Appendix E

Stage 1 Archaeological Assessment
Stage 1 Archaeological Assessment  
(Background Research and Property Inspection)

New Coronation Road and CP Rail Crossing  
Municipal Class Environmental Assessment  
Lots 33-35, Concession 3  
Former Township of Whitby, County of Ontario  
Town of Whitby, Regional Municipality of Durham

Prepared for:

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MTCS PIF P392-0038-2013  
ASI File 13EA-142

July 3, 2014
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(Background Research and Property Inspection)

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Executive Summary

Archaeological Services Inc. (ASI) was contracted by Hatch Mott MacDonald (Mississauga) on behalf of the Town of Whitby, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the New Coronation Road and CP Rail Crossing Municipal Class Environmental Assessment (EA) study. The study area includes part of Lots 33-35, Concession 3 from Coronation Road in the east, Rossland Road West in the south, Lakeridge Road North in the west until approximately 1 km north of Rossland Road West in the north. This assessment is being conducted under Schedule ‘B’ of the Municipal Class EA process, and in accordance with the Ministry of Tourism and Culture’s 2011 document Standards and Guidelines for Consultant Archaeologists (S & G) administered by the Ministry of Tourism, Culture and Sport (MTCS).

The Stage 1 Archaeological Assessment determined that 20 archaeological sites have been registered within one kilometre of the study area and that there have been other assessments that overlap the study area. 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.

A large part of the study area has been previously subject to Stage 2 through 4 archaeological assessments for the Highway 407 link that is currently under construction. Another part of the study area has been previously subject to Stage 2 through 4 archaeological assessments for the Currey Property development project. The property inspection documented that the CP Rail ROW possesses deep and extensive ground disturbance. A small part of the study area was also documented to possess low and wet conditions. All of these areas do not require further archaeological assessment. The remainder of the study area possesses confirmed archaeological potential and will require Stage 2 archaeological assessment by combination of test-pit survey and pedestrian survey at 5 m intervals, where appropriate.
In light of these results, the following recommendations are made:

1. The CP Rail ROW was documented to possess deep and extensive land disturbance. A small part of the study area was also documented to possess low and wet conditions. These lands do not require further archaeological assessment;

2. Sections of the study area within the Highway 407 project area have been previously assessed and do not require further archaeological assessment;

3. The remainder of the study area was confirmed to possess archaeological potential and requires Stage 2 Archaeological Assessment by combination of pedestrian survey and test-pit survey; and,

4. Should the proposed work extend beyond the current study area then further 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 Hatch Mott MacDonald (HMM) (Mississauga) on behalf of the Town of Whitby, to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the New Coronation Road and CP Rail Crossing Municipal Class Environmental Assessment (EA) study. The study area includes part of Lots 33-35, Concession 3 from Coronation Road in the east, Rossland Road West in the south, Lakeridge Road North in the west until approximately 1 km north of Rossland Road West in the north (Figure 1). This assessment is being conducted under Schedule ‘B’ of the Municipal Class EA process, and in accordance with the Ministry of Tourism and Culture’s 2011 document Standards and Guidelines for Consultant Archaeologists (S & G) administered by the Ministry of Tourism, Culture and Sport (MTCS).

This assessment was conducted under the project direction and project management of Paul David Ritchie (PIF# P392-0038-2013) and the senior project management of Lisa Merritt (P094), both of ASI.

Section 1 of the S & G 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 is being conducted under Schedule B of the Municipal Class EA process.

All activities carried out during this assessment were completed in accordance with the Municipal Engineers’ Association document Municipal Class Environmental Assessment (2000, as amended in 2007 and 2011), the Ministry of the Environment document Code of Practice: Preparing, Reviewing and Using Class Environmental Assessments in Ontario (2009), 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 HMM (Mississauga) on November 28, 2013.

1.2 Historical Context

The purpose of this section, according to Section 7.5.7 (1) of the S & G, 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, if only seasonally, since the retreat of the Laurentide glacier during what is known as the Paleo-Indian period, approximately 11,000 BP (Ellis and Deller 1990). Populations at this period would have been highly mobile, inhabiting a boreal-parkland more similar to the modern sub-arctic. By the end of the 11th millennium BP, the environment had progressively warmed (see Section 1.3.2) and populations now occupied less extensive territories (Ellis and Deller 1990: 62-63).

From the 10th to the first half of the 6th millennia BP, the Great Lakes’ basins experienced low-water levels, and so it is likely that many sites which would have been located on those former shorelines are now submerged beneath Lake Ontario and Lake Huron. This period produces the earliest evidence of heavy wood working tools, 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
the 8th millennium BP, evidence exists for polished stone implements and worked native copper. The source of the latter from the north shore of Lake Superior is evidence of extensive exchange networks. By the middle of the 5th millennium BP, during the Late Archaic period, 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).

The settlement and subsistence systems of the Early Woodland (3000-2000 BP) period are not entirely clear. Populations continued a semi-permanent existence and exploited seasonally available resources, and harvesting 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 the second millennium BP in the Middle Woodland period, 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 Middle Woodland people’s diet (Birch and Williamson 2013: 13-15). Bands likely retreated to interior camps during the winter.

The advent of Iroquoian culture occurs during the Late Woodland (AD 1000-AD 1649) period though full expression of Iroquoian culture is not recognised archaeologically until the fourteenth century AD. During the Early Iroquoian (AD 1000-AD 1300) phase, 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 (AD 1300-AD 1450) phase, 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 (AD 1450-AD 1649) phase 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 First Nations as described historically by the French and English explorers who first visited southern Ontario was developed.

The study area includes tributaries of Lynde Creek and is situated within 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 evidence is documented from the fourteenth century (Waltham site) until the mid-fifteenth century (Joseph Picard site; WP36). 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. The main settlements were located near the mouths of the Humber and Rouge Rivers, two branches of the Toronto Carrying Place, which was the route that linked Lake Ontario to the upper Great Lakes through Lake Simcoe.

The contact period for the north shore of Lake Ontario begins in the early seventeenth century with the arrival of French explorers, traders and missionaries. The ancestral Huron-Wendat are thought to have been the main group who controlled the region and the presence of European trade goods is first evident in the mid-sixteenth century when European artifacts start to make an appearance at some ancestral Huron-Wendat sites. The occurrence of European artifacts on Huron-Wendat sites increases towards the end of the sixteenth century as the interaction between the Huron-Wendat and French explorers, traders, and missionaries continued to increase in frequency and intensity. The Huron-Wendat were eventually dispersed by the Five Nations Iroquois in 1649 at which point 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.

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

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).

**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.

1.2.3 **Historic Map Review**

The 1860 Tremaine’s *Map of the County of Ontario, Upper Canada* and the 1877 *Illustrated Historical Atlas of the Country of Ontario* was reviewed to determine the potential for the presence of historical features within or abutting the study area during
the nineteenth century (Figures 2 and 3). 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.

Historically, the study area includes part of Lots 33-35, Concession 3 in the Former Township of Whitby, County of Ontario. The available data regarding property owners and historical features gathered from the historic mapping is summarized in Tables 1 and 2.

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<td>Thos. Marquis</td>
<td>Farmhouse</td>
</tr>
<tr>
<td>34</td>
<td>3</td>
<td>J. Walton</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>3</td>
<td>J. Wilson</td>
<td></td>
</tr>
<tr>
<td>34</td>
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<td>35</td>
<td>3</td>
<td>Jas. Young</td>
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<th>Lot #</th>
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<tr>
<td>33</td>
<td>3</td>
<td>T. Marquis</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>3</td>
<td>Mrs. Walton</td>
<td></td>
</tr>
<tr>
<td>34</td>
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<tr>
<td>35</td>
<td>3</td>
<td>W. Duncan</td>
<td>Farmhouses (2)</td>
</tr>
</tbody>
</table>

The 1860 ‘Jas. Young’ house likely correlates with one of the 1877 ‘W. Duncan’ houses, though may have been less intensively occupied based on archaeological evidence (see Section 1.3.3: AlGr-191). The 1860 Thos. Marquis house is not indicated on the 1877 map. This may be for reasons of subscription noted above or possibly that the house was abandoned by 1877.

The study area indicates that Rossland Road West and Coronation Road are both historic transportation routes. The mapping indicates that in 1877, Lake Ridge Road North (north of Rossland Road West) was a proposed road.

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 landscape of the study area had changed very little since the late nineteenth century. The 1930 map indicates that Lakeridge Road North (north of Rossland Road) still did not exist. It also indicates the Canadian Pacific Railway (Dept. National Defence 1930).

1.2.4 Summary of Historical Context

The background research and historic mapping demonstrates that the study area is located in the Former Township of Whitby, County of Ontario in Lots 33-35, Concession 3. The 1877 Illustrated Atlas of the County of Ontario indicates that the study area includes the locations of three historic farmhouses. The study area is flanked by Coronation Road and Rossland Road West, both 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 Creek Late Iroquoian settlement sequence, in 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 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 consists of an approximately 1,200 hectare (ha) area northeast of the developed residential area of the Town of Whitby. The landscape is rural with either agricultural land use or being utilized as bush lot. The study area is intersected by the CP Rail ROW and is flanked to the west, south, and east by Lakeridge Road North, Rossland Road West, and Coronation Road, respectively. The Highway 407 East
Extension includes a north-south link to Highway 401 that cuts through the study area. Their construction of the link is in progress.

### 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, cobble 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 Iroquois Plain physiographic region of southern Ontario in clay plain and drumlin. The Iroquois Plain is a lowland region bordering Lake Ontario. This region is characteristically flat and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of approximately 300 km (Chapman...
and Putnam 1984: 190). The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements.

Glacial Lake Iroquois came into existence by about 12,000 BP as the Ontario lobe of the Laurentide glacier retreated from the Lake Ontario basin. Isostatic uplift and the blockage of subsequent lower outlets by glacial ice produced a water plain substantially higher than modern Lake Ontario. Beginning around 12,000 BP, water levels started to drop during the next few centuries in response to sill elevations at the changing outlet. By about 11,500 BP, when the St. Lawrence River outlet became established, the initial phase of Lake Ontario began and this low water phase appears to have lasted until at least 10,500 BP. At this time the waters stood approximately 328 feet below current levels. At this time isostatic uplift had started to raise the outlet around Kingston so that by 10,000 BP the water level had risen to approximately 262 feet below present. Uplift has continued to tilt Lake Ontario upward to the northeast, propagating a gradual and transgressive expansion throughout the basin (Anderson and Lewis 1985; Karrow 1967:49; Karrow and Warner 1990).

The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building material, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman and Putnam 1984:196). This narrow strip is the most densely inhabited area because of its proximity to Lake Ontario and its climatic influences, as well as its favourable soil conditions.

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 4 for surficial geology and Figure 5 for soil drainage. The surficial geology mapping demonstrates that the study area contains areas of: a) sand; b) silt; and, c) diamicton (poorly sorted sediments). The soil drainage mapping demonstrates that the study area contains areas with poorly, imperfectly, and well drained soils.

Soils within the study area consists of Bottom Lands, Brighton sandy loam, Darlington loam, Lyons loam, Schomberg clay loam, Smithfield clay loam, and Whitby loam (Dept. of Agriculture 1979). 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).
Brighton sandy loam is developed from light brownish grey coarse textured sand and gravel. The depth is approximately 61 cm and the parent material is calcareous. The topography is gently sloping to level; in some areas the topography is moderately sloping. External and internal drainage is good (Olding et al. 1956: 36-37).

Darlington loam occurs on gently sloping to steeply sloping topography. This soil has good to moderately good drainage. The parent material is calcareous making the soil slightly alkaline. The surface texture varies from loam to silt loam with an average depth of approximately 61 cm (Olding et al. 1956: 32-33).

Lyons loam is a poorly drained soil (internal and external). This soil has a level and depressional topography with a high organic content. Soil colour is typically very dark greyish brown with a neutral pH (Olding et al. 1956: 30).

Schomberg clay loam is a medium-well drained soil that has developed from stonefree calcareous clay. The soil topography ranges from smooth gently sloping to moderately sloping. This soil is prone to severe erosion. Soil colour ranges from very dark grey to light brownish grey. Soil pH is typically neutral (Olding et al. 1956: 46).

Smithfield clay loam is an imperfectly drained soil that has developed from a stonefree calcareous clay. This soil has a very gently sloping to level topography. Soil colour ranges from very dark grey to grey-brown through the horizon. Soil pH is typically neutral (Olding et al. 1956: 46-47).

The study area includes tributaries of Lynde Creek. Lynde Creek and its tributaries drain an area of approximately 13,000 ha (CLOCA 2012). The watershed originates in the Oak Ridges Moraine physiographic region and transits the South Slope physiographic region meeting its confluence with Lake Ontario in the Iroquois Plain physiographic region at Lynde Shores Conservation Area.

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° C 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 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 block AlGr.

According to the OASD (MTCS 2013), 20 previously registered archaeological sites are located within 1 km of the study area. Site details are presented in Table 3.

<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>AlGr-160</td>
<td>Levanna</td>
<td>Late Woodland, Euro-Canadian</td>
<td>Findspot</td>
<td>Steiss [ASI] 2004</td>
</tr>
<tr>
<td>AlGr-161</td>
<td>Bowerman</td>
<td>Euro-Canadian</td>
<td>Homestead</td>
<td>Steiss [ASI] 2004</td>
</tr>
<tr>
<td>AlGr-162</td>
<td>McGowan Farm</td>
<td>Euro-Canadian</td>
<td>Homestead</td>
<td>Steiss [ASI] 2004</td>
</tr>
<tr>
<td>AlGr-176</td>
<td></td>
<td>Euro-Canadian, mid-19th century</td>
<td>Homestead</td>
<td>Slocki 2008</td>
</tr>
<tr>
<td>AlGr-191</td>
<td>James Young</td>
<td>Euro-Canadian</td>
<td>Scatter</td>
<td>Game [URS and ASI] 2008</td>
</tr>
<tr>
<td>AlGr-192</td>
<td></td>
<td>Euro-Canadian</td>
<td>Scatter</td>
<td>Game [URS] 2008</td>
</tr>
<tr>
<td>Borden #</td>
<td>Site Name</td>
<td>Cultural Affiliation</td>
<td>Site Type</td>
<td>Researcher</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>----------------------</td>
<td>-----------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>AlGr-193</td>
<td>Turkingham</td>
<td>Aboriginal, pre-</td>
<td>Undetermined; homestead</td>
<td>Game [URS] 2008; MacDonald [ASI] 2009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>contact; early-mid 19th century</td>
<td></td>
<td>Game [URS and ASI] 2008</td>
</tr>
<tr>
<td>AlGr-204</td>
<td>Guthrie</td>
<td>Euro-Canadian, early-mid 19th century</td>
<td>Scatter</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Late Archaic</td>
<td>Lithic scatter</td>
<td>Game [URS] 2008</td>
</tr>
<tr>
<td>AlGr-207</td>
<td>Guthrie</td>
<td>1870-21st century</td>
<td>Homestead</td>
<td>Merritt and MacDonald [ASI] 2009</td>
</tr>
<tr>
<td>AlGr-220</td>
<td>Currey 1</td>
<td>Euro-Canadian, late 19th century</td>
<td>Scatter</td>
<td>Game [URS] 2009</td>
</tr>
<tr>
<td>AlGr-226</td>
<td>Currey 3</td>
<td>Aboriginal, pre-</td>
<td>Undetermined</td>
<td>Parslow [Golder] 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>contact</td>
<td>Homestead</td>
<td>Parslow [Golder] 2011</td>
</tr>
<tr>
<td>AlGr-229</td>
<td>Bowerman</td>
<td>Euro-Canadian, mid-19th century</td>
<td>Homestead</td>
<td>Marr [ArcheoWorks] 2010</td>
</tr>
<tr>
<td>AlGr-230</td>
<td>Sarah Wilson</td>
<td>Mid-late 19th century</td>
<td>Homestead</td>
<td>MacDonald [ASI] 2010</td>
</tr>
<tr>
<td>AlGr-265</td>
<td>David Reed</td>
<td>1840s-1870s</td>
<td>Homestead</td>
<td>MacDonald [ASI] 2010</td>
</tr>
<tr>
<td>AlGr-268</td>
<td>West H45</td>
<td>Euro-Canadian, 1830s-early 20th century</td>
<td>Homestead</td>
<td>MacDonald [ASI] 2010</td>
</tr>
<tr>
<td>AlGr-272</td>
<td>H1</td>
<td>Early Archaic,</td>
<td>Findspot</td>
<td>Cooper [ASI] 1997</td>
</tr>
<tr>
<td>AlGr-273</td>
<td>P2</td>
<td>Nettling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIGs-168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Sites in bold are within 300 metres of the study area
ArcheoWorks – ArcheoWorks Inc.
ASI – Archaeological Services Inc.
Golder – Golder Associates Ltd.
URS – URS Canada Inc.
Twelve of the sites listed in the OASD as within 1 km of the study area are located within 300 metres of the study area. No data was available on the sites AlGr-272 and AlGr-273. The remainder are reviewed below.

The AlGr-176 site was registered in 2008 by Kim Slocki. The site was identified as a mid-nineteenth century Euro-Canadian homestead. Five-hundred, ten artifacts were collected dating the site to between ca. 1834 and the 1830s. The site was entirely excavated and recommended to be considered cleared of further archaeological concern (MTCS 2013).

The James Young site (AlGr-191) was registered in 2008 by Emily Game. One-hundred, thirty-eight Euro-Canadian artifacts were recovered dating the site to the mid-late nineteenth century (MTCS 2013). The site was subsequently subject to Stage 3 and 4 archaeological assessments (see below; ASI 2011b).

The Turkingham site (AlGr-193) was registered in 2008 by Emily Game. Twenty-three Euro-Canadian artifacts were recovered during Stage 2 archaeological assessment (MTCS 2013). The site was subsequently subject to Stage 3 and 4 archaeological assessments (see below; ASI 2011c).

The AlGr-194 site was registered in 2008 by Emily Game. Fifty-one Euro-Canadian artifacts were recovered dating to the early-mid nineteenth century. The site scatter consisted of an area eight metres by 19 metres (MTCS 2013). The site was subsequently subject to Stage 3 and 4 archaeological assessments (see below; ASI 2011d).

The AlGr-204 site was registered in 2008 by Emily Game. The site is located along Lynde Creek. The site consists of two lithic artifacts approximately 30 metres from each other (MTCS 2013).

The AlGr-220 site was registered in 2009 by Emily Game. The site is situated on a flat plateau overlooking the Lynde Creek. The site consisted of a scatter of 33 late nineteenth century Euro-Canadian artifacts (MTCS 2013).

The Currey 1 (AlGr-226) site was registered in 2010 by Carla Parslow. The site consisted of one biface, five lithic flake artifacts and five Euro-Canadian artifacts (Golder 2010b; MTCS 2013). The site was subject to Stage 3 archaeological excavation which only recovered two Euro-Canadian artifacts. The site was recommended to be considered clear of further archaeological concern (Golder 2010b).

The Currey 3 site (AlGr-227) site was registered in 2010 by Carla Parslow. The site consisted of a scatter of 788 Euro-Canadian artifacts dating to the early-mid nineteenth century. The site consisted of an area of 20 metres by 40 metres (Golder 2010a; 2010b;
2010c; MTCS 2013). The site was subject to Stage 3 and 4 archaeological excavations (Golder 2010b; 2010c).

The Bowerman site (AlGr-229) was registered by Kim Slocki in 2010. The site is located in proximity to Lynde Creek. The site has been identified as a homestead site dating to the mid-nineteenth century. Seven-hundred, ninety-two Euro-Canadian artifacts were recovered from the site. The site was subject to Stage 3 archaeological assessment and has been recommended to be considered free of further archaeological assessment (MTCS 2013).

The West H45 site (AlGr-268) was registered by Dr. Robert MacDonald and Denise McGuire in 2010. The site is located adjacent to the west of Lynde Creek (MTCS 2013). The site was subject to subsequent Stage 3 and 4 archaeological assessments (see below; ASI 2012).

According to the background research, 14 other archaeological assessments have been conducted within 50 metres of the study area (ASI 2006a; 2009; 2011a; 2011b; 2011c; 2011d; 2012; 2013; In-preparation; ASI and URS 2011; Golder 2010a; 2010b; 2010c; URS and ASI 2011). These studies are reviewed below.

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.

ASI (2009) conducted a Stage 1 archaeological assessment of the West Whitby Secondary Plan in the Town of Whitby, Regional Municipality of Durham under the project direction of Debbie Steiss (MCL CIF P049-396-2009). The Stage 1 archaeological assessment conducted an archaeological potential model for the study area. However, it was recommended that all areas within the study area require Stage 2 archaeological assessment prior to any proposed development.

Golder Associates Ltd. (Golder) (2010a) conducted a Stage 1 and 2 archaeological assessment of the Runnymede Development Corp. Inc. property in part of Lot 33, Concession 3, in the Geographic Township of Whitby, Town of Whitby, Regional Municipality of Durham under the project direction of Dr. Carla Parslow (PIF P243-060-2010). The Stage 1 background research determined that the study area possessed archaeological potential. The Stage 2 archaeological assessment was conducted on May 11, 2010 by pedestrian survey at five metre intervals. The Stage 2 property assessment identified two archaeological sites (AlGr-226; AlGr-227) and one Euro-
Canadian findspot. Both AlGr-226 and AlGr-227 were recommended to be subject to Stage 3 archaeological assessment. The remainder of the study area was recommended to be considered free of further archaeological assessment.

Golder (2010b) conducted a Stage 3 archaeological assessment in the Currey Property in part of Lot 33, Concession 3 in the Geographic Township of Whitby Regional Municipality of Durham, Ontario under the project direction of Dr. Carla Parslow (PIF P243-065-2010; P243-066-2010). Sites AlGr-226 and AlGr-227 were subject to Stage 3 archaeological assessments between June 28 and July 2, 2010. Twelve one metre square test-units were excavated at AlGr-226 recovering a total of two Euro-Canadian artifacts. The site was recommended to be considered free of further archaeological concern. Twenty-three one metre square test-units were excavated at AlGr-227 recovering a total of 147 Euro-Canadian artifacts, dating the site to the early-mid nineteenth century. The site was recommended to be subject to Stage 4 archaeological assessment.

Golder (2010c) conducted a Stage 4 archaeological assessment in the Currey Property in part of lot 33, Concession 3 in the Geographic Township of Whitby, Regional Municipality of Durham under the project direction of Dr. Carla Parslow (PIF P243-077-2010). Site AlGr-227 was subjected to Stage 4 archaeological assessment which commenced on August 26, 2010. Forty-four one metre square units were excavated recovering 599 Euro-Canadian artifacts. No subsurface cultural features were identified. The site was recommended to be considered free of further archaeological concern.

ASI and URS (2011), URS and ASI (2011), and ASI (2011a; 2013; in-preparation) conducted Stage 2 archaeological assessment of the 407 East EA Phase 1 study area in the Regional Municipality of Durham under the project direction of Dr. Rob Macdonald (PIF# P117-134-2008; PIF# P117-146-2009; PIF# P117-163-2010) and Lisa Merritt (PIF #P094-087-2011). Stage 2 archaeological assessments of lands included in the New Coronation Road and CP Rail Crossing study area was conducted in 2008, 2009, 2010 and 2011. Sites AlGr-191, AlGr-193, AlGr-194, AlGr-217, AlGr-219, and AlGr-268 were discovered within the New Coronation Road and CP Rail Crossing study area (see above). No further work was recommended for AlGr-217 and AlGr-219. Sites AlGr-191, AlGr-193, AlGr-194 and AlGr-268 were recommended to be subject to Stage 3 archaeological assessment (see below).

ASI (2011b) conducted a Stage 3 archaeological assessment of the James Young site (AlGr-191) in part of Lot 35, Concession 3 in the Geographic Township of Whitby, Regional Municipality of Durham under the project direction of Dr. Rob MacDonald (MTC PIF P117-168-2009; P117-160-2010). A total of 92 one metre square test units were excavated identifying 12 stratigraphic layers and recovering a total of 4,044 Euro-Canadian historic artifacts of multiple classes. Feature fill was identified in seven test-units with three possible features cut into subsoil identified. The site was dated to the
early-mid nineteenth century. It was recommended as having cultural heritage value and to be either protected or be subject to a Stage 4 archaeological salvage excavation. Stage 4 excavation was undertaken for the Highway 407 Owner’s Engineer Assignment. Results are preliminary but the site has been fully mitigated through Stage 4 salvage excavation. As such, AlGr-191 has no further cultural heritage value or interest and no further archaeological assessment is required.

ASI (2011c) conducted a Stage 3 archaeological assessment of the Turkingham site (AlGr-193) in the Regional Municipality of Durham under the project direction of Dr. Rob Macdonald (MTC PIF P117-152-2009). A total of 93 one metre square test units were excavated identifying six possible subsurface features. A total of 3,178 artifacts were recovered including 12 Aboriginal artifacts and 3,166 Euro-Canadian artifacts. The Aboriginal component of the site assemblage was identified to belong to the Middle Archaic period but was determined to not require further archaeological assessment due to low artifact yields. The Euro-Canadian component of the site is dated to the early-mid nineteenth century. The site was recommended to have cultural heritage value and to be either protected or be subject to a Stage 4 archaeological salvage excavation. Stage 4 excavation was undertaken for the Highway 407 Owner’s Engineer Assignment. Results are preliminary but the site has been fully mitigated through Stage 4 salvage excavation. As such, AlGr-193 has no further cultural heritage value or interest and no further archaeological assessment is required.

ASI (2011d) conducted a Stage 3 archaeological assessment of the Wilson Tenant site (AlGr-194) in part of Lot 34, Concession 3 in the Geographic Township of Whitby, Regional Municipality of Durham under the project direction of Dr. Rob MacDonald (MTC PIF P117-163-2010). A total of 49 one metre square test-units were excavated. One subsurface feature was identified. A total of 1,685 artifacts were recovered. The site was dated to the mid-nineteenth century (post-1830) and was recommended to have cultural heritage value. It was recommended to be either protected or be subject to Stage 4 archaeological salvage excavation. Stage 4 excavation was undertaken for the Highway 407 Owner’s Engineer Assignment. Results are preliminary but the site has been fully mitigated through Stage 4 salvage excavation. As such, AlGr-194 has no further cultural heritage value or interest and no further archaeological assessment is required.

ASI (2012) conducted a Stage 3 archaeological assessment of the Robert Spears site (AlGr-268) in part of Lot 35, Concession 3 in the Geographic Township of Whitby, Regional Municipality of Durham under the project direction of Sara Cherubin (MTCS PIF P223-041-2011). A total of 37 one metre square test-units were excavated. A total of 1,755 Euro-Canadian artifacts were recovered. Two stratigraphic layers were identified, one of which was attributed to landscape fill. The site was dated to the early-mid nineteenth century. It was recommended to have cultural-heritage value and to be subject to Stage 4 archaeological salvage excavation. Stage 4 excavation was
undertaken for the Highway 407 Owner’s Engineer Assignment. Results are preliminary but the site has been fully mitigated through Stage 4 salvage excavation. As such, AlGr-268 has no further cultural heritage value or interest and no further archaeological assessment is required.

1.3.4 Summary of Archaeological Context

The review of archaeological work conducted in the area demonstrated that 20 previously registered archaeological sites are located within 1 km 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. Eight previously registered archaeological sites are located within the study area. Four of them were subject to Stage 4 archaeological salvage excavation as part of the Highway 407 East project and one as part of the Currey Property Development project.

The study area included tributaries of Lynde Creek and contains well-drained sandy soil.

The historical context demonstrates that the study area contains three historic features, two of which correlate with sites AlGr-191 and AlGr-268, and that Coronation Road and Rossland Road are both 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 Section 1.2 of the S & G, 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 Dr. Katherine Hull (P128 and Paul David Ritchie (P392), both of ASI, on December 6, 2013 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 Section 1.2 of the S & G, Standards 1-6.

The PIF for this project was issued on December 6, 2013 with the registered project start date of December 9, 2013. However, due to a weather forecast of snowfall for December 8, 2013 it was decided by the licensee to conduct the property inspection on December 6, 2013 to avoid conditions of adverse visibility.

Weather conditions for the inspection were a mix of sun and cloud with a temperature of approximately -2°C. 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 6) and associated photographic plates are presented in Section 8.0 (Plates 1-11). As per Section 1.2 of the S & G, 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-191; AlGr-193; AlGr-194; AlGr-226; AlGr-227; AlGr-268);
- Water sources: primary, secondary, or past water source (e.g. Lynde Creek);
- Well-drained sandy soils (e.g. Brighton sandy loam)
- Areas of Euro-Canadian Settlement (e.g. ‘Thos. Marquiss’ farmhouse);
• Early historic transportation routes (e.g. Coronation Road)
• Elevated topography (e.g. drumlin)

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

The entirety of the study area has been subject to prior Stage 1 archaeological assessment (ASI 2008) however this assessment did not entail a property inspection. A large part of the study area has also been subsequently subject to Stage 2 archaeological assessment (ASI 2011a; 2013; In-preparation; ASI and URS 2011; URS and ASI 2011) as part of the Highway 407 East project (Figure 6: area marked in green). Six archaeological sites were identified, four of which were subject to Stage 4 archaeological mitigation (ASI 2011b; 2011c; 2011d; 2012). These sites have been fully mitigated through salvage excavation and construction of the Highway 407 link has begun. Part of the study area was also subject to Stage 2 archaeological assessment (Golder 2010a) as part of the Currey Property Development project (Figure 6: area marked in orange). Two archaeological sites were identified, one of which was subjected to Stage 4 archaeological mitigation (Golder 2010c). This site has been fully mitigated. The property inspection documented the CP rail ROW as possessing deep and extensive land disturbance (Figure 6: areas marked in yellow). These areas do not require further archaeological assessment. An area was documented to be low and wet ground (Figure 6: area marked in purple). This area does not require further archaeological assessment.

The remainder of the lands require Stage 2 archaeological assessment (Figure 6: areas marked in pink) by a combination of pedestrian survey and test-pit survey (Figure 6: areas marked in hatching) in accordance with Sections 2.1.1 and 2.1.2 of the S & G.

3.3 Conclusions

The Stage 1 Archaeological Assessment determined that 20 archaeological sites have been registered within a 1 km of the study area and that there have been other assessments that overlap the study area. 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.

A large part of the study area has been previously subject to Stage 2 through 4 archaeological assessments for the Highway 407 link that is currently under construction. Another part of the study area has been previously subject to Stage 2
through 4 archaeological assessments for the Currey Property development project. The property inspection documented that the CP Rail ROW possesses deep and extensive ground disturbance. A small part of the study area was also documented to possess low and wet conditions. All of these areas do not require further archaeological assessment. The remainder of the study area possesses confirmed archaeological potential and will require Stage 2 archaeological assessment by combination of test-pit survey and pedestrian survey at 5 m intervals, where appropriate.

4.0 Recommendations

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

1. The CP Rail ROW was documented to possess deep and extensive land disturbance (Figure 6: area marked in yellow). A small part of the study area was also documented to possess low and wet conditions (Figure 6: area marked in purple). These lands do not require further archaeological assessment;

2. Sections of the study area within the Highway 407 project area have been previously assessed and do not require further archaeological assessment (Figure 6: areas marked in green and orange);

3. The remainder of the study area was confirmed to possess archaeological potential and requires Stage 2 Archaeological Assessment (Figure 6: area marked in pink) by combination of pedestrian survey and test-pit survey (Figure 6: area marked in hatching); and,

4. Should the proposed work extend beyond the current study area then further 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 Legislations**

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 *Cemeteries Act* (1990, as amended in 2012) and 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.
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Ministry of Consumer Services  
1990 *Cemeteries Act* [as amended in 2012]

2002 *Funeral, Burial and Cremation Services Act*

Ministry of Culture  
2005 *Ontario Heritage Act*

Ministry of Environment  
1990 *Environmental Assessment Act*

2009 *Code of Practice: Preparing, Reviewing and Using Class Environmental Assessments in Ontario.*

Ministry of Tourism and Culture  

Ministry of Tourism, Culture and Sport (MTCS)  
2013 *Email communication*, Robert von Bitter, MTCS Data Coordinator, July 26, 2013

Municipal Engineers’ Association  

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

Pfeiffer, S.  
Ramsden, P.G.

Sauer, C.O.

Shier, J.

Smith, W.H.

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

URS Canada Inc. (URS) and ASI

Williamson, R.F.

7.0 Maps
Figure 1: New Coronation Road and CP Crossing Study Area Location
Figure 2: New Coronation Road and CP Rail Crossing Study Area overlaid on 1860 map of Ontario County
Figure 3: New Coronation Road and CP Rail Crossing Study Area overlaid on 1877 map of Township of West Whitby
Figure 4: New Coronation Road and CP Rail Crossing - Surficial Geology
Figure 5: New Coronation Road and CP Rail Crossing - Soil Drainage
Figure 6: New Coronation Road and CP Rail Crossing - Property Inspection Results

- Study Area
- Photo Location
- No Potential: Low and Wet
- Previously Assessed (Golder 2010a, 2010b, 2010c)
- Stage 2 Required: Pedestrian Survey
- Stage 2 Required: Test Pit Survey
- Grade Alignment
- Overpass Alignment
- Underpass Alignment

Rossland Road W
Coronation Road
Lake Ridge Road N
Rossland Road E

Durham
West Whitby
Shier
1877

Overpass Alignment
Underpass Alignment

Previously Assessed (Golder 2010a, 2010b, 2010c)

Grade Alignment

Study Area

Photo Location

No Potential: Low and Wet

Previously Assessed: Property Assessment
(ASI 2011, 2013; ASI and URS 2011; URS and ASI 2011, ASI 2013)

Previously Assessed (Golder 2010a, 2010b, 2010c)

Stage 2 Required: Pedestrian Survey

Stage 2 Required: Test Pit Survey

Japan
day
in
May
1877

Study Area

Photo Location

No Potential: Disturbed

Previously Assessed: Property Assessment
(ASI 2011, 2013; ASI and URS 2011; URS and ASI 2011, ASI 2013)

Previously Assessed (Golder 2010a, 2010b, 2010c)

Stage 2 Required: Pedestrian Survey

Stage 2 Required: Test Pit Survey

Grade Alignment

Overpass Alignment

Underpass Alignment

Figure 6: New Coronation Road and CP Rail Crossing - Property Inspection Results
8.0 Images

Plate 1: View north of area disturbed by Highway 407 East Link construction. No potential. Area previously assessed.

Plate 2: View northwest of area disturbed by Highway 407 East Link construction. No potential. Area previously assessed.

Plate 3: View northeast of Lynde Creek tributary and marsh. Middle ground is low and wet. Foreground has potential. Requires Stage 2 pedestrian survey.

Plate 4: View southwest of study area. Area has potential. Field requires Stage 2 pedestrian survey. Wooded area in background requires Stage 2 test-pit survey.
Stage 1 Archaeological Assessment
New Coronation Road and CP Rail Crossing
Municipal Class EA
Town of Whitby

Plate 5: View WSW along CP Rail ROW. Rail ROW is disturbed. No potential. Field has potential. Requires Stage 2 pedestrian survey.

Plate 6: View WNW of study area. Field has potential. Requires Stage 2 pedestrian survey.

Plate 7: View WSW of study area. Field has potential. Requires Stage 2 pedestrian survey. Field edges require Stage 2 test-pit survey.

Plate 8: View NNW of study area. Field has potential. Requires Stage 2 pedestrian survey.
Stage 1 Archaeological Assessment
New Coronation Road and CP Rail Crossing
Municipal Class EA
Town of Whitby

Plate 9: View west along CP Rail ROW. ROW is disturbed. No potential.

Plate 10: View southwest across CP Rail ROW. Field beyond has potential. Requires Stage 2 pedestrian survey.

Plate 11: View WNW of study area. Field has potential. Requires Stage 2 pedestrian survey. Wooded area beyond has potential. Requires Stage 2 test-pit survey.