Original Report:
Stage 1 Archaeological Assessment

East Riverside Municipal Environmental Assessment, Part of Lots 145, 146, and 147, Concession 1 Petite Cote, Former Township of Sandwich East, Essex County, Now in the City of Windsor, Ontario

Project # SYW197047

Archaeological Consulting License # P348 (Slim)
P.I.F. # P348-0052-2019 (Stage 1)

Prepared for:

City of Windsor

1266 McDougall Street, Windsor, Ontario, N8X 3M7

16-May-19

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Project # SYW107047

Prepared for:
City of Windsor
1266 McDougall Street, Windsor, Ontario, N8X 3M7
and
The Ontario Ministry of Tourism, Culture and Sport

Prepared by:
Wood Environment & Infrastructure Solutions,
a Division of Wood Canada Limited
[Comments]

16-May-19

Executive Summary

Wood Environment & Infrastructure Solutions ("Wood") was retained by the City of Windsor (the "Client) to conduct a Stage 1 archaeological assessment as part of the East Riverside Municipal Environmental Assessment. The study area along the east and west sides of Jarvis Avenue are identified as having high archaeological potential within the City of Windsor's archaeological master plan. This archaeological assessment was conducted prior to development. The property is located to the east and west of Jarvis Avenue between Riverside Drive East and Little River Boulevard, in the City of Windsor, Ontario ("Study Area"). The study area includes the right-of-way of Wyandotte Street East and the lands required to complete the Beverly Glen road alignment. The study area was historically described as Part of Lots 145, 146, and 147, Concession 1 Petite Cote, Geographic Township of East Sandwich, County of Essex, Ontario. The study area is approximately 21.02 hectares (51.96 acres) in size.

The Stage 1 archaeological assessment was carried out in accordance with the Ontario Ministry of Tourism, Culture and Sport's ("MTCS") *Standards and Guidelines for Consultant Archaeologists* (2011), under an Ontario Professional Licence to Conduct Archaeological Fieldwork (P348) held by Barbara Slim, Senior Archaeologist at Wood. The project information was acknowledged by the MTCS with the approval of PIF number P348-0053-2019. Permission to enter the lands for a property inspection was granted to Wood by the City of Windsor. The Stage 1 property inspection was conducted by Chelsea Dickinson (R1194) of Wood on 04 April 2019. The weather that day was overcast with a high of 5 degrees Celsius and did not impede the inspection in any way.

The Stage 1 background study has indicated that undisturbed portions of the subject property have archaeological potential and warrant Stage 2 property assessment for two principal reasons: 1) the close proximity of a natural water source, Lake St. Clair, located 100 metres to the north; 2) the known presence of one archaeological site within a one-kilometre radius providing direct evidence that this general area had been exploited by Aboriginal peoples.

On the basis of the Stage 1 property inspection and a review of recent land use history, Wood has identified that: 1) 25% (5.18 hectares) of the study area does not require Stage 2 assessment as archaeological potential has been removed by the construction of residential houses and roadways; 2) the balance of the study area (75%/15.84 hectares)–consisting of landscaped land with some heavily treed and scrub areas in an urban setting (unploughable land)–has archaeological potential and warrants Stage 2 assessment (Appendix A: Figure 7).

In light of these results, the following recommendations are made, subject to the advice on compliance with legislation contained in Section 6.0:

1) A Stage 2 archaeological assessment in the form of a test-pit survey should be conducted on the landscaped and wooded areas as shown in Appendix A: Figure 8). The test pits should be excavated by hand at regular five-metre intervals in a grid-pattern and to a depth of 5 cm into the subsoil. The stratigraphy of soils excavated during test pitting should be examined in order to detect cultural soil horizons. In addition, excavated soils are to be screened through 6-mm mesh in order to facilitate the recovery of artifacts.

   The pattern and intensity of test-pit placement may be altered due to changes in archaeological potential in different parts of a study area and/or the presence of disturbed soils. Any areas of 'disturbance' should be evaluated and photo-documented.

   If archaeological resources are found their exact distribution should be documented and any diagnostic artifacts recovered and inventoried. Upon the discovery of cultural materials, the survey grid should be continued to determine whether there are enough archaeological resources to meet the criteria for making a recommendation to carry out a Stage 3 assessment. In the event that insufficient archaeological resources are recovered, eight additional test pits are to be dug in a 2 to 2.5-metre radius around the positive test pit, followed by the excavation of a 1 x 1-m test unit at the positive test pit. All soils from the test pits and test unit should be screened for artifacts through 6-mm mesh. Cultural artifacts encountered are to be collected and bagged according to provenience.

2. The remainder of the study area has low archaeological potential due to previous disturbance and does not require further archaeological assessment.

The above recommendations are subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any of the study area without Ministry of Tourism, Culture, and Sport concurrence.

No grading or other activities that may result in the destruction or disturbance to the study area is permitted until notice of Ministry of Tourism, Culture, and Sport approval has been received.

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Project Personnel

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1.0 Project Context

1.1 Development Context

Wood Environment & Infrastructure Solutions ("Wood") was retained by the City of Windsor (the "Client) to conduct a Stage 1 archaeological assessment as part of the East Riverside Municipal Environmental Assessment. The study area along the east and west sides of Jarvis Avenue are identified as having high archaeological potential within the City of Windsor's archaeological master plan. This archaeological assessment was conducted prior to development. The property is located to the east and west of Jarvis Avenue between Riverside Drive East and Little River Boulevard, in the City of Windsor, Ontario ("Study Area"). The study area includes the right-of-way of Wyandotte Street East and the lands required to complete the Beverly Glen road alignment. The study area was historically described as Part of Lots 145, 146, and 147, Concession 1 Petite Cote, Geographic Township of East Sandwich, County of Essex, Ontario. The study area is approximately 21.02 hectares (51.96 acres) in size.

The Stage 1 archaeological assessment was carried out in accordance with the Ontario Ministry of Tourism, Culture and Sport's ("MTCS") *Standards and Guidelines for Consultant Archaeologists* (2011), under an Ontario Professional Licence to Conduct Archaeological Fieldwork (P348) held by Barbara Slim, Senior Archaeologist at Wood. The project information was acknowledged by the MTCS with the approval of PIF number P348-0053-2019. Permission to enter the lands for a property inspection was granted to Wood by the City of Windsor. The Stage 1 property inspection was conducted by Chelsea Dickinson (R1194) of Wood on 04 April 2019. The weather that day was overcast with a high of 5 degrees Celsius and did not impede the inspection in any way.

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

1.2 Scope of Work

This Stage 1 archaeological assessment was carried out in accordance with the Terms of Reference provided in Wood's work agreement dated 07 December 2018.

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

recommendations for Stage 2 property assessment for all or parts of the property if warranted; and, 3) to recommend appropriate strategies for Stage 2 property assessment if warranted.

The Stage 1 background study was conducted in accordance with the *Standards and Guidelines for Consultant Archaeologists, 2011,* set out by the MTCS, and with the Ontario Heritage Act, R.S.O. 1990, c.0.18.

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

- Contacting the MTCS to determine if recorded archaeological sites exist in the vicinity (one-kilometre ["km"] radius) of the property, through a search of the Ontario Archaeological Sites Database maintained by that Ministry;
- Contacting the MTCS to determine if there are any known reports of previous archaeological field work within a radius of 50 metres ("m") around the study area;
- A desktop review of the study area's physical setting to determine its potential for both historic and pre-contact human occupation, including its topography, hydrology, soils, vegetation, and proximity to important resources and historic transportation routes;
- A review of the potential for historic occupation as documented in historical atlases and other archival sources;
- A property inspection of the study area in order to gather first-hand and current evidence of the property's physical setting, and to aid in delineating areas where archaeological potential may have been impacted or removed by previous land-use practices;
- Review of any available geotechnical or environmental boreholes to understand the stratigraphy of the study area;
- A review of historical land-use practices that may have impacted the preservation of potential archaeological resources;
- Mapping, photography and production of other relevant graphics; and,
- Preparing a Stage 1 report of findings with recommendations regarding the need for further archaeological work if deemed necessary.

2.0 Stage 1 Background Study

As part of the Stage 1 archaeological assessment, Wood searched MTCS's PastPort system to determine if archaeological sites have been registered within 1 km of the property (Section 2.1.1), and if previous archaeological assessments have been carried out within a 50-m radius (Section 2.1.2). Secondly, the principal determinants of archaeological potential–proximity to water, topography, drainage, soils, vegetation, and proximity to important resources and historically significant transportation routes and settlements–were examined in order to evaluate the property's overall archaeological potential (Sections 2.1, 2.1.3, 2.2, and 2.2.1). Thirdly, the specific potential for historic archaeological resources was assessed through an examination of available historical maps and other archival sources (Section 2.2).

2.1 Archaeological Context

2.1.1 Registered Archaeological Sites

Wood conducted the requisite Stage 1 background research. First, Wood searched MTCS's PastPort system to ascertain if previously registered archaeological sites have been identified in close proximity to the study area.

In Ontario, information concerning archaeology sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological registered sites within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on longitude and latitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referred to by a four-letter designation and sites located within the block are numbered sequentially as they are found. The subject property is located within the *AbHr* Borden Block. On the basis of a search of the OASD through PastPort, there are no registered sites within the study area however there is one registered archaeological site located within a 1-km radius.

Table 1 provides a summary of this site.

Table 1: Registered Archaeological Sites within a 1-km Radius

Borden Number	Site Name	Cultural Affiliation	Site Type	Distance to Study Area	Researcher	Status
AbHr-19	Nicodemo-Dupuis	Aboriginal (Archaic; Woodland)	Camp/Campsite	995 m	Claire Freisenhausen (P244)	Further CHVI*

*CHVI-cultural heritage value or interest

2.1.2 History of Archaeological Investigations

Wood completed a search for reports directly on PastPort on 25 April 2019). Based on this search (by address, lot and concession and the above-mentioned archaeological Borden block), no previous archaeological assessments have been conducted within 50 m of the subject lands.

2.1.3 Environmental Context

The study area (Appendix A: Figures 1–3) is situated in the St. Clair Clay Plains physiographic region of Ontario (Chapman and Putnam 1984: 113). This region consists of an extensive clay plain that covers an area of approximately 5,879 km^2 and lies at an elevation of 175 to 214 m above sea level (Chapman and Putnam 1984: 147). The study area is located within the Essex Clay Plain sub-region and consists of a till plain overlying a low swell in the bedrock (Chapman and Putnam 1984: 149). The soils within the study area consist of Brookston clay loam (Chapman and Putnam 1984: 149), comprised of silty clay soils with poor drainage capabilities (Richards et. al 1949).

It is crucial to consider the proximity of water sources in any evaluation of archaeological potential because the availability of water is arguably the single most important determinant of human land use, past and present. The *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) lists proximity to water as one of the prime indicators of potential for the presence of archaeological sites. Distance from potable water has been one of the most commonly used variables for predictive modeling of site location. Water, both potable and non-potable, also facilitated the transportation of people and goods and served to focus animal and vegetable resources. According to the 2011 *Standards and Guidelines for Consultant Archaeologists*, lands within 300 m of an extant or formerly mapped river or creek have potential for the presence of early Aboriginal and Euro-Canadian archaeological sites. Lake St. Clair is located approximately 100 m to the north of the study area (Appendix A: Figures 1 and 3).

In summary, a review of the archaeological context supports a conclusion of overall archaeological potential and the need for a Stage 2 assessment. Natural water sources are located within 300 m of the study area, including Lake St. Clair, 100 m to the north. Moreover, we have direct evidence that this general area had been intensively exploited by both pre-contact Aboriginal peoples in that one site that has been previously registered within a 1-km radius.

2.2 Historical Context

2.2.1 A Cultural History for Southwestern Ontario

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

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

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

After 9,500 years ago, there was a long period when the climate was variable and the bare lands left by the glaciers were becoming re-forested, resulting in patchier, more diverse ecozones. During this time, which lasted until 3,000 years ago, people were adapting to diverse environmental settings. There appears to have been more reliance on local stone for making tools and more variable tool manufacturing technologies. The adoption of a spear-throwing board, known as an atlatl, was an important innovation, resulting in the ability to throw smaller darts with more force. Projectile points from this period, called the

Archaic Period, are commonly side or corner-notched and are smaller than those of the preceding period. The Archaic adaptation is generally thought to have centred on localized resources, often forest resources, and groups of people are thought to have been less mobile, an adaptation that continued to develop until the arrival of Europeans.

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

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

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

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

When European explorers and missionaries arrived in southern Ontario in the early seventeenth century, they described the local Iroquoian social organization as being under

the direction of elected chiefs. Tribal confederacies and allegiances resulted in intertribal warfare, which was only made worse by the European presence. Three Ontario Iroquoian confederacies, the Huron, Petun, and Neutral, were driven from their traditional territories before the middle of the seventeenth century.

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

Table 2: Simplified Cultural Chronology of Southern and Eastern Ontario

Period	Complexes/Cultures, Some Diagnostic Artifacts
Early Paleo-Indian (9000–8500 B.C.)	Small nomadic hunter-gatherer bands. Early Paleo-Indian (EPI) rarely found in Eastern Ontario. Gainey, Barnes, Crowfield fluted points.
Late Paleo-Indian (8500–7500 B.C.)	Small nomadic hunter-gatherer bands. Hi-Lo, Holcombe points, Lanceolate Bifaces.
Early Archaic (7500–6000/4500 B.C.)	Small nomadic hunter-gatherer bands. Nettling, Stanley/Neville points.
Middle Archaic (6000/4500–2500 B.C.)	Transition to territorial settlements. Seasonal round of subsistence introduced. Thebes (6000–5000 B.C.), Otter Creek points (4500–3000 B.C.). **Brewerton Complex (3000–2500 B.C.).** Brewerton points. **Laurentian Complex (6000 B.C.–2500 B.C.)** (Eastern Ontario)
Late Archaic (2500–1000 B.C.)	More numerous territorial hunter- gatherer bands, increasing use of exotic materials and artistic items for grave offerings, regional trade networks. **Narrowpoint Complex (2500–1850 B.C.).** Lamoka points. **Broadpoint Complex (1850–1650 B.C.).** Adder Orchard, Genesee points. **Smallpoint Complex (1650–1000 B.C.).** Crawford Knoll, Innes points. **Terminal Archaic (1100–1000 B.C.) Glacial Kame Complex.** Hind points.
Early Woodland (1000–400 B.C.)	Pottery introduced. Meadowood Notched points, Meadowood Cache Blades, Kramer, Adena points. **Meadowood Complex (1000–400 B.C.).** **Middlesex Complex (650–400 B.C.).** Introduction of true cemeteries.

Table 2: Simplified Cultural Chronology of Southern and Eastern Ontario	
Period	**Complexes/Cultures, Some Diagnostic Artifacts**
Middle Woodland (400 B.C.–A.D. 500/900)	Saugeen, Snyders, Vanport, Port Maitland points. **Point Peninsula Complex** (Southcentral and Eastern Ontario) **Saugeen Complex** (southeast of Lake Huron and the Bruce Peninsula, London area, and possibly as far east as the Grand River) **Couture Complex** (Lake St. Clair and the western end of Lake Erie). Burial ceremonialism.
Transitional Woodland (A.D. 500–900)	Agriculture introduced. Levanna, Jacks Reef points. **Princess Point Complex** (Eastern end of Lake Erie and the western end of Lake Ontario). **Rivière au Vase Phase of the Younge / Western Basin Tradition** (Lake St. Clair and western end of Lake Erie) **Sandbanks Complex** (Kingston area).
Late Woodland (A.D. 900–1650)	Tribal differentiation. Transition to settled village life. Dewaele, Glen Meyer Tanged, Triangular Nanticoke, Notched Nanticoke, Triangular Daniels/Madison points. **Ontario Iroquoian and St. Lawrence Iroquoian Traditions** (Southcentral and Eastern Ontario, respectively). **Algonkian Western Basin Tradition** (Lake St. Clair and the western end of Lake Erie).
Early Post-Contact (A.D. 1650–1763)	Iroquoian, Algonkian migrations and resettlement. French exploration and colonization
Late Post-Contact (A.D. 1763–1867)	Iroquoian, Algonkian migrations and resettlement. British and other European immigration increases.

Archaeologically, the years since the arrival of Europeans are referred to as the Historic Period. In southern Ontario, significant Historic sites are those that have an affiliation with an important historic event, figure, or family, but can also be anything dating to the original European settlement of a region. Often, these sites date to before A.D. 1830.

2.2.2 Review of Historical Records

The study area is located within the Township of Sandwich East and Maidstone, County of Essex. As early as the 1670s, two Sulpician priests, François Dollier de Casson and René de Bréhant de Galinée, and later the adventurer René-Robert Cavelier, Sieur de LaSalle, made their way up the Detroit River to Lake St. Clair to document the region that is now Essex County (Morrison 1954: 3). The first European settlement around the study area took place in the early 1700's when Antoine Laumet de la Mothe, Sieur de Cadillac built Fort Pontchartrain on what is now Detroit. The fort originally started out as a fur trading centre but was converted into a military post (Mika & Mika 1977). In 1748, a Jesuit mission to the Huron was established on the south shore of the Detroit River, in what is now the

Windsor area (ECTA 1947). After that, French agriculturalists quickly settled in the area (Mika & Mika 1977).

At the close of the War of 1812, United Empire Loyalists began seeking land and settling in the area (ETCA 1947). The inland areas of the township were not settled until the nineteenth century, as the land was poorly drained. However, by 1824, Essex had a population of 4,274, which quickly grew upon completion of the Erie Canal and Talbot Road a few years later (Carter 1984).

Sandwich Township was incorporated in 1850, and in 1861 was divided into three townships, Sandwich East, West and South (Carter 1984). Sandwich East was annexed in part by the City of Windsor and in part by the Township of Sandwich South in 1966 (Carter 1984). The Town of Sandwich is the earliest settlement in the area. In 1796, lots were given to fur traders from Detroit who wished to remain under British Rule. Sandwich was the county seat for many years (Mika & Mika 1983). An ex-slave community existed in Sandwich as early as 1820, when they founded the first Baptist congregation there (ECTA 1947). After slavery was outlawed by Britain, the influx of fugitive slaves to Canada increased, with Sandwich and Windsor serving as major border crossings for the Underground Railroad.

The City of Windsor was first established near ferries run by French to carry goods across the river to Detroit and was originally known as South Detroit. Windsor now encompasses three nineteenth century communities, Sandwich, Windsor, and Walkerville. Windsor was slow to grow and develop until the construction of the Great Western Railway in 1854,

The closest historical community to the study area was the village of Pike Creek, located approximately 5.2 km to the southeast. Pike Creek village was home to the Pike Creek Hotel, located at the crossroads of Brighton Road and Tecumseh Road. The hotel was owned by Philip May who was born in Pike Creek in 1858 and died in 1931 (Southwestern Ontario Digital Archive 2019). The 1880 historical map places the hotel approximately 320 m north of the Great Western Railway (Belden 1880).

Historical records and mapping were examined for evidence of early Euro-Canadian use of the study area. The study area historically was located on Part of Lots 145, 146, and 147 Concession 6 Petite Cote, Geographic Township of Sandwich East, County of Essex, Ontario.

The 1877 *H.R. Page & Co.'s Map of the County of Essex* was examined in an effort to determine the potential for historic archaeological evidence within the study area, which at that time appears to be under the ownership of C. Parent (Lot 145), P. McLaughlin (Lot

146) and R. Duchan (Lot 147) (Page 1877; Appendix A: Figure 4). Historical features are not illustrated within the study area or in the vicinity nor are there any roadways illustrated within the vicinity. Lake St. Clair is depicted approximately 100 m north of the study area.

In addition, the *1880 Illustrated Atlas of Essex County* (Belden 1880; Appendix A: Figure 5) was examined. In 1880 map does not identify an owner for any of the lots on the subject property. Historical features and roadways are not illustrated within the study area or in the vicinity however, as previously depicted in the 1877 historical map Lake St. Clair is depicted approximately 100 m north of the study area. The Great Western Railway is located approximately 1.2 km to the south of the study area, with a station 1.5 km to the southeast in Tecumseh.

The 1871–1891 historical census records were reviewed in order to obtain additional information on this property. The 1871 historical census indicates that a Camile Parent and a Cleophas Parent lived in Essex County in the Sandwich East sub-district. Due to the fact that there is no identified given name for C. Parent on the historical map it is possible the property on Lot 146 could belong to either Camile or Cleophas. Camile Parent is listed as a 40-year-old Catholic farmer born in Ontario with French origins. Camile's wife Eleise is listed as 34 years old and is a Catholic born in Ontario with French origins. Their three children are listed between the ages of 4 and 9. Cleophas Parent is listed as a 33-year-old Catholic farmer born in Ontario with French origins. His wife Polline is 27-years-old and is listed as Catholic and she was born in Ontario with French origins. Their three children are listed between the ages of 2 and 6. There were no records found on the 1871 census for R. McLaughlin or R. Duchan (Library and Archives Canada 2019).

Both Camile and Cleophas Parent and their families are present again in the 1881 census records. Camile and Eleise are listed as 50 and 45 respectively, and their children are between the ages of 14 and 19. Cleophas appears to have re-married sometime between 1871 and 1881, as his wife's name on the 1881 census is Adelique. They are listed as 45 and 36 respectively, and seven children between the ages of 3 and 15 are listed. There were no records found for R. McLaughlin or R. Duchan in the 1881 census (Library and Archives Canada 2019).

Finally, the 1891 census was reviewed in order to obtain additional information on this property. Camile Parent, his wife Camille, and daughter Larianne are listed. In addition, an Alice Lefebvre is listed as part of Camille's extended family. Cleophas Parent, his wife Adelique and their eight children between the ages of 23 and 8 are listed. There were no records for R. McLaughlin or R. Duchan on the 1891 census (Library and Archives Canada 2019).

In summary, a review of the historical context does not support a conclusion of overall archaeological potential and the need for a Stage 2 assessment since the study area is not located adjacent to historical roadways and there are no historical features or structures depicted on the historical maps (Appendix A: Figures 4 and 5). As per the MTCS's *Standards and Guidelines for Consultant Archaeologists*, any areas within 100 m of early historic transportation routes and 300 m of early Euro-Canadian settlement warrant the need for a Stage 2 property assessment.

2.3 Summary of Archaeological Potential

The Stage 1 background study has indicated that undisturbed portions of the subject property have archaeological potential and warrant Stage 2 property assessment for two principal reasons: 1) the close proximity of a natural water source, Lake St. Clair, located 100 m to the north; 2) the known presence of one archaeological site within a 1-km radius providing direct evidence that this general area had been exploited by Aboriginal peoples.

3.0 Stage 1 Property Inspection

3.1 Methodology

The Stage 1 property inspection was conducted by Chelsea Dickinson (R1194) of Wood on 04 April 2019 to confirm archaeological site potential and to determine the degree to which development and landscape alteration have affected that potential. The weather that day was overcast with a high of 5 degrees Celsius and did not impede the inspection in any way.

The Stage 1 property inspection included a walk-through of the entire property, which measures approximately 21.02 ha (51.96 acres). The property inspection was thoroughly photo-documented. Field observations were recorded on aerial maps and field forms. Areas identified as disturbed, including buildings, buildings with basements, driveways, and roadways, have had the integrity of the topsoil compromised by earth moving activities to the point where archaeological potential has been removed. Landscaped sections/undeveloped sections of the study area were assumed to have retained archaeological potential. All land conditions were recorded as shown in Appendix A: Figure 7 and Appendix B: Photographs 1–10.

3.2 Record of Finds

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

Table 3: Inventory of Documentary Record

Study Area	Map and Photo(s)	Field Notes
Part Lots 145,156, 147, Concession 1 Petite Cote, Township of Sandwich, Essex County, Ontario	Photocopies of 2 historical maps, 1 aerial photograph, and 10 Stage 1 photographs	Stage 1 photo logs and field notes

3.3 Results

The study area is currently a residential area in an urban context and includes a number of existing roadways and road allowances (Appendix A: Figure 2). There are private houses with landscaped yards to the east and west of Jarvis Street. Some sections in the backyards of residences to the west of Jarvis Street are heavily treed.

Archaeological potential has been removed within areas that have been subjected to previous disturbance, including existing houses, roadways, driveways, and other buildings (Appendix A: Figure 7).

The remainder of the study area, consisting of landscaped lawn in an urban area and some scrub/forested areas, has archaeological potential and warrants Stage 2 assessment (Appendix A: Figure 7).

4.0 Stage 1 Analysis and Conclusions

The study area is currently a residential area in an urban context and includes a number of existing roadways and road allowances (Appendix A: Figure 2). There are private houses with landscaped yards to the east and west of Jarvis Street. Some sections in the back yard of residences to the west of Jarvis Street are heavily treed.

The Stage 1 background study has indicated that undisturbed portions of the subject property have archaeological potential and warrant Stage 2 property assessment for two principal reasons: 1) the close proximity of a natural water source, Lake St. Clair, 100 m to the north; 2) the known presence of one archaeological site within a 1-km radius providing direct evidence that this general area had been exploited by Aboriginal peoples.

On the basis of the Stage 1 property inspection and a review of recent land use history, Wood has identified that: 1) 25% (5.18 hectares) of the study area does not require Stage 2 assessment as archaeological potential has been removed by construction of residential houses and roadways; 2) the balance of the study area (75%/15.84 hectares)–consisting of landscaped land with some heavily treed and scrub areas in an urban setting (unploughable land)–has archaeological potential and warrants Stage 2 assessment (Appendix A: Figure 7).

5.0 Recommendations

In light of these results, the following recommendations are made, subject to the advice on compliance with legislation contained in Section 6.0:

1) A Stage 2 archaeological assessment in the form of a test-pit survey should be conducted on the landscaped and wooded areas as shown in Appendix A: Figure 8). The test pits should be excavated by hand at regular five-metre intervals in a grid-pattern and to a depth of 5 cm into the subsoil. The stratigraphy of soils excavated during test pitting should be examined in order to detect cultural soil horizons. In addition, excavated soils are to be screened through 6-mm mesh in order to facilitate the recovery of artifacts.

   The pattern and intensity of test-pit placement may be altered due to changes in archaeological potential in different parts of a study area and/or the presence of disturbed soils. Any areas of 'disturbance' should be evaluated and photo-documented.

   If archaeological resources are found their exact distribution should be documented and any diagnostic artifacts recovered and inventoried. Upon the discovery of cultural materials, the survey grid should be continued to determine whether there are enough archaeological resources to meet the criteria for making a recommendation to carry out a Stage 3 assessment. In the event that insufficient archaeological resources are recovered, eight additional test pits are to be dug in a 2 to 2.5-metre radius around the positive test pit, followed by the excavation of a 1 x 1-m test unit at the positive test pit. All soils from the test pits and test unit should be screened for artifacts through 6-mm mesh. Cultural artifacts encountered are to be collected and bagged according to provenience.

2) The remainder of the study area has low archaeological potential due to previous disturbance and does not require further archaeological assessment.

The above recommendations are subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any of the study area without Ministry of Tourism, Culture, and Sport concurrence.

No grading or other activities that may result in the destruction or disturbance to the study area is permitted until notice of Ministry of Tourism, Culture, and Sport approval has been received.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

a) This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part IV 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 Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

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

d) The *Funeral, Burial and Cremation Services Act,* 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or corner and the Registrar of Cemeteries at the Ministry of Consumer Services.

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

7.0 Assessor Qualifications

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

8.0 Closure

This report was prepared for the exclusive use of the City of Windsor and is intended to provide a Stage 1 archaeological assessment of the study area. The property is located at east and west of Jarvis Avenue, between Riverside Drive East and Little River Boulevard, Ontario. The property is legally described as Part of Lots 145, 146, and 147, Concession 1 Petite Cote, Geographic Township of East Sandwich, County of Essex, Ontario.

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

The report is based on data and information collected during the Stage 1 background study conducted by Wood. It is based solely a review of historical information, a property reconnaissance conducted on 04 April 2019 and data obtained by Wood as described in this report. Except as otherwise maybe specified, Wood disclaims any obligation to update this report for events taking place, or with respect to information that becomes available to Wood after the time during which Wood conducted the archaeological assessment.

In evaluating the property, Wood has relied in good faith on information provided by other individuals noted in this report. Wood has assumed that the information provided is factual and accurate. In addition, the findings in this report are based, to a large degree, upon information provided by the current owner/occupant. Wood accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted.

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

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

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

Respectfully Submitted,

Wood Environment & Infrastructure Solutions,
a division of Wood Canada Limited

Prepared by,

Kristy O'Neal, M.A.
Senior Archaeologist

Chelsea Dickinson, B.A.
Field Archaeologist

Reviewed by,

Shaun Austin, Ph.D. (R141)
Associate Archaeologist

9.0 Bibliography

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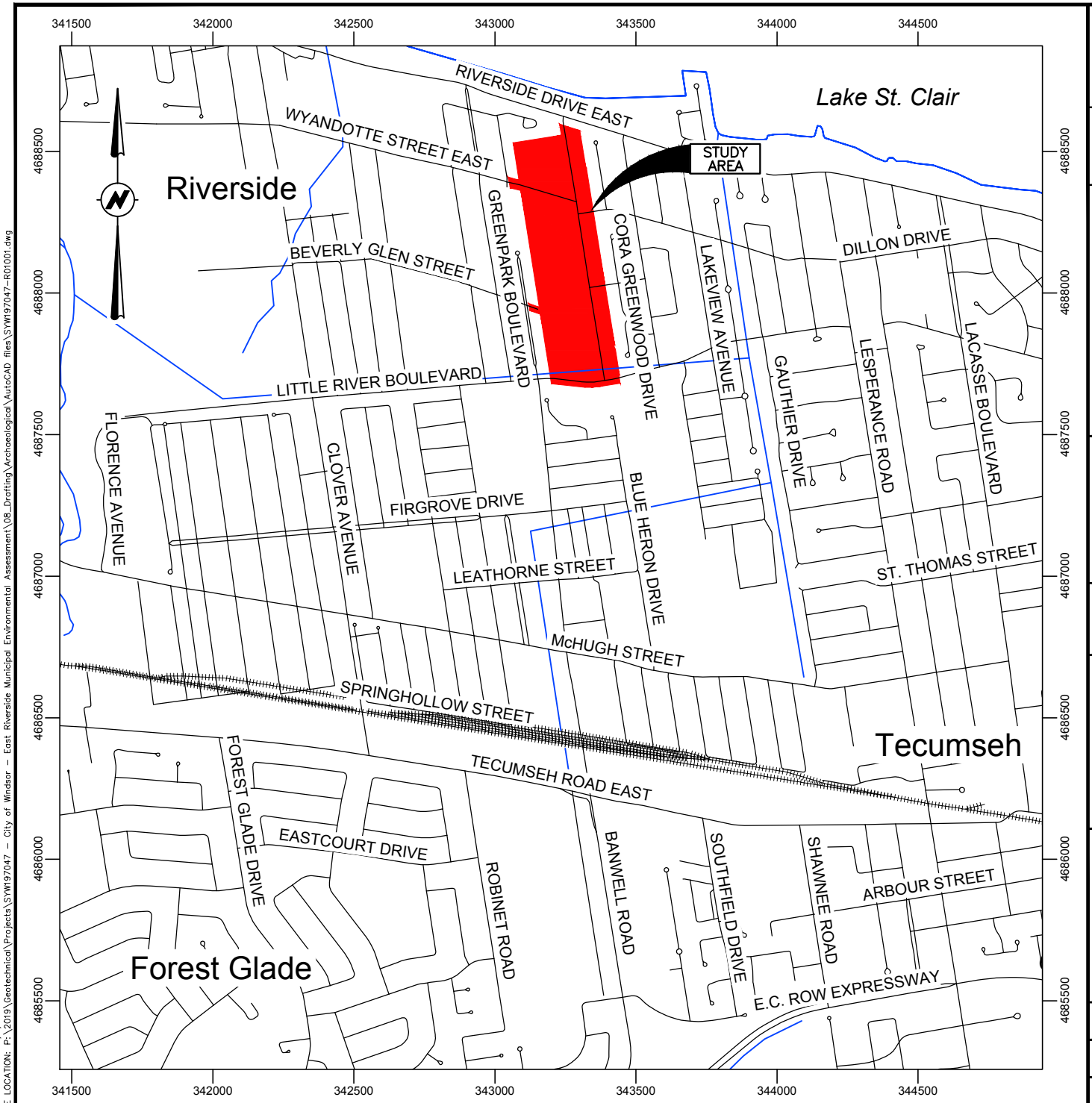
Appendix A

Figures



PROJECT:
STAGE 1
ARCHAEOLOGICAL ASSESSMENT
EAST RIVERSIDE MUNICIPAL ENVIRONMENTAL ASSESSMENT
JARVIS AVENUE, CITY OF WINDSOR
COUNTY OF ESSEX, ONTARIO

TITLE:
LOCATION OF STUDY AREA

LEGEND:
STUDY AREA

NOTES:
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ALL LOCATIONS ARE APPROXIMATE.
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JARVIS AVENUE, CITY OF WINDSOR
COUNTY OF ESSEX, ONTARIO

TITLE:
AERIAL PHOTOGRAPH SHOWING LOCATION OF STUDY AREA

LEGEND:
- STUDY AREA

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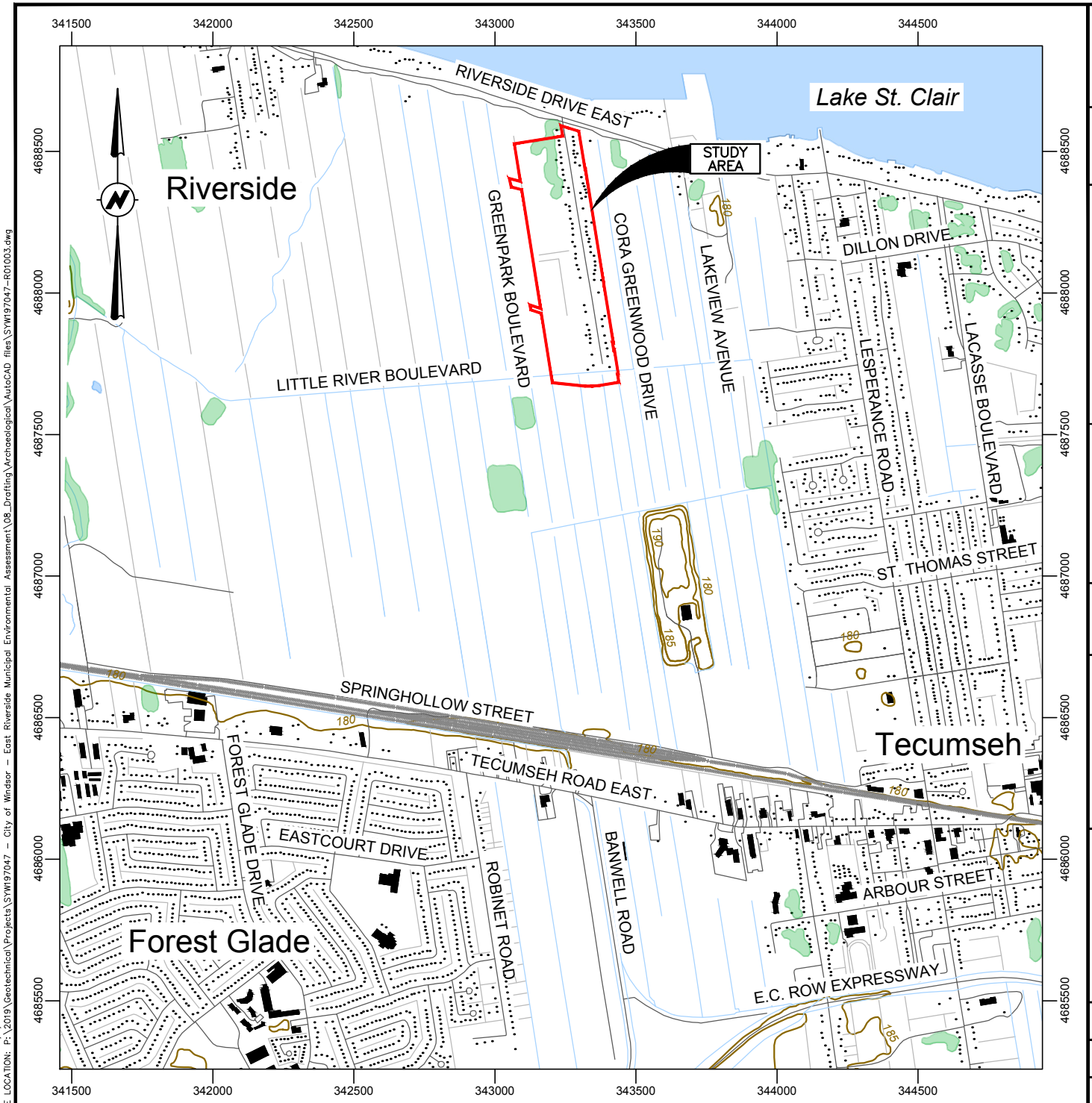

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STAGE 1
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EAST RIVERSIDE MUNICIPAL ENVIRONMENTAL ASSESSMENT
JARVIS AVENUE, CITY OF WINDSOR
COUNTY OF ESSEX, ONTARIO

TITLE:
TOPOGRAPHIC MAP SHOWING
LOCATION OF STUDY AREA

LEGEND:
STUDY AREA

NOTES:
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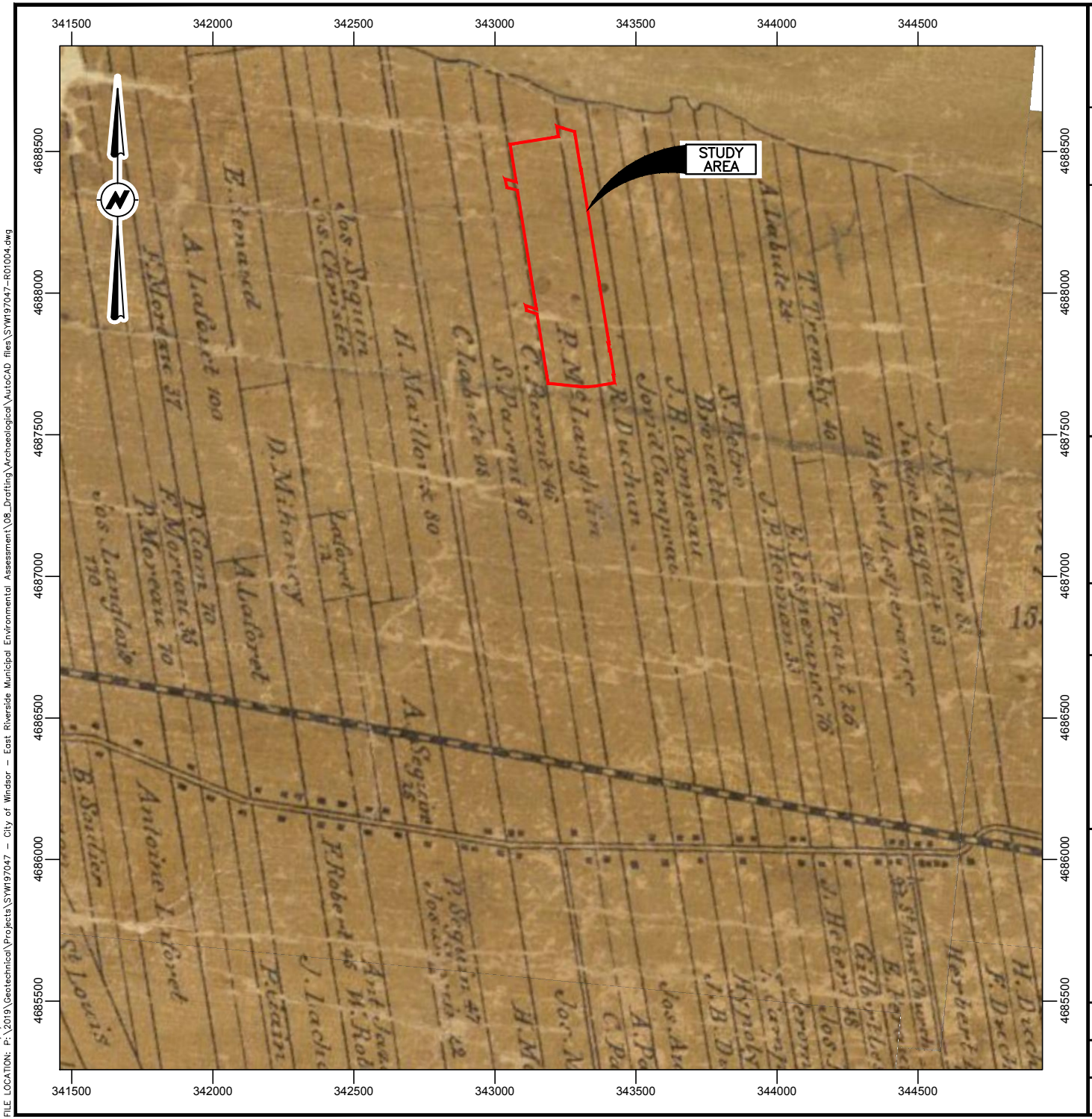

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STAGE 1
ARCHAEOLOGICAL ASSESSMENT
EAST RIVERSIDE MUNICIPAL ENVIRONMENTAL ASSESSMENT
JARVIS AVENUE, CITY OF WINDSOR
COUNTY OF ESSEX, ONTARIO

TITLE:
1877 MAP OF THE COUNTY OF ESSEX, ONTARIO

LEGEND:
STUDY AREA

NOTES:
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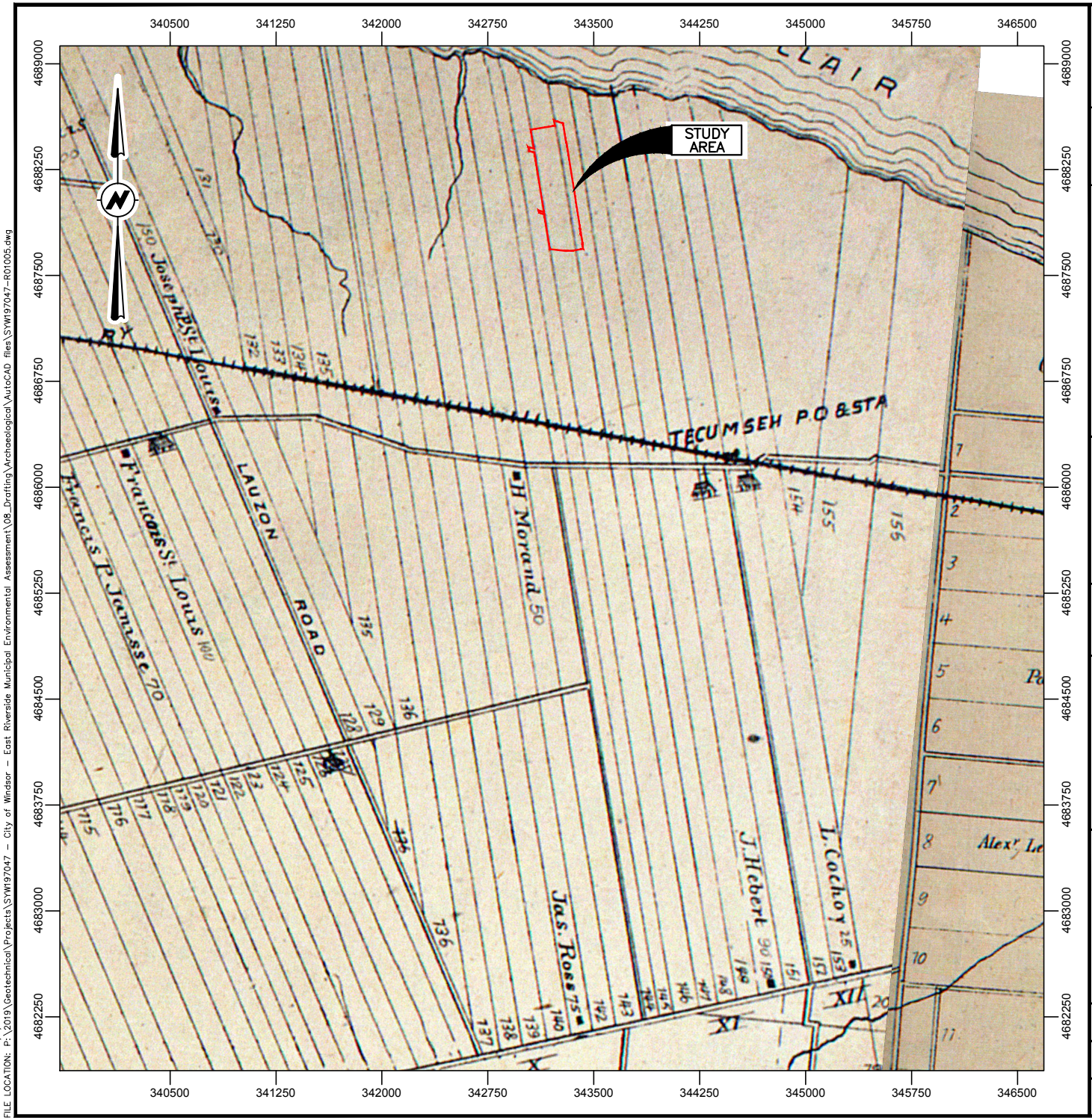

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JARVIS AVENUE, CITY OF WINDSOR
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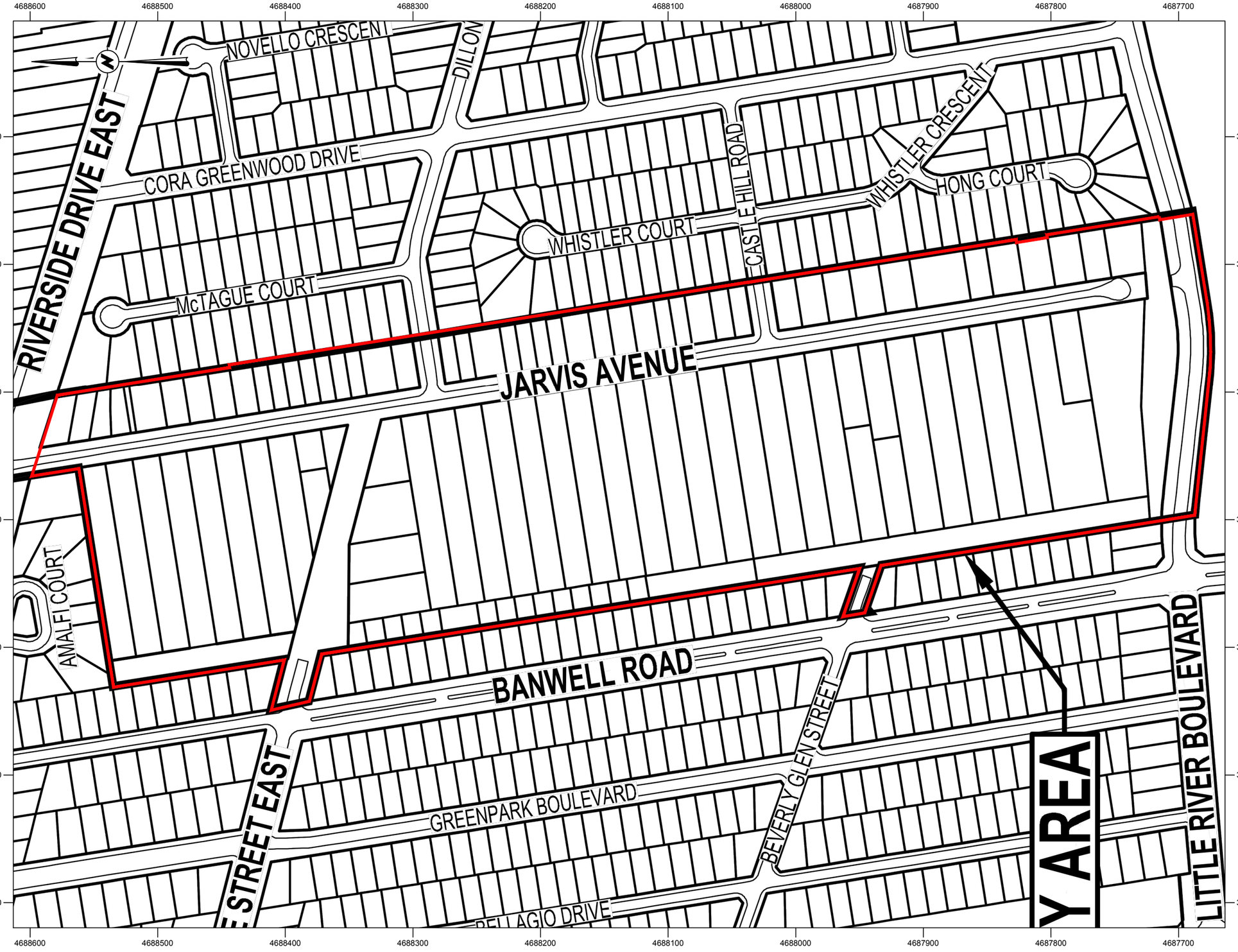

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EAST RIVERSIDE MUNICIPAL ENVIRONMENTAL ASSESSMENT
JARVIS AVENUE, CITY OF WINDSOR
COUNTY OF ESSEX, ONTARIO

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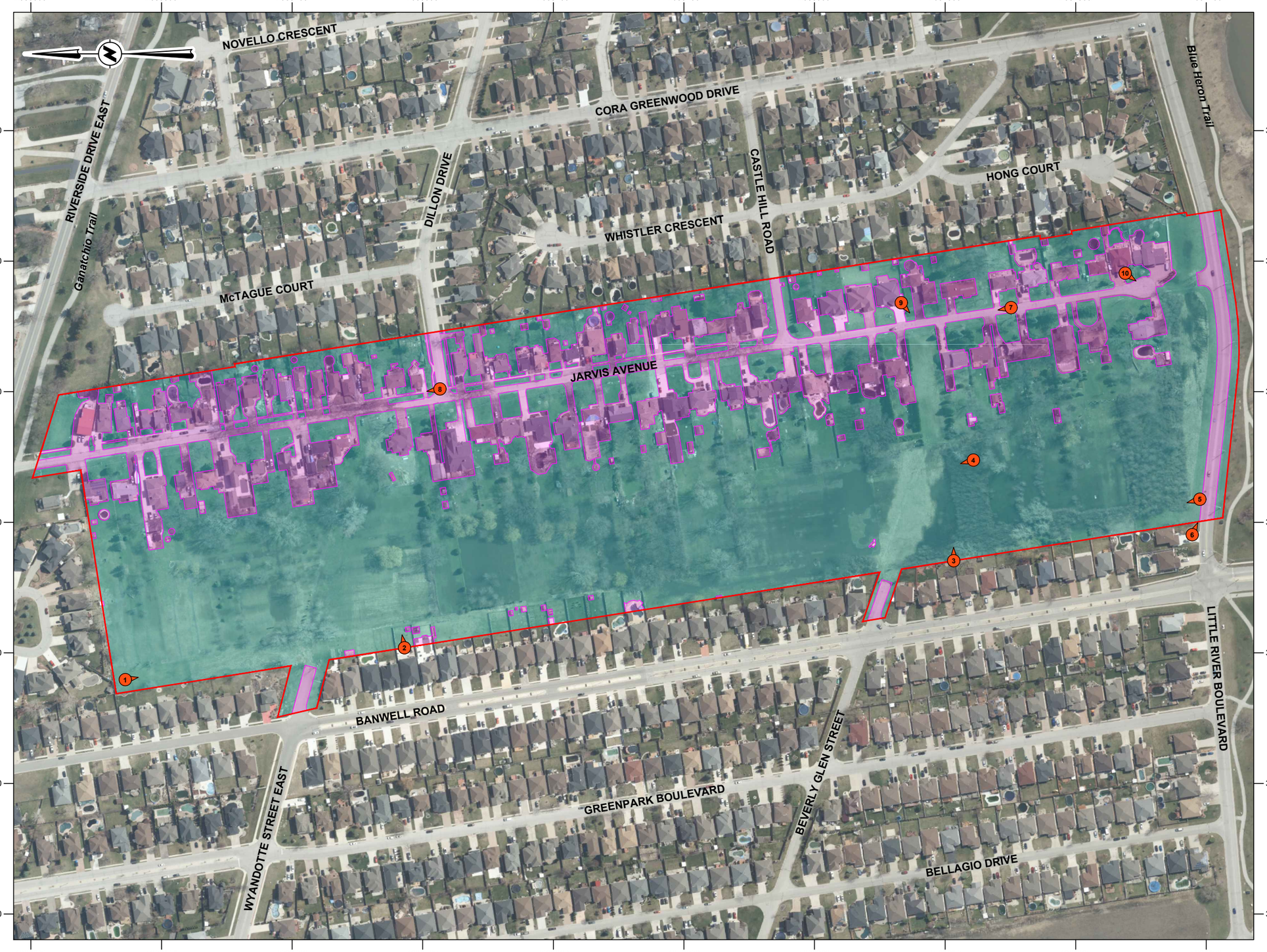

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STAGE 1
ARCHAEOLOGICAL ASSESSMENT
EAST RIVERSIDE MUNICIPAL ENVIRONMENTAL ASSESSMENT
JARVIS AVENUE, CITY OF WINDSOR
COUNTY OF ESSEX, ONTARIO

TITLE:
STAGE 1 RESULTS WITH PHOTOGRAPH LOCATIONS AND DIRECTIONS

LEGEND:

- STUDY AREA
- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER

AREA OF ARCHAEOLOGICAL POTENTIAL

- NON-PLOUGHABLE - STAGE 2 TEST PITTING AT 5m INTERVALS RECOMMENDED

AREA OF NO ARCHAEOLOGICAL POTENTIAL

- DISTURBED - NO FURTHER ASSESSMENT RECOMMENDED

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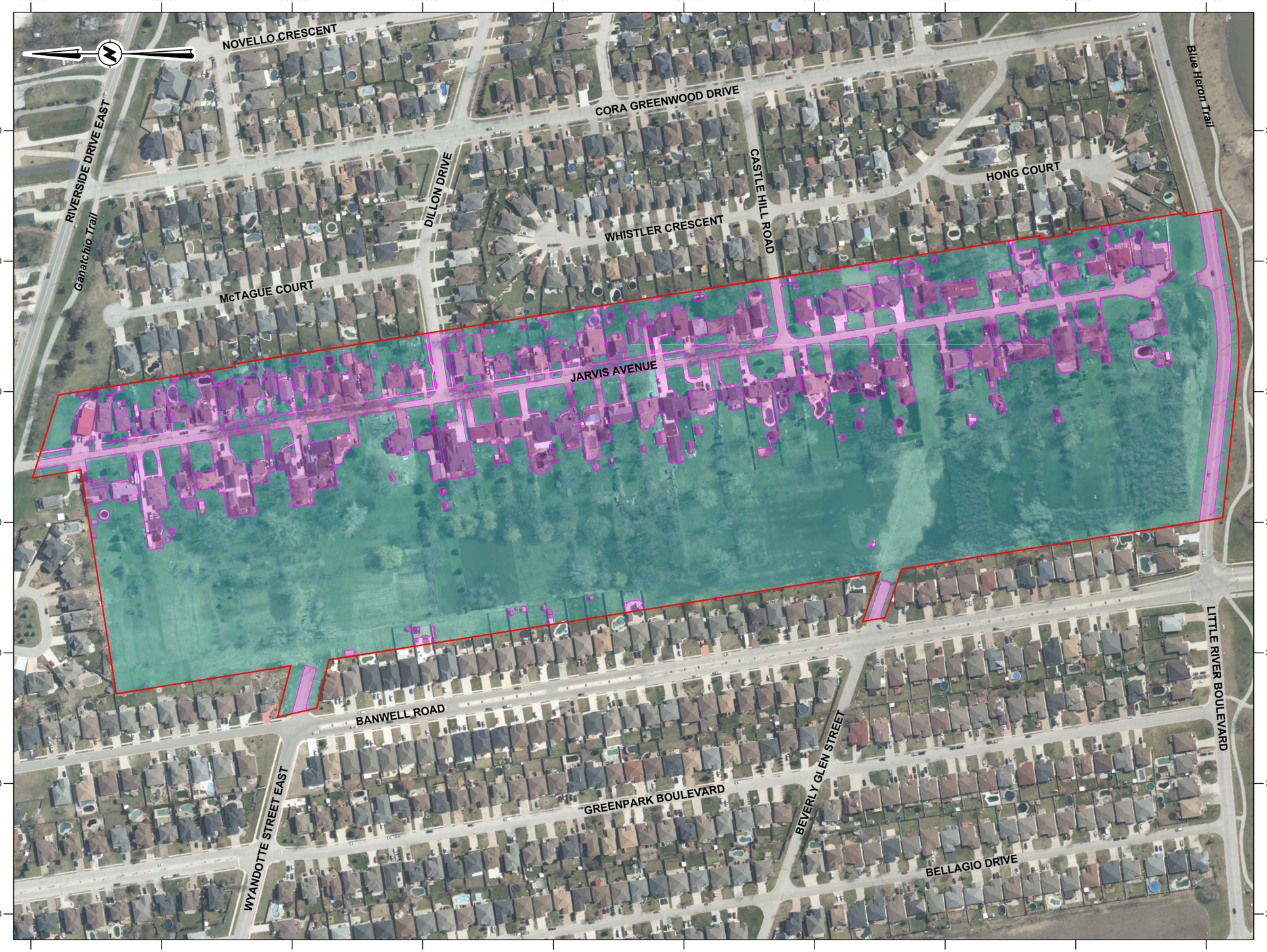

PROJECT:
STAGE 1
ARCHAEOLOGICAL ASSESSMENT
EAST RIVERSIDE MUNICIPAL ENVIRONMENTAL ASSESSMENT
JARVIS AVENUE, CITY OF WINDSOR
COUNTY OF ESSEX, ONTARIO

TITLE:
SUGGESTED STRATEGY
FOR STAGE 2 ASSESSMENT

LEGEND:

STUDY AREA

AREA OF ARCHAEOLOGICAL POTENTIAL

NON-PLOUGHABLE - STAGE 2 TEST PITTING AT 5m INTERVALS REQUIRED

AREA OF NO ARCHAEOLOGICAL POTENTIAL

DISTURBED - NO FURTHER ASSESSMENT RECOMMENDED

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ALL LOCATIONS ARE APPROXIMATE.

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REFERENCES:
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Appendix B

Photographs

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. SYW197047

PROJECT Stage 1 Archaeological Assessment, East Riverside

LOCATION Part Lots 145, 146 & 147, Concession 1 Petite Cote, Township of Sandwich, City of Windsor

PHOTOGRAPH	1

Description
View of study area, from northwest corner, showing landscaped urban area. Facing southeast.

PHOTOGRAPH	2

Description
View of study area, from west edge, showing landscaped urban area. Facing northeast.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. SYW197047

PROJECT Stage 1 Archaeological Assessment, East Riverside

LOCATION Part Lots 145, 146 & 147, Concession 1 Petite Cote, Township of Sandwich, City of Windsor

PHOTOGRAPH	3

Description
View of study area, from west edge, showing landscaped urban area. Facing east.

PHOTOGRAPH	4

Description
View of study area showing existing servicing. Facing northwest.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. SYW197047

PROJECT Stage 1 Archaeological Assessment, East Riverside

LOCATION Part Lots 145, 146 & 147, Concession 1 Petite Cote, Township of Sandwich, City of Windsor

PHOTOGRAPH	5

Description
View of study area, from near south edge. Note trees and scrub. Facing northwest.

PHOTOGRAPH	6

Description
View of Litte River Boulevard. Facing southeast.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. SYW197047

PROJECT Stage 1 Archaeological Assessment, East Riverside

LOCATION Part Lots 145, 146 & 147, Concession 1 Petite Cote, Township of Sandwich, City of Windsor

PHOTOGRAPH	7

Description
View of study area along Jarvis Avenue, facing northwest.

PHOTOGRAPH	8

Description
View of study area along Jarvis Avenue, facing northwest.

APPENDIX B - PHOTOGRAPHIC RECORD

PROJECT NO. SYW197047

PROJECT Stage 1 Archaeological Assessment, East Riverside

LOCATION Part Lots 145, 146 & 147, Concession 1 Petite Cote, Township of Sandwich, City of Windsor

PHOTOGRAPH	9

Description
Study area, from Jarvis Street. Facing southwest.

PHOTOGRAPH	10

Description
Study area, south end of Jarvis Street. Facing southwest.

Appendix C

Assessor Qualifications

Assessor Qualifications

Dr. Shaun Austin, Ph.D. – Associate Archaeologist

Dr. Austin is the Senior Archaeology Advisor of Wood's cultural heritage resources group and is based in the Wood's Hamilton Office. He has been working in Canadian archaeology and heritage since 1976 and as an archaeological and heritage consultant in Ontario since 1987. He is a dedicated cultural heritage consultant with repeated success guiding projects through to completion to the satisfaction of the development proponent, the cultural heritage community and all other stakeholder groups. His areas of interest and expertise include pre-contact Aboriginal lithics and ceramics. Dr. Austin holds a Professional Archaeology License (P141) issued by the Ontario Ministry of Tourism, Culture and Sport, is MTO RAQs certified in Archaeology/Heritage and is a member of the Ontario Association of Professional Archaeologists.

Barbara Slim, M.A. – Senior Archaeologist

Ms. Slim is a Senior Archaeologist with more than 13 years of experience in the archaeological field and has participated in and directed numerous Stage 1 to 4 archaeological assessments in Ontario. As a founding member of the Wood's archaeology team, Ms. Slim has performed every aspect of project execution, from client relations, project design and First Nation's engagement to MTCS clearance. The majority of the above-mentioned projects have included First Nations involvement. In addition to her archaeological experience, Ms. Slim has several years of experience in conducting environmental investigations and occupational hygiene assessments. Furthermore, she currently serves as Health & Safety Coordinator for her office. Her diverse background with multidisciplinary projects has highlighted her abilities as an effective team member and innovator. Ms. Slim holds a Professional Archaeology License (P348) issued by the Ontario MTCS, is a member of the Ontario Association of Professional Archaeologists and Ontario Archaeological Association.

Kristy O'Neal, M.A. – Senior Archaeologist

Ms. O'Neal is a Senior Archaeologist at Wood with over 20 years of archaeology consulting experience in Ontario. Ms. O'Neal has supervised a wide variety of Stage 1 through 4 archaeological assessments throughout Ontario, with a focus on both pre-contact and Euro-Canadian settlements. Pre-Contact projects have involved First Nations consultation. Ms. O'Neal has a strong background in cultural material analysis and has extensive experience with large complex stratified Aboriginal sites situated within often compromised urban context. She holds a Master's Degree in Bioarchaeology and a Bachelor of Arts Degree in Anthropology from the University of Western Ontario, where she received a Gold Medal Award. Ms. O'Neal's areas of interest and expertise include the archaeological prehistory and history of southwestern Ontario, with focus on the Middle Woodland period and changes in Aboriginal weapon technology. Ms. O'Neal holds a **Professional Archaeology Licence** (**P066**) issued by the Ontario Ministry of Tourism, Culture and Sport, and is a member of the Ontario Archaeology Society.

Chelsea Dickinson, B.A. – Field Archaeologist

Ms. Dickinson is a Field Archaeologist with 4 years of experience in the consulting archaeology. She has participated in Stage 1 to 4 archaeological assessments in Ontario, including survey in Northern Ontario. In addition, Ms. Dickinson is proficient in surveys using ArcGIS mapping

systems, and has extensive experience working on both Aboriginal and Euro-Canadian sites. Furthermore, she currently serves as Health & Safety Coordinator for her office. Her diverse background with multidisciplinary projects has highlighted her abilities as an effective team member and innovator. Ms. Dickinson holds an **Applied Research Archaeology Licence (R1194)** issued by the MTCS and is a member of the Ontario Archaeological Society.

Appendix D

Limitations

Limitations

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