Stage 4 Archaeological Assessment

Excavation of Site AgGv-148, Part of Lot 5, Concession 9, Geographic Township of Grimsby, County of Lincoln, Community of Smithville, Township of West Lincoln, Regional Municipality of Niagara, Ontario

Prepared by:

AS&G Archaeological Consulting

07-Aug-24

MCM Archaeological Consulting License # P124 (Dr. Helen R. Haines)
MCM P.I.F. # P124-0273-2023 and Associated P.I.F.# P124-0233-2023 (Stage 3)

ORIGINAL REPORT

EXECUTIVE SUMMARY

AS&G Archaeological Consulting Inc. was contracted to conduct a Stage 4 Mitigation of Development Impacts of Site AgGv-148, located on Part of Lot 5, Concession 9, Geographic Township of Grimsby, County of Lincoln, Community of Smithville, Township of West Lincoln, Regional Municipality of Niagara, Ontario. The proposed development project was triggered by the *Planning Act* and this Stage 4 Archaeological Assessment, as well as the previous Stage 1 to 3 Archaeological Assessments, were completed in advance of a development proposal application. The greater property, approximately 8 hectares (ha) in size, consists primarily of overgrown, previously ploughed agricultural land lined by trees on the east, west, and northern borders. The property is bound on the south side by Highway 20 (Saint Catharines Street) in Smithville, by agricultural land to the east and west (the property to the east also includes a residence), and the Canadian Pacific Railway line to the north.

Site AgGv-148 was originally identified by ASI (2022) as the result of a Stage 2 Archaeological Assessment, consisting of a systematic test pit and pedestrian survey performed at standardized 5 m intervals. ASI's field Assessment resulted in the identification of two Early Archaic Indigenous sites, AgGv-148 and AgGv-149, as well as six isolated Indigenous findspots (P3, P4, P7, P8, P11 and P12). Sites AgGv-148 and AgGv-149 were recommended for further Stage 3 Archaeological Assessment. The six outlying findspots were identified as possibly representing outliers to Site AgGv-148, more specifically Findspots P7, P8, P11 and P12. The subsequent Stage 3 Site-Specific Archaeological Assessments for both AgGv-148 and AgGv-149 Sites were completed by AS&G between the months of July and September 2023. The Stage 3 Archaeological Assessment Report recommended that Site AgGv-148 continued to have cultural heritage value or interest and should be subject to Stage 4 Mitigation, as avoidance and protection was not a viable option (AS&G 2024).

AS&G Archaeological Consulting Inc., contracted by the proponent to undertake a Stage 4 Mitigation of Development Impacts, conducted the Assessment under the Ministry of Citizenship and Multiculturalism (MCM) Professional Archaeology License #P124 issued to Dr. Helen R. Haines by the Minister of Citizenship and Multiculturalism for the Province of Ontario (PIF# P124-0273-2023). Stage 4 Mitigation was carried out between the 3rd and 20th of November 2023. The Field supervision for the projects was performed under MCM Applied Research Archaeology Licence holder Pete Demarte (R1073).

The Stage 4 Mitigation field method strategy was consistent with that outlined in the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011) for small or diffuse lithic scatters as per Sections 3.4.1, 4.2.1, and 4.2.2 (MCM 2011). Given

that the Stage 3 Assessment produced two test units with yields of ten or more, the site was classified as a small Pre-Contact Archaic period site. Thus, the Stage 4 excavation strategy followed methodology outlined Section 4.3, Table 4.1 of the *Standards and Guidelines for Consultants Archaeologists* (MCM 2011). Following the clients Indigenous Engagement policy, representatives of the Haudenosaunee Development Institute (HDI), Six Nations of the Grand River Elected Council (SNGREC), and Mississauga of the Credit First Nation (MCFN) participated in the Stage 3 fieldwork (see Supplementary Documentation).

The Stage 4 Assessment of Site AgGv-148 produced a total of 205 lithic artifacts through the excavation of 52 units. As with the former Stage 3 artifact assemblage, the Stage 4 assemblage produced a few diagnostic artifacts, which span a considerable time range. This continued to support the determination that AgGv-148 was a multi-component site ranging from the Early to Late Archaic periods. The Early Archaic component of the site remains the projectile point that was recovered during the Stage 2 Assessment. Taking all this together, the modest number of artifacts, the lack of exotic cherts, the small amount of primary reduction sequence debitage, and the multi-component nature of the site, the site is consistent with what would be expected of a small camping/hunting site that experienced multiple periods of use over a long period of time (Andrefsky 2002).

The Stage 4 Archaeological Assessment by means of Mitigation, involving hand block excavation, has now been completed on all portions of Site AgGv-148. The site has been fully documented to the extent required under the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011) and **the site does not retain further cultural heritage value or interest. As such, no further archaeological Mitigation of Site AgGv-148 is required.**

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INTRODUCTION

The *Ontario Heritage Act*, R.S.O. 1990 c. O.18, requires anyone wishing to carry out archaeological fieldwork in Ontario to have a license from the Ministry of Citizenship and Multiculturalism (MCM). All licensees are to file a report with the MCM containing details of the fieldwork that has been done for each project. Following standards and guidelines set out by the MCM is a condition of a licence to conduct archaeological fieldwork in Ontario. ***AS&G Archaeological Consulting Inc***. confirms that this Report meets ministry report requirements as set out in the *2011 Standards and Guidelines for Consultant Archaeologists* and is filed in fulfillment of the terms and conditions an archaeological license.

1.0 PROJECT CONTEXT

This section of the report will provide the context for the archaeological fieldwork, including the development context, the historical context, and the archaeological context.

1.1 Development Context

AS&G Archaeological Consulting Inc. **(AS&G)** was contracted to conduct a Stage 4 Mitigation of Development Impacts of Site AgGv-148, located on Part of Lot 5, Concession 9, Geographic Township of Grimsby, County of Lincoln, Community of Smithville, Township of West Lincoln, Regional Municipality of Niagara, Ontario (see Map 1 and Map 2). The proposed development project was triggered by the *Planning Act* and this Stage 4 Archaeological Assessment, as well as the previous Stage 1 to 3 Archaeological Assessments, were completed in advance of a development proposal application. The greater property, approximately 8 hectares in size, consists primarily of overgrown, previously ploughed agricultural land lined by trees on the east, west, and northern borders. The property is bound on the south side by Highway 20 (St. Catharines Street) in Smithville, by agricultural land to the east and west (the property to the east also including a residence), and the Canadian Pacific Railway line to the north.

This report describes the results of the 2023 Stage 4 Mitigation of Development Impacts of the AgGv-148 Site conducted by **AS&G.** All work documented in this report was conducted under Professional Archaeology License P124, issued to Dr. Helen R. Haines, by the Ministry of Citizenship and Multiculturalism (PIF# P124-0273-2023). Permission to access the property to conduct all required archaeological fieldwork activities, including the recovery of artifacts, was granted by the proponent and their representatives. Following the clients Indigenous Engagement policy, representatives of the Haudenosaunee Development Institute (HDI), Six Nations of the Grand River Elected Council (SNGREC), and

Mississauga of the Credit First Nation (MCFN) participated in the Stage 3 fieldwork (Supplementary Documentation).

This report describes the results of the Stage 4 Mitigation of Development Impacts of site AgGv-148 and makes recommendations appropriate to the results.

1.2 Scope of Work

In compliance with Section 4.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011), the overall objectives of the Stage 4 Archaeological Assessment involving Mitigation through excavation are: 1) to document the archaeological context, cultural features, and artifacts for the archaeological site; 2) to document the removal of the archaeological site, and 3) to preserve the information about the archaeological site for future study.

1.3 Historical Context

The Study Area is situated in an area of Ontario that has a rich and diverse cultural history that extends back at least 11,000 years ago. To provide context for this report, the settlement history is summarized below.

1.3.1 Pre-Contact Indigenous Period

Drawn from Ellis and Ferris (1990), Table 1 provides a general outline of the pre- and post-contact cultural history of the Geographical Township Grimsby, County of Lincoln, Ontario. The Study Area is situated in an area of Ontario that has evidence of extended periods of human settlement, dating back at least 11,000 years.

Table 1: General Archaeological Chronology for South-Central Ontario

Period	Archeological/Material Culture	Date Range	Comments
PALEO			
Early	Gainey, Barnes, Crowfield, Fluted Points	11,000-10,500 BP	Big game hunters, i.e., caribou
Late	Holcombe,Hi-Lo, Lanceolate	10,500-9,500 BP	Paleo Point Technology
ARCHAIC			
Early	Bifurcate-base, Nettling, Side Notched	9,800-8,000 BP	Nomadic hunters/gathers
Middle	Stanley, Kirk, Brewerton, Laurentian	8,000-4,000 BP	Focused seasonal resource areas
Late	Lamoka, Genesee, Innes, Crawford Knoll	4,500-2,500 BP	Polished/ground stone tools Burial ceremonialism
	Hind	3,000-2,600 BP	
WOODLAND			

Period	Archeological/Material Culture	Date Range	Comments
Early	Meadowood, Middlesex	2,800-2,000 BP	Introduction of pottery, elaborate burials
Middle	Princess Point, Saugeen, Point Peninsula	2,000-950 BP	Long-distance trade, burial mounds, horticulture
Late	Pickering, Uren, Middleport (Anishinabek/Iroquois), Algonkian-Wendat Alliance	950-300 BP	Emergence of agricultural villages Large, palisaded villages Trade, alliances, and warfare
HISTORIC			
	Huron, Neutral, Petun, Odawa, Ojibwa Six Nations Iroquois, Ojibwa, Mississauga	350 BP-Present	Mission villages and Reserves
	Euro-Canadian		European settlement

1.3.1.1 Paleo

Archaeological evidence demonstrates that people inhabited South-central Ontario, just after the end of the Wisconsin Glacial Period, approximately 11,000 years ago. This early settlement period is known as the Paleo Period (Ellis and Deller 1990). Based upon current archaeological knowledge, Indigenous groups originally living south of the Great Lakes migrated to the area. The settlement patterns of Early Paleo peoples consisting of small bands, i.e., less than 35 individuals, maintained a seasonal pattern of mobility over vast territories. For example, of the most studied groups, appeared to migrate seasonally between Chatham, Ontario, to the Horseshoe Valley north of Barrie, Ontario (Ellis and Deller 1990).

These Early Paleo sites are typically located in elevated locations, with well-drained loamy soils, with many known sites found on former beach ridges, associated with glacial lakes (Ellis and Deller 1990). These sites were likely formed when they were occupied for short increments, over the course of many years, possibly as communal hunting camps. Their locations appear conducive to hunting migratory mammals, such as caribou (Ellis and Deller 1990).

During the Late Paleo Period (10,500-9,500 BP), the south-central Ontario environment started to become dominated by closed coniferous forests, with only some minor deciduous elements. The hunting landscape had also changed, as many of the large game species that had been hunted in the early part of the Paleo Period, either migrated further north, or in some cases, had become extinct, i.e., mastodons and mammoths (Ellis and Deller 1990). Comparable to the early Paleo peoples, late Paleo peoples covered large territories as a response to seasonal resource fluctuations. In Ontario, Late Paleo Period inhabitation appears more frequently in the archaeological record, comparable to the Early Paleo

Period. Thus, it has been suggested that migratory populations had increased in size (Ellis and Deller 1990).

1.3.1.2 Archaic Period

During the Early Archaic Period (9,800-8,000 BP), the jack and red pine forests that characterized the Late Paleo environment, were replaced by forests of white pine, with a few correlated deciduous trees (Ellis et al. 1990). Based on material culture, the Early Archaic Period is recognized by the shift to side and corner-notched projectile points (Ellis et al. 1990). Other notable innovations, include the introduction of ground stone tools such as celts and axes. These tools suggest that there was a woodworking industry. Additionally, the presence of these, often large and not easily portable tools, suggests that there may have been a reduction in seasonal movement. However, the current understanding of the Period suspects that population densities were still low, and seasonal territories were still large (Ellis et al. 1990).

During the Middle Archaic Period (8,000-4,000 BP), it is speculated that there was an increase in regional population growth, which precipitated a decrease in overall seasonal migration territory. Additionally, as a consequence of population growth, a shift in subsistence patterns occurred, as more people needed to be supported from the resources contained within the smaller area (Ellis et al 1990). Thus, the Middle Archaic is characterized by the diversification of toolkits and diets, with the introduction of net-sinkers and bannerstones, as well as stone tools specifically designed for the preparation of wild plant foods. The appearance of net-sinkers suggests that fishing was becoming an important aspect of the subsistence economy. In contrast, bannerstones were carefully crafted ground stone devices that served as a counterbalance for *atlatls* or spear-throwers, used in hunting game (Ellis et al 1990).

Another characteristic of the Middle Archaic Period is an increased reliance on local, often poor-quality chert resources, for the manufacturing of projectile points. Unlike earlier periods, when nomadic groups occupied vast territories, at least once in their seasonal migration it was possible for them to visit a primary outcrop of high-quality chert. However, during the Middle Archaic Period, groups inhabited smaller territories, which usually did not contain a source of high-quality raw material, and were forced to use the locally sourced, poorer quality resources (Ellis et al. 1990). It was also during the latter part of the Middle Archaic Period, that long-distance trade routes began to develop, which spanned the northeastern part of the continent. For instance, copper tools, which were manufactured from a source located northwest of Lake Superior, were being widely traded (Ellis et al. 1990).

The trend towards a decreasing territory size and a broadening subsistence economy, continued during the Late Archaic Period (4,500-2,500 BP). Similarly, archaeologically Late Archaic sites are more numerous than Early or Middle Archaic sites, which is correlated to an increasing population (Ellis et al. 1990). With the trend towards larger groups, the first cemeteries have also been dated to the Late Archaic Period. Prior to this, individuals were interred close to the location where they died. Furthermore, during the Late Archaic Period, if an individual died while away from their home territory, the bones would be kept until they could be placed in the group cemetery. Therefore, it is not unusual to find disarticulated skeletons, and/or skeletons lacking minor elements, i.e., fingers, toes and/or ribs (Ellis et al. 1990).

The appearance of cemeteries during the Late Archaic Period has been interpreted as a response to increased population densities. The increased populations also demonstrated evidence of regionalized variation in Late Archaic projectile point styles (Ellis et al. 1990). The differences were likely indicative of the different relationships the people had to the land and waters they inhabited. Additionally, trade networks established during the Middle Archaic continued to flourish. For instance, copper native to northern Ontario and marine shell artifacts from as far away as the Mid-Atlantic coast, are frequently encountered as grave goods. Other artifacts such as polished stone pipes and banded slate gorgets, also appear on Late Archaic sites. One of the more unusual and interesting of the Late Archaic artifacts is the *birdstone*. Birdstones are small, bird-like effigies usually manufactured from green banded slate (Ellis et al. 1990).

1.3.1.3 Woodland Period

For archaeologists, the Early Woodland Period (2,000-2,000 BP) is distinguished from the Late Archaic Period primarily by the addition of ceramic technology. The first pots were crudely constructed, had undecorated thick walls, and were friable. Spence et al. (1990) suggests, they were used in the processing of nut oils, which required boiling crushed nut fragments in water and skimming off the oil. As these vessels were not easily portable, individual pots were likely not used for extended periods of time. Additionally, as there are many Early Woodland sites where no pottery was recovered, it has been suggested that these poorly constructed vessels were not utilized by all Early Woodland peoples (Spence et al. 1990).

Other than the limited use of ceramics, there were other subtle differences between the Late Archaic and the Early Woodland Periods. For example, 'pop-eyes', a protrusion from the side of the head, was added to birdstones. Similarly, a slight modification was made to the thin, well-made projectile points made during Archaic Period, i.e. Early Woodland variants were side-notched rather than the corner-notched (Spence et al. 1990). The trade networks which were

established in the Middle and Late Archaic Periods, continued to flourish; however, there appeared to be a decrease in the trade of marine shell during the Early Woodland Period. Projectile points crafted from high quality American Midwest materials, began to be found on southwestern Ontario sites, dated towards the end of the Early Woodland Period (Spence et al. 1990).

The Middle Woodland (2,000-950 BP) is characterized by rich, densely occupied sites, which are usually found bordering major rivers and lakes. While these locations were inhabited periodically by earlier peoples, Middle Woodland sites are significant as they represent long periods of continuous occupations, i.e., hundreds of years (Spence et al. 1990). The shift in settlement pattern, created large deposits of artifacts, as the sites appear to have functioned as home bases that were occupied throughout the year. Numerous smaller Middle Woodland sites have been found inland, and likely functioned as specialized camps, for the exploitation of local resources (Spence et al. 1990).

The shift to a more sedentary lifestyle, also resulted in a shift in subsistence patterns, comparable to the Early Woodland Period. Although, they still relied on hunting and gathering, fish became a predominant diet staple, to meet their growing subsistence needs (Spence et al. 1990). Additionally, the people of the Middle Woodland, relied more on ceramic technology, with many being heavily decorated with impressed designs covering the entire exterior surface, and the upper portion of the interior of vessels (Spence at al. 1990).

Material culture changes that occurred in the early portion of the Late Woodland (950-300 BP), include the appearance of triangular projectile point styles, first seen with the Levanna form, and a change to more intricate design patterns on ceramics. Designs included cord-wrapped stick decorated ceramics, which were created using the paddle and anvil forming technique (Bursey 1995; Ferris and Spence 1995; Spence et al. 1990; Williamson 1990).

The Late Woodland Period is marked by an increasing reliance on corn (*Zea mays*) horticulture (Crawford et al. 1997; Fox 1990; Martin 2004; Smith 1990; Williamson 1990). Although corn was possibly introduced into southwestern Ontario from the American Midwest as early as 2,500 BP, it was not considered a dietary staple until at three to four hundred years later. From there, corn cultivation gradually spread into south-central and southeastern Ontario. Thus, the Late Woodland Period is widely accepted as the beginning of a reliance on agriculture, for subsistence. Researchers have suggested that a warming trend, which increased the number of frost-free days, was likely a catalyst for the spread of maize into southern Ontario (Stothers and Yarnell 1977). Additionally, sites have been identified in a wider variety of environments, including riverine, lacustrine and wetlands (Dieterman 2001).

In southern Ontario, the first agricultural villages have been dated to approximately 1,200 BP to 700 BP. These sites are typically found on elevated areas, with well-drained sandy soils. These early villages share many characteristics with Iroquoian settlements that were recorded at the time European contact, including longhouses and/or palisades (Dodd et al. 1990; Williamson 1990). However, the scale is much smaller, with early longhouses only averaging 12.4 m in length. Furthermore, the excavation and exposure of cultural features archaeologically, indicate that there was possibly overlapping structures. This has been interpreted as evidence of long-term occupation, as it indicates that the structures were present long enough to require them to be re-built (Dodd et al. 1990; Williamson 1990).

Due to soil depletion resulting from farming, and the scarcity of easily accessible firewood, the Jesuits reported that the Huron moved their villages every 10-15 years (Pearce 2010). Since the more sedentary sites were occupied for considerably longer amounts of time, it is hypothesized that the Indigenous communities relied less heavily on corn. Furthermore, small seasonally occupied sites have been documented, which relate specifically to nut collection, deer procurement, and fishing activities. Thus, the smaller demand on resources within close proximity to the settlement, coupled with the smaller reliance on crops, indicates that they maintained a considerably smaller population size (Pearce 2010).

Around 700-600 BP, the size of villages increased from approximately 0.6 hectares, to approximately 1 to 2 hectares. Correspondingly, the size of longhouses also significantly increased in size to an average of 30 m, with some longhouses being documented as 45 m in length (Dodd et al. 1990; Smith 1990). Although the increase in longhouse size can be explained by the significant increase in overall population within villages, other possible hypotheses include changes to the socio-political and economic structure of the communities (Dodd et al. 1990). For instance, Dodd et al. (1990) has suggested that several smaller communities may have merged, to increase protection and defense from neighbouring tribes. This hypothesis is supported by the presence of a few sites with up to seven rows of palisades, which indicates the potential need for strong protective measures (Dodd et al. 1990).

With the increase in population and village sizes, it is postulated that there was increased community planning and organization. Whereas longhouses were originally haphazardly placed, the increase in population required more organization. For instance, archaeologists have documented the organization of two or more discrete groups of parallel, tightly spaced longhouses on several sites. It has been hypothesized that the organization and grouping of different habitations, may indicate the initial development of clans, a characteristic historically attributed to the Iroquoian peoples (Dodd et al. 1990).

Towards the end of the Late Woodland (approximately 600 BP), village sizes continued to increase, as did longhouse lengths i.e., an average length of 62 m. However, around approximately 500 BP, longhouse lengths become significantly shorter, with an average length of only 30 m (Lennox and Fitzgerald 1990). The significant decrease in the overall length of longhouses in a short amount of time, is not well understood; however, it has been hypothesized that it is directly correlated to introduction of European diseases, i.e., smallpox, which caused a steep reduction in Indigenous population sizes (Lennox and Fitzgerald 1990).

Even with the decrease in the length of longhouses, archaeologists have noted that some village populations continued to grow, with periodic expansions visually documented. With increase in disease and subsequently a rise in warfare between communities, it is postulated that the expansion was the result of the amalgamation of smaller villages. These sites also appeared to be heavily fortified with many rows of wooden palisades, again supporting the hypothesis that smaller villages united for defensive purposes (Anderson 2009).

1.3.2 Post-Contact History

At the end of the 17th and beginning of the 18th century, the dispersal of several Iroquoian-speaking peoples by the New York State Iroquois, coupled with the return of the Algonkian-speaking groups from Northern Ontario, formed the post-contact Indigenous occupation landscape of southern Ontario (Schmalz 1991). As European settlers encroached on traditional Indigenous territories, settlement sizes, populations, and material culture shifted. Despite this shift, there remains a continuity from ancient Indigenous groups to the communities written about in historical accounts (Ferris and Spence 2009). Thus, it should be noted that the Indigenous peoples of southern Ontario have deposited archaeologically significant resources throughout the province, demonstrating a shared traditional and continuing history, regardless of whether their presence is recorded in historic Euro-Canadian documents.

The Community of Smithville was included in the Between the Lakes Purchase and Collins Purchase, also known as Treaty 3. The Treaty was originally signed in 1784, but due to ambiguities related to the land allotment, it was re-signed on December 7, 1792, by the Crown and the Principal Chiefs and Women of the Mississaugas - Wabakanyne, Wabanip, Kautabus, Wabaninship, and Nattoton (Government of Canada 1792). The Between the Lakes Purchase encompassed approximately 3 million acres, related to:

> 'that tract or parcel of land lying and being between the Lakes Ontario and Erie, beginning at Lake Ontario four miles south-westerly from the point opposite to Niagara fort, known by the name of Messissague Point, and running from thence along he said lake to the

> creek that falls from a small lakes known by the name of Washquarter into the said Lake Ontario; and from thence north forty-five degrees west twenty-miles; and thence south until it strikes the River La Tranche; then down the stream of the said river to that part or place where a due south course to the mouth of the said Catfish Creek; thence down Lake Erie to eh lands heretofore purchased from the Nation of Messissague Indians; and from thence along the said purchase to Lake Ontario at the place beginning as above mentioned, together with all the woods, ways, paths, waters, water courses and appurtenances thereunto belonging.'
>
> (Morris 1943)

The Principal Chief and Women who agreed to the revised Treaty 3, were paid the sum of eleven hundred and eighty pounds, twelve shillings and fourpence (Government of Canada 1923).

The Williams Treaties also had broad implications for the First Nation Communities in Ontario. The Treaties were signed on October 31 and November 15, 1923, by: Commissioner Angus Seymour Williams, representing the Dominion of Canada; Robert Victor Sinclair and Uriah McFadden, representing the Province of Ontario; the Anishinaabe Chippewa of Simcoe (First Nation Communities of Beausoleil, Georgina Island, and Rama); and the Anishinaabe Michi Saagig of the north shore of Lake Ontario (First Nation Communities of Alderville, Curve Lake, Hiawatha, and Scugog Island) (Government of Canada 1923).

The two treaties encompass 12,944,400 acres of land, separated into three distinct tracts. Tract 1 is between the Etobicoke and Trent Rivers, bounded by Lake Ontario's Northern Shore, which then extends north to Lake Simcoe to create Tract 2. Tract 3 includes the area between the Ottawa River and Lake Huron, which is delineated in the North by the Mattawa River-Lake Nipissing and French Line (Government of Canada 1923; Manners 2022). The Williams Treaties were the culmination of almost sixty years of the Chippewa and Mississauga (Michi Saagig) lobbying the Ontario and Canadian governments for protection and respect of their rights to harvest, hunt, fish, and trap on their traditional lands (Manners 2022).

The Williams Treaties were originally designed by the Crown to quell the complaints put forth by the various First Nation communities regarding settlers interfering and encroaching on their traditional lands. Instead, the Williams Treaties effectively obtained large tracts of unceded lands held by the First Nation communities, and removed their rights to harvest, hunt, fish, and trap outside of Reserve lands. Thus, the Treaties led to long-standing disputes between the First Nation Communities and the government, regarding compensation, land, harvesting, and access to traditional lands used for hunting, fishing, and trapping

(Government of Canada 2018ab). In 1992, the Chippewa and the Mississaugas filed a lawsuit against the Crown, under the claim that the Crown had not met their financial and legal obligations set forth in the Williams Treaties (Manners 2022). The matter would remain before the courts until 2018, when the Canadian and Ontario Governments formally settled the matter with the First Nation Communities, by including a billion dollars in compensation, the ability to add up to 11,000 acres to their respective reserve land base(s), and the recognition of the First Nation Communities to hunt, fish, harvest, and trap on their traditional lands. Additionally, the Honourable Carolyn Bennett, Minister of Crown-Indigenous Relations, issued a formal apology on behalf of the Government of Canda, in recognition of the negative impacts the Williams Treaties had on the Chippewas and the Mississaugas (Government of Canada 2018ab; Manners 2022).

1.3.3 Oral History

The traditional homelands of the Michi Saagiig (Mississauga Anishinaabeg) encompass a vast area of what is now known as southern Ontario. The Michi Saagiig are known as "the people of the big river mouths" and were also known as the "Salmon People" who occupied and fished the north shore of Lake Ontario where the various tributaries emptied into the lake. Their territories extended north into and beyond the Kawarthas as winter hunting grounds on which they would break off into smaller social groups for the season, hunting and trapping on these lands, then returning to the lakeshore in spring for the summer months.

The Michi Saagiig were a highly mobile people, traveling vast distances to procure subsistence for their people. They were also known as the "Peacekeepers" among Indigenous nations. The Michi Saagiig homelands were located directly between two very powerful Confederacies: The Three Fires Confederacy to the north and the Haudenosaunee Confederacy to the south. The Michi Saagiig were the negotiators, the messengers, the diplomats, and they successfully mediated peace throughout this area of Ontario for countless generations.

Michi Saagiig oral histories speak to their people being in this area of Ontario for thousands of years. These stories recount the "Old Ones" who spoke an ancient Algonquian dialect. The histories explain that the current Ojibwa phonology is the 5th transformation of this language, demonstrating a linguistic connection that spans back into deep time. The Michi Saagiig of today are the descendants of the ancient peoples who lived in Ontario during the Archaic and Paleo periods. They are the original inhabitants of southern Ontario, and they are still here today.

The traditional territories of the Michi Saagiig span from Gananoque in the east, all along the north shore of Lake Ontario, and west to the north shore of Lake Erie at Long Point. The territory spreads as far north as the tributaries that flow into these

lakes, from Bancroft and north of the Haliburton highlands. This also includes all the tributaries that flow from the height of land north of Toronto like the Oak Ridges Moraine, and all of the rivers that flow into Lake Ontario (the Rideau, the Salmon, the Ganaraska, the Moira, the Trent, the Don, the Rouge, the Etobicoke, the Humber, and the Credit, as well as Wilmot and 16 Mile Creeks) through Burlington Bay and the Niagara region including the Welland and Niagara Rivers, and beyond. The western side of the Michi Saagiig Nation was located around the Grand River which was used as a portage route as the Niagara portage was too dangerous. The Michi Saagiig would portage from present-day Burlington to the Grand River and travel south to the open water on Lake Erie.

Michi Saagiig oral histories also speak to the occurrence of people coming into their territories sometime between 500-1000 A.D. seeking to establish villages and a corn growing economy – these newcomers included peoples that would later be known as the Huron-Wendat, Neutral, Petun/Tobacco Nations. The Michi Saagiig made Treaties with these newcomers and granted them permission to stay with the understanding that they were visitors in these lands. Wampum was made to record these contracts, ceremonies would have bound each nation to their respective responsibilities within the political relationship, and these contracts would have been renewed annually (see Gitiga Migizi and Kapyrka 2015). These visitors were extremely successful as their corn economy grew as well as their populations. However, it was understood by all nations involved that this area of Ontario were the homeland territories of the Michi Saagiig.

The Odawa Nation worked with the Michi Saagiig to meet with the Huron-Wendat, the Petun, and Neutral Nations to continue the amicable political and economic relationship that existed – a symbiotic relationship that was mainly policed and enforced by the Odawa people.

Problems arose for the Michi Saagiig in the 1600s when the European way of life was introduced into southern Ontario. Also, around the same time, the Haudenosaunee were given firearms by the colonial governments in New York and Albany which ultimately made an expansion possible for them into Michi Saagiig territories. There began skirmishes with the various nations living in Ontario at the time. The Haudenosaunee engaged in fighting with the Huron-Wendat and between that and the onslaught of European diseases, the Iroquoian-speaking peoples in Ontario were decimated.

The onset of colonial settlement and missionary involvement severely disrupted the original relationships between these Indigenous nations. Disease and warfare had a devastating impact on the Indigenous peoples of Ontario, especially the large sedentary villages, which mostly included Iroquoian-speaking peoples. The Michi Saagiig were largely able to avoid the devastation caused by these processes by retreating to their wintering grounds to the north, essentially waiting

for the smoke to clear.

Michi Saagiig Elder Gitiga Migizi (2017) recounts:

"We weren't affected as much as the larger villages because we learned to paddle away for several years until everything settled down. And we came back and tried to bury the bones of the Huron but it was overwhelming, it was all over, there were bones all over – that is our story.

There is a misnomer here, that this area of Ontario is not our traditional territory and that we came in here after the Huron-Wendat left or were defeated, but that is not true. That is a big misconception of our history that needs to be corrected. We are the traditional people, we are the ones that signed treaties with the Crown. We are recognized as the ones who signed these treaties and we are the ones to be dealt with officially in any matters concerning territory in southern Ontario.

We had peacemakers go to the Haudenosaunee and live amongst them in order to change their ways. We had also diplomatically dealt with some of the strong chiefs to the north and tried to make peace as much as possible. So we are very important in terms of keeping the balance of relationships in harmony.

Some of the old leaders recognized that it became increasingly difficult to keep the peace after the Europeans introduced guns. But we still continued to meet, and we still continued to have some wampum, which doesn't mean we negated our territory or gave up our territory – we did not do that. We still consider ourselves a sovereign nation despite legal challenges against that. We still view ourselves as a nation and the government must negotiate from that basis."

Oftentimes, southern Ontario is described as being "vacant" after the dispersal of the Huron-Wendat peoples in 1649 (who fled east to Quebec and south to the United States). This is misleading as these territories remained the homelands of the Michi Saagiig Nation. The Michi Saagiig participated in eighteen treaties from 1781 to 1923 to allow the growing number of European settlers to establish in Ontario. Pressures from increased settlement forced the Michi Saagiig to slowly move into small family groups around the present-day communities: Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, Scugog Island First Nation, New Credit First Nation, and Mississauga First Nation. The Michi Saagiig have been in Ontario for thousands of years, and they remain here to this day.

**This historical context was prepared by Gitiga Migizi, a respected Elder and Knowledge Keeper of the Michi Saagiig Nation.

1.3.4 History of the Nation Huronne-Wendat

As an ancient people, traditionally, the Huron-Wendat, a great Iroquoian civilization of farmers and fishermen-hunter-gatherers and also the masters of trade and diplomacy, represented several thousand individuals. They lived in a territory stretching from the Gaspé Peninsula in the Gulf of Saint Lawrence and up along the Saint Lawrence Valley on both sides of the Saint Lawrence River all the way to the Great Lakes. Huronia, included in Wendake South, represents a part of the ancestral territory of the Huron-Wendat Nation in Ontario. It extends from Lake Nipissing in the North to Lake Ontario in the South and Île Perrot in the East to around Owen Sound in the West. This territory is today marked by several hundred archaeological sites, listed to date, testifying to this strong occupation of the territory by the Nation. It is an invaluable heritage for the Huron-Wendat Nation, and the largest archaeological heritage related to a First Nation in Canada.

According to our own traditions and customs, the Huron-Wendat are intimately linked to the Saint Lawrence River and its estuary, which is the main route of its activities and way of life. The Huron-Wendat formed alliances and traded goods with other First Nations among the networks that stretched across the continent. Today, the population of the Huron-Wendat Nation is composed of more than 4000 members distributed on-reserve and off-reserve.

The Huron-Wendat Nation band council (CNHW) is headquartered in Wendake, the oldest First Nations community in Canada, located on the outskirts of Quebec City (20 km north of the city) on the banks of the Saint Charles River. There is only one Huron-Wendat community, whose ancestral territory is called the Nionwentsïo, which translates to "our beautiful land" in the Wendat language.

The Huron-Wendat Nation is also the only authority that have the authority and rights to protect and take care of her ancestral sites in Wendake South.

**This information has been provided by Marie-Sopie Gendron, Analyste archéologue for the Huron-Wendat First Nation.

1.3.5 History of Six Nations

From time immemorial, the Six Nations (sometimes then referred to as the Five Nations) possessed very large territories in what is today the United States of America and the provinces of Ontario and Quebec. The original five nations unified under the Great Tree of Peace and became the Haudenosaunee Confederacy. Starting in 1613, the Haudenosaunee entered into several Two Row Wampum agreements with European Powers that formed the basis for subsequent treaties:

> "We will not be like Father and Son, but like Brothers. [Our treaties] symbolize two paths or two vessels, travelling down the same river together. One, a birchbark canoe, will be for the First Nations People, their laws, their customs, and their ways. The other, a ship, will be for the Settler people and their laws, their customs, and their ways. We shall each travel the river together, side by side, but in our own boat. Neither of us will make compulsory laws nor interfere in the internal affairs of the other. Neither of us will try to steer the other's vessel."

Southern Ontario was always Iroquois land. Occupied by the Huron-Wendat and Neutral Nations prior to colonialism, both were defeated by Haudenosaunee in the Beaver Wars and a majority of their members were absorbed into Six Nations. The Crown later recognized this vast expanse of Haudenosaunee land in the 1701 Fort Albany/Nanfan Treaty and continued to recognize it and honour its terms. That same year, the Haudenosaunee and a number of Anishinaabeg Nations agreed to share a portion of those lands in their Dish with One Spoon Treaty.

In the late 1600s, the Anishinaabe, as allies of the French, expanded their territory westward into Fort Albany/Nanfan lands as Six Nations was preoccupied fighting alongside their Imperial Crown allies elsewhere. The Anishinaabe attempted to exclude the Haudenosaunee from their northern lands, but failed, as the Haudenosaunee continued to use those lands for hunting, trapping, trade, transit, and settlement. While the Haudenosaunee had their rights to those lands enshrined in treaties, the Anishnaabe forfeited any rights they may have had in a series of quit claims, despite being told they had no right to sell the land.

Throughout the American War of Independence, the Six Nations continued their alliance with the Imperial Crown. During an American raid on Onondaga, Cayuga and Seneca villages in the late summer of 1779, an estimated 9 million pounds of corn were destroyed, attesting that the Haudenosaunee were prolific farmers as well as hunters and fishers. Because of the Crown's defeat in that war, many Haudenosaunee left the United States and, at the invitation of the Crown, settled on a portion of their Fort Albany/Nanfan lands, known today as the Haldimand Tract. The 1784 Haldimand Treaty emphasized the land was for the exclusive possession and settlement of the Six Nations and that those lands would be enjoyed by their descendants forever.

As more settlers moved onto Six Nations of the Grand River territory, the land became unsuitable for hunting and the Six Nations were forced to find alternate means of support. The Haudenosaunee placed some of their lands in trust with the Crown to raise funds, via leases for the perpetual care and maintenance of Six Nations. But those leases were never properly honoured. Monies resulting from such leases, and illegal sales, were administered by the Crown, but instead of benefitting Six Nations, these funds were frequently used to pay down Crown

debts and build public infrastructure. These actions are subject to ongoing litigation between Six Nations of the Grand River and the provincial and federal Crowns.

**This information has been provided by Tanya Hill-Montour, SNGR Archaeological Supervisor for Six Nations (see Record of Indigenous Engagement).

1.3.6 Post-Contact History: County of Lincoln and the Township of Grimsby

The following information is a summary review of the previous Stage 1 Archaeological Assessment report for the project area (ASI 2021:7-10):

1.3.6.1 Geographic Township of Grimsby

Grimsby was originally known as "Township No. 6," but was also called "The Forty" due to its location on the Forty Mile Creek. It was re-named after a place called "Great Grimsby" in Lincolnshire, England (Gardiner 1899:268 in ASI 2021). Grimsby Township was first surveyed and settled in 1787-88. Some of the original landowners were disbanded soldiers who had served in Butler's Rangers during the American Revolutionary War, while others were classified as "Late Loyalists" and Americans who arrived in the province between 1785 and 1789. The first known township meeting in Ontario was held at Grimsby in April 1790. A post office was established there in 1816 (Smith 1851:153; Armstrong 1985:144; Scott 1997:94 in ASI 2021). The township was described in an early gazetteer as being "in the county of Lincoln, lies west of Clinton, and fronts Lake Ontario." It was observed that Grimsby contained "soil of a good quality," and was in a "good situation." Grimsby was however "but indifferently circumstanced for roads," although it had "full advantage of water communication" by means of Lake Ontario with other settlements.

Early mills and various industries were established in Grimsby on the Forty Mile Creek (Smyth 1799:86; Boulton 1805:80 in ASI 2021). In 1846, Grimsby was described as a "well settled township" with "rolling land" and "excellent farms." Approximately 35 % (9,745 acres or 3,943 hectares) of the land within the township was under cultivation. The principal crops included: wheat, barley, rye, oats, peas, Indian corn, potatoes, buckwheat, turnips, mangel wurzel, hay and various fruit cultivars. Additional farm products of note included hay, wool, cheese, butter, and maple sugar. Real property in the township was assessed at £35,498. The timber was a mixture of pine and hardwood. The population was 1,784 which was a mixture of Canadians (Loyalists), Americans and Europeans. The township contained thirteen public schools by the early 1850s (Smith 1846:71; Smith 1851:211, 216-217 in ASI 2021). The original township was split into North and South Grimsby Townships in 1882. Following the creation of the Regional Municipality of

Niagara in 1970, South Grimsby was annexed and joined with other nearby townships to form part of present-day West Lincoln (Rayburn 1997:144 in ASI 2021).

1.3.6.2 County of Lincoln

In 1782, Lincoln County was one of the first Counties to be established by proclamation following the arrival of Lieutenant-Governor John Graves Simcoe in Upper Canada. The County was named after Lincolnshire in England. Prior to that time Lincoln had comprised part of the District of Nassau, which was under the legal and administrative jurisdiction of Montreal between 1783 and 1788. This name was changed to the "Home District" in October 1792. The Town of Niagara (or Newark, now Niagara-on-the-Lake) was not only the County Town, but also the capital of the Province of Upper Canada between 1792 and 1796. In 1800, the Niagara Region was re-named as the "District of Niagara." The Town of Niagara remained as the "official" County Town from July 1801 until 1866 when that status was transferred to St. Catharines (Gardiner 1899:267; Armstrong 1985:172, 186-188 in ASI 2021). By 1805, Lincoln was described as being "a very fine and populous settlement," with a population of about 6,000 (Boulton 1805:49 in ASI 2021).

1.3.6.3 Community of Smithville

Smithville is one of the oldest settlements in the Niagara Region. The first settler in the community was Richard Griffin, a Welshman who had resided at Nine Partners, New York, prior to the outbreak of the American Revolutionary War. He was married to Mary Smith, and they raised a family of twelve children including a son named Smith Griffin. The Griffin family settled in Grimsby around 1786. The new village was originally named "Griffintown," but in July 1831, it was re-named "Smithville" when it acquired the status of a post-office village. The new name is said to have been selected in honour of Mary Smith's family. Smith Griffin was an enterprising individual, who served on the township council and constructed the first store and grist mill in the community on the headwaters of the Twenty Mile Creek (Armstrong 1985:235; Rayburn 1997:320; Scott 1997:208 in ASI 2021). In 1846, Smithville contained a population of about 150 inhabitants. The list of businesses included: one grist mill, one sawmill, a carding machine, cloth factory, machine shop, tannery, two blacksmiths, four stores, two tailors and two shoemakers. The post office received mail twice weekly. The spiritual needs of the community were served by an Episcopal Methodist and a British Wesleyan Methodist Church. By 1851, the population of the village had increased to approximately 450. Additional industries included a woolen factory and a foundry. A lead mine (for "cubic lead ore") had been established in the late 1840s. There were two known "sulphur springs" in the vicinity. Unconfirmed reports circulated around that time of "ore rich in silver" (Smith 1846:174; Smith 1851:209 in ASI 2021)".

1.4 Archaeological Context

1.4.1 Previous Archaeological Investigations

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (O.A.S.D.), an inventory of the documented archaeological record in Ontario. Summary information on the known archaeological sites in the vicinity of the property was obtained from the MCM (2023a) site database on November 23, 2023. There are 2 known archaeological sites within the property and there are an additional nine (9) registered sites within a one-kilometre radius of the property, two (2) of which are located within 300 metres of the property limits (see Table 2). Sites bolded in Table 2 are located within 300 metres of the property limits or they are located within the property limits. A brief description of each of these sites has been included below and/or in Section 1.4.2.

Table 2: Sites Recorded within a One Kilometre Radius of the Study Area

Borden Number	Site Name	Time Period	Affinity	Site Type	Current Development Review Status
AgGv-54	Riverview Estates	Other	-	Camp/Campsite	Unknown
AgGv-60	-	Pre-Contact	Indigenous	Camp/Campsite	No Further Cultural Heritage Value or Interest (CHVI)
AgGv-61	-	Pre-Contact	Indigenous	Unknown	No Further CHVI
AgGv-62	-	Pre-Contact	Indigenous	Findspot	No Further CHVI
AgGv-102	-	Pre-Contact	Indigenous	Scatter	No Further CHVI
AgGv-103	-	Pre-Contact	Indigenous	Unknown	No Further CHVI
AgGv-145	Location 1	Post-Contact	-	Scatter	Further CHVI
AgGv-146	Algernon Page	Post-Contact	Euro-Canadian	Agricultural	Further CHVI
AgGv-147	3 Patterson	Post-Contact	Euro-Canadian	Agricultural	Further CHVI
AgGv-148	-	Early Archaic	Indigenous	Scatter	Further CHVI
AgGv-149	-	Early Archaic	Indigenous	Scatter	Further CHVI

- Archaeological Site **AgGv-54** (Riverview Estates) is located approximately 300 m southwest of the project area. The site record form contains little information; however, four Onondaga flakes were recovered during a 1993 test-pit survey conducted for the Riverview Estates residential homes project. The site was interpreted as a campsite. The development review status was not recorded (MCM 2023a).

- Archaeological Site **AgGv-145** (Location 1) is located approximately 300 m southwest of the project area. Location 1 is a Post-Contact Mid to Late 19th Century scatter. The site was discovered during an Integrity Dig for Enbridge. The site has undergone Stage 3 monitoring; however, no formal Stage 3 has been completed and the Location 1 Site (AgGv-145) retains further CHVI (MCM 2023a).

- In addition to Archaeological Site **AgGv-148**, Site **AgGv-149** is located within the project area. Site AgGv-149 discussed in detail in Section 1.4.2.

1.4.2 Previous Archaeological Assessments within the Project Area

Based on a search of the Ontario Public Register of Archaeological Reports, there are three previous archaeological investigations that have taken place within the subject property (MCM 2023a, ASI 2021). Based on a search of the Ontario Public Register of Archaeological Reports, there is one additional report that provided information on previous archaeological investigations within 50 m of the project area (MCM 2023b).

A Stage 1 Background Study of the subject property was completed by ASI in 2021 (PIF# P449-0566-2021). The background study found that the property exhibited the potential for the recovery of archaeological resources of Cultural Heritage Value or Interest and concluded that the property required a Stage 2 Archaeological Assessment.

The subsequent Stage 2 Archaeological Assessment was also conducted by ASI (2022) under PIF# P449-0633-2022. The Report, currently awaiting review with MCM, stated that the Assessment consisted of a systematic pedestrian survey performed at standardized 5 m intervals. The Assessment resulted in the identification of two Early Archaic Indigenous sites (AgGv-148 and AgGv-149), as well as six isolated Indigenous findspots (P3, P4, P7, P8, P11 and P12). Sites AgGv-148 and AgGv-149 were recommended for further Stage 3 Archaeological Assessment. The six outlying findspots were interpreted as representing outliers related to Site AgGv-148, more specifically Findspots P7, P8, P11 and P12.

The Stage 3 Site-Specific Assessment of AgGv-148 was completed by AS&G in July and August of 2023 (P124-0233-2023). The Stage 3 Assessment consisted of the excavation of 38 one-metre square test units at five-to-ten-metre intervals, followed by an additional eight (8) test unit excavations (i.e., 40% infill) of the initial grid unit total focusing on areas of interest within the site extent. During the initial Stage 3 Archaeological Assessment a network of five-by-five metre grid squares was established across the extent of the site, as determined by the location of the Stage 2 controlled surface pick-up (CSP) locations. However, when >10 artifacts were encountered within one unit, excavations were changed to a network of 10

m by 10 m grid squares, as it was determined the site would require Stage 4 Excavation or Avoidance and Protection. The Stage 3 Assessment resulted in the recovery of a total of 81 artifacts through test unit excavations, with an additional seven artifacts recovered during a CSP. This resulted in a total of 88 artifacts between the 46 excavated test units and the CSP.

The following recommendations for the Stage 4 Mitigation of Site AgGv-148 were made in the Stage 3 Archaeological Report (AS&G 2024):

1. Further Archaeological Assessment of Site AgGv-148 is warranted.

2. It was determined through discussion with the proponent that avoidance and protection of the AgGv-148 Site was not viable in the context of their development plans. Thus, excavation is the preferred approach to Stage 4 Mitigation of Impacts to the site.

3. A Stage 4 Mitigation of the AgGv-148 Site must be completed in accordance with the *Standards and Guidelines for Consultant Archaeologists* for small or diffuse lithic scatters as per Section 3.4.1 (MCM 2011).

4. More specifically, the Stage 4 Mitigation strategy will follow methodology outlined in Sections 4.2.1 and 4.2.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011).

5. Given that two (2) units with artifact yields of ten (10) or higher were found, and the site is classed as a small Pre-Contact Archaic period site, the Stage 4 excavation strategy will follow that of Section 4.3, Table 4.1 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011).

6. Should cultural features be identified within the site during Stage 4 excavations they must be excavated by hand and soil samples collected as per Section 4.4 of the 2011 *Standards and Guidelines for Consultant Archaeologists* (MCM 2011).

7. No construction activities shall take place within the study area prior to the MCM (Archaeological Programs Unit) confirming in writing that all archaeological licensing and technical review requirements have been satisfied.

The Stage 4 Mitigation field work strategies present herein coincided with AS&G's (2023) recommendations.

The Stage 3 Assessment of Site AgGv-149 was also completed by AS&G in August and September of 2023 (P124-0235-2023). The Stage 3 Assessment consisted of hand excavation of 10 test units, producing no artifacts. AS&G noted that the site had been fully documented and does not retain further cultural heritage value or interest.

There is no additional archaeological information that may be relevant to understanding the choice of fieldwork techniques or the recommendations of this report.

1.4.3 Previous Archaeological Assessments within 50 m of the Project Area

In addition, one Archaeological Assessment has been conducted adjacent to or within 50 metres of the property (MCM 2023b). This Stage 1 and 2 Archaeological Assessment was completed by AMICK Consultants Ltd., and it is titled: Revised Report: *Stage 1-2 Archaeological Property Assessment Industrial Road & Regional Road 20 Subdivision Part of Lots 4, Concession 9 (Geographic Twp. of Grimsby, County of Lincoln). Part of the North Half of Lot 29, Concession 6 (Geographic Twp. of Gainsboro, County of Lincoln), Township of West Lincoln (Smithville), Regional Municipality of Niagara*. Report dated 01 February 2017, (PIF #: P384-0140-2017).

In 2014 AMICK Consultants Ltd., was retained to conduct a combined Stage 1 and 2 Archaeological Assessment. The Assessment was a requirement of the plans for a subdivision, Ontario Regulation 544/06 under the Planning Act (1990b), which requires an evaluation of archaeological potential (AMICK 2017:2). AMICK's Assessment included agricultural lands to the east and south of the current subject property. A combination of test pit survey and pedestrian survey, both conducted at 5 m intervals, was completed. No archaeological materials or sites were identified, and a recommendation of no further Archaeological Assessment was made (AMICK 2017:2).

1.4.4 Natural Environment / Physiography

A review of the previous Archaeological Assessment completed within the subject property (ASI 2021, AS&G 2023), indicated that Site AgGv-148 is situated within the clay plains of the Haldimand Clay Plain physiographic region of southern Ontario (Chapman and Putnam 1984:156-159). The Haldimand Clay Plain is among the largest of the 53 defined physiographic regions in southern Ontario, comprising approximately 3,500 square kilometres (km). Generally, this region is flat and poorly drained, although it includes several distinctive landforms including dunes, cobble, clay, and sand beaches, limestone pavements, and backshore wetland basins.

Soils within the subject property consist primarily of fine-textured glaciolacustrine deposits of silt and clay, minor and sand gravel (ASI 2021).

The subject property is within the Twenty Mile Creek watershed, which covers approximately 291 square kilometres and contains five sub-watersheds, including the main branch of Twenty Mile Creek, North Creek, Sinkhole Creek, Spring Creek and Gavora Ditch (Niagara Peninsula Conservation Authority 2006 in ASI 2021). Twenty Mile Creek and its tributaries surround the subject property.

1.4.4.1 Existing Conditions

Site AgGv-148 is located within the greater subject property which is approximately eight hectares (ha) in size, within an agricultural area in the Community of Smithville. The property consists of open grassed lands, bordered by trees on the west, north and east sides. The property is bounded by Highway 20 to the south, agricultural land to the west, agricultural land and a residence to the east, and the Canadian Pacific Railway line to the north.

2.0 FIELD METHODS

2.1 Stage 4 Mitigation Methods

The Stage 4 Archaeological Assessment was conducted under the Professional Archaeologist licence issued to Dr. Helen R. Haines (P124), by the MCM (PIF# P124-0273-2023. The Stage 4 fieldwork was performed under the field supervision of MCM Applied Research Archaeology Licence holder Pete Demarte (R1073) between 3rd and 20th of November 2023.

The weather during the Stage 4 Assessment was variable (see Table 3). At no time was fieldwork conducted in conditions detrimental to the observation, recovery documentation, and/or collection of archaeological material (see Image 1 to Image 3).

Table 3: Weather Conditions During the Stage 4 Assessment

Date	Weather and Average Temperature	Field Director
November 3, 2023	Sunny; Warm, 12° C	Pete Demarte (R1073)
November 6, 2023	Overcast; Cold, 3° C	Pete Demarte (R1073)
November 13, 2023	Partly Sunny; Warm, 13° C	Pete Demarte (R1073)
November 14, 2023	Overcast; Cool, 9° C	Pete Demarte (R1073)
November 15, 2023	Partly Sunny; Warm, 12° C	Pete Demarte (R1073)
November 16, 2023	Sunny; Warm, 14° C	Pete Demarte (R1073)

Date	Weather and Average Temperature	Field Director
November 20, 2023	Sunny; Cold, 2° C	Pete Demarte (R1073)

At the outset of the Stage 4 Mitigation, AS&G re-established the 5 m, magnetic north-oriented grid using the Stage 3 baseline stakes which had been left in place. The GPS coordinates of the datum stake (500N-300E) are provided in Appendix B. The grid, re-established using measuring tapes and a compass on both a north to south and east to west axis, provided full coverage for all Stage 3 units; however, the focus of the Stage 4 excavations was centered on the Stage 3 test units 510N-280E (n=14) and 515N-280E (n=10), the only Stage 3 test units containing 10 or more lithic artifacts.

The Stage 4 Assessment began with the hand excavation of 52 1 m x 1 m units in all directions around Stage 3 units 510N-280E and 515N-280E. Excavations continued if positive yields (i.e., 10 or more lithic artifacts), formal tools, or diagnostic artifacts were encountered. No subsurface features or post moulds were present in any of the Stage 4 units advanced.

The soil from each 1 m^2 test unit was excavated to the interface between the topsoil and subsoil and all soil was screened through 6 mm hardware cloth to facilitate the recovery of small artifacts. The subsoil surface of each unit was then shovel shined and examined for evidence of subsurface cultural features, and excavation continued into the top 5 cm of the subsoil layer.

Each day the supervising field director documented the fieldwork, archaeological findings, conditions that may have affected field work, the identification of artifacts or cultural features, through written notes and logs, maps and photographs. A representative sample of wall profiles were drawn and photographed from excavated tests units. Stratigraphy in the Stage 4 Assessment was consistent with that of the Stage 3 Assessment (i.e. a layer of ploughzone over subsoil).

All excavated artifacts were retained and recorded with reference to their unit number and retained for laboratory analysis and description, as per Section 6.0 of the *Standards and Guidelines* (MCM 2011).

All GPS points were obtained using a Garmin GPS Map 64x GPS unit. No methods of correction were used. Accuracy of the reading was to within two metres for each point. **Relevant UTM coordinates for all locations for Site AgGv-148 are presented in APPENDIX B.**

3.0 RECORD OF FINDS

The Stage 4 Assessment was conducted employing the methods described in Section 4.2.1 and 4.2.2 of the *Standards and Guidelines* (MCM, 2011). Map 10 illustrates the areas assessed and the method employed, while Images 1 to 3 illustrates the conditions during the Stage 4 Assessment.

Artifacts recovered from the Stage 4 Assessment have been washed, catalogued, and analyzed, and are stored in one banker boxes retained at AS&G's office in Markham, Ontario. Table 13 provides an inventory of the documentary record generated in the field, and a complete catalogue of all artifacts recovered during the *Stage 4 Assessment* is provided below in **Appendix A**. A selection of artifact photographs is provided in Section 8.0 Images.

The Stage 4 Excavation of the Site AgGv-148 resulted in the recovery of a total of 205 lithic artifacts through unit excavations. All the artifacts recovered from the excavation of the 52 one-metre square units are listed below (see Table 4). This resulted in an average yield of 3.94 artifacts per unit. The highest yield of artifacts was from units 512N-281E (n = 14), 512N-282E (n = 12), 512N-280E (n = 11), 509N-281E (n = 10), 511N-279E (n = 10), and 513N-278E (n = 10). Five (5) units yielded no artifacts. No cultural features were noted.

Table 4: Stage 4 Site AgGv-148 Unit Depths and Artifact Yields

Test Unit	Total Unit Depth	Quantity of Artifacts
508N-279E	26cm	1
508N-280E	27cm	2
508N-281E	31cm	5
508N-282E	29cm	2
509N-274E	23cm	1
509N-275E	22cm	0
509N-276E	23cm	4
509N-279E	31cm	2
509N-281E	31cm	10
509N-282E	24cm	1
510N-274E	31cm	0
510N-276E	31cm	1
510N-278E	30cm	6
510N-282E	25cm	6
510N-283E	18cm	5
510N-284E	19cm	1
511N-274E	31cm	0
511N-275E	23cm	2
511N-276E	30cm	2
511N-277E	30cm	1
511N-278E	30cm	5

Test Unit	Total Unit Depth	Quantity of Artifacts
511N-279E	31cm	10
511N-281E	29cm	4
511N-282E	20cm	5
511N-283E	20cm	8
511N-284E	22cm	4
512N-277E	31cm	1
512N-278E	28cm	6
512N-279E	31cm	5
512N-280E	31cm	11
512N-281E	31cm	14
512N-282E	27cm	12
512N-283E	20cm	7
512N-284E	27cm	6
513N-277E	31cm	4
513N-278E	27cm	10
513N-279E	29cm	2
513N-280E	30cm	3
513N-281E	32cm	4
513N-282E	30cm	2
513N-283E	24cm	2
514N-277E	31cm	3
514N-278E	31cm	6
514N-279E	26cm	3
514N-281E	31cm	6
515N-278E	31cm	1
516N-278E	31cm	3
516N-279E	33cm	0
516N-281E	31cm	0
517N-279E	30cm	2
517N-280E	34cm	2
517N-281E	29cm	2
Total		**205**

3.1 Artifact Analysis

This section documents all archaeological resources discovered as a result of the Stage 4 Archaeological Mitigation of Site AgGv-148.

A total of 205 lithic artifacts dating to Pre-Contact periods were recovered. The artifact assemblage is typical of a small, multiple-context camping/hunting site. Table 5 below is representative of the artifact categories that were recovered, with the Lithic Debitage category having the highest frequency at 89.27% of the assemblage, followed by the Informal Lithic Artifact category at 9.76%, and the Formal Lithic Artifact category making up the remaining 0.97% of the assemblage. The three categories listed here and in Table 5 are as defined by the *2011 Standards and Guidelines for Consultant Archaeologists* (MCM 2011:99-101).

Table 5: Lithic Artifact Category Frequencies

Artifact Class	Frequency	% of Total
Lithic Debitage	183	89.27%
Informal Lithic Artifact Types	20	9.76%
Formal Lithic Artifact Types	2	0.97%
Total	**205**	**100.0%**

All the lithic artifacts are made of chert, the vast majority of which are made of Onondaga Chert, a non-exotic material at the location of AgGv-148 (see Table 6). The unidentified cherts may also be variations of Onondaga or Fossil Hill Formation cherts as well but were unidentified at the time of analysis.

Table 6: Material Type Frequencies

Material Type	Frequency	% of Total
Onondaga Chert	195	95.12%
Fossil Hill Formation Chert	7	3.42%
Unidentified Chert	3	1.46%
Total	**205**	**100.0%**

In total 183 pieces of lithic debitage (or fragments thereof) were recovered, comprising approximately 89.27% of the total assemblage. Lithic debitage is the waste products produced during the production of stone tools and is an effective tool to be used in determining the function of a site (Andrefsky 2001; 2005). Lithic production occurs in several stages, producing distinctive types of debitage depending on the activities taking place, the methodologies practiced by the flintknapper, and the sequence of production occurring in a location (Andrefksy 2001; 2005). Furthermore, taphonomic processes (post-depositional processes) could leave diagnostic traces on lithic material which can speak to site formation process in a location (Andrefsky 2001).

The lithic debitage can further be broken down into debitage types; these typologies are well established in the scientific literature though for the purposes of this analysis the definitions of these terms can be seen in William Andrefsky Jr.'s (2005) *Lithics: Macroscopic Approaches to Analysis*. These types, along with certain morphological features, can indicate what part of the reduction sequence the material was created. This in turn draws light on the pre and post-depositional events which took place at a site (Andrefsky 2001, 2005).

A breakdown of the lithic debitage is provided in Table 7 below.

Table 7: Debitage Type Frequencies

Debitage Type	Frequency	% of Total
Intact Flake	48	24.59%
Broken Flake	58	31.69%
Flake Fragment	57	31.15%
Debris (Shatter)	23	12.57%
Total	**183**	**100%**

Of the debitage recovered, a total of 160 pieces were flakes (or pieces thereof). Flakes are a common type of debitage that are thin pieces of stone that are removed from a larger piece of lithic material using either percussion or the application of pressure by taking advantage of conchoidal breakage patterns typical of certain source materials (Andrefksy 2001; 2005). Flakes can vary considerably in shape and size and are produced either in an attempt to thin an objective piece being produced (such as a biface), to shape an objective piece to prepare for further material removal, or produced to generate a flake that itself will either be used as-is for a tool or modified further into a tool (Andrefksy 2001; 2005). Other debris is also formed in lithic production such as shatter, which as the name indicates is formed when raw material is broken in more unpredictable ways when the percussive force is applied in such a way as to not produce a flake. Five pieces of shatter were recovered at site AgGv-148.

The production of flaked lithic implements can be broadly divided into several stages regardless of the tools being produced. It begins with collection of raw materials, which may include quarrying when necessary. The pieces removed from the source location typically undergo initial reduction into cores and/or preforms, often at or near to the source location. Following initial reduction, the pieces are manufactured into tools. This stage varies considerably depending on what tools are being manufactured and the methodology employed by the flintknapper (Andrefksy 2001; 2005; Kelly 2002). During the use-life of an artifact it may undergo maintenance or reworking into different types of tools.

Flakes differ in their morphology depending on which stage of the manufacturing process they were formed and the way in which they were produced. Cortical removal flakes are created in the earliest stages of production when the flintknapper is attempting to remove the cortex (the undesirable parent material that the raw material may be attached to) (Andrefsky 2005). These tend to be large flakes and may or may not contain any of the desired raw material. Primary reduction flakes are the next type of flake to be produced in the production sequence These are flakes produced in the initial shaping of the material, generally in the production of cores or preforms (Andrefsky 2005). Primary flakes tend to be large and may or may not contain some amount of cortex and may or may not show evidence of previous flaking on their dorsal surfaces. Secondary

flakes are from the last stages of production and are often referred to as thinning flakes or tertiary flakes depending on their purpose (Andrefsky 2005). They are produced in the final shaping and maintenance of tools and are generated to shape and thin out tools. They are often very thin, typically smaller than primary flakes, and are unlikely to contain any cortex (there are of course exceptions to this based on the quality of the material being used).

As seen in Table 8 below, approximately 4.37% of the debitage recovered during the Stage 4 Excavation of site AgGv-148 were from the primary reduction stages, approximately 76.51% were associated with secondary reduction, and only approximately 2.73% of the debitage assemblage were debitage from cortical removal. Approximately 16.39% of the debitage are of an indeterminate reduction sequence association. This can happen when damage to an artifact removes the requisite diagnostic features to determine reduction sequence.

Table 8: Reduction Sequence of Debitage Frequencies

Reduction Type	Frequency	% of Total
Primary Reduction	8	4.37%
Secondary Reduction	140	76.51%
Cortical Removal	5	2.73%
Indeterminate	30	16.39%
Total	**183**	**100.0%**

3.1.1 Formal Lithic Artifacts

Formal Lithic Artifacts include artifacts such as scrapers, perforators, knives, cache blades, formal (diagnostic) bifaces and unifaces, projectile points, drills, and gouges (MCM 2011). Only 2 Formal Lithic Artifacts were recovered from AgGv-148 Stage 4 Excavation amounting to only approximately 0.97% of the total assemblage. They are listed in Table 9.

Table 9: Formal Lithic Artifact Types

Unit and Catalogue Number	Type	Sub-Type	Age	Material	Heat Affected
509N-281E: L4019	Scraper	Thumb Scraper	Paleo – Historic	Onondaga Chert	No
511N-283E: L4077	Drill	N/A	Paleo – Historic	Onondaga Chert	No

Lithic scrapers and drills exist over all pre-contact time periods, neither of these artifacts are temporally or culturally diagnostic. Their physical properties are recorded below in Table 10.

Table 10: Diagnostic Artifact Dimensions (mm)

Unit and Catalogue Number	Typology	Total Length	Blade Length	Neck Height	Base Length	Blade Width	Neck Width	Base Width	Thick-ness
509N-281E: L4019	Scraper	21.95	23.52	N/A	N/A	N/A	N/A	N/A	5.56
511N-283E: L4077	Drill	43.17	35.78	N/A	7.39	9.59	N/A	16.11	6.81

3.1.2 Informal Lithic Artifacts

Informal Lithic Artifacts include artifacts such as cores, non-diagnostic bifaces and unifaces, preforms, rejects, and fragments thereof (MCM 2011). It also includes improvised tools such as utilized flakes, wedges, flake burins or spurs. A total of 20 informal artifacts were recovered (Table 11), accounting for approximately 9.76% of the total assemblage.

Table 11: Informal Lithic Artifact Types

Unit and Catalogue Number	Type	Sub-Type	Material	Heat Affected
508N-282E: L4009	Uniface	Flake Tool	Onondaga Chert	No
510N-276E: L4029	Broken Biface (base of)	Indeterminate	Onondaga Chert	No
511N-276E: L4050	Uniface	Flake Tool	Onondaga Chert	No
51N1-279E: L4062	Fragment	Modified Fragment	Onondaga Chert	No
511N-281E: L4068	Biface Fragment	Indeterminate	Onondaga Chert	No
511N-281E: L4069	Uniface	Flake Tool	Onondaga Chert	No
511N-281E: L4070	Flake	Utilised Flake	Onondaga Chert	No
511N-283E: L4078	Broken Biface (tip of)	Indeterminate	Onondaga Chert	No
511N-283E: L4084	Broken Core	Reworked Unidirectional Core	Onondaga Chert	No
512N-278E: L4090	Broken Preform	Biface Preform	Fossil Hill Formation	No
512N-281E: L4124	Biface Fragment	Indeterminate	Onondaga Chert	No
512N-281E: L4125	Broken Biface (base of)	Indeterminate	Onondaga Chert	No

Unit and Catalogue Number	Type	Sub-Type	Material	Heat Affected
512N-282E: L4127	Fragment	Utilised Fragment	Onondaga Chert	No
512N-283E: L4139	Uniface	Flake Tool	Onondaga Chert	No
513N-278E: L4155	Flake	Utilised Flake	Onondaga Chert	No
513N-278E: L4158	Broken Flake	Utilised Flake	Onondaga Chert	No
513N-280E: L4169	Broken Biface (base of)	Indeterminate	Onondaga Chert	No
513N-283E: L4176	Broken Core	Multidirectional Core	Onondaga Chert	No
514N-277E: L4178	Flake	Trifacial Flake Tool	Onondaga Chert	Yes
517N-280E: L4202	Flake	Utilised Flake	Onondaga Chert	No

3.1.3 Alteration(s)

Heat can alter the appearance, as well as the properties of stone. It can be useful as evidence towards both site activity/production sequence, as well as site formation processes. The application of heat can be used intentionally with some materials to improve their knapping qualities and/or their visual presentation (Andrefsky 2005; Kelly 2002). The application of heat whether intentional or otherwise can make visually distinctive changes on lithic material, including colour/texture changes and small roughly circular flake scars on the surface of the stone, known as pot-lid fractures or 'pot-lidding' (Andrefsky 2005). A total of 43 artifacts (22.98% of the total assemblage) shows some evidence for heat alteration, of which 32 (15.61% of the total assemblage) exhibit definite evidence of heat alteration (see Table 12 below).

Table 12: Heat Altered Lithics

Unit and Catalogue Number	Artifact Type	Heat Alteration Feature
508N-279E: L4001	Broken Flake	Pot-lidding on ventral surface.
508N-281E: L4006	Flake Fragment	Pot-lidding on dorsal surface.
509N-276E: L4012	Flake Fragment	Pot-lid on ventral surface.
509N-276E: L4014	Flake Fragment	Pot-lid on dorsal surface.
509N-281E: L4026	Shatter	Pot-lid on ventral surface, possible heat fracturing.
510N-278E: L4030	Broken Flake	Pot-lid on ventral surface.

Unit and Catalogue Number	Artifact Type	Heat Alteration Feature
510N-283E: L4046	Broken Flake	Possible heat fracture. Possible pot-lid of entire dorsal surface.
510N-284E: L4047	Broken Flake	Pot-lid on dorsal surface.
511N-276E: L4051	Shatter	Possible heat related colour change/red patina.
511N-279E: L4060	Shatter	Very small pot-lid on dorsal surface.
511N-279E: L4065	Shatter	Pot-lid on dorsal surface.
511N-279E: L4067	Broken Flake	Pot-lid on ventral surface.
511N-282E: L4074	Broken Flake	Pot-lidding on both surfaces.
511N-283E: L4079	Broken Flake	Pot-lid on ventral surface, possible heat fracturing.
512N-278E: L4093	Broken Flake	Extensive pot-lidding on both surfaces.
512N-280E: L4103	Flake Fragment	Pot-lidding on both surfaces and heat fracturing.
512N-280E: L4104	Shatter	Possible heat fracturing.
512N-280E: L4107	Broken Flake	Pot-lid on ventral surface.
512N-281E: L4114	Broken Flake	Pot-lidding on both surfaces.
512N-281E: L4115	Flake	Small pot-lid on ventral surface.
512N-281E: L4116	Flake	Possible pot-lid on dorsal surface.
512N-281E: L4118	Flake Fragment	Possible pot-lid on ventral surface.
512N-281E: L4120	Flake Fragment	Pot-lidding on dorsal surface.
512N-281E: L4121	Flake Fragment	Possible pot-lidding on dorsal surface.
512N-281E: L4123	Broken Flake	Pot-lid on dorsal surface.
512N-282E: L4135	Broken Flake	Small pot-lid on ventral surface.
512N-282E: L4137	Shatter	Pot-lidding on multiple surfaces, possible heat fracturing.
512N-283E: L4138	Flake	Possible pot-lid on dorsal surface.
512N-283E: L4142	Broken Flake	Pot-lid on ventral surface.
512N-284E: L4145	Flake Fragment	Pot-lidding on dorsal surface.
512N-284E: L4146	Broken Flake	Artifact itself may be a pot-lid spall from a larger object.
512N-284E: L4147	Flake Fragment	Possible heat fracturing.

Unit and Catalogue Number	Artifact Type	Heat Alteration Feature
513N-278E: L4156	Broken Flake	Pot-lid on ventral surface, possible colour change (unusual oxidation on dorsal surface).
513N-278E: L4163	Flake	Pot-lidding on ventral surface.
513N-280E: L4168	Flake Fragment	Pot-lid on ventral surface.
514N-277E: L4178	Trifacial Flake Tool	Pot-lidding on dorsal and ventral surfaces.
514N-278E: L4181	Shatter	Possible very small pot-lid on ventral surface, possible colour change (unusual oxidation on all surfaces).
514N-278E: L4184	Broken Flake	Pot-lidding on ventral surface.
514N-278E: L4185	Flake Fragment	Pot-lidding on dorsal surface.
514N-279E: L4187	Flake Fragment	Pot-lidding on both surfaces.
514N-279E: L4189	Flake Fragment	Possible pot-lid on ventral surface, possible heat fracturing.
514N-281E: L4190	Broken Flake	Pot-lidding on dorsal surface.
514N-281E: L4194	Flake Fragment	Pot-lid on both surfaces.

All artifacts will be retained at the corporate offices of ***AS&G Archaeological Consulting Inc.*** until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Citizenship and Multiculturalism (MCM) on behalf of the government and citizens of Ontario. All the artifacts are contained within a single banker box.

3.2 Documentary Record

An Inventory of documentary and material records compiled for this Assessment is provided in Table 13.

Table 13: Inventory of Documentary Record

Document Type	Current Location of Document	Additional Comments
Field Notes	AS&G Office	Five pages/spreadsheet of written field notes detailing daily weather conditions, excavation results, artifact yields per test unit; field crew

Document Type	Current Location of Document	Additional Comments
		members; first nation liaisons/representatives.
Hand Drawn Maps	AS&G Office	One hand drawn grid map on graph paper detailing placement of test units in relation to a site datum and mapping included in this report.
Digital Photographs	AS&G Office	A total of 13 field photos stored digitally in the project file.

All Documentation related to the Archaeological Assessment for this project will be retained at the corporate offices of ***AS&G Archaeological Consulting Inc.*** until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Citizenship and Multiculturalism (MCM) on behalf of the government and citizens of Ontario.

4.0 ANALYSIS AND CONCLUSIONS

The Stage 4 Assessment began with the hand excavation around the entire perimeter of Stage 3 units 510N-280E and 515N-280E, the only two positive Stage 3 units. Excavations continued if positive yields (10 or more lithic artifacts), formal tools, or diagnostic artifacts were encountered. No subsurface features or post moulds were present in any of the Stage 4 units. The Stage 4 Assessment of the Indigenous Site AgGv-148 produced a total of 205 lithic artifacts through the excavation of 52 units.

The highest number of lithics associated for a single unit peaked at 14 (512N-281E), with an average of approximately 3.94 artifacts per unit. Consistent with the Stage 3 assemblage, the most common artifacts in the Stage 4 assemblage were debitage made of Onondaga Chert, a locally available chert (approximately 95.12% of the assemblage). Remaining consistent with the former Stage 3 assemblage, most Stage 4 artifacts (approximately 76.51%) are associated with Secondary Reduction processes. Along with the sparse presence of primary reduction debitage, cores, and cortical flakes, the Stage 4 assemblage continues to demonstrate that AgGV-148 was not a primary production site.

Only two formal lithic artifacts were recovered, a Scraper (Catalogue #: L4019) and a complete Drill (Catalogue #: L4077). As noted, both lithic scrapers and drills exist over all pre-contact time periods, and neither of these artifacts are temporally or culturally diagnostic. A total of 20 informal artifacts were recovered, accounting for approximately 9.76% of the total lithic assemblage. Only one (Catalogue #L4178) had evidence of heat alteration. There is little overall

evidence for the heat alteration of lithics at this location, as only 15.61% of the Stage 4 assemblage was definitively heat altered.

As with the former Stage 3 artifact assemblage, the Stage 4 assemblage produced few diagnostic artifacts, which span a considerable time range which demonstrated that AgGv-148 was a multi-component site ranging from the Early to Late Archaic periods. The Early Archaic component of the site remains the projectile point which was recovered during the Stage 2 Assessment. Taking all this together, the modest number of artifacts, the lack of exotic cherts, the small amount of primary reduction sequence debitage, and the multi-component nature of the site, the site is consistent with what would be expected of a small camping/hunting site that experienced multiple periods of use over a long period of time (Andrefsky 2002).

The evaluation of the level of cultural heritage value or interest of the AgGv-148 Site is based on the Stage 4 Assessment findings in relation to Table 3.2 of the *MCM 2011 Standards and Guidelines for Consultant Archaeologists*. Indicators showing Cultural Heritage Value or Interest (CHVI) include the sites 1) information value, 2) value to a community, and 3) value as a public resource. Each of these is determined by a set of criteria. The information value is defined as how the archaeological site contributes to local, regional, provincial, or national archaeological history. Community value is defined as the archaeological site's intrinsic value to a particular community or group. The value as a public resource is defined as how the site contributes to enhancing the public's understanding and appreciation of Ontario's past. The site is evaluated against set criteria outlined by Table 3.2 of the *MCM 2011 Standards and Guidelines for Consultant Archaeologists* in Table 14 below:

Table 14: Indicators Showing Cultural Heritage Value or Interest for Site AgGv-148

Information Value Related to Site AgGv-148* and Site AgGv-149**	
Criteria	*Indicators*
Cultural Historical Value	• No indicators
Historical Value	• No indicators
Scientific Value	• No indicators
Rarity or Frequency	• No indicators
Productivity	• No indicators
Integrity	• No indicators
Value to a Community	
Criteria	*Indicators*
The site has traditional, social or religious value	• No indicators
Value as a Public Resource	
Criteria	*Indicators*
The site has potential for public use for education, recreation, or tourism	• No indicators

Given the above, Site AgGv-148 has been fully mitigated and has no further CHVI and no further Stage 4 archaeological Mitigation is warranted for this site.

5.0 RECOMMENDATIONS

The Stage 4 Archaeological Assessment by means of Mitigation, involving hand block excavation, has now been completed on all portions of Site AgGv-148. The site has been fully documented to the extent required under the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011) and **the site does not retain further cultural heritage value or interest. As such, no further archaeological Mitigation of Site AgGv-148 is required.**

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9, Standard 1a
This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, 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.

Section 7.5.9, Standard 1b
It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Section 7.5.9, Standard 1c
Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

Section 7.5.9, Standard 1d

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

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8.0 IMAGES

Image 1: Showing Field Conditions during Stage 4 Assessment.

Image 2: Showing Field Conditions and Stage 4 Excavations in Progress.

Image 3: Showing field conditions and Stage 4 Excavations in Progress.

Image 4: Showing Representative Stage 4 Unit – Profile of Unit 509N-276E.

Image 5: Showing Representative Stage 4 Unit – Plan of Unit 509N-276E.

Image 6: Showing Representative Stage 4 Unit – Profile of Unit 517N-279E.

Image 7: Showing Representative Stage 4 Unit – Profile of Unit 517N-279E.

Image 8: Thumb Scraper recovered from Unit 509N-281E (Catalogue #L4019).

Image 9: Drill recovered from Unit 511N-283E (Catalogue #L4077).

Image 10: Re-worked Core Fragment recovered from Unit 511N-283E (Catalogue #L4084).

Image 11: Trifacial flake tool recovered from Unit 514N-277E (Catalogue #L4178).

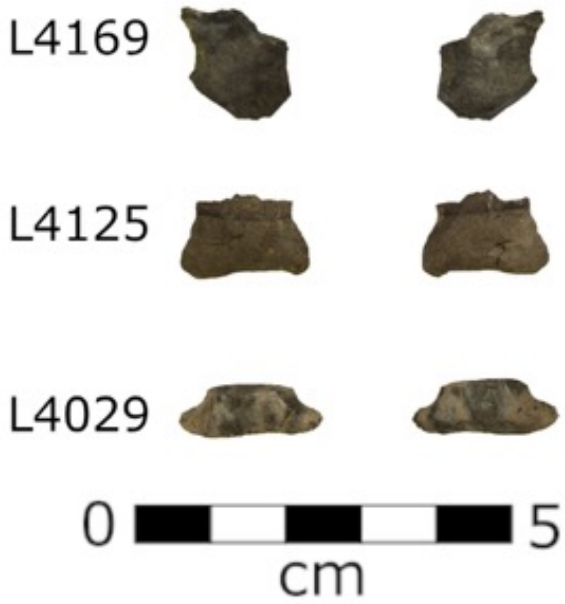


Image 12: Representative Sample of Bases Recovered.

Image 13: Representative Sample of Bifaces Recovered.

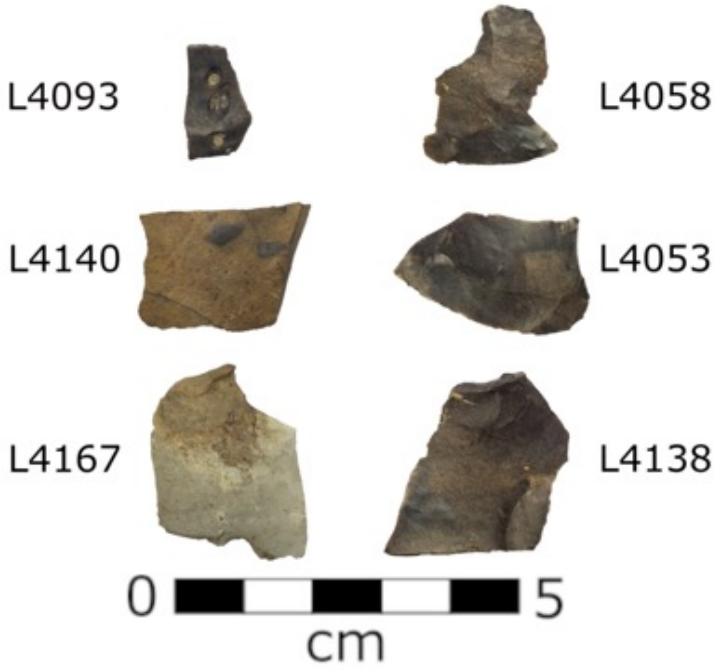
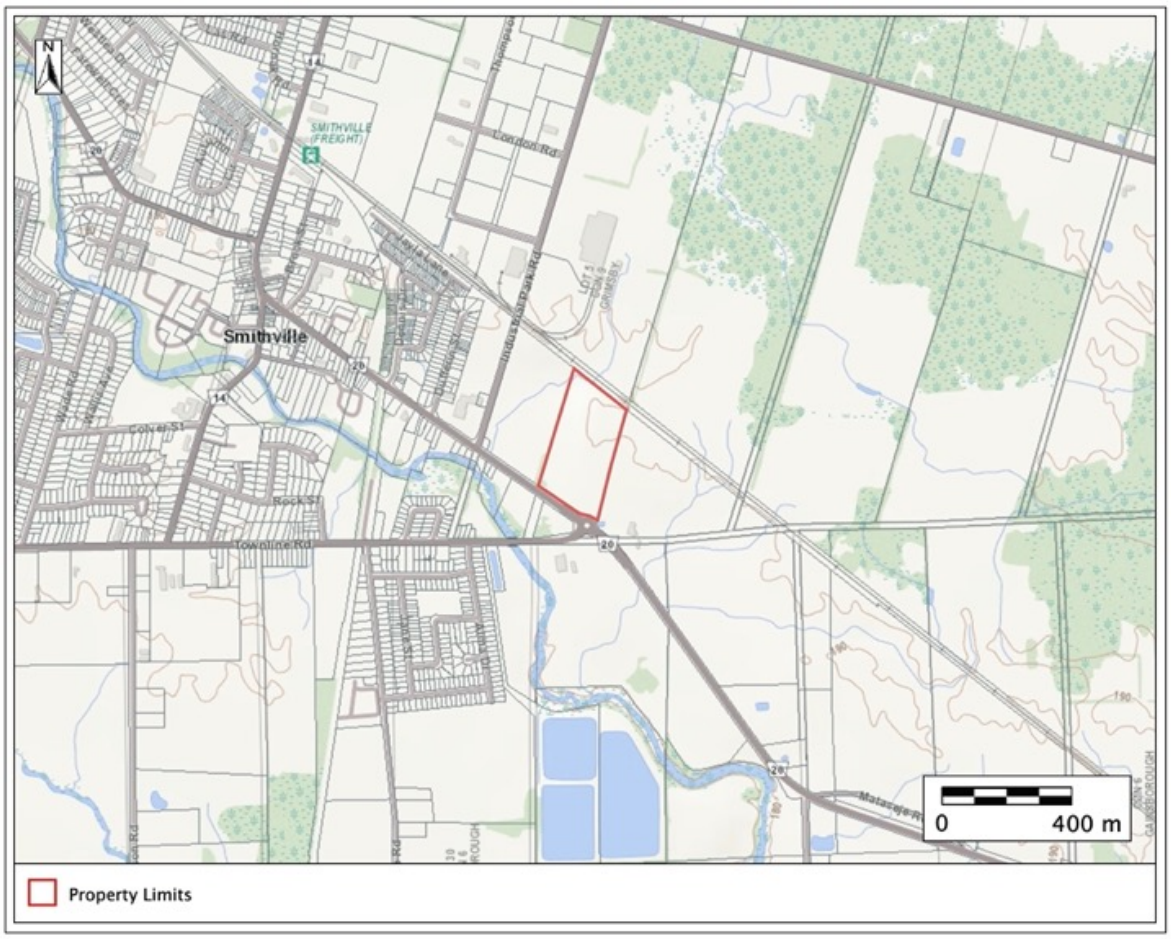
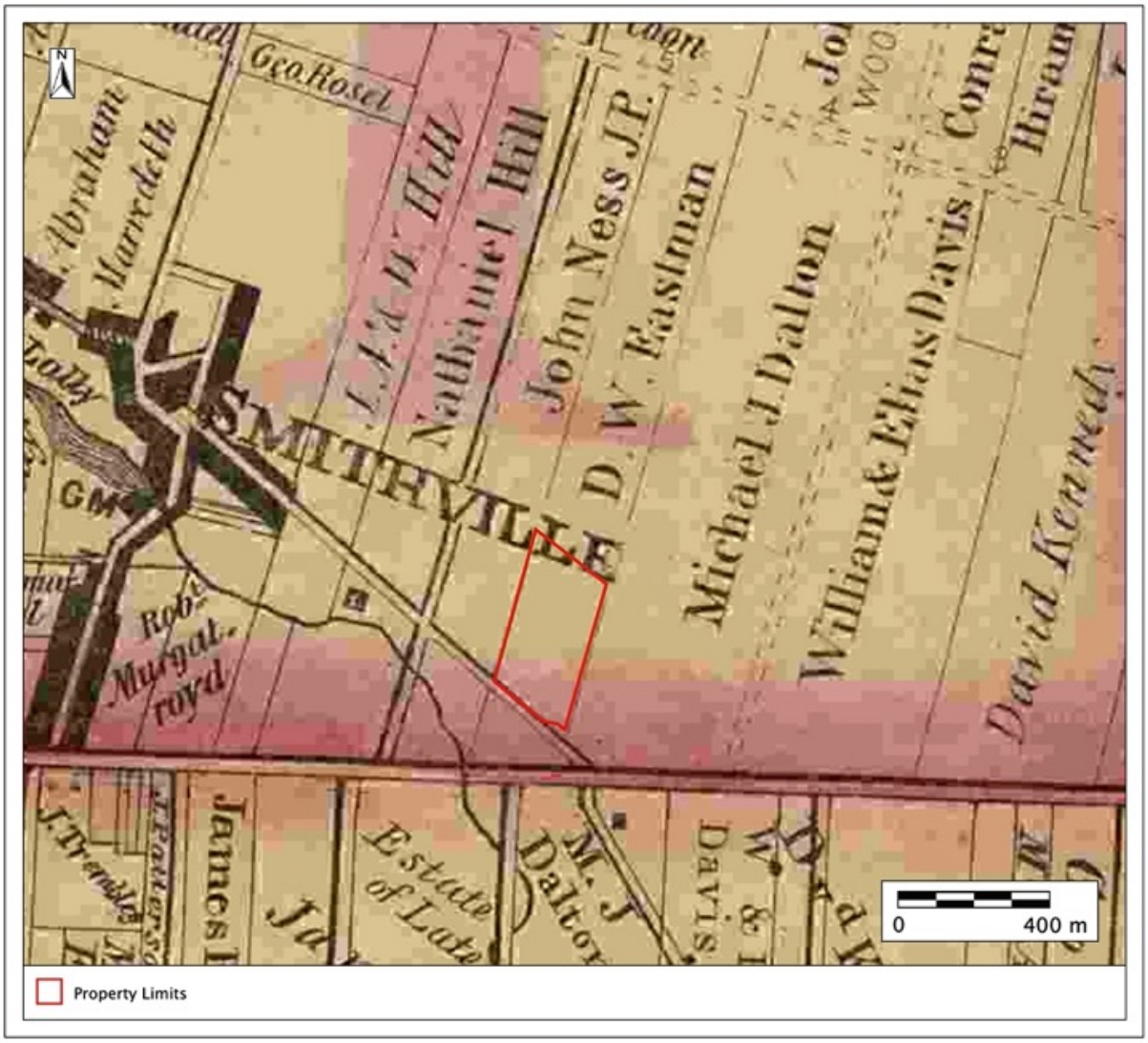


Image 14: Representative Sample of Debitage Recovered.

9.0 MAPS



Map 1: General Location of the Subject Property



Map 2: Property Overlaid on 1862 Historical Atlas Mapping

Map 3: Property Overlaid on 1876 Historical Atlas Mapping

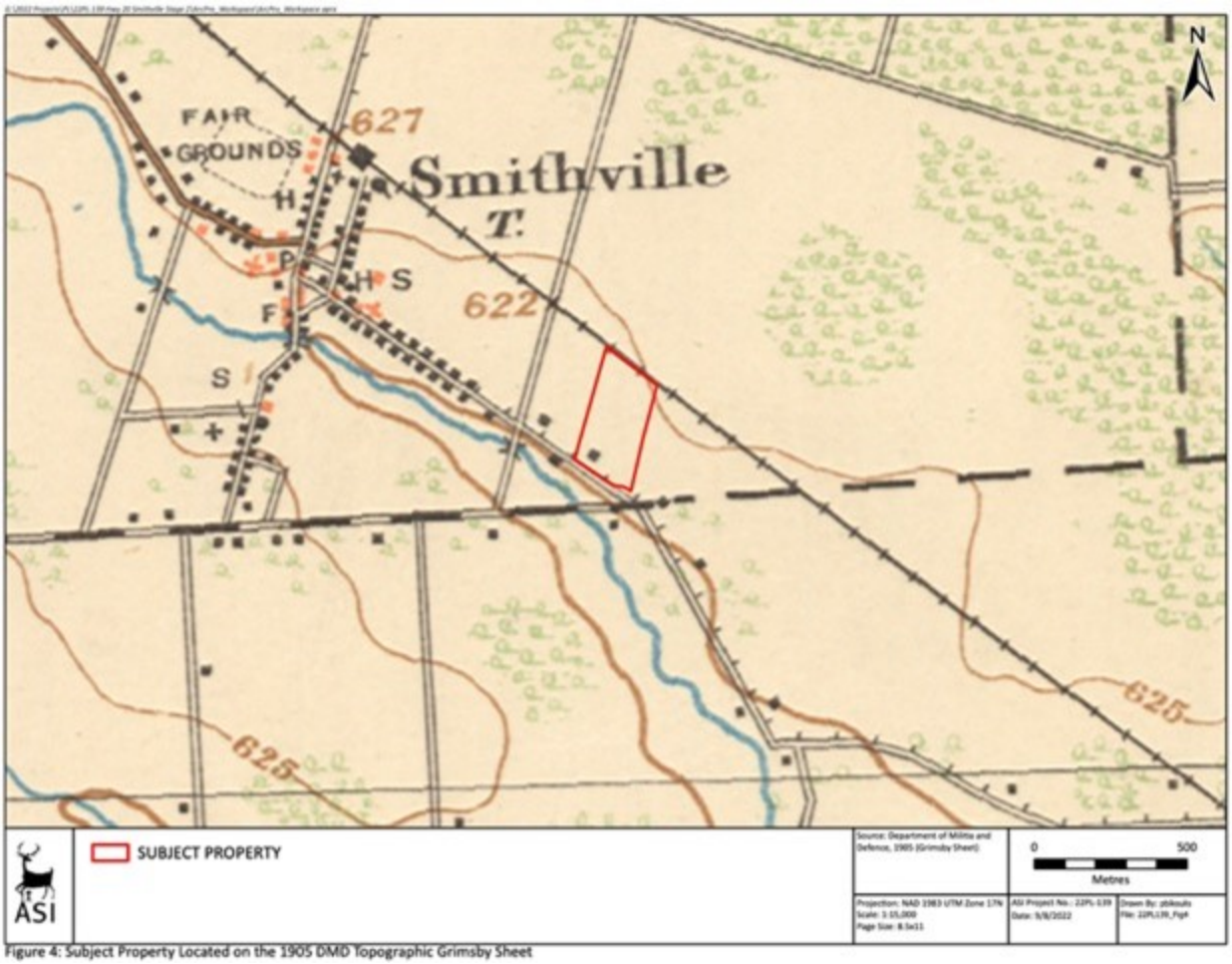
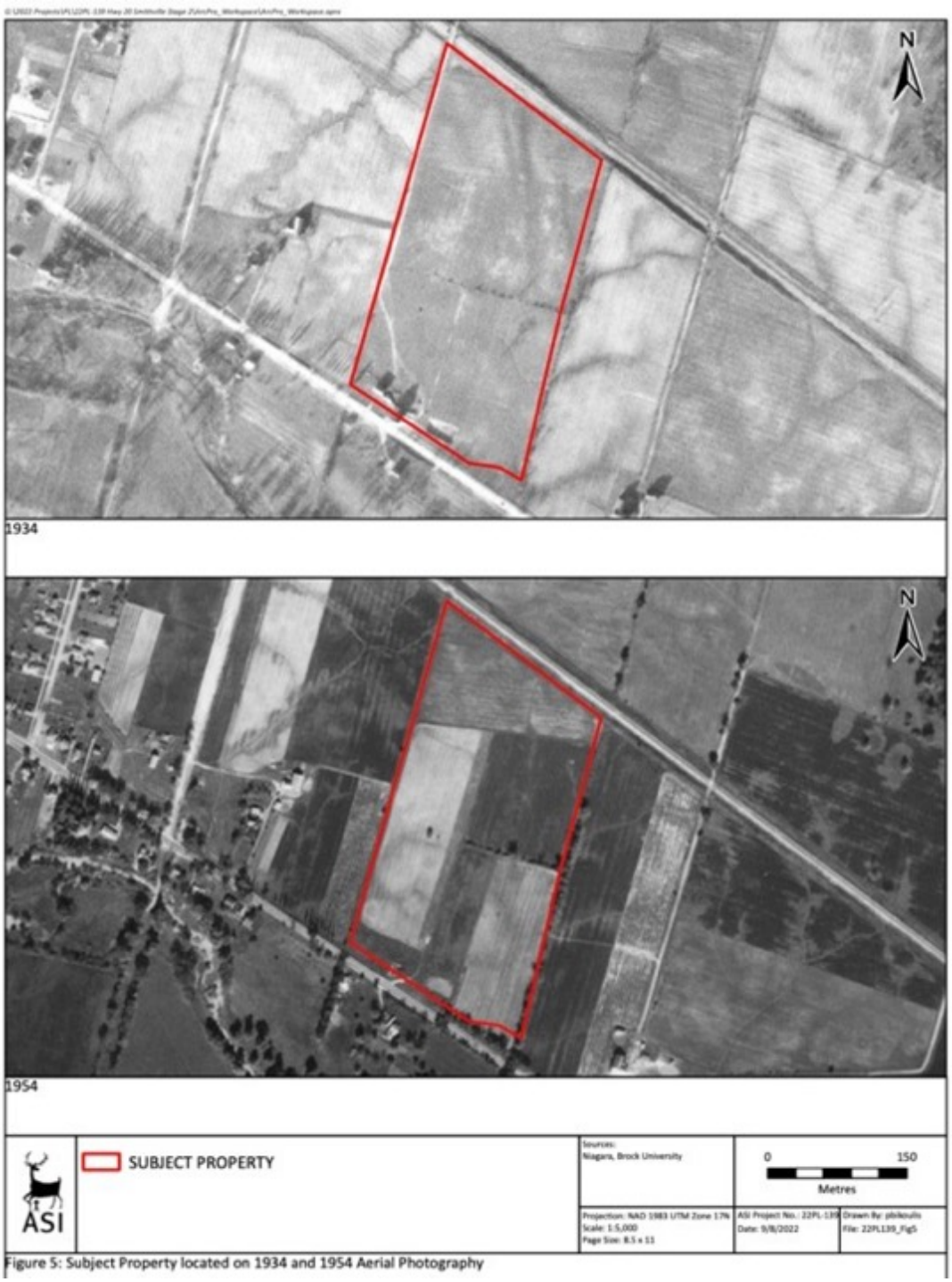


Figure 4: Subject Property Located on the 1905 DMD Topographic Grimsby Sheet

Map 4: Property Overlaid on 1905 Topographic Mapping (ASI 2022)

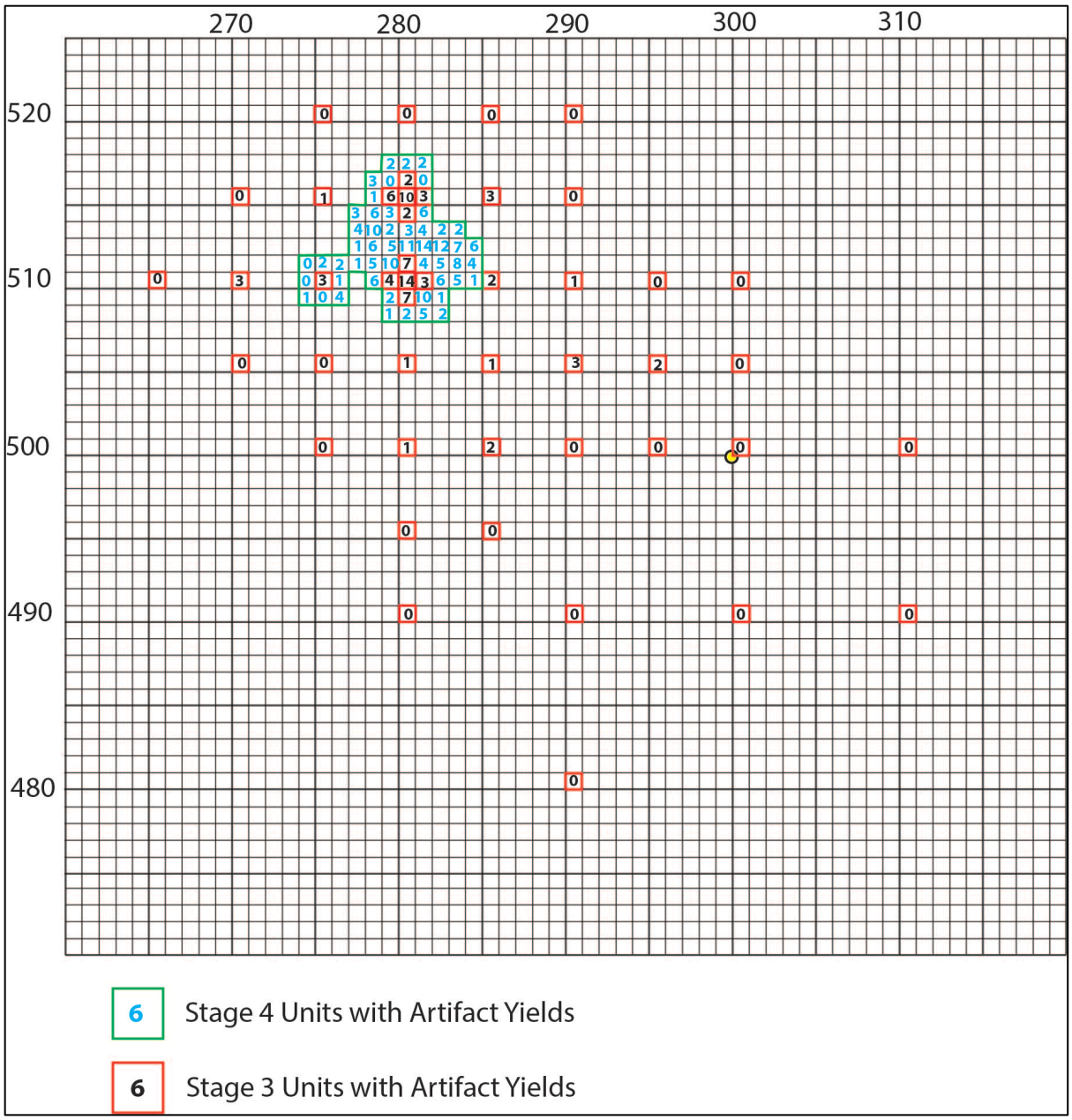


Map 5: Property Overlaid on Historic Aerial Mapping 1934 and 1954 (ASI 2022)

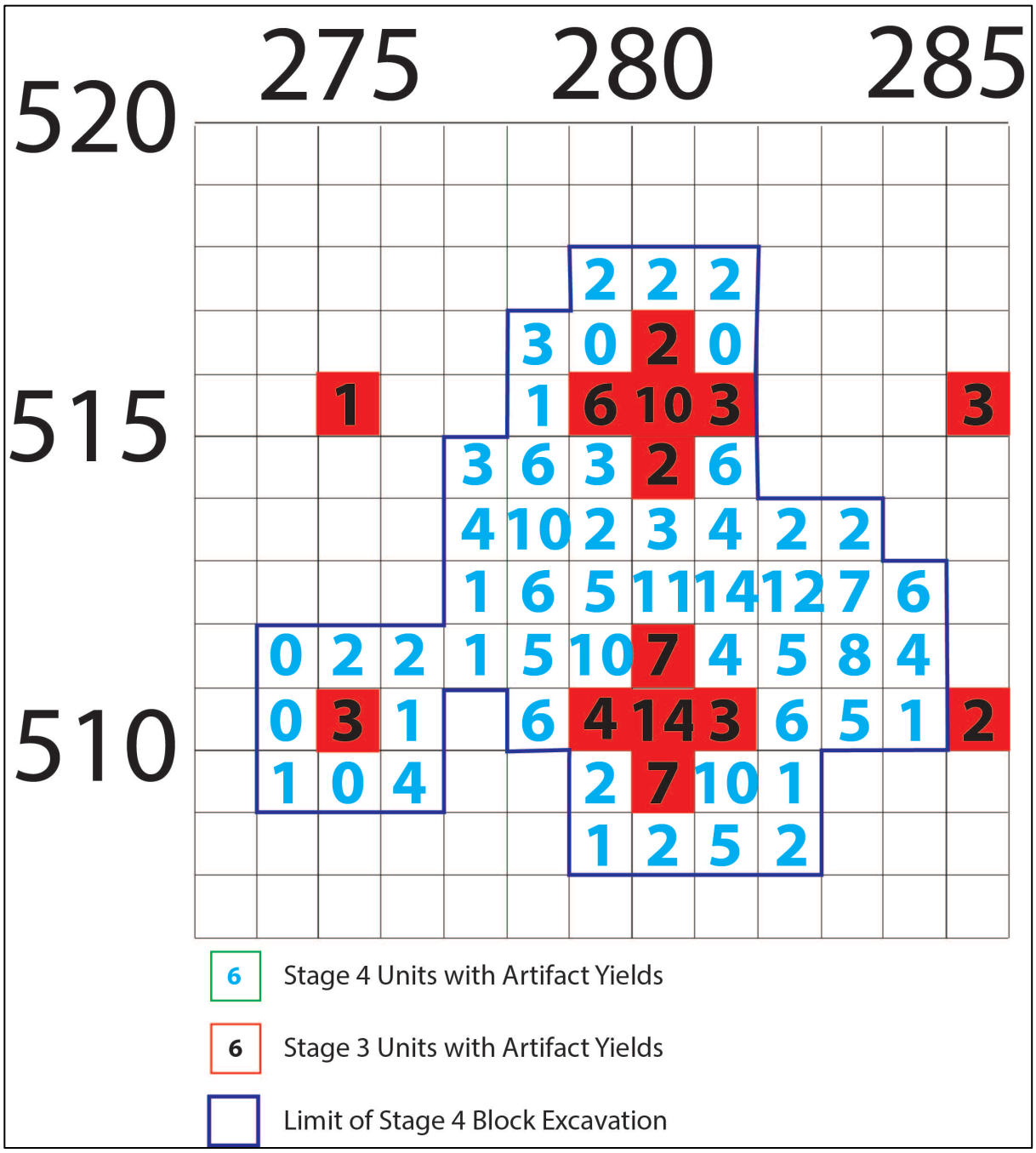
Map 6: Property Overlaid on Recent Aerial Mapping

Figure 1: Location of Sites and Findspots

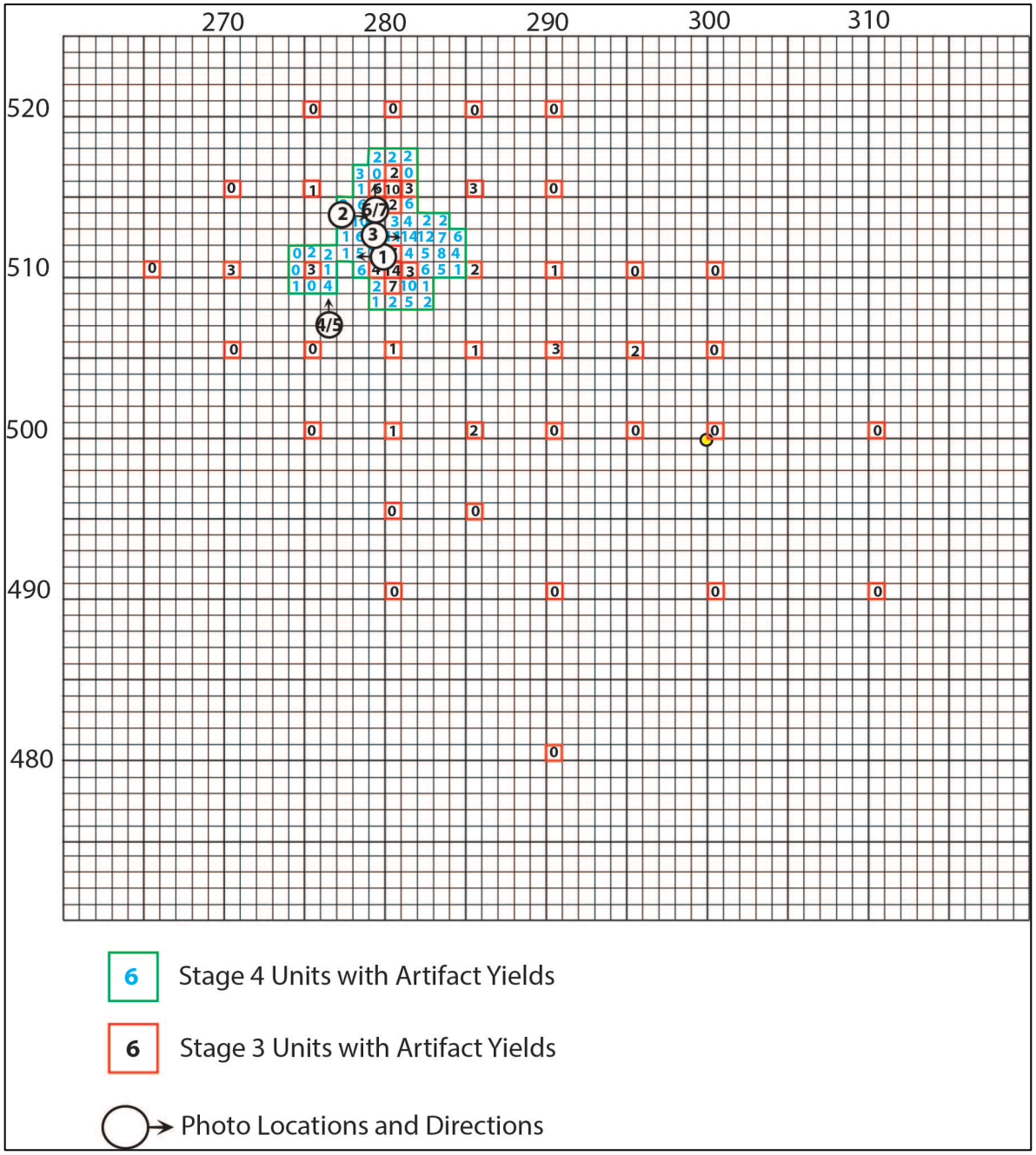
Map 7: Results of the Stage 3 Archaeological Assessment Overlaid on Stage 2 Results.



Map 8: Results of the Stage 4 Archaeological Assessment Overlaid on Stage 3 Results.



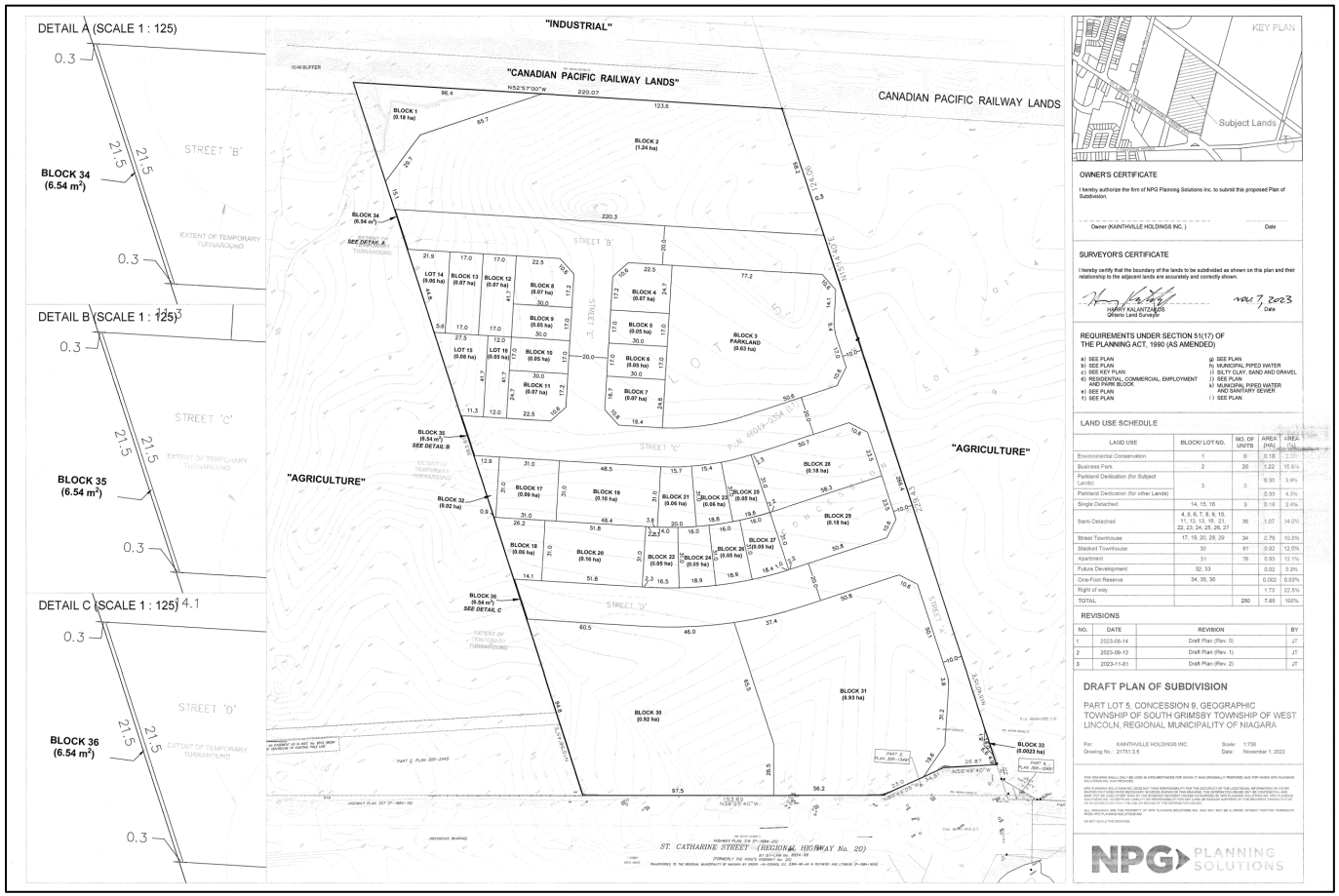
Map 9: Results of the Stage 4 Archaeological Assessment. (Stage 3 Units in Red).



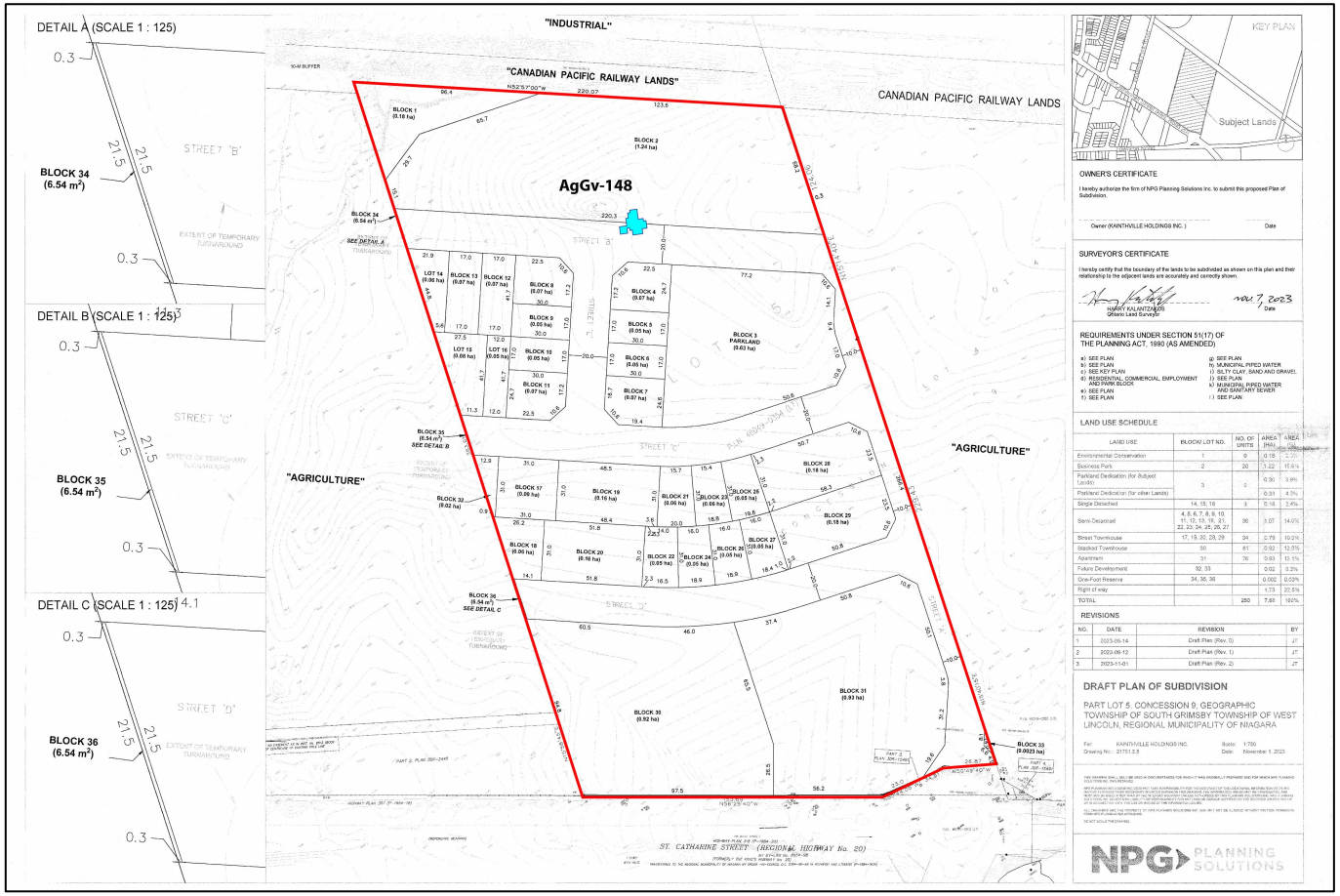
Map 10: Photo Locations and Directions.

Figure 1: Location of Sites and Findspots

Map 11: Limits of Stage 4 Excavation overlaid on Stage 3 and Stage 2 results.



Map 12: Clear Copy of Draft Plan of Subdivision.



Map 11: Stage 4 Excavation (in blue) overlaid on development mapping.

APPENDIX A – SITE AGGV-148 STAGE 4 ARTIFACT CATALOGUE

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
508-279	L4001	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Dark Mottled Grey	Onondaga Chert	Yes	11.93	8.16	2.1	Pot-lidding on ventral surface.
508-280	L4002	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	7.65	12.94	2.26	
508-280	L4003	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	9.05	7.76	2.32	
508-281	L4004	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Primary	No	Mid-Mottled Grey	Onondaga Chert	No	23.98	17.73	9.07	
508-281	L4005	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	16.68	14.94	3.15	
508-281	L4007	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Light Mottled Grey	Onondaga Chert	No	23.3	12.53	2.59	Chert mottled with heavily silicified cortex.
508-281	L4008	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	No	7.41	7.92	3.17	
508-281	L4006	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	14.62	8.23	2.96	Pot-lidding on dorsal surface.
508-282	L4009	1	Informal	Uniface	Flake Tool	Conchoidal Flake	N/A	Yes	Mid-Mottled Grey	Onondaga Chert	No	30.74	17.3	2.73	Unifacially worked edge - can't determine if worked flake, or flake removed from a previously worked piece
508-282	L4010	1	Debitage	Shatter	N/A	N/A	Primary	No	Mid-Grey	Onondaga Chert	No	16.81	13.43	4.95	
509-274	L4011	1	Debitage	Shatter	N/A	N/A	Primary	No	Light Grey w/ Tan	Onondaga Chert	No	33.6	20.61	7.42	
509-276	L4013	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Light Grey w/ Tan	Onondaga Chert	No	15.04	15.2	3.68	Chert mottled with heavily silicified cortex.
509-276	L4015	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	10.06	12.55	2.14	
509-276	L4012	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	17.38	11.9	3.94	Pot-lid on ventral surface.
509-276	L4014	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	10.22	11.73	2.15	Pot-lid on dorsal surface.
509-279	L4016	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Light Mottled Grey	Onondaga Chert	No	17.78	15.16	3.47	
509-279	L4017	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	12.85	7.99	1.97	
509-281	L4018	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	37.98	19.43	9.11	Large reduction flake, borderline primary but with relict flake scars on the dorsal surface.
509-281	L4019	1	Formal	Scraper	Thumb Scraper	N/A	N/A	Yes	Light Grey w/ Tan	Onondaga Chert	No	21.95	23.52	5.56	Crudely made, possibly just a worked flake but appears to be a quickly made scraper.

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
509-281	L4020	1	Debitage	Flake	N/A	Conchoidal Flake	Primary	No	Mid-Grey	Onondaga Chert	No	18.66	17.39	4.32	
509-281	L4021	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Light Grey w/ Tan	Onondaga Chert	No	22.05	11.4	2.88	Some cortex at termination.
509-281	L4022	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Banded Greys	Onondaga Chert	No	16.48	12.91	3.13	
509-281	L4023	1	Debitage	Shatter	N/A	N/A	Cortical Removal	No	Light Grey w/ Tan	Onondaga Chert	No	20.13	10.11	5.64	
509-281	L4024	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	19.05	15.31	3.12	
509-281	L4025	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	12.56	14.62	2.12	
509-281	L4027	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	7.5	7.82	1.36	
509-281	L4026	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Light Grey	Onondaga Chert	Yes	12.2	9.78	3.6	Pot-lid on ventral surface, possibly fire cracked.
509-282	L4028	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	14.19	21.55	3.94	
510-276	L4029	1	Informal	Broken Biface	Indeterminate (base)	N/A	N/A	Yes	Light Mottled Grey	Onondaga Chert	No	7.26	19.23	3.94	Base width: 19.23, Neck width: 12.07. Does not retain the entire hafting element and is impossible to type with confidence.
510-278	L4031	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	11.76	12.21	2.53	
510-278	L4032	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Banded Greys	Onondaga Chert	No	13.6	8.14	2.52	
510-278	L4033	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	13.61	7.87	2.72	
510-278	L4034	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Light Grey w/ Tan	Onondaga Chert	No	10.27	7.01	1.21	
510-278	L4035	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Light Grey w/ Tan	Onondaga Chert	No	8.43	6.15	2.98	
510-278	L4030	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Light Grey	Onondaga Chert	Yes	14.07	17.04	4.41	Pot-lid on ventral surface.
510-282	L4036	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mottled Greys w/ Tan	Onondaga Chert	No	24.47	17.3	5.65	Pocket of cortex at/near platform.
510-282	L4037	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	No	11.5	13.04	3.46	
510-282	L4038	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Mottled Grey	Onondaga Chert	No	12.08	12.13	2.26	
510-282	L4039	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	15.11	11.13	3.14	
510-282	L4040	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	8.75	9.81	1.71	
510-282	L4041	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Mid-Grey	Onondaga Chert	No	9.04	7.54	2.38	
510-283	L4042	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Mid-Grey	Onondaga Chert	No	18.51	12.49	2.42	
510-283	L4043	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Mid-Grey	Onondaga Chert	No	15.82	7.49	2.78	

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
510-283	L4044	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Light Grey w/ Tan	Onondaga Chert	No	15.45	8.93	1.57	
510-283	L4045	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	No	10.44	10.07	1.67	
510-283	L4046	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Light Grey	Onondaga Chert	Possible	11.06	7.93	1.08	Possible fire-cracking/rough pot-lid of entire dorsal surface.
510-284	L4047	1	Debitage	Broken Flake	N/A	Indeterminate	Indeterminate	No	Mid-Grey	Onondaga Chert	Yes	17.51	21.69	1.98	Pot-lid on dorsal surface.
511-275	L4048	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Mid-Grey	Onondaga Chert	No	18.84	6.99	4.13	
511-275	L4049	1	Debitage	Shatter	N/A	N/A	Indeterminate	Possible	White	Fossil Hill Formation	No	15.91	9.71	5.28	Unknown chert, possibly from fossil hill formation, very white. Possibly slight retouch on one edge, but the object is quite fragmented.
511-276	L4050	1	Informal	Uniface	Flake Tool	Indeterminate	Secondary	Yes	Mid-Grey	Onondaga Chert	No	19.97	31.43	6.22	Some retouch on one of the broken edges.
511-276	L4051	1	Debitage	Shatter	N/A	N/A	Primary	No	White/Tan	Fossil Hill Formation	Possible	20.62	14.68	9.74	Red patina, possibly from heat. Uncertain chert, probably FHF.
511-277	L4052	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	31.34	21.12	6.82	Large reduction flake, borderline primary but with relict flake scars on the dorsal surface.
511-278	L4053	1	Debitage	Flake Fragment	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	29.25	17.71	3.25	
511-278	L4054	1	Debitage	Shatter	N/A	N/A	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	20.72	12.27	4.03	
511-278	L4055	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Light Grey	Onondaga Chert	No	17.21	10.08	2.07	
511-278	L4056	1	Debitage	Shatter	N/A	N/A	Secondary	No	Mid-Grey	Onondaga Chert	No	11.81	11.59	3.94	
511-278	L4057	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Mottled Grey	Onondaga Chert	No	14.07	6.36	2.56	Unusually light colour phase, unlike the bulk of the assemblage but still within the range expected for Onondaga chert. Small piece, difficult to say with certainty.
511-279	L4058	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	23.59	19.9	3.19	
511-279	L4059	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	14.63	24.3	6.85	
511-279	L4061	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Light Mottled Grey	Onondaga Chert	No	22.13	18.31	1.79	
511-279	L4062	1	Informal	Fragment	Modified Fragment	N/A	N/A	Yes	Light Grey w/ Tan	Onondaga Chert	No	25.47	11.43	4.96	Some retouch but the broken nature of the object obscures what this might have been.
511-279	L4063	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Banded Greys	Onondaga Chert	No	17.4	9.23	2.09	

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
511-279	L4064	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	White	Fossil Hill Formation	No	8.02	17.77	3.39	
511-279	L4066	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Light Grey w/ Tan	Onondaga Chert	No	9.47	6.46	1.24	
511-279	L4060	1	Debitage	Shatter	N/A	N/A	Secondary	No	Mid-Grey	Onondaga Chert	Yes	25.11	19.1	6.07	Very small pot-lid on dorsal surface.
511-279	L4065	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Mid-Grey	Onondaga Chert	Yes	9.47	9.18	3.85	Pot-lid on dorsal surface.
511-279	L4067	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	5.88	9.82	1.25	Pot-lid on ventral surface.
511-281	L4068	1	Informal	Biface Fragment	Unidentified Biface Fragment	N/A	N/A	Yes	Light Grey w/ Tan	Onondaga Chert	No	12.34	12.32	5.82	Fragment of the blade of a narrow biface. Impossible to say what type of tool, possibly a drill, possibly a projectile point, etc.
511-281	L4069	1	Informal	Uniface	Worked Flake	Conchoidal Flake	N/A	Yes	Mid-Grey	Onondaga Chert	No	26.32	21.59	4.64	Crude retouch on a lateral edge.
511-281	L4070	1	Informal	Flake	Possible Utilized Flake	Conchoidal Flake	Secondary	No	Light Grey w/ Tan	Onondaga Chert	No	34.11	14.53	3.21	No retouch, but possible usewear on lateral edges. Has the approximate morphology of a crude prismatic blade, possibly from a blade-core.
511-281	L4071	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	13.51	8.55	2.07	
511-282	L4072	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Light Grey w/ Tan	Onondaga Chert	No	20.6	11.38	4.73	
511-282	L4073	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	13.05	14.52	2.1	
511-282	L4075	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	9.96	9.79	2.08	
511-282	L4076	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Very Light Grey w/ Tan	Unidentified Chert	No	13.63	13.26	2.28	Possibly just a light colour-phase of Onondaga, could be FHF or something else as well.
511-282	L4074	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	Yes	10.74	13.8	2.84	Pot-lidding on both surfaces.
511-283	L4077	1	Formal	Drill	Drill	N/A	N/A	Yes	Banded Greys	Onondaga Chert	No	43.17	16.11	6.81	Base width: 16.11, Blade width: 9.59.
511-283	L4078	1	Informal	Broken Biface	Tip of Biface	N/A	N/A	Yes	Mid-Grey	Onondaga Chert	No	27.39	32.85	4.66	Tip of a thin, and quite wide biface. Does not retain diagnostic elements necessary for typing.
511-283	L4080	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Banded Greys	Onondaga Chert	No	16.68	11.87	2.45	
511-283	L4081	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	12.76	17.12	2.51	
511-283	L4082	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	9.79	10.39	0.93	
511-283	L4083	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	6.11	15.16	3.2	

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
511-283	L4084	1	Informal	Broken Core	Reworked Unidirectional Core	N/A	N/A	Yes	Banded Greys w/ Tan	Onondaga Chert	No	26.56	30.88	14.43	Piece of a core that after having been broken has had an edge retouched into a graver/burin-like shape.
511-283	L4079	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	Yes	16.46	24.04	4.16	Pot-lid on ventral surface, possibly fire cracked.
511-284	L4085	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mottled Greys w/ Tan	Onondaga Chert	No	22.92	16.81	3.66	
511-284	L4086	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	16.91	14.24	2.07	Has the approximate morphology of a (fragment of a) prismatic blade. Probably coincidental since it's just a fragment.
511-284	L4087	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Light Grey	Onondaga Chert	No	13.06	12.53	1.2	
511-284	L4088	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	8.44	9.75	1.93	
512-277	L4089	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Light Grey w/ Tan	Onondaga Chert	No	17.74	22.73	5.47	
512-278	L4090	1	Informal	Broken Preform	Biface Preform	N/A	N/A	Yes	White	Fossil Hill Formation	No	30.31	23.38	6.35	Biface preform, tip is missing, possibly the beginning of a crude notch but not convincing.
512-278	L4091	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Mid-Grey	Onondaga Chert	No	20.52	12.54	7.72	
512-278	L4092	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	13.47	18.6	1.87	
512-278	L4094	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	8.21	11.76	0.95	
512-278	L4095	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Mottled Greys w/ Tan	Onondaga Chert	No	10.45	9.47	2.22	
512-278	L4093	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	9.74	17.23	1.69	Extensive pot-lidding on both surfaces.
512-279	L4096	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Banded Greys	Onondaga Chert	No	16.27	21.18	5.21	
512-279	L4097	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	17.48	9.94	4.61	
512-279	L4098	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	16.1	10.38	2.83	
512-279	L4099	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	7.87	13.33	1.77	
512-279	L4100	1	Debitage	Shatter	N/A	N/A	Primary	No	Mottled Greys w/ Tan	Onondaga Chert	No	18.85	6.2	2.36	
512-280	L4101	1	Debitage	Flake Fragment	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	32.71	14.72	4.64	
512-280	L4102	1	Debitage	Flake Fragment	N/A	Conchoidal Flake	Indeterminate	No	Mid-Grey	Onondaga Chert	No	30.8	15.93	6.02	Some patina on dorsal surface.

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
512-280	L4105	1	Debitage	Flake Fragment	N/A	Indeterminate	Cortical Removal	No	Mottled Greys w/ Tan	Onondaga Chert	No	12.56	16.48	3.47	Mostly cortex.
512-280	L4106	1	Debitage	Flake	N/A	Indeterminate	Secondary	No	Light Mottled Grey	Onondaga Chert	No	8.92	16.02	1.93	
512-280	L4108	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	12.62	7.92	1.43	
512-280	L4109	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Light Grey	Onondaga Chert	No	10.69	6.75	0.95	
512-280	L4110	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Mid-Grey	Onondaga Chert	No	8.61	5.59	0.98	
512-280	L4111	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	8.54	5.55	0.65	
512-280	L4104	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Banded Greys	Onondaga Chert	Possible	22.53	16.98	7.66	Possible heat fracturing of object.
512-280	L4103	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	Yes	23.69	21.97	5.43	Pot-lids on both surfaces as well as heat fracturing of flake.
512-280	L4107	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Light Mottled Grey	Onondaga Chert	Yes	12.14	11.31	1.37	Pot-lid on ventral surface.
512-281	L4112	1	Debitage	Flake Fragment	N/A	Conchoidal Flake	Secondary	No	Mottled Greys w/ Tan	Onondaga Chert	No	24.67	24.29	3.03	
512-281	L4113	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	No	21.03	15.65	3.98	
512-281	L4117	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Unidentified Chert	No	19.16	12.64	1.91	Possibly just a different colour-phase of Onondaga.
512-281	L4119	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	10.95	12.37	1.6	
512-281	L4122	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Banded Greys	Onondaga Chert	No	17.25	9.14	4.09	
512-281	L4124	1	Informal	Biface Fragment	Indeterminate	N/A	N/A	Yes	Dark Grey	Onondaga Chert	No	15.76	5.18	4.11	Small fragment of a bifacially worked edge. Is curved so perhaps from the base? Does not retain diagnostic elements.
512-281	L4125	1	Informal	Broken Biface	Indeterminate (base)	N/A	N/A	Yes	Banded Greys	Onondaga Chert	No	9.73	16.65	6.25	Base width: 16.65.00, Neck width:12.3. Does not retain the entire hafting element so impossible to type with confidence.
512-281	L4116	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	Possible	16.74	14.5	2.43	Possible pot-lid on dorsal surface near to platform.
512-281	L4118	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Possible	16.84	10.68	1.43	Possible pot-lid on ventral surface along broken edge of flake.
512-281	L4121	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Possible	13.84	9.31	1.09	Possible pot-lidding on dorsal surface.
512-281	L4114	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	Yes	24.96	15.26	3.74	Pot-lidding on both surfaces.
512-281	L4115	1	Debitage	Flake	N/A	Conchoidal Flake	Indeterminate	No	Mid-Mottled Grey	Onondaga Chert	Yes	14.12	19.21	5.81	Small pot-lid on ventral surface. Very

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
															rounded/crushed at the platform.
512-281	L4120	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	Yes	7.14	14.62	1.3	Pot-lidding on dorsal surface.
512-281	L4123	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Dark Grey	Onondaga Chert	Yes	9.34	10.86	2.24	Pot-lid on dorsal surface.
512-282	L4126	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Banded Greys w/ Tan	Onondaga Chert	No	29.02	22.53	4.17	
512-282	L4127	1	Informal	Fragment	Utilised Fragment	N/A	N/A	Yes	Mid-Mottled Grey	Onondaga Chert	No	35.11	25.93	10.17	Small retouch on edge and/or usewear. May be platform prep but its quite small flakes.
512-282	L4128	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Light Grey w/ Tan	Onondaga Chert	No	24.04	19.04	2.52	
512-282	L4129	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	22.59	17.59	4.39	
512-282	L4130	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	15.87	20.31	1.59	
512-282	L4131	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Mottled Greys w/ Tan	Onondaga Chert	No	17.78	18.94	4.73	
512-282	L4132	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Banded Greys w/ Tan	Onondaga Chert	No	11.57	19.35	2.25	
512-282	L4133	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Banded Greys	Onondaga Chert	No	16.15	10.31	1.98	
512-282	L4134	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	8.93	10.42	1.78	
512-282	L4136	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	7.79	10.57	2.53	
512-282	L4135	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	11.58	9.56	1.52	Small pot-lid on ventral surface. Very rounded/crushed at the platform.
512-282	L4137	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Mid-Grey	Onondaga Chert	Yes	9.64	7.14	3.36	Pot-lidding on multiple surfaces, possible heat fracturing as well.
512-283	L4139	1	Informal	Uniface	Flake Tool	Conchoidal Flake	Secondary	Yes	Mid-Grey	Onondaga Chert	No	29.44	24.66	6.39	Appears to have a modified edge into a graver or burin-like protrusion. Minimal working but perhaps some usewear along the terminal edge as well.
512-283	L4140	1	Debitage	Flake Fragment	N/A	Indeterminate	Cortical Removal	No	Tan w/ Small Grey Bands	Onondaga Chert	No	18.45	23.77	6.37	Heavily silicified cortex.
512-283	L4141	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	11.33	15.53	4.77	
512-283	L4143	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	6.33	16.36	2.08	
512-283	L4144	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	5.93	9.37	0.84	

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
512-283	L4138	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	Possible	33.08	22.32	5.56	Possible pot-lid on dorsal surface near a lateral edge.
512-283	L4142	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	Yes	11.34	11.25	1.98	Pot-lid on ventral surface.
512-284	L4148	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	10.62	9.95	1.76	
512-284	L4149	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Unidentified Chert	No	8.72	10.17	2.01	Probably just a colour-phase of Onondaga chert, but it differs from the bulk of the rest of the assemblage.
512-284	L4150	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	White	Fossil Hill Formation	No	7.35	7.66	1.43	
512-284	L4146	1	Debitage	Broken Flake	N/A	Indeterminate	Indeterminate	No	Mid-Mottled Grey	Onondaga Chert	Possible	15.64	11.45	2.79	This object may be the pot-lid itself that came from a larger object.
512-284	L4147	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Banded Greys	Onondaga Chert	Possible	13.66	9.9	1.83	Possibly heat fractured, it has an unusual texture on what should be the ventral surface.
512-284	L4145	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	14.17	11.41	3.13	Pot-lidding on dorsal surface.
513-277	L4151	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	18.86	10.05	3.54	
513-277	L4152	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Banded Greys w/ Tan	Onondaga Chert	No	10.76	15.9	3.34	
513-277	L4153	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Light Mottled Greys w/ Tan	Onondaga Chert	No	9.88	12.16	2.06	
513-277	L4154	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	6.5	12.95	2.48	
513-278	L4155	1	Informal	Flake	Utilised Flake	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	34.51	22.61	6.22	Possible usewear on lateral and distal edges, is pretty beat up though no formal retouch.
513-278	L4157	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	16.55	15.31	4.64	
513-278	L4158	1	Informal	Broken Flake	Utilised Flake	Conchoidal Flake	Secondary	No	Tan w/ Small Grey Bands	Onondaga Chert	No	22.29	13.51	3.2	Looks like microflakes removed from ventral face along part of lateral edge, possibly from use.
513-278	L4159	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Light Mottled Greys w/ Tan	Onondaga Chert	No	13.98	12.65	2.34	
513-278	L4160	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	16.36	10.48	1.38	
513-278	L4161	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Banded Greys	Onondaga Chert	No	14.75	9.98	5.56	
513-278	L4162	1	Debitage	Flake Fragment	N/A	Indeterminate	Indeterminate	No	Light Mottled Grey	Onondaga Chert	No	14.66	9.49	2.16	

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
513-278	L4164	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	11.02	7.28	1.61	
513-278	L4156	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	Yes	23.96	17.46	5.42	Pot-lid on ventral surface, unusual oxidation on dorsal surface.
513-278	L4163	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	Yes	9.31	10.38	0.93	Pot-lidding on ventral surface.
513-279	L4165	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	31.64	16.28	5.58	
513-279	L4166	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Light Mottled Greys w/ Tan	Onondaga Chert	No	14.21	20.64	2.92	
513-280	L4167	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	White w/ Tan	Fossil Hill Formation	No	31.42	24.82	4.22	
513-280	L4169	1	Informal	Broken Biface	Indeterminate (base)	N/A	N/A	Yes	Light Mottled Greys	Onondaga Chert	No	14.81	13.77	6.27	Crudely notched base of a biface. Base width: 13.77, Neck width:12.08, Haft length: 10.19 (only intact on one side). Does not retain enough diagnostic features to type with confidence.
513-280	L4168	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	13.29	7.93	1.92	Pot-lid on ventral surface.
513-281	L4170	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	29.95	18.57	3.13	
513-281	L4171	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Mid-Mottled Grey	Onondaga Chert	No	25.54	17.65	7.82	
513-281	L4172	1	Debitage	Flake	N/A	Conchoidal Flake	Indeterminate	No	Mid-Mottled Grey	Onondaga Chert	No	21.53	20.18	9.8	
513-281	L4173	1	Debitage	Shatter	N/A	N/A	Indeterminate	No	Light Mottled Greys w/ Tan	Onondaga Chert	No	16.69	15.25	5.19	
513-282	L4174	1	Debitage	Flake	N/A	Conchoidal Flake	Indeterminate	No	Mid-Mottled Grey w/ Tan	Onondaga Chert	No	23.54	33.44	6.21	
513-282	L4175	1	Debitage	Flake	N/A	Conchoidal Flake	Primary	No	Mid-Grey	Onondaga Chert	No	20.04	21.65	10.55	Very rounded and crushed on dorsal surface near platform.
513-283	L4176	1	Informal	Broken Core	Multi-directional Core	N/A	N/A	No	Banded Greys w/ Tan	Onondaga Chert	No	36.32	25.87	22.98	Very rounded and crushed along edges / eroded.
513-283	L4177	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Banded Greys	Onondaga Chert	No	12.82	17.64	4.68	
514-277	L4179	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	8.46	18.71	5.84	
514-277	L4180	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	No	8.79	21.32	3.47	
514-277	L4178	1	Informal	Flake	Trifacial Flake Tool	Conchoidal Flake	N/A	Yes	Mid-Mottled Grey	Onondaga Chert	Yes	51.7	22.78	10.72	Trifacial retouch and/or usewear, perhaps a crude drill? Pot-lidding on dorsal and ventral surfaces.

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
514-278	L4182	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	16.76	12.3	3.78	
514-278	L4183	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	15.31	12.74	1.54	
514-278	L4186	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Light Mottled Greys	Onondaga Chert	No	7.19	7.92	0.92	
514-278	L4181	1	Debitage	Shatter	N/A	N/A	Indeterminate	Possible	Light Mottled Greys	Onondaga Chert	Possible	31.3	32.51	9.59	Possible retouch, looks like relict platform prep. Possible tiny pot-lid on ventral surface (may just be inclusion), some unusual oxidation, mostly on dorsal surface but does appear slightly on ventral surface.
514-278	L4184	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	Yes	14.49	8.75	2.49	Pot-lidding on ventral surface.
514-278	L4185	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	12.59	7.33	1.98	Pot-lidding on dorsal surface.
514-279	L4188	1	Debitage	Broken Flake	N/A	Indeterminate	Secondary	No	White w/ Visible Fossils	Fossil Hill Formation	No	11.94	10.14	1.24	
514-279	L4189	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	Possible	13.39	8.54	2.18	Possible pot-lid and/or heat fracture on ventral surface.
514-279	L4187	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Mottled Grey	Onondaga Chert	Yes	23.58	12.29	2.71	Pot-lidding on both surfaces.
514-281	L4191	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	17.14	9.06	2.75	
514-281	L4192	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	14.81	11.06	1.41	
514-281	L4193	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	15.32	8.07	1.43	
514-281	L4195	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	No	6.64	7.86	1.15	
514-281	L4190	1	Debitage	Broken Flake	N/A	Conchoidal Flake	Secondary	No	Mid-Grey	Onondaga Chert	Yes	16.08	19.31	3.11	Pot-lidding on dorsal surface.
514-281	L4194	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	Yes	12.56	9.14	1.85	Pot-lid on both surfaces.
516-278	L4196	1	Debitage	Flake	N/A	Conchoidal Flake	Primary	No	Mid-Mottled Grey w/ Tan	Onondaga Chert	No	29.33	28.66	8.58	Very crushed and rounded on dorsal surface near to platform.
516-278	L4197	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Mid-Grey	Onondaga Chert	No	17.61	9.76	1.69	
516-278	L4198	1	Debitage	Flake Fragment	N/A	Indeterminate	Cortical Removal	No	Mid-Grey w/ Tan	Onondaga Chert	No	13.14	7.99	2.59	
515-278	L4199	1	Debitage	Flake	N/A	Conchoidal Flake	Cortical Removal	No	Mid-Grey w/ Tan	Onondaga Chert	No	13.93	11.29	5.75	
517-279	L4200	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	11.52	8.32	2.24	
517-279	L4201	1	Debitage	Flake Fragment	N/A	Indeterminate	Secondary	No	Light Grey	Onondaga Chert	No	9.75	8.49	2.45	

Unit	Cat. #	Lot	Category	Type	Sub-Type	Flake Type	Reduction Sequence	Retouch	Colour	Material	Heat	L (mm)	W (mm)	Max Th (mm)	Comments
517-280	L4202	1	Informal	Flake	Utilised Flake	Conchoidal Flake	Secondary	No	Mid-Mottled Grey	Onondaga Chert	No	20.12	34.9	5.92	Appears to have usewear along the part of the terminal edge where the termination is feathered.
517-280	L4203	1	Debitage	Flake	N/A	Conchoidal Flake	Secondary	No	Banded Greys	Onondaga Chert	No	17.22	13.16	2.64	
517-281	L4204	1	Debitage	Flake	N/A	Bending Flake	Secondary	No	Light Grey	Onondaga Chert	No	11.65	8.01	1.82	
517-281	L4205	1	Debitage	Broken Flake	N/A	Bending Flake	Secondary	No	Mid-Grey	Onondaga Chert	No	9.29	10.09	1.11	

APPENDIX B SITE AGGV-148 LOCATION INFORMATION

Site AgGv-148 Location Information (Refer to Map 9) UTM 17, NAD 83 with an accuracy of ±3 m.			
Location Description	**Identifier**	**Easting**	**Northing**
Site AgGv-148	Centre	619351	4772395
	North	619361	4772421
	East	619384	4772383
	West	619333	4772397
	South	619351	4772377
	Site Datum (500N-300E)	619360	4772396
	Fixed Landmark	619269	4772109