake Superior and the area around Georgian Bay. The Mississaugas lived lightly on the lands they occupied and purposefully moved about the landscape harvesting resources as they became available.

Mississauga Territory

The ancestors of the Mississaugas of the Credit migrated into Southern Ontario by means of military conquest. After the Iroquois had expelled the Huron from Southern Ontario in 1649-50, they continued their attacks northward into the territories occupied by the Mississaugas and their allies. By the end of the 17th century, the Mississaugas and their allies had succeeded in driving the Iroquois back into their homelands south of Lake Ontario. At the conclusion of the conflict, many Mississaugas settled at the eastern end of Lake Ontario; other Mississaugas settled at the western end of the lake with their primary location at the mouth of the Credit River.

The Mississaugas of the Credit occupied, controlled and exercised stewardship over approximately 3.9 million acres of lands, waters, and resources in Southern Ontario. Their territory extended from the Rouge River Valley westward across to the headwaters of the Thames River, down to Long Point on Lake Erie and then followed the shoreline of Lake Erie, the Niagara River, and Lake Ontario until arriving back at the Rouge River Valley.

From the time of the conquest of New France in 1760, the British Crown recognized the inherent rights of First Nations and their ownership of the lands they occupied. The Royal Proclamation of 1763 confirmed First Nations' sovereignty over their lands and prevented anyone, other than the Crown, from purchasing that land. The Crown, needing First Nations' land for military purposes or for settlement, would first have to purchase it from its Indigenous occupants.



Municipal Boundaries Related to the Between the Lakes Treaty, No. 3 (1792)

Between the Lakes Treaty, No.3 (1792)



The arrival of Loyalists during and after the American Revolutionary War placed pressure on the British Crown to find lands on which to settle the newcomers. Among the Loyalists were approximately 2000 members of the Six Nations who had lost their homes fighting on behalf of the Crown.

Seeking to reward his First Nation allies for their loyalty during the war, Governor Haldimand offered homes to the Six Nations refugees in the remaining British colonies. One group of the Six Nations Loyalists settled at the eastern end of Lake Ontario, while another group, under the leadership of Mohawk Chief Joseph Brant, selected the Grand River Valley as an area for settlement.

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 land grant to the Six Nations was to extend six miles on both sides of the Grand River from its mouth to its source. When it was later discovered that the upper limits of the Between the Lakes Treaty were in error due to faulty geographical assumptions, actual boundaries were defined and a confirming document signed by the Mississaugas and the Crown in 1792.

Major population centres found within the boundaries of the Between the Lakes Treaty include Hamilton, Cambridge, Waterloo, Guelph, Brantford, and St. Catharines. The present location of the Mississaugas of the New Credit First Nation Reserve is located on Between the Lakes Treaty lands.

Appendix G: Assessor Qualifications

Assessor Qualifications

Peter Popkin, Ph.D., CAHP, MCIfA, Associate Archaeologist (P362) – Dr. Popkin is an Associate Archaeologist at Wood. Peter has over 20 years of professional experience in both consulting and academic archaeology within Canada and internationally. In Ontario he has successfully undertaken consultant archaeology projects triggered by: the Planning Act (subdivisions, site plans, re-zoning, official plan amendments, consent), the Environmental Assessment Act (individual and Class EAs, provincial and federal EAs), the Environmental Protection Act (Renewable Energy Approvals O.Reg 359/09), as well as the Aggregates Resources Act (aggregate pit extensions), and has managed projects under the National Energy Board Act (now the Canadian Energy Regulator Act). Dr. Popkin has lectured in archaeology at York University, the University of Toronto and Wilfrid Laurier University in Ontario, as well as University College London, King's College London, and Birkbeck College, in the UK. Dr. Popkin holds a Professional Archaeology Licence (P362) from the Ontario MHSTCI, is a Professional Member of the Canadian Association of Heritage Professionals (CAHP) and is a full Member of the Chartered Institute for Archaeologists (MCIfA). Dr. Popkin received his Ph.D. from the Institute of Archaeology, University College London, London, UK (2009).

Heidy Schopf, MES, CAHP – Built Heritage and Cultural Landscape Team Lead - Heidy Schopf the Built and Landscape Heritage Team Lead at Wood. She has over ten years' experience in Cultural Resource Management. She is a professional member of the **Canadian Association of Heritage Professionals (CAHP)** and is MTO RAQs certified in archaeology/heritage. She has worked on a wide variety of projects throughout Ontario, including: cultural heritage resources assessments, heritage impact assessments, documentation reports, cultural heritage evaluations, strategic conservation plans, heritage conservation district studies and plans and AAs. Ms. Schopf has extensive experience applying local, Provincial, and Federal heritage guidelines and regulations to evaluate protected and potential cultural heritage properties. She is skilled at carrying out impact assessments and developing mitigation measures to conserve the heritage attributes of properties where changes are proposed.

Henry Cary, Ph.D., CAHP, RPA – Senior Staff Archaeologist –Dr. Henry Cary has over 20 years of public and private-sector experience directing archaeological and cultural heritage projects in urban, rural, Arctic and Sub-Arctic environments in Canada as well as the Republic of South Africa, Italy, and France. His career has included positions as project archaeologist and cultural resource management specialist for Parks Canada's Fort Henry National Historic Site Conservation Program and Western Arctic Field Unit, Heritage Manager for the Town of Lunenburg UNESCO World Heritage Site, and senior-level archaeologist and cultural heritage specialist for CH2M and Golder Associates. He currently holds a **Professional Archaeology Licence (P327)** issued by the Ontario MHSTCI, is MTO RAQs certified in Archaeology/Heritage and is a member of the Canadian Association of Heritage Professionals (CAHP) and Register of Professional Archaeologists (RPA). His education includes a B.A. in

Prehistoric Archaeology and Anthropology from Wilfrid Laurier University, a MA in Historical Archaeology from Memorial University, and a Ph.D. in War Studies from the Royal Military College of Canada. Currently, Henry also holds academic positions as Adjunct Professor of Anthropology at Saint Mary's University and lecturer in Visual & Material Culture at Mount Allison University.

Chelsea Dickinson B.A. Hons., Cultural Heritage Specialist | Research

Archaeologist (R1194) - Ms. Dickinson holds an Honours B.A. Degree in Near Eastern and Classical Archaeology from Wilfrid Laurier University, and a Post-Graduate Certificate in Geographical Information Systems from Fanshawe College, she has been working in the field of archaeological consulting since 2015. Ms. Dickinson holds an Applied Research license (License R1194) in Archaeology from the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries. Ms. Dickinson has conducted all aspects of Stage 1 to 4 archaeological assessments (AAs) throughout Ontario, including environmental assessments (EA) conducted for the development of wind and solar farms, hydro line corridors and municipal roadway improvements. Ms. Dickinson has been the co-author on a multitude of archaeological assessment reports and has experience working on cultural heritage assessment reports, heritage impact assessments, and documentation reports specializing in historical background research spanning across Southern Ontario. Ms. Dickinson has had the privilege of working alongside a multitude of First Nation community members while conducting archaeological assessments in both Northern and Southern Ontario. Ms. Dickinson has experience using high precision GPS technologies, specifically Top Con Hi SR and FC5000 positioning systems, used to map in architectural features, diagnostic artifacts, as well as topographical anomalies and site boundaries. Ms. Dickinson has experience using ArcGIS in addition to Collector for ArcGIS while conducting archaeological assessments.

Appendix H: Limitations

Limitations

1. The work performed in the preparation of this report and the conclusions presented are subject to the following:
 - a. The Standard Terms and Conditions which form a part of our Professional Services Contract;
 - b. The Scope of Services;
 - c. Time and Budgetary limitations as described in our Contract; and,
 - d. The Limitations stated herein.
2. No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.
3. The conclusions presented in this report were based, in part, on visual observations of the Study Area. Our conclusions cannot and are not extended to include those portions of the Study Area which were not reasonably available, in Wood Environment & Infrastructure's opinion, for direct observation.
4. The potential for archaeological resources, and any actual archaeological resources encountered, at the Study Area were assessed, within the limitations set out above, having due regard for applicable heritage regulations as of the date of the inspection.
5. Services including a background study and fieldwork were performed. Wood Environment & Infrastructure's work, including archival studies and fieldwork, were completed in a professional manner and in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' guidelines. It is possible that unforeseen and undiscovered archaeological resources may be present at the Study Area.
6. The utilization of Wood Environment & Infrastructure's services during the implementation of any further archaeological work recommended will allow Wood Environment & Infrastructure to observe compliance with the conclusions and recommendations contained in the report. Wood Environment & Infrastructure's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.
7. This report is for the sole use of the parties to whom it is addressed unless expressly stated otherwise in the report or contract. Any use which any third party makes of the report, in whole or in part, or any reliance thereon, or decisions made based on any information or conclusions in the report, is the sole responsibility of such third party. Wood Environment & Infrastructure accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on the report or anything set out therein.
8. This report is not to be given over to any third-party other than a governmental entity, for any purpose whatsoever without the written permission of Wood Environment & Infrastructure, which shall not be unreasonably withheld.