Stage 1 Archaeological Assessment  
(Background Research and Property Inspection)

Townline Road  
Municipal Class Environmental Assessment  
Townline Road from South of Taunton Road to North of Conlin Road  
Former Township of East Whitby, County of Ontario  
Former Township of Darlington, County of Durham  
City of Oshawa and Municipality of Clarington, Regional Municipality of Durham

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MTCS PIF P392-0072-2014  
ASI File 13EA-163

October 2, 2014
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City of Oshawa and Municipality of Clarington, Regional Municipality of Durham

EXECUTIVE SUMMARY

Archaeological Services Inc. (ASI) was contracted by CIMA+ (Burlington) on behalf of the City of Oshawa, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Townline Road Municipal Class Environmental Assessment (EA) study. The study area aligns with Townline Road from north of Conlin Road to south of Taunton Road, in the City of Oshawa and Municipality of Clarington. The project involves the preliminary design of the Townline Road corridor roadway.

The Stage 1 Archaeological Assessment determined that 10 archaeological sites have been registered within a 1 km of the study area. Part of the study area has been previously assessed. A review of the historical and archaeological contexts of the study area also suggested that it has potential for the identification of Aboriginal and Euro-Canadian archaeological resources. The property inspection confirmed, however, that potential for the identification of archaeological resources is present only in some areas.

In light of these results, the following recommendations are made:

1. Parts of the Townline Road study area were determined to possess archaeological potential. These lands require Stage 2 archaeological assessment by pedestrian survey and test-pit survey prior to and proposed land disturbance;

2. Sections of the Townline Road study area were documented to have been subject to deep and extensive disturbance related to ROW construction and grading as well as the development of adjacent lands. Other areas were documented to have low and wet conditions. Part of the study area was documented to have been previously assessed. These lands do not require further archaeological assessment; and,

3. Should the proposed work extend beyond the current study area then further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of such additional lands.
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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by CIMA+ (Burlington) on behalf of the City of Oshawa, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Townline Road Municipal Class Environmental Assessment (EA) study. The study area aligns with Townline Road from north of Conlin Road to south of Taunton Road, in the City of Oshawa and Municipality of Clarington (Figure 1). The project involves the preliminary design of the Townline Road corridor roadway.

This assessment was conducted under the project direction and project management of Paul David Ritchie (PIF# P392-0072-2014) and the senior project management of Lisa Merritt (P094), both of ASI.

Section 1 of the Ministry of Tourism and Culture’s 2011 document Standards and Guidelines for Consulting Archaeologists (S & G), administered by the Ministry of Tourism, Culture and Sport (MTCS) discusses the objectives of a Stage 1 archaeological assessment as follows:

- To provide information about the history, geography, previous archaeological fieldwork and current land condition of the study area;
- To evaluate in detail the archaeological potential of the study area which can be used, if necessary, to support recommendations for Stage 2 archaeological assessment for all or parts of the study area; and,
- To recommend appropriate strategies for Stage 2 archaeological assessment, if necessary.

This report describes the Stage 1 archaeological assessment that was conducted for this project and is organized as follows: Section 1.0 summarizes the background study that was conducted to provide the historical and archaeological contexts for the project study area; Section 2.0 addresses the field methods used for the property inspection that was undertaken to document its general environment, current land use history and conditions of the study area; Section 3.0 analyses the characteristics of the project study area and evaluates its archaeological potential; Section 4.0 provides recommendations for the next assessment steps; and the remaining sections contain other report information that is required by the S & G, e.g., advice on compliance with legislation, works cited, mapping and photo-documentation.

1.1 Development Context

All work has been undertaken as required by the Environmental Assessment Act, RSO (1990) and regulations made under the Act, and are therefore subject to all associated legislation. This project was initiated and conducted under Schedule C of the Municipal Class EA process. The project was subsequently modified to a Schedule A+ project of the Municipal Class EA process on May 1, 2014 (CIMA+ 2014).

All activities carried out during this assessment were completed in accordance with the Municipal Engineers’ Association document Municipal Class Environmental Assessment (2007, as amended in 2011), the Ontario Heritage Act (2005), and the S & G.
Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted to ASI by CIMA+ (Burlington) on January 15, 2014.

1.2 Historical Context

The purpose of this section, according to the S & G, Section 7.5.7, Standard 1, is to describe the past and present land use and the settlement history and any other relevant historical information gathered through the Stage 1 background research. First, a summary is presented of the current understanding of the Aboriginal land use of the study area. This is followed by a review of the historical Euro-Canadian settlement history.

1.2.1 Aboriginal Settlement and Land Use

Southern Ontario has been occupied by human populations, since the retreat of the Laurentide glacier, approximately 13,000 before present (BP) (Ferris 2013:13). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 BP the environment had progressively warmed (Edwards and Fritz 1988) and populations now occupied less extensive territories (Ellis and Deller 1990: 62-63).

Between approximately 10,000-5,500 BP the Great Lakes basins experienced low-water levels and many sites which would have been located on those former shorelines, now submerged. This period produces the earliest evidence of heavy wood working tools and is indicative of greater investment of labour in felling trees for fuel, to build shelter, or to produce crafts and is ultimately indicative of prolonged seasonal residency at sites. By approximately 8,000 BP evidence exists for polished stone implements and worked native copper. The latter’s source from the north shore of Lake Superior is evidence of extensive exchange networks. Between approximately 4,500-3,000 BP the earliest evidence exists at this time of fish weirs and cemeteries, indicative of increased social organization and investment of labour into social infrastructure, increased procurement of food, and establishing territories (Brown 1995: 13; Ellis et al. 1990; Ellis et al. 2009; cf. Sauer 1952).

Between 3,000-2,500 BP, settlement and subsistence systems are not entirely understood. Populations continued a semi-permanent existence and exploited seasonally available resources, and the harvesting of spawning fish continued to be an important part of their subsistence. Evidence still exists for extensive and complex exchange networks (Spence et al. 1990: 136, 138). By approximately 2,000 BP evidence exists for macro-band camps, focussing on the seasonal exploitation of resources such as spawning fish and wild rice (Spence et al. 1990: 155, 164). It is also during this period that maize was first introduced into southern Ontario, though it would have only supplemented people’s diet (Birch and Williamson 2013: 13-15). Bands likely retreated to interior camps during the winter.

By approximately 1,000 BP until approximately 300 BP, archaeological evidence indicates lifeways similar to the historically described Aboriginal groups. Populations in southern Ontario were Iroquoian speaking though full expression of Iroquoian culture is not recognised archaeologically until the fourteenth century AD. During the Early Iroquoian phase (AD 1000-AD 1300), the communal site is replaced by the village focussed on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson 1990: 317). By the second quarter of the first millennium BP, during the Middle Iroquoian phase (AD 1300-AD 1450), this episodic community disintegration was no longer practised and populations now communally
occupied sites throughout the year (Dodd et al. 1990: 343). In the Late Iroquoian phase (AD 1450-AD 1649) this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). Through this process, the socio-political organization of the Aboriginal Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed.

The study area is situated within the Oshawa Creek drainage and is part of the identified Lynde and Harmony Creeks Iroquoian community sequence (Birch and Williamson 2013:30-31). Limited evidence exists on the Lynde-Harmony Creek settlement sequence. The earliest settlement is documented from the fourteenth century (Waltham site) until the mid-fifteenth century (Joseph Picard site). The Grandview site (Williamson et al. 2003) is located within the Oshawa Creek drainage and dates to the late fourteenth/early fifteenth century. It is believed that the Grandview population subsequently relocated to the McLeod site (Reed 1993). The antecedent settlement of this specific sequence is unknown (Birch and Williamson 2013: 31). By the late-fifteenth century the populations of the Harmony-Lynde Creek sequence seem to have either migrated north to the Uxbridge area (Uxbridge Ossuary - Pfeiffer 1983) or splintered east and/or west to join populations in the Trent Valley and Rouge-Duffins drainages, respectively (Birch and Williamson 2013: 40).

By AD 1600, most of the Aboriginal communities located on the north shore of Lake Ontario had moved inland. The Five Nations Iroquois, and in particular the Seneca, however, were still using the central north shore of Lake Ontario for hunting, fishing, and for participation in the fur trade. By AD 1649 the Seneca, Cayuga and Oneida mainly took over control of the north shore (Konrad 1974; Ramsden 1990). Compared to settlements of the New York Iroquois the “Iroquois du Nord” occupation of the landscape was less intensive. Only seven villages are identified by the early historic cartographers on the north shore and they are documented as considerably smaller than those in New York State. The populations were agriculturalists, growing maize, pumpkins and squash. These settlements also played the important alternate role of serving as stopovers and bases for New York Iroquois travelling to the north shore for the annual beaver hunt (Konrad 1974).

Beginning in the mid-eighteenth century, the Anishnaabeg began to replace the Iroquois as the controlling Aboriginal group in the north shore since the Iroquois confederacy had overstretched their territory between the 1650s and 1670s (Williamson 2008). The Iroquois could not hold the region and agreed to form an alliance with the Anishnaabeg and share hunting territories with them. The Anishnaabeg traded with both the British and the French in order to have wider access to European materials at better prices, and used their strategic position on the Humber to act as trade intermediaries between the British and tribes in the north.

The study area is located within the parcel of the Williams Treaty of 1923 between King George V through his commissioners and the Chippewa of Christian Island, Georgina Island and Rama (Duhamel 1967).

**1.2.2 Historic Euro-Canadian Land Use: Township Survey and Settlement**

Historically, the study area is located in Lot 1, Concessions 3-5 in the Former Township of East Whitby, Ontario County and Lot 35, Concession 4-6, former Township of Darlington, Durham County.

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Aboriginal pathways and set up trading posts at strategic locations along the well-traveled...
river routes. All of these occupations occurred at sites that afforded both natural landfalls for Great Lakes traffic and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Aboriginal trails, both along the lakeshore and adjacent to various creeks and rivers (ASI 2006b).

East Whitby Township

Whitby Township, when first laid out in the 1790s, was designated Township 9 although the name was changed shortly thereafter to Norwich. The first survey of this township was made in 1791 and the first settler arrived in 1794 (Armstrong 1985: 148). The first settler was said to have been Benjamin Wilson, a Loyalist from Vermont, who settled along the lakeshore east of Oshawa (Farewell 1907: 18). Wilson’s house, built on Lot 4 in the Broken Front, was an early landmark that was depicted on several early township surveys and patent plans. Whitby was quickly settled by a mixture of Loyalists, disbanded troops, and emigrants from the United States, the United Kingdom, and Ireland. Boulton (1805: 90) noted that Whitby would command “particular advantages” due to its proximity to the seat of government, and by 1846 Smith described it as a “well settled township … [where] farms are generally well cleared and cultivated, and in good order.” The timber was a mixture of hardwood and pine (Smith 1846: 218). In 1851, Smith described it as “an exceedingly fine township…considered in point of value of property and agricultural productions, the first township in the County” (Smith 1851: 26). This statement is substantiated by an examination of extant census and assessment records for the township.

Two major settlements were soon established in the southern half of the township, Whitby and Oshawa. These communities were advantageously located where watersheds (such as that of Lynde Creek) were crossed by the Kingston Road. Whitby further benefited from its harbour and from the construction of the Grand Trunk Railway in the 1850s. The 1850 de Rottenburg map shows that Whitby contained a much heavier concentration of roads than did neighbouring Pickering, some of the roads having been planked or gravelled. An early patent plan for Whitby (Chewett 1795) showed a road which originated at Wilson’s on Lot 4 in the Broken Front and which extended northwards to Lot 12 in Concession 9. This road forked at Lot 5, Concession 1, and the easterly branch extended up as far as Lot 1, Concession 8. It appears to have followed the high ground between the East Oshawa Creek and Harmony Creek watersheds and does not correspond to any later roads shown on the de Rottenburg (1850), Tremaine (Shier 1860), or Beers atlas (Beers 1877) maps. This early patent plan also showed minor road deviations from Lots 16 to 20 between Concessions 1 and 2, as well as from Lots 1 to 4 in Concession 1.

Darlington Township

Darlington Township, when first laid out in the 1790s, was designated Township 7, although the name was changed shortly thereafter to Bristol. The township was first surveyed in 1793 and the first permanent settler arrived in the township in 1784 (Armstrong 1985: 142). Despite fertile conditions, its development was slow and it was optimistically predicted that it “promises a more than commonly quick settlement” on account of its vicinity to York (Boulton 1805: 77.) In 1846 it was described as “an old, well-settled township, containing good farms, many of which are rented out” and in 1851 it was thought to be the “best settled” township in Durham County (Smith 1846: 42; 1851: 200). The major highway across the township was the Kingston Road, constructed in 1796. The 1850 de Rottenburg map showed three other north-south roads, two of which were constructed on the east side of the township leading towards Bowmanville.
Taunton

This community was located on part Lot 1 in Concessions 3 and 4 (East Whitby) on the Townline road between Durham Region and Clarington. A post office existed here between July 1871 and October 1972 (ASI 2006a: 19).

1.2.3 Historic Map Review

The 1860 Tremaine’s Map of the County of Ontario, Upper Canada, the 1877 Illustrated Historical Atlas of the County of Ontario, Ont., and the 1878 Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont. were reviewed to determine the potential for the presence of historical features within or abutting the study area during the nineteenth century (Figures 2-4). It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases.

The available data regarding property owners and historical features gathered from the historic mapping is summarized in Table 1.

The study area is aligned with Townline Road and includes its intersections with Taunton Road and Conlin Road, all of which are historic transportation routes.

Transportation and communication networks are important because they serve to integrate social and economic activities between disparate settlement centres. As these settlements grew, and traffic increased between them, toll gates, taverns, hotels and other services for travellers were established where major transportation routes were crossed. Early overland routes followed the natural topography, avoiding swamps or rocky outcrops. The historic thoroughfares within the study area, however, were opened along the straight survey lines, creating the familiar grid system of lots and concessions.

The 1930 topographic map of Oshawa was also reviewed to examine the development of the study area during the early twentieth century. The 1930 map indicates that the locale of the study area had changed very little since the late nineteenth century, with increased development Taunton Road and a small locus of five structures along Townline Road not coinciding with any of the structures indicated on the 1878 map. The 1930 mapping also indicates that Harmony Creek north of Taunton Road as an intermittent watercourse, perhaps indicative of a temporary fluctuation in the local watershed (Dept. National Defence 1930).

<table>
<thead>
<tr>
<th>Lot</th>
<th>Con</th>
<th>Property Owner</th>
<th>Historical Feature(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>Jacob Gronk</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>Jacob Gronk</td>
<td>Church</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Launder</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roeben Thomas</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>Wm Bain</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Nineteenth-century property owners and historical features
Table 2: Nineteenth-century property owners and historical features (cont’d)

1877 Illustrated Historical Atlas of the County of Ontario, Ont.

<table>
<thead>
<tr>
<th>Lot #</th>
<th>Con #</th>
<th>Property Owner</th>
<th>Historical Feature(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>Village of Taunton (one structure)</td>
<td>J. Gronk</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>Village of Taunton</td>
<td>Church</td>
</tr>
<tr>
<td></td>
<td></td>
<td>W. Launder</td>
<td>R. Thomas</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>Wm. Bain</td>
<td></td>
</tr>
</tbody>
</table>

1878 Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont.

<table>
<thead>
<tr>
<th>Lot #</th>
<th>Con #</th>
<th>Property Owner</th>
<th>Historical Feature(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>J.K.</td>
<td>Village of Taunton</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>T.H.</td>
<td>V. Wann</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. Lander</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>Godfrey Thompson</td>
<td></td>
</tr>
</tbody>
</table>

1.2.4 Summary of Historical Context

The background research and historic mapping demonstrate that the study area is located within Lot 1, Concessions 3-5 in the Former Township of East Whitby, Ontario County and Lot 35, Concession 4-6, former Township of Darlington, Durham County. The nineteenth century mapping indicates that the study area is in proximity to a number of historic features including historic farmhouses as well as the historic village of Taunton. The study area is aligned with Townline Road and includes its intersections with Conlin Road and Taunton Road, all of which are historic transportation routes. These criteria indicate that the study area possesses potential for the recovery of Euro-Canadian archaeological resources.

Further, the background research demonstrates that the study area is located in the Lynde-Harmony Creek Iroquoian settlement sequence, in the traditional territory of the ancestral Huron-Wendat and was subsequently utilised by the Seneca and Anishnaabeg for resource extraction. Therefore, the study area possesses potential for the recovery of Aboriginal archaeological resources.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Townline Road study area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research: the site record forms for registered sites housed at the MTCS; published and unpublished documentary sources; and the files of ASI.

1.3.1 Current Land Use and Field Conditions

The study area is located in the northeast corner of the sprawling City of Oshawa. The western half of the study area has been subject to residential development. The eastern half of the study area consists of mixed low-density residential and agricultural land use. The surrounding locale of the study area is rural with suburban areas to the southwest. A large proportion of the study area consists of ROW.
1.3.2 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, a description of the physiography and soils, are briefly discussed for the study area.

The S & G stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (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, cobbled beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 BP (Karrow and Warner 1990: Figure 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include: elevated topography (eskers, drumlins, large knolls, and 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 (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (S & G Section 1.3.1).

The study area is situated within the South Slope physiographic region of southern Ontario in drumlinized till plain and drumlin. The South Slope region tilts southward from the heights of the Oak Ridges Moraine into the Lake Ontario basin and is a broad, relatively featureless till plain which spans an area of approximately 230,000 hectares (ha) (Chapman and Putnam 1984:172-174). The South Slope overlies the limestones of the Verulam and Lindsay Formations, the grey shale of the Georgian Bay Formation and the red shale of the Queenston Formation. Till soils of this physiographic region are more sandy in the east and clayey in the west (Chapman and Putnam 1984:173).

The drumlinized till plain of the region was formed during the retreat of the Lake Ontario ice lobe of the Laurentide glacier and indicate directionality of advance and retreat. Till is produced from the advance of continental glacial ice. Soil and rock is carried forward by the ice and mixed a mill, producing a heterogeneous soil which is characteristic of glaciations (Chapman and Putnam 1984: 10, 16).

Drumlins are a common geographic feature in Ontario. Their formation process is not perfectly understood. Three formation processes which are speculated over are plastered (evident from concentric bedding in section), gouging (evident in the geology between drumlins) or by subglacial meltwaters (evident by occasional sand and gravel cores) (Chapman and Putnam 1984: 16). Their greatest value to the study of Holocene geology is that they are indicative of the direction of glacial movement (Chapman and Putnam 1984: 16).
See Figure 5 for surficial geology and Figure 6 for soil drainage. The surficial geology mapping demonstrates that the study area is underlain by diamicton (poorly sorted sediments). The soil drainage mapping demonstrates that the study area contains areas of well drained and imperfectly drained soils.

Soils within the study area consist of Guerin loam, Bondhead loam and Bottom Lands (Dept. of Agriculture 1979; Hydrographic and Map Service 1945). Bottom Lands are soils occurring along stream courses and are subject to periodic flooding. The alluvial material has variable texture (Olding et al. 1956: 51; Webber et al. 1946: 48).

Bondhead loam is developed on loam calcareous till and contains numerous limestone fragments. Drumlins are characteristic of this soil; the humps of which present gently sloping topography with steeper slopes present on the sides. The soil has good internal drainage. Natural vegetation consists of sugar maple, beech, basswood and some elm and ash. Soil colour ranges from very dark grey or grey-brown to pale brown or brownish grey through the horizon. Soil pH ranges from neutral to slightly acidic through the horizon (Olding et al. 1956: 28-29; Webber et al. 1946: 28-29).

Guerin loam is a calcareous loam till and contains numerous limestone fragments. This soil is imperfectly drained and has a very gently sloping to gently sloping topography. These low slopes causes the external drainage to be poor. Internal drainage is also slow. Soil colour ranges from very dark brown to very dark grey-brown through the horizon. Soil pH is typically basic (Olding et al. 1956: 29).

The study area is in proximity to the Taunton and Grandview subwatersheds of Harmony Creek intersected by Oshawa Creek. The Taunton subwatershed drains an area of approximately 872 ha. The Taunton subwatershed originates in the South Slop physiographic region and meets its confluence with Ritson subwatershed in the Iroquois Plain physiographic region south of Adelaide Avenue West in Oshawa. The Grandview subwatershed drains an area of approximately 1,125 ha. It originates in the South Slope physiographic region and meets its confluence with the Ritson subwatershed in the Iroquois plain physiographic region north of Adelaide Avenue West in Oshawa (CLOCA 2011: 10, 12; Figures 2, 4 and 5).

Palaeontological evidence can provide some information on the past environment of the region of the study areas. Isotope studies of Oxygen-18 and Carbon-13 can provide information on past climate conditions. By comparing quantities of Oxygen-18 and Carbon-13 in marl deposits with quantities found in normal meteoric water it is possible to estimate past temperatures and relative humidity. Following the retreat of the Laurentide glacier at approximately 12,000 BP, southern Ontario began to warm up. Until approximately 7,500 BP the temperature was still below that of modern day and the climate was also very dry. Between 7,500 BP and 5,800 BP the climate of southern Ontario remained dry but was approximately 2 degrees Celsius warmer than the modern day average. Between approximately 5,800 BP and 1,500 BP the climate continued to be warmer than the modern day and but was now a very moist climate. After 1,500 BP the temperature began to get cooler until reaching the present day climate (Edwards and Fritz 1988).

By approximately 11,000 BP southern Ontario was predominantly a spruce parkland. By approximately 10,000 BP this had transformed into a predominantly pine woodland. This pine woodland dominated until approximately 4,000 BP, at which point the environment transitioned into a mixed deciduous-coniferous forest of Birch, Maple, Beech and Hemlock. This woodland persisted until the beginnings of European settlement in southern Ontario, at which time the forests were cleared and the region began to be dominated by meadow species and birch (Bernabo and Webb 1976; McAndrews 1981).
Following the retreat of the glacier the southern Ontario was a boreal like environment and supported a sub-arctic ecosystem including extinct megafauna. By between 10,000 BP and 7,000 BP the mixed coniferous-deciduous woodland would likely have been inhabited by more familiar species such as caribou or other cervids. By 2,000 BP the ecosystem would have been similar to that of the present day.

### 1.3.3 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area under review is located in Borden blocks AlGr and AlGq.

According to the OASD (MTCS 2014), 10 previously registered archaeological sites are located within 1 km of the study area. Site details are presented in Table 2. Two sites are located within 300 metres of the study area. These sites are summarised below.

<table>
<thead>
<tr>
<th>Borden #</th>
<th>Site Name</th>
<th>Cultural Affiliation</th>
<th>Site Type</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlGq-35</td>
<td>Mrs Bennett</td>
<td>Undetermined</td>
<td>Undetermined</td>
<td>Roberts 1978</td>
</tr>
<tr>
<td>AlGr-10</td>
<td>Harvey Pascoe</td>
<td>Aboriginal (ca. 10,000-300 BP)</td>
<td>Undetermined</td>
<td>Roberts 1978</td>
</tr>
<tr>
<td>AlGr-11</td>
<td>Lee</td>
<td>Aboriginal (ca. 10,000-2,800 BP)</td>
<td>Undetermined</td>
<td>Roberts 1978</td>
</tr>
<tr>
<td>AlGr-74</td>
<td></td>
<td>Aboriginal (ca. 10,000-8,000 BP)</td>
<td>Findspot</td>
<td>Austin [ASI] 1995</td>
</tr>
<tr>
<td>AlGr-75</td>
<td></td>
<td>Aboriginal (ca. 4,500-2,800 BP)</td>
<td>Findspot</td>
<td>Austin [ASI] 1995</td>
</tr>
<tr>
<td>AlGr-79</td>
<td></td>
<td>Aboriginal (pre-contact)</td>
<td>Findspot</td>
<td>Austin [ASI] 1995</td>
</tr>
<tr>
<td>AlGr-81</td>
<td></td>
<td>Aboriginal (pre-contact)</td>
<td>Findspot</td>
<td>Austin [ASI] 1995</td>
</tr>
<tr>
<td>AlGr-85</td>
<td></td>
<td>Euro-Canadian</td>
<td>Homestead</td>
<td>Austin [ASI] 1995</td>
</tr>
<tr>
<td>AlGr-88</td>
<td>Hugh Earl</td>
<td>Euro-Canadian</td>
<td>Homestead</td>
<td>Austin [ASI] 1995</td>
</tr>
<tr>
<td>AlGr-109</td>
<td>Grandview Street</td>
<td>Aboriginal (pre-contact)</td>
<td>Undetermined</td>
<td>Jackson [NAAL] 1998</td>
</tr>
</tbody>
</table>

Note: Sites in bold are within 300 metres of the study area
ASI – Archaeological Services Inc.
NAAL – Northeastern Archaeological Associates Ltd.

The Lee site (AlGr-11) was registered by Arthur C.B. Roberts in 1978. The site type in undetermined and has been identified as an Aboriginal site tentatively dated to between ca. 10,000 and 2,800 BP. The site was registered on examination of a private collection and informant report of the site location.

The AlGr-74 site consists of a single findspot of a side-notched bifurcate projectile point base, dating the site to ca. 10,000-8,000 BP. The site was identified by pedestrian survey in 1995. No further work was conducted.

According to the background research, three other archaeological assessments have been conducted within 50 m of the study area (AMEC 2013; ASI 1995; 2006a). These studies are reviewed below.
ASI (1995) conducted a Stage 1-2 archaeological assessment of the Metrontario Group Property (South), including 18T-95010 in part of Lots 1-4, Concession 4 in the City of Oshawa, Regional Municipality of Durham under the project direction of Martin S. Cooper (Licence #95-020). The background study determined that the study area possessed archaeological potential. Stage 2 archaeological assessment field work was conducted in May of 1995 by a combination of pedestrian survey and test-pit survey, at 5 m intervals. The survey identified one archaeological site (AlGr-74) and one findspot within 300 m of the Townline study area. The findspot; “P2,” consisted of a single fragment of shattered Onondaga chert. Site AlGr-74 consisted of a single projectile point artifact, identified as an Early Archaic side-notched point. The study area was recommended to be considered free of any further archaeological concern.

ASI (2006a) drafted a technical report of the existing conditions of the proposed Highway 407 East project. This technical report reviewed Aboriginal land use history, historic township and settlement history, and geography and conducted an archaeological potential model for the study area. This report determined that the proposed Highway 407 East project threatened to cause a significant cultural loss due to disturbance of archaeological sites and recommended that proposed alternatives be selected to minimize this impact.

AMEC (2013) conducted a Stage 1 archaeological assessment of Conlin Road, east from Simcoe Street North to the east city limit, in Lots 1-12 and part of Lot 13, Concessions 4 and 5, in the former County of Ontario, Geographic Township of Durham, Oshawa under the project direction of Jason Sequin (PIF P141-182-2013). The Stage 1 identified lands within the Townline Road study area as possessing archaeological potential. The assessment recommended that lands indicated to possess archaeological potential be subject to Stage 2 test-pit survey at 5 metre intervals prior to and land disturbance.

1.3.4 Summary of Archaeological Context

The review of archaeological work conducted in the area demonstrated that 10 previously registered archaeological sites are located within 1 km of the study area with two located within 300 metres of the study area. The registered sites are a mix of Aboriginal and Euro-Canadian sites, which reflect the long-term use and settlement of the area.

The study area is located in proximity to Harmony Creek.

The historical context demonstrates that the study area includes several historic farmhouses and the historic village of Taunton and that Conlin Road, Taunton Road and Townline Road are all historic transportation routes.

The above criteria are indicative that the study area possesses potential for Aboriginal and Euro-Canadian archaeological resources.

2.0 FIELD METHODS

As per the S & G, Section 1.2, Standards 1-6, a property inspection must adhere to the following. The entire property and its periphery must be inspected. The inspection may be either systematic or random. Coverage must be sufficient to identify the presence or absence of any features of archaeological potential. The inspection must be conducted when weather conditions permit good visibility of land features. Natural landforms and watercourses are to be confirmed if previously identified. Additional
features such as elevated topography, relic water channels, glacial shorelines, well-drained soils within heavy soils and slightly elevated areas within low and wet areas should be identified and documented, if present. Features affecting assessment strategies should be identified and documented such as woodlots, bogs or other permanently wet areas, areas of steeper grade than indicated on topographic mapping, areas of overgrown vegetation, areas of heavy soil, and recent land disturbance such as grading, fill deposits and vegetation clearing. The inspection should also identify and document structures and built features which will affect assessment strategies such as heritage structures or landscapes, cairns, monuments or plaques, and cemeteries.

The Stage 1 archaeological assessment property inspection was conducted by Peter Carruthers (P163), of ASI, on April 28, 2014 in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the study area. It was a visual inspection only and did not include excavation or collection of archaeological resources. The property inspection was conducted in compliance with the S & G Section 1.2, Standards 1-6.

Weather conditions for the inspection were a mix of sun and cloud with high ceiling and temperatures between 10 and 13 degrees Celsius. Previously identified features of archaeological potential were examined; additional features of archaeological potential not visible on mapping were identified and documented as well as any features that will affect assessment strategies. Field observations are compiled onto maps of the study area in Section 7.0 (Figures 7-9) and associated photographic plates are presented in Section 8.0 (Plates 1-14). As per the S & G, Section 1.2, the entire property and its periphery were systematically inspected.

3.0 ANALYSIS AND CONCLUSIONS

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the study area. This data is presented below in Section 3.1. Results of the analysis of the property inspection are then presented for the study area (Section 3.2).

3.1 Analysis of Archaeological Potential

The S & G list characteristics that indicate where archaeological resources are most likely to be found. The study area meets the following criteria indicating archaeological potential:

- Previously identified archaeological sites (e.g. AlGr-299);
- Water sources: primary, secondary, or past water source (e.g. Harmony Creek);
- Areas of Euro-Canadian Settlement (e.g. historic farmhouses; Village of Taunton);
- Early historic transportation routes (e.g. Townline Road)

These criteria characterize the study area as having potential for the identification of Aboriginal and Euro-Canadian archaeological resources.

3.2 Analysis of Property Inspection Results

A large part of the study area is documented to have been subject to deep and extensive disturbed ground
including ROW construction and grading as well as development of adjacent property (Figures 8 and 9: areas marked in yellow). These lands do not require further archaeological assessment as per the S & G, Section 1.3.2. A considerable area of land within the study area was also documented to have low and wet conditions (Figure 8: areas marked in blue). These lands do not require further archaeological assessment, as per the S & G, Section 2.1.

The remainder of the lands (except previously assessed areas) require Stage 2 archaeological assessment (Figures 8 and 9: areas marked in green and purple) by a combination of pedestrian survey and test-pit survey in accordance with the S & G, Sections 2.1.1 and 2.1.2.

### 3.3 Conclusions

The Stage 1 archaeological assessment determined that 10 archaeological sites have been registered within one kilometre of the study area. Part of the study area has been previously assessed. A review of the historical and archaeological contexts of the study area also suggested that it has potential for the identification of Aboriginal and Euro-Canadian archaeological resources depending on the degree of disturbance. The property inspection confirmed, however, that potential for the identification of archaeological resources is present only in some areas.

### 4.0 RECOMMENDATIONS

In light of these results, the following recommendations are made:

1. Parts of the study area were determined to possess archaeological potential. These lands require Stage 2 archaeological assessment by pedestrian survey and test-pit survey prior to and proposed land disturbance (Figure 8 and 9: areas marked in green and purple, respectively);

2. Sections of the study area were documented to have been subject to deep and extensive disturbance related to ROW construction and grading as well as the development of adjacent lands (Figures 8 and 9: areas marked in yellow). Other areas were documented to have low and wet conditions (Figure 8: areas marked in blue). Part of the study area was documented to have been previously assessed (Figures 8 and 9: areas marked in hatching). These lands do not require further archaeological assessment; and,

3. Should the proposed work extend beyond the current study area then further Stage 1 Archaeological Assessment should be conducted to determine the archaeological potential of such additional lands.

Notwithstanding the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the MTCS should be immediately notified.
5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI also advises compliance with the following legislation:

- This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 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 field work and report recommendations ensure the conservation, preservation and protection 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 MTCS, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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

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

- The *Funeral, Burial and Cremation Services Act* (2002) require that any person discovering human remains must immediately notify the police or coroner.

- The documentation related to this archaeological assessment will be curated by ASI until such a 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(s), the Ontario MTCS, and any other legitimate interest groups.
6.0 WORKS CITED

AMEC Environment and Infrastructure (AMEC)
2013 Original Report: Stage 1 Background Study and Property Inspection: Conlin Road East from Simcoe Street North to the East City Limit, Lots 1-12, Part of Lot 13, Concession 4&5, Historical County of Ontario, Geographic Township of Durham, Oshawa, Ontario.

Archaeological Services Inc. (ASI)
1995 Archaeological Assessment of Metrontario Group Property (South), Including 18T-95010, Part of Lots 1-4, Concession 4, City of Oshawa, Regional Municipality of Durham.


2006b Historical Overview and Assessment of Archaeological Potential Don River Watershed, City Of Toronto.

Armstrong, F.H.

Beers, J.H.

Belden, H. & Co.

Bernabo, J.C. and T. Webb III

Birch, J. and R. F. Williamson

Boulton, D’A.

Brown, J.
Central Lake Ontario Conservation Authority (CLOCA)

2011 *Black/Harmony/Farewell Creek Watershed Existing Conditions Report – Final.*


Chapman, L.J. and F. Putnam


Chewett, W.


CIMA+

2014 *Email communication,* Stephen Keen, Director Transportation Planning, May 1, 2014.

Duhamel, R.


de Rottenburg, Major Baron

1850 *Map of the Principal Communications in Canada West. Compiled from the Most Authentick Sources, Actual Surveys, District Maps &c.* Ottawa: National Map Collection 3500 sheet 2 (copy held at Robarts Library, University of Toronto).

Department of Agriculture


Department of National Defence

1930 1:63,360. *Oshawa Sheet No. 108*


Edwards, T.W.D. and P. Fritz


Ellis, C.J. and D.B. Deller


Ministry of Consumer Services 2002 *Funeral, Burial and Cremation Services Act*

Ministry of Culture 2005 *Ontario Heritage Act*

Ministry of Environment 1990 *Environmental Assessment Act*
Ministry of Tourism and Culture  

Ministry of Tourism, Culture and Sport (MTCS)  
2014 *Email communication*, Robert von Bitter, MTCS Data Coordinator, April 22, 2014.  

Municipal Engineers’ Association  
2007 *Municipal Class Environmental Assessment [amended 2011]*  

Olding, A.B., R.E. Wicklund and N.R. Richards  

Pfeiffer, S.  

Ramsden, Peter G.  

Sauer, C.O.  

Shier, J.  

Smith, W.H.  
1846 *Smith’s Canadian Gazetteer.* Toronto: H. & W. Roswell.  

Spence, M.W., R.H. Pihl and C. Murphy  

Webber, L.R., F.F. Morwick and N.R. Richards  
Williamson, R.F.


Williamson, R.F., S.J. Austin and S. Cox Thomas
7.0 MAPS
Figure 1: Subject property illustrated on 1:15,000 map
Figure 2: Townline Road Study Area overlaid on 1860 map of County of Ontario
Figure 3: Townline Road Study Area overlaid on 1877 map of Township of East Whitby
Figure 4: Townline Road Study Area overlaid on 1878 map of Township of Darlington
Figure 6: Townline Road - Soil Drainage

Legend:
- Study Area
- Well Drained
- Poorly Drained
- Imperfectly Drained
- Very Poorly Drained
- No data

Legend:
- Study Area
- Well Drained
- Poorly Drained
- Imperfectly Drained
- Very Poorly Drained
- No data

Metres

0 1,000
Sheet 2

Sheet 1

Study Area

Figure 7: Townline Road - Property Inspection Results (Key Map)
Figure 9: Townline Road - Property Inspection Results (Sheet 2)
8.0 IMAGES

Plate 1: View west of study area in northwest corner of intersection of Townline Road and Taunton Road. Area is disturbed. No potential.

Plate 2: View NNE of study area in northeast corner of intersection of Townline Road and Taunton Road. Area is disturbed. No potential.

Plate 3: View SSE of Townline Road ROW. Area is disturbed. No potential.

Plate 4: View SSE of Townline Road ROW. Area is disturbed. No potential.

Plate 5: View SSE of Townline Road ROW. Area is disturbed. No potential.

Plate 6: View southeast of residential property adjacent to Townline Road to the east. Property is heavily graded. No potential.
Plate 7: View SSE of study area. Townline Road ROW is disturbed. No potential. Agricultural field beyond has potential. Requires Stage 2 archaeological assessment.

Plate 8: View southwest of Townline Road ROW and residential beyond adjacent to the west. Area is disturbed. No potential.

Plate 9: View east of residential property adjacent to the east of Townline Road. Property is heavily graded and disturbed. No potential.

Plate 10: View southwest of Townline Road ROW and residential development adjacent to the west. Area is disturbed. No potential.

Plate 11: View southeast of Townline Road ROW and adjacent residential development. Area is disturbed. Residential frontage graded. No potential.

Plate 12: View southeast of study area southeast of intersection of Conlin Road and Townline Road. ROW is disturbed. No potential.
Plate 13: View northeast of study area northeast of intersection of Conlin Road and Townline Road. ROW is disturbed. No potential. Lands beyond have potential. Require Stage 2 archaeological assessment.

Plate 14: View WSW of study area northwest of intersection of Conlin Road and Townline Road. ROW is disturbed. No potential. Lands beyond have potential. Require Stage 2 archaeological assessment.