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REGIONAL MUNICIPALITY OF NIAGARA
SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS

Archaeological Assessments

Stage 1 AA - Long List of WWTP Sites



REVISED REPORT

Stage 1 Archaeological Assessment

South Niagara Falls Wastewater Solutions Schedule C Class Environmental Assessment, Various Lots and Concessions, Geographic Townships of Stamford, Willoughby and Crowland, Former County of Welland, City of Niagara Falls, Regional Municipality of Niagara, Ontario

Report Corresponds with Phase 3 of the Environmental Assessment

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Executive Summary

The Executive Summary highlights key points from the report only, for complete information and findings as well as limitations, the reader should examine the complete report.

Golder Associates Ltd. (Golder) was retained by GM BluePlan Engineering (GM BluePlan) on behalf of the Regional Municipality of Niagara to undertake a Stage 1 archaeological assessment as part of the South Niagara Falls Wastewater Solutions Schedule C Class Environmental Assessment (SNFWWS). This report corresponds with Phase 3 of the Environmental Assessment and is supplementary to the review undertaken during Phase 2 of the Environmental Assessment. This report is a revised version of the original project report dated and submitted 13 May 2020. The revisions in this report reflect new information provided by the MHSTCI on 27 July 2020 where Golder was made aware of an assessment which had previously been undertaken within the Project Area. The Project Area is divided into ten distinct Areas (1-10) expanding over numerous lots and concessions collectively occupying an approximate 371.65 hectare (ha) area of the City of Niagara, stretching out from Garner Road along the banks of the Welland River (also known as Chippawa Creek), and to the east approximately 675 m west of the intersection of Stanley Avenue and Lyons Creek Road, and south to north from Reixinger Road to Oakwood Drive south of the Queen Elizabeth Way (Map 1, Map 2). The Project Area is located as follows (Map 1):

- Areas 1, 3-7 and 9 occupy portions or the entirety of Lots 187, 197, 205, and 209-216, Geographic Township of Stamford, former County of Welland, now the City of Niagara Falls, Regional Municipality of Niagara;
- Areas 8 and 10 occupy portions of Lots 5-10, Broken Front on Chippawa Creek, Geographic Township of Willoughby, former County of Welland, now the City of Niagara Falls, Regional Municipality of Niagara; and,
- Area 2 occupies portions of Lot 5-6, Broken Front Concession, Geographic Township of Crowland, former County of Welland, now the City of Niagara Falls, Regional Municipality of Niagara.

Background research determined the Project Area to have high archaeological potential for the recovery of both Indigenous and Euro-Canadian archaeological resources. This determination was based on the proximity of previously registered archaeological sites, water sources, historical settlements and historical transportation routes. Additionally, one cultural heritage property is known to exist within the Project Area, one known early Euro-Canadian cemetery is located directly adjacent to the Project Area, and a historic plaque denoting the original location of Fort Chippawa resides within 1 km of the Project Area.

A negative indicator of archaeological potential is extensive below-grade land disturbance. This includes widespread earth movement activities that would have removed or relocated any archaeological resources to such a degree that their information potential and cultural heritage value or interest has been lost. A desktop review of the Project Area identified areas of disturbances within the Project Area including but not limited to: areas occupied by the foundation infrastructure of large factories, commercial and industrial complexes and residential homes, areas previously excavated for the purpose of water retention (ponds and stormwater management facilities), and existing paved driveways, parking lots and industrial lands as well as paved roadways and areas of engineered ditching. However, the areas of deep and extensive disturbances should only be considered as *likely* not requiring Stage 2 survey. A visual inspection is still required to provide on-site confirmation and documentation of the actual condition and exact extent of the disturbance.

Additionally, several portions of the Project Area have been subject to previous archaeological assessment, with no further assessment recommended.

Based on these findings, the following recommendations are presented:

- 1) Lands that have been previously subject to archaeological assessment(s) and cleared by the Ministry of Heritage, Tourism, Sport and Culture Industries (MHSTCI) of further archaeological concern are recommended to be exempt from further assessment (Amec Foster Wheeler 2016, 2017a, 2017b, Mayer Archaeological Consultants 2015). Within the Project Area this includes Site of Interest 6, Site of Interest 7, and Site of Interest 9 as shown in Map 7 and Map 8. The western portion of Site of Interest 8 has also been previously assessed. Portions of Site of Interest 8 have been cleared by the MHSTCI of further archaeological concern and are recommended to be exempt from further assessment; however, further work (Stage 3) has been recommended for five sites that were identified. These recommendations are outlined below.
- 2) Five archaeological sites were previously identified in the western portion of Site of Interest 8 during a Stage 1-2 archaeological assessment and recommended to be subject to Stage 3 archaeological assessment prior to any impacts (Mayer Archaeological Consultants 2015). The sites include: AgGs-48 (Crawford 2), AgGs-50 (Feren), AgGs-379, AgGs-380 and AgGs-381. The Stage 3 assessments of these sites remain outstanding, and, as such, the original recommendations for these sites as outlined in Mayer Archaeological Consultant's Stage 1-2 report (2015) remain standings and should be followed prior to any anticipated impacts.
- 3) The remainder of the Project Area was determined to have archaeological potential for both Indigenous and Euro-Canadian archaeological resources and is recommended to be subjected to a Stage 2 archaeological assessment. It is recommended that areas of archaeological potential be subjected to test pit or pedestrian survey at 5 m intervals in accordance with Section 2.1.2 of the MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (2011). Within the Project Area this includes Sites of Interest 1, 2, 3, 4, 5, 8, and 10, as shown in Map 7 and Map 8. Of note is that Sites of Interest 3 and 10 and the unassessed eastern portion of Site of Interest 8 each contain known registered archaeological sites, including AgGs-47 (Crawford 1) in Site of Interest 8; AgGs-49 (Crawford 3) in Site of Interest 10; and, AgGs-51 in Site of Interest 3. These sites were identified in the late 1960s to mid-1980s, but to the best of our knowledge do not have corresponding reports that assess their Cultural Heritage Value or Interest (CHVI) or provide recommendations for further assessment. The status of these three sites is unknown, but it is presumed no further archaeological work has been conducted as there are no records of further stages of work. As such, the locations of the sites should be re-established through Stage 2 survey as a means to assess their Cultural Heritage Value or Interest (CHVI) and make recommendations for further assessment, if required.
- 4) Areas of previous disturbance were identified in Sites of Interest 1, 4, and 5 (Map 7 and Map 8). As no property inspections were completed as part of this Stage 1 archaeological assessment, on-site confirmation and documentation of the disturbance within these areas will need to be completed during Stage 2 archaeological assessment, as per *Section 1.4.1, Standard 1.f* and *Section 1.4.2* of the MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (2011).
- 5) The Dell Family Cemetery is located directly south and adjacent to, but not within Site of Interest 8. Prior to any invasive impacts within 20 m of the Dell Family Cemetery, including a Stage 2 archaeological assessment, detailed background research of the cemeteries' history and legal boundaries will need to be

carried out to determine if there is potential for burials to be located within the Project Area. Detailed recommendations for Stage 2 and 3 archaeological assessment fieldwork will be proposed, based on this research and the proposed location of the project, including the need for a Cemetery Investigation Authorization (CIA) issued by the Bereavement Authority of Ontario (BAO).

The Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

Study Limitations

Golder has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty expressed or implied is made.

This report has been prepared for the specific site, design objective, developments, and purpose described to Golder by the Regional Municipality of Niagara (the Client). The factual data, interpretations, and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations, and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the Client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings, and other documents as well as electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder's report or other work products.

Unless otherwise stated, the suggestions, recommendations, and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study, if any, comply with those identified in the Ministry of Tourism, Culture and Sport's 2011 *Standards and Guidelines for Consultant Archaeologists*.

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Acknowledgements

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APPENDIX A

City of Niagara Falls Heritage Master Plan

1.0 PROJECT CONTEXT

1.1 Development Context

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- Area 2 occupies portions of Lot 5-6, Broken Front Concession, Geographic Township of Crowland, former County of Welland, now the City of Niagara Falls, Regional Municipality of Niagara.

This Stage 1 archaeological assessment was conducted under Project Information Number (PIF) P468-0036-2019, issued to Rhiannon Fisher of Golder.

1.2 Objectives

The objective of the Stage 1 archaeological assessment was to compile available information about the known and potential cultural heritage resources within the Project Area and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the Provincial standards and guidelines set out in the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011), the objectives of the Stage 1 archaeological assessment were:

- To provide information about the Project Area's geography, history, previous archaeological fieldwork and current land condition;
- To evaluate in detail the Project Area's archaeological potential, which will support recommendations for Stage 2 survey for all or parts of the Project Area; and,
- To recommend appropriate strategies for Stage 2 archaeological survey.

To meet these objectives Golder archaeologists employed the following research strategies:

- Review of relevant archaeological, historic and environmental literature pertaining to the Project Area;
- Review of an updated listing of registered archaeological sites from the Ontario Archaeological Sites Database (OASD);

- Review of previously completed archaeological assessments; and,
- Review of historic maps of the Project Area.

1.3 Historical Context

To establish the historical context of the Project Area, a review of Indigenous and Euro-Canadian settlement history was undertaken. This information is presented below.

1.3.1 Pre-Contact Period

The general culture history of the pre-contact Indigenous period of southern Ontario is summarised in Table 1.

Table 1: Overview of Pre-Contact Cultural Chronology of Southern Ontario

Period		Time Range (circa)	Characteristics
Paleo	Early	9000 - 8400 BC	Gainey, Barnes and Crowfield traditions; small bands; mobile hunters and gatherers; utilization of seasonal resources and large territories; fluted projectiles
	Late	8400 - 8000 BC	Holcombe, Hi-Lo and Lanceolate biface traditions; continuing mobility; campsite/way-station sites; smaller territories are utilized; non-fluted projectiles
Archaic	Early	8000 - 6000 BC	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate Base traditions; growing diversity of stone tool types; heavy woodworking tools appear (e.g., ground stone axes and chisels)
	Middle	6000 - 2500 BC	Stemmed (Kirk, Stanly/Neville), Brewerton side- and corner-notched traditions; reliance on local resources; populations increasing; more ritual activities; fully ground and polished tools; net-sinkers common; earliest copper tools
	Late	2000 - 950 BC	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; less mobility; use of fish-weirs; more formal cemeteries appear; stone pipes emerge; long-distance trade (marine shells and galena)
Woodland	Early	950 - 400 BC	Meadowood tradition; cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; bands of up to 35 people
	Middle	400 BC - AD 500	Saugeen tradition; stamped ceramics appear; Saugeen projectile points; cobble spall scrapers; seasonal settlements and resource utilization; post holes, hearths, middens, cemeteries and rectangular structures identified

Period		Time Range (circa)	Characteristics
	Transitional	AD 550 - 900	Princess Point tradition; cord roughening, impressed lines and punctate designs on pottery; adoption of maize horticulture at the western end of Lake Ontario; oval houses and 'incipient' longhouses; first palisades; villages with 75 people
	Early Late	AD 900 - 1300	Glen Meyer tradition; settled village-life based on agriculture; small villages (0.4 ha) with 75–200 people and 4–5 longhouses; semi-permanent settlements
	Middle Late	AD 1300 - 1400	Uren and Middleport traditions; Classic longhouses emerge; larger villages (1.2 ha) with up to 600 people; more permanent settlements (30 years)
	Late	AD 1400 - 1600	Pre-contact Neutral tradition; larger villages (1.7 ha); examples up to 5 ha with 2,500 people; extensive croplands; also hamlets, cabins, camps and cemeteries; fur trade begins ca. 1580; European trade goods appear

(Sawden 1952; Heidenreich 1978; Dodd et al. 1990; Ellis and Deller 1990; Fox 1990; Lennox and Fitzgerald 1990; Ramsden 1990; Spence et al. 1990; Williamson 1990; Wright 1994; Ferris and Spence 1995; Warrick 2000; Brown 2009; Ellis 2013; Williamson 2013; Garrad 2014).

1.3.2 Contact Period (AD 1600 to 1650)

The Huron-Wendat and Haudenosaunee called those within the territory of the Niagara Peninsula the 'Attiewandaron' (also spelled Attiwondaronks and Atiquandaronk) (Brown 2009). According to Samuel de Champlain, who first referred to the Attiewandaron as *la Nation neutre*, the Attiewandaron inhabited forty villages and could field 4,000 warriors (Jury 1974; White 1978; Warrick 2008). It is speculated that prior to the great epidemics of the 1630s, the Attiewandaron Confederacy numbered approximately 35,000 to 40,000 individuals (White 1978; Warrick 2008).

Their territory at the western end of Lake Ontario and along the north shore of Lake Erie was favourably located for easy trade with the Erie, Haudenosaunee, Tionnontaté, and Huron-Wendat (Trigger 1994). The interior lands occupied by the Attiewandaron contained rapidly running streams, large rivers, and portage routes. A significant trail beginning at Lake Simcoe, following the Nottawasaga River to the Pine River to the source of the Irvine River and into the Grand River and banks of Lake Erie, formed an Indigenous portage route favoured for travel and trade between Huron-Wendat and Attiewandaron territorial lands (Bricker 1934).

There are limited records documenting European contact with the Attiewandaron. In 1626, Reverend Father Joseph de la Roche D'aillon, a Récollet (or Recollect) missionary, journeyed from the Huron-Wendat to the Attiewandaron under the pretense of trade, and spent months studying the Attiewandaron language in an attempt to instruct them in the principals of Christian religion (Jury 1974; White 1978; Gingras 2000). However, the

Huron-Wendat guarded their trade advantage and travelled from village to village, warning the Attiewandaron of “misfortune and ruin if they received the French in their midst” (Jury 1974, p.20). This action caused the dismissal of Father D’aillon from the Attiewandaron and no direct trade relationship was ever formed between the French and Attiewandaron (White 1978). In the winter of 1640-41, Jesuit Missionaries stayed in ten Attiewandaron villages and produced a map of the Attiewandaron territory, but it has not survived (Jury 1974; White 1978; Brown 2009). Famine also affected the Attiewandaron. Famine had become so severe by 1639 that many Attiewandaron sold their children for corn and others fled to neighbouring tribes, pale and disfigured (Jury 1974; White 1978; Brown, 2009).

By 1645, having grown dependent on European goods and with their territory no longer yielding enough animal pelts, the Haudenosaunee Nation became increasingly aggressive towards the Huron-Wendat Confederacy (Trigger 1994, p.53). Armed with Dutch guns and ammunition, the Haudenosaunee engaged in warfare with the Huron-Wendat Confederacy and brutally attacked and destroyed several Huron-Wendat villages throughout southern Ontario (Trigger 1994). After the massacres of 1649-50, the small groups that remained of the Huron-Wendat Confederacy became widely dispersed throughout the Great Lakes region, ultimately resettling in Quebec (Schmalz 1991). Many Huron-Wendat groups sought refuge and protection within the Attiewandaron, until the Haudenosaunee attacked in the 1650s (Trigger 1994; Warrick 2008). Many were captured and incorporated into the Haudenosaunee or sought refuge within other tribes (Lennox and Fitzgerald 1990; Trigger 1994). The last mention of the Attiewandaron in French writing was in 1671 (Noble 2012). After the massacres of 1649-50, and for the next forty years, the Haudenosaunee used present-day Ontario to secure furs with the Dutch, then with the English (Coyne 1895; Schmalz 1991; Smith 2013).

1.3.3 Post-Contact Period (AD 1650 to 1800)

Although their homeland was located south of the lower Great Lakes, the Haudenosaunee controlled most of southern Ontario after the 1660s, occupying at least half a dozen villages along the north shore of Lake Ontario and into the interior (Schmalz 1991; Williamson 2013). The Haudenosaunee established “settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. Their settlements were on canoe-and-portage routes that linked Lake Ontario to Georgian Bay and the upper Great Lakes” (Williamson 2013, p.60). The Haudenosaunee had established a village at the Rouge River, the Humber River, and at the Niagara River (Robinson 1965; Schmalz 1991).

At this time, several Algonquin-speaking linguistic and cultural groups within the Anishinaabeg (or Anishinaabe) began to challenge the Haudenosaunee dominance in the region (Johnston 2004; Gibson 2006). Before contact with the Europeans, the Ojibwa territorial homeland was situated inland from the north shore of Lake Huron (MNCFN [date unknown]). The English referred to those Algonquin-speaking linguistic and cultural groups that settled in the area bounded by Lakes Ontario, Erie, and Huron as Chippewas or Ojibwas (Smith 2002). In 1640, the Jesuit fathers had recorded the name “*oumisagai*, or Mississaugas, as the name of an Algonquin group near the Mississagi River on the northwestern shore of Lake Huron. The French, and later English, applied this same designation to all Algonquian [-speaking groups] settling on the north shore of Lake Ontario” (Smith 2002, p. 107; Smith 2013, pp.19-20). “The term ‘Mississauga’ perplexed the Algonquins, or Ojibwas, on the north shore of Lake Ontario, who knew themselves as the Anishinaabeg” (Smith 2013, p.20).

Following a major smallpox epidemic, combined with the capture of New Netherland by the English, access to guns and powder became increasingly restricted for the Haudenosaunee. After a series of successful attacks against the Haudenosaunee by groups within the Anishinaabeg, the Haudenosaunee dominance in the region began to fail. By the 1690s, Haudenosaunee settlements along the northern shores of Lake Ontario were

abandoned, and in 1701, the Haudenosaunee were defeated. After these battles, the Anishinaabeg replaced the Haudenosaunee in southern Ontario (Coyne 1895; Schmalz 1991; Gibson 2006; Warrick 2008; Williamson 2013).

In 1701, representatives of several groups within the Anishinaabeg and the Haudenosaunee, collectively known as the First Nations, assembled in Montreal to participate in Great Peace negotiations, sponsored by the French (Johnston 2004; Trigger 2004). The Mississaugas were granted possession of the territory along and extending northward of Lake Ontario and Lake Erie (Hathaway 1930). The Seneca, a group within the Haudenosaunee, had settled along the eastern banks of the Niagara River at Fort Niagara, a French fort, at the mouth of the Niagara River (Abler and Tooker 1978; Surtees 1994). From 1701 to the fall of New France in 1759, the Anishinaabeg experienced a “golden age” of trade, holding no conclusive alliance with either the British or the French while maintaining their middle-man position between Indigenous groups to the north and in southwestern Ontario (Schmalz 1991). Mississauga subsistence patterns include a primary focus on hunting, fishing and gathering with little emphasis on agriculture (McMillian and Yellowhorn 2004). Temporary and moveable house structures were utilized which were easy to construct and disassemble, allowing swift travel throughout their territory (McMillian and Yellowhorn 2004). Consequently, little archaeological material was left behind.

The Seven Years War brought warfare between the French and British in North America. In 1763, the Royal Proclamation declared the Seven Years War over, giving the British control of New France. The British did not earn the respect of the Anishinaabeg or the Haudenosaunee, as the British did not honour fair trade or the land as the French had. Consequently, the Pontiac Uprising, also known as the Beaver Wars, began that same year (Schmalz 1991; Johnston 2004). This uprising involved groups both within the Haudenosaunee and the Anishinaabeg. The Seneca remained pro-French and supported the Pontiac Uprising (Abler and Tooker 1978; Surtees 1994). The Seneca utilized the Niagara River to harass the British. During an ambush at Devil’s Hole, a trail between Fort Schlosser at the top of the falls and Fort Niagara, over 70 British soldiers were killed (Abler and Tooker 1978; Surtees 1994). The Seneca eventually made peace with the British and the Seneca surrendered a tract of land six and a half kilometres in depth on the east side of the Niagara River and three kilometres deep on the west side of the Niagara River along the full length of the river (Surtees 1994). This surrender secured a navigable route for the British and punished the Seneca for their support of the French during the Seven Years’ War and for the Devil’s Hole massacre (Surtees 1994).

During the American Revolution, the Haudenosaunee were divided in their support of the British and their support of the Americans. The Mohawk, Onondaga, Cayuga and Seneca supported the British and many fled from their territorial homelands south of Lake Ontario to the Niagara Peninsula and remained there until the Treaty of Paris was signed in 1784 (Tooker 1978). However, the Treaty made no provisions for the Indigenous, and “consequently, the [divided Iroquois] had to treat each government separately. This meant that as individuals the [Haudenosaunee] had to decide where they should go live and with which country, they wished to enter into a treaty agreement with” (Tooker 1978). Fort Niagara remained in the control of the British, under the command of John Butler from 1777 to 1784. The Haudenosaunee who had sought refuge at Fort Niagara placed enormous strain on the fort’s resources and these individuals were ultimately relocated to the Grand River Valley (Surtees 1994).

1.3.4 Euro-Canadian Settlement Period (Late 1700s to 1900)

During the American War of Independence, in the late 1700s, a large number of United Empire Loyalists (UELs), who were granted land for staying loyal to the British crown, began to move into the Niagara Peninsula, putting greater demand on the quantity of available lands for settlement within what would become Welland County (Brown 2009). These land grants were very liberal, where “field officers being allowed to select 5,000 acres,

captains 3,000 acres, subalterns 2,000 acres and privates 200 acres” (Murphy 1887, pp.87-88; Michael 1967, p.11). By 1784, about 40 families had settled on the territory now comprising the County of Welland (Murphy 1887).

In 1784, the Mississauga at the western end of Lake Ontario ceded a large tract of land that “included the Niagara Peninsula, lands close to the head of Lake Ontario, and the north shore of Lake Erie as far west as Cat Fish Creek” (Surtees 1994, p.103). The British purchased this land for £1,180 worth of trade goods, and it became known as the Between the Lakes Purchase (Surtees 1994). The tract included over one million hectares of land, and a tract of land nearly ten kilometres deep on either side of the Grand River was awarded to the Six Nations (Surtees 1994). In 1792, a land sale document was produced to confirm the actual limits of this purchase, which includes the Township of Willoughby and Bertie (Indian Treaties... 1891; Surtees 1994).

The majority of the Project Area (Sites of Interest 1, 3-7 and 9) is located within the former Stamford Township, previously known as both Mount Dorchester and Township #2 (Zavitz 2015a). The township was renamed to Stamford Township upon the arrival of John Graves Simcoe in 1792 (Zavitz 2015b). In 1791 the area of Stamford Township was located within the newly created Lincoln County. When Lincoln County was divided in 1845, Stamford Township fell within the newly created Welland County.

Active settlement of the area commenced prior to the Crown survey of 1813. As in Lincoln County, in 1784, almost immediately following the American Revolution UELs, specifically members and relatives of the Butler’s Rangers under the command of Col. John Butler settled in the area. An informal survey was conducted by Philip R. Frey in 1787, and the first map of the surveyed area was published in 1791 (Copp 1891). The ten Sites of Interest that comprise the Project Area has been overlain on top of the Augustus Jones 1797. *Stamford Township No. 2 “Niagara Chain RESERVE”* Map within this report (Map 3).

The Crown survey used a Front and Rear special survey system that was in use from 1783-1813 (Dean and Matthews 1969). This survey system laid out concession roads that ran in a north-south orientation with side roads surveyed between every second lot to connect the concession roads. Each lot was 100 acres.

The roads used throughout the early township were Concessions and Lines and are the basis for the main grid roads today. The most famous of these roads is Lundy’s Lane. Lundy’s Lane, originally used an Indigenous trail, became one of the first roads used by settlers. It also became the site of a major battle of the War of 1812. Stamford Township was heavily involved in the events of the War of 1812, and Lundy’s Lane was considered to be the bloodiest battle to take place on Canadian soil. Portage Road, still used today, runs parallel to the Niagara River, and was used to connect the properties located along the shoreline with the interior portions of Stamford Township.

European settlement in Willoughby Township began in the 1780s (Page and Co. 1876), and predominately included UELs fleeing the American Revolutionary War. Groups of Pennsylvania Dutch began to settle in the township in the 1790s. Formal survey of the township was completed in 1787; at this time land could be bought for one shilling per acre. By 1817 the township had a population of 450 and land had increased to 25 shillings per acre (Page and Co. 1876). Economic activity centred around agricultural production due to the presence of fertile, easily worked soils. The combination of socioeconomic upheavals from the War of 1812, the Rebellion of 1837, the Fenian Raids of 1867 and the presence of a large tamarack swamp along the southern border of the township resulted in sluggish population growth, and the township reached 1,200 inhabitants by 1885 (Cruikshank 1886). The ten Sites of Interest that comprise the Project Area has been overlain on top of the Augustus Jones 1795. *Willoughby Township No. 1* Map. within this report (Map 3).

As with Stamford and Willoughby Townships, European settlement in Crowland Township was driven by the influx of UELs. Several families settled in the area in 1778 and 1785, with widespread settlement starting in 1788. It is no surprise that land adjacent to the Welland River was the most sought after in the township. In 1801 the first road was surveyed through the township, from Zavitz's Mills in Bertie Township to the Welland River. The 1803 census of the township identified 216 inhabitants; this grew to 600 inhabitants in 1817, and 1,200 inhabitants in 1848.

1.3.5 Project Area Surveys (1790s to 1900)

To understand the 1800s past land use history of the Project Area, several documents were reviewed. A review of the 1797 Augustus Jones "Niagara Chain RESERVE" map and the Augustus Jones 1795 *Willoughby Township No. 1 Map* (Map 3), the 1862 *Tremaine's Map of the Counties of Lincoln and Welland* (Map 4) and 1876 *Illustrated Historical Atlas of the Counties of Lincoln and Welland* (Maps 5 and 6) identifies the Project Area as traversing numerous lots and broken front lots owned by various individuals on either side of the Welland River. Beginning with Section 1.3.5.1, a brief history on each of the lots and broken front lots is provided, Table 2 lists each of the ten Sites of Interests that make up the Project Area, and which Lots and Broken Front Lots are held therein.

Table 2: Sites of Interest 1-10 of the Project Area and Associated Lots and Broken Front Lots

Site of Interest Number	Lot Numbers and Description	Location
1	A portion of Lot 205 (south half)	Historic Township of Stamford
2	A portion of Broken Front Lots 5 and 6	Historic Township of Crowland
3	A portion of Lots 209 and 210 (south half)	Historic Township of Stamford
4	A portion of Lots 187 and 197 (west half)	Historic Township of Stamford
5	A portion of Lot 211 (south half)	Historic Township of Stamford
6	A portion of Lot 212 (north half)	Historic Township of Stamford
7	Portions of Lots 212, 213 and 214 (south half)	Historic Township of Stamford
8	A portion of Broken Front on Chippawa Creek Lots 7, 8, 9 and 10	Historic Township of Willoughby
9	Portions of Lots 215 and 216	Historic Township of Stamford
10	Broken Front on Chippawa Creek Lots 5 and 6	Historic Township of Willoughby

1.3.5.1 Lots 205, 209-210, Geographic Township of Stamford

The orientation and overall layout of the lots within Stamford Township, as per the 1797 Augustus Jones map, appear to be generally the same as in the later 1862 Tremaine map, however the numbering system used by the township was changed at some point between 1797 and 1862. Lot 205 as it is designated today, initially appears

as Lot 14 on the 1797 Augustus Jones “*Niagara Chain RESERVE*” map. The riverfront lot is depicted as owned by C. McDaniell and appears to have the same general proportions and alignment with the Welland River as compared to the 1862 Tremaine map (Maps 3 and 4). The 1797 Augustus Jones map does not depict the location of any structures within any of the lots on the map. By 1862 ownership of Lot 205 had changed to an unequal division of ownership by Timothy Hixon and Jacob Hixson. Timothy Hixon owned the west two-thirds, and Jacob Hixson (possibly a brother or cousin, with an alternate spelling of the last name) owned the east one-third of the lot. Additionally, a road (known today as Chippawa Creek Road) now bisects the south portion of the riverfront lots and follows the course of the Welland River toward the Niagara River. A review of the 1876 *Illustrated Historical Atlas of the Counties of Lincoln and Welland* reveals that property divisions and ownership had remained unchanged, although now the spelling of the last name of Hixon has been adopted by both parties (Map 5). Additionally, two new structures appear within Lot 205 in the southwest corner, one on either side of the road.

Lots 209 and 210 are depicted on the 1797 Augustus Jones map as Lots 10 and 9 respectively, and lists Mathew [Pearson] as the sole landowner for both lots (Map 3). The 1862 Tremaine map shows that landownership changes have resulted in the lots now being owned separately; Lot 209 is owned at this time by Archibald Thompson, and Lot 210 is owned by Archibald Grey. By 1862 the local infrastructure has increased considerably within the Township of Stamford and many new structures appear within Lots 209 and 210. The 1862 Tremaine map indicates that a smaller secondary sideroad (possibly Montrose Road today) now branches off the main road cutting through the southeast portion of Lot 210 and crosses the Welland River by way of a swing bridge and meets up with Lot 1, Broken Front Concession, Township of Willoughby. Additionally, depicted within Lot 209 is a single structure, and depicted within Lot 210 are 3 structures, a grocer on the west side of the southbound side of the road and a shop called SS & WM Shop on the west side. The third structure is also possibly a shop, but the script is too degraded to decipher, and it was located on the north side of modern day Chippawa Creek Road (Map 4). By 1876 the atlas map depicts the same structure on Lot 209 with the addition of an orchard directly to the east. In Lot 210 the existing shops and grocer seem to have disappeared and been replaced by a post office located on the southeast corner of the intersection of the two main roads, and two new structures have been built directly along the north bank of the Welland River west of the swing bridge (Map 5).

1.3.5.2 Lot 187, Geographic Township of Stamford

Lot 187 is depicted on the 1797 Augustus Jones “*Niagara Chain RESERVE*” map as Lot 163, and lists Hugh [Haggarty] as the sole owner of the lot (Map 3). A review of the 1862 Tremaine map reveals that Lot 187 has been divided in half east to west; Everat DeWitt owning the south half and J. Malone the north half and no structures are yet present on the Lot (Map 4). The 1876 *Illustrated Atlas* map shows one structure has been built on the south half of Lot 187 on the land owned by Everat DeWitt, whilst it seems J. Malone chose to build his house on Lot 178 to the north alongside his orchard leaving the north half of Lot 187 vacant of structures (Map 5).

1.3.5.3 Lots 197 and 211, Geographic Township of Stamford

Lot 197 is depicted on the 1797 Augustus Jones map as Lot 162, and lists G. Smith as the sole owner of the lot (Map 3). A review of the 1862 Tremaine map reveals that a single structure now resides in the central portion of Lot 197 and that the landowner is now Henry Spence (Map 4). By 1876 Lot 197 has changed ownership again and the structure once depicted as residing in the central portion of the lot is gone and has been replaced by a structure with an adjacent orchard situated alongside a major historic roadway, possibly modern-day Montrose Road (Map 5).

Lot 211 is depicted on the 1797 Augustus Jones map as Lot 8, and lists James Thompson as the sole owner (Map 3). A review of the 1862 Tremaine map reveals that Lot 211 is part of the Estate of Late James Thompson,

with a single structure depicted in the northwest corner of the lot within a small, roadside subdivided lot (Map 4). By 1876 Lot 211 has a new landowner listed by surname only (Murray) on the 1876 map, with a large household depicted south of Chippawa Creek Road along the west extent of the property in addition to the existing structure that still is situated in the northwest corner of the lot which now seems to be officially owned by the neighbouring Lot 210 owner Archibald Gray (Map 5).

1.3.5.4 Lots 212 - 216, Geographic Township of Stamford

Lot 212 is depicted on the 1797 Augustus Jones map as Lot 7 and is owned in its entirety by Robert McKinley (Map 3). A review of the 1862 Tremaine map reveals that Lot 212 was then owned in its entirety by D. W. Metler. The north one-quarter of Lot 212 has been subdivided by this time and it appears that a possible structure is situated in the northwest corner of the lot; this however still retains the Metler name (Map 4). By 1876 Lot 212 has changed ownership once more, with James Dell listed on the larger south portion of the lot and the previously severed north one-quarter owned by Henry DeWitt. The previously indicated structure in the north part of Lot 212 is no longer present on the 1876 Historic Atlas map, it has been replaced by a structure located on the north side of Chippawa Creek Road on the larger portion of the lot owned by James Dell (Map 5).

Lots 213-216 are depicted on the 1797 Augustus Jones map as Lots 6-3 owned by John McEwan (Map 3). A review of the 1862 Tremaine map reveals that by this time the four lots have been sold individually and partially subdivided as follows; Lot 213 is divided in half north to south, the west half is owned by Peter DeWitt and the east half is owned by Henry DeWitt, Lot 214 is owned by Thomas C. Street, Lot 215 is owned by James Anderson, and Lot 216 is owned by John McClive. The only structure illustrated on the 1862 map resides within Lot 216 along the west extent and north of Chippawa Creek Road. (Map 4). By 1876 Lots 213-216 remain unchanged in their general layout, however ownership and titles have shifted slightly, and recognized infrastructure and landmarks have grown. The 1876 map indicates that an additional five structures have been built and three orchards have been added to these lots. Lots 213 and 214 remain in the hands of Peter and Henry DeWitt, however there is an additional structure on Peter's half of the lot on the south side of Chippawa Creek Road, and an orchard is illustrated on the southern portion of Henry's lot as well as the addition of two structures, one on either side of Chippawa Creek Road. Lot 215 remains owned by James Anderson, and the map now indicates that he has since built a structure and planted an orchard on the south side of Chippawa Creek Road along the banks of the Welland River. Lot 216 has remained in the McClive family, although ownership has now been transferred to Robert McClive and an additional structure and a new orchard now appears south of Chippawa Creek Road in addition to the existing structure on the north side of Chippawa Creek Road (Map 5).

1.3.5.5 Broken Front Lots 5-10, Geographic Township of Willoughby

The orientation and overall layout of the lots and broken front lots within Willoughby Township, as per the 1795 Augustus Jones map, appear to have remained unchanged throughout the existence of Willoughby Township and remain in the same numeration and orientation as they are today. The 1795 map does not specify any landowners on any of the broken front lots within the Project Area. Either the Crown Patents for these lots were simply not yet awarded or granted to individuals due to the early date of the map, or they had previously been awarded/granted but not yet claimed by the individuals and thus remain blank on the map (Map 3).

A review of the 1862 Tremaine map reveals that all of Lot 6 is owned by K. McKenzie, while the majority of Lot 5 is owned by J. Macklem. No structures are illustrated on either Lot. By 1876 the majority of Lot 6 is owned by John Orchard, with a structure and orchard being added to the lot adjacent to the Welland River. A small portion of the south half of Lot 6 is owned by William King. The majority of Lot 5 is owned at this time by Frerick Dell, with a structure illustrated adjacent to the Welland River. The southeast corner of Lot 5 is owned by William McKeown.

A review of the 1862 Tremaine map reveals that all of Lot 7 as well as the north two-thirds of Lot 10 are part of the Estate of W. Miller. All of Lot 8 and the south one-third of Lot 10 is listed as being owned by H. Dell. One structure is shown to exist within Lot 8, owned by H. Dell, and bears the title E.M.C.; a review of the Canadian census records from 1861 reveals that the Dell families from Willoughby Township were indeed members of the Evangelical Methodist Church (LAC 2019). No structures are identified on Lot 7. Lot 9 does not have any landowners specified on the 1862 map. Either the Crown Patents for this lot was simply not yet awarded or granted or they had previously been awarded/granted but not yet claimed by the individuals and thus remain blank on the map. No structures are identified on Lot 9 (Map 4). By 1876 land ownership on Lots 5-10 had been passed to the next generation or sold to new landowners. A review of the 1876 map indicates Henry DeWitt owns most of Lot 7 and the east half of Lot 8, with William King owning a small portion of the southeast corner of Lot 7. Edward Dell is the listed owner of the west half of Lot 8 as well as the south half of both Lots 9 and 10. James Malone is listed as the owner of the north half of both Lots 9 and 10. It is very apparent that local business and farming practices have flourished in Willoughby Township just as they had during the middle of the 19th century on the north side of the Welland River in Stamford Township. The properties owned by Edward Dell experienced similar growth and the 1876 map now indicates an additional structure with accompanying orchard along the western extent of Lot 8. The south half of Lot 9, owned by Edward Dell, does not have any structures identified though the south half of Lot 10 indicates a new structure. The Evangelical Methodist Church seen in the 1862 Tremaine map remains visible in Lot 8 and has since had a cemetery added directly north of the church and is marked by a lone crucifix on the map. The north half of both Lots 9 and 10 indicate orchards with a accompanying structure on Lot 10 (Map 6).

1.3.5.6 Broken Front Lots 5 and 6, Geographic Township of Crowland

A review of the 1862 Tremaine map reveals that the east half of Lot 5 is owned by J. Young. The west half of Lot 5 and the east half of Lot 6 are owned by John Steinhoff, while the west half of Lot 6 is owned by William Stinhoff. No structures are illustrated on either Lot. By 1876 Lot 5 is owned by Jacob Young, William Lundy and John Biggar; structure and orchards are illustrated on land owned by Jacob Young and John Biggar, adjacent to the Welland River. In 1876 the majority of Lot 6 is owned by John Biggar, with a structure illustrated adjacent to the Welland River. The southwest corner of Lot 6 is owned by A. Flenner.

1.4 Archaeological Context

1.4.1 Existing Conditions

The Project Area consists of ten individual Sites of Interest that encompasses a total of 371.65 ha situated along the banks of the Welland River and other nearby areas in the City of Niagara Falls. The Project Area is bounded by Garner Road to the west, and to the east approximately 675 m west of the intersection of Stanley Avenue and Lyons Creek Road, and south to north from Reixinger Road to Oakwood Drive south of the Queen Elizabeth Way (Map 1, Map 2).

The closest body of water is the Welland River (historically known as Chippawa Creek), which directly abuts the majority of the ten Sites of Interest within the overall Project Area and flows directly into the Niagara River 3.75 km northeast of Site 10 of the Project Area. (Map 1, Map 2).

1.4.2 Physiography

The Project Area is located within the Haldimand Clay Plain physiographic region of southern Ontario. The Haldimand Clay Plain is a series of parallel belts, which lie between the Niagara Escarpment and Lake Erie, and occupies all of the Niagara Peninsula except for the fruit belt below the escarpment. Although it was once

completely submerged in Lake Warren, the till is not all buried by stratified clay and generally comes to the surface on the low morainic ridges in the north. The soils of this region are particularly known for their heavy texture and poor drainage (Chapman and Putnam 1984).

Soil texture can be an important determinant of past settlement, usually in combination with other factors, such as topography. The Project Area consists primarily of varied clay soil types and varied alluvium deposits in floodplain areas and along the edges of the Welland River. Table 3 shows the breakdown of soil types present in each of the ten Sites of Interest and lists the generalized drainage and topographic characteristics for each Site of Interest based on soil types present (Ministry of Agriculture and Food 1989).

Table 3: Soil types within the Project Area

Site of Interest Number	Soil Types	Parent Material	Description	Drainage	Topography
1	Niagara Clay and Alluvium	Mainly reddish-hued lacustrine heavy clay and variable floodplain deposits	Glayed Gray Brown Luvisol	Variable to Imperfect	Level to irregular gently sloping terrain
2	Niagara Clay and Alluvium	Mainly reddish-hued lacustrine heavy clay and variable floodplain deposits	Glayed Gray Brown Luvisol	Variable to Imperfect	Level to irregular gently sloping terrain
3	Niagara Clay and Alluvium	Mainly reddish-hued lacustrine heavy clay and variable floodplain deposits	Glayed Gray Brown Luvisol	Variable to Imperfect	Level to irregular gently sloping terrain
4	Not Mapped	No information	Area occupied by residential, industrial and recreational areas	Variable	--
5	Not Mapped	No information	Area occupied by residential, industrial and recreational areas	Variable	--
6	Lincoln Clay and Alluvium	Mainly lacustrine heavy clay and variable floodplain deposits	Orthic Humic Gleysol	Poor to variable	Smooth basin to level transitioning to smooth very gently sloping terrain
7	Ontario Soil and Welland Clay	Mainly reddish-hued lacustrine heavy clay	Ontario Soil – Brunisolic Gray Brown Luvisol, Welland Clay-	Poor in Welland Clay to moderately	Smooth basin to level transitioning to smooth gently sloping terrain

Site of Interest Number	Soil Types	Parent Material	Description	Drainage	Topography
			Orthic Humic Glysol	well in Ontario Soil	
8	Niagara Clay, Welland Clay, Cashel Soil, Ontario Soil and Alluvium	Niagara and Welland Clay, and Ontario Soil - Mainly reddish-hued lacustrine heavy clay and variable floodplain deposits Cashel Soil - 40-100 cm of reddish-hued lacustrine silty clay over heavy clay over clay loam till	Niagara Clay – Glayed Gray Brown Luvisol, Welland Clay- Orthic Humic Glysol, Cashel Clay - Orthic Gray Brown Luvisol, Ontario Soil – Brunisolic Gray Brown Luvisol	Variable to imperfect in Niagara Clay, poor in Welland Clay and moderately well in Ontario and Cashel soils	Smooth basin to level transitioning to both smooth and irregular gently sloping terrain
9	Niagara Clay, Welland Clay and Ontario Soil	Mainly reddish-hued lacustrine heavy clay	Niagara Clay – Glayed Gray Brown Luvisol, Welland Clay- Orthic Humic Glysol, Ontario Soil – Brunisolic Gray Brown Luvisol	Poor to variable in Welland and Niagara Clay, moderately well in Ontario Soil	Smooth basin to level terrain
10	Niagara Clay, Welland Clay, Cashel Soil, Ontario Soil and Alluvium	Niagara and Welland Clay, and Ontario Soil - Mainly reddish-hued lacustrine heavy clay and variable floodplain deposits Cashel Soil - 40-100 cm of reddish-hued lacustrine silty clay over heavy clay over clay loam till	Niagara Clay – Glayed Gray Brown Luvisol, Welland Clay- Orthic Humic Glysol, Cashel Clay - Orthic Gray Brown Luvisol, Ontario Soil – Brunisolic Gray Brown Luvisol	Variable to imperfect in Niagara Clay, poor in Welland Clay and moderately well in Ontario and Cashel soils	Smooth basin to level transitioning to both smooth and irregular gently sloping terrain

'--' denotes information was not available on 1989 Land Survey Maps.

These collective soil types would have supported past human settlement and various forms of land use, as there are vast differences in suitability based on terrain and drainage. In general, the areas containing Niagara and Lincoln Clays had imperfect or variable drainage and are capable of sustaining hardier crops such as corn and winter wheat; areas comprised of Cashel and Ontario Soils are moderately well drained and are perfectly suited for most agricultural crops, while those areas comprised of Welland Clay or Alluvium deposits (i.e. in floodplains or along the banks of the Welland River) exhibit either poor drainage or are well drained but prone to seasonal flooding and are therefore reserved for pasture land or have been historically abandoned agriculturally (Ministry of Agriculture and Food 1989). The topography of the Project Area varies depending on proximity to the Welland River, and averages 175 m at surface level (asl), with a maximum elevation of approximately 215 m asl and minimum elevation of 110 m asl.

Potable water is an important resource necessary for any extended human occupation or settlement. As water sources have remained relatively stable in Ontario since post-glacial times, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Hydrological features such as primary water sources (i.e. lakes, rivers, creeks, streams) and secondary water sources (i.e. intermittent streams and creeks, springs, marshes, swamps) would have helped supply plant and food resources to the surrounding area. As per MHSTCI evaluation criteria (2011), lands within 300 m of a water source are deemed to have archaeological potential. The Welland River (historically known as Chippawa Creek) is the nearest primary water source and flows through the middle of the Project Area. The Welland River flows east beyond the eastern limit of the Project Area and joins the main body of the Niagara River, approximately 3.75 km northeast of Site of Interest¹⁰ (Map 1, Map 2). Additionally, there is a modified section of a tributary of the Welland River called Hydro Canal that divided the Project Area north to south just east of Sites of Interest 4 and 5. Water sources would have provided potable water, plant and food resources, as well as transportation routes which would have supported past human settlement of the area.

1.4.3 Registered Archaeological Sites

To compile an inventory of archaeological resources, the registered archaeological site records maintained by the MHSTCI in the Ontario Archaeological Site Database (OASD) were consulted. At the time of writing this report, the OASD indicated that there is a total of 73 registered archaeological sites within 1 km of the Project Area (Table 4) and that a total of 9 of these sites are located within the Project Area. However, through additional background research a 10th registered site (AgGs-387), which was not listed within the OASD at the time of writing this report, was identified within the Project Area. The 10 sites within the Project Area are summarized below.

Table 4: Registered archaeological sites within 1 km of the Project Area

Borden Number	Name	Time Period	Cultural Affiliation	Site Type	Affinities	Current Development Review Status
Registered Archaeological Sites within the Project Area						
AgGs-47	Crawford 1	Middle Archaic through to Post-Contact	--	Camp/ Campsite	Indigenous/ Euro- Canadian	-- (Within Site 8)

Borden Number	Name	Time Period	Cultural Affiliation	Site Type	Affinities	Current Development Review Status
AgGs-48	Crawford 2	Middle Archaic through to Post-Contact	--	Camp/ Campsite	Indigenous/ Euro- Canadian	Further CHIV (Within Site 8)
AgGs-49	Crawford 3	Middle Archaic through to Early Woodland	--	Camp/ Campsite	Indigenous	-- (Within Site 10)
AgGs-50	Feren	Middle Archaic through to Post-Contact	Laurentian	Fishing; Homestead; Hunting	Indigenous/ Euro- Canadian	Further CHIV (Within Site 8)
AgGs-51	Thompsons Creek	Paleo-Indian, Late; Woodland, Early	--	Hunting	Indigenous	-- (Within Site 3)
AgGs-379	--		--	Camp/ Campsite	Indigenous	Further CHIV (Within Site 8)
AgGs-380	--	--	--	Camp/ Campsite	Indigenous	Further CHIV (Within Site 8)
AgGs-381	--	--	--	Camp/ Campsite	Indigenous	Further CHIV (Within Site 8)
AgGs-387	--	--	--	Homestead	Euro- Canadian	No Further CHIV (Within Site 6)
AgGs-399	Parkway Site	Pre-Contact	--	Camp/ Campsite	Indigenous	No Further CHIV (Within Site 6)
Registered Archaeological Sites within 1 km of the Project Area						
AgGs-4	Feren	--	--	--	--	--
AgGs-5	Walters	--	--	--	--	--
AgGs-14	Marian White 991	Late Archaic	Lamoka	Camp/ Campsite	Indigenous	--
AgGs-15	MIA 8469	--	--	--	--	--

Borden Number	Name	Time Period	Cultural Affiliation	Site Type	Affinities	Current Development Review Status
AgGs-16	MIA 8470	--	--	--	--	--
AgGs-17	MIA 8471	--	--	--	--	--
AgGs-18	MIA 8472	--	--	--	--	--
AgGs-19	MIA 8473	Late Archaic	--	Camp/ Campsite	Indigenous	--
AgGs-20	MIA 8474	Late Archaic	Lamoka	Camp/ Campsite	Indigenous	--
AgGs-21	MIA 8475	--	--	--	--	--
AgGs-22	MIA 8476	--	--	--	--	--
AgGs-23	MIA 8477	--	--	--	--	--
AgGs-24	MIA 8478	--	--	--	--	--
AgGs-25	MIA 8479	--	--	--	--	--
AgGs-26	MIA 8480	--	--	--	--	--
AgGs-27	MIA 8481	Late Archaic	--	Camp/ Campsite	Indigenous	--
AgGs-28	MIA 8482	--	--	--	--	--
AgGs-33	MIA 8483	Post-Contact	--	House	Euro- Canadian	--
AgGs-34	MIA 8484	Early Woodland	--	Findspot	Indigenous	--
AgGs-35	MIA 8485	--	--	--	--	--
AgGs-84	Stranges	Other	--	Camp/ Campsite	--	--
AgGs-85	TCPL 90-5	Other	--	Findspot	--	--
AgGs-86	Cebrynski- Kneller	Late Archaic	--	Camp/ Campsite	Indigenous	--

Borden Number	Name	Time Period	Cultural Affiliation	Site Type	Affinities	Current Development Review Status
AgGs-87	TCPL 90-7	Other	--	Findspot	--	--
AgGs-88	TCPL 90-8	Early Archaic	--	Camp/ Campsite	Indigenous	--
AgGs-89	TCPL 90-9	Other	--	Other: findspot_	--	--
AgGs-90	Walter	Archaic, Late	--	Camp/ Campsite	Indigenous	--
AgGs-93	TCPL 90-13	Other	--	Findspot	--	--
AgGs-225	--	Pre-Contact	--	Unknown	Indigenous	--
AgGs-226	--	Pre-Contact	--	Unknown	Indigenous	--
AgGs-227	--	Pre-Contact	--	Unknown	Indigenous	--
AgGs-228	Grassy Brook Camp I	Pre-Contact	--	Camp/ Campsite	Indigenous	--
AgGs-229	James Macklem	Pre-Contact; Post- Contact	--	Homestead	Indigenous; Euro- Canadian	--
AgGs-230	Grassy Brook Camp II	Pre-Contact	--	Unknown	Indigenous	--
AgGs-231	John Steinhoff	Post-Contact; Pre- Contact	--	homestead	Indigenous; Euro- Canadian	--
AgGs-232	Welland River Camp	Pre-Contact	--	Other: camp/campsite	Indigenous	No Further CHIV
AgGs-233	Alexander Simpson	Post-Contact; Pre- Contact	--	homestead	Indigenous; Euro- Canadian	--
AgGs-235	Cabeiroi Camp I	Pre-Contact	--	Unknown	Indigenous	--

Borden Number	Name	Time Period	Cultural Affiliation	Site Type	Affinities	Current Development Review Status
AgGs-236	Cabeiroi Camp 2	Pre-Contact	--	Other: camp/campsite ; scatter	Indigenous	--
AgGs-237	--	Post-Contact	--	Unknown	Euro-Canadian	--
AgGs-238	Welland Drain	Pre-Contact	--	Other: camp/campsite	Indigenous	--
AgGS-277	--	Other	--	Findspot	--	No Further CHIV
AgGs-278	--	Other	--	Findspot	--	No Further CHIV
AgGs-279	--	Early Woodland	--	Findspot	Indigenous	No Further CHIV
AgGs-280	--	Post-Contact	Other	Homestead	Euro-Canadian	--
AgGs-281	--	Other	--	Findspot	--	No Further CHIV
AgGs-288	--	Early Archaic	--	Scatter	Indigenous	No Further CHIV
AgGs-289	--	Pre-Contact	--	Scatter	Indigenous	No Further CHIV
AgGs-290	--	Late Archaic	--	Scatter	Indigenous	Further CHIV
AgGs-291	--	Middle Archaic	--	Scatter	Indigenous	Further CHIV
AgGs-292	--	Late Woodland	--	Findspot	Indigenous	No Further CHIV
AgGs-293	P23	Archaic, Early	--	Findspot and Stg. 3/Unknown	Indigenous	--

Borden Number	Name	Time Period	Cultural Affiliation	Site Type	Affinities	Current Development Review Status
AgGs-294	--	--	--	--	--	--
AgGs-295	--	Late Woodland	--	Findspot	Indigenous	No Further CHIV
AgGs-296	--	Early Archaic	Kirk-Nettling	Camp/Campsite	Indigenous	No Further CHIV
AgGs-297	--	Early Archaic	--	Findspot	Indigenous	Further CHIV
AgGs-298	--	Early Archaic	Kirk-Nettling	Camp/Campsite	Indigenous	No Further CHIV
AgGs-299	--	--	--	--	--	--
AgGs-300	--	Middle Archaic	--	Findspot	Indigenous	No Further CHIV
AgGs-301	--	Late Archaic	--	Findspot	Indigenous	No Further CHIV
AgGs-302	--	Early Archaic	--	Findspot	Indigenous	No Further CHIV
AgGs-303	--	Late Archaic	--	Findspot	Indigenous	No Further CHIV
AgGs-375	--	Post-Contact	Other	Farmstead	Euro-Canadian	No Further CHIV
AgGs-395		Post-Contact	Other	Unknown	Euro-Canadian	Further CHIV

'--' denotes information was not available on the OASD

AgGs-47 (Crawford 1) is a multi-component site identified by William Parkins in 1969. The site is located on the south bank of the Welland River. Cultural material, including chipping detritus, was recovered along the south bank of the Welland River, extending 30 m beyond the river. Remains of a 19th century house were also discovered just west of the lithic scatter. It is noted in the site record form that Paul Lennox excavated "a few square meters" of AgGs-47 in 1977 and all materials collected from the site by Parkins and Lennox were donated to McMaster University. AgGs-47 is described as having a long occupation history stretching from the Middle Archaic through to the Post-Contact era. The site is recognized as a camp/campsite of both Indigenous and Euro-Canadian affinity. The current status of the site is unknown, but it is presumed no further archaeological

work has been conducted since the 1977 excavations as there are no records of further stages of work. There are no licensee recommendations associated with the site form nor any corresponding reports. AgGs-47 is located at the northeastern corner of Site 8, immediately adjacent to Site 10.

AgGs-48 (Crawford 2) was originally identified by William Parkins in 1976 and re-identified and assessed during a pedestrian survey by Mayer Archaeological Consultants (MAC) in 2014. AgGs-48 is described in MACs 2015 Stage 1-2 archaeological assessment report under PIF no. P066-0210-2014 as being a large plough disturbed multi-component lithic scatter consisting of approximately 1500 artifacts covering a 250 by 100 m area. The majority of the artifact assemblage is comprised of chipping detritus though eight tools were collected including three projectile points. MAC indicate in their report that it is clearly evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 recommendations and therefore recommend a Stage 3 strategy consisting of a Controlled surface pick-up (CSP) followed by hand excavation as per Section 3.2.3, Table 3.1, Standards 5-7. AgGs-48 is located in the northwestern portion of Site 8, approximately 30 m south of the Welland River.

AgGs-49 (Crawford 3) is a pre-contact camp/campsite identified by William Parkins in 1984. The site is located right at the edge of the Welland River and to a lesser extent in the shallow edge of the river. In the sand lag deposits of the shallow water concentrations of chipping detritus, tools and animal bone were recovered dating from the Middle Archaic to Early Woodland periods. Parkins notes in the site record form that it is likely that the area recorded represents one or more sites which may well be undisturbed or disturbed only to the extent that their edges have been slightly eroded. The current status of the site is unknown, but it is presumed no further archaeological work has been conducted as there are no records of further stages of work. There are no licensee recommendations associated with the site form nor any corresponding reports. AgGs-49 is located in the northwestern portion of Site 10, immediately adjacent to the south bank of the Welland River.

AgGs-50 (Feren) is a multi-component Pre-Contact fishing and hunting site originally identified by William Parkins in 1970 and re-identified and assessed via pedestrian survey by Mayer Archaeological Consultants (MAC) in 2014. AgGs-50 is described in MACs Stage 1-2 report under PIF no. P066-0210-2014 as being a large plough disturbed lithic scatter consisting of approximately 300 artifacts covering a 140 by 100 m area. Artifacts recovered include chipping detritus, knives, scrapers, gravers, netsinkers and seventeenth century trade beads. MAC indicate in their report that it is clearly evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 recommendations and therefore recommend a Stage 3 strategy consisting of a Controlled surface pick-up (CSP) followed by hand excavation as per Section 3.2.3, Table 3.1, Standards 5-7. AgGs-50 is located in the northwestern portion of Site 8, approximately 100 m southwest of the AgGs-48 and 130 m south of the Welland River.

AgGs-51 (Thompson Creek) is a multi-component Pre-Contact hunting site identified by William Parkins in 1973. The site is described in the site record form as being contained in the sand lag deposit along the shoreline and within shallow water. The site consists of projectile points, scrapers, a drill point and a preform. The site is described as having overlapping periods of occupation beginning in the Late Paleo-Indian and the Early Woodland periods. The current status of the site is unknown, but it is presumed no further archaeological work has been conducted as there are no records of further stages of work. There are no licensee recommendations associated with the site form nor any corresponding reports. AgGs-51 is located in the southwestern corner of Site 3, immediately adjacent to the north bank of the Welland River.

AgGs-379 is a site that was discovered during pedestrian survey by Mayer Archaeological Consultants (MAC) in 2014. AgGs-379 is described in MACs Stage 1-2 report under PIF no. P066-0210-2014 as being a small plough

disturbed lithic scatter consisting of 46 artifacts recovered from a 40 by 31 m area. MAC indicate in their report that it is not clearly evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 recommendations and therefore recommend a Stage 3 strategy consisting of a Controlled surface pick-up (CSP) followed by hand excavation as per Section 3.2.3, Table 3.1, Standard 1 and 2. AgGs-379 is located in the northwestern portion of Site 8, approximately 67 m southwest of the AgGs-48 and 55 m northeast of AgGs-50.

AgGs-380 is a site that was discovered during pedestrian survey by Mayer Archaeological Consultants (MAC) in 2014. AgGs-380 is described in MACs Stage 1-2 report under PIF no. P066-0210-2014 as being a small plough disturbed lithic scatter consisting of 16 artifacts recovered from a 22 by 23 m area. MAC indicate in their report that it is not clearly evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 recommendations and therefore recommend a Stage 3 strategy consisting of a Controlled surface pick-up (CSP) followed by hand excavation as per Section 3.2.3, Table 3.1, Standard 1 and 2. AgGs-380 is located in the northwestern portion of Site 8, approximately 220 m south of AgGs-50 and 350 m south of the Welland River.

AgGs-381 is a site that was discovered during pedestrian survey by Mayer Archaeological Consultants (MAC) in 2014. AgGs-381 is described in MACs Stage 1-2 report under PIF no. P066-0210-2014 as being a small plough disturbed lithic scatter consisting of 13 artifacts recovered from a 5 by 8 m area. MAC indicate in their report that it is not clearly evident that the level of cultural heritage value or interest will result in a recommendation to proceed to Stage 4 recommendations and therefore recommend a Stage 3 strategy consisting of a Controlled surface pick-up (CSP) followed by hand excavation as per Section 3.2.3, Table 3.1, Standard 1 and 2. AgGs-381 is located in the northwestern portion of Site 8, approximately 56 m west of AgGs-380.

Though the OASD does not list AgGs-387 as being located within the Project Area and has it mapped as being near Cayuga through reading Amec Foster Wheelers 2017 report under PIF no. P141-0245-2016 it is evident that AgGs-387 is located within Site 6 of the Project Area. The site is described as a large Euro-Canadian site dating from the late 19th to early 20th century. The site which was subject to Stage 3 assessment and has been determined to have no further cultural heritage value or interest.

AgGs-399 (Parkway Site) is a Pre-Contact camp/campsite that has been subject to Stage 4 block excavation by Amec Foster Wheeler in 2017 under PIF no. P038-0922-2017. The Stage 4 mitigation of AgGs-399 resulted in the recovery of 28 Pre-Contact Indigenous artifacts. The entire assemblage consists of one formal lithic tool, one informal lithic tool, and 26 pieces of lithic debitage, manufactured on Onondaga chert. The Stage 4 mitigation of AgGs-399 resulted in the documentation of a campsite. Activities appear to have been limited to tool maintenance and re-sharpening, with some minor resource processing as evidenced by the recovered lithic wedge. Amec Foster Wheeler note that given the saturated condition of the present-day landscape, it is likely the study area was frequently flooded, or formed part of a larger swamp during Pre-Contact times. The site is notable for the recovery of a stone pendant during the Stage 3 assessment. AgGs-399 has been determined to have no further cultural heritage value or interest. AgGs-399 is located within Site 6 of the Project Area.

1.4.4 Previous Archaeological Assessments

At the time of writing this report, inquiry with the MHSTCI, a search of all reports on PastPortal corresponding to the County, Township and Region, and a search of Golder's corporate library identified a total of seven previous archaeological assessments that were undertaken within 50 m of the Project Area (Maps 7, 8). To the best of our knowledge, no additional archaeological assessments have been completed within 50 m of the Project Area.

Table 5: Previous Archaeological Assessments Adjacent to or Within Project Area

Report	Distance to Project Area	Development Status
Stage 1 Background Study and Stage 2 Archaeological Assessment for Parcels 11 and 12, Part of Lots 209 & 210, Plan 59R-13115, Geographic Township of Stamford, Counties of Lincoln and Welland, Now in the City of Niagara Falls (AS&G Archaeological Consulting 2017)	Adjacent to Site of Interest 3	No further assessment recommended
Stage 1 & 2 Archaeological Assessment, Thundering Waters Secondary Plan, Lot 214 and Part Lots 195, 196, 197, 212, 213, 215 and 216, Township of Stamford, County of Welland, Now Located in the City of Niagara Falls, Ontario (Amec Foster Wheeler 2016)	Within Sites of Interest 6, 7, 9	Stage 3 assessment recommended for one possible 19th century historic site, no further assessment recommended for balance of property
Stage 4 archaeological mitigation of the Parkway Site (AgGs-399), a Pre-Contact Aboriginal archaeological site located on part of Lot 15, Broken Front Concession-Niagara River, City of Niagara Falls, Regional Municipality of Niagara, historically part of the Geographic Township of Willoughby, Welland County (Amec Foster Wheeler 2017a) **Stage 1-2 and Stage 3 for this site also conducted by Amec Foster Wheeler	Within Site of Interest 6	No further assessment recommended
Stage 3 Site-Specific Archaeological Assessment of Site AgGs-387, Part of Lot 212, Township of Stamford, County of Welland, Now Located in the City of Niagara Falls, Ontario (Amec Foster Wheeler 2017b)	Within Site of Interest 6	No further assessment recommended
Archaeological Assessment (Stages 1 & 2) 7047 Rexinger Road, Part of Lots 8, 9 and 10, Broken Front Concession, Formerly in the Township of Willoughby, City of Niagara Falls, R.M. of Niagara, Ontario (Mayer Archaeological Consultants 2015)	Within Site of Interest 8	Stage 3 assessment recommended for five pre-contact Indigenous sites (AgGs-48, AgGs-50, AgGs-379, AgGs-380, AgGs-381) within northern half of property. No further assessment recommended for

Report	Distance to Project Area	Development Status
		western arm or southern half of property.
Stage 1 Archaeological Assessment, Proposed Residential Development – Thundering Waters Golf Course, 6000 Marineland Parkway, Regional Municipality of Niagara, City of Niagara Falls, Ontario (Golder 2018)	Within 50 m of Site of Interest 9	Stage 2 recommended
Stage 2 Archaeological Assessment, Proposed Residential Development – Thundering Waters Golf Course, 6000 Marineland Parkway, Regional Municipality of Niagara, City of Niagara Falls, Ontario (Golder 2019)	Within 50 m of Site of Interest 9	No further assessment recommended

1.4.5 Cultural Heritage Resources

According to the City of Niagara Falls (2019a) heritage properties website, only one heritage property is recognized within the Project Area. The Timothy Hixon House, located at 9030 Chippawa Creek Road, is identified as having been constructed in 1870 but may have been originally built much earlier in the Gothic style, perhaps as early as 1833, although several additions have been added to the house. The only historic plaque within 1 km of the Project Area is located near Niagara Parkway and Mechanic Street and marks the former location of Fort Chippawa:

The fortifications which stood on this site were built in 1791 to protect the southern terminus of the Niagara Portage road and served as forwarding depot for government supplies. Known also as Ft. Welland, the main structure consisted of a log block house surrounded by a stockade. During the War of 1812, several bloody engagements were fought in this vicinity including the bitterly contested Battle of Chippawa July 5, 1814 and possession of the fort frequently changed hands. A barracks storehouse, officers' quarter and earth works were added in 1814-15 but shortly thereafter Ft. Chippawa was abandoned and fell into decay. Erected by the Ontario Archeological and Historic Sites Board (Niagara Parks 2019)*

1.4.6 Cemeteries

A review of the City of Niagara Falls website identified one early family cemetery within 300 m of the Project Area. The Dell Family Cemetery (also referred to as the Dell Cemetery) is located directly south and adjacent to Site of Interest 8 of the Project Area:

Henry, son of Basnett Jr. & Ann (DeFields) Dell petitioned for land as a Loyalist soldier in 1796. In 1851 Henry deeded one acre of land to the Methodist Episcopal church, to be known as the Dell Chapel & Cemetery. Several Dell family members are buried here as well as other pioneer families, including Hexamer, Morley and Riexinger to name a few. The City acquired ownership in 1973. (City of Niagara Falls 2021)

A review of the 1862 Tremaine map reveals that all of Lot 8 and the south one-third of Lot 10 is listed as being owned by H. Dell. One structure is shown to exist within Lot 8, owned by H. Dell, and bears the title E.M.C.; a

review of the Canadian census records from 1861 reveals that the Dell families from Willoughby Township were indeed members of the Evangelical Methodist Church (LAC 2019). The Evangelical Methodist Church seen in the 1862 Tremaine map remains visible in Lot 8 on 1876 mapping and has since had a cemetery added directly north of the church and is marked by a lone crucifix on the 1876 map.

Despite not being marked on the 1861 map, the Dell cemetery was established in 1851; in fact, the first burial is noted to have occurred two years prior, in 1849 (Mary Dell, wife of Robert Dell) (Niagara Falls 2021). Land registry records confirm one acre of Lot 8 was transferred in 1851 by Henry Dell to Jonathan Dell, Thomas Dell, Daniel Lambert, William Dell and Peter Dell, Trustees of Methodist Episcopal Church, know as Dell's Chapel. The applicable land registry entry is provided below (Figure 1).

<u>Township Registry</u>							
9	A 3043, B 71, 123	13 May 1851	14 May 1851	Henry Dell, Senr	Jonathan Dell, Thomas Dell, Daniel Lambert, and William Dell, and Peter Dell, Trustees of Methodist Episcopal Church, known as Dell's Chapel,	1 acre, known as part of W. 1/2, commencing at S. E. corner of West 1/2, 7/16.	L. 5.

Figure 1: Land Registry Record, 1851

A review of available sources provides no date for the last burial at Dell's Cemetery. The Dell cemetery is classified as an inactive cemetery and is currently owned by the City of Niagara Falls (BAO 2021).

As per Section 1.3.1 of the MHSTCI (2011), areas of early Euro-Canadian settlements, such as, early cemeteries are considered features of archaeological potential. Historical records have demonstrated the land deeded to Dell's Chapel for a cemetery in 1851 was one acre; the mapped extent of the cemetery property today remains one acre. Given this it could be concluded that burials do not extend beyond the current property of the cemetery. However, additional, detailed background research of the cemeteries' history and legal boundaries must be undertaken to determine if there is potential for burials to be located within the Project Area. Recommendations addressing additional research to be carried out regarding the Dell Cemetery adjacent to the Project Area are provided in Section 4.0.

2.0 FIELD METHODS

2.1 Desktop Study

This Stage 1 archaeological assessment involved a desktop background research and assessment of archaeological potential employing the criteria outlined in MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011). Areas identified as previously disturbed will need to be confirmed through a property inspection.

3.0 ANALYSIS AND CONCLUSION

Archaeological potential is established by determining whether any features or characteristics indicating potential are located on or in the vicinity of a Project Area. Features and characteristics that indicate a higher potential for archaeological resources are defined within Section 1.3.1 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011:17-18) and include:

- Previously identified archaeological sites;
- Water sources:
 - 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, shorelines of drained lakes or marshes, and cobble beaches);
 - Accessible or inaccessible shoreline (e.g., high bluffs, swamps or marsh fields by the edge of a lake, sandbars stretching into marsh);
- Elevated topography (eskers, drumlins, large knolls, plateaux);
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground;
- Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases;
- Resource areas including:
 - Food or medicinal plants;
 - Scarce raw minerals (e.g., quartz, copper, ochre or outcrops of chert);
 - Early Euro-Canadian industry (fur trade, logging, prospecting, mining);
- Areas of early Euro-Canadian settlement including:
 - Early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes);
 - Early wharf or dock complexes, pioneer churches and early cemeteries;
- Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes);
- Property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial or municipal historic landmark or site; and,
- Property that local histories or informants have identified with possible archaeological sites, historical events, activities or occupations.

Many of the above features of archaeological potential have a buffer assigned to them, extending the zone of archaeological potential beyond the physical feature. The following buffers are commonly accepted by the MHSTCI and specifically indicated in Section 1.4 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011:20-21).

- 300 m buffer: previously identified archaeological site; water sources; areas of early Euro-Canadian settlement; or locations identified through local knowledge or informants.
- 100 m buffer: early historical transportation route.

In the event no buffer is inherently present, potential is restricted to the physical limits or the feature: elevated topography, pockets of well-drained sandy soil, distinctive land formations, resources areas, listed or designated properties and landmark properties.

3.1 Potential for Indigenous Archaeological Resources

Potential for Indigenous archaeological sites is established by determining the likelihood that archaeological resources may be present in a Project Area. Archaeological potential criteria commonly used by the MHSTCI (2011) were applied to determine areas of archaeological potential within the Project Area. These variables include: distance to previously identified archaeological sites, distance to various types of water sources, drainage, soil type, glacial geomorphology, and the general topographic variability of the area.

In archaeological potential modelling, a distance to water criterion of 300 m is generally employed for water sources, including lakeshores, rivers, creeks, and swamps. The Welland River, a primary water source flows west to east, bisecting and paralleling the general Project Area and empties into the Niagara River approximately 3.75 km northeast. Water sources in the Project Area would have provided potable water, transportation as well as plant and food resources, which would have supported past human settlement of the area.

Soil texture can be an important determinant of past settlement, usually in combination with other factors, such as topography. The Project Area is located within the Haldimand Clay Plain physiographic region of southern Ontario. The soil within the Project Area is varied depending on the Site of Interest. A mixture of clay soil types with drainage ranging between poor/imperfect to moderately well-drained (Chapman and Putnam 1984; Ministry of Agriculture and Food 1989). In general, all these soil types would have supported past human settlement, although the more well-drained soils would have been suitable for growing an assortment of crops, while the poorly drained clays or alluvium deposits would have been reserved for hardier crops such as winter wheat and corn, or been reserved for pasture land and perhaps abandoned altogether for agriculture (Ministry of Agriculture and Food 1989). The topography of the Project Area varies depending on proximity to Chippawa Creek, and averages 175 m asl, with a maximum elevation of approximately 215 m asl and minimum elevation of 110 m asl.

Furthermore, the MHSTCI stipulates that areas within 300 m of previously identified archaeological sites to be of high archaeological potential. A review of the OASD maintained by the MHSTCI identified 73 known archaeological sites located within 1 km of the limits of the Project Area, 6 of which are located within the boundaries of the Project Area.

When the above noted archaeological potential criteria are applied to the Project Area, archaeological potential exists for the identification of pre-contact archaeological resources (Map 7, Map 9). These findings are consistent with mapping illustrating areas of archaeological potential on the Niagara Falls Heritage Master Plan (Carl Bray and Associates 2005, Mapping by ASI) (Map 9).

3.2 Potential for Euro-Canadian Archaeological Resources

The criteria used by the MHSTCI to determine potential for historic archaeological sites include the presence of: 1) particular, resource-specific features that would have attracted past subsistence or extractive uses; 2) areas of initial, non-Indigenous settlement; 3) early historic transportation routes; 4) previously identified archaeological sites; and 5) properties designated under the Ontario Heritage Act (MHSTCI 2011).

In addition to the Project Area being located in proximity to resource-specific features such as water sources and soil types conducive for past human settlement as stated above, the Project Area is located in proximity to numerous important historic Euro-Canadian settlements, and occupies a considerable amount of land that could potentially hold innumerable cultural heritage resources. A search of the Niagara Parks website yielded one historic plaque within 1 km of the Project Area. A search of the City of Niagara online heritage resource yielded the location of one identified heritage property within the Project Area, and the location of one early historic cemetery directly adjacent to the Project Area. Areas of early Euro-Canadian settlements (e.g., pioneer homesteads, isolated cabins, farmstead complexes, early wharf or dock complexes, pioneer churches, and early cemeteries), early historic transportation routes (e.g., trails, passes, roads, railways, portage routes), and properties that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations, are considered features of archaeological potential.

When the above noted archaeological potential criteria are applied to the Project Area, archaeological potential exists for the identification of historic Euro-Canadian archaeological resources (Map 7, Map 9). These findings are consistent with mapping illustrating areas of archaeological potential on the Niagara Falls Heritage Master Plan (Carl Bray and Associates 2005, Mapping by ASI) (Map 9).

3.3 Archaeological Integrity

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

Activities that are recognized to cause sufficient disturbance to remove archaeological potential include: quarrying, major landscaping involving grading below topsoil, building footprints, and infrastructure development. Activities including agricultural cultivation, gardening, minor grading, and landscaping do not necessarily remove archaeological potential (MHSTCI 2011:18). Identified areas of disturbances within the Project Area include all paved driveways, paved municipal roads, service roads, all areas of deep ditching, areas occupied by large industrial or commercial buildings and areas occupied by residential housing, not including the land around these structures that may retain archaeological potential. However, the areas of deep and extensive disturbances should only be considered as *likely* not requiring Stage 2 survey (Map 7, Map 8). A visual inspection is still required to provide on-site confirmation and documentation of the actual condition and exact extent of the disturbance.

4.0 RECOMMENDATIONS

Given the results and conclusions of the Stage 1 desktop archaeological assessment presented in this report, the following recommendations are provided:

- 1) Lands that have been previously subject to archaeological assessment(s) and cleared by the MHSTCI of further archaeological concern are recommended to be exempt from further assessment (Amec Foster Wheeler 2016, 2017a, 2017b). Within the Project Area this includes Site of Interest 6, Site of Interest 7, and Site of Interest 9 as shown in Map 7 and Map 8. The western portion of Site of Interest 8 has also been previously assessed; however, further work (Stage 3) has been recommended for sites that were identified. These recommendations are outlined below.
- 2) Five archaeological sites were previously identified in the western portion of Site of Interest 8 during a Stage 1-2 archaeological assessment and recommended to be subject to Stage 3 archaeological assessment prior to any impacts (Mayer Archaeological Consultants 2015). The sites include: AgGs-48 (Crawford 2), AgGs-50 (Feren), AgGs-379, AgGs-380 and AgGs-381. The Stage 3 assessments of these sites remain outstanding, and, as such, the original recommendations for these sites as outlined in Mayer Archaeological Consultant's Stage 1-2 report (2015) remain standings and should be followed prior to any anticipated impacts.
- 3) The remainder of the Project Area was determined to have archaeological potential for both Indigenous and Euro-Canadian archaeological resources and is recommended to be subjected to a Stage 2 archaeological assessment. It is recommended that areas of archaeological potential be subjected to test pit or pedestrian survey at 5 m intervals in accordance with Section 2.1.2 of the MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (2011). Within the Project Area this includes Sites of Interest 1, 2, 3, 4, 5, 8, and 10, as shown in Map 7 and Map 8. Of note is that Sites of Interest 3 and 10 and the unassessed eastern portion of Site of Interest 8 each contain known registered archaeological sites, including AgGs-47 (Crawford 1) in Site of Interest 8; AgGs-49 (Crawford 3) in Site of Interest 10; and, AgGs-51 in Site of Interest 3. These sites were identified in the late 1960s to mid-1980s, but to the best of our knowledge do not have corresponding reports that assess their Cultural Heritage Value or Interest (CHVI) or provide recommendations for further assessment. The status of these three sites is unknown, but it is presumed no further archaeological work has been conducted as there are no records of further stages of work. As such, the locations of the sites should be re-established through Stage 2 survey as a means to assess their Cultural Heritage Value or Interest (CHVI) and make recommendations for further assessment, if required.
- 4) Areas of previous disturbance were identified in Sites of Interest 1, 4, and 5 (Map 7 and Map 8). As no property inspections were completed as part of this Stage 1 archaeological assessment, on-site confirmation and documentation of the disturbance within these areas will need to be completed during Stage 2 archaeological assessment, as per *Section 1.4.1, Standard 1.f* and *Section 1.4.2* of the MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (2011).
- 5) The Dell Family Cemetery is located directly south and adjacent to, but not within Site of Interest 8. Prior to any invasive impacts within 20 m of the Dell Family Cemetery, including a Stage 2 archaeological assessment, detailed background research of the cemeteries' history and legal boundaries will need to be carried out to determine if there is potential for burials to be located within the Project Area. Detailed recommendations for Stage 2 and 3 archaeological assessment fieldwork will be proposed, based on this

research and the proposed location of the project, including the need for a Cemetery Investigation Authorization (CIA) issued by the Bereavement Authority of Ontario (BAO).

The MHSTCI is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries, as a condition of licensing in accordance with *Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18*. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological 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 Ontario 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.

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

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

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ontario Ministry of Consumer Services is also immediately notified.

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 licence.

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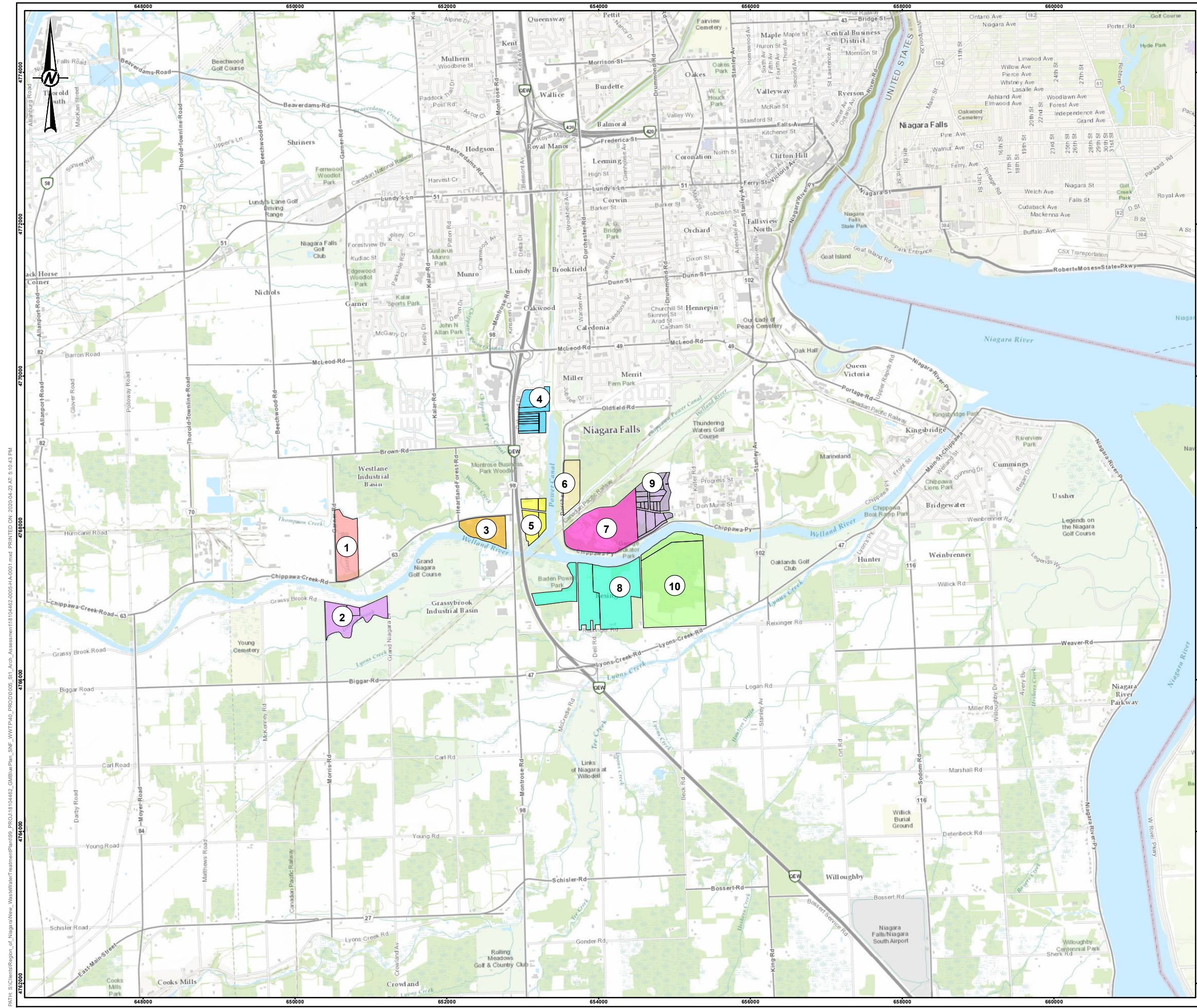
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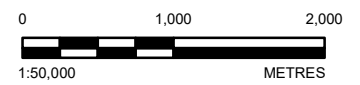
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7.0 MAPS

All figures follow on succeeding pages.



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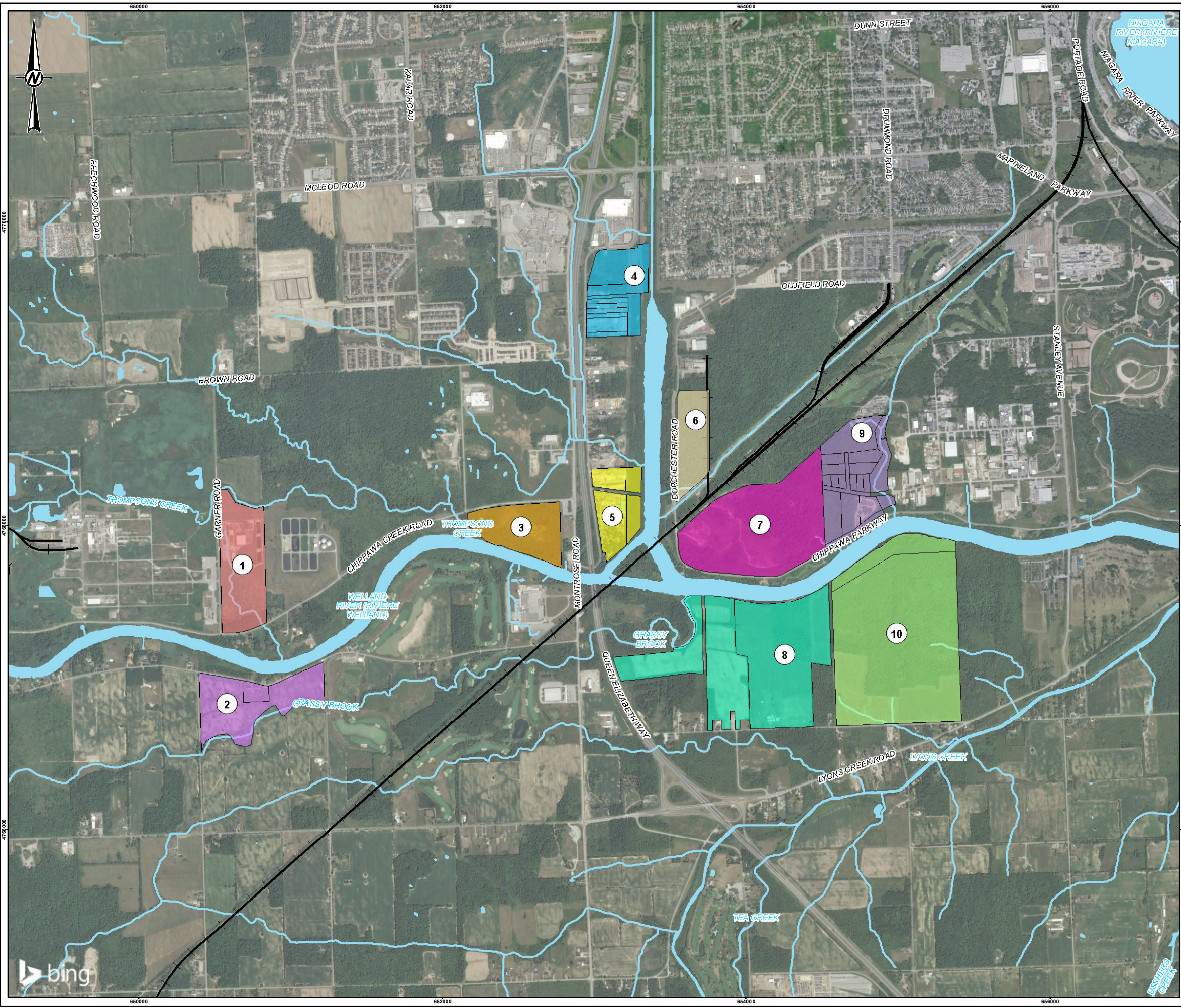
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 SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
 SCHEDULE C CLASS ENVIRONMENTAL ASSESSMENT**

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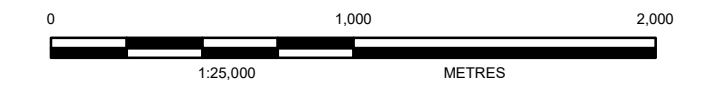
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- RAILWAY
- WATERCOURSE
- WATERBODY



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 SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
 SCHEDULE C CLASS ENVIRONMENTAL ASSESSMENT

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PROJECT

STAGE 1 ARCHAEOLOGY ASSESSMENT
SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
SCHEDULE C CLASS ENVIRONMENTAL ASSESSMENT

TITLE

INTERCONNECTED 1797 AUGUSTUS JONES "NIAGARA CHAIN RESERVE" MAP, STAMFORD TOWNSHIP NO. 2 AND 1795 AUGUSTUS JONES, WILLOUGHBY TOWNSHIP NO. 1 MAP

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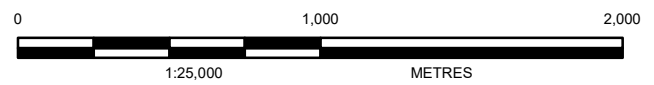
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SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
SCHEDULE C CLASS ENVIRONMENTAL ASSESSMENT

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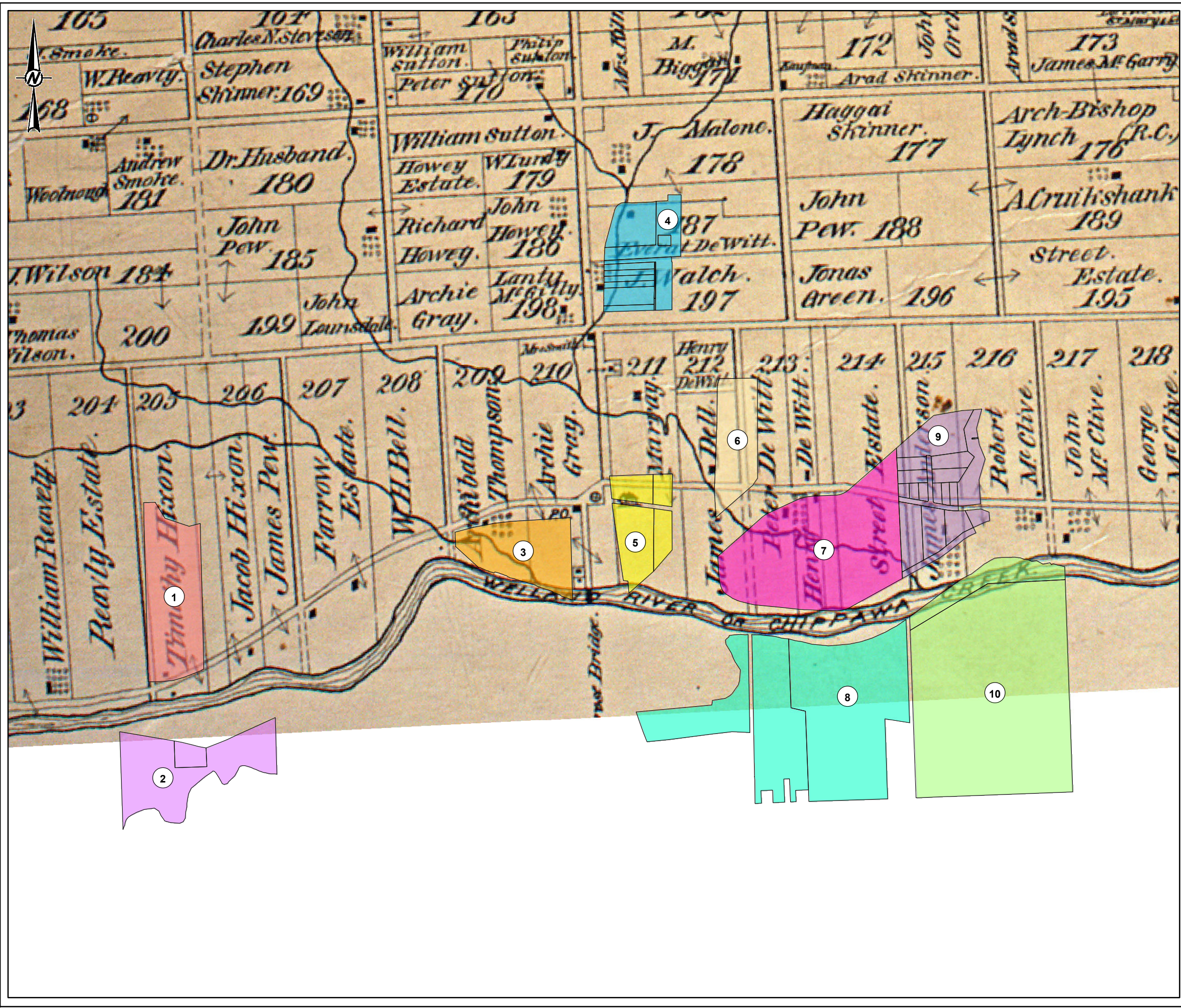
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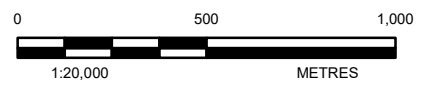
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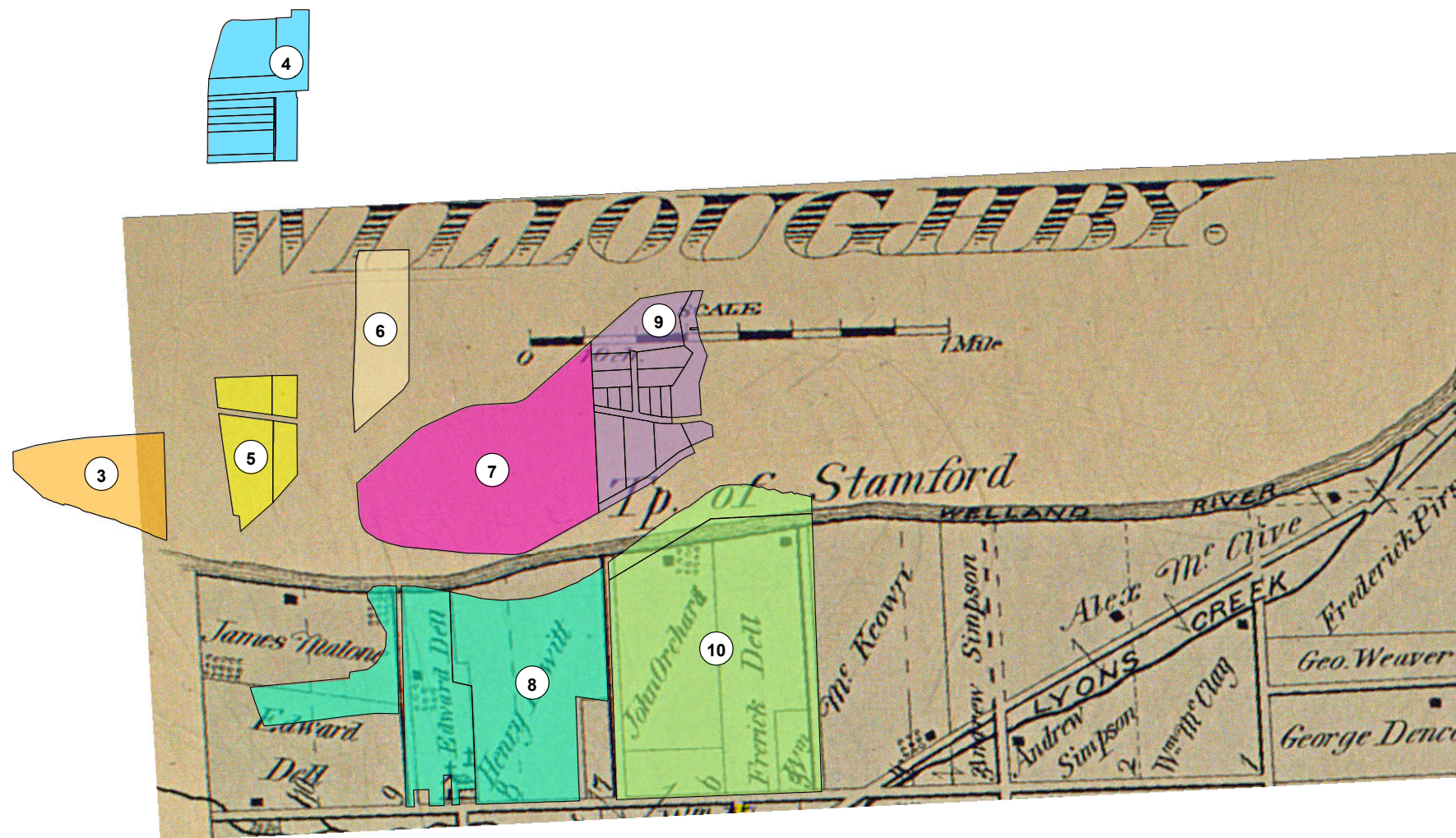
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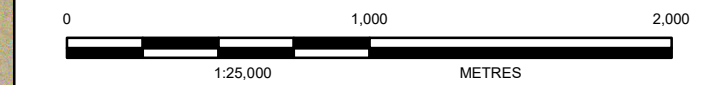
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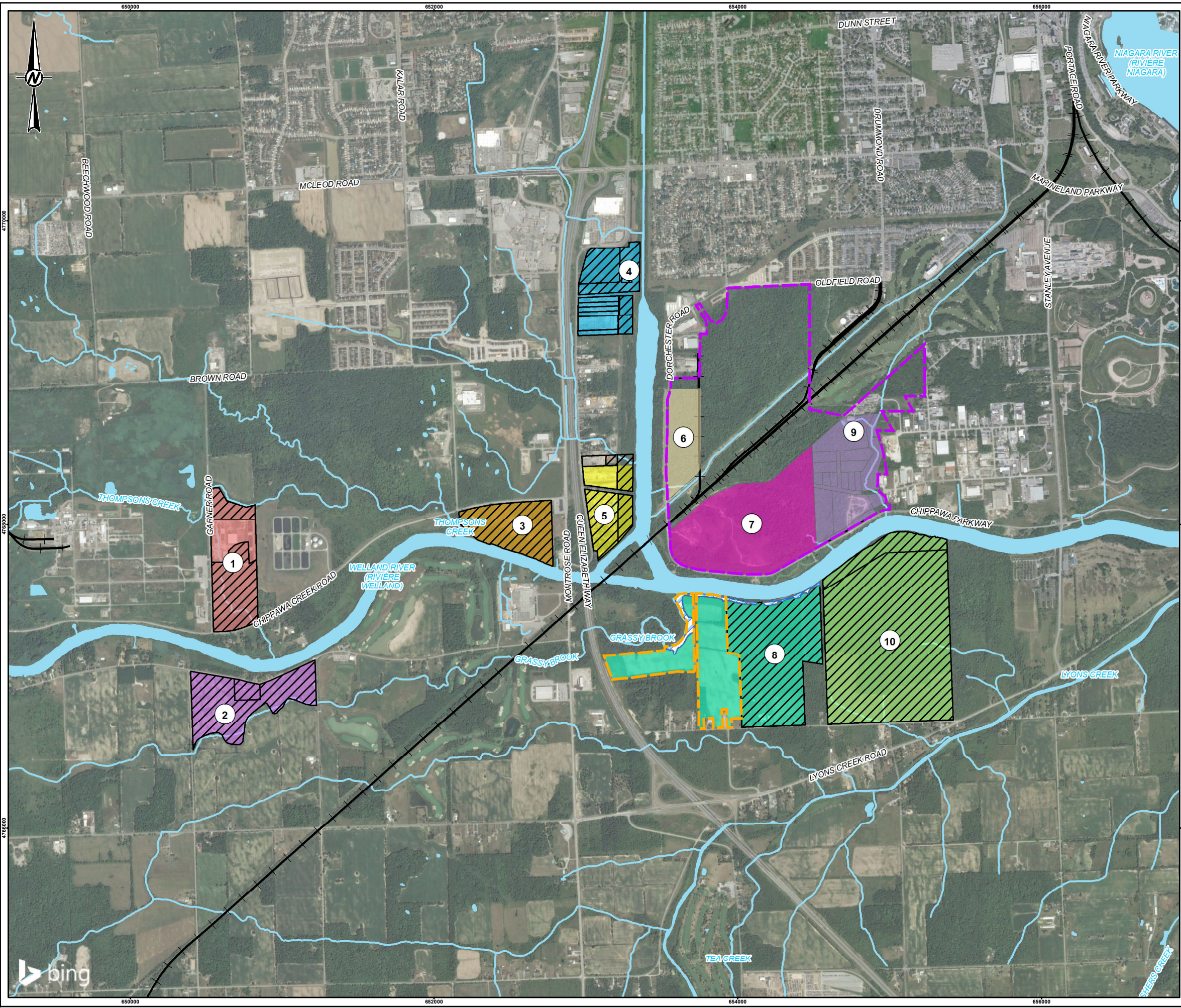
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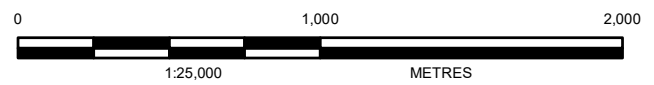
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- LEGEND**
- RAILWAY
 - WATERCOURSE
 - ARCHAEOLOGICAL POTENTIAL, STAGE 2 SURVEY RECOMMENDED
 - AREA OF LOW ARCHAEOLOGICAL POTENTIAL, TO BE CONFIRMED WITH PROPERTY INSPECTION
 - PROVINCIALY SIGNIFICANT WETLAND – STAGE 2 ASSESSMENT RECOMMENDED
 - PREVIOUSLY ASSESSED (AMEC FOSTER WHEELER 2016), NO FURTHER ASSESSMENT RECOMMENDED
 - PREVIOUSLY ASSESSED (MAYER ARCHAEOLOGICAL CONSULTANTS 2015), STAGE 3 ARCHAEOLOGICAL ASSESSMENT RECOMMENDED FOR PORTIONS OF THE SITE
 - WATERBODY
 - SITES OF INTEREST ID

SITES OF INTEREST

- SITE 1
- SITE 2
- SITE 3
- SITE 4
- SITE 5
- SITE 6
- SITE 7
- SITE 8
- SITE 9
- SITE 10



NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)
 BASE DATA - MNR LIO, OBTAINED 2019
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 PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
REGIONAL MUNICIPALITY OF NIAGARA

PROJECT
STAGE 1 ARCHAEOLOGY ASSESSMENT
SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
SCHEDULE C CLASS ENVIRONMENTAL ASSESSMENT

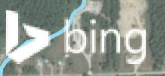
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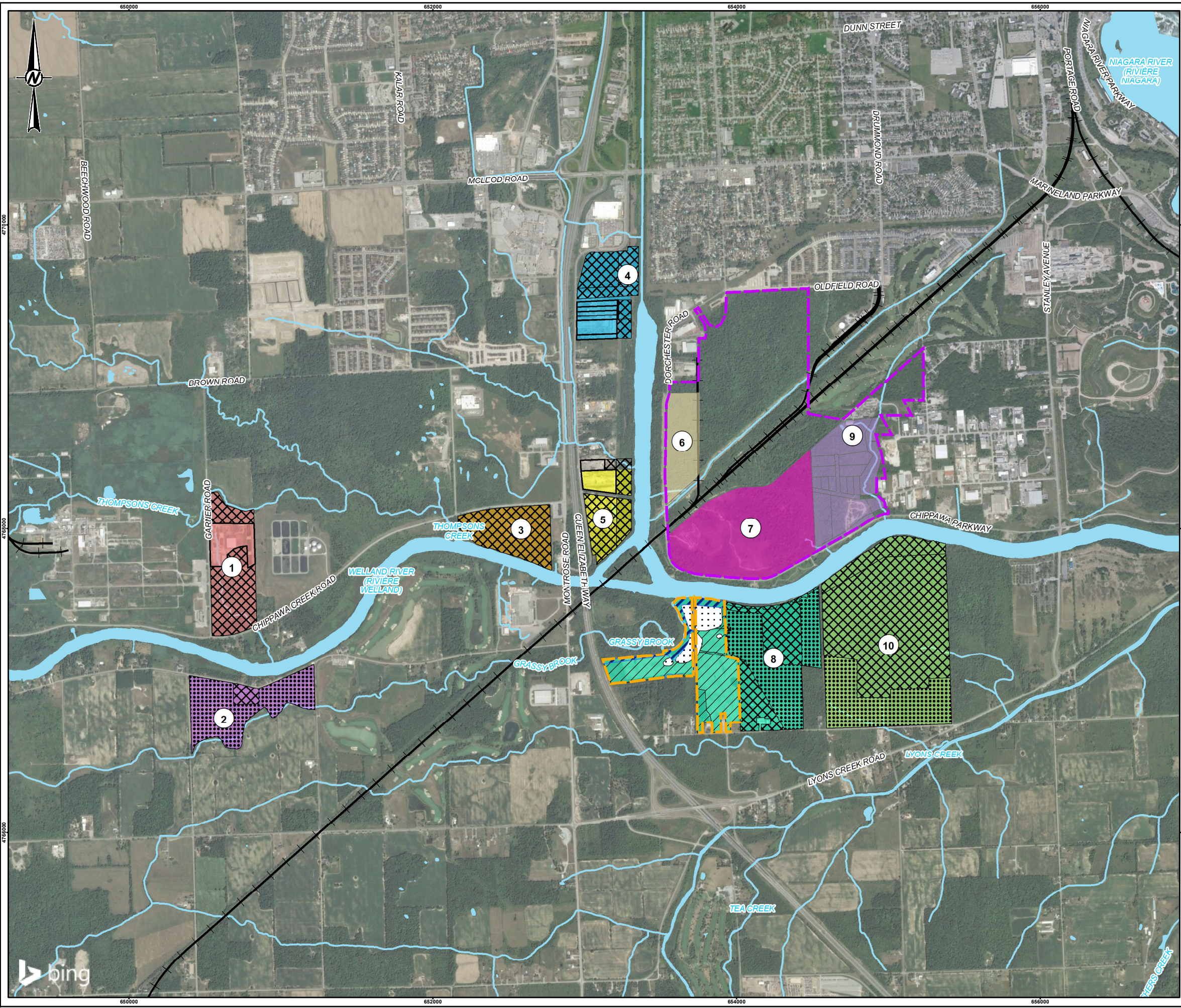
CONSULTANT	YYYY-MM-DD	2020-08-20
DESIGNED	PR	
PREPARED	PR	
REVIEWED	RF	
APPROVED		

PROJECT NO.	CONTROL	REV.	MAP
18104462	0001	B	7

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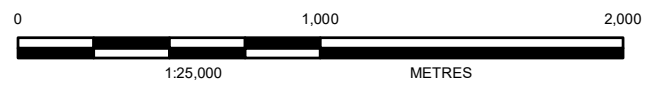




- LEGEND**
- RAILWAY
 - WATERCOURSE
 - AREA OF LOW ARCHAEOLOGICAL POTENTIAL, TO BE CONFIRMED WITH PROPERTY INSPECTION
 - STAGE 3 ASSESSMENT RECOMMENDED
 - NOT TESTED DUE TO WETLAND, STAGE 2 SURVEY RECOMMENDED
 - PEDESTRIAN SURVEY AT 5 M INTERVALS RECOMMENDED
 - TEST PIT SURVEY AT 5 M INTERVALS RECOMMENDED
 - NO FURTHER ASSESSMENT RECOMMENDED (MAYER ARCHAEOLOGICAL CONSULTANTS 2015)
 - PREVIOUSLY ASSESSED (AMEC FOSTER WHEELER 2016), NO FURTHER ASSESSMENT RECOMMENDED
 - PREVIOUSLY ASSESSED (MAYER ARCHAEOLOGICAL CONSULTANTS 2015), STAGE 3 ARCHAEOLOGICAL ASSESSMENT RECOMMENDED FOR PORTIONS OF THE SITE
 - WATERBODY
 - SITES OF INTEREST ID

SITES OF INTEREST

- SITE 1
- SITE 2
- SITE 3
- SITE 4
- SITE 5
- SITE 6
- SITE 7
- SITE 8
- SITE 9
- SITE 10



NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE.

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 DISTRIBUTION AIRBUS DS
 PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

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PROJECT
STAGE 1 ARCHAEOLOGY ASSESSMENT
SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
SCHEDULE C CLASS ENVIRONMENTAL ASSESSMENT

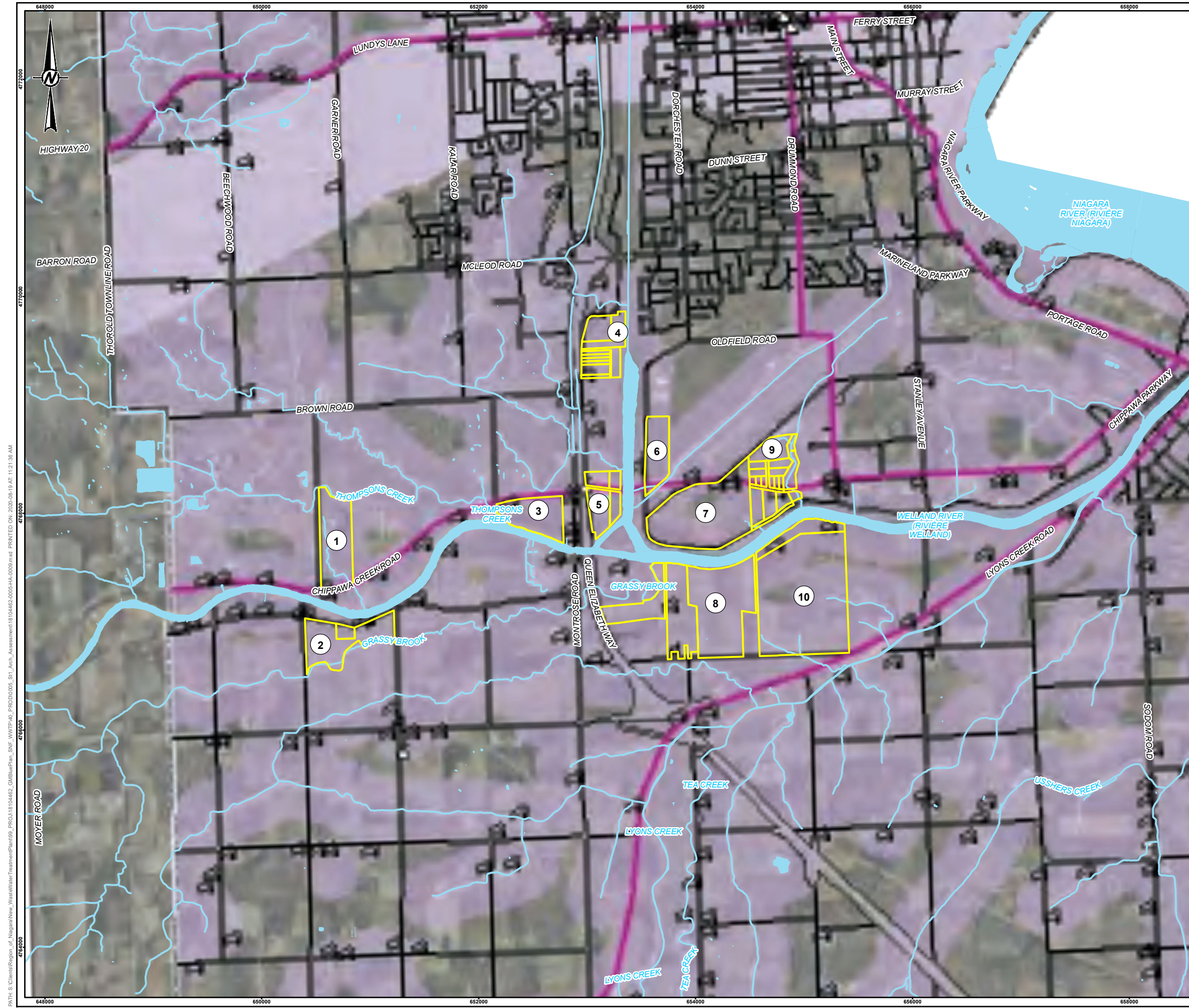
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DESIGNED	PR	
PREPARED	PR	
REVIEWED	RF	
APPROVED		

PROJECT NO. 18104462 CONTROL 0001 REV. B MAP 8

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LEGEND

- WATERCOURSE
- WATERBODY
- 1 SITES OF INTEREST ID
- SITES OF INTEREST
- Area of Potential (Buffers on water, sites, historic features)
- Area of Potential (soils and moraines)
- mills
- hotels
- houses
- battlefields
- cemetery
- churches
- schools
- blacksmiths
- Municipal Boundary
- Historic Roads
- escarpment
- row

0 1,000 2,000

1:35,000 METRES

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)
CITY OF NIAGARA FALLS HERITAGE MASTER PLAN, ARCHAEOLOGICAL SERVICES INC.
BASE DATA - MNR LIO, OBTAINED 2019
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BASE IMAGERY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

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REGIONAL MUNICIPALITY OF NIAGARA

PROJECT
STAGE 1 ARCHAEOLOGY ASSESSMENT
SOUTH NIAGARA FALLS WASTEWATER SOLUTIONS
SCHEDULE C CLASS ENVIRONMENTAL ASSESSMENT

TITLE
PORTION OF CITY OF NIAGARA FALLS HERITAGE MASTER PLAN - ARCHAEOLOGICAL POTENTIAL

CONSULTANT	YYYY-MM-DD	2020-08-19
	DESIGNED	PR
	PREPARED	PR
	REVIEWED	RF
	APPROVED	


PROJECT NO.	CONTROL	REV.	MAP
18104462	0001	B	9

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Signature Page

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Archaeologist



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Associate, Senior Archaeologist

SB/JL/RF/HD/MT/mp/ly

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APPENDIX A

**City of Niagara Falls Heritage
Master Plan**



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