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REGIONAL MUNICIPALITY OF NIAGARA
SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS

Archaeological Assessments

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Original Report: 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

Project # OCUL2001.900

Archaeological Consulting License #P327 (Cary)
PIF # P327-0012-2021 (Stage 1)

April 13, 2022

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

wood.

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
Project # OCUL2001.900

PREPARED FOR:

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April 13, 2022

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Executive Summary

Wood Environment & Infrastructure Solutions (“Wood”) was retained by Niagara Region to complete cultural heritage and archaeological consulting services in support of the Schedule “C” Municipal Class Environmental Assessment for the proposed South Niagara Falls Wastewater Treatment Plant (WWTP) 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 summarized below. The project components assessed by Wood archaeology staff are depicted in Appendix A.

This report contains the Stage 1 archaeological assessment for the South Thorold Trunk alignment and Blackhorse Sewage Pumping Station (SPS), in Cities of Thorold and Niagara Falls, Regional Municipality of Niagara, Ontario (the “Study Area”). From its east terminus at Heartland Forest Road in the City of Niagara Falls, the Study Area runs west along Brown Road, turns north on Beechwood Road, turns west at McLeod Road, jogs at Thorold Townline Road to Barron Road, then turns north on Allanport Road to Davis Road and ends at the proposed Blackhorse SPS site at 701 Allanburg Road. The Study Area includes a 10 m buffer on both sides of the alignment (20 m total) with sections of agricultural fields, woodlot, manicured lawns and roadways. From east to west, the Study Area is within part of Lots 167-168, 181-184, and 198-201 and 203-208 in the Township of Stamford and part of Lots 93-94, 112-117 and 135-140 in the Township of Thorold (Appendix B: Figure 1 to Figure 3). 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 Stage 1 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 on 05 October 2021 with the issuance of PIF number P327-0012-2021 (Stage 1).

A property assessment of the Study Area was directed and conducted by Krista Lane (R382) with the assistance of Xavier Figuera of Wood on 6 October 2021. The weather during the assessment was sunny with some overcast periods and this weather did not impede the inspection in any way.

The Stage 1 background study indicated that the Study Area has 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

Stage 1 AA: SNFWWTP South Thorold Trunk and Blackhorse SPS

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 Study Area. These areas, identified as disturbed, have had the integrity of the topsoil compromised by earth moving activities to the point where archaeological potential has been removed. These areas include the right-of-way, recent residential complexes and moderate to deep roadside ditching and culverts.

The remainder of the Study Area, approximately 5.5 ha (31%), consists of manicured 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.

In light of the findings of the Stage 1 archaeological assessment of the Study Area, the following recommendations are made, subject to the conditions outlined below and in Section 5.0:

1. Approximately 12.2 ha (69%) of the Study Area has no to low archaeological potential due to extensive and deep land alterations and therefore no further archaeological assessment is required (Appendix B: Figure 11A-Figure 11B).
2. Approximately 5.5 ha (31%) of the Study Area is located within maintained lawns, wooded areas, or narrow corridor (10 m or less) that has archaeological potential but cannot be accessed by plough, meeting the requirements of Section 2.1.2, Standard 1.e., that ploughing or cultivation is not viable (Appendix B: Figure 11A-Figure 11B). Areas where open cut construction is proposed or surface disturbance is anticipated should be assessed by means of hand shovel test pitting at 5 m grid intervals. All test pits should be a minimum of 30 centimetres (“cm”) in diameter and dug to a minimum of five cm into the subsoil. Soils and sediments should be screened through 6 millimetre (“mm”) mesh screens in order to facilitate artifact recovery. Test pit profiles should be examined for cultural deposits prior to being backfilled. Test pitting should be conducted to within 1 m of all disturbances. All test pits should be backfilled to level grade, and any sod caps replaced and tamped down by foot.
 - a. The requirement for further archaeological assessment will be confirmed during the detailed design phase of the project.

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

Project Personnel

Project Director:	Barbara Slim, M.A. (P348)
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1.0 Section 1 – Project Context

1.1 Development Context

Wood Environment & Infrastructure Solutions (“Wood”) was retained by Niagara Region to complete cultural heritage and archaeological consulting services in support of the Schedule “C” Municipal Class Environmental Assessment for the proposed South Niagara Falls Wastewater Treatment Plant (WWTP) 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.

Proposed Project Components	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 2022a)
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 2022b) Marine Archaeological Assessment (Marine Archaeological License 2021-22; Wood 2022c)
South Thorold Trunk and Blackhorse Sewage Pumping Station	<ul style="list-style-type: none"> Stage 1 Archaeological Assessment (P327-0012-2021) (Current Report) Stage 2 Archaeological Assessment for Blackhorse Sewage Pumping Station (P327-0019-2021; Wood 2022d)

This report contains the Stage 1 archaeological assessment for the South Thorold Trunk alignment and Blackhorse Sewage Pumping Station (SPS), in Cities of Thorold and Niagara Falls, Regional Municipality of Niagara, Ontario (the “Study Area”). From its east terminus at Heartland Forest Road in the City of Niagara Falls, the Study Area runs west along Brown Road, turns north on Beechwood Road, turns west at McLeod Road, jogs at Thorold Townline Road to Barron Road, then turns north on Allanport Road to Davis Road and ends at the proposed Blackhorse SPS site at 701 Allanburg Road. The Study Area includes a 10 m buffer on both sides of the alignment (20 m total) with sections of agricultural fields, woodlot, manicured lawns and roadways. From east to west, the Study Area is within part of Lots 167-168, 181-184, and 198-201 and 203-208 in the Township of Stamford and part of Lots 93-94, 112-117 and 135-140 in the Township of Thorold (Appendix B : Figure 1 to Figure 3). 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 Stage 1 archaeological assessment was carried out in accordance with the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (“MHSTCI”) 2011 *Standards*

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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 on 05 October 2021 with the issuance of PIF number P327-0012-2021 (Stage 1).

This report presents the results of the Stage 1 background study and property inspection and makes pertinent recommendations.

1.2 Scope of Work

A Stage 1 archaeological assessment is a systematic qualitative process executed in order to assess the archaeological potential of a Study Area based on its historical use and its potential for early Euro-Canadian (early settler) and pre-contact Indigenous occupation. The objectives of a Stage 1 background study are: 1) to provide information about the Study Area's geography, history, previous archaeological fieldwork and current land condition; 2) to evaluate in detail the Study Area's archaeological potential which will support recommendations for Stage 2 archaeological assessment for all or parts of the Study Area if warranted; and 3) to recommend appropriate strategies for Stage 2 archaeological assessment if warranted.

The scope of work for the Stage 1 background study consisted of the following tasks:

- 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 that Ministry.
- Contacting the MHSTCI to determine if there are any known reports of previous archaeological field work within the Study Area or within a radius of 50 metres ("m") around the Study Area, through a search of the *Ontario Public Register of Archaeological Reports* maintained by that Ministry.
- A desktop review of the Study Area's physical setting to determine its potential for both pre-contact and post-contact period human occupation, including its topography, hydrology, soils, and proximity to important resources and historical transportation routes and settlements.
- A review of the potential for post-contact period human occupation of the Study Area as documented in historical atlases and other archival sources.
- A visual inspection of the Study Area to gather first-hand and current evidence of its physical setting, and to aid in delineating areas where archaeological potential may have been impacted or removed by recent land-use practices.
- Formulate appropriate field testing strategies for areas of general archaeological potential.
- Preparing a Stage 1 report of findings with recommendations regarding the need for further archaeological work if deemed necessary.

2.0 Stage 1 Background Study

As part of the Stage 1 archaeological assessment, Wood queried the *Ontario Archaeological Sites Database*, maintained by the MHSTCI to determine if archaeological sites have been registered within 1 km of the Study Area (MHSTCI 2021a). The *Ontario Public Register of Archaeological Reports* was also queried to determine whether previous archaeological assessments have been carried out within the Study Area, or within a 50 m radius of the Study Area (MHSTCI 2021b). The principal determinants of archaeological potential, namely proximity to water, topography, drainage, soils, and proximity to important resources and historical transportation routes and settlements, were then examined to evaluate the Study Area's general archaeological potential. The specific potential for post-contact period archaeological resources was assessed through an examination of available historical maps and other archival sources. A property inspection was also conducted to confirm the desktop evaluation of archaeological potential and identify areas where recent land use has impacted or removed that potential.

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 *AgGs* and *AgGt* Borden blocks. On the basis of a search of the *Ontario Archaeological Sites Database* there are 43 registered sites located within a 1 km radius of the Study Area. Nine 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
AgGS-277	Unknown	Unknown	Findspot	< 1 km	No Further CHVI
AgGs-278	Unknown	Unknown	Findspot	< 300m	No Further CHVI
AgGs-279	Unknown	Indigenous	Findspot	< 300m	No Further CHVI

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Borden Number	Site Name	Cultural Affiliation	Site Type	Distance from Study Area	Development Review Status
		(Early Woodland)			
AgGs-280	Unknown	Euro-Canadian	Homestead	< 300m	No Further CHVI
AgGs-281	Unknown	Unknown	Findspot	< 300m	No Further CHVI
AgGs-282	Unknown	Indigenous (Early Archaic)	Scatter	< 300m	No Further CHVI
AgGs-283	Unknown	Unknown	Findspot	< 300m	No Further CHVI
AgGs-284	Unknown	Unknown	Unknown	< 1 km	Unknown
AgGs-286	Unknown	Unknown	Unknown	< 1 km	No Further CHVI
AgGs-287	Unknown	Unknown	Scatter	< 1 km	No Further CHVI
AgGs-288	Unknown	Indigenous (Early Archaic)	Unknown; Scatter	< 1 km	No Further CHVI
AgGs-289	Unknown	Indigenous (Pre-Contact)	Scatter	< 1 km	Further CHVI
AgGs-290	Unknown	Indigenous (Late Archaic)	Scatter	< 1 km	Further CHVI
AgGs-291	Unknown	Indigenous (Middle Archaic)	Scatter	< 1 km	Further CHVI
AgGs-292	Unknown	Indigenous (Late Woodland)	Findspot	< 1 km	No Further CHVI
AgGs-293	P23	Indigenous (Early Archaic)	Findspot	< 1 km	Unknown
AgGs-294	Unknown	Unknown	Unknown	< 1 km	Unknown

Stage 1 AA: SNFWWTP South Thorold Trunk and Blackhorse SPS

Borden Number	Site Name	Cultural Affiliation	Site Type	Distance from Study Area	Development Review Status
AgGs-295	Unknown	Indigenous (Late Woodland)	Findspot	< 1 km	No Further CHVI
AgGs-296	Unknown	Indigenous (Early Archaic)	Camp / Campsite	< 1 km	No Further CHVI
AgGs-297	Unknown	Indigenous (Early Archaic)	Findspot	< 1 km	Further CHVI
AgGs-298	Unknown	Indigenous (Early Archaic)	Camp / Campsite	< 1 km	No Further CHVI
AgGs-299	Unknown	Unknown	Unknown	< 300m	Unknown
AgGs-300	Unknown	Indigenous (Middle Archaic)	Findspot	< 1 km	No Further CHVI
AgGs-301	Unknown	Indigenous (Late Archaic)	Findspot	>300m	No Further CHVI
AgGs-302	Unknown	Indigenous (Early Archaic)	Findspot	>300m	No Further CHVI
AgGs-303	Unknown	Indigenous (Late Archaic)	Findspot	< 1 km	No Further CHVI
AgGs-394	Location 1	Indigenous (Early Archaic)	Scatter	< 1 km	No Further CHVI
AgGs-395	Unknown	Euro-Canadian	Unknown	< 1 km	Further CHVI
AgGt-69	Kaune	Indigenous (Pre-Contact)	Unknown	< 1 km	Unknown
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

Stage 1 AA: SNFWWTP South Thorold Trunk and Blackhorse SPS

Borden Number	Site Name	Cultural Affiliation	Site Type	Distance from Study Area	Development Review Status
AgGt-95	Unknown	Indigenous (Archaic)	Scatter	< 1 km	Unknown
AgGt-130	T Brown	Euro-Canadian	Homestead	< 1 km	Unknown
AgGt-131	Robert Spencer	Euro-Canadian	Homestead	< 1 km	Unknown
AgGt-133	K Smith	Euro-Canadian	Homestead	< 1 km	Unknown
AgGt-134	Unknown	Unknown	Findspot	< 1 km	Unknown
AgGt-135	Unknown	Unknown	Findspot	< 1 km	Unknown
AgGt-136	Unknown	Unknown	Findspot	< 1 km	Unknown
AgGt-139	Glen Gordon 1	Unknown	Scatter	< 1 km	Unknown
AgGt-140	Glen Gordon 2	Unknown	Scatter	< 1 km	Unknown
AgGt-141	Glen Gordon 3	Unknown	Scatter	< 1 km	Unknown

- Archaeological site AgGs-278 is located approximately 175 m north of the Study Area. It was originally discovered during pedestrian survey and includes one biface fragment and one secondary knapping flake recovered within a 5 m radius. No further work was recommended for this site (ASI 2007).
- Archaeological site AgGs-279 is located approximately 95 m north of the Study Area. It was originally discovered during pedestrian survey and includes an isolated findspot of an Early Woodland Meadowood point. No further work was recommended for this site (ASI 2007).
- Archaeological site AgGs-280 is located approximately 104 m north of the Study Area. It was originally discovered during pedestrian survey and includes a scatter of historic Euro-Canadian artifacts consisting mainly of a mixture of early 19th to early 20th-century artifacts distributed over an area with dimensions approximately 55 metres by 45 metres. This site was deemed to have significant archaeological potential and recommended for further archaeological assessment (ASI 2007).

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- Archaeological site AgGs-281 is located approximately 194 m north of the Study Area. It was originally discovered during test-pit survey and includes an isolated findspot of one Onondaga biface fragment. No further work was recommended for this site (ASI 2007).
- Archaeological site AgGs-282 is located approximately 124 m north of the Study Area. It was originally discovered during pedestrian survey and includes an Early Archaic Nettling projectile point, a primary thinning flake and a shatter fragment. This site was deemed to have significant archaeological potential and recommended for further archaeological assessment (ASI 2007).
- Archaeological site AgGs-283 is located approximately 258 m north of the Study Area. It was originally discovered during pedestrian survey and includes an isolated findspot of a biface fragment of Onondaga chert. No further work was recommended for this site (ASI 2007).
- Archaeological site AgGs-299 is located approximately 208 m north of the Study Area. It was originally discovered during pedestrian survey and is a lithic scatter of more than 15 pieces of Onondaga chert debitage, a biface, and a modified flake. This site was deemed to have significant archaeological potential and recommended for further archaeological assessment (ASI 2007).
- Archaeological site AgGs-301 is located approximately 165 m east of the Study Area. It was originally discovered during pedestrian survey and is an isolated findspot of a Late Archaic Innes projectile point. No further work was recommended for this site (ASI 2007).
- Archaeological site AgGs-302 is located approximately 198 m east of the Study Area. It was originally discovered during pedestrian survey and is an isolated findspot of an Early Archaic Nettling projectile point. No further work was recommended at this site (ASI 2007).

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 and two archaeological assessments have been conducted within 50 m of the Study Area.

Appendix B: Figure 10 shows the location of these previous studies.

2.1.2.1 Reports Documenting Archaeological Assessments Within the Study Area

Table 2 lists the reports made available from MHSTCI documenting archaeological assessments conducted within the Study Area.

Table 2: Related Archaeological Assessment Reports Within the Study Area

Year	Title	Author	PIF
2007	Stage 1 & 2 Archaeological Assessment of The Warren Woods Property, Part Lots 185,198 and 199, Geographic Township of Stamford, Now in the City of Niagara Falls, Regional Municipality of Niagara	Archaeological Services Inc.	P117-050, 072 and P141-021-2006
Ongoing	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.	Wood	P327-0013-2021

- ***Stage 1 & 2 Archaeological Assessment of The Warren Woods Property, Part Lots 185,198 and 199, Geographic Township of Stamford, Now in the City of Niagara Falls, Regional Municipality of Niagara. Prepared by Archaeological Services Inc. (ASI), dated January 2005. ASI File: 0SPO-36 (formerly 04DEL-01). PIF P117-050, 072 and P141-021-2006.***

Between 2005-2006, ASI was retained by Warren Woods Land Corporation to conduct a Stage 1-2 archaeological assessment on part of Lots 185, 198, and 199 in the Geographic Township of Stamford, now in the City of Niagara Falls. The assessment concluded that the Study Area exhibited significant archaeological potential based on its proximity to former watercourses and 16 previously identified pre-contact Indigenous and historic Euro-Canadian sites within a 2 km radius. The Stage 2 archaeological assessment consisted of both test pit and pedestrian survey and identified 37 archaeological sites, 13 of which were recommended for further Stage 3 archaeological assessment. These include: P9 (AgGs-282), P12 (AgGs-284), P15 (AgGs-286), P17 (AgGs-288), P18 (AgGs-297), P19 (AgGs-289), P20 (AgGs-290), P21 (AgGs-291), P23 (AgGs-293), P24 (AgGs-294), P28 (AgGs-296), P29 (AgGs-298), and P30 (AgGs-299).

- ***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.***

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Impacts related to the Phase 1 component of the project are being addressed under a separate Stage 1 Archaeological Assessment (PIF P327-0013-2021 [Stage 1]) being conducted concurrently Wood. To date, the Stage 1 Archaeological Assessment report has not been entered into the *Ontario Public Register of Archaeological Reports*, therefore the associated project footprint is not included in Figure 10.

2.1.2.2 Reports Documenting Archaeological Assessments Within 50 m of the Study Area

Table 3 lists the reports made available from MHSTCI documenting archaeological assessments conducted within 50 m of the Study Area.

Table 3: Related Archaeological Assessment Reports Within 50 m of the Study Area

Year	Title	Author	PIF
2018	Stage 3 Archaeological Assessment, Proposed Warren Woods Subdivision H1 (AgGs-280) and P9 (AgGs-282) Part of Lot 199, Geographic and Historical Township of Stamford, Historic County of Welland Now in the City of Niagara Falls, Ontario	Detritus Consulting Ltd	P017-0591-2017 and P017-0592-2017

- ***Stage 3 Archaeological Assessment, Proposed Warren Woods Subdivision H1 (AgGs-280) and P9 (AgGs-282) Part of Lot 199, Geographic and Historical Township of Stamford, Historic County of Welland Now in the City of Niagara Falls, Ontario Prepared by Detritus Consulting Ltd., dated 16 October 2018, PIF P017-0591-2017 and P017-0592-2017 (Detritus Consulting Ltd 2018).***

In 2018, Detritus Consulting Ltd. conducted a Stage 3 archaeological assessment of two sites previously identified during the 2006 Stage 1-2 archaeological assessment as part of the Warren Woods development (H1 [AgGs-280] and P9 [AgGs-282]). Following completion of the Stage 3, it was determined that AgGs-280 and AgGs-282 did not to meet the criteria for cultural heritage value or interest outlined in Section 3.4 of the *Standards and Guidelines for Consultant Archaeologists* and therefore no further work was required.

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 kms of Welland County are covered in peat bogs.

The *Soil Survey of Welland County* (Acton 1935) indicates that the dominant surface soil types within the Study Area is Welland Clay and Haldimand Clay. Welland Clay has fair to poor natural drainage while Haldimand Clay has fair to good surface drainage. The topography of the Study Area is a mix of generally rolling to smooth uplands and smooth to undulating uplands with some low swales and pond holes.

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. Three secondary water sources (two unnamed tributaries of the Old Welland Canal and one unnamed tributary of the Welland River) cross the Study Area (Appendix B: Figure 3). These secondary water sources are illustrated within the 1862 Historic Map (Appendix B: Figure 4).

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.

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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-Indian 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 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

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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.

Archaeologists tend to describe a period of transition from Late Woodland to post-contact times as “proto-historic”. The dating of this period is variable and may be different from site to site within a region as it describes a time when local Indigenous peoples were acquiring European trade goods indirectly through other Indigenous middlemen rather than directly from European traders. This period was generally very short and is often difficult to differentiate archaeologically from later post-contact times, when trade goods were widely available, but it usually is identified by evidence of an intact traditional cultural adaptation with occasional European items used in traditional ways.

Table 4: Simplified Cultural Chronology of Southern and Eastern Ontario

Period	Complexes/Cultures, Some Diagnostic Artifacts
Early Paleo-Indian (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-Indian (8500–7500 B.C.)	Small nomadic hunter-gatherer bands. Hi-Lo, Holcombe points, Lanceolate Bifaces.
Early Archaic	Small nomadic hunter-gatherer bands. Nettling, Stanley/Neville points.

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Period	Complexes/Cultures, Some Diagnostic Artifacts
(7500–6000/4500 B.C.)	
Middle Archaic (6000/4500–2500 B.C.)	<p>Transition to territorial settlements. Seasonal round of subsistence introduced. Thebes (6000–5000 B.C.), Otter Creek points (4500–3000 B.C.).</p> <p>Brewerton Complex (3000–2500 B.C.). Brewerton points.</p> <p>Laurentian Complex (6000–2500 B.C.) (Eastern Ontario)</p>
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.</p> <p>Broadpoint Complex (1850–1650 B.C.). Adder Orchard, Genesee points.</p> <p>Smallpoint Complex (1650–1000 B.C.). Crawford Knoll, Innes points.</p> <p>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.</p> <p>Meadowood Complex (1000–400 B.C.).</p> <p>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.</p> <p>Point Peninsula Complex (Southcentral and eastern Ontario)</p> <p>Saugeen Complex (Southeast of Lake Huron and the Bruce Peninsula, London area, and possibly as far east as the Grand River)</p> <p>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.</p> <p>Princess Point Complex (Eastern end of Lake Erie and the western end of Lake Ontario).</p> <p>Rivière au Vase Phase of the Youngue / Western Basin Tradition (Lake St. Clair and western end of Lake Erie)</p> <p>Sandbanks Complex (Kingston area).</p>
Late Woodland (A.D. 900–1650)	<p>Tribal differentiation. Transition to settled village life. Dewaele, Glen Meyer Tanged, Triangular Nanticoke, Notched Nanticoke, Triangular Daniels/Madison points.</p>

Period	Complexes/Cultures, Some Diagnostic Artifacts
	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).
Early Post-Contact (A.D. 1650–1763)	Iroquoian, Algonkian migrations and resettlement. French exploration and colonization
Late Post-Contact (A.D. 1763–1867)	Iroquoian, Algonkian migrations and resettlement. British and other European immigration increases.

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 Townships of Stamford and Thorold, 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).

Stamford Township in the County of Welland was first settled in 1784 by Colonel John Butlers Rangers and other UELs. Originally named Township #2 because it was the

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second township surveyed in Welland County (Page 1876:14), by 1784 it was known as Mount Dorchester, and in 1793 Simcoe named it for the borough of Stamford on the Welland River in Lincolnshire (Rayburn 1997: 328). The Township was first surveyed in 1787 by Philip R. Frey but its Portage Road between Chippawa and Queenston was one of the earliest routes in the Niagara Peninsula, following a trail used by Indigenous people to portage around Niagara Falls. The Township's first Euro-Canadian settler was Philip George Bender, who settled near the Falls in 1781, and by the 1790s the Township was populated with Loyalists and other British settlers (Mika & Mika 1983: 39). In 1831, Drummondville was the first incorporated village in the Township.

Thorold Township, located in the County of Welland was first settled between 1784 and 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 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 Lots 167-168, 181-184, and 198-201 and 203-208 in the Geographic Township of Stamford and Part of Lots 93-94, 112-117 and 135-140 in the Geographic Township of Thorold, both in the former County of Welland.

Table 5 lists the historical records examined to determine archaeological potential within the Study Area.

Table 5: Review of Historical Records

Figure No.	Year	Map Title	Historical Feature(s)
Appendix B: Figure 4	1862	1862 Tremaine's <i>Map of the Counties of Lincoln and Welland</i> (Tremaine 1862)	<p>The map lists the following property owners and features:</p> <ul style="list-style-type: none"> • Stamford Township <ul style="list-style-type: none"> ○ Lot 167: Samuel Pew and Benjamin Smoke ○ Lot 168: Samuel Pew ○ Lot 181: Haggi Biggar ○ Lot 182: John Sagar <ul style="list-style-type: none"> ▪ One building located within 100 m of the Study Area in Lot 182 ○ Lot 183: Thomas Garner and George Garner ○ Lot 184: John Wilson and Thomas Wilson ○ Lot 198: Isaac Howey ○ Lot 199: John N/A ○ Lot 200: Thomas Wilson AND John C. Wilson ○ Lot 201: Issac Lonke ○ Lot 203/204: Thomas Reavely ○ Lot 205: Timothy Hixon ○ Lot 206: Jason Hison and James Pew ○ Lot 207: John Thompson ○ Lot 208: N/A Ostrander ○ Lot 209: Archibald Thompson • Thorold Township <ul style="list-style-type: none"> ○ Lot 93: B. Tucker ○ Lot 94: Joseph Upper ○ Lot 112/113/114: Thomas Allison ○ Lot 115: R.G. Hager ○ Lot 116: D. Skinner ○ Lot 117: Frederick Deceu ○ Lot 135: S. Lutz ○ Lot 136: A. Burnes ○ Lot 137: George Williams ○ Lot 138: A. Mar ○ Lot 139: Chris Mosse and N/A Thomas ○ Lot 140: R. Kemp • Other Features <ul style="list-style-type: none"> ○ Study Area located within 300 m of the Welland Railway ○ The Study Area follows six historic roadways today known as Brown Road, Beechwood Road, McLeod Road, Thorold Townline Road, Barron Road, Allanport Road and Davis Road
Appendix B: Figure 5	1876	1876 <i>Illustrated Historical Atlas of Lincoln and Welland Counties</i> (Page & Co. 1876)	<p>The map lists the following property owners and features:</p> <ul style="list-style-type: none"> • Stamford Township <ul style="list-style-type: none"> ○ Lot 167: Samuel Pew and Benjamin Smoke ○ Lot 168: Samuel Pew

Figure No.	Year	Map Title	Historical Feature(s)
			<ul style="list-style-type: none"> ○ Lot 181: Haggi Biggar ○ Lot 182: John Sagar ○ Lot 183: Thomas Wilson and Robinson ○ Lot 184: John Wilson and Thomas Wilson ○ Lot 198: Archie Gray ○ Lot 199: John Pew and John Lounsdale ○ Lot 200: J. Wilson and Thomas Wilson ○ Lot 201: Thomas Wilson ○ Lot 203 Jamieson and William Reavely ○ Lot 204: Reavely Estate ○ Lot 205: Timothy Hixon ○ Lot 206: Jacob Hixon and James Pew ○ Lot 207: Farrow Estate ○ Lot 208: W.H. Bell ○ Lot 209: Archibald Thompson ● Thorold Township <ul style="list-style-type: none"> ○ Lot 93: B. Tucker ○ Lot 94: J.W. Upper ○ Lot 112/113/114: W. Allison ○ Lot 115: Estate of R.G. Hager ○ Lot 116: J. Hicks and Mrs. J. Britt ○ Lot 117: Samuel Smith ○ Lot 135: T. Wilson ○ Lot 136: Mrs. Gray, J.M. Chinnis, and T.M. ○ Lot 137: John Dixon ○ Lot 138: G. Happell ○ Lot 139: G. Thomas and William Thomas ○ Lot 140: F. Silverthorn ● Historical Feature(s) <ul style="list-style-type: none"> ○ One school located within 100 m of the Study Area ○ One Mill located within 100 of the Study Area ○ Black Horse Inn located within 100 m of the Study Area ○ Ten structures located within 300 m of the Study Area in various lots ○ Study Area located within 300 m of the Welland Railway ○ The Study Area is located along six historic roadways at what is now known as Brown Road, Beechwood Road, McLeod Road, Thorold Townline Road, Barron Road, Allanport Road and Davis Road

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 were selected as they best illustrate change in the Study Area and surrounding areas. Table 6 summarizes analysis of these maps.

Table 6: Review of National Topographic Series (NTS) Maps

Figure No.	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"> • Nine wood buildings depicted within 300 m of the Study Area • One masonry building depicted within 100 m of the Study Area • One masonry schoolhouse depicted within 100 m of the Study Area • One post office depicted within 100 m of the Study Area • Black Horse Inn located within 100 m of the Study Area • Grand Trunk Railway depicted crossing the Study Area

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Figure No.	Map Title	Historical Feature(s)
		<ul style="list-style-type: none"> • Two unnamed tributaries of the Old Welland Canal depicted crossing the Study Area • One unnamed tributary of the Welland River depicted crossing the Study Area
Appendix B: Figure 7	1925 NTS Map, Niagara Sheet (Department of Militia and Defence 1925)	<ul style="list-style-type: none"> • Fifteen buildings depicted within 300 m of the Study Area • Black Horse Inn located within 100 m of the Study Area • Canadian National Railway depicted crossing Study Area • Two unnamed tributaries of the Old Welland Canal depicted crossing the Study Area • One unnamed tributary of the Welland River depicted crossing the Study Area
Appendix B: Figure 8	1942 NTS Map, Sheet 30 (Department of National Defence 1942)	<ul style="list-style-type: none"> • More than 20 residences depicted within 300 m of the Study Area • Canadian National Railway depicted crossing Study Area • Two unnamed tributaries of the Old Welland Canal depicted crossing the Study Area • One unnamed tributary of the Welland River depicted crossing 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"> • More than 25 residences depicted within 300 m of the Study Area • Black Horse Corner located within 100 m of the Study Area • Canadian National Railway depicted crossing Study Area • Two unnamed tributaries of the Old Welland Canal depicted crossing the Study Area • One unnamed tributary of the Welland River depicted crossing the Study Area

Recent aerial photographs were also reviewed to document land use in the Study Area (Appendix D). Table 7 provides a summary of these findings.

Table 7: Review of 20th Century Aerial Imagery

Year	Features
1934 (Appendix D: Plate B1; Brock University 2016)	<ul style="list-style-type: none"> A railway (Canadian National Railway based on NTS mapping) crosses the Study Area
1968 (Appendix D: Plate B4; Brock University 2016)	<ul style="list-style-type: none"> A railway (Canadian National Railway based on NTS mapping) crosses the Study Area Realignment of Davis Road depicted directly to and within 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. Residences and commercial buildings located on both sides of the Study Area
Various (2000 to 2018 Brock University 2016)	<ul style="list-style-type: none"> Additional residences and commercial buildings located on both sides of the Study Area

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, most of the Study Area is identified as having archaeological potential and therefore requiring an archaeological resource assessment prior to development (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

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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;
- 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;

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- 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 roadways, agricultural lands, manicured lawns and wooded areas interspersed with residential and commercial properties. Actively or formerly cultivated agricultural fields line the majority of the Study Area alignment. Several factors can be used to assess the potential for recovery of Indigenous archaeological resources within a Study Area.

First, the Study Area is located within 300m of nine archaeological sites, this includes four Indigenous archaeological sites, one Euro-Canadian archaeological site and four archaeological sites with an unknown cultural affiliation providing evidence that the general area has been intensively utilized by both Indigenous peoples and Euro-Canadians.

Second, the Study Area is largely comprised of well-drained land that is suitable for human habitation. Third, three secondary water sources (two unnamed creeks that now flow into the Welland Canal and one unnamed tributary of the Welland River) cross the Study Area.

As 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 follows historical roadways and transportation routes, including Brown Road, Beechwood Road, McLeod Road, Thorold Townline Road, Barron Road, Allanport Road and Davis Road, and the Grand Trunk Railway (now CN Rail line). Several farmsteads and orchards are illustrated on the 1876 historical atlas mapping within 300 m of the Study Area including the Black Horse Inn, the first inn in Welland County, which is located directly adjacent to the Study Area (Appendix B: Figure 5). Finally, according to the AMP the majority of the Study Area was identified as having overall archaeological potential.

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.

Areas that have been disturbed by modern activities, both extensive and intensive, have low potential for the recovery of archaeological resources. Disturbance includes paved roadways and roadside ditches located within the Study Area, which makes up 12.2 ha of the Study Area. These areas include the road rights-of-way of Brown Road, Beechwood Road, McLeod Road, Thorold Townline Road, Barron Road, Allanport Road and Davis Road and adjacent areas with associated moderate to deep roadside ditching and culverts and additional late 20th century residential complexes located on either side of the Study Area.

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 1 Property Assessment

3.1 Methods

A Stage 1 property inspection of the Study Area was directed and conducted by Krista Lane (R382) with the assistance of Xavier Figuera of Wood on 6 October 2021. The weather during the assessment was sunny with some overcast periods with a maximum temperature of 23°C and did not impede the inspection or assessment in any way. As such, it is confirmed that the assessment met Section 2.1 Standard 3 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011) regarding weather and lighting.

The Stage 1 property inspection confirmed archaeological site potential and determined the degree to which development and landscape alteration have affected that potential. It included a walk-through of the entire Study Area and thorough photo-documentation. Field observations were recorded on aerial maps and field forms. All land conditions were recorded as shown in Appendix B: Figure 11A and Figure 11B and Appendix E: Photographs 1 to 18.

3.2 Results

The Study Area is comprised of two-lane asphalt roadways bordered predominately by agricultural fields and wooded areas interspersed by residential and commercial complexes with moderate to deep roadside ditching and culverts. The Study Area alignment runs along the following roadways: Brown Road, Beechwood Road, McLeod Road, Thorold Townline Road, Barron Road, Allanport Road and Davis Road. At the Blackhorse SPS portion of the Study Area at 701 Allanburg Road is manicured lawn.

Based on the Stage 1 property inspection and background research Wood determined that archaeological potential has been removed within 12.2 ha (69%) of the Study Area. These areas, identified as disturbed, have had the integrity of the topsoil compromised by earth moving activities to the point where archaeological potential has been removed. These areas include the road rights-of-way with associated moderate to deep roadside ditching and culverts and the late 20th century residential complexes.

The remainder of the Study Area, 5.5 ha (31%), consisting of manicured lawns, cultivated agricultural fields and wooded areas, have general archaeological potential and warrant Stage 2 archaeological assessment (Appendix A: Figure 11A-Figure 11B).

3.2.1 Documentary Record

The inventory of documentary records accumulated as part of this assessment is provided in Table 8.

Table 8: 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, 18 Stage 1 photographs and 3 aerial photographs	Stage 1 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.

3.3 Stage 1 Analysis and Conclusions

The Stage 1 background study indicated that the Study Area has general archaeological potential and warrants Stage 2 property assessment 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; and, (6) according to the *Niagara Region Archaeological Management Plan (AMP)* the majority of the Study Area was identified as having overall archaeological potential Appendix B: Figure 5).

The Stage 1 property inspection and background research determined that archaeological potential has been removed within 12.2 ha (69%) of the Study Area. These areas, identified as disturbed, have had the integrity of the topsoil compromised by earth moving activities to the point where archaeological potential has been removed. These areas include the right-of-way, recent residential complexes and moderate to deep roadside ditching and culverts.

The remainder of the Study Area, approximately 5.5 ha (31%) consists of manicured 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.

Stage 1 AA: SNFWWTP South Thorold Trunk and Blackhorse SPS

4.0 Recommendations

In light of the findings of the Stage 1 archaeological assessment of the Study Area, the following recommendations are made, subject to the conditions outlined below and in Section 5.0:

1. Approximately 12.2 ha (69%) of the Study Area has no to low archaeological potential due to extensive and deep land alterations and therefore no further archaeological assessment is required (Appendix B: Figure 11A-Figure 11B).
2. Approximately 5.5 ha (31%) of the Study Area is located within maintained lawns, wooded areas, or narrow corridor (10 m or less) that has archaeological potential but cannot be accessed by plough, meeting the requirements of Section 2.1.2, Standard 1.e., that ploughing or cultivation is not viable (Appendix B: Figure 11A-Figure 11B). Areas where open cut construction is proposed or surface disturbance is anticipated should be assessed by means of hand shovel test pitting at 5 m grid intervals. All test pits should be a minimum of 30 centimetres (“cm”) in diameter and dug to a minimum of five cm into the subsoil. Soils and sediments should be screened through 6 millimetre (“mm”) mesh screens in order to facilitate artifact recovery. Test pit profiles should be examined for cultural deposits prior to being backfilled. Test pitting should be conducted to within 1 m of all disturbances. All test pits should be backfilled to level grade, and any sod caps replaced and tamped down by foot.
 - a. The requirement for further archaeological assessment will be confirmed during the detailed design phase of the project.

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.

5.0 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.
- e. Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

6.0 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.

7.0 Closure

This report was prepared for the exclusive use of Niagara Region and is intended to provide a Stage 1 archaeological assessment of the Study Area. The property from its east terminus at Heartland Forest Road in the City of Niagara Falls, the Study Area runs west along Brown Road, turns north on Beechwood Road, turns west at McLeod Road, jogs at Thorold Townline Road to Barron Road, then turns north on Allanport Road to Davis Road to end at the Blackhorse SPS site at 701 Allanburg Road. The Study Area includes a 10 m buffer on both sides of the alignment (20 m total) with sections of agricultural fields, woodlot, manicured lawns and roadways. From east to west, the Study Area is within part of Lots 167-168, 181-184, and 198-201 and 203-208 in the Township of Stamford and part of Lots 93-94, 112-117 and 135-140 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 1 background study conducted by Wood. It is based solely a review of historical information, a property inspection conducted on 6 October 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.

Stage 1 AA: SNFWWTP South Thorold Trunk and Blackhorse SPS

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,

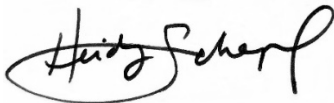
**Wood Environment & Infrastructure,
a Division of Wood Canada Limited**

Prepared By:



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

Reviewed By:



Heidy Schopf, MES, CAHP
Built and Landscape Heritage Team Lead



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

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Stage 1 AA: SNFWWTP South Thorold Trunk and Blackhorse SPS

Detritus Consulting Ltd

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Wood

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2022b *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

2022c *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 2021-22

2022d *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*. DRAFT Report on File with Wood. PIF P327-0019-2021

Wright James V.

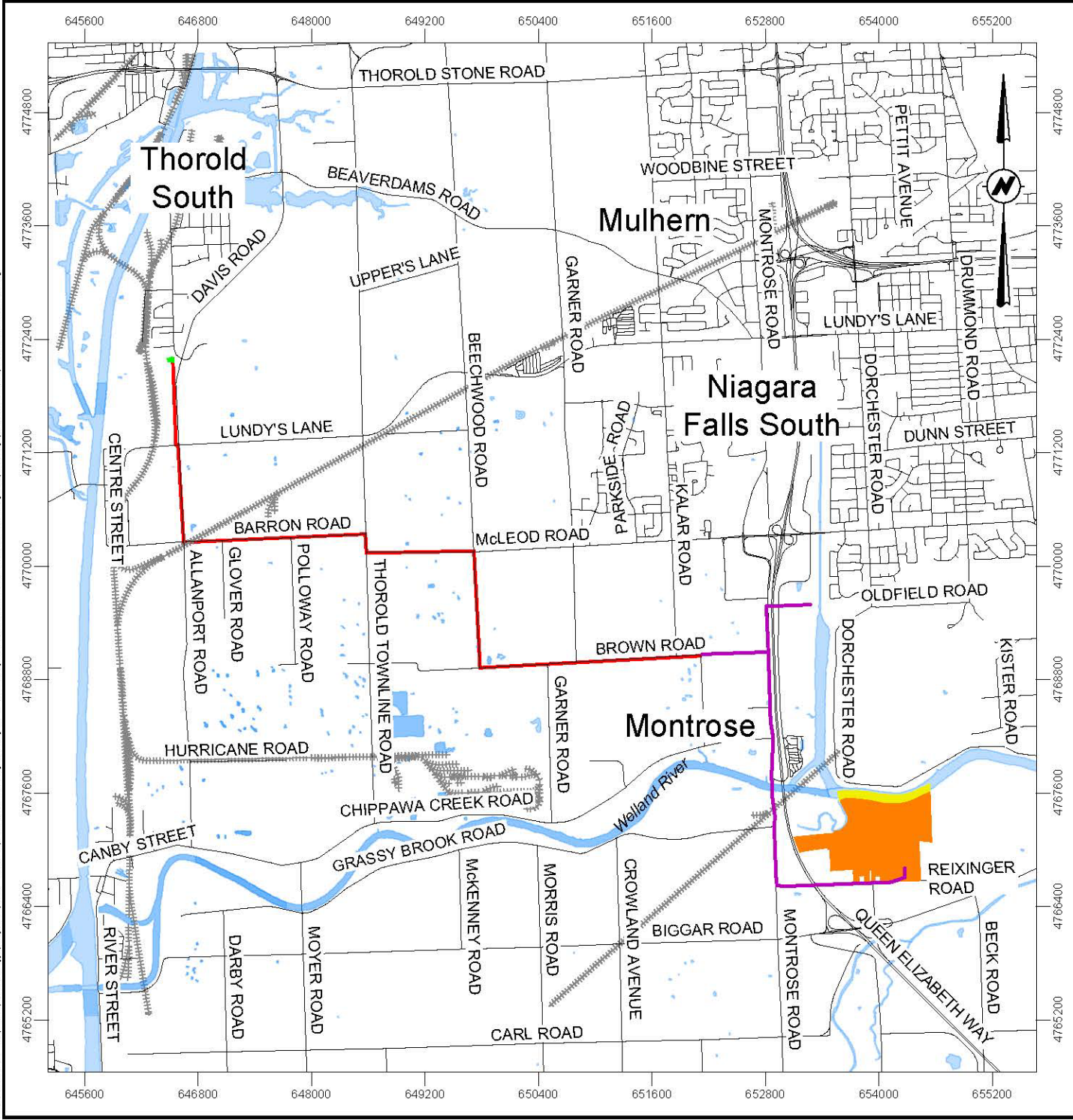
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Appendix A: Summary of Archaeological Assessments

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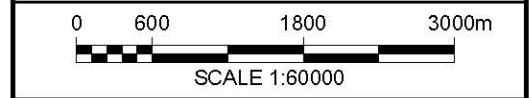


PROJECT:
 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 FORMER COUNTY OF WELLAND
 NOW IN THE CITY OF NIAGARA FALLS
 REGIONAL MUNICIPALITY OF NIAGARA, ONTARIO

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)

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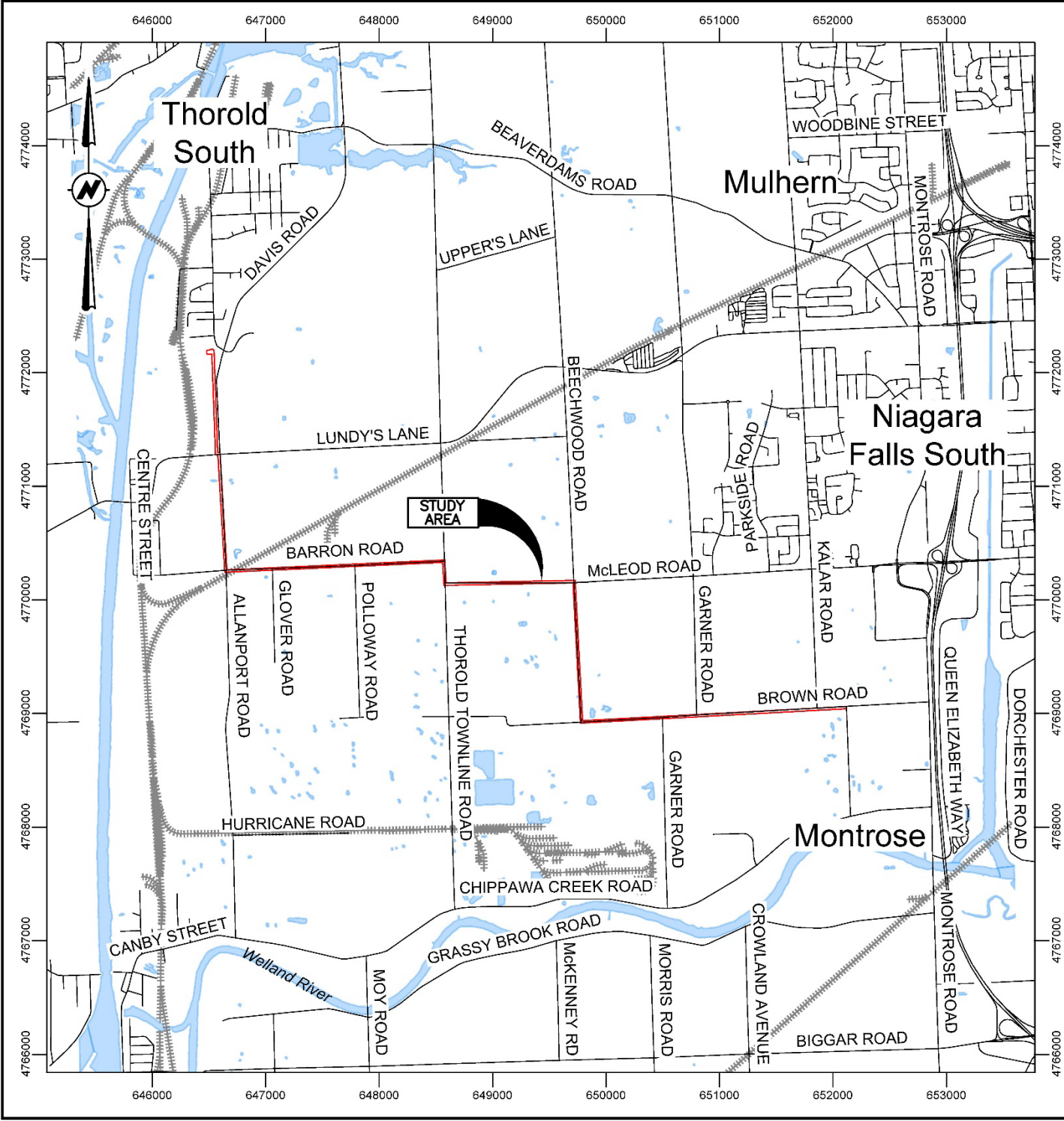
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Appendix B: Figures

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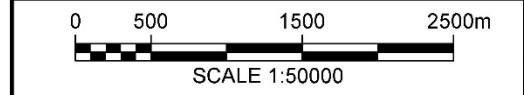


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 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

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 LOCATION OF THE STUDY AREA

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 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 AERIAL PHOTOGRAPH SHOWING THE
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 [Red Outline] STUDY AREA

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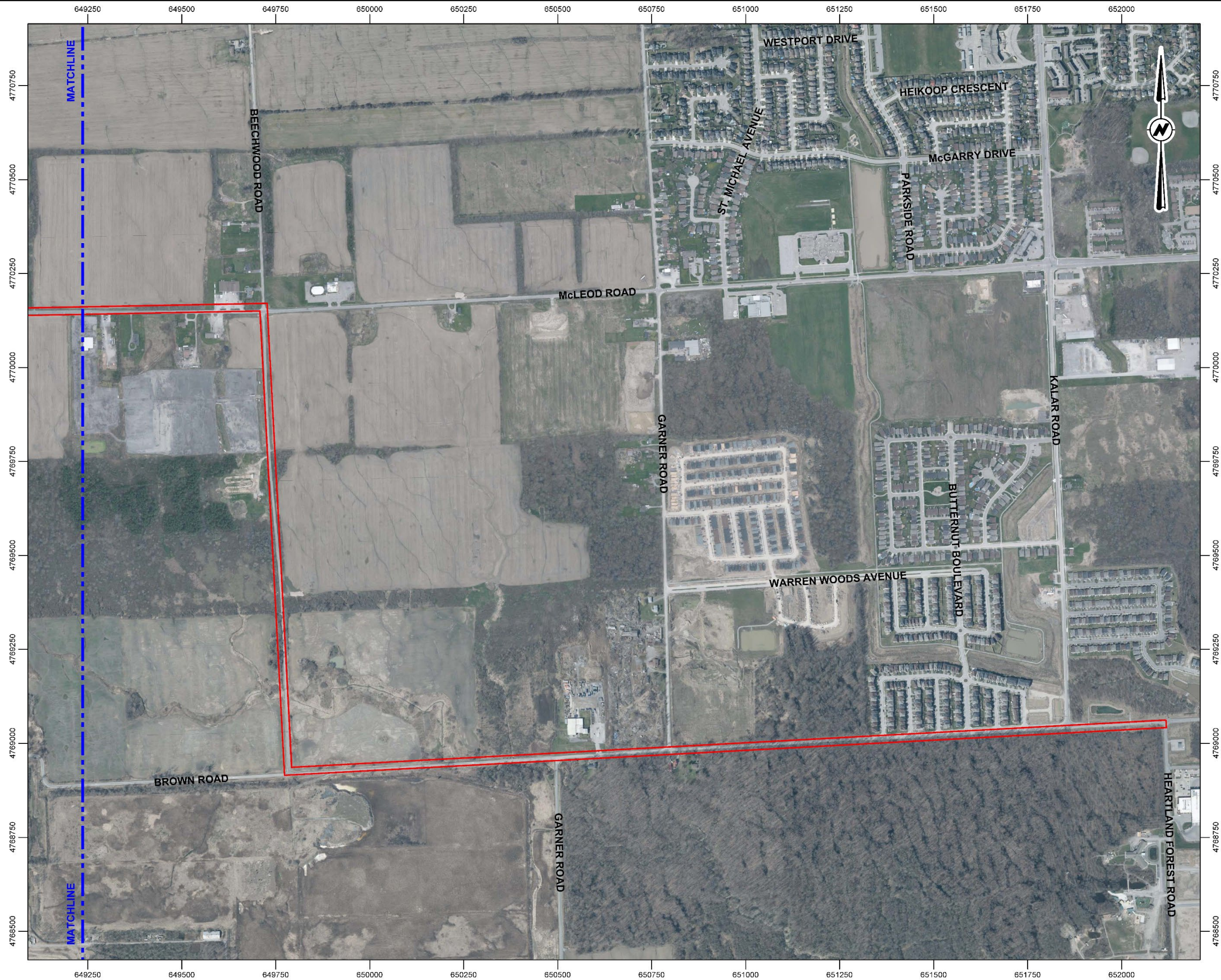
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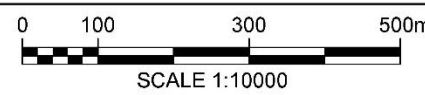


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 SOUTH THOROLD TRUNK &
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 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

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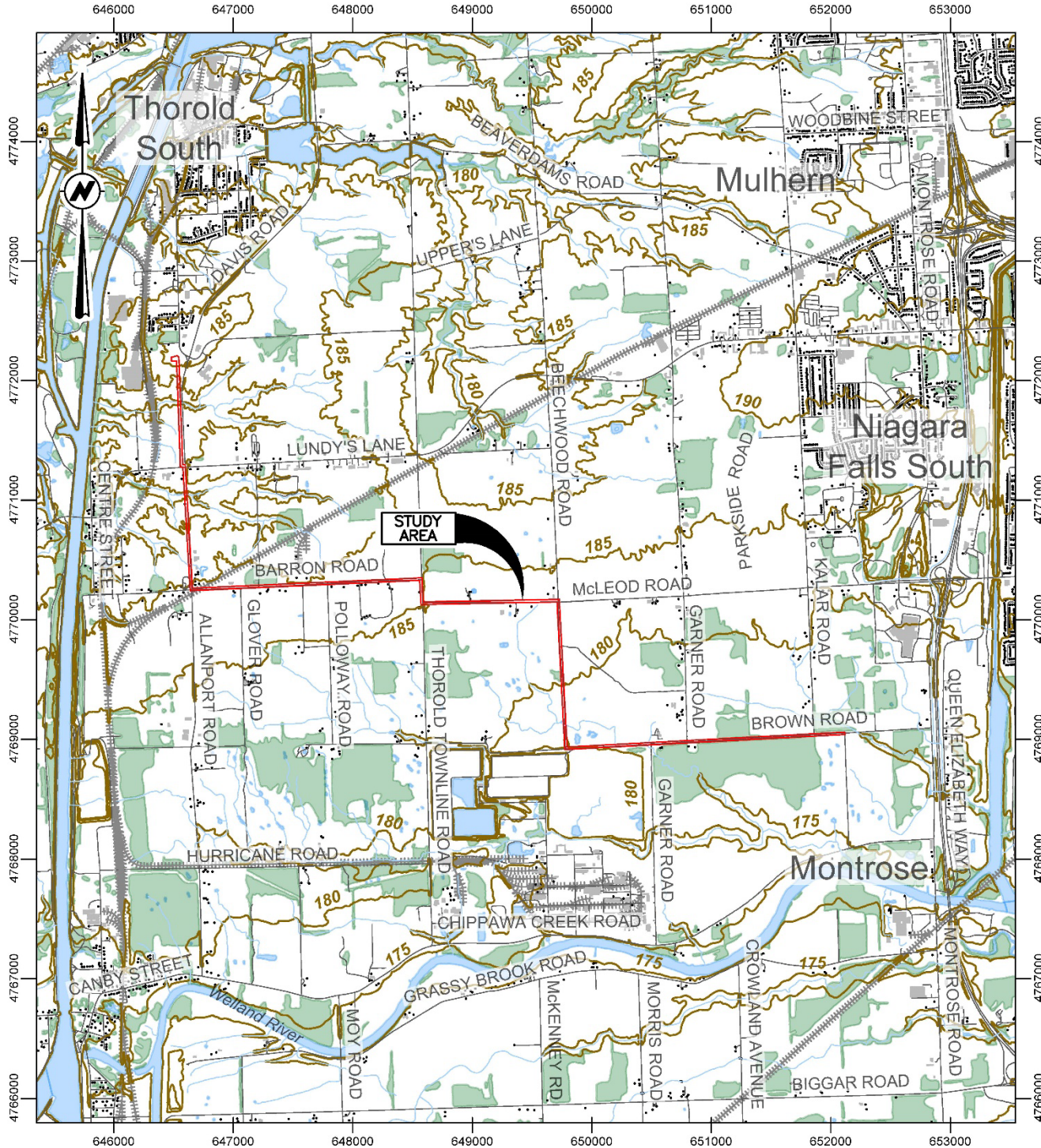


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DWN BY:	CHK'D BY:	DATE:
SJL	CD	NOV. 10, 2021
DATUM:	PROJECTION:	PROJECT No:
NAD83	UTM Zone 17	OCUL2001.900
REV No:		FIGURE No:
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PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 TOPOGRAPHIC MAP SHOWING THE
 LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
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 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.900.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 8½ x 11.
 REFERENCES:
 ESRI CANADA, "ONTARIO BASIC MAPPING (OBM)"; CANMAP
 STREETFILES V2008.4.



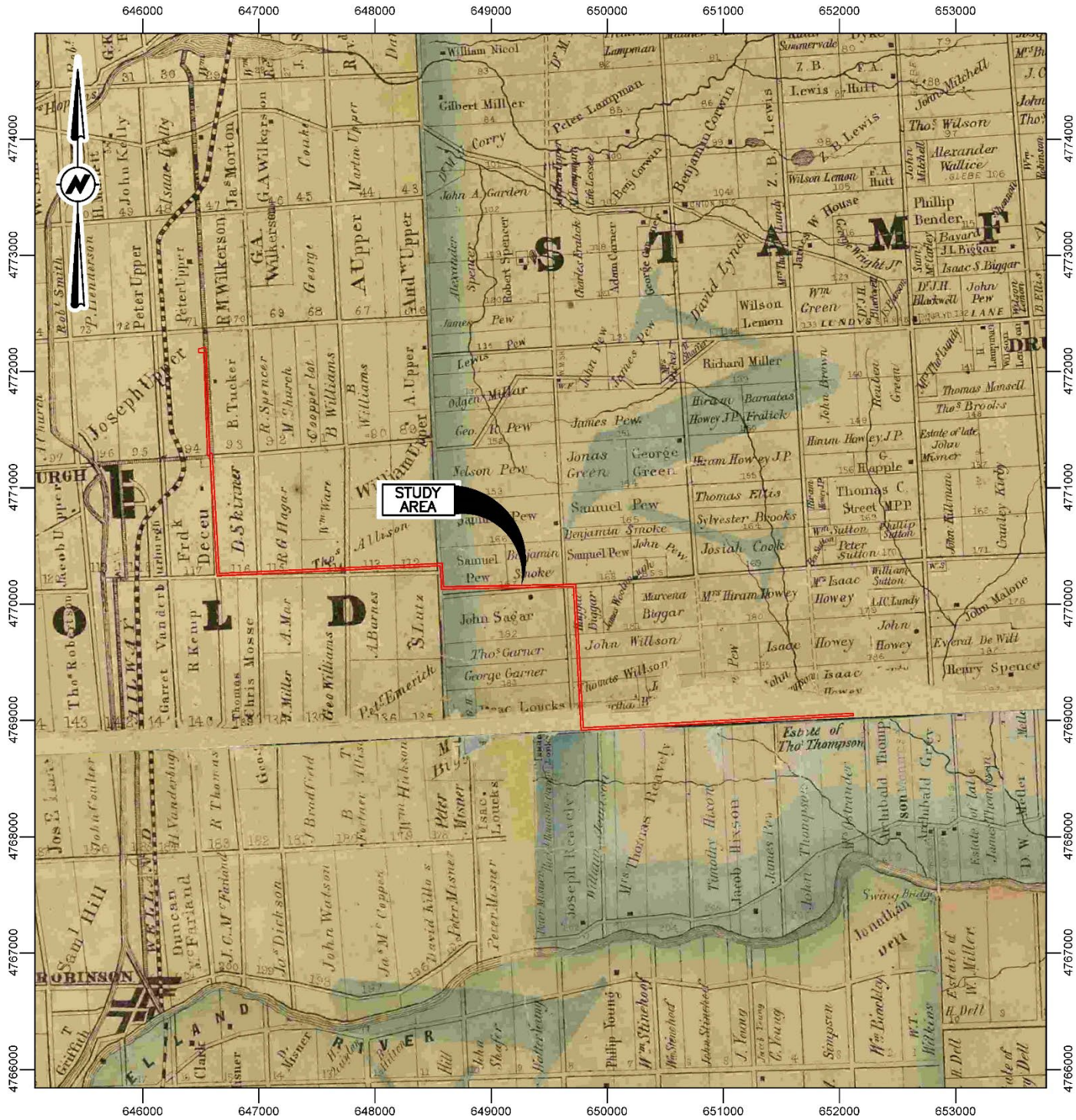
Niagara Region
 1815 SIR ISAAC BROCK WAY, P.O. BOX 1042
 THOROLD, ONTARIO, L2V 4T7



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DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: OCUL2001.900
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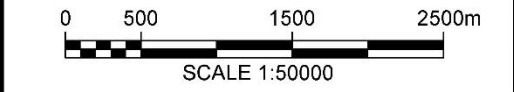
PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

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

LEGEND:

STUDY AREA

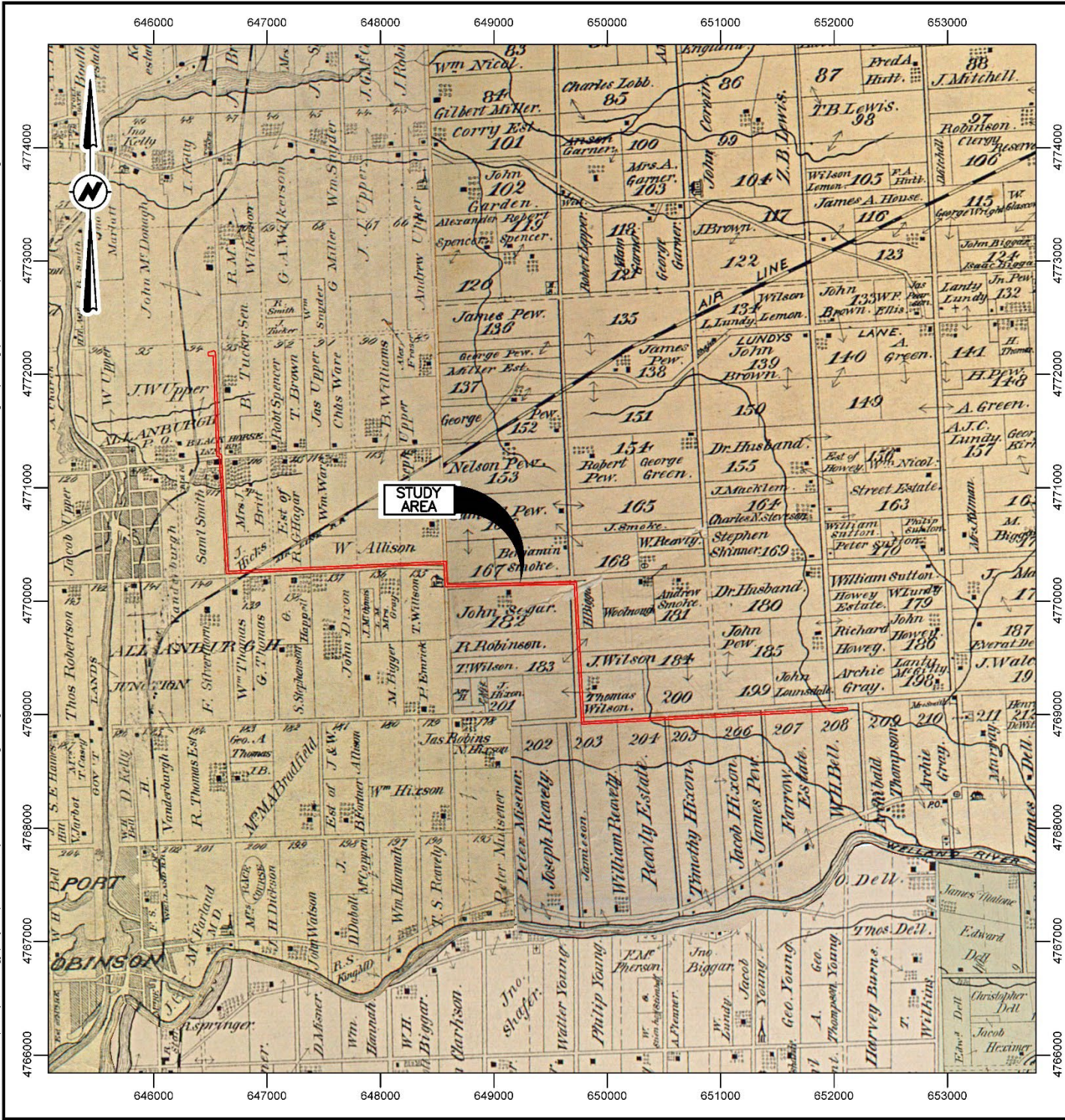
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 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 8 1/2 x 11.
 REFERENCES:
 G.R. & G.M. TREMAINE, 1862; CANMAP STREETFILES V2008.4.



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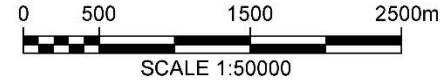


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 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

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. OCUL2001.900.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 8 1/2 x 11.
 REFERENCES:
 H.R. PAGE & Co., 1876; CANMAP STREETFILES V2008.4.



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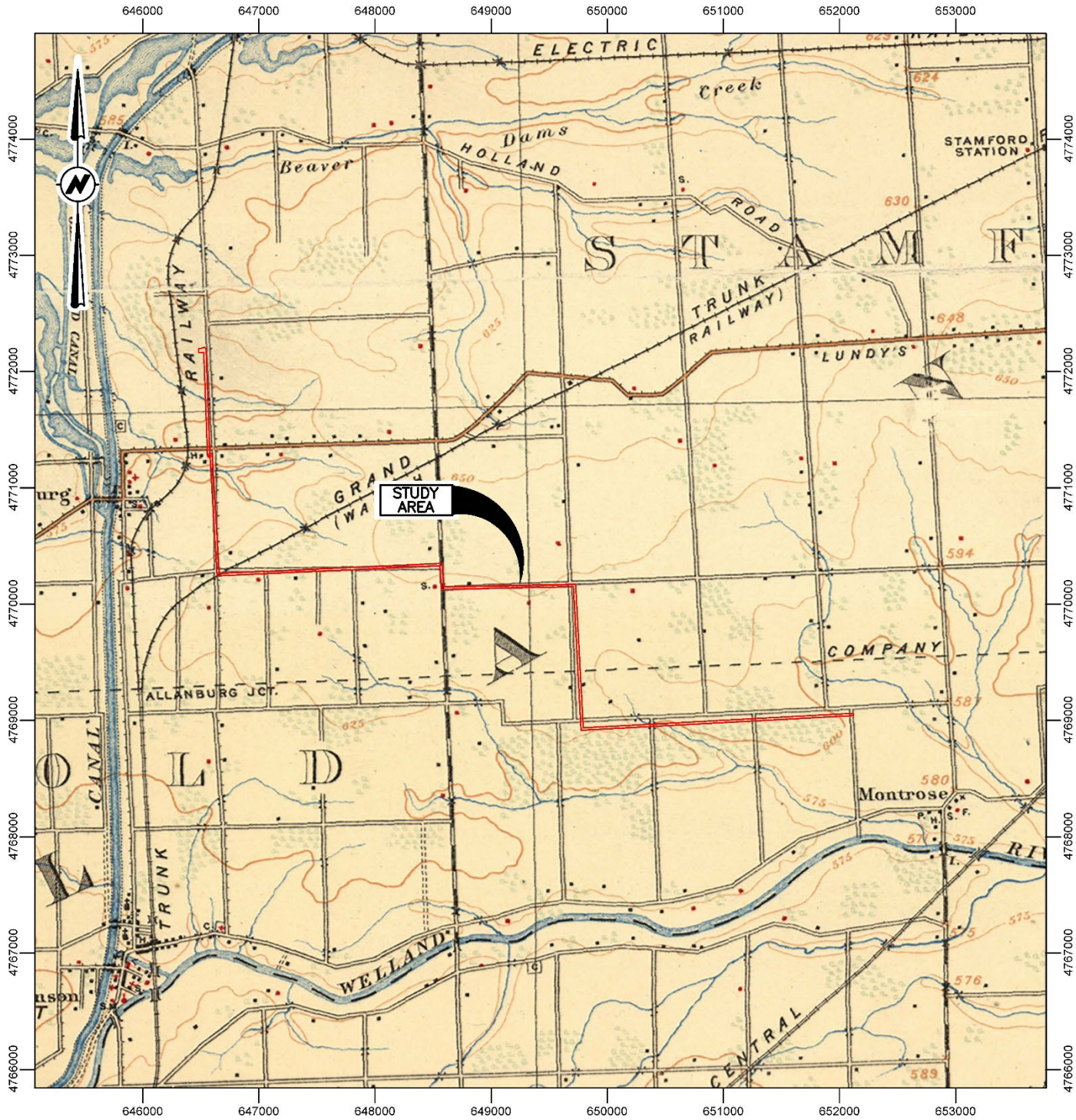


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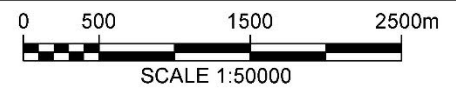


PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1906 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. OCUL2001.900.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 8½ x 11.
 REFERENCES:
 DEPARTMENT OF MILITIA AND DEFENSE, 1906; CANMAP
 STREETFILES V2008.4.



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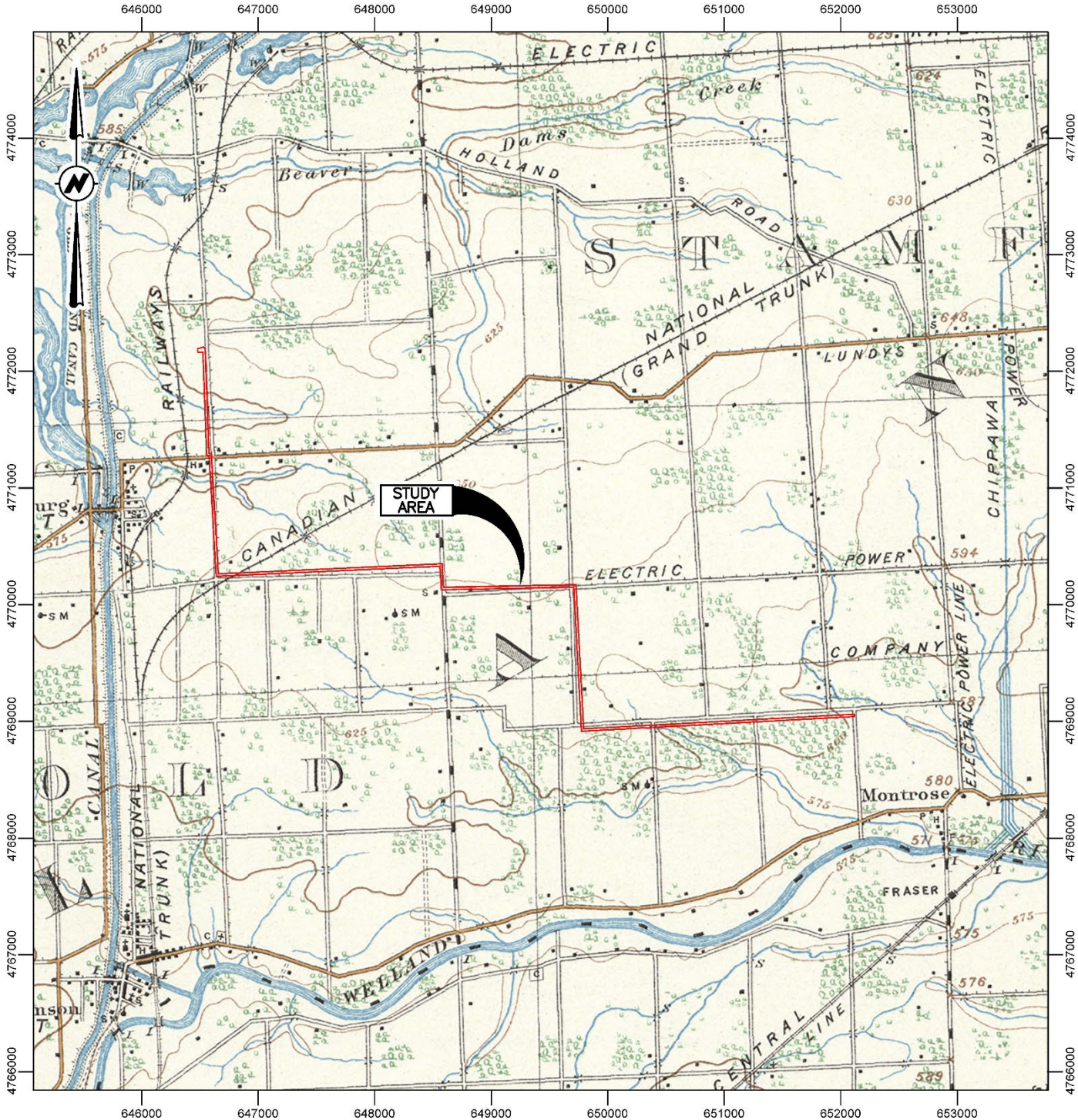


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DWN BY: SJL	CHK'D BY: CD	DATE: NOV. 10, 2021
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REV No: 0		FIGURE No: 8

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PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

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

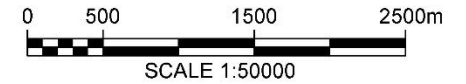
LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
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 REPORT No. OCUL2001.900.

ALL LOCATIONS ARE APPROXIMATE.

ORIGINAL PAPER SIZE: 8½ x 11.

REFERENCES:
 DEPARTMENT OF MILITIA AND DEFENSE, 1925; CANMAP
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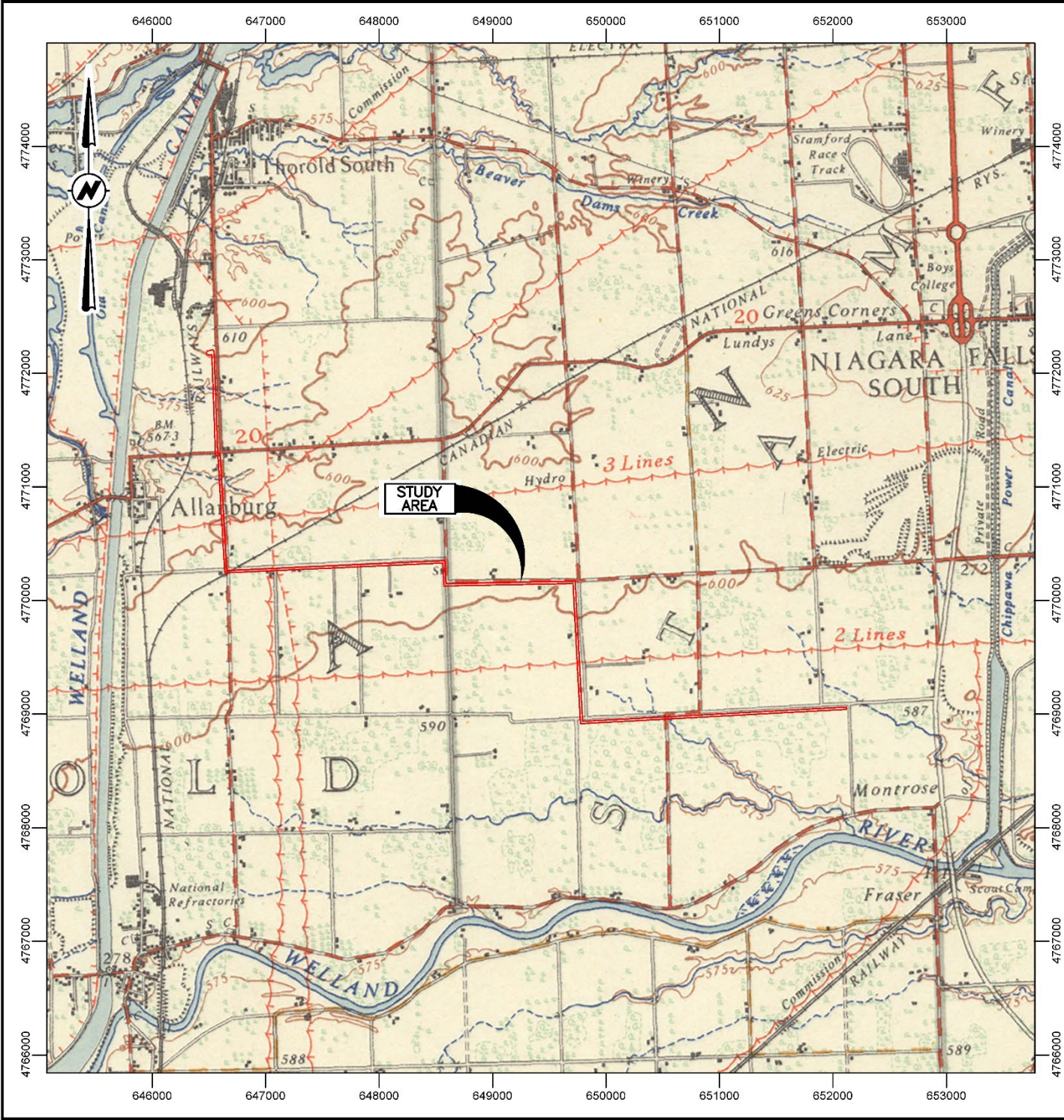


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 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 1942 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
 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.900.
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 ORIGINAL PAPER SIZE: 8½ x 11.
 REFERENCES:
 DEPARTMENT OF MILITIA AND DEFENSE, 1942; CANMAP
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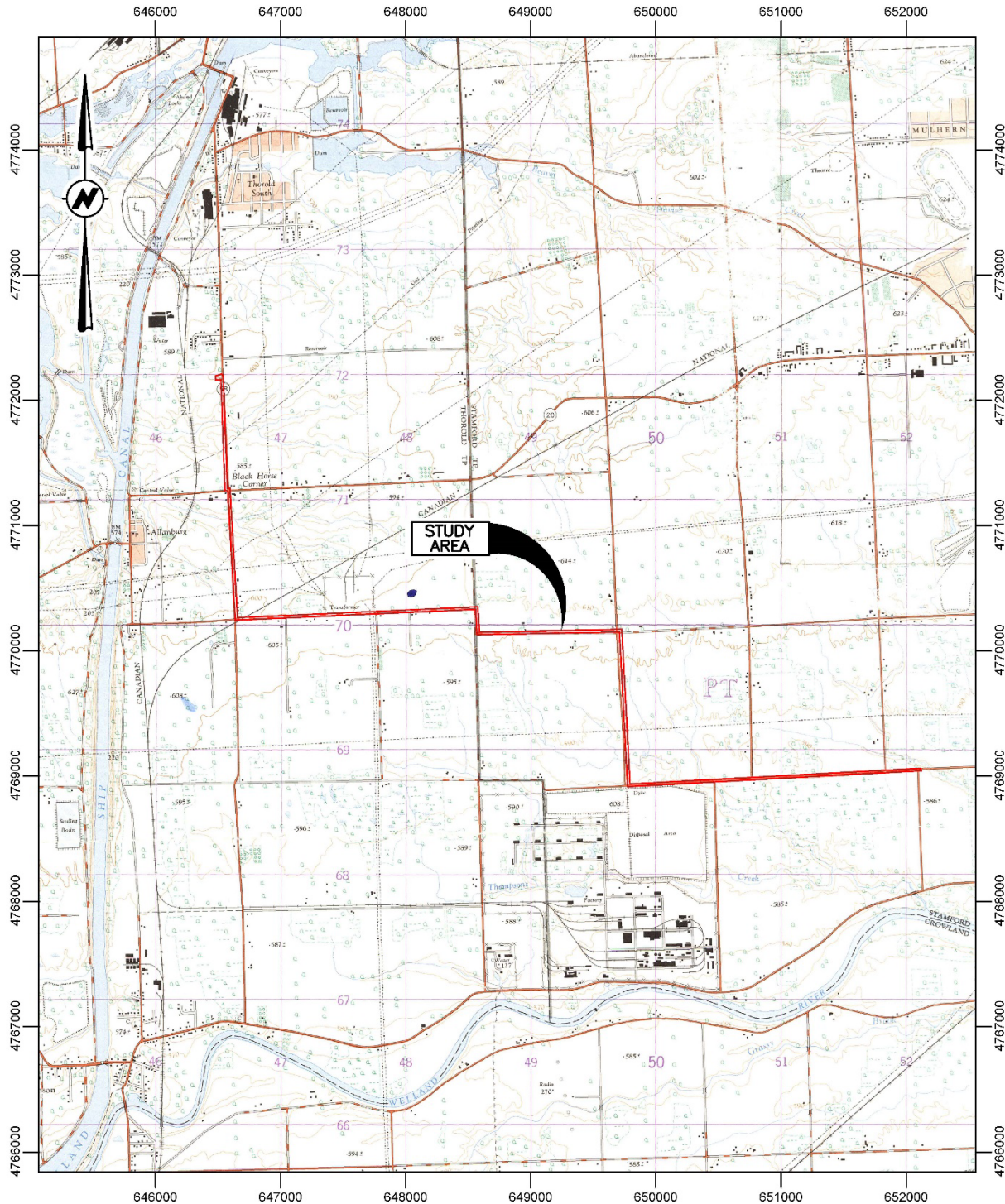


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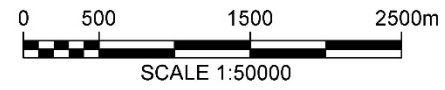


PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

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. OCUL2001.900.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 8½ x 11.
 REFERENCES:
 ARMY SURVEY ESTABLISHMENT, R.C.E., 1963; CANMAP
 STREETFILES V2008.4.



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PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE: PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS WITHIN THE STUDY AREA AND WITHIN 50m OF THE STUDY AREA

LEGEND:

- STUDY AREA
- STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT (PIF P117-050-2006 & P117-072-2006, ASI, 2007)
- STAGE 3 ARCHAEOLOGICAL ASSESSMENT (PIF P017-0591-2017 & P017-0592-2017, DETRITUS, 2018)

NOTES:
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 ALL LOCATIONS ARE APPROXIMATE.
ORIGINAL PAPER SIZE: 11 x 17.
REFERENCES:
 2020 AERIAL PHOTOGRAPHS BY THE REGION OF NIAGARA;
 CANMAP STREETFILES V2008.4

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

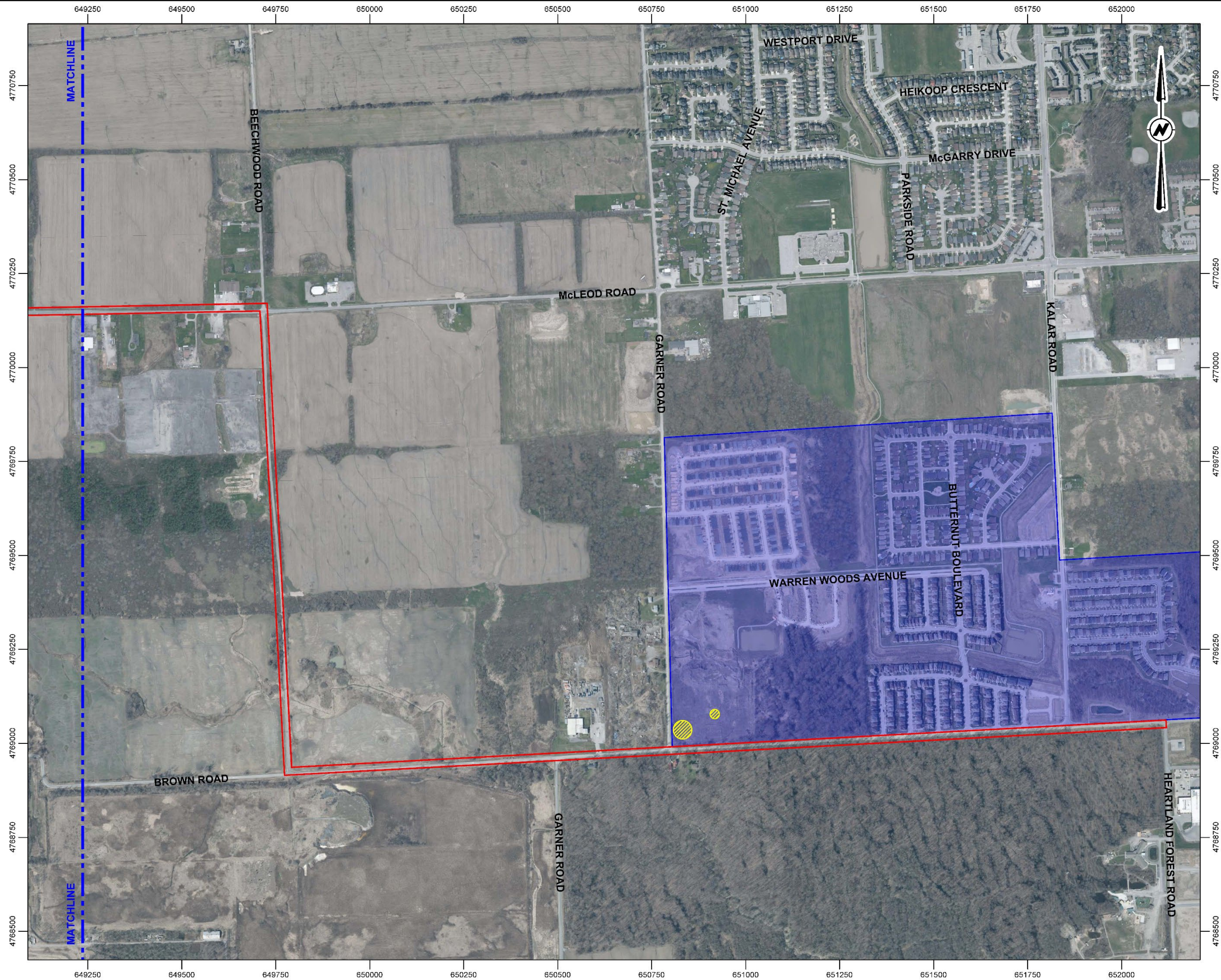
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wood.

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S.J.L.	CD	NOV. 10, 2021
DATUM:	PROJECTION:	PROJECT No:
NAD83	UTM Zone 17	CCUL2001.900
REV No:		FIGURE No:
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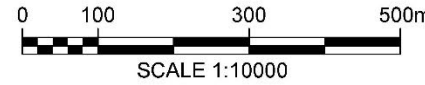


PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE: PREVIOUS ARCHAEOLOGICAL
 INVESTIGATIONS WITHIN THE STUDY AREA
 AND WITHIN 50m OF THE STUDY AREA

- LEGEND:
- STUDY AREA
 - STAGE 1 & 2 ARCHAEOLOGICAL ASSESSMENT
(PIF P117-050-2006 & P117-072-2006; ASI, 2007)
 - STAGE 3 ARCHAEOLOGICAL ASSESSMENT
(PIF P017-0591-2017 & P017-0592-2017; DETRITUS, 2018)

NOTES:
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 REPORT No. OCUL2001.900.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 11 x 17.
 REFERENCES:
 2020 AERIAL PHOTOGRAPHS BY THE REGION OF NIAGARA;
 CANMAP STREETFILES V2008.4.



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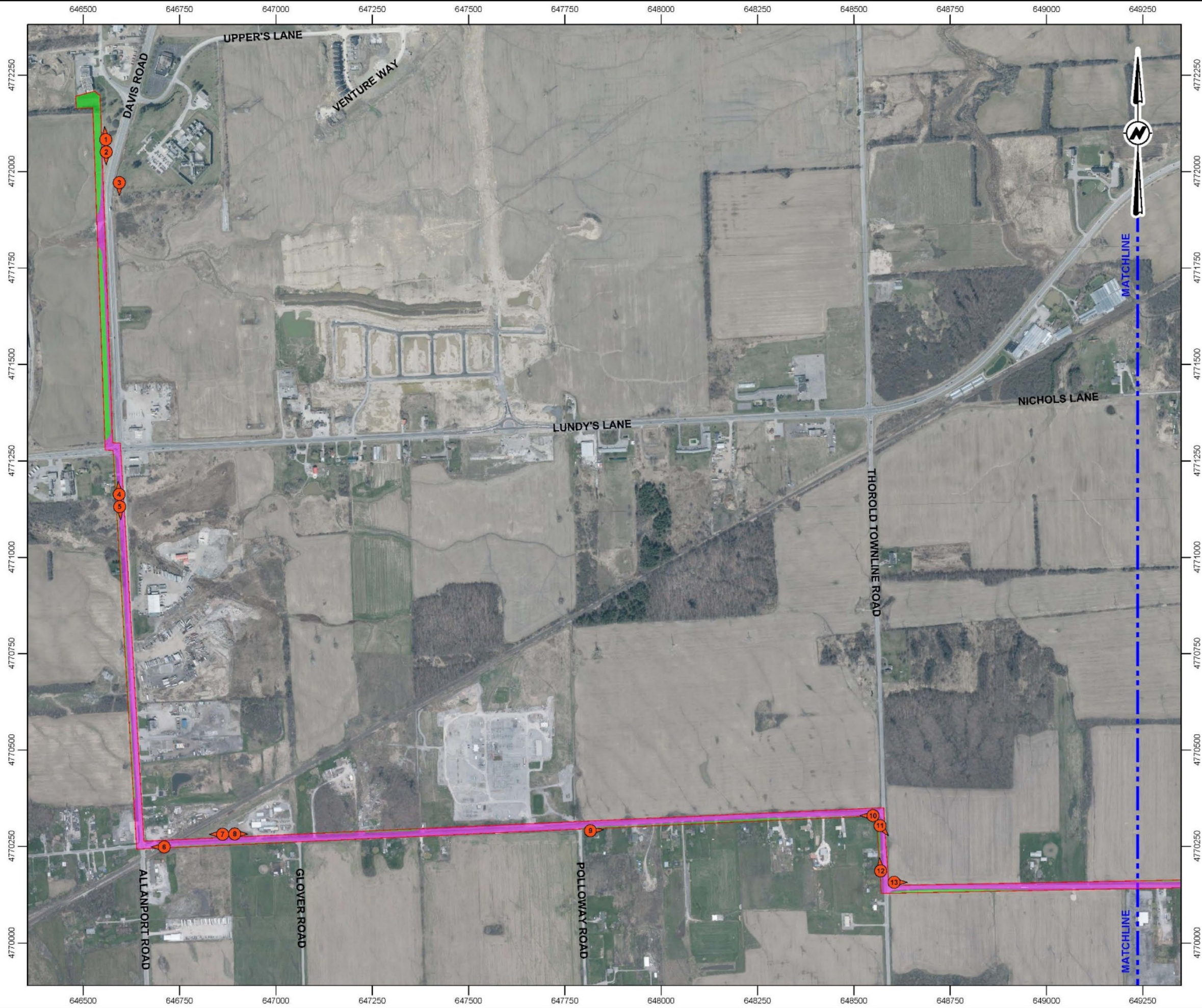


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DATUM:	PROJECTION:	PROJECT No:
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PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 STAGE 1 RESULTS WITH PHOTOGRAPH
 LOCATIONS AND DIRECTIONS

LEGEND:

- STUDY AREA
- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND IDENTIFICATION
- AREA OF ARCHAEOLOGICAL POTENTIAL
- UNPLOUGHABLE LAND: TO BE TEST PIT SURVEYED AT 5m INTERVALS
- AREA OF NO ARCHAEOLOGICAL POTENTIAL
- DISTURBED: NO FURTHER ASSESSMENT REQUIRED

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.900.
 ALL LOCATIONS ARE APPROXIMATE.
ORIGINAL PAPER SIZE: 11 x 17.

REFERENCES:
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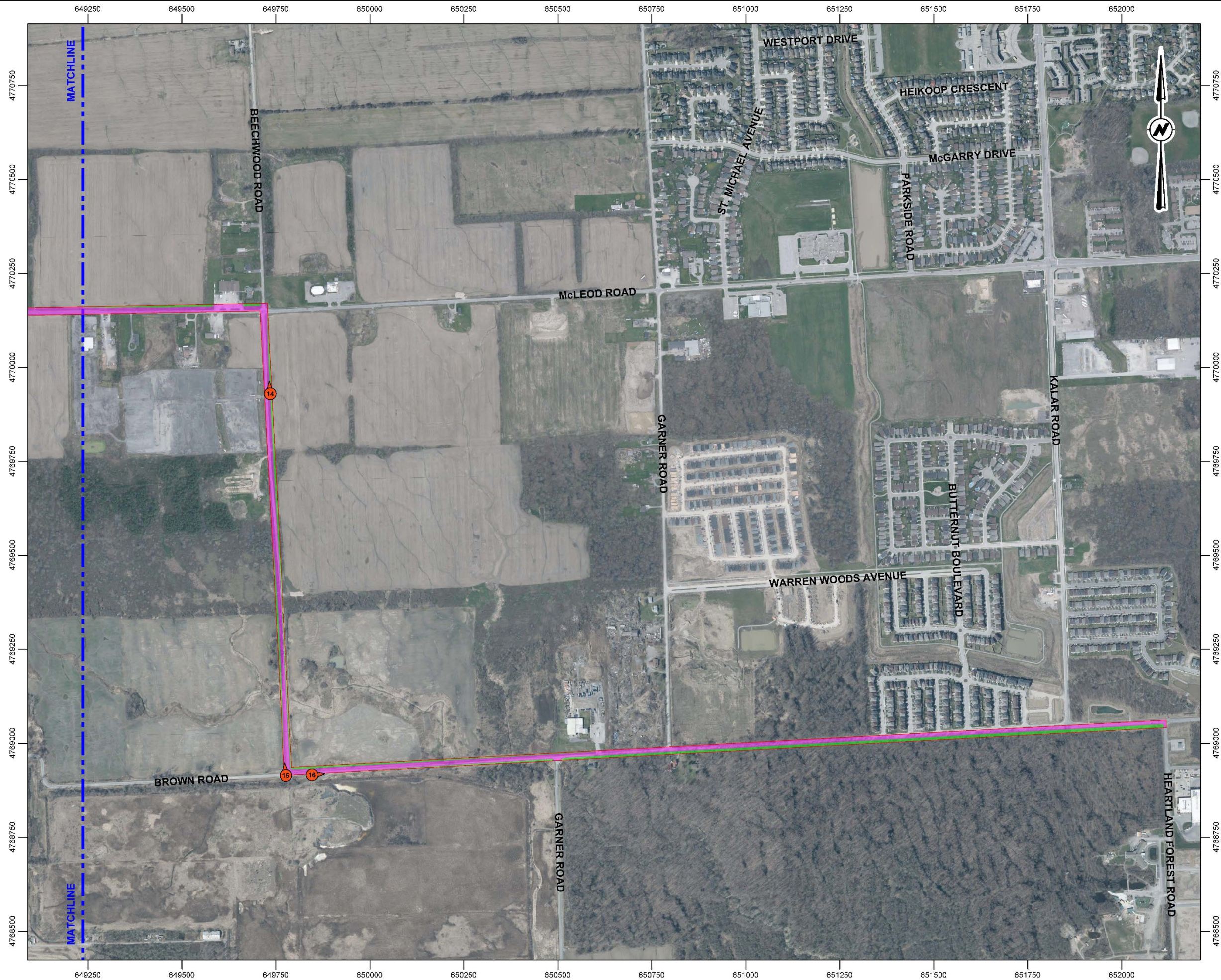
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DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: OCUL2001.900
REV No: 1		FIGURE No: 11A

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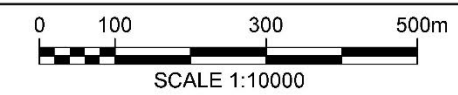


PROJECT: STAGE 1 ARCHAEOLOGICAL ASSESSMENT
 SOUTH NIAGARA FALLS WASTEWATER TREATMENT PLANT
 SOUTH THOROLD TRUNK &
 BLACKHORSE SEWAGE PUMPING STATION
 DAVIS ROAD
 CITY OF NIAGARA, ONTARIO

TITLE:
 STAGE 1 RESULTS WITH PHOTOGRAPH
 LOCATIONS AND DIRECTIONS

- LEGEND:
- STUDY AREA
 - PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND IDENTIFICATION
 - AREA OF ARCHAEOLOGICAL POTENTIAL
 - UNPLOUGHABLE LAND: TO BE TEST PIT SURVEYED AT 5m INTERVALS
 - AREA OF NO ARCHAEOLOGICAL POTENTIAL
 - DISTURBED: NO FURTHER ASSESSMENT REQUIRED

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. OCUL2001.900.
 ALL LOCATIONS ARE APPROXIMATE.
 ORIGINAL PAPER SIZE: 11 x 17.
 REFERENCES:
 2020 AERIAL PHOTOGRAPHS BY THE REGION OF NIAGARA;
 CANMAP STREETFILES V2008.4.



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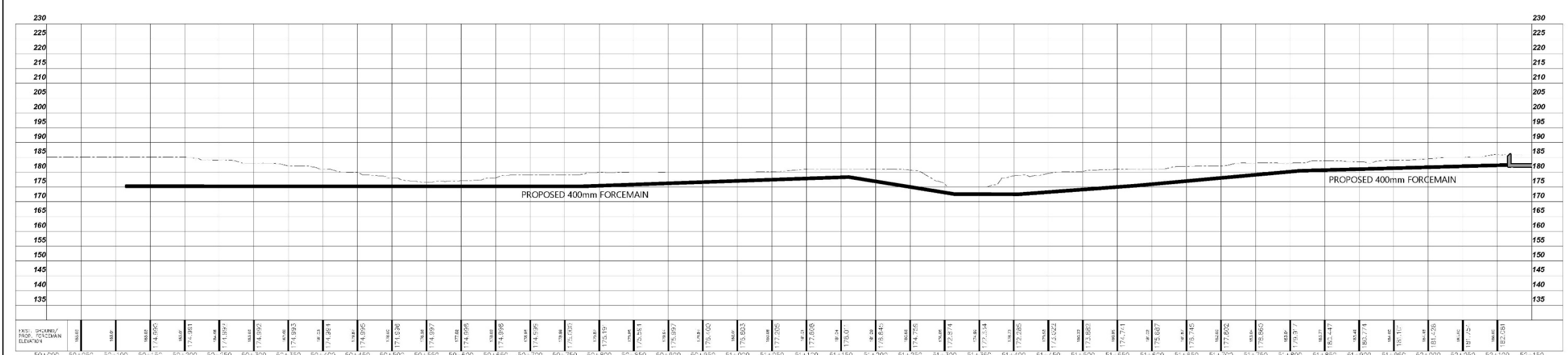
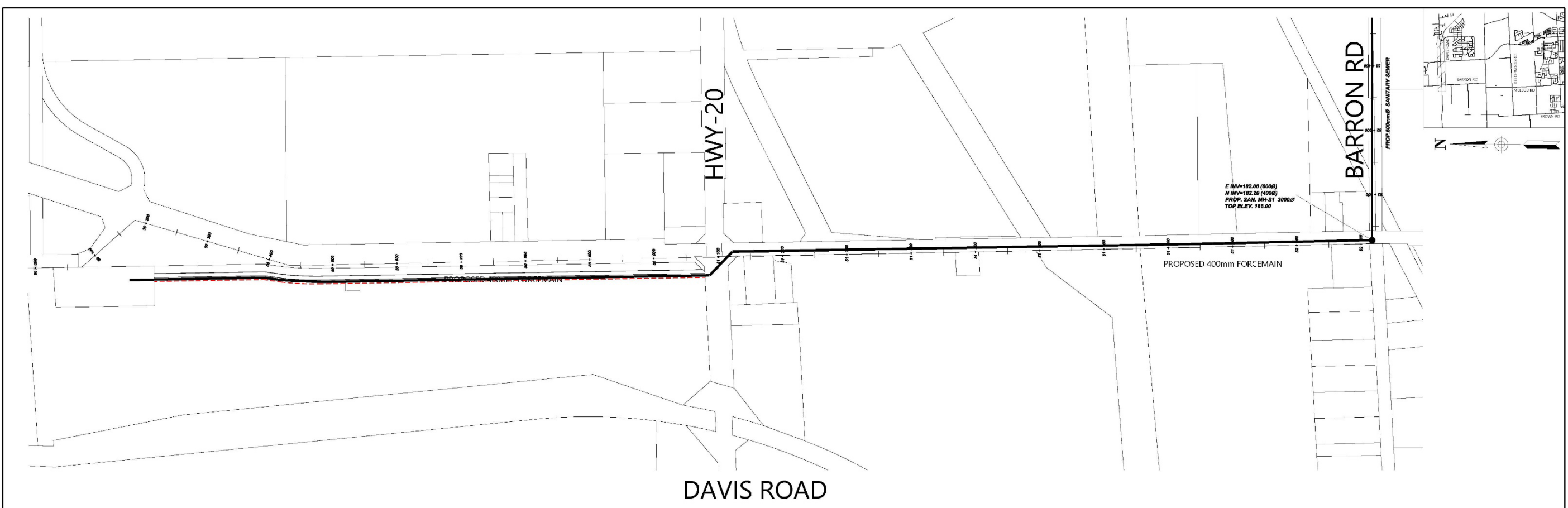
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DWN BY:	CHK'D BY:	DATE:
SJL	CD	NOV. 26, 2021
DATUM:	PROJECTION:	PROJECT No:
NAD83	UTM Zone 17	OCUL2001.900
REV No:		FIGURE No:
1		11B

Appendix C: Proposed Work





NO.	REVISION	DATE	INIT.
0	CONCEPTUAL DESIGN SUBMISSION	2021-XX-XX	MF

NOTES/LEGEND

1 THE POSITION OF HOLE LINES, CONDUITS, WATERMANS, SEWER AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED BEFORE STARTING WORK. THE CONTRACTOR SHALL INQUIRE HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

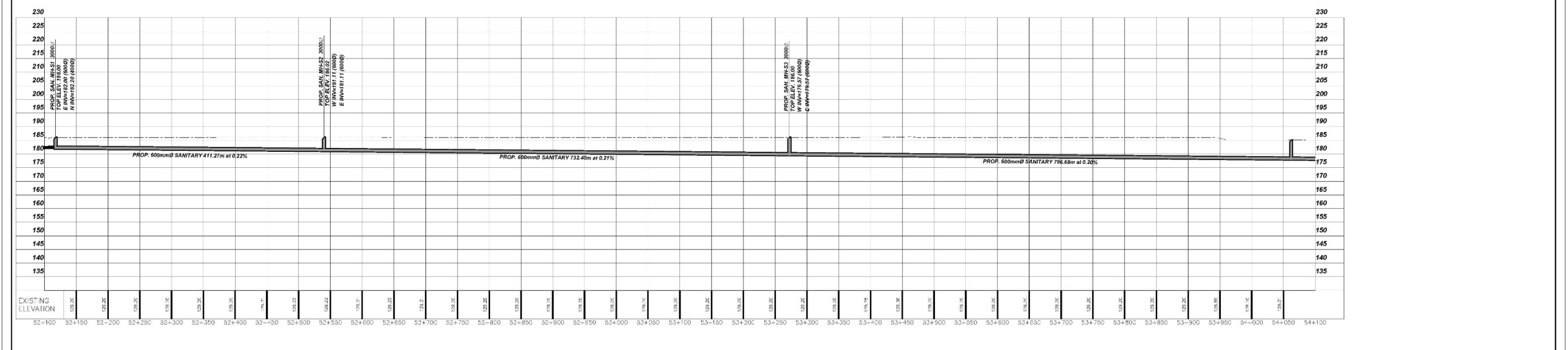
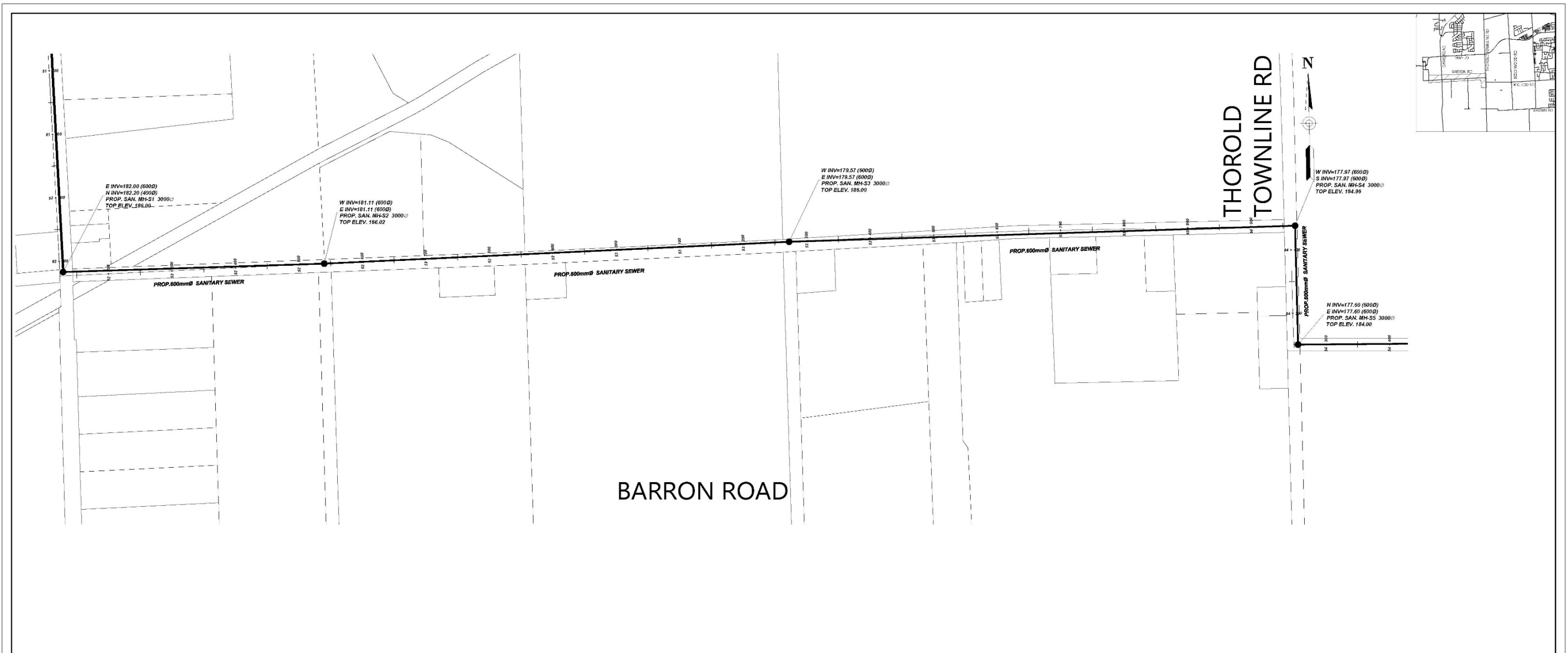
2 PROPERTY LINES WERE PLOTTED USING RECORDED PLANS AND BARS LOCATED IN THE FIELD. TO VERIFY THE ACCURACY OF THESE PROPERTY LINES, A LEGAL SURVEY SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

DRAFTING	DR
DESIGN	MF
CHECKED BY	
APPROVED BY	



SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
TRUNK SANITARY SEWER
CONCEPTUAL DESIGN
from STA 50+000 to STA 52+150
 NIAGARA REGION
PLAN & PROFILE

CONSULTANT FILE No.	718002
DATE	2021-06-21
SCALE	Hor : 1:3000 m Ver : 1:700 m
Sheet No.	#
DWG No.	C1
REV.	0



NO.	REVISION	DATE	INIT.
0	CONCEPTUAL DESIGN SUBMISSION	2021-XX-XX	MF

NOTES/LEGEND

1. THE POSITION OF PIPE LINES, CONDUITS, WATERMANS SEWER AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED BEFORE STARTING WORK. THE CONTRACTOR SHALL INQUIRE HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

2. PROPERTY LINES WERE PLOTTED USING RECORDED PLANS AND BARS LOCATED IN THE FIELD. TO VERIFY THE ACCURACY OF THESE PROPERTY LINES, A LEGAL SURVEY SHOULD BE OBTAINED PRIOR TO CONSTRUCTION.

DRAFTING
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DESIGN
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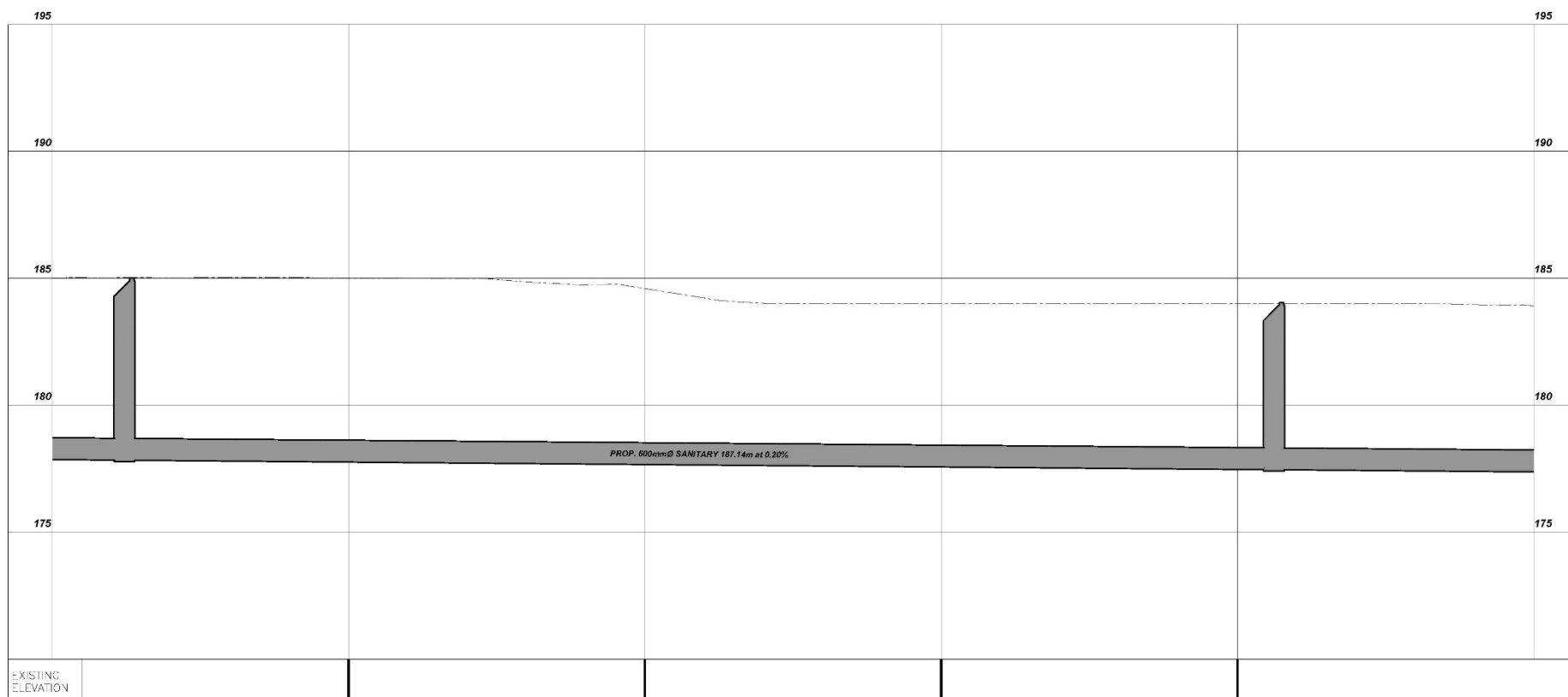
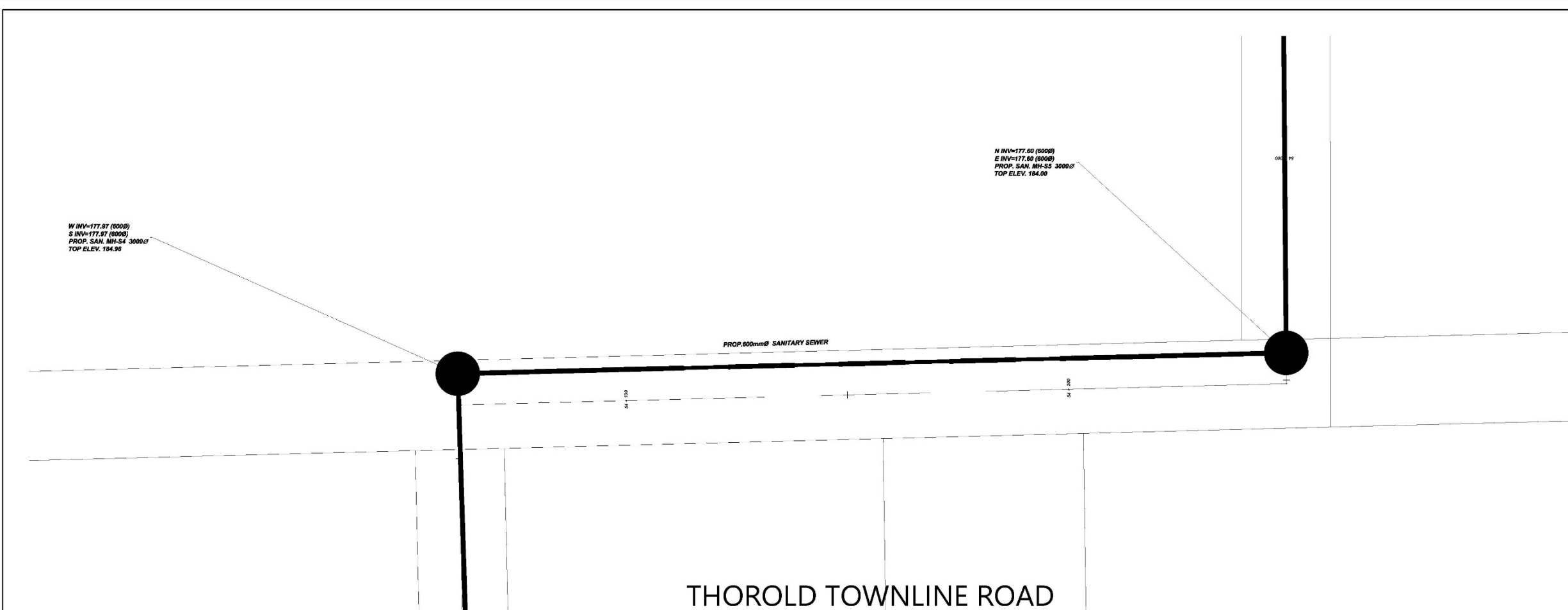
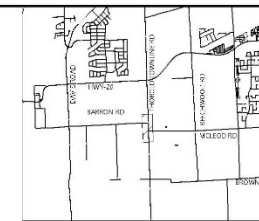
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SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
TRUNK SANITARY SEWER
CONCEPTUAL DESIGN
 from STA 52+100 to STA 54+100
 NIAGARA REGION
PLAN & PROFILE

CONSULTANT FILE No. 718002	REV.
DATE 2021-06-21	0
SCALE Hor : 1:3000 m Ver : 1:700 m	
Sheet No. #	
DWG No. C2	



NOTES/LEGEND

1. THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWER AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED BEFORE STARTING WORK. THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

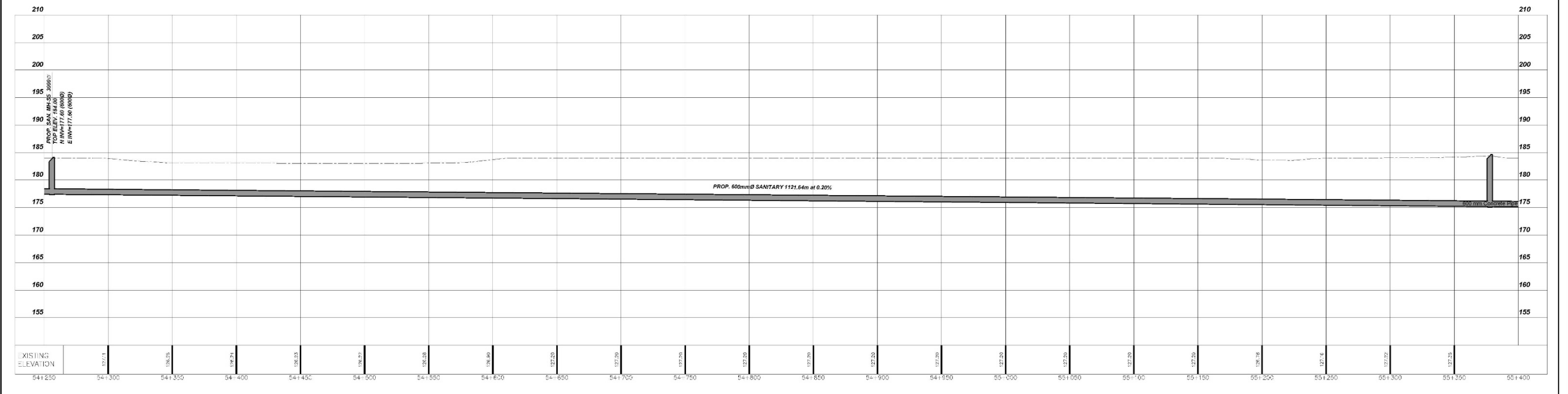
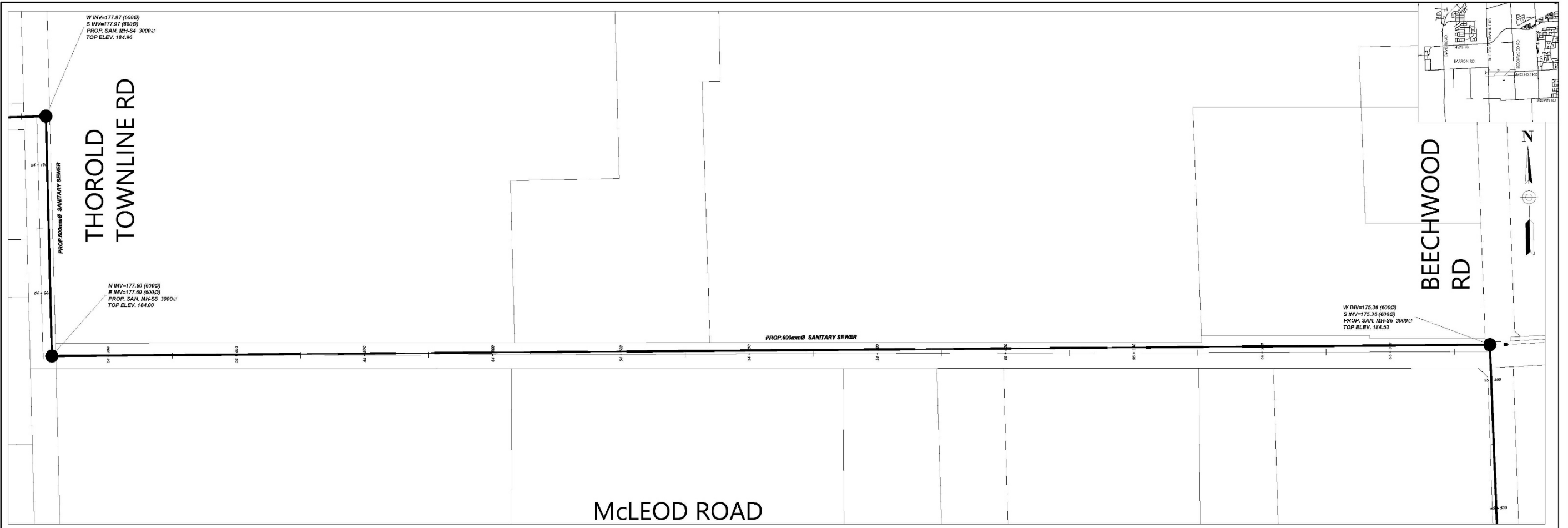
2. PROPERTY LINES WERE PLOTTED USING REGISTERED PLANS AND BARS LOCATED IN THE FIELD TO VERIFY THE ACCURACY OF THESE PROPERTY LINES. A LOCAL SURVEY SHOULD BE PERFORMED PRIOR TO CONSTRUCTION.

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APPROVED BY	---



SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
TRUNK SANITARY SEWER
 CONCEPTUAL DESIGN
 from STA 54+100 to STA 54+300
 NIAGARA REGION
 PLAN & PROFILE

CONSULTANT FILE No.	718002
DATE	2021-06-21
SCALE	hor : 1:500 m ver : 1:1.17 m
REF. No.	#
DWG No.	C3
REV.	0



NO.	REVISION	DATE	INIT.
0	CONCEPTUAL DESIGN SUBMISSION	2021-XX-XX	MF

NOTES/LEGEND

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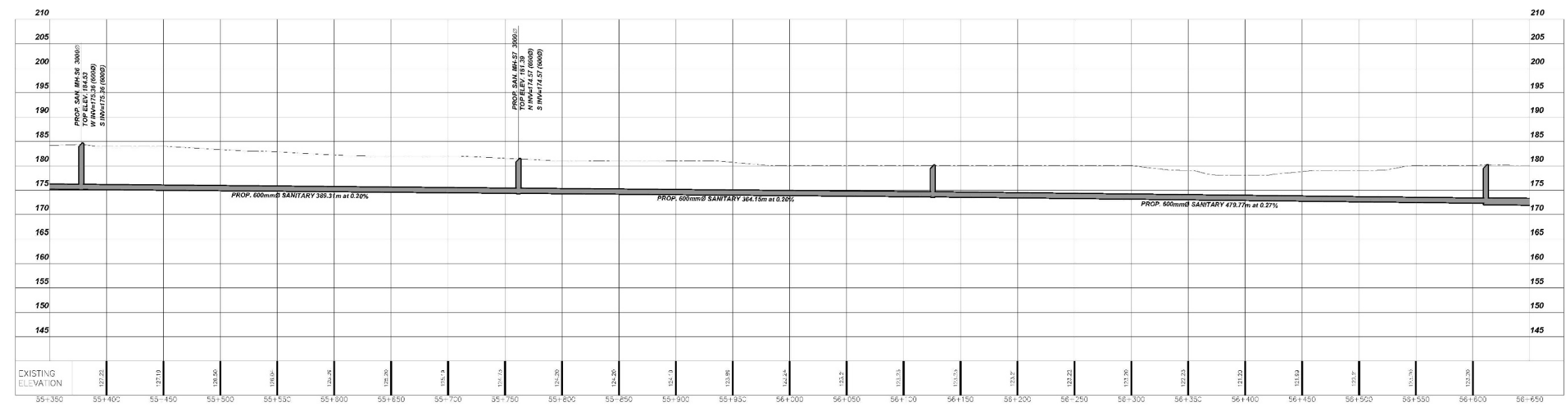
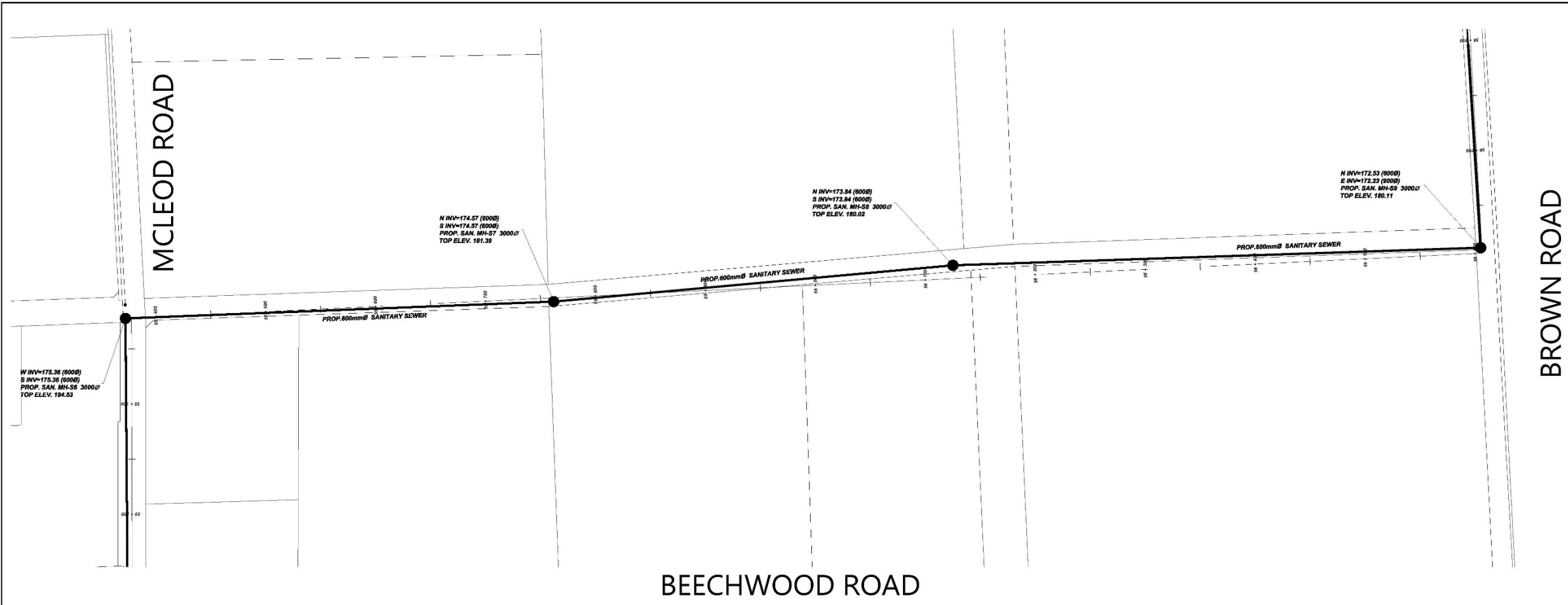
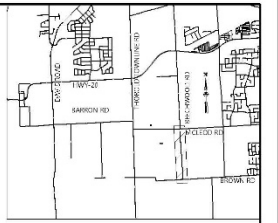
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APPROVED BY	--



SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
TRUNK SANITARY SEWER
CONCEPTUAL DESIGN
 from STA 54+250 to STA 55+400
 NIAGARA REGION
PLAN & PROFILE

CONSULTANT FILE No. 718002	REV.
DATE 2021-06-21	0
SCALE Hor : 1:1500 m Ver : 1:350 m	
REF. No. #	
DWG. No. C4	



NO.	CONCEPTUAL DESIGN SUBMISSION	2021-XX-XX	MF
NO.	REVISION	DATE	INIT.

NOTES/LEGEND

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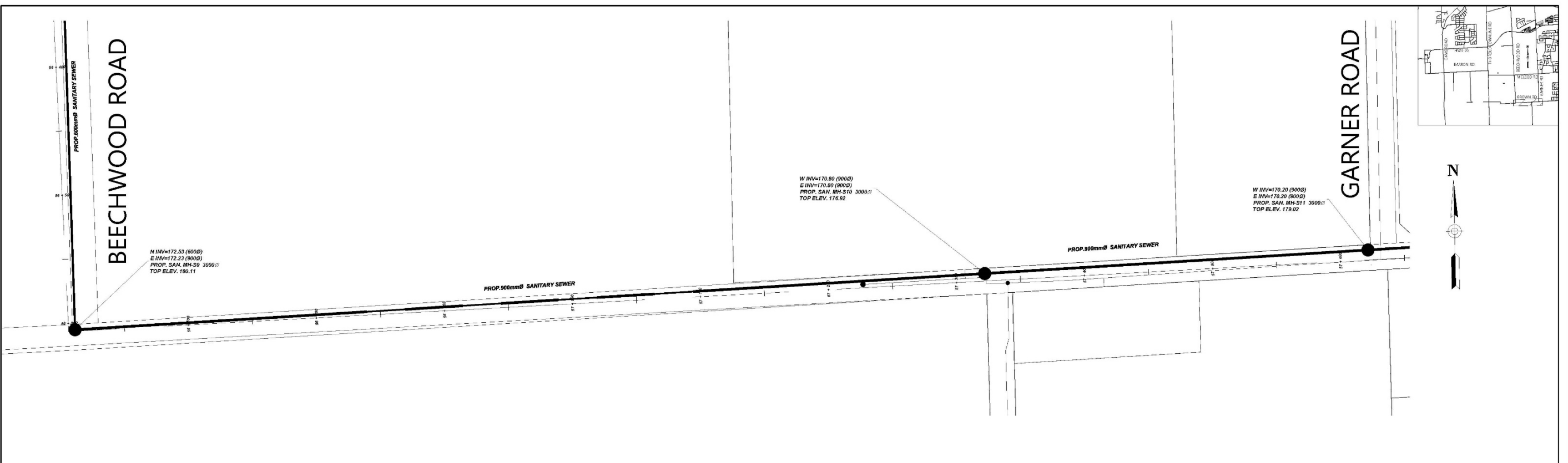
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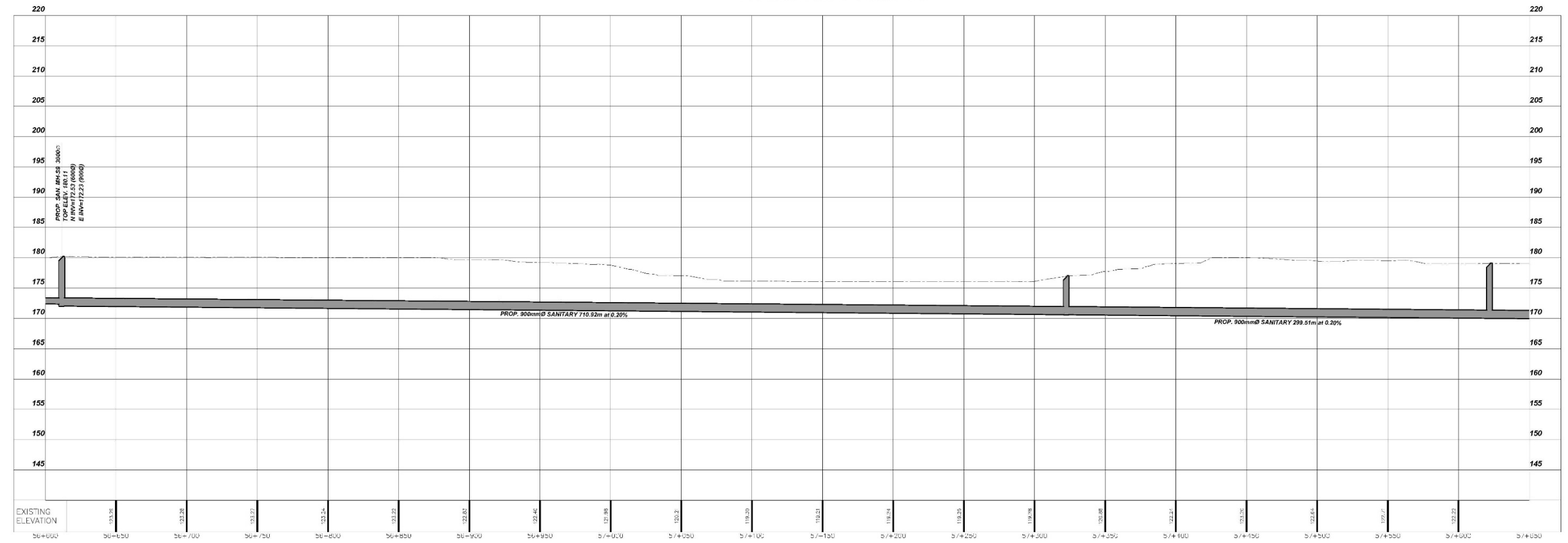


SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
TRUNK SANITARY SEWER
CONCEPTUAL DESIGN
 from STA 55+350 to STA 56+650
 NIAGARA REGION
PLAN & PROFILE

CONSULTANT FILE No.	718002
DATE	2021-05-21
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DWG No.	C5
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BARRON ROAD



NO.	REVISION	DATE	INT.
0	CONCEPTUAL DESIGN SUBMISSION	2021-XX-XX	VF

NOTES/LEGEND

1 THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWER AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

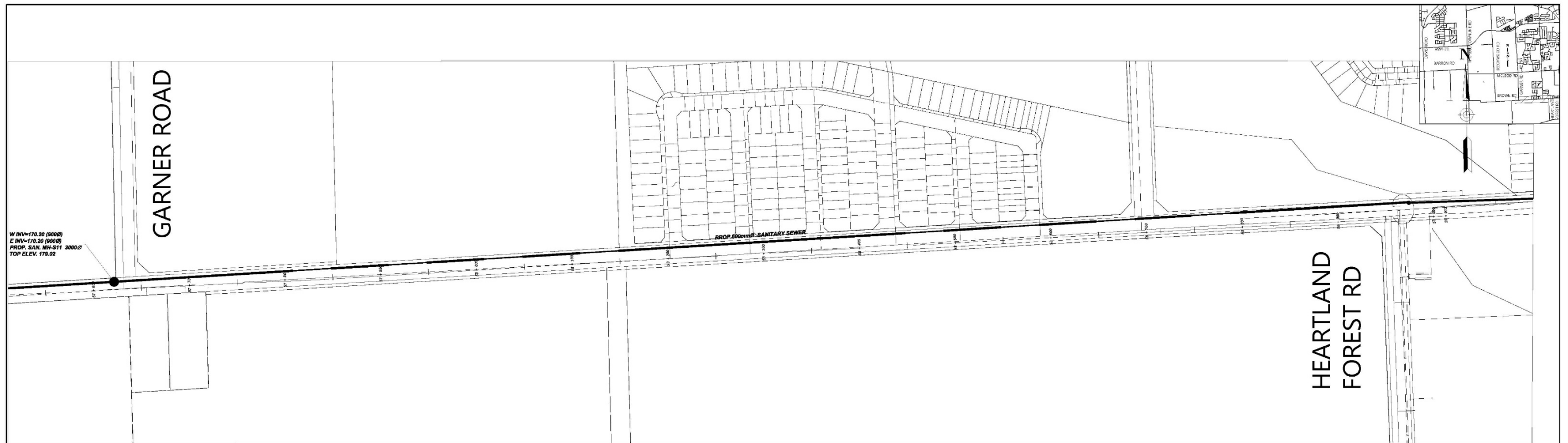
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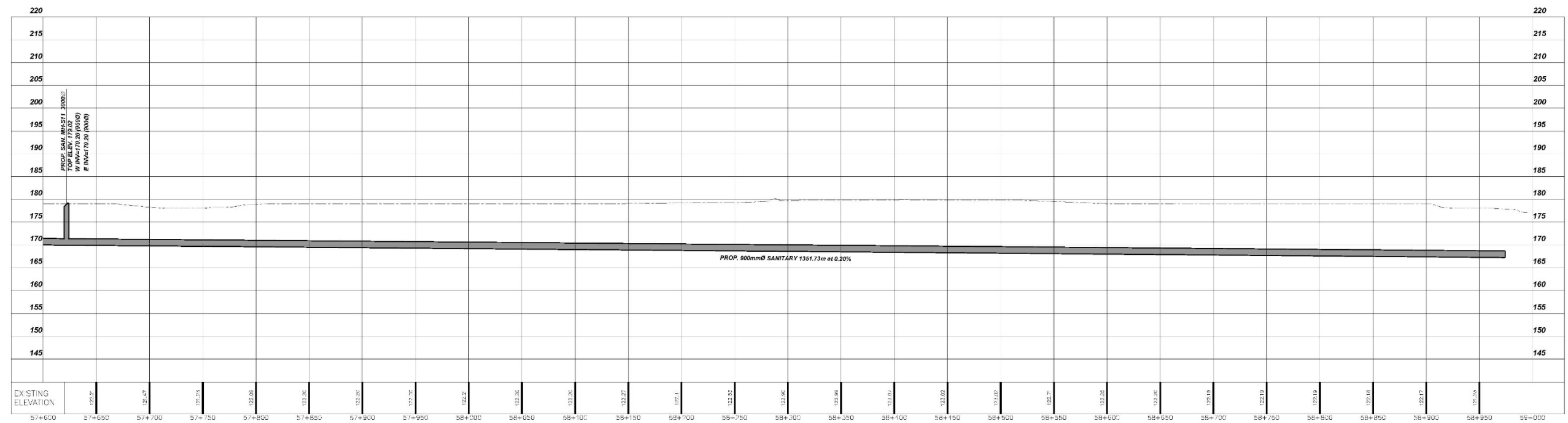


SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
TRUNK SANITARY SEWER
CONCEPTUAL DESIGN
 from STA 56+600 to STA 57+650
 NIAGARA REGION
PLAN & PROFILE

CONSULTANT FILE No.	718002
DATE	2021-06-21
SCALE	Hor : 1:1500 m Ver : 1:350 m
REF. No.	#
DRG No.	C6
REV.	0



BROWN ROAD



NO.	REVISION	DATE	INIT.
0	CONCEPTUAL DESIGN SUBMISSION	2021-XX-XX	VF

NOTES/LEGEND

1. THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWER AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL VERIFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

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Niagara Region
PUBLIC WORKS

SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
TRUNK SANITARY SEWER
CONCEPTUAL DESIGN
from STA 57+600 to STA 59+000
NIAGARA REGION
PLAN & PROFILE

CONSULTANT FILE No.	718002
DATE	2021-06-21
SCALE	Hor : 1:2000 m Ver : 1:467 m
REF. No.	#
DWG No.	C7
REV.	0

Appendix D: Historical Aerials



Aerial Photograph
Dated: 1934
SNFWWTP: Stage 1 AA South Thorold and Blackhorse SPS
Plate: B1



LEGEND

 Study Area

Aerial Photograph
Dated: 1968

SNFWWTP: Stage 1 AA South Thorold and Blackhorse SPS
Plate: B2

 **wood.**

Appendix E: Photographs



PHOTOGRAPH 1

View of agricultural field facing north towards 701 Allanburg Road and Davis Road. Also visible is the built-up gravel roadway to the east of the Study Area.



PHOTOGRAPH 2

View facing south towards Davis Road. Also visible is the built-up gravel roadway to the west of the Study Area.



PHOTOGRAPH 3

View of Davis Road facing south. Note the deep and wide roadside culvert/ditching to the east of the Study Area.



PHOTOGRAPH 4

View of Allanport Road facing north towards Allanport Road and Lundy's Lane intersection.



PHOTOGRAPH 5
View of Allanport Road facing south. Visible roadside culvert/ditching and manhole covering.



PHOTOGRAPH 6
View of the CN Railway (former Grand Trunk line) tracks facing west towards Barron Road and Allanport Road intersection.



PHOTOGRAPH 7
View of Barron Road facing west. Also visible is the roadside culvert/ditching.



PHOTOGRAPH 8
View of Barron Road facing east. Also visible is the roadside culvert/ditching.



PHOTOGRAPH 9
View of Barron Road facing east. Also visible is the roadside culvert/ditching.



PHOTOGRAPH 10
View of Barron Road facing west. Also visible is the roadside culvert/ditching.



PHOTOGRAPH 11
View of the Thorold Township Road facing southeast. Also visible is the roadside culvert/ditching.



PHOTOGRAPH 12
View of the Thorold Township Road facing north. Also visible is the roadside culvert/ditching and utility box.



PHOTOGRAPH 13

View of the McLeod Road facing southeast. Also visible is the built-up McLeod roadway and deep roadside ditching.



PHOTOGRAPH 14

View of Beechwood Road facing north. No disturbance evident on the roadside.



PHOTOGRAPH 15

View of Beechwood Road facing north. Also visible is the built-up roadway.



PHOTOGRAPH 16

View of Brown Road facing east. No disturbance evident on the south side of the roadway.



PHOTOGRAPH 17
View of Brown Road facing east. Also visible is the roadside ditching.



PHOTOGRAPH 18
View of Brown Road facing east. Also visible is the roadside ditching and gas line.

Appendix F: Excerpts from the MCFN Treaties Booklet

Mississaugas of the Credit Treaties



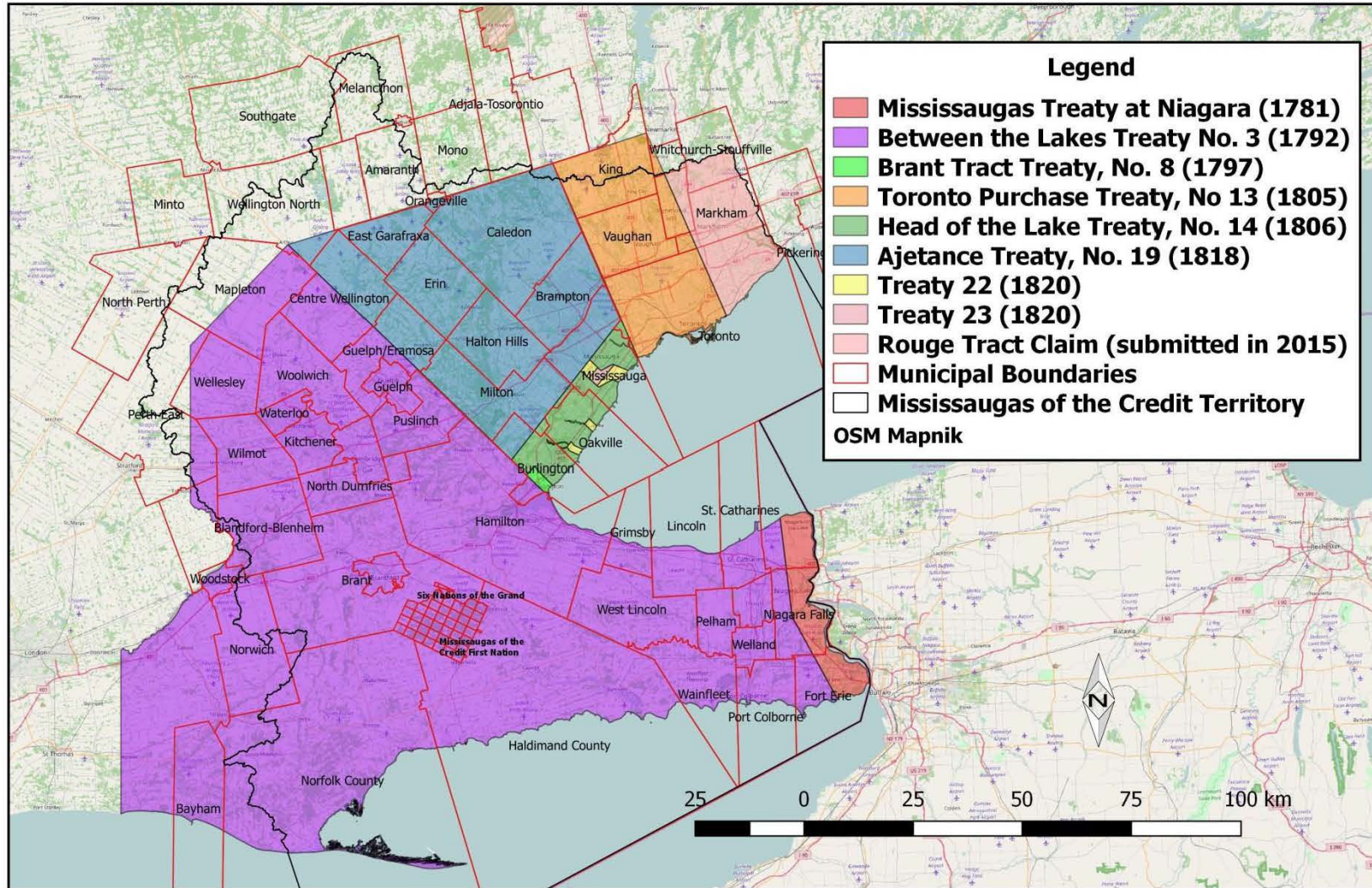
Prior to European contact, the ancestors of the Mississaugas of the New Credit First Nation occupied the lands north of Lake Superior and the area around Georgian Bay. The Mississaugas lived lightly on the lands they occupied and purposefully moved about the landscape harvesting resources as they became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

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.

Krista Lane, MA., Field Director (R382) - Ms. Lane is a Field Director based out of Wood's London Office. She holds a Bachelor's Degree in Bioarchaeology, and has worked across Ontario as a field archaeologist since 2006. She has conducted numerous Stage 1 to 4 archaeological assessments including background research, field surveys, archaeological excavations, analysis of archaeological resources, laboratory work, reporting, and monitoring construction projects for public and private development proponents. Ms. Lane is experienced on large scale energy projects (wind, solar, and oil), urban environments, wood lots, parks, and farm field context archaeological projects. Ms. Lane holds an Applied Research License (R382) issued by the Ontario MHSTCI, is a member of the Canadian Archaeological Association and the Ontario Archaeological Association.

Chelsea Dickinson B.A., 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

The work performed in the preparation of this report and the conclusions presented are subject to the following:

1. The Standard Terms and Conditions which form a part of our Professional Services Contract;
2. The Scope of Services;
3. Time and Budgetary limitations as described in our Contract; and,
4. The Limitations stated herein.

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.

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.

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.

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.

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.

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.

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.