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STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Ninth Line (Regional Road 13) Transportation Corridor Improvements from Dundas Street (Regional Road 5) to 407 ETR (Express Toll Route), Halton Region, Ontario

ORIGINAL REPORT

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Executive Summary

The Executive Summary highlights key points from the report only; for complete information and findings, as well as the limitations, the reader should examine the complete report.

A Stage 1 Archaeological Assessment was conducted on behalf of CIMA+ (the client) by Golder Associates Ltd. (Golder) in support of the Municipal Class Environmental Assessment (MCEA) Study for the Ninth Line Transportation Corridor Improvements from Dundas Street to Highway 407. The study area is an approximately linear corridor 3.8 kilometres (km) long and 35 metres wide along the current Ninth Line roadway corridor; in order to accommodate the proposed right-of-way (ROW) and potential construction staging areas the Stage 2 archaeological study includes a total width of 50 metres. The study area cuts across portions of Lots 5 and 6 in Concessions 1 and 2 North of Dundas Street in the historic geographic Township of Trafalgar South, and includes portions of Halton County, now the Town of Oakville, Ontario and the Region of Peel, now the City of Mississauga, Ontario (Map 1).

The objective of the Stage 1 Archaeological Assessment was to compile all available information about the known and potential archaeological resources within the study area and to provide direction for the protection, management and/or recovery of these resources, consistent with Ministry of Tourism, Culture and Sport (MTCS) guidelines (MTCS 2011). The Stage 1 background study found potential to exist within the study area for the recovery of pre- and post-contact Aboriginal and historical Euro-Canadian archaeological resources (Map 6A-E). Given the findings of the Stage 1 archaeological assessment of the study area, the following recommendations are made:

- 1) Portions of the study area that were identified as poorly drained or previously disturbed, as illustrated in Map 6A-E, do not exhibit archaeological potential and no further archaeological assessment of these areas is required.
- 2) All remaining portions of the study area that have archaeological potential, as illustrated in Map 6A-E, are recommended for Stage 2 archaeological assessment (test pit survey or pedestrian survey, as indicated on Map 6A-E) prior to ground disturbance associated with any future development.

The MTCS is asked to review the results and recommendations presented herein and accept this report into the Provincial Register of archaeological reports. The MTCS is also asked to provide a letter concurring with the results presented herein.



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1.0 PROJECT CONTEXT

1.1 Development Context

A Stage 1 Archaeological Assessment was conducted on behalf of CIMA+ (the client) by Golder Associates Ltd. (Golder) in support of the Municipal Class Environmental Assessment (MCEA) Study for the Ninth Line Transportation Corridor Improvements from Dundas Street to Highway 407. The study area is a linear corridor, approximately 3.8 kilometres (km) long and 35 metres wide along the current Ninth Line roadway; in order to accommodate the proposed right-of-way (ROW) and potential construction staging areas the Stage 2 archaeological study includes a total width of 50 metres. The study area cuts across portions of Lots 5 and 6 in Concessions 1 and 2 North of Dundas Street in the historic geographic Township of Trafalgar South, and includes portions of Halton County, now the Town of Oakville, Ontario and the Region of Peel, now the City of Mississauga, Ontario (Map 1).

The objective of the Stage 1 Archaeological Assessment was to compile available information about the known and potential archaeological resources within the study area and to determine if a field survey (Stage 2) is required, as well as the recommended Stage 2 strategy. In compliance with the provincial standards and guidelines set out in the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), the objectives of the Stage 1 Archaeological Assessment are as follows:

- To provide information about the study area's geography, history, previous archaeological fieldwork and current land conditions;
- To evaluate in detail the study area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and,
- To recommend appropriate strategies for Stage 2 survey.

To meet these objectives Golder archaeologists employed the following research strategies:

- A review of relevant archaeological, historic and environmental literature pertaining to the study area;
- A review of the land use history, including pertinent historic maps;
- An examination of the Ontario Archaeological Sites Database (OASD) to determine the presence of known archaeological sites in and around the project area; and
- An inquiry with the MTCS to determine previous archaeological assessments conducted in close proximity to the study area.

The Stage 1 assessment was conducted under professional archaeological licence P243, issued to Carla Parslow of Golder by the MTCS (PIF P243-0315-2016). Golder staff did not enter any properties for the purposes of the Stage 1 property inspection, all evaluation of the Ninth Line road expansion study area was completed from the road right-of-way (ROW).



1.2 Historical Context

1.2.1 Post-Contact Aboriginal Occupation of Southern Ontario

The post-contact Aboriginal occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking peoples by the New York State Iroquois and the subsequent arrival of Algonkian-speaking groups from northern Ontario at the end of the 17th century and beginning of the 18th century (Schmalz 1991).

Following the introduction of Europeans to North America, the nature of First Nations settlement size, population distribution, and material culture shifted as settlers began to colonize the land. Despite this shift in First Nations life ways, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris 2009:114). As a result, First Nation peoples of southern Ontario have left behind archaeologically significant resources throughout southern Ontario which show continuity with past peoples, even if this connection has not been recorded in historical Euro-Canadian documentation.

The study area is situated within the historic Geographic Township of Trafalgar South and includes portions of Halton County, now the Town of Oakville, Ontario and the Region of Peel, now the City of Mississauga. The study area is within lands that were part of Treaty Number 13A, made between the Mississaugas and William Claus, Superintendent-General of Indian Affairs on August 2nd, 1805 for 1,000 pounds on behalf of His Majesty King George III. As detailed in the below passage, Treaty Number 13A includes:

“Commencing at the eastern bank of the mouth of the River Etobicoke, being in the limit of the western boundary line of the Toronto Purchase, in the year 1787; then north twenty-two degrees west, six miles; thence south 38 degrees west, twenty-six miles more or less, until it intersects a line on the course north 45 degrees west, produced from the outlet of Burlington Bay; then along the said produced line, one mile more or less to the lands granted to Captain Brant; then north 45 degrees east, one mile and a half; then south 45 degrees east, three miles and a half more or less to Lake Ontario; then north easterly along the waters’ edge of Lake Ontario to the eastern bank of the River Etobicoke being the place of the beginning.”

Reserving to Ourselves and Mississague Nation the sole right of the Fisheries in the Twelve Mile Creek, the Sixteen Mile Creek, the Etobicoke River, together with the flats or low grounds on said creeks and rivere which we have heretofore, cultivated and where have our camps and also the sole right of the Fishery in the River Credit with one mile on each side of said river.

This treaty comprises the fronts of the Townships of Toronto, Trafalgar and Nelson, except the 3,450 acres granted to Chief Brant in 1797.

(Morris 1943:22)

Although no Aboriginal engagement was conducted as part of the Stage 1 assessment, should any Stage 2 archaeological assessment result in the identification of sites with an Aboriginal component that are recommended for Stage 3 assessment, Aboriginal engagement measures consistent with MTCS standards will need to be undertaken.



1.2.2 Euro-Canadian Settlement

1.2.2.1 *Township of Trafalgar South, Halton County*

The County of Halton was named for William Halton who was engaged as the secretary of Francis Gore, whom acted as the Lieutenant-Governor of Upper Canada (Halton Region 2015). The County was originally a part of the Gore District but in 1816, the Gore district became its own entity separate from the United Counties of Halton and Wentworth. In 1853, the two counties separated and in 1857, the Towns of Oakville and Milton were added to County Council (Walker and Miles 1877). The County of Halton included the townships of Esquesing, Nassagaweya, Nelson, and Trafalgar. Surveys of Halton County were undertaken in 1806 and 1819, after First Nation land purchases. In the early maps of Halton County there was an area of 960 acres that was listed as First Nations land. This land was ceded to the Crown by the Mississauga's and immediately surveyed and made available for sale. On August 16, 1867 the entire 960 acres were purchased by Colonel William Chisolm; his first undertaking was to begin the three year construction on what would become Oakville Harbour (Walker and Miles 1877). The harbour was crucial in the logging trade for shipping to Quebec. William Chisolm's integral role in founding the harbour and town, as well as establishing trade economy was commemorated when the town was named "Oakville" (a nod to Chisolm's nickname: "White Oak"). By 1846 Oakville was a busy port town with a population of 550 residents which supported a wide selection of trades and merchants including two grist mills, one saw mill, a distillery, five blacksmiths, three taverns, and a dozen shoemakers (Smith 1846).

The lots of the southern portion of Trafalgar Township were laid out with the concessions running north-south and the lots numbered east to west. The main road through Trafalgar Township at the time of lot organization was Dundas Street and so the concessions are labelled as either north or south of Dundas Street (Warnock 1862). The study area includes lots on both Concession 1 and 2 North of Dundas Street (NDS). Official settlement of the area began immediately once the township was surveyed. The township had been surveyed into 200 acre lots and conditions of sale required that at least 5 acres be cleared, a house built (16 x 20ft), and the lot fenced; if the lot bordered a road, additional land was to be cleared and improvements made to the road itself (Trafalgar Township Historical Society 2016d). One of the early landowners in Trafalgar Township was Hannah Young who had been granted all 200 acres of Lot 6, Concession 2 NDS. She sold her land to Michael Snider who either sold or granted it to his son David who farmed there until his death in 1862 (Mair 2009). The Sniders became a well-known family, operating as post-masters and granting a portion of Lot 6 for the construction of a church. The intersection of the 'back-concession' (Burnhamthorpe Road) and Ninth Line became known as Sniders Corners and although it had a church and a schoolhouse it never grew into larger town with greater store fronts and amenities (Mair 2009).

Following World War II, the widespread use of motor vehicles began to change urban and rural development; as vehicular traffic increased, the network of roadways throughout the region improved providing Oakville and the surrounding communities with better connections to the growing metropolis of Toronto. These transportation improvements, specifically the construction of the 403 and 407 Highways, resulted in the decreasing survival rate of the original buildings of Sniders Corners – currently only two remain standing: 1481 Burnhamthorpe Road (Snider family) and 3480 Ninth Line (Ephraim Post).

In 1974 some municipal boundaries were altered and so although historically the entire study area was within Halton County, the City of Mississauga border now extends partially to the east side of Ninth Line and as such the eastern portion of the study area is a part of Peel Region.



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1.2.2.2 *Lot 5, Concession 1 North of Dundas Street, Township of Trafalgar South*

Part of the study area was originally part of Lot 5, Concession 1 North of Dundas Street, in the former Township of Trafalgar South.

An early lot owner was David Taylor who is listed on the 1806 Samuel Wilmot map of the area, conducted after the purchase of land from the Mississauga's. In 1806 Taylor is illustrated as owning all 200 acres of the lot but by the 1858 Tremaine map of the township, Lot 5 has been split and the southern portion of the lot is owned by William Robertson, with Henry Shain on the northernmost quarter. The available Tremaine map is in poor condition and no further information can be discerned. In the 1877 Walker and Miles map the majority of the lot to the south is now owned by William T. Brown who settled in the area in 1875 and is occupied as a farmer and stock raiser, none of the structures illustrated on his property fall within the designated study area. The northern quarter of Lot 5 is owned by Joseph Henderson. He is listed as non-resident but a structure and orchard are illustrated on the south-east corner of what is now Burnamthorpe Road and Ninth Line.

The previously completed Cultural Heritage Report states that the S.S. noted in the south-west corner of Henry Shains property in 1858 indicates the position of the first school house in the area of Snider's Corner (Unterman McPhail Associates 2008).

1.2.2.3 *Lot 6, Concession 1 North of Dundas Street, Township of Trafalgar South*

The 1806 map of the area lists William Tisdale on all of Lot 6. The 1858 Tremaine map indicates that the lot has been divided and the majority of the lot that is within the study area is owned by John McLean and Henry Shain owning a total of 100 acres including the northernmost 25 acres of the eastern side of the lot. In the 1877 map both land owners for Lot 6 are clearly noted: Arthur Conover has 75 acres along the south-east portion of the lot and the northern 25 acre parcel of the east side of the lot is owned by Ephraim Post (who owns the additional 75 acres on the west side of Lot 6, previously owned by Shain). Several structures were present near to the study area in this section: a structure and nearby orchard at the southern edge of Arthur Conover's property, a structure and orchard in the mid-northern portion of Ephraim Post's 25 acres, as well as a larger building at the south-west corner of what is now Burnamthorpe Road and Ninth Line. The larger building illustrated at the south-west corner of Burnhamthorpe Road and Ninth Line (north-east corner of Lot 6) was the one-room school house (S.S. #4) that was in use from the mid-19th century (Image 20). The school house was replaced by a new structure in 1956, and in its later years was used as a residence (1536 Burnhamthorpe Road East), before being demolished in 2010 after a Cultural Heritage Report deemed no further mitigation was required due to the extensive renovations and alterations to the original structure (Trafalgar Township Historical Society, 2016a, Unterman McPhail Associates 2008).

Ephraim Post's home is a listed property with the Town of Oakville (3480 Ninth Line) for its description as an "1886 brick Victorian house and its associations with the agricultural development of Trafalgar Township" (Town of Oakville 2016a, p. 79, Image 18).

1.2.2.4 *Lot 5, Concession 2 North of Dundas Street, Township of Trafalgar South*

Only a portion of the southern half of Lot 5, Concession 2 North of Dundas Street is within the current study area. The 1806 map of the area lists an illegible occupant of the southern half of Lot 5 and no owner at all for the northern half. The 1858 Tremaine map indicates that the southern half of the lot is owned by an Albertson (first name



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illegible). The 1877 map shows that the southern half of Lot 5 and addition land in Lot 4 is owned by Hiram Albertson. A structure is illustrated on the southern edge of Lot 5, approximately mid-way along the frontage of the Lot on Burnamthorpe Road. This structure is approximately 150 metres east of the study area.

1.2.2.5 *Lot 6, Concession 2 North of Dundas Street, Township of Trafalgar South*

Only a portion of the southern half of Lot 6, Concession 2 North of Dundas Street is within the current study area.

The 1806 map of the area lists Hannah Young in possession of all 200 acres of Lot 6. She was granted the patent to the land in 1808 and in 1810 sold to Michael Snider. Although Hannah had been granted the patent, the Snider family had been living on the land prior to their purchase (Trafalgar Township Historical Society, 2016b).

The 1858 Tremaine map shows the majority of Lot 6 still owned by David Snider with the exception of the south-east corner of the lot which the Sniders granted in the 1830s for the construction of a church. A Wesleyan Methodist church opened in 1839 until it was closed and re-opened as Methodist in 1870, the church stayed in use until a new one was constructed in 1886 (Mair 2009). On the 1877 map the southern portion of Lot 6 has been split into east and west sections. The western portion, outside of our study area, is owned by David Snider and the home that he built in 1848 is illustrated and surrounded by orchards (Image 19). This house is currently designated by the Town of Oakville Heritage Register (2016b, p. 3). The eastern portion which includes the study area is owned by F. G. Snider. The church is illustrated in the south-east corner of Lot 6 and a secondary structure is noted approximately 225 metres to the north, along Ninth Line.

1.3 Archaeological Context

1.3.1 The Natural Environment

The study area is situated within the “South Slope” physiographic region (Chapman & Putnam: 1984, 172-174).

The South Slope is the southern slope of the Oak Ridges Moraine but it includes the strip south of the Peel plain. ...it rises 300 to 400 feet in an average width of 6 or 7 miles. Extending from the Niagara Escarpment to the Trent River it covers approximately 940 square miles. The central portion is drumlinized...The streams flow directly down the slope; being rapid they have cut sharp valleys in the till...Bare grey slopes, where soil is actively eroding are common in this area.

Chapman & Putnam, 1984: 172-174

The soils of the study area consist predominately of Oneida Clay Loam. This type of soil can be found in smooth to gently sloping areas; these types of soils exhibit good natural drainage (Chapman and Putnam 1984). There are also small areas of Chinguacousy Clay Loam and Jeddo Clay Loam across the study area; also in smooth to gently sloping areas, these soils however exhibit imperfect to poor natural drainage (Chapman and Putnam 1984). Overall the main Oneida type of soils likely would have been suitable for pre-contact Aboriginal agricultural practices. A few small tributaries cross the study area as part of the larger Joshua Creek watershed (Map 1, Map 4).



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1.3.2 General Overview of the Pre-Contact Period in Halton Region

The cultural chronology of the Halton Region is briefly summarized in Table 1.

Table 1: Cultural Chronology for Halton Region, based on chapters in Ellis and Ferris (eds.) (1990)

Period	Characteristics	Time Period	Comments
Early Paleo	Fluted Projectiles	9000 - 8400 B.C.	spruce parkland/caribou hunters
Late Paleo	Hi-Lo Projectiles	8400 - 8000 B.C.	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 B.C.	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 B.C.	environment similar to present
Late Archaic	Lamoka (Narrow Points)	2000 - 1800 B.C.	increasing site size
	Broad Points	1800 - 1500 B.C.	large chipped lithic tools
	Small Points	1500 - 950 B.C.	introduction of bow hunting, emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 B.C.	introduction of pottery
Middle Woodland	Dentate Stamp and Pseudo-Scallop Shell Impressed pottery	400 B.C. - A.D. 500/800	increased sedentism
Late Woodland	Princess Point Complex	A.D. 500 - 1050	introduction of corn
	Early Ontario Iroquoian	A.D. 900/1000 - 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	A.D. 1300 - 1400	long longhouses (100m +)
	Late Ontario Iroquoian	A.D. 1400 - 1650	tribal warfare and displacement
Contact Aboriginal	Seneca, Mississaugas, Six Nations	A.D. 1650 - present	early written records and treaties
Late Historic	Euro-Canadian	A.D. 1785 - present	European settlement

1.3.3 Pre-Contact Aboriginal Documentation

Previous archaeological assessments and research surveys have demonstrated that the Halton Region was intensively occupied by pre-contact Aboriginal communities.

The following subsections outline the cultural or temporal periods recognized for southern Ontario more generally.

1.3.3.1 Paleo Period

The first human occupation of southern Ontario began just after the end of the Wisconsin Glacial period. Although there was a complex series of ice retreats and advances which played a large role in shaping the local topography, southwestern Ontario was finally ice free by 12,500 years ago. The first human settlement can be traced back 11,000 years, when this area was settled by Native groups that had been living south of the Great Lakes.

Our current understanding of Early Paleo period (*circa* 9000-8400 B.C.) settlement patterns suggest that small bands, consisting of probably no more than 25-35 individuals, followed a pattern of seasonal mobility extending over large territories (Ellis and Deller 1990:54). One of the most thoroughly studied of these groups followed a



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seasonal round that extended from as far south as Chatham to the Horseshoe Valley north of Barrie. Early Paleo sites tend to be located in elevated locations on well-drained loamy soils.

Many of the known sites were located on former beach ridges associated with Lake Algonquin, the post-glacial lake occupying the Lake Huron/Georgian Bay basin. There are a few extremely large Early Paleo sites, such as one located close to Parkhill, Ontario, which covered as much as six hectares (Ellis and Deller 1990:51).

It appears that these sites were formed when the same general locations were occupied for short periods of time over the course of many years. Given their placement in locations conducive to the interception of migratory mammals such as caribou, it has been suggested that they may represent communal hunting camps (Ellis and Deller 1990:51). There are also smaller Early Paleo camps scattered throughout the interior of southwestern Ontario, usually situated adjacent to wetlands. The most recent research suggests that population densities were very low during the Early Paleo period (Ellis and Deller 1990:54). Because this is the case, Early Paleo sites are exceedingly rare.

While the Late Paleo period (8400-8000 B.C.) is more recent, it has been less well researched, and is consequently more poorly understood. By this time the environment of southwestern Ontario was coming to be dominated by closed coniferous forests with some minor deciduous trees (Ellis and Deller 1990:60). It seems that many of the large game species that had been hunted in the early part of the Paleo period had either moved further north, or as in the case of the mastodons and mammoths, become extinct (Ellis and Deller 1990).

As in the early Paleo period, late Paleo period peoples covered large territories as they moved about in response to seasonal resource fluctuations. On a province wide basis, Late Paleo projectile points are far more common than Early Paleo materials, suggesting a relative increase in population (Ellis and Deller 1990:62).

The end of the Paleo period was heralded by numerous technological and cultural innovations which may be best explained in relation to the dynamic nature of the post-glacial environment and region-wide population increases.

1.3.3.2 Archaic Period

During the Early Archaic period (8000-6000 B.C.), the jack and red pine forests that characterized the Late Paleo period environment were replaced by forests dominated by white pine with some associated deciduous trees (Ellis *et al.* 1990:68-69). One of the more notable changes in the Early Archaic period is the appearance of side and corner-notched projectile points.

Other significant innovations include the introduction of ground stone tools such as celts and axes, suggesting the beginnings of a simple woodworking industry (Ellis and Deller 1990:65). The presence of these often large and not easily portable tools suggests there may have been some reduction in the degree of seasonal movement, although it is still suspected that population densities were quite low, and band territories large.

During the Middle Archaic period (6000-2500 B.C.) the trend to more diverse toolkits continued, as the presence of netsinkers suggest that fishing was becoming an important aspect of the subsistence economy. It was also at this time that "bannerstones" were first manufactured (Ellis *et al.* 1990:65). Bannerstones are carefully crafted ground stone devices that served as a counterbalance for "atlatls" or spear-throwers. Another characteristic of the Middle Archaic is an increased reliance on local, often poor quality chert resources for the manufacturing of projectile points. It seems that during earlier periods, when groups occupied large territories, it was possible for them to visit a primary outcrop of high quality chert at least once during their seasonal round. However, during the



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Middle Archaic, groups inhabited smaller territories that often did not encompass a source of high quality raw material. In these instances lower quality materials which had been deposited by the glaciers in the local till and river gravels were utilized.

This reduction in territory size was probably the result of gradual region-wide population growth which led to the infilling of the landscape (Ellis *et al.* 1990:67). This process resulted in a reorganization of Native subsistence practices, as more people had to be supported from the resources of a smaller area.

During the latter part of Middle Archaic, technological innovations such as fish weirs have been documented as well as stone tools especially designed for the preparation of wild plant foods. It is also during the latter part of the Middle Archaic period that long distance trade routes began to develop, spanning the northeastern part of the continent. In particular, native copper tools manufactured from a source located northwest of Lake Superior were being widely traded (Ellis *et al.* 1990:66). By 3500 B.C. the local environment had stabilized in a near modern form (Ellis *et al.* 1990:69).

During the Late Archaic (2500-900 B.C.) the trend towards decreased territory size and a broadening subsistence base continued. Late Archaic sites are far more numerous than either Early or Middle Archaic sites, and it seems that the local population had definitely expanded. It is during the Late Archaic that the first true cemeteries appear (Ellis *et al.* 1990:66). Before this time individuals were interred close to the location where they died. During the Late Archaic, if an individual died while his or her group happened to be at some distance from their group cemetery, the bones would be kept until they could be placed in the cemetery. Consequently, it is not unusual to find disarticulated skeletons, or even skeletons lacking minor elements such as fingers, toes or ribs, in Late Archaic burial pits.

The appearance of cemeteries during the Late Archaic has been interpreted as a response to increased population densities and competition between local groups for access to resources. It is argued that cemeteries would have provided strong symbolic claims over a local territory and its resources. These cemeteries are often located on heights of well-drained sandy/gravel soils adjacent to major watercourses (Ellis *et al.* 1990).

This suggestion of increased territoriality is also consistent with the regionalized variation present in Late Archaic projectile point styles. It was during the Late Archaic that distinct local styles of projectile points appear. Also during the Late Archaic the trade networks which had been established during the Middle Archaic continued to flourish. Native copper from northern Ontario and marine shell artifacts from as far away as the mid-Atlantic coast are frequently encountered as grave goods (Ellis *et al.* 1990:117; Ellis *et al.* 2009:824-825). 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" (Ellis *et al.* 1990:111). Birdstones are small, bird-like effigies usually manufactured from green banded slate.

1.3.3.3 Woodland Period

The Early Woodland period (900-200 B.C.) is distinguished from the Late Archaic period primarily by the addition of ceramic technology. While the introduction of pottery provides a useful demarcation point for archaeologists, it may have made less difference in the lives of the Early Woodland peoples. The first pots were very crudely constructed, thick walled, and friable. It has been suggested that they were used in the processing of nut oils by boiling crushed nut fragments in water and skimming off the oil (Spence *et al.* 1990:137). These vessels were not easily portable, and individual pots must not have enjoyed a long use life. There have also been numerous Early



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Woodland sites located at which no pottery was found, suggesting that these poorly constructed, undecorated vessels had yet to assume a central position in the day-to-day lives of Early Woodland peoples.

Other than the introduction of this rather limited ceramic technology, the life-ways of Early Woodland peoples show a great deal of continuity with the preceding Late Archaic period. For instance, birdstones continue to be manufactured, although the Early Woodland varieties have "pop-eyes" which protrude from the sides of their heads (Spence *et al.* 1990:129).

Likewise, the thin, well-made projectile points produced during the terminal part of the Archaic period continue in use. However, the Early Woodland variants were side-notched rather than corner-notched, giving them a slightly altered and distinctive appearance.

The trade networks which were established in the Middle and Late Archaic also continued to function, although there does not appear to have been as much traffic in marine shell during the Early Woodland period (Spence *et al.* 1990:129). During the last 200 years of the Early Woodland period, projectile points manufactured from high quality raw materials from the American Midwest begin to appear in southern Ontario (Spence *et al.* 1990:138).

In terms of settlement and subsistence patterns, the Middle Woodland (200 B.C.-900 A.D.) provides a major point of departure from the Archaic and Early Woodland periods. While Middle Woodland peoples still relied on hunting and gathering to meet their subsistence requirements, fish were becoming an even more important part of the diet (Spence *et al.* 1990:151). Some Middle Woodland sites have produced literally thousands of bones from spring spawning species such as walleye and sucker. Nuts such as acorns were also being collected and consumed (Spence *et al.* 1990:134). In addition, Middle Woodland peoples relied much more extensively on ceramic technology. Middle Woodland vessels are often decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. Consequently, even very small fragments of Middle Woodland vessels are easily identifiable.

It is also at the beginning of the Middle Woodland period that rich, densely occupied sites appear on the valley floor of major rivers. Middle Woodland sites are significantly different in that the same location was occupied off and on for as long as several hundred years. Because this is the case, rich deposits of artifacts often accumulated.

Unlike earlier seasonally utilized locations, these Middle Woodland sites appear to have functioned as base camps, occupied off and on over the course of the year. There are also numerous small upland Middle Woodland sites, many of which can be interpreted as special purpose camps from which localized resource patches were exploited. This shift towards a greater degree of sedentism continues the trend witnessed from at least Middle Archaic times, and provides a prelude to the developments that follow during the Late Woodland period.

The Late Woodland period began with a shift in settlement and subsistence patterns involving an increasing reliance on corn horticulture (Fox 1990:185; Smith 1990; Williamson 1990:312). Corn may have been introduced into southwestern Ontario from the American Midwest as early as 600 A.D. (Fox 1990:174; Williamson 1990:312). However, it did not become a dietary staple until at least three to four hundred years later. Others have more recently espoused or accepted a Late Woodland beginning around A.D. 500 with the appearance or development of the Princess Point Complex (e.g. Crawford and Smith 2002; see also Martin 2004, 2008).

The first agricultural villages in southwestern Ontario date to the 10th century A.D. (Williamson 1990:291). Unlike the riverine base camps of the Middle Woodland period, these sites are located in the uplands, on well-drained sandy soils.



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Categorized as "Early Ontario Iroquoian" (900-1300 A.D.), many archaeologists believe that it is possible to trace a direct line from the Iroquoian groups which inhabited southwestern Ontario at the time of first European contact, to these early villagers.

Village sites dating between 900 and 1300 A.D., share many attributes with the historically reported Iroquoian sites, including the presence of longhouses and sometimes palisades. However, these early longhouses were actually not all that large, averaging only 12.4 metres in length (Dodd *et al.* 1990:349; Williamson 1990:304-305). It is also quite common to find the outlines of overlapping house structures, suggesting that these villages were occupied long enough to necessitate re-building. The Jesuits reported that the Huron moved their villages once every 10-15 years, when the nearby soils had been depleted by farming and conveniently collected firewood grew scarce (Pearce 2010). It seems likely that Early Ontario Iroquoians occupied their villages for considerably longer, as they relied less heavily on corn than did later groups, and their villages were much smaller, placing less demand on nearby resources.

Judging by the presence of carbonized corn kernels and cob fragments recovered from sub-floor storage pits, agriculture was becoming a vital part of the Early Ontario Iroquoian economy. However, it had not reached the level of importance it would in the Middle and Late Ontario Iroquoian periods. There is ample evidence to suggest that more traditional resources continued to be exploited, and comprised a large part of the subsistence economy. Seasonally occupied special purpose sites relating to deer procurement, nut collection, and fishing activities, have all been identified (Williamson 1990:317). While beans are known to have been cultivated later in the Late Woodland period, they have yet to be identified on Early Ontario Iroquoian sites (Williamson 1990:291).

The Middle Ontario Iroquoian period (1300-1400 A.D.) witnessed several interesting developments in terms of settlement patterns and artifact assemblages. Changes in ceramic styles have been carefully documented, allowing the placement of sites in the first or second half of this 100-year period. Moreover, villages, which averaged approximately 0.6 hectares in extent during the Early Ontario Iroquoian period, now consistently range between one and two hectares.

House lengths also change dramatically, more than doubling to an average of 30 metres, while houses of up to 45 metres have been documented. This radical increase in longhouse length has been variously interpreted. The simplest possibility is that increased house length is the result of a gradual, natural increase in population (Dodd *et al.* 1990:323, 350, 357; Smith 1990). However, this does not account for the sudden shift in longhouse lengths around 1300 A.D. Other possible explanations involve changes in economic and socio-political organization (Dodd *et al.* 1990:357). One suggestion is that during the Middle Ontario Iroquoian period small villages were amalgamating to form larger communities for mutual defence (Dodd *et al.* 1990:357). If this was the case, the more successful military leaders may have been able to absorb some of the smaller family groups into their households, thereby requiring longer structures.

This hypothesis draws support from the fact that some sites had up to seven rows of palisades, indicating at least an occasional need for strong defensive measures. There are, however, other Middle Ontario Iroquoian villages which had no palisades present (Dodd *et al.* 1990:358). More research is required to evaluate these competing interpretations.

The lay-out of houses within villages also changes dramatically by 1300 A.D. During the Early Ontario Iroquoian period villages were haphazardly planned at best, with houses oriented in various directions. During the Middle



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Ontario Iroquoian period villages are organized into two or more discrete groups of tightly spaced, parallel aligned, longhouses.

It has been suggested that this change in village organization may indicate the initial development of the clans which were a characteristic of the historically known Iroquoian peoples (Dodd *et al.* 1990:358).

Initially at least, the Late Ontario Iroquoian period (1400-1650 A.D.) continues many of the trends which have been documented for the proceeding century. For instance, between 1400 and 1450 A.D. house lengths continue to grow, reaching an average length of 62 metres.

After 1450 A.D., house lengths begin to decrease, with houses dating between 1500-1580 A.D. averaging only 30 metres in length. Why house lengths decrease after 1450 A.D. is poorly understood, although it is believed that the even shorter houses witnessed on historic period sites can be at least partially attributed to the population reductions associated with the introduction of European diseases such as smallpox (Lennox and Fitzgerald 1990:405, 410).

Village size also continues to expand throughout the Late Ontario Iroquoian period, with many of the larger villages showing signs of periodic expansions. The Late Middle Ontario Iroquoian period and the first century of the Late Ontario Iroquoian period was a time of village amalgamation.

One large village situated in London expanded one-fifth of its size (Anderson 2009) and one village north of Toronto have been shown to have expanded on no fewer than five occasions (Ramsden 1990:374-375). These large villages were often heavily defended with numerous rows of wooden palisades, suggesting that defence may have been one of the rationales for smaller groups banding together.

After 1525 A.D. communities of pre-contact Aboriginals of the Late Ontario Iroquoian period who had formerly lived throughout southwestern Ontario as far west as the Chatham area moved further east to the Hamilton area. During the late 1600s and early 1700s, the French explorers and missionaries reported a large population of Iroquoian peoples clustered around the western end of Lake Ontario. They called these people the "Neutral", because they were not involved in the on-going wars between the Huron and the League Iroquois located in upper New York State.

1.3.4 Previously Identified Archaeological Sites and Surveys

A search of the OASD and within Golder's corporate library indicated there are currently 15 registered archaeological sites within one kilometre of the study area, including six pre-contact Aboriginal, seven historical Euro-Canadian, and two sites that were incompletely categorized (MTCS 2016). Table 2 lists the 15 sites.



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Table 2: Registered Sites within One Kilometre of Study Area

Borden Number	Site Name	Site Type	Cultural Affiliation
AjGw-232	Churchill Meadows 1	Findspot	Pre-contact Aboriginal
AjGw-236	Churchill Meadows 5	Homestead	Historical Euro-Canadian
AjGw-237	Churchill Meadows 6	Homestead	Historical Euro-Canadian
AjGw-24	Cold	Findspot	Pre-contact Aboriginal
AjGw-260	Johnston Rogers Homestead	Homestead	Historical Euro-Canadian
AjGw-29	80-403-15	Findspot	Pre-contact Aboriginal
AjGw-32	81-403-49	Findspot	Pre-contact Aboriginal
AjGw-34	81-403-53	Farmstead	Historical Euro-Canadian
AjGw-555	n/a	Unknown	Post-Contact
AjGw-102	Stellar	n/a	n/a
AjGw-25	Adle	Campsite	Pre-contact Aboriginal
AjGw-305	Phoenix	Homestead	Historical Euro-Canadian
AjGw-306	Albertson II	Homestead	Historical Euro-Canadian
AjGw-307	Albertson I	Homestead	Historical Euro-Canadian
AjGw-308	Raptor	Campsite	Pre-contact Aboriginal

One archaeological assessment has been completed within the study area: AjGw-555. Unfortunately the site form for this location does not provide a lot of detail regarding the site-type or artifacts found, merely listing it as “post-contact”.

No additional archaeological assessments have been completed within 50 metres of the study area.

1.3.5 Previous Heritage Studies

A previous HIA was conducted in 2008 by Unterman McPhail Associates for the Town of Oakville in relation to the *New North Oakville Transportation Corridor and Crossing of the Sixteen Mile Creek Class Environmental Assessment*. All of the current study area that lies west of Ninth Line was included in this previous heritage assessment. Within the overlapping study area one residence was identified as being directly impacted by the proposed construction, 1536 Burnhamthorpe Road East, which was the location of the mid-19th century S. S. #4 Schoolhouse. The following recommendations were made:

An on-site review of the residence located at No. 1536 Burnhamthorpe Road East was conducted in March 2008, and it was determined the building was originally the S. S. # 4 Trafalgar schoolhouse associated with the hamlet of Snider's Corners. A cultural heritage evaluation report was completed for the resource. Due to the compromised physical/design integrity of the former schoolhouse building, retention and relocation of the building were not recommended as mitigation measures. Commemoration of the former historical community of Snider Corners with a description of the schoolhouse, the former church site and the Snider House by means of an historical plaque is considered to be an appropriate mitigation measure for the site.



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Golder will be providing a draft Heritage Impact Assessment report to CIMA+ for the study area. The HIA will provide a Statement of Cultural Heritage Value regarding any structures within the study area deemed to have particular design/physical, historic/associative, or contextual value (Golder, *in progress*).



2.0 FIELD METHODS

2.1 Property Survey Methods

Although a Stage 1 property inspection of the study area is not a mandatory component of Stage 1 investigations, a random spot-check methodology was employed to provide relevant photos and impressions within the existing and immediate vicinity of the current ROW across the study area (MTCS 2011 Section 1.2, Standard 1). The property inspection was conducted on June 13, 2016 under archaeological consulting licence P243, issued to Carla Parslow of Golder. Dr. Parslow designated Mr. Chris Lemon (R289) to conduct the property inspection of the study area. The weather during the Stage 1 property inspection was sunny and warm. Lighting conditions were excellent, and at no time were field conditions found to be detrimental to the identification of archaeological resources or landscapes. The property inspection of the study area was conducted on foot, with existing conditions mapped and photographed from the existing ROW. Coverage of the study area was considered to be good (Map 6A-E).

An inventory of documentary records related to the Stage 1 assessment is provided in Table 3.

Table 3: Inventory of Documentary Records

Document Type	Current Location of Document	Additional Comments
Field Notes	Golder office in Whitby	4 pages in project file
Hand Drawn Maps	Golder office in Whitby	1 map stored in project file
Maps Provided by Client	Golder office in Whitby	1 map stored in project file
Digital Photographs	Golder office in Whitby	194 photographs stored digitally in project file

2.2 Existing Conditions

The study area is currently occupied by active farm lands, recreational sports complexes, a modern cemetery (Glen Oaks Cemetery) and a mix of residential and commercial structures.

The study area is also bisected by both the Enbridge and TransCanada pipelines which include a significant amount of disturbance (Image 6, 7, 9, 12, 13, 16, and 17) and will require a necessary buffer for any excavation work.

No areas of natural slope greater than 20% were encountered although a degree of grading and subsequent disturbance along the Ninth Line road right-of-way (ROW) was identified (Image 4). Several areas of low-lying, wet, marshy ground were also identified along the ROW (Map 6D, Image 10). The largest marshy area is sign-posted as part of Oakville's Natural Heritage System, created to protect "land which maintains a wide diversity of species and landscapes within an urban context" (Town of Oakville 2016c).

Landscaping, grading, and disturbance through construction were identified at the recreational sports complex, in particular areas of the modern cemetery, and in the immediate footprint of the other residential and commercial structures.

Areas that appear to be relatively undisturbed were identified and include agricultural fields and some areas of manicured lawn (Map 6A-E).



3.0 ANALYSIS AND CONCLUSIONS

3.1 Assessing Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. In accordance with the MTCS's 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites;
- Water sources:
 - Primary water sources (lakes, rivers, streams, creeks);
 - Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
 - Features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
 - Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
- Elevated topography (eskers, drumlins, large knolls, plateaux);
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground; Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases (there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings);
- Resource areas including:
 - Food or medicinal plants;
 - Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
 - Early Euro-Canadian industry (fur trade, mining, logging);
- Areas of Euro-Canadian settlement; and,
- Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for a study area, MTCS stipulates the following:

- No areas within 300 metres of a previously identified site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge or informants can be recommended for exemption from further assessment;
- No areas within 100 metres of early transportation routes can be recommended for exemption from further assessment; and,
- No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.



3.1.1 Archaeological Integrity

A negative indicator of archaeological potential is extensive land disturbance. This includes widespread earth movement activities that would have eradicated or relocated any cultural material to such a degree that the information potential and cultural heritage value or interest has been lost.

Section 1.3.2 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists states that:

Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources.

MTCS 2011:18

The types of disturbance referred to above includes, but is not restricted to, quarrying, sewage and infrastructure development, building footprints and major landscaping involving grading below topsoil.

3.1.2 Potential for Pre- and Post-Contact Aboriginal Archaeological Resources

Following the criteria outlined above in Section 3.1 to determine pre- and post-contact Aboriginal archaeological potential, a number of factors can be highlighted. There is a water source in close proximity to the study area, the soils of the study area would have been suitable for pre-contact Aboriginal practices, and six pre-contact Aboriginal archaeological sites have been identified within one kilometre of the study area.

When the above noted archaeological potential criteria were applied to the study area, the study area exhibits archaeological potential for pre-contact and post-contact Aboriginal sites. While areas of previous disturbance eradicate the potential for the recovery of archaeological resources (Section 1.3.5.1), areas of no or low levels of previous disturbance retain their archaeological potential. Map 6A-E illustrates areas of potential within the study area that were determined to require further Stage 2 assessment.

3.1.3 Potential for Historical Euro-Canadian Archaeological Resources

Following the criteria outlined above in Section 3.1 to determine historical Euro-Canadian archaeological potential, a number of factors can be highlighted.

The study area had been occupied from the early 19th century as evidenced by historical mapping and land records. Although little survives today, the town of Snider's Corners was well established at the intersection of Ninth Line and Burnhamthorpe Road even in the early 19th century. Seven known historical Euro-Canadian archaeological sites have been found within one kilometre of the study.

When the above noted archaeological potential criteria were applied to the study area, the study area exhibits archaeological potential for historical Euro-Canadian sites. While areas of previous disturbance eliminate the potential for the recovery of archaeological resources (Section 1.3.5.1), areas of no or low levels of previous disturbance retain their archaeological potential. Map 6A-E illustrates areas of potential within the study area that require Stage 2 assessment.



4.0 RECOMMENDATIONS

Given the findings of the Stage 1 Archaeological Assessment of the study area, the following recommendations are made:

- 1) Portions of the study area that were identified as poorly drained or previously disturbed, as illustrated in Map 6A-E, do not exhibit archaeological potential and no further archaeological assessment of these areas is required.
- 2) All remaining portions of the study area that have archaeological potential, as illustrated in Map 6A-E, are recommended for Stage 2 Archaeological Assessment (test pit survey or pedestrian survey, as indicated on Map 6) prior to ground disturbance associated with any future development.

Areas recommended for further Stage 2 Archaeological Assessment should be subject to investigation by test pit survey at five metre intervals (MTCS 2011 Section 2.1.2 Standard 1.e., Standard 2) or pedestrian survey at five metres intervals where ploughing of agricultural land is possible (MTCS 2011 Section 2.1.1).

Any portion of the study area requiring Stage 2 Archaeological Assessment that is actively or recently cultivated agricultural land must be ploughed and weathered and subject to Stage 2 pedestrian survey as per the Standards within Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).

Areas recommended for test pit survey should have each test pit excavated by shovel to be at least 30 centimetres in diameter, into the subsoil by five centimetres and examined for any stratigraphy or indication of cultural features or fill activities prior to being backfilled (MTCS 2011 Section 2.1.2 Standard 5 and 6). All soil should be screened through six millimetre hardware cloth and all artifacts collected and labelled according to their associated test pit (MTCS 2011 Section 2.1.2 Standard 7 and 8). Should artifacts be identified during the Stage 2 survey it may be necessary to intensify test pit intervals to 2.5 metres, and excavate a one-metre square unit. Any recovered artifacts should be bagged in the field according to their provenance and return to the laboratory for artifact analysis and reporting, consist with MTCS standards. If during the Stage 2 test pit survey, it is determined that all or parts of the study area being test pitted are disturbed, and it does not appear that there is potential for deeply buried archaeological deposits, a combination of property inspection and test pitting may be employed as per Section 2.1.8 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).



5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c O.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regards to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licenced 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 licenced archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be representative of a new archaeological site or sites 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*.

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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



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STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE (REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON REGION, ONTARIO

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE (REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON REGION, ONTARIO

7.0 IMAGES



Image 1: Ninth Line Sports Park, looking south-east on Ninth Line.



Image 2: ROW with visible low-lying wet marsh, utilities, gravel disturbance, looking south-east on Ninth Line towards Sports Park.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE (REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON REGION, ONTARIO



Image 3: Mausoleum for Glen Oaks Cemetery, manicured lawn, facing west



Image 4: Manicured lawn in front of Glen Oaks Cemetery, looking south-east on Ninth Line towards the Sports Park, some slope away from the road base in ROW.



**STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE
(REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON
REGION, ONTARIO**



Image 5: Manicured lawn in front of Glen Oaks Cemetery, agricultural field to the north-west, looking north on Ninth Line.



Image 6: Fern Hill School, pipeline signs to right of driveway, facing south-west.



**STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE
(REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON
REGION, ONTARIO**



Image 7: Pipeline construction disturbance on west side of Ninth Line, facing north-west.



Image 8: Large stone wall on east side of Ninth Line, possible historic interest, facing south-east.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE (REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON REGION, ONTARIO



Image 9: Pipeline Construction disturbance, east side of Ninth Line, facing east.



Image 10: Section of Ninth Line with low-lying wet areas on either side of the road, sign posted as part of Oakville's Natural Heritage System, facing south-east.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE (REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON REGION, ONTARIO



Image 11: Agricultural fields along Ninth Line, facing south-east.



Image 12: Pipeline construction disturbance in front of the Kingdom Hall, facing south



STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE (REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON REGION, ONTARIO



Image 13: Agricultural field with pipeline construction, facing north-west.



Image 14: Agricultural field to east of Ninth Line, facing east.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE (REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON REGION, ONTARIO



Image 15: Intersection of Ninth Line and Dundas Street, facing south-east.



Image 16: Agricultural field, pipeline disturbance on east side of Ninth Line, facing north.



**STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE
(REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON
REGION, ONTARIO**



Image 17: E.H. Post House, built in 1884 (Trafalgar Township Historical Society 2016c).



Image 18: Snider House - 1481 Burnhamthorpe Road East (Trafalgar Township Historical Society 2016b).



**STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE
(REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON
REGION, ONTARIO**



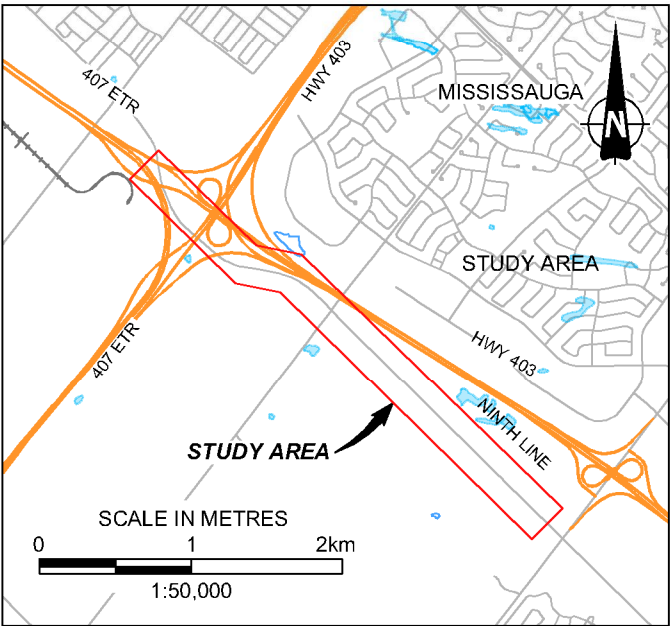
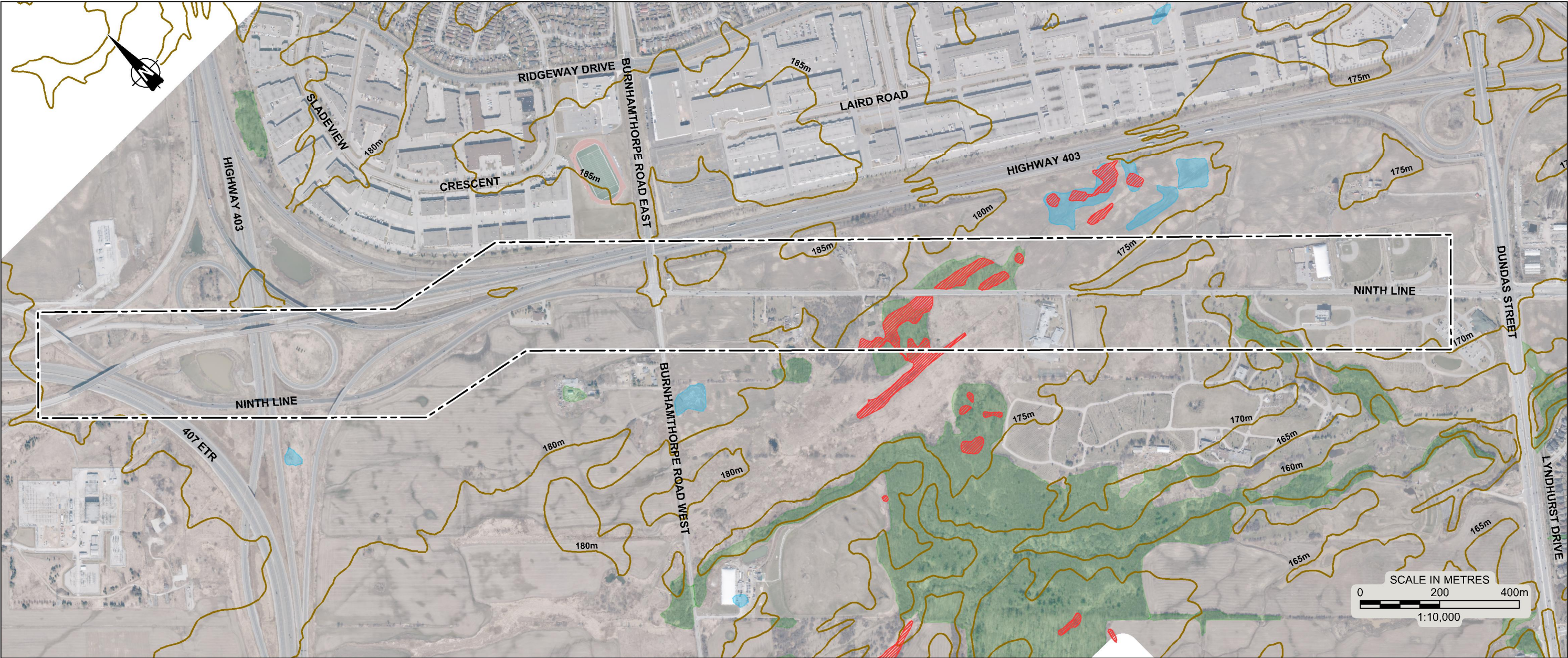
Image 19: First School House for S.S. #4 at Sniders Corners (Trafalgar Township Historical Society 2016a).



9.0 MAPS

All maps follow on succeeding pages.

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REGIONAL MAP

LEGEND


- STUDY AREA
- ▨ AREA OF PROVINCIAL SIGNIFICANT WETLAND

REFERENCE

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NOTES

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PROJECT						HERITAGE IMPACT ASSESSMENT NINTH LINE, DUNDAS STREET to HIGHWAY 407 REGION OF HALTON, ONTARIO													
TITLE												LOCATION OF STUDY AREA							
 Golder Associates						PROJECT No.				1648031				FILE No. 1648031-2000-R01001					
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						CADD		DCH		July 25/16									
						CHECK													
												MAP 1							



LEGEND

STUDY AREA

REFERENCE

DRAWING BASED ON WILMOT, SAMUEL, 1806, TRAFALGAR TOWNSHIP MAP: "TRAFALGAR PLAN OF THE SECOND TOWNSHIP IN THE TRACT OF LAND LATELY PURCHASED FROM THE MISSISSAUGA INDIANS"

NOTES

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PROJECT

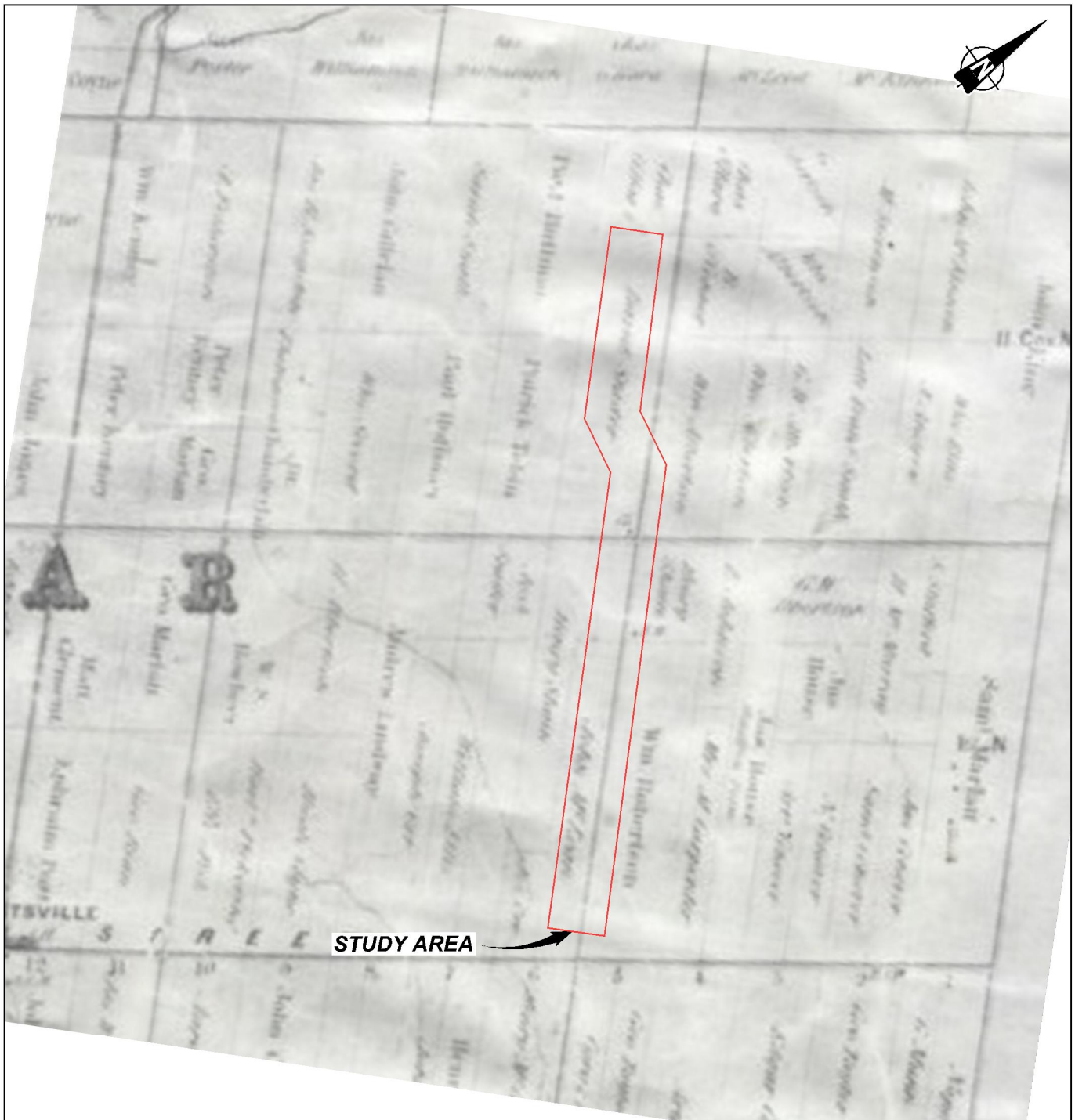
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NINTH LINE (REGIONAL ROAD 13)
TRANSPORTATION CORRIDOR IMPROVEMENTS FROM DUNDAS STREET (REGIONAL ROAD 5) TO 407 ETR (EXPRESS TOLL ROUTE)
REGION OF HALTON, ONTARIO

TITLE

A PORTION OF THE 1806 MAP OF TRAFALGAR SOUTH



PROJECT No.	1648031	FILE No.	1648031-2000-R01002
CADD	DCH	DATE	July 25/16
CHECK		SCALE	NTS REV. 0
MAP 2			



LEGEND

STUDY AREA

REFERENCE

DRAWING BASED ON TREMAINE, GEORGE C., 1858, "MAP OF THE COUNTY OF HALTON, CANADA WEST"; AND CANMAP STREETFILES V2008.4.

NOTES

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PROJECT

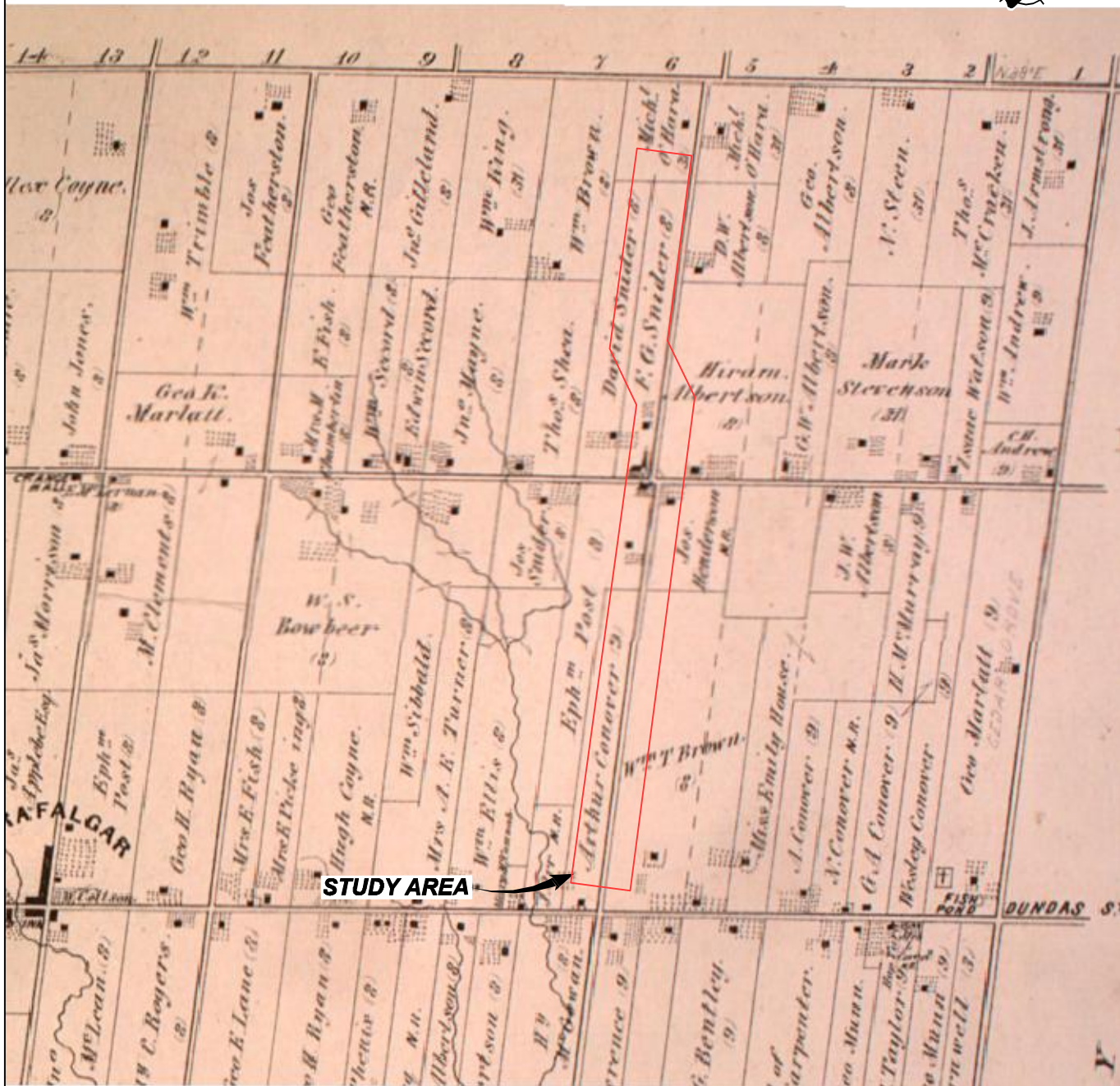
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NINTH LINE (REGIONAL ROAD 13)
TRANSPORTATION CORRIDOR IMPROVEMENTS FROM DUNDAS
STREET (REGIONAL ROAD 5) TO 407 ETR (EXPRESS TOLL ROUTE)
REGION OF HALTON, ONTARIO

TITLE

**A PORTION OF THE 1858
TREMAINE MAP OF THE COUNTY OF
HALTON, UPPER CANADA**



PROJECT No.		1648031	FILE No. 1648031-2000-R01003	
CADD	DCH	Feb 21/17	SCALE	NTS REV. 0
CHECK			MAP 3	



LEGEND

STUDY AREA

REFERENCE

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NOTES

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PROJECT

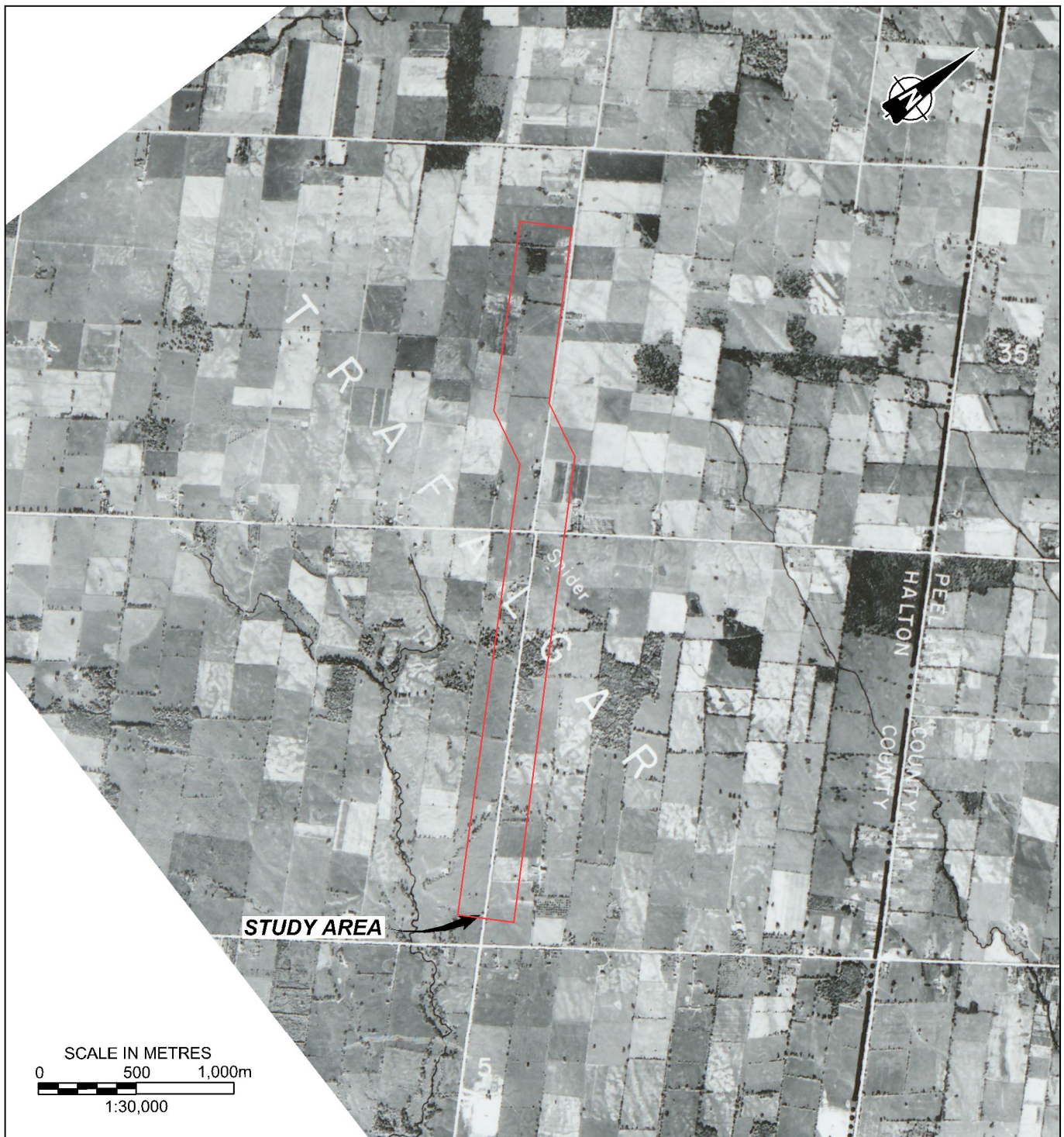
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
NINTH LINE (REGIONAL ROAD 13)
TRANSPORTATION CORRIDOR IMPROVEMENTS FROM DUNDAS STREET (REGIONAL ROAD 5) TO 407 ETR (EXPRESS TOLL ROUTE)
REGION OF HALTON, ONTARIO

TITLE

**A PORTION OF THE
1877 HISTORICAL ATLAS MAP
OF HALTON COUNTY**



PROJECT No.	1648031	FILE No.	1648031-2000-R01004
CADD	DCH	July 25/16	SCALE NTS REV. 0
CHECK			
MAP 4			



LEGEND

STUDY AREA

REFERENCE

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
NINTH LINE (REGIONAL ROAD 13)
TRANSPORTATION CORRIDOR IMPROVEMENTS FROM DUNDAS STREET (REGIONAL ROAD 5) TO 407 ETR (EXPRESS TOLL ROUTE)
REGION OF HALTON, ONTARIO

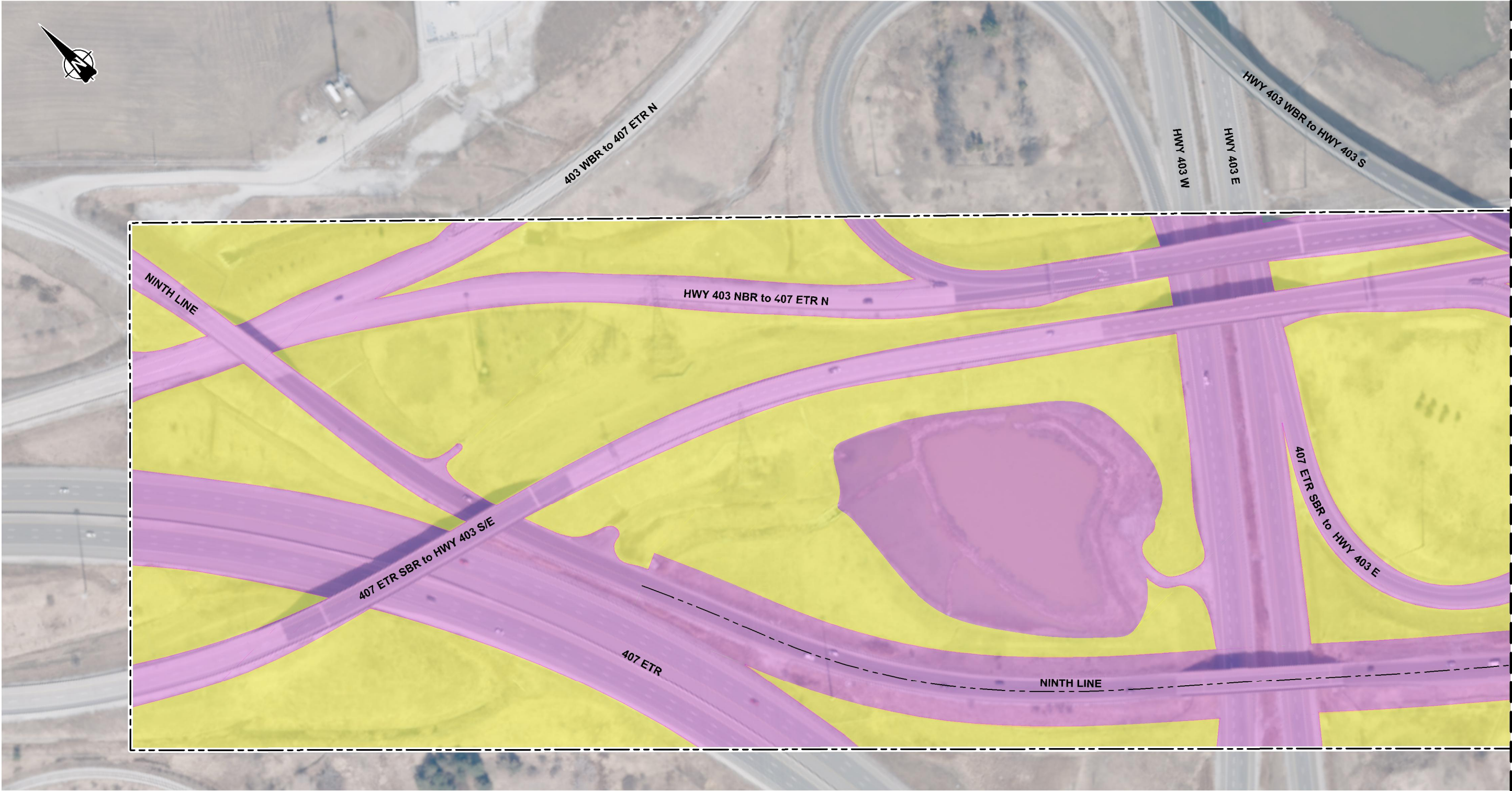
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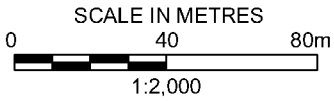
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LEGEND

- STAGE 1 METHODS AND RESULTS:
- AREA OF ARCHAEOLOGICAL POTENTIAL, STAGE 2 ASSESSMENT REQUIRED
 - AREA OF PREVIOUS DISTURBANCE, NO ARCHAEOLOGICAL POTENTIAL



REFERENCE

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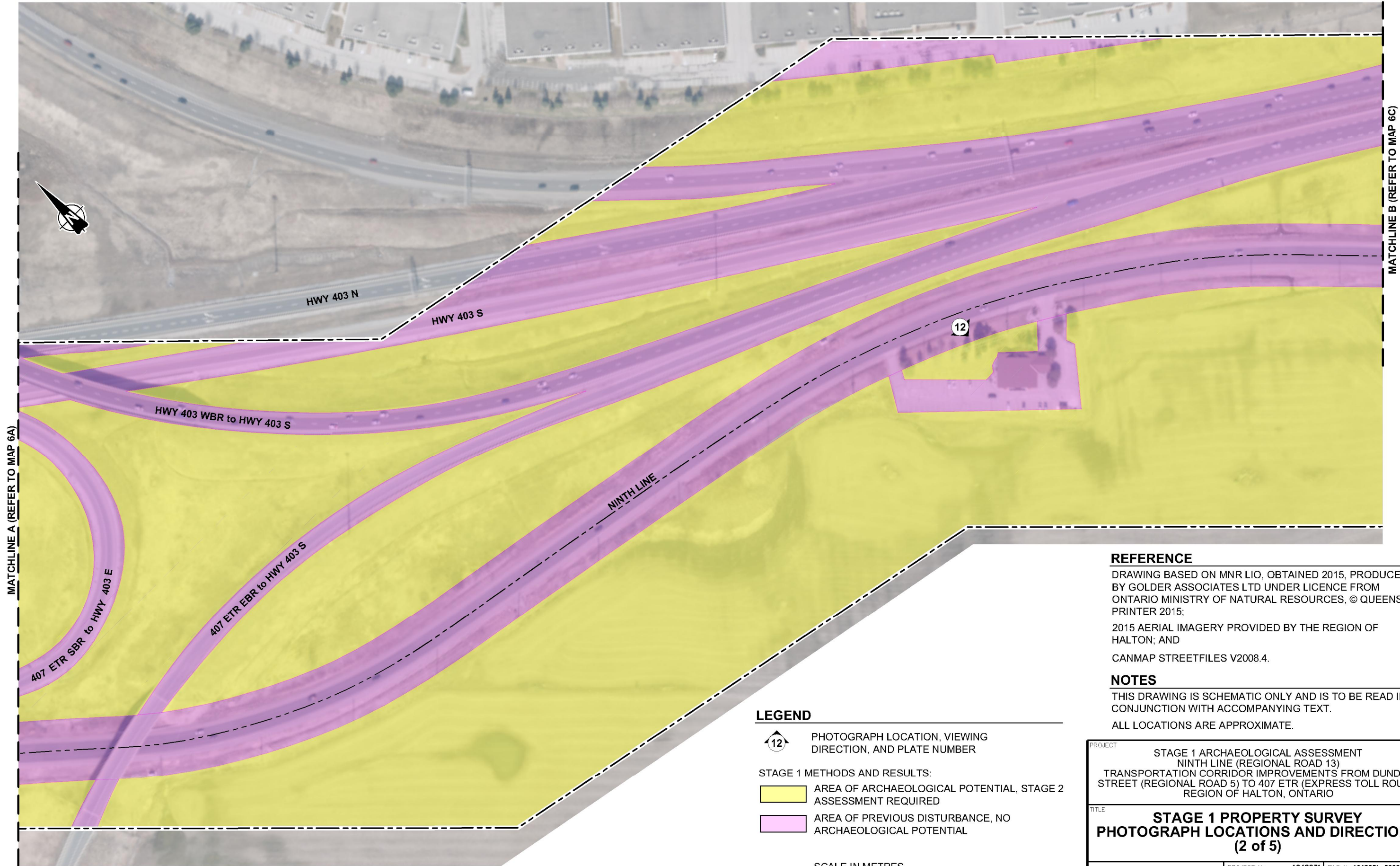
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TITLE				STAGE 1 PROPERTY SURVEY PHOTOGRAPH LOCATIONS AND DIRECTIONS (1 of 5)			
PROJECT No.		1648031		FILE No. 1648031-2000-R01006			
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PHOTOGRAPH LOCATION, VIEWING
DIRECTION, AND PLATE NUMBER

STAGE 1 METHODS AND RESULTS:

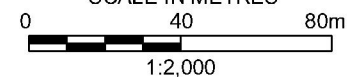


AREA OF ARCHAEOLOGICAL POTENTIAL, STAGE 2
ASSESSMENT REQUIRED



AREA OF PREVIOUS DISTURBANCE, NO
ARCHAEOLOGICAL POTENTIAL

SCALE IN METRES



REFERENCE

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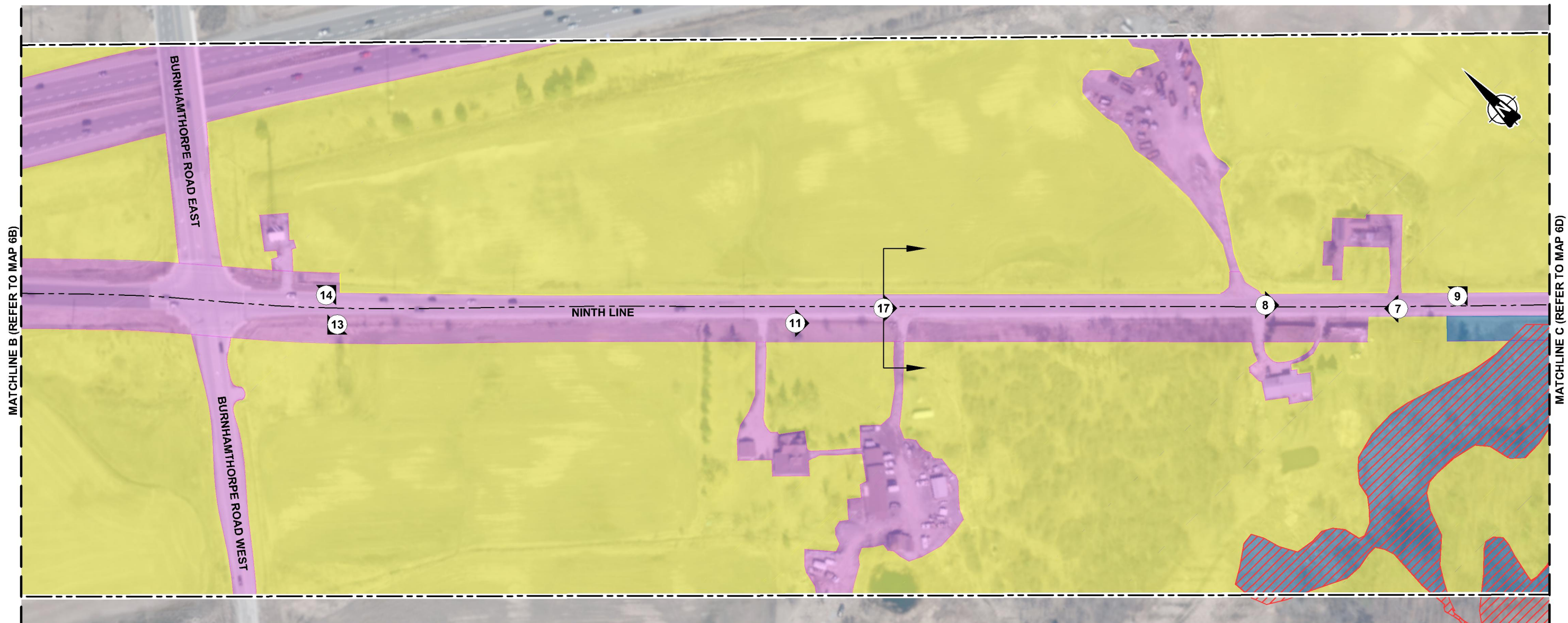
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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT NINTH LINE (REGIONAL ROAD 13) TRANSPORTATION CORRIDOR IMPROVEMENTS FROM DUNDAS STREET (REGIONAL ROAD 5) TO 407 ETR (EXPRESS TOLL ROUTE) REGION OF HALTON, ONTARIO	
TITLE		STAGE 1 PROPERTY SURVEY PHOTOGRAPH LOCATIONS AND DIRECTIONS (2 of 5)	
PROJECT No.		1648031	FILE No. 1648031-2000-R01006
CADD		DCH	July 25/16
CHECK			
SCALE		AS SHOWN	REV. 0
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PHOTOGRAPH LOCATION, VIEWING
DIRECTION, AND PLATE NUMBER



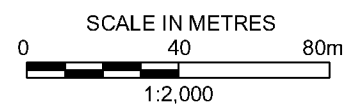
AREA OF PROVINCIALLY SIGNIFICANT WETLAND

STAGE 1 METHODS AND RESULTS:

AREA OF ARCHAEOLOGICAL POTENTIAL, STAGE 2
ASSESSMENT REQUIRED

AREA OF PREVIOUS DISTURBANCE, NO
ARCHAEOLOGICAL POTENTIAL

AREA OF POOR DRAINAGE



REFERENCE

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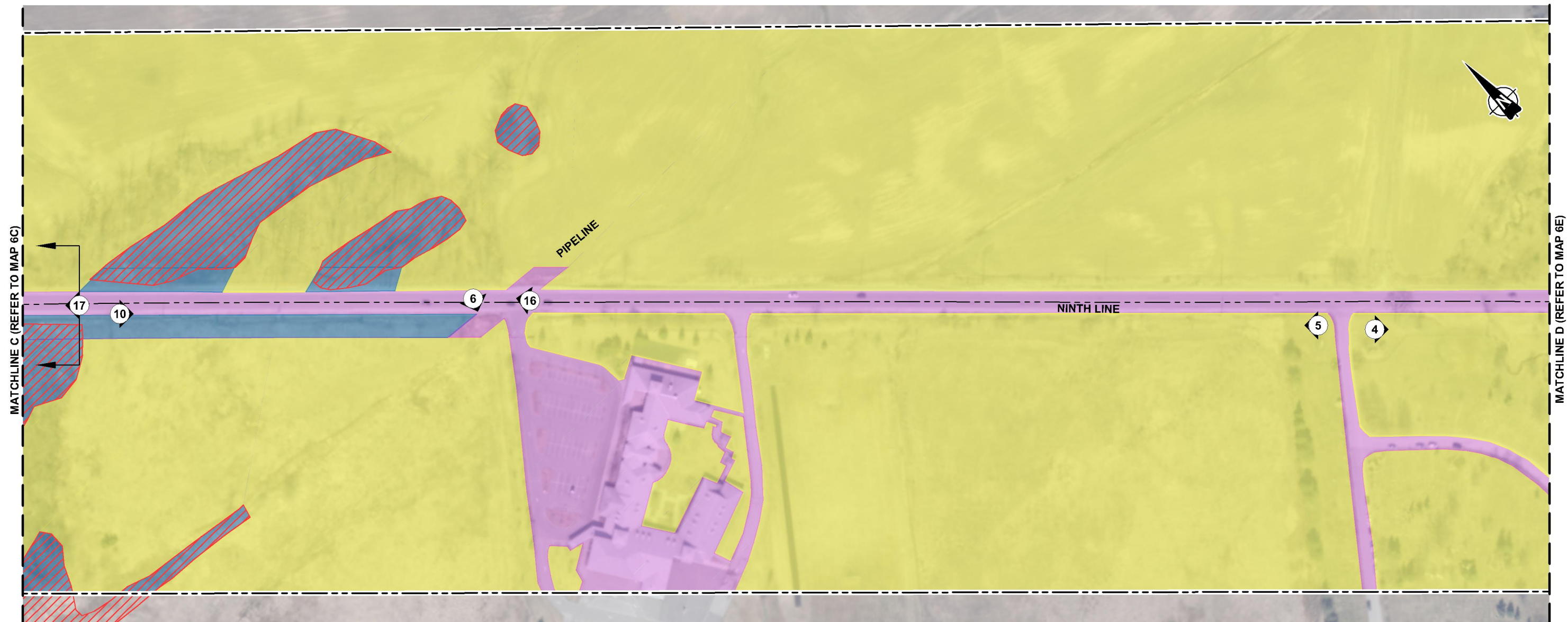
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TITLE		STAGE 1 PROPERTY SURVEY PHOTOGRAPH LOCATIONS AND DIRECTIONS (3 of 5)	
PROJECT No.		1648031	FILE No. 1648031-2000-R01006
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


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LEGEND

-  PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER
-  AREA OF PROVINCIALLY SIGNIFICANT WETLAND

STAGE 1 METHODS AND RESULTS:

-  AREA OF ARCHAEOLOGICAL POTENTIAL, STAGE 2 ASSESSMENT REQUIRED
-  AREA OF PREVIOUS DISTURBANCE, NO ARCHAEOLOGICAL POTENTIAL
-  AREA OF POOR DRAINAGE

SCALE IN METRES

0 40 80m

1:2,000

REFERENCE

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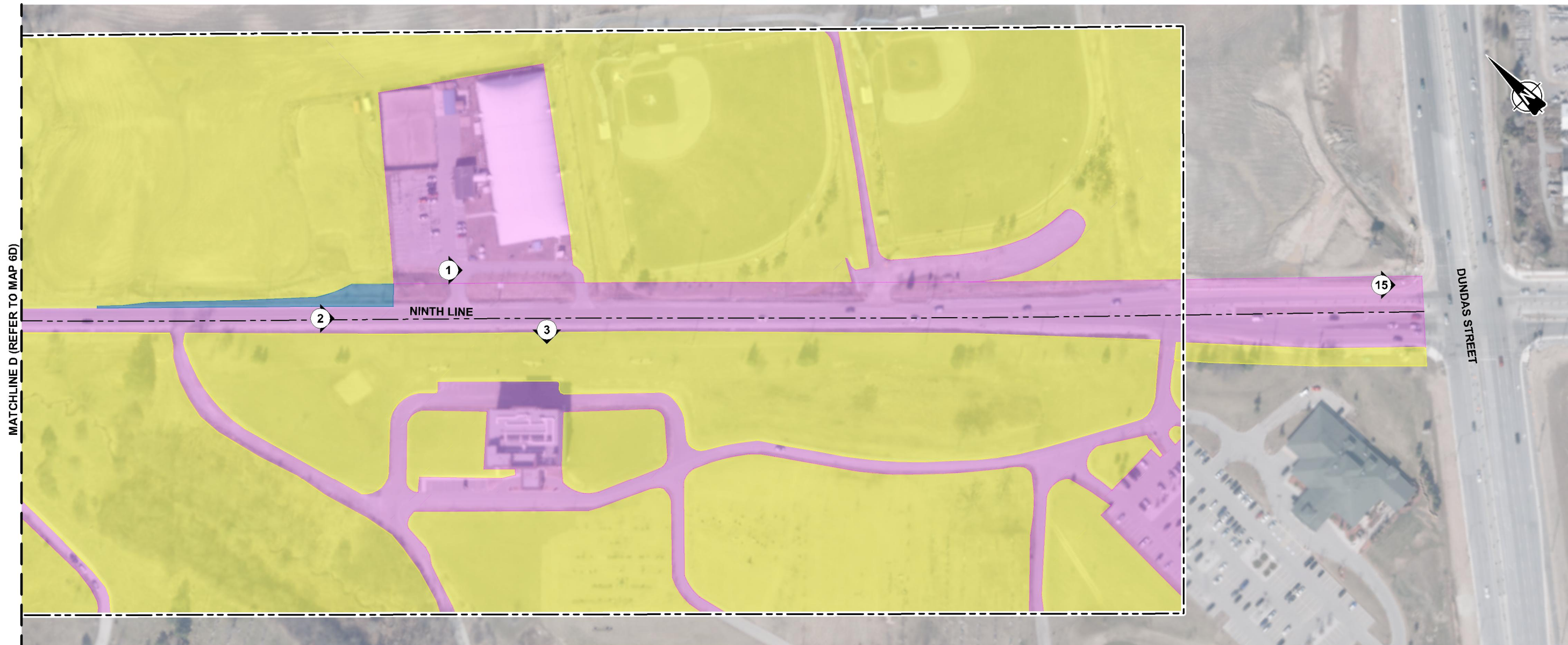
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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT NINTH LINE (REGIONAL ROAD 13) TRANSPORTATION CORRIDOR IMPROVEMENTS FROM DUNDAS STREET (REGIONAL ROAD 5) TO 407 ETR (EXPRESS TOLL ROUTE) REGION OF HALTON, ONTARIO	
TITLE		STAGE 1 PROPERTY SURVEY PHOTOGRAPH LOCATIONS AND DIRECTIONS (4 of 5)	
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	CADD	DCH	July 25/16
	CHECK		
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MAP 6D			




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LEGEND

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STAGE 1 METHODS AND RESULTS:

-  AREA OF ARCHAEOLOGICAL POTENTIAL, STAGE 2 ASSESSMENT REQUIRED
-  AREA OF PREVIOUS DISTURBANCE, NO ARCHAEOLOGICAL POTENTIAL
-  AREA OF POOR DRAINAGE


SCALE IN METRES
0 40 80m
1:2,000

REFERENCE

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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT NINTH LINE (REGIONAL ROAD 13) TRANSPORTATION CORRIDOR IMPROVEMENTS FROM DUNDAS STREET (REGIONAL ROAD 5) TO 407 ETR (EXPRESS TOLL ROUTE) REGION OF HALTON, ONTARIO	
TITLE		STAGE 1 PROPERTY SURVEY PHOTOGRAPH LOCATIONS AND DIRECTIONS (5 of 5)	
PROJECT No.		1648031	FILE No. 1648031-2000-R01006
CADD		DCH	July 25/16
CHECK			
SCALE		AS SHOWN	REV. 0
		MAP 6E	



10.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Golder has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

This report has been prepared for the specific site, design objective, developments and purpose described to Golder by CIMA+ (the client). The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the Client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder's report or other work products.

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Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the Ministry of Tourism, Culture and Sport's 2011 *Standards and Guidelines for Consultant Archaeologists*.



**STAGE 1 ARCHAEOLOGICAL ASSESSMENT - NINTH LINE
(REGIONAL ROAD 13 TRANSPORTATION CORRIDOR), HALTON
REGION, ONTARIO**

Report Signature Page

GOLDER ASSOCIATES LTD. GOLDER ASSOCIATES LTD.

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Project Archaeologist

Carla Parslow, Ph.D.
Associate, Archaeologist

KNP/CAP/lb

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