

Appendix B: Archaeological and Heritage Studies



1.0 PROJECT REPORT COVER PAGE

LICENSEE INFORMATION:

Contact Information:

Michael B. Henry CD BA FRAI FRSA
Managing Partner
Lakelands District Office
380 Talbot Street, P.O. Box 29
Port McNicoll, ON L0K 1R0
Phone: (705) 534-1546 Fax: (705) 534-7855
Email: mhenry@amick.ca
www.amick.ca

Licensee:

Ontario Archaeology Licence:

Sarah MacKinnon MSc
P1024

PROJECT INFORMATION:

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15798

MTCS Project Number:

P1024-0088-2015

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Stage 1 Archaeological Assessment

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Oxford County Road 16.

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Oxford County Road 16 (Road 84) from Kintore to 31st
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Part of Lot 15-16, Concession 11-15 (Geographic
Township of East Zorra, County of Oxford), Town of
Kintore, Oxford County

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2.0 EXECUTIVE SUMMARY

This report describes the results of the 2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County, conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P1024 issued to Sarah MacKinnon by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as part of the Environmental Assessment requirement under the Planning Act (RSO 1990b) and the Provincial Policy Statement (2014). For plans of subdivision, Ontario Regulation 544/06 under the Planning Act (1990b) requires an evaluation of archaeological potential and, where applicable, an archaeological assessment report completed by an archaeologist licensed by the Ministry of Tourism, Culture and Sport (MTCS). Policy 2.6 of the Provincial Policy Statement (PPS 2014) addresses archaeological resources. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation on September 4, 2015

All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

As a result of the property inspection of the study area, the study area has been identified as an area of archaeological potential. Test pitting at a 5 metre interval within the proposed corridor is recommended. The Stage 1 included the north and south side of County Road 16 (Road 84) to account for any potential changes.

3.0 TABLE OF CONTENTS

1.0 PROJECT REPORT COVER PAGE	1
2.0 EXECUTIVE SUMMARY	2
3.0 TABLE OF CONTENTS	3
4.0 PROJECT PERSONNEL	3
5.0 PROJECT BACKGROUND	4
6.0 ANALYSIS AND CONCLUSIONS	14
7.0 RECOMMENDATIONS	22
8.0 ADVICE ON COMPLIANCE WITH LEGISLATION	22
9.0 BIBLIOGRAPHY AND SOURCES	23
10.0 MAPS	24
11.0 IMAGES	35

4.0 PROJECT PERSONNEL

AMICK CONSULTANTS LIMITED PARTNERS

Michael Henry (MTCS Professional Archaeologist Licence #P058)
Marilyn Cornies (MTCS Professional Archaeologist Licence #P038)

AMICK CONSULTANTS LIMITED BUSINESS MANAGER

Melissa Maclean BBA email mmaclean@amick.ca

PROJECT CONSULTANT ARCHAEOLOGIST

Sarah MacKinnon (MTCS Professional Archaeologist Licence #P1024)

PROJECT FIELD DIRECTORS

Michael Henry (MTCS Professional Archaeologist Licence #P058)

PROJECT FIELD ASSISTANTS

Marilyn Cornies (MTCS Professional Archaeologist Licence #P038)

PROJECT REPORT PREPARATION

Elizabeth Grant

PROJECT DRAUGHTING

Elizabeth Grant

PROJECT PHOTOGRAPHY

Michael Henry (MTCS Professional Archaeologist Licence #P058)

5.0 PROJECT BACKGROUND

This report describes the results of the 2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County, conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P1024 issued to Sarah MacKinnon by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as part of the Environmental Assessment requirement under the Planning Act (RSO 1990b) and the Provincial Policy Statement (2014). For plans of subdivision, Ontario Regulation 544/06 under the Planning Act (1990b) requires an evaluation of archaeological potential and, where applicable, an archaeological assessment report completed by an archaeologist licensed by the Ministry of Tourism, Culture and Sport (MTCS). Policy 2.6 of the Provincial Policy Statement (PPS 2014) addresses archaeological resources. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a).

5.1 DEVELOPMENT CONTEXT

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation on September 4, 2015

All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

The proposed road improvements have yet to be determined. The Stage 1 included the north and south side of County Road 16 (Road 84) to account for any potential changes

5.2 HISTORICAL CONTEXT

As part of the present study, background research was conducted in order to determine the archaeological potential of the proposed project area.

“A Stage 1 background study provides the consulting archaeologist and Ministry report reviewer with information about the known and potential cultural heritage resources within a particular study area, prior to the start of the field assessment.” (OMCzCR 1993)

The evaluation of potential is further elaborated Section 1.3 of the Standards and Guidelines for Consultant Archaeologist (2011) prepared by the Ontario Ministry of Tourism and Culture:

“ The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property’s archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment. ”
(MTC 2011: 17)

Features or characteristics that indicate archaeological potential when documented within the study area, or within close proximity to the study area (as applicable), include:

- “ - previously identified archaeological sites*
 - water sources (It is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees.):*
 - primary water sources (lakes, rivers, streams, creeks)*
 - secondary water sources (intermittent streams and creeks, springs, marshes, swamps)*
 - features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches)*
 - accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh)*
 - elevated topography (e.g., eskers, drumlins, large knolls, plateaux)*
 - pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground*
 - distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.*
 - resource areas, including:*
 - food or medicinal plants (e.g., migratory routes, spawning areas, prairie)*
 - scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)*
 - early Euro-Canadian industry (e.g., fur trade, logging, prospecting, mining)*
 - areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.*
 - 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 that is a federal, provincial or municipal historic landmark or site*

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)

- *property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations”*
(MTC 2011: 17-18)

The evaluation of potential does not indicate that sites are present within areas affected by proposed development. Evaluation of potential considers the possibility for as yet undocumented sites to be found in areas that have not been subject to systematic archaeological investigation in the past. Potential for archaeological resources is used to determine if property assessment of a study area or portions of a study area is required.

“Archaeological resources not previously documented may also be present in the affected area. If the alternative areas being considered, or the preferred alternative selected, exhibit either high or medium potential for the discovery of archaeological remains an archaeological assessment will be required.”

(MCC & MOE 1992: 6-7)

“The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property’s archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment.”

(MTC 2011: 17)

In addition, archaeological sites data is also used to determine if any archaeological resources had been formerly documented within or in close proximity to the study area and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to establish the relative significance of any resources that might be encountered during the conduct of the present study. For example, the relative rarity of a site can be used to assign an elevated level of significance to a site that is atypical for the immediate vicinity. The requisite archaeological sites data of previously registered archaeological sites was collected from the Programs and Services Branch, Culture Programs Unit, MTCS and the corporate research library of AMICK Consultants Limited. The Stage 1 Background Research methodology also includes a review of the most detailed available topographic maps, historical settlement maps, archaeological management plans (where applicable) and commemorative plaques or monuments. When previous archaeological research documents lands to be impacted by the proposed undertaking or archaeological sites within 50 metres of the study area, the reports documenting this earlier work are reviewed for pertinent information. AMICK Consultants Limited will often modify this basic methodology based on professional judgment to include additional research (such as, local historical works or documents and knowledgeable informants).

5.2.1 CURRENT CONDITIONS

The present use of the study area is approximately 6 kilometres of road and road allowance along the north and south side of Oxford County Road 16 (Road 84) between 31 Line and

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)

roughly 200 metres east of 19th Line (Road 119). The study area consists of the asphalt of Country Road 16, and to the north and south of Oxford County Road 16, gravel, gravel driveways associated with structures, intersecting roads, grassy areas and ditches. The study area is bounded on the north and south by farmland, intersecting road and driveways. A plan of the study area is included within this report as Figure 3. Current conditions encountered during the Stage 1 Property Inspection are illustrated in Figures 4 & 5.

5.2.2 GENERAL HISTORICAL OUTLINE

In 1788, the Hesse District was established within Upper Canada covering the territory of what is today southwestern Ontario. Four years later it became the Western District with the establishment of Norfolk County that included the territory of present-day Oxford County. In 1793, Abraham Canfield a United Empire Loyalist from Connecticut settled in the "Township of Oxford on the Thames". In 1798, these lands were included into a new London District. The Brock District, containing the Oxford County territory, was then split off from the London District in 1840, after Upper Canada had been replaced by the Canada West portion of the Province of Canada governance. (Wikipedia.org)

Legislation passed in 1878 redefined the boundaries of three counties, Oxford, Middlesex, and Norfolk to form the new District of London. A District had its own Court of Quarter Sessions, which was established, in the Courthouse in Vittoria near the Loyalist settlements along Lake Erie. At this time there were 1,200 people in the District, only 200 of whom were resident in Oxford. The lands that would eventually become the Nissouris were still designated as Indian lands. Modest growth slowed even further after 1800 as the government sold large tracts of land to speculators, such as Robert Hamilton of Niagara who owned 6,000 acres in Oxford in addition to many other holdings. These absentee businessmen were content to simply wait until their holdings increased in value due to the efforts of other. Extensive lands were also set aside as school and clergy reserves. Blandford Township was entirely locked up in this way. As a result of these machinations, whereby land was simply held in expectation of future profit, large areas of Upper Canada remained dormant for decades. Nissouri's designation as Indian Land actually kept it, largely, out of the hands of the spectators. Nissouri was partially surveyed in 1811 but work was delayed by the War of 1812 and not resumed until 1819- 20 when the survey was completed by Shubal Park, the Deputy Surveyor of Ontario. The newly surveyed township extended thirteen and a half miles north to south, from the Perth Line to the Governor's Road, and eleven and thirteen sixteenths miles west to east from London Township to Zorra. Nissouri Township was first assessed, separately from Oxford County, in 1821, and the first land grants were made, to 38 veterans of the War of 1812 (History of Zorra).

Figure 2 is a facsimile segment of the Township of East Nissouri map reproduced from The Illustrated Historical Atlas of the County of Oxford (Walker & Miles 1877). Figure 2 illustrates the location of the study area and environs as of 1877. The historic settlement of Kintore is directly to the west of the study area. The present Oxford County Road 16 (Road 84) corresponds to the road illustrated on the Historic Atlas (see figure 2). Although the lots to the north and south of the Early Settlement Road are listed, there are no structures depicted

other than a mill owned by John Marshall on Lot 16. A tributary of the Nissouri Creek is depicted in the atlas crossing the study area.

It must be borne in mind that inclusion of names of property owners and depictions of structures within properties on these maps were sold by subscription. While information included within these maps may provide information about occupation of the property at a specific point in time, the absence of such information does not indicate that the property was not occupied.

5.2.3 SUMMARY OF HISTORICAL CONTEXT

The brief overview of documentary evidence readily available indicates that the study area is situated within an area that was close to the historic transportation routes and in an area well populated during the nineteenth century and as such has potential for sites relating to early Euro-Canadian settlement in the region. Background research indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of potable water in the past.

5.3 ARCHAEOLOGICAL CONTEXT

The Archaeological Sites Database administered by the Ministry of Tourism, Culture and Sport (MTCS) indicates that there is no (0) previously documented sites within 1 kilometre of the study area. However, it must be noted that this is based on the assumption of the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MTCS. In addition, it must also be noted that a lack of formerly documented sites does not indicate that there are no sites present as the documentation of any archaeological site is contingent upon prior research having been conducted within the study area.

On the basis of information supplied by MTCS, no archaeological assessments have been conducted within 50 metres of the study area. AMICK Consultants Limited assumes no responsibility for the accuracy of previous assessments, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MTCS. In addition, it must also be noted that the lack of formerly documented previous assessments does not indicate that no assessments have been conducted.

5.3.1 FIRST NATIONS REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MTCS. As a result it was determined that no (0) archaeological sites relating directly to First Nations habitation/activity had been formally registered within the immediate vicinity of the study area. However, the lack of formally documented archaeological sites does not mean that First Nations people did not use the area; it more likely reflects a lack of systematic archaeological research in the immediate vicinity.

The distance to water criteria used to establish potential for archaeological sites suggests potential for First Nations occupation and land use in the area in the past. This consideration establishes archaeological potential within the study area.

Table 1 illustrates the chronological development of cultures within southern Ontario prior to the arrival of European cultures to the area at the beginning of the 17th century. This general cultural outline is based on archaeological data and represents a synthesis and summary of research over a long period of time. It is necessarily generalizing and is not necessarily representative of the point of view of all researchers or stakeholders. It is offered here as a rough guideline and outline to illustrate the relationships of broad cultural groups and time periods.

5.3.2 EURO-CANADIAN REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MTCS. As a result it was determined that no (0) archaeological sites relating directly to Euro-Canadian habitation/activity had been formally registered within the immediate vicinity of the study area.

TABLE 1 CULTURAL CHRONOLOGY FOR SOUTH-CENTRAL ONTARIO

Years ago	Period	Southern Ontario
250	Terminal Woodland	Ontario Iroquois and St. Lawrence Iroquois Cultures
1000 2000	Initial Woodland	Princess Point Culture Saugeen-Point Peninsula-Meadowood Cultures
3000 4000 5000	Archaic	Laurentian

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)

6000		Culture
7000	Palaeo-Indian	Plano Culture
8000		
9000		
10000		Clovis Culture
11000		
		(Wright 1972)

5.3.3 LOCATION AND CURRENT CONDITIONS

The study area is described as Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process. The present use of the study area is approximately 6 kilometres of road and road allowance along the north and south side of Oxford County Road 16 (Road 84) between 31 Line and roughly 200 metres east of 19th Line (Road 119). The study area consists of the asphalt of Country Road 16, and to the north and south of Oxford County Road 16, gravel, gravel driveways associated with structures, intersecting roads, grassy areas and ditches. The study area is bounded on the north and south by farmland, intersecting roads and driveways. A plan of the study area is included within this report as Figure 3. Current conditions encountered during the Stage 1 Property Inspection are illustrated in Figures 4 & 5.

5.3.4 PHYSIOGRAPHIC REGION

The Oxford till plain occupies a central position adjacent to the Stratford till plain in the peninsula of southwestern Ontario covering about 600 square miles, or 385,000 acres, mostly in Oxford County. An upland surface ranging from 1,000 to 1,200 feet a.s.l., it is crossed by three well-marked valleys cut by glacial melt water streams. The surface is drumlinized. The till is a pale brown, calcareous loam in which Middle Devonian limestone is the dominant material, although grey or pale brown dolostone is also abundant (Chapman and Putnam 1984: 143-144).

5.3.5 SURFACE WATER

Sources of potable water, access to waterborne transportation routes, and resources associated with watersheds are each considered, both individually and collectively to be the highest criteria for determination of the potential of any location to support extended human activity, land use, or occupation. Accordingly, proximity to water is regarded as the primary indicator of archaeological site potential. The Standards and Guidelines for Consultant

Archaeologists stipulates that undisturbed lands within 300 metres of a water source are considered to have archaeological potential (MTC 2011: 21).

Tributaries of Nissouri Creek cross Oxford Road 16 (Road 84), which corresponds, to the tributary illustrated in the Historic Atlas (see figure 2).

5.3.6 CURRENT PROPERTY CONDITIONS CONTEXT

Current characteristics encountered within an archaeological research study area determine if property Assessment of specific portions of the study area will be necessary and in what manner a Stage 2 Property Assessment should be conducted, if necessary. Conventional assessment methodologies include pedestrian survey on ploughable lands and test pit methodology within areas that cannot be ploughed. For the purpose of determining where property Assessment is necessary and feasible, general categories of current landscape conditions have been established as archaeological conventions. These include:

5.3.6.1 BUILDINGS AND STRUCTURAL FOOTPRINTS

A building, in archaeological terms, is a structure that exists currently or has existed in the past in a given location. The footprint of a building is the area of the building formed by the perimeter of the foundation. Although the interior area of building foundations would often be subject to property Assessment when the foundation may represent a potentially significant historic archaeological site, the footprints of existing structures are not typically assessed. Existing structures commonly encountered during archaeological assessments are often residential-associated buildings (houses, garages, sheds), and/or component buildings of farm complexes (barns, silos, greenhouses). In many cases, even though the disturbance to the land may be relatively shallow and archaeological resources may be situated below the disturbed layer (e.g. a concrete garage pad), there is no practical means of assessing the area beneath the disturbed layer. However, if there were evidence to suggest that there are likely archaeological resources situated beneath the disturbance, alternative methodologies may be recommended to study such areas.

The study area contains no buildings or structural footprints.

5.3.6.2 DISTURBANCE

Areas that have been subjected to extensive and deep land alteration that has severely damaged the integrity of archaeological resources are known as land disturbances. Examples of land disturbances are areas of “past quarrying, major landscaping, recent built and industrial uses, sewage and infrastructure development, etc.” (MCL 2005: 15), as well as driveways made of gravel or asphalt or concrete, in-ground pools, and wells or cisterns. Surfaces paved with interlocking brick, concrete, asphalt, gravel and other surfaces meant to support heavy loads or to be long wearing hard surfaces in high traffic areas, must be prepared by the excavation and removal of topsoil, grading, and the addition of aggregate material to ensure appropriate engineering values for the supporting matrix and also to ensure

that the installations shed water to avoid flooding or moisture damage. All hard surfaced areas are prepared in this fashion and therefore have no or low archaeological potential. Major utility lines are conduits that provide services such as water, natural gas, hydro, communications, sewage, and others. These major installations should not be confused with minor below ground service installations not considered to represent significant disturbances removing archaeological potential, such as services leading to individual structures which tend to be comparatively very shallow and vary narrow corridors. Areas containing substantial and deeply buried services or clusters of below ground utilities are considered areas of disturbance, and may be excluded from Stage 2 Property Assessment. Disturbed areas are excluded from Stage 2 Property Assessment due to no or low archaeological potential and often because they are also not viable to assess using conventional methodology.

*“Earthwork is one of the major works involved in road construction. This process includes excavation, material removal, filling, compaction, and construction. Moisture content is controlled, and compaction is done according to standard design procedures. Normally, rock explosion at the road bed is not encouraged. While filling a depression to reach the road level, **the original bed is flattened after the removal of the topsoil.** The fill layer is distributed and compacted to the designed specifications. This procedure is repeated until the compaction desired is reached. **The fill material should not contain organic elements, and possess a low index of plasticity.** Fill material can include gravel and decomposed rocks of a particular size, but should not consist of huge clay lumps. Sand clay can be used. The area is considered to be adequately compacted when the roller movement does not create a noticeable deformation. **The road surface finish is reliant on the economic aspects, and the estimated usage.**” [Emphasis Added]*

(Goel 2013)

The supporting matrix of a hard paved surface cannot contain organic material, which is subject to significant compression, decay and moisture retention. Topsoil has no engineering value and must be removed in any construction application where the surface finish at grade requires underlying support.

Installation of sewer lines and other below ground services associated with infrastructure development often involves deep excavation that can remove archaeological potential. This consideration does not apply to relatively minor below ground services that connect structures and facilities to services that support their operation and use. Major servicing corridors will be situated within adjacent road allowances with only minor, narrow and relatively shallow underground services entering into the study area to connect existing structures to servicing mainlines. The relatively minor, narrow and shallow services buried within a residential property do not require such extensive ground disturbance to remove or minimize archaeological potential within affected areas.

The study area contains previous disturbances. Oxford Road 16 and the intersecting roads constitute a major disturbance. Gravel driveways enter off the road.

5.3.6.3 LOW-LYING AND WET AREAS

Landscape features that are covered by permanently wet areas, such as marshes, swamps, or bodies of water like streams or lakes, are known as low-lying and wet areas. Low-lying and wet areas are excluded from Stage 2 Property Assessment due to inaccessibility.

The study area does not contain low-lying and wet areas.

5.3.6.4 STEEP SLOPE

Landscape which slopes at a greater than (>) 20 degree change in elevation, is known as steep slope. Areas of steep slope are considered uninhabitable, and are excluded from Stage 2 Property Assessment.

Although some portions of the study area that were subject to test pit survey may qualify as steep slope under the Standards and Guideline for Consultant Archaeologists (MTC 2011), AMICK Consultants Limited corporate policy is that slopes are to be test pit surveyed on any occasion where it is safe to do so. This exceeds the requirements of the Standards and Guidelines and offers greater surety of total coverage of viable assessment areas. Slopes are not assessed because steep slopes are interpreted to have low potential, not due to viability to assess, except in cases where the slope is severe enough to become a safety concern for archaeological field crews. In such cases, the Occupational Health and Safety Act takes precedence as indicated in the introduction to the Standards and Guidelines. Assessment of slopes, except where safety concerns arise, eliminates the invariably subjective interpretation of photographs that generates disputes between reviewers and consultant archaeologists. This is done to minimize delays due to conflicts in such interpretations and to increase the efficiency of review.

The study area does not contain areas of steep slope.

5.3.6.5 WOODED AREAS

Areas of the property that cannot be ploughed, such as natural forest or woodlot, are known as wooded areas. These wooded areas qualify for Stage 2 Property Assessment, and are required to be assessed using test pit survey methodology.

The study area does not contain any wooded areas.

5.3.6.6 PLOUGHABLE AGRICULTURAL LANDS

Areas of current or former agricultural lands that have been ploughed in the past are considered ploughable agricultural lands. Ploughing these lands regularly moves the soil around, which brings covered artifacts to the surface, easily identifiable during visual inspection. Furthermore, by allowing the ploughed area to weather sufficiently through

rainfall washing soil off any artifacts, the visibility of artifacts at the surface of recently worked field areas increases significantly. Pedestrian survey of ploughed agricultural lands is the preferred method of property Assessment because of the greater potential for finding evidence of archaeological resources if present.

The study area does not contain any ploughable lands.

5.3.6.7 LAWN, PASTURE, MEADOW

Landscape features consisting of former agricultural land covered in low growth, such as lawns, pastures, meadows, shrubbery, and immature trees. These are areas that may be considered too small to warrant ploughing, (i.e. less than one hectare in area), such as yard areas surrounding existing structures, and land-locked open areas that are technically workable by a plough but inaccessible to agricultural machinery. These areas may also include open area within urban contexts that do not allow agricultural tillage within municipal or city limits or the use of urban roadways by agricultural machinery. These areas are required to be assessed using test pit survey methodology.

The study area does not contain any areas of lawn associated with the road allowance.

5.3.7 SUMMARY

Background research indicates the vicinity of the study area has potential for archaeological resources of Native origins based on proximity to a source of potable water in the past. Background research also suggests potential for archaeological resources of Euro-Canadian origins based on proximity to a historic roadway and documented historic settlement.

Current conditions within the study area indicate that some areas of the property may have no or low archaeological potential and do not require Stage 2 Property Assessment or should be excluded from Stage 2 Property Assessment. A significant proportion of the study area does exhibit archaeological potential and therefore a Stage 2 Property Assessment is required.

Archaeological potential does not indicate that there are necessarily sites present, but that environmental and historical factors suggest that there may be as yet undocumented archaeological sites within lands that have not been subject to systematic archaeological research in the past.

6.0 ANALYSIS AND CONCLUSIONS

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct

and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

Section 7.7.3 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 132) outlines the requirements of the Analysis and Conclusions component of a Stage 1 Background Study.

- 1) *“Identify and describe areas of archaeological potential within the project area.*
- 2) *Identify and describe areas that have been subject to extensive and deep land alterations. Describe the nature of alterations (e.g., development or other activity) that have severely damaged the integrity of archaeological resources and have removed archaeological potential.”*

6.1 CHARACTERISTICS INDICATING ARCHAEOLOGICAL POTENTIAL

Section 1.3.1 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics that indicate archaeological potential (MTC 2011: 17-18). Factors that indicate archaeological potential are features of the local landscape and environment that may have attracted people to either occupy the land or to conduct activities within the study area. One or more of these characteristics found to apply to a study area would necessitate a Stage 2 Property Assessment to determine if archaeological resources are present. These characteristics are listed below together with considerations derived from the conduct of this study.

- 1) *Previously Identified Archaeological Sites*
Previously registered archaeological sites have not been documented within 300 metres of the study area.
- 2) *Water Sources*
Primary water sources are described as including lakes, rivers streams and creeks. Close proximity to primary water sources (300 metres) indicates that people had access to readily available sources of potable water and routes of waterborne trade and communication should the study area have been used or occupied in the past.

There are no identified primary water sources within 300 metres of the study area.

Secondary water sources are described as including intermittent streams and creeks, springs, marshes, and swamps. Close proximity (300 metres) to secondary water sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne trade and communication should the study area have been used or occupied in the past.

Tributaries of Nissouri Creek cross the study area.

3) *Features Indicating Past Water Sources*

Features indicating past water resources are described as including glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches. Close proximity (300 metres) to features indicating past water sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne trade and communication should the study area have been used or occupied in the past.

There are no identified features indicating past water sources within 300 metres of the study area.

4) *Accessible or Inaccessible Shoreline*

This form of landscape feature would include high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.

There are no shorelines within 300 metres of the study area.

Elevated Topography

Features of elevated topography that indicate archaeological potential include eskers, drumlins, large knolls, and plateaux.

There are no identified features of elevated topography within the study area.

5) *Pockets of Well-drained Sandy Soil*

Pockets of sandy soil are considered to be especially important near areas of heavy soil or rocky ground.

Not applicable.

6) *Distinctive Land Formations*

These are landscape features that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.

There are no identified distinctive land formations within the study area.

7) *Resource Areas*

Resource areas that indicate archaeological potential include food or medicinal plants (e.g., migratory routes, spawning areas, and prairie), scarce raw materials (e.g.,

quartz, copper, ochre or outcrops of chert) and resources of importance to early Euro-Canadian industry (e.g., logging, prospecting, and mining).

There are no identified resource areas within the study area.

8) Areas of Early Euro-Canadian Settlement

These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.

The study area is situated in close proximity to a historic settlement of Kintore identified on the historic atlas map.

9) Early Historical Transportation Routes

This includes evidence of trails, passes, roads, railways, portage routes.

The study area is the early settlement road that appears on the Historic Atlas Map of 1877, now known as Oxford County Road 16 (Road 84). Tributaries of the Nissouri Creek cross the study area.

10) Heritage Property

Property listed on a municipal register or designated under the *Ontario Heritage Act* or is a federal, provincial or municipal historic landmark or site.

There are no listed or designated heritage buildings or properties that form a part of the study area. There are no listed or designated heritage buildings or properties that are adjacent to the study area.

11) Documented Historical or Archaeological Sites

This includes property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations. These are properties which have not necessarily been formally recognized or for which there is additional evidence identifying possible archaeological resources associated with historic properties in addition to the rationale for formal recognition.

There are no known heritage features, or known historic sites, or known archaeological sites within the study area in addition to those formally documented with the appropriate agencies or previously noted under a different criterion.

6.2 CHARACTERISTICS INDICATING REMOVAL OF ARCHAEOLOGICAL POTENTIAL

Section 1.3.2 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics which indicate no archaeological potential or for which

archaeological potential has been removed (MTC 2011: 18-19). These characteristics are listed below together with considerations derived from the conduct of this study.

The introduction of Section 1.3.2 (MTC 2011: 18) notes that “*Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as ‘disturbed’ or ‘disturbance’, and may include:’*”

1) Quarrying

There is no evidence to suggest that quarrying operations were ever carried out within the study area.

2) Major Landscaping Involving Grading Below Topsoil

Unless there is evidence to suggest the presence of buried archaeological deposits, such deeply disturbed areas are considered to have lost their archaeological potential. Properties that do not have a long history of Euro-Canadian occupation can have archaeological potential removed through extensive landscape alterations that penetrate below the topsoil layer. This is because most archaeological sites originate at grade with relatively shallow associated excavations into the soil. First Nations sites and early historic sites are vulnerable to extensive damage and complete removal due to landscape modification activities. In urban contexts where a lengthy history of occupation has occurred, properties may have deeply buried archaeological deposits covered over and sealed through redevelopment activities that do not include the deep excavation of the entire property for subsequent uses. Buildings are often erected directly over older foundations preserving archaeological deposits associated with the earlier occupation.

There is evidence to suggest that major landscaping operations involving grading below topsoil were carried out within the study area. Surfaces paved with interlocking brick, concrete, asphalt, gravel and other surfaces meant to support heavy loads or to be long wearing hard surfaces in high traffic areas, must be prepared by the excavation and removal of topsoil, grading, and the addition of aggregate material to ensure appropriate engineering values for the supporting matrix and also to ensure that the installations shed water to avoid flooding or moisture damage. All hard surfaced areas are prepared in this fashion and therefore have no or low archaeological potential. Oxford County Road is in such a disturbed area and has no or low archaeological potential and often because they are also not viable to assess using conventional methodology.

3) Building Footprints

Typically, the construction of buildings involves the deep excavation of foundations, footings and cellars that often obliterate archaeological deposits situated close to the surface.

There are no buildings within the study area.

4) *Sewage and Infrastructure Development*

Installation of sewer lines and other below ground services associated with infrastructure development often involves deep excavation that can remove archaeological potential.

There is no evidence to suggest that substantial below ground services of any kind have resulted in significant impacts to any significant portion of the study area. Major utility lines are conduits that provide services such as water, natural gas, hydro, communications, sewage, and others. These major installations should not be confused with minor below ground service installations not considered to represent significant disturbances removing archaeological potential, such as services leading to individual structures which tend to be comparatively very shallow and vary narrow corridors. Areas containing substantial and deeply buried services or clusters of below ground utilities are considered areas of disturbance, and may be excluded from Stage 2 Property Assessment.

“Activities such as agricultural cultivation, gardening, minor grading and landscaping do not necessarily affect archaeological potential.”

(MTC 2011: 18)

“Archaeological potential is not removed where there is documented potential for deeply buried intact archaeological resources beneath land alterations, or where it cannot be clearly demonstrated through background research and property inspection that there has been complete and intensive disturbance of an area. Where complete disturbance cannot be demonstrated in Stage 1, it will be necessary to undertake Stage 2 assessment.”

(MTC 2011: 18)

Table 2 below summarizes the evaluation criteria of the Ministry of Tourism and Culture together with the results of the Stage 1 Background Study for the proposed undertaking. Based on the criteria, the property is deemed to have archaeological potential on the basis of proximity to water, proximity to the historic settlement of Kintore and historic structures, and the location of early historic settlement roads adjacent to the study area.

**2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line,
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Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)**

Table 2 Evaluation of Archaeological Potential

FEATURE OF ARCHAEOLOGICAL POTENTIAL		YES	NO	N/A	COMMENT
1	Known archaeological sites within 300m		N		If Yes, potential determined
PHYSICAL FEATURES					
2	Is there water on or near the property?	Y			If Yes, what kind of water?
2a	Primary water source within 300 m. (lakeshore, river, large creek, etc.)		N		If Yes, potential determined
2b	Secondary water source within 300 m. (stream, spring, marsh, swamp, etc.)	Y			If Yes, potential determined
2c	Past water source within 300 m. (beach ridge, river bed, relic creek, etc.)		N		If Yes, potential determined
2d	Accessible or Inaccessible shoreline within 300 m. (high bluffs, marsh, swamp, sand bar, etc.)		N		If Yes, potential determined
3	Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		N		If Yes, and Yes for any of 4-9, potential determined
4	Pockets of sandy soil in a clay or rocky area		N		If Yes and Yes for any of 3, 5-9, potential determined
5	Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		N		If Yes and Yes for any of 3-4, 6-9, potential determined
HISTORIC/PREHISTORIC USE FEATURES					
6	Associated with food or scarce resource harvest areas (traditional fishing locations, agricultural/berry extraction areas, etc.)		N		If Yes, and Yes for any of 3-5, 7-9, potential determined.
7	Early Euro-Canadian settlement area within 300 m.	Y			If Yes, and Yes for any of 3-6, 8-9, potential determined
8	Historic Transportation route within 100 m. (historic road, trail, portage, rail corridors, etc.)	Y			If Yes, and Yes for any 3-7 or 9, potential determined
9	Contains property designated and/or listed under the Ontario Heritage Act (municipal heritage committee, municipal register, etc.)				If Yes and, Yes to any of 3-8, potential determined
APPLICATION-SPECIFIC INFORMATION					
10	Local knowledge (local heritage organizations, First Nations, etc.)		N		If Yes, potential determined
11	Recent disturbance not including agricultural cultivation (post-1960-confirmed extensive and intensive including industrial sites, aggregate areas, etc.)		N		If Yes, no potential or low potential in affected part (s) of the study area.

If **YES** to any of 1, 2a-c, or 10 Archaeological Potential is **confirmed**

If **YES** to 2 or more of 3-9, Archaeological Potential is **confirmed**

If **YES** to 11 or No to 1-10 Low Archaeological Potential is **confirmed** for at least a portion of the study area.

6.3 STAGE 1 ANALYSIS AND CONCLUSIONS

As a result of the Stage 1 portion of the study it was determined that the study area has archaeological potential on the basis of proximity to water, proximity to historic settlement structures, the historic settlement of Kintore, and the location of early historic settlement roads adjacent to the study area. The grassy road allowance is to be test pit assessed at a 5 metre interval between test pits. The ditches within the grass are shallow potential is not necessarily removed. In addition, they are less than 5 metres in width and can be incorporated into the five metre grid. While the paved surface of Oxford Road 16 (Road 84) and associated gravel are not viable to assess, the interesting roads situated within the road allowance are generally less than 5 metres and can be incorporated within a 5 metre test pit grid.

7.0 RECOMMENDATIONS

7.1 STAGE 1 RECOMMENDATIONS

Under Section 7.7.4 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 133) the recommendations to be made as a result of a Stage 1 Background Study are described.

- 1) *Make recommendations regarding the potential for the property, as follows:
 - a. if some or all of the property has archaeological potential, identify areas recommended for further assessment (Stage 2) and areas not recommended for further assessment. Any exemptions from further assessment must be consistent with the archaeological fieldwork standards and guidelines.
 - b. if no part of the property has archaeological potential, recommend that the property does not require further archaeological assessment.*
- 2) *Recommend appropriate Stage 2 assessment strategies.*

The study area has been identified as an area of archaeological potential.

8.0 ADVICE ON COMPLIANCE WITH LEGISLATION

While not part of the archaeological record, this report must include the following standard advisory statements for the benefit of the proponent and the approval authority in the land use planning and development process:

- a. This report is submitted to the Minister of Tourism and Culture 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 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 and Culture, 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 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 archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.*
- d. The Cemeteries Act, R.S.O. 1990, c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner 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 licence.*

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10.0 MAPS



FIGURE 1 LOCATION OF THE STUDY AREA (GOOGLE MAPS 2012)

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)

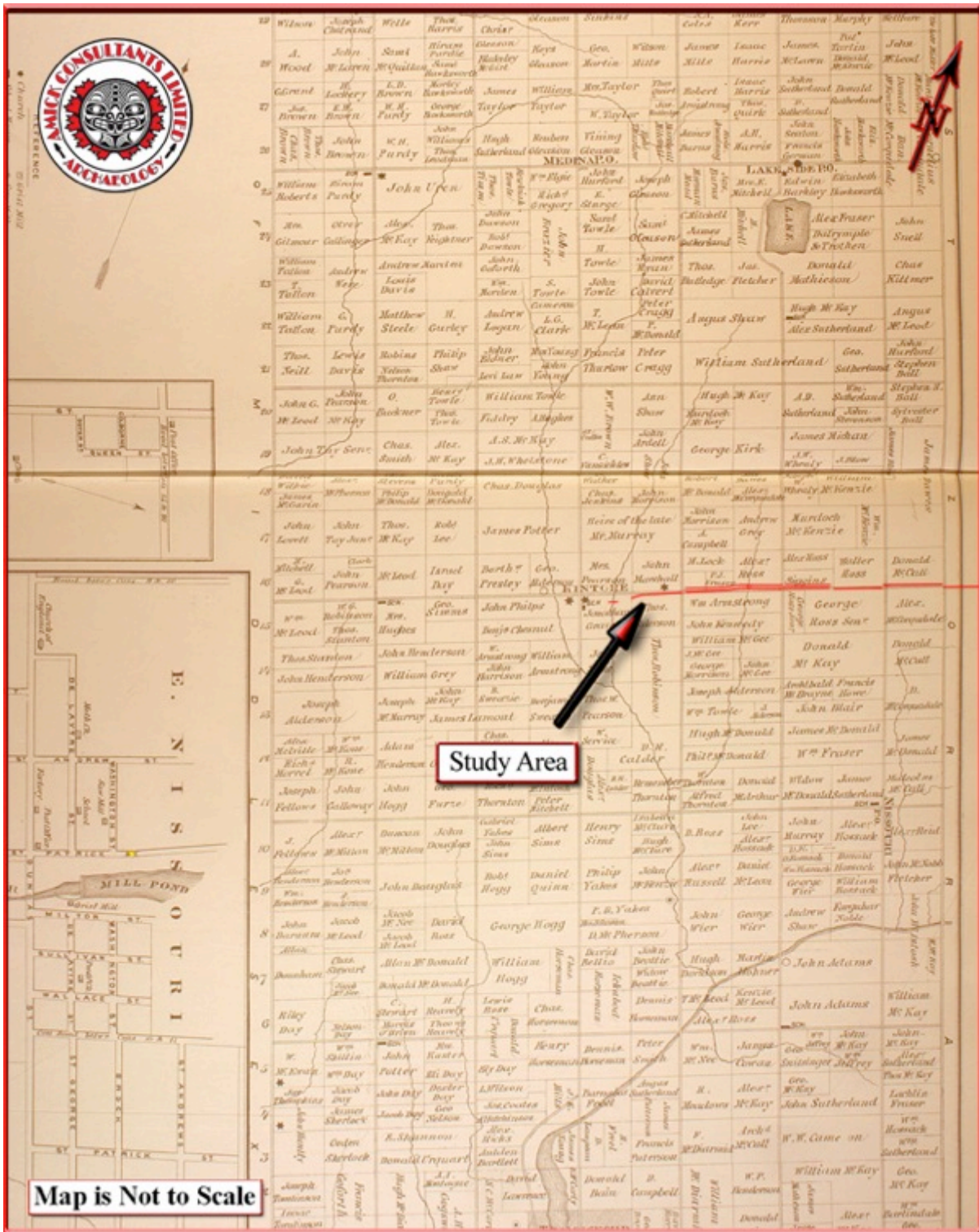


FIGURE 2 FACSIMILE SEGMENT OF THE HISTORIC ATLAS MAP OF THE TOWNSHIP OF EAST NISSOURI (WALKER & MILES 1881)

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)

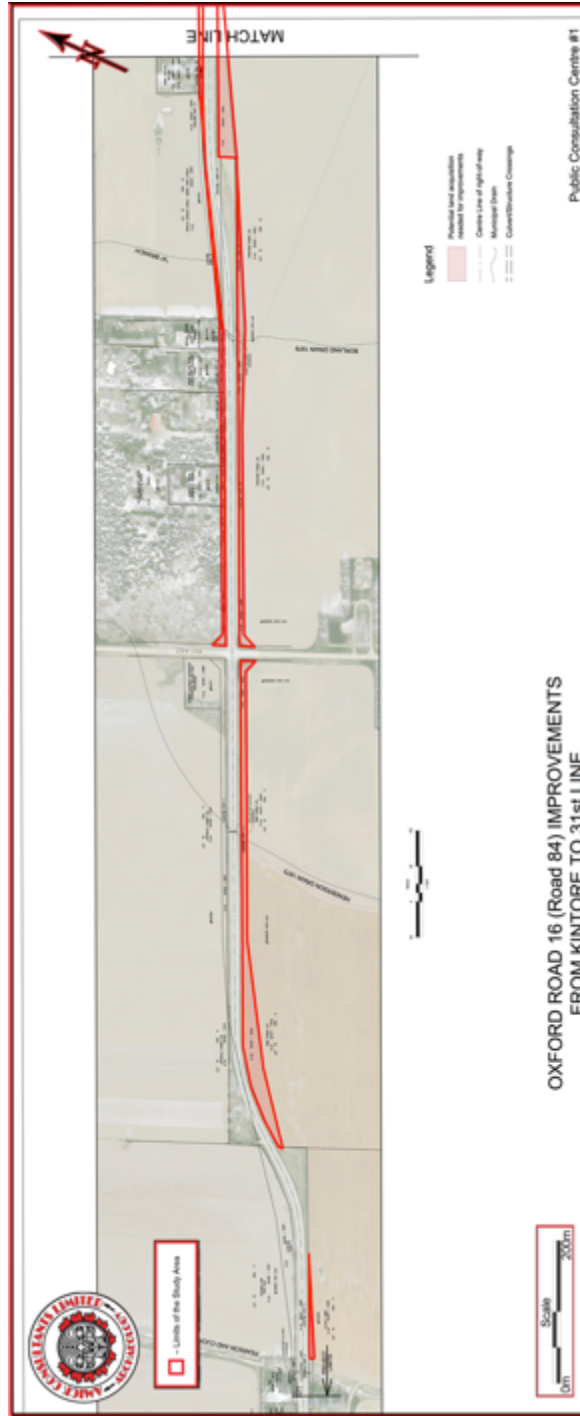


FIGURE 3A PLAN OF COUNTY ROAD 16

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)

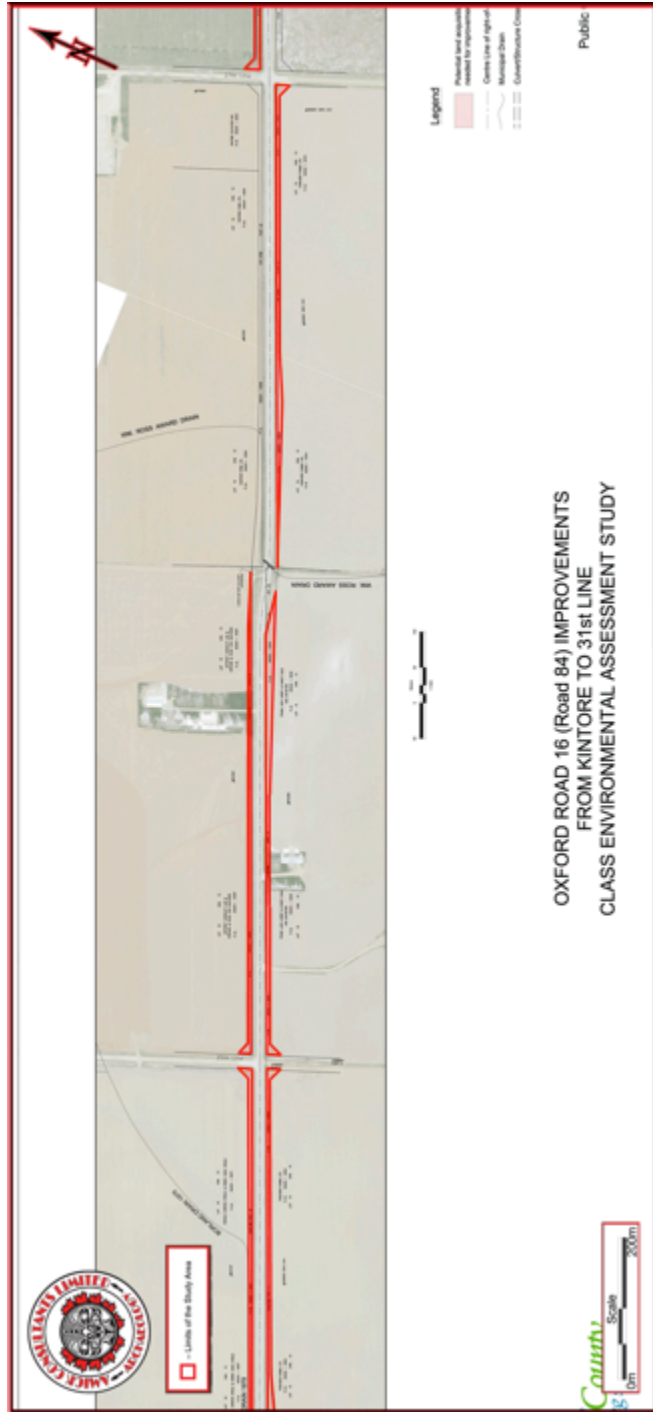


FIGURE 3B PLAN OF COUNTY ROAD 16

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)



FIGURE 3C PLAN OF COUNTY ROAD 16

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)



FIGURE 4A AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2011)

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FIGURE 4B AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2011)

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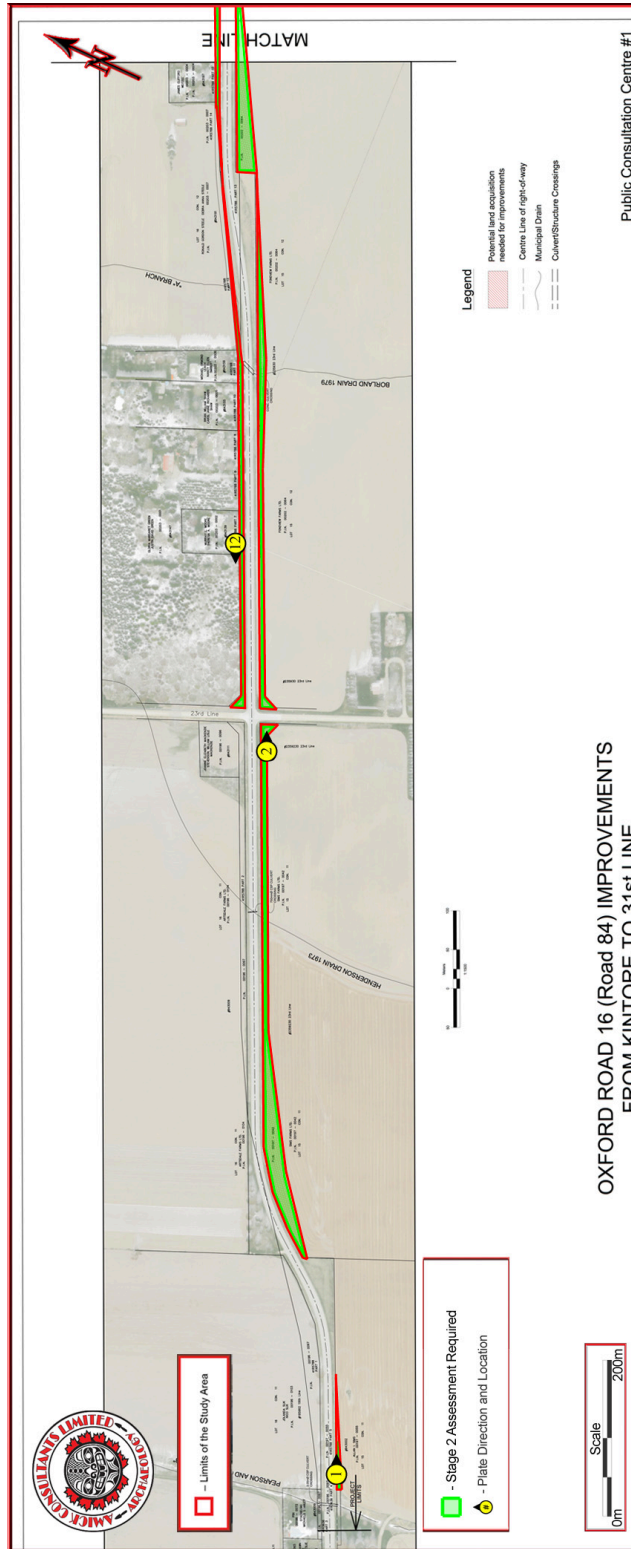


FIGURE 5A DETAILED PLAN OF COUNTY ROAD 16

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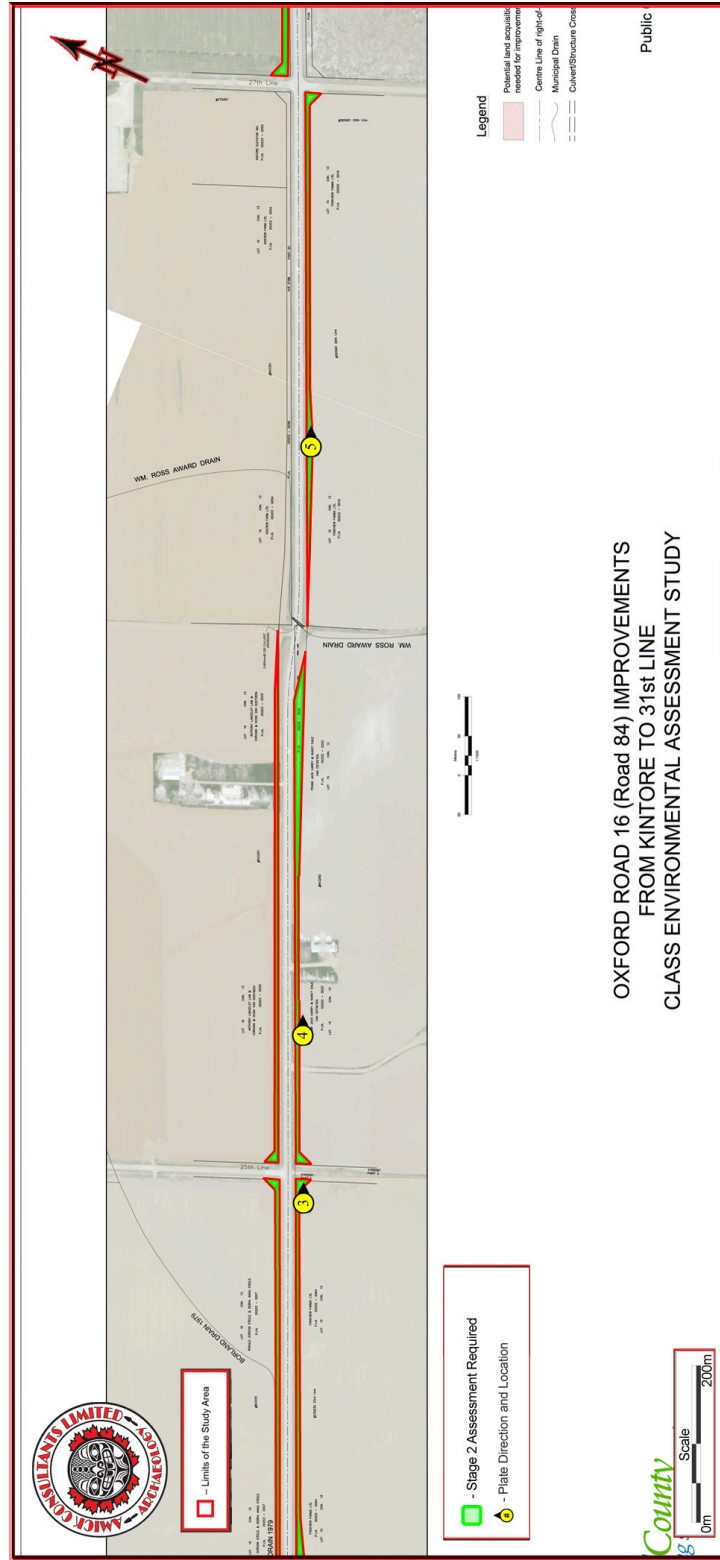


FIGURE 5B DETAILED PLAN OF COUNTY ROAD 16

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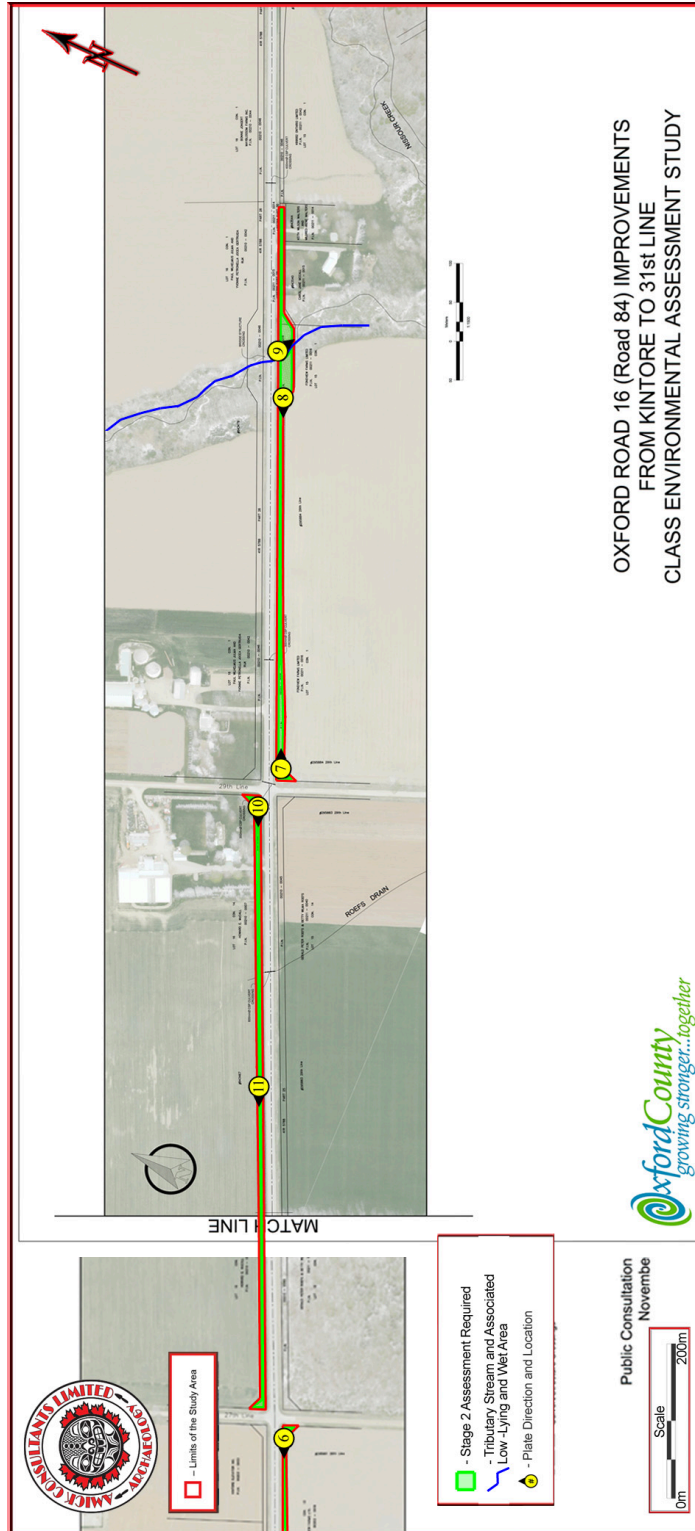


FIGURE 5C DETAILED PLAN OF COUNTY ROAD 16

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11.0 IMAGES



PLATE 1 PROPERTY CONDITIONS



PLATE 2 PROPERTY CONDITIONS



PLATE 3 PROPERTY CONDITIONS



PLATE 4 PROPERTY CONDITIONS



PLATE 5 PROPERTY CONDITIONS



PLATE 6 PROPERTY CONDITIONS

2015 Stage 1 Archaeological Assessment of Oxford County Road 16 (Road 84) from Kintore to 31st Line, Part of Lot 15-16, Concession 11-15 (Geographic Township of East Zorra, County of Oxford), Town of Kintore, Oxford County (AMICK File #15798/MTCS File #P1024-0088-2015)



PLATE 7 PROPERTY CONDITIONS



PLATE 8 PROPERTY CONDITIONS



PLATE 9 PROPERTY CONDITIONS



PLATE 10 PROPERTY CONDITIONS



PLATE 11 PROPERTY CONDITIONS



PLATE 12 PROPERTY CONDITIONS