

Appendix A8-2
Stage 1 Archaeological Assessment
(Project Information Form Number
P1148-0004-2021)





**Addendum to Oshawa to
Bowmanville Rail Service Extension
Project: Stage 1 Archaeological
Assessment**

Various Lots and Concessions, former Township of East Whitby, former County of Ontario, now City of Oshawa, and former Darlington Township, former County of Durham, now Municipality of Clarington; Regional Municipality of Durham, Ontario

April 5, 2023

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REVISED REPORT

Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by Metrolinx, an agency of the Province of Ontario, to complete a Stage 1 archaeological assessment for the lands associated with the Oshawa to Bowmanville Rail Service Extension Project (the Project), formally referred to as the Oshawa to Bowmanville Rail Service Expansion Project in the 2011 Environmental Project Report. The Stage 1 archaeological assessment was conducted in accordance with the *Environmental Assessment Act* (Government of Ontario 1990c), as per Ontario Regulation 231/08-*Transit Projects and Metrolinx Undertakings* (Government of Ontario 1990d) and the *Transit Project Assessment Process* (TPAP) (Government of Ontario 2015).

The Stage 1 archaeological assessment was completed under Project Information Form number P1148-0004-2021 issued to Heather Kerr, MA by the Ministry of Citizenship and Multiculturalism (MCM). The Stage 1 archaeological assessment of the study area was conducted between May 14, 2021, and May 17, 2021. The study area comprises approximately 483.4 hectares and consists of several environmental settings, including agricultural field, manicured lawn, steep slope, permanently wet lands, scrubland, forest, as well as disturbance associated with roadways, sidewalks, the railway corridor, below grade utilities, extensive landscaping, and extant structures.

The Stage 1 archaeological assessment, involving background research and a property inspection, resulting in the determination that approximately 45.62% of the study area retains low to no archaeological potential as it includes extensive disturbance from buried utilities, municipally constructed drains, asphalt and gravel roadway, a railway corridor, and extant structures. In accordance with Section 1.3.2 and Section 7.7.4 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), further archaeological assessment is not required for any portion of the Project's anticipated construction which impacts an area of low to no archaeological potential (See Figure 8.1-8.10).

The recorded location of the Robertson site (AlGq-18) was based on a landowner account only and has not been documented through formal archaeological investigation. The recorded location of the site has subsequently been extensively disturbed by the construction of a manufacturing facility. In accordance with Section 1.1, Standard 1 and Section 7.5.8. Standard 4 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **further archaeological assessment is not recommended (see Supplementary Documentation).**



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Other portions of the study area, approximately 0.05%, retain low to no potential due to steep slope, and 0.08% of the study area was identified as low and wet, thus retaining low to no potential. In accordance with Section 2.1, Standard 2a-b of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **further archaeological assessment is not recommended for any portion of the Project's anticipated construction which impacts an area of low to no archaeological potential (see Figure 8.1-8.10).**

Background research also demonstrated that approximately 11.49% of the study area, has been subject to previous archaeological assessment and not recommended for further study. In accordance with Section 1.1, Standard 1 and Section 7.5.8. Standard 4 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **further archaeological assessment is not recommended for any portion of the Project's anticipated construction which impacts areas previously assessed and not recommended for further archaeological work (see Figure 8.1-8.10).**

Approximately 0.31% of the study area falls within the boundaries of the St. Wolodymyr and St. Olha Ukrainian Cemetery which was established in 1969. **The St. Wolodymyr and St. Olha Ukrainian Cemetery property retains archaeological potential for archaeological resources not related to the cemetery and Stage 2 archaeological assessment is recommended (see Figure 8.6).** Test-pit survey within the St. Wolodymyr and St. Olha Ukrainian Cemetery property should avoid directly impacting known burials. A Cemetery Investigation Authorization issued by the Bereavement Authority of Ontario is required in advance of invasive archaeological fieldwork within the cemetery property.

Parts of the St. Wolodymyr and St. Olha Ukrainian Cemetery contain burials and cemetery investigation is recommended prior to construction impacts in these areas (see Figure 8.6). Cemetery investigation should only be completed after all required Stage 2 archaeological survey (and any subsequently recommended Stages of archaeological assessment) has been completed. Cemetery investigation should be conducted by the removal of the topsoil by mechanical means (Gradall or backhoe equipped with a smooth bucket) under the observation of a licensed archaeologist to expose potential grave shafts within the subsoil. A minimum buffer of at least 10 metres of subsoil free of burial features should be established beyond exposed burial shafts, where allowed by the study area's extent.

The remaining portion of the study area, approximately 42.45%, retains potential for the identification and documentation of archaeological resources.



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The Osbourne site (AIGq-17) and the Elgin Farwell site (AIGq-22) have not been subject to formal archaeological investigation and their precise locations are unknown. Thus, in accordance with Section 1.3 and Section 7.7.4 of the MCM's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), **Stage 2 archaeological assessment is recommended to identify the locations of these sites prior to construction impacts of the recorded sites' locations (see Supplementary Documentation).**

The Bates site (AIGq-170) is located outside of the current construction footprint. No construction impacts to the Bates site (AIGq-170) are anticipated as part of this project, based on the current construction design. The Bates site (AIGq-170) has been previously recommended for Stage 4 archaeological mitigation. Based on a review of the Ontario Public Register of Archaeological Reports, this work has not yet been completed. Thus, in accordance with Section 3.4 and Section 7.7.4 of the MCM's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), **Stage 4 archaeological mitigation of the Bates site (AIGq-170) is recommended prior to construction impacts of the recorded site's locations (see Supplementary Documentation).** The Stage 4 recommendations made for the Bates site (AIGq-170) by ASI (2016a) are reproduced here (ASI 2016a:17):

"The recommended Stage 4 protocol is the hand-excavation of additional one-metre square units around high-yielding deposits, starting with Stage 3 units 475N-190E, 480N-190E, and 485N-185E, until yields drop to 200 artifacts per square, in order to salvage excavate the midden. A mechanical excavator with a smooth bucket should be used to remove the 70-120 cm thick stratum of landscape fill to expose the deposit under the direction of a licensed archaeologist. Following the block excavation, additional one-metre square units must be hand-excavated at least 2 metres beyond the potential nineteenth-century cultural features to fully expose them. The mitigation would continue with the removal of the remaining soil fills by mechanical means (Gradall or backhoe equipped with a smooth bucket) to expose other potential features within the subsoil. The stripped area must be buffered by at least 10 metres of subsoil free of features. The exposed subsoil should then be cleaned by shovel ("shovel shine") or trowel and the resulting subsoil surface examined for cultural features. Afterward, full hand-excavation and documentation of all features should follow."

In accordance with Section 1.3 and Section 7.7.4 of the MCM's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), **Stage 2 archaeological assessment is recommended for any portion of the Project's anticipated construction which impacts an area of archaeological potential (see Figure 8.1-8.10).** Full and detailed recommendations are provided in the body of the report.



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The MCM is asked to review the results presented and accept this report into the *Ontario Public Register of Archaeological Reports*. Additional archaeological assessment is still required and so the archaeological sites recommended for further archaeological fieldwork remain subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990c) and may not be altered, or have artifacts removed, except by a person holding an archaeological license.

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



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Project Personnel

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Acknowledgements

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Introduction
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1.0 Introduction

Stantec Consulting Ltd. (Stantec) was retained by Metrolinx, an agency of the Province of Ontario, to complete a Stage 1 archaeological assessment for the lands associated with the Oshawa to Bowmanville Rail Service Extension Project (the Project), formally referred to as the Oshawa to Bowmanville Rail Service Expansion Project in the 2011 Environmental Project Report (EPR). The Project is located in the City of Oshawa and Municipality of Clarington, Ontario (Figure 1).

All-day rail service currently operates on the Lakeshore East Rail Corridor between Union Station in Downtown Toronto and the Durham College (DC) Oshawa GO Station (DC Oshawa GO) (formerly Oshawa GO Station). The Lakeshore East Rail Corridor extension from Oshawa to Bowmanville was originally identified as one of 52 rapid transit improvements and expansion projects in the *MoveOntario* 2020 plan, Ontario's multi-year \$17.5 billion rapid transit action plan for the Greater Toronto and Hamilton Area (GTHA). More recently, the expansion initiative was supported through the Initial Business Case Update (Metrolinx 2020) and a preferred alignment option was selected.

The Oshawa to Bowmanville Rail Service Expansion and Rail Maintenance Facility EPR was completed in 2011, in accordance with the Transit Project Assessment Process (TPAP) outlined in Ontario Regulation (O. Reg.) 231/08 – Transit Projects and Metrolinx Undertakings, to assess Metrolinx's plan to expand GO Transit rail services from Oshawa to Bowmanville utilizing the Canadian Pacific (CP) Rail corridor.

Since the completion of the 2011 EPR, Metrolinx has advanced the design of the rail expansion project, including updates to the alignment and infrastructure needs of the project. As outlined in Section 15 (1) of O. Reg. 231/08, if a proponent wishes to make a change to a transit project that is inconsistent with a completed EPR, an addendum to the EPR must be prepared. In addition, as per Section 16 of O. Reg. 231/08, should a project not commence within 10 years of the Statement of Completion, a review of the project documentation is required. The Statement of Completion for the 2011 EPR is dated April 13, 2011, and more than 10 years has lapsed since the filing of this document.



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The current Project includes the extension of GO rail service from the DC Oshawa GO through to Bowmanville, with four new proposed GO stations. The following Project components are proposed to be located on or adjacent to the rail corridor between approximately the DC Oshawa GO and Bowmanville Avenue in the Municipality of Clarington (i.e., GO Subdivision Mile 11.67 in the west to CP Belleville Subdivision Mile 164.8 in the east):

- Tracking and supporting track infrastructure:
 - Proposed new track within the existing GO Lakeshore East Rail Corridor at the western limit of the Project, crossing Highway 401 via the existing General Motors (GM) Spur bridge. A new bridge will be constructed adjacent to the existing GM Spur bridge for the proposed realigned CP Rail track. The new GO track will extend north to the existing CP Rail corridor, ending at Bowmanville Avenue.
 - Retaining walls and grading to support the track infrastructure
- Proposed GO station locations in proximity to:
 - Fox Street (B1 Thornton's Corners East)
 - Front Street (B2 Ritson)
 - Courtice Road (B3 Courtice)
 - Bowmanville Avenue (B4 Bowmanville)
- New bridges at the following locations:
 - Highway 401
 - GM Spur
 - Oshawa Creek
 - Wilson Road
 - Farewell Creek
 - Harmony Creek
 - Green Road
- New multi-use crossing (bridge or tunnel, to be determined):
 - Front Street (Michael Starr Trail)



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- Bridge replacements at the following locations:
 - Simcoe Street
 - Ritson Street
 - Farewell Street¹
- Bridge removal at Albert Street
- Bridge expansions at the following locations:
 - DC Oshawa GO (pedestrian bridge)
 - Stevenson Road
 - Park Road
 - Harmony Road
 - Courtice Road
- Widening of at-grade crossings to accommodate GO track(s) at the following locations:
 - Bloor Street
 - Prestonvale Road
 - Private crossing for Dom's Auto
 - Trulls Road
 - Baseline Road (two crossings)
 - Rundle Road
 - Holt Road
 - Private farm crossing west of Maple Grove Road
 - Maple Grove Road

An EPR Addendum Report is being undertaken to document the changes to the transit project based on refinements to the design approach identified in the EPR, and to consider relevant updates to environmental conditions since the completion of the EPR in 2011.

¹ Multi-use crossing only. Multi-use crossings can be used by pedestrians and cyclists crossing the rail corridor.



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1.1 Purpose of this Report

Metrolinx is conducting preliminary planning studies and developing a conceptual design for the Project. Potential environmental effects of the Project are being assessed to meet the requirements of the *O. Reg. 231/08* and with the Ontario *Environmental Assessment Act*. This Stage 1 archaeological assessment considers the potential effects to known or potential archaeological resources for the Project and will be used to support the EPR Addendum Report.

An analysis of the effects to archaeological resources was conducted to support the EPR in 2011. Since the completion of the 2011 EPR, Metrolinx has advanced the design of the rail expansion project, including updates to the alignment and infrastructure needs of the Project. A new Stage 1 archaeological assessment is being undertaken to update existing conditions information and assess the effects to archaeological resources based on the updated design of the Project.



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2.0 Project Context

2.1 Development Context

The study area for the Stage 1 assessment of the lands associated with the Project comprises approximately 484 hectares of various Lots and Concessions, former Township of East Whitby, former County of Ontario, now City of Oshawa, and former Darlington Township, former County of Durham, now Municipality of Clarington; Regional Municipality of Durham, Ontario (Figure 2; Table 2.1). The Stage 1 archaeological assessment was conducted in accordance with the *Environmental Assessment Act* (Government of Ontario, 1990c), as per *Ontario Regulation 231/08-Transit Projects and Metrolinx Undertakings* (Government of Ontario 1990d) and the *Transit Project Assessment Process* (TPAP) (Government of Ontario 2015).

Table 2.1: Lots and Concessions Included in the Stage 1 Archaeological Assessment Study Area

Lot	Concession	Geographic Township	Former County	Current Lower Tier Municipality	Current Upper Tier Municipality
2-17	1	East Whitby	Ontario	City of Oshawa	Durham Region
16	Broken Front	East Whitby	Ontario	City of Oshawa	Durham Region
1	Broken Front	East Whitby	Ontario	City of Oshawa	Durham Region
27-35	1	Darlington	Durham	Municipality of Clarington	Durham Region
22-26	Broken Front	Darlington	Durham	Municipality of Clarington	Durham Region
15-22	1	Darlington	Durham	Municipality of Clarington	Durham Region

2.1.1 Objectives

In compliance with the provincial standards and guidelines set out in the Ministry of Citizenship and Multiculturalism' (MCM) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 1 are as follows:

- To provide information about the study area's geography, history, previous archaeological fieldwork and current land conditions.



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- To evaluate the study area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the study area.
- To recommend appropriate strategies for Stage 2 survey.

To meet these objectives, Stantec archaeologists employed the following research strategies:

- A review of relevant archaeological, historical, and environmental literature pertaining to the study area.
- A review of the land use history, including pertinent historical maps.
- An examination of the *Ontario Archaeological Sites Database* to determine the presence of registered archaeological sites in and around the study area.

Permission to enter (PTE) had not been granted to the study area(s) when the Stage 1 archaeological assessment commenced; thus, the property inspection was conducted from the public right-of-way.

2.2 Historical Context

2.2.1 Post-contact Indigenous Resources

“Contact” is typically used as a chronological benchmark when discussing Indigenous archaeology in Canada and describes the contact between Indigenous and European cultures. Contact in what is now the province of Ontario is broadly assigned to the 16th century (Loewen and Chapdelaine 2016).

During the early post-contact period the north shore of Lake Ontario was occupied by two distinct peoples with different cultural traditions: the Michi Saagiig Nishnaabeg (Mississauga Anishinaabeg) and the Huron-Wendat. It has long been the understanding of archaeologists that prior to the 16th century the north shore of Lake Ontario was occupied by Iroquoian-speaking populations (Birch and Williamson 2013; Birch 2015; Dermarker et al. 2016). Traditionally, the Huron-Wendat were farmers and fishermen-hunter-gatherers with a population of between 30,000 and 40,000 individuals. The Huron-Wendat traveled widely across a territory stretching from the Gaspé Peninsula in the Gulf of Saint Lawrence, along both sides of the Saint Lawrence River, and throughout the Great Lakes. The Huron-Wendat were, and continue to be, 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



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other Indigenous partners among the networks that stretched across the continent, and later incorporated the French into that trading network.

Recently, the direct correlation in Ontario between archaeology and ethnicity, and especially regional identity, has been questioned (cf. Fox 2015:23; Gaudreau and Lesage 2016:9-12; Ramsden 2016:124). Recent considerations of Indigenous sources on cultural history have led to the understanding that prior to the 16th century the north shore of Lake Ontario was co-habited by Iroquoian and more mobile Anishnaabeg populations (Kapyrka 2018), the latter of whom have not been represented in previous analyses of the archaeological record and most likely left a more ephemeral archaeological record than that of more densely populated agricultural settlements. The apparent void of semi-permanent village settlement along the north shore of Lake Ontario continued through the first half of the 17th century; however, this does not preclude the occupation of the region by mobile Anishnaabeg peoples. Both Huron-Wendat and Mississauga traditional history indicate that the Huron-Wendat and Mississauga cohabited the region (Kapyrka 2018).

The Mississauga traditional homeland stretched along the north shore of Lake Ontario and its tributary rivers from present-day Gananoque in the east to Long Point on Lake Erie in the west. In the winter the communities dispersed into smaller groups and travelled in-land to the north, to the area around present-day Bancroft and the Haliburton Highlands. Mississauga oral history relates that their ancestors occupied this part of southern Ontario from the time of the last deglaciation and continued to occupy it up to the start of the Contact period (Kapyrka 2018).

The Mississauga traditional territory was located between two powerful confederacies: the Three Fires Confederacy (consisting of the Odawa, Ojibwa, and Pottawatomi) located to the north and west and the Haudenosaunee (Five Nations Iroquois) Confederacy on the south shore of Lake Ontario in present-day New York State. In this geo-political context, the Mississauga acted as peacekeepers among the various Indigenous communities and Nations, acting as negotiators and emissaries (Kapyrka 2018).

By the turn of the 16th century, the region of the study area appears to have been abandoned of semi-permanent village settlement. In 1649, the Seneca, with the Mohawk, led a campaign to the north shore of Lake Ontario and dispersed the Huron-Wendat, Tionontate (Petun) and Attawandaron (Neutral) Nations (Trigger 1978:354-356). At this time the semi-permanent settlements associated with the ancestral Huron-Wendat (the Huron) were abandoned and the Mississauga retreated from the area along the north shore of Lake Ontario into the hinterlands of their territory, waiting until the conflicts had ended and the political situation had stabilized before returning (Heidenreich 1990; Kapyrka 2018; Ramsden 1990).



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After 1650 a series of villages affiliated with the Five Nations Iroquois were established along the north shore of Lake Ontario and through the Trent Valley. Four of those villages were located around the study area. There were the three Cayuga villages of Quinte (Keint-he), located near the mouth of the Trent River at Trenton; Ganaraske, located at the mouth of the Ganaraska River at Port Hope; and Quintio, located on Rice Lake. There was also the Oneida village of Ganneious, located on the Bay of Quinte near the mouth of the Napanee River (Konrad 1981). Travel along the north shore of Lake Ontario and the connecting rivers occurred frequently.

In 1667, surviving Huron Wendat warriors joined in alliance with the French-allied Ojibwa and Mississaugas to counterattack the Iroquois who had settled along the north shore of Lake Ontario. By 1690, Ojibwa (Anishinaabe) speaking people had begun moving south into the lower Great Lakes basin (Konrad 1981; Rogers 1978). Mississauga oral traditions, as told by Chief Robert Paudash and recorded in 1905, indicate that after the Mississauga defeat of the Mohawk Nation, the Mohawk retreated to their homeland south of Lake Ontario and a peace treaty was negotiated between those groups around 1695 (Paudash 1905). Upon the Mississaugas' return they decided to settle permanently in southern Ontario and began to reestablish their role as peacekeepers in the region, extending that to include the incoming Euro-Canadian settlers (Curve Lake First Nation no date [n.d.]; Kapyrka 2018). The Huron-Wendat permanently left the region, moving to the east in Quebec and to the southwest in the present-day United States.

Since contact with European explorers and immigrants, and, later, with the establishment of provincial and federal governments (the Crown), the lands within Ontario have been included in various treaties, land claims, and land cessions. Though not an exhaustive list, Morris (1943) provides a general outline of some of the treaties within the Province of Ontario from 1783 to 1923. The study area falls within the territory of the seven Anishnaabeg First Nations which are signatories to the Williams Treaties. These include the Mississaugas of Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Scugog Island First Nation, the Chippewas of Beausoleil First Nation, Georgina Island First Nation, and the Rama First Nation (Williams Treaties First Nations 2017).

The Williams Treaty (Figure 3) between the Crown and the Chippewas in this area are part of “[t]hree separate and large parcels of land in southern and central Ontario...acquired by the Government of Canada in 1923” (Surtees 1986:1). This particular parcel includes “parts of the Counties of Northumberland, Durham, Ontario and York...[c]ommencing at the point where the easterly limit of that portion of the lands said to have been ceded...[as part of Treaty Number 13] intersects the northerly shore of Lake Ontario; thence northerly along the said easterly and northerly limits of the



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confirmed tract to the Holland River; thence northerly along the Holland River and along the westerly shore of Lake Simcoe and Kempenfeldt Bay to the narrows between Lake Couchiching and Lake Simcoe; thence south easterly along the shores of Lake Simcoe to the Talbot River; thence easterly along the Talbot River to the boundary between the Counties of Victoria and Ontario; thence southerly along that boundary to the north west angle of the Township of Darlington; thence along the northern boundary of the Township of Darlington, Clarke, Hope and Hamilton to Rice Lake; thence along the southern shore of said Lake to River Trent, and along the River Trent to Bay of Quinte; thence westerly and southerly along the shore of the Bay of Quinte to the road leading to Carrying Place and Wellers Bay; then westerly along the northern shore of Lake Ontario to the place of beginning” (Morris 1943:62). It is also worth noting that this area also “included substantial portions of land that had been the object of previous land cession treaties” (Surtees 1986:1).

2.2.2 Euro-Canadian Resources

The study area is located on part of Lots 1 and 16, Broken Front Concession and part of Lot 2-16, Concession 1, former Township of East Whitby, former Ontario County and in part of Lots 22-26, Broken Front Concession, and part of Lots 15-22 and 27-35, Concession 1, former Township of Darlington, former Durham County. The Euro-Canadian settlement history of the region of the study area is summarized below.

In 1791, the Provinces of Upper Canada and Lower Canada were created from the former Province of Quebec by an act of British Parliament. At this time, Colonel John Graves Simcoe was appointed as the Lieutenant Governor of Upper Canada and was tasked with governing the new province, directing its settlement and establishing a constitutional government modelled after that of Britain (Petrhyshyn 1985). In 1792, Simcoe divided Upper Canada into 19 counties consisting of previously settled lands, new lands opened for settlement, and lands not yet acquired by the Crown. These new counties stretched from Essex in the west to Glengarry in the east.

2.2.2.1 Ontario County

Ontario County was enclosed by the shores of Lake Ontario on the south, by York County and Lake Simcoe on the west, Durham and Victoria counties on the east, and by the District of Muskoka on the north. Initially attached to York and Peel Counties for municipal and judicial purposes, Ontario County separated in 1852. The original townships that existed with Ontario County include: Brock, Mara, Pickering, Rama, Reach, Scott, Thorah, Uxbridge, and Whitby. Settlement began in the county in the late 1700s but remained sparse, with only a few families arriving to the area. However, following the War of 1812 there was a period of increased settlement and immigration to the region (Mika and Mika 1983:112).



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Agriculture became one of the major industries in Ontario County, with the breeding and importing of cattle at its base. Apple growing in the southern areas of the county also brought commerce to the region. The Ontario lakeshore, bordering the southern edge of the county, provided for excellent harbours. These harbours facilitated greater access to trade and travel throughout the Great Lakes (Mika and Mika 1983:113). On January 1, 1974, Ontario County and Durham County were amalgamated into the Regional Municipality of Durham (Mika and Mika 1983:114).

2.2.2.2 Whitby Township

Whitby Township existed within Ontario County and, later, in the Municipality of Durham, with its southern border at the north shore of Lake Ontario. Whitby Township was originally surveyed between 1791 and 1795 and initially included East Whitby Township. Early settlement of the region was concentrated in two main areas; the space surrounding the natural harbour, known as Windsor Bay, and along Kingston Road (Mika and Mika 1983:642). By the 1820s, settlement had begun to increase and moved farther north from the lake and harbour (Griffith 1945:90). With this increasing settlement, the harbour became a focal point of the region and by the 1830s it had become a thriving shipping destination. Windsor Bay was eventually renamed Whitby Harbour in 1847 after conflict arose due to another Windsor already existing within the province (Mika and Mika 1983:642). From the 1840s to the 1870s, the harbour continued to prosper, making way for further developments in the surrounding areas.

2.2.2.3 Oshawa

Oshawa, which is believed to mean either "crossing between the waters" or "where the canoe is exchanged for the trail" was initially settled in 1794 by Benjamin Wilson (Mika and Mika 1983). Wilson arrived from Vermont with his family and set up a homestead at the mouth of Oshawa Creek. A saw and grist mill were built on Harmony Creek and a tavern on Dundas Street shortly after the initial Euro-Canadian settlement of the area. The first school to be built in Oshawa was a one room log building, located at King and Simcoe Street. By 1840 a Post Office had been established and the settlement officially gained village status in 1850 with a population of 1,100 individuals (Mika and Mika 1983).

The completion of the Grand Trunk Railway (from Toronto to Montreal) in 1856 promoted industrial growth within Oshawa (Mika and Mika 1983). This included the Oshawa Manufacturing Company, the Ontario Malleable Iron Company, and R. McLaughlin's carriage company, which would go on to become part of General Motors . By 1879 Oshawa had been incorporated as a town (Mika and Mika 1983).



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2.2.2.4 Durham County

Established in 1792, Durham County was originally composed of the townships of Cartwright, Manvers, Cavan, Darlington, Clarke, and Hope and portions of what is now Peterborough County. In 1850, Durham County was administratively linked with Northumberland County to form the United Counties of Northumberland and Durham (Armstrong 2004). This larger county was subsequently dissolved in 1974 when half of the original Durham County was merged with the former Ontario County to establish the Regional Municipality of Durham.

2.2.2.5 Geographic Township of Darlington

The Township of Darlington was first settled in 1793 by United Empire Loyalists from the United States (Leetooze 1994). Settlement of Darlington Township was initially focused on the southern concessions along the north shore of Lake Ontario. In 1829, the township was home to approximately 350 inhabitants but by 1850 the population had exceeded 7,200 (Woodstock 1865). As settlement in the area grew, the need for commercial services arose and the construction of hotels, inns, general stores, tanneries, and grist mills soon followed (Belden & Co. 1878). By 1861, the population of the township had decreased slightly to 6,912 (Woodstock 1865). The map of Darlington Township in the 1878 *Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont.* (Belden & Co. 1878) depicts a well-developed agricultural landscape with numerous farmsteads; homesteads; orchards; a local road and railway system; and a number of villages and hamlets, including: Bowmanville, Hampton, Solina, Tyrone, Enniskillen, and Haydon (Figure 8).



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2.2.2.6 Railways

The Grand Trunk Railway (GTR) was established in 1852, with the plan of a railway line between Toronto and Montreal. The GTR was the first railway to run through the study area, with the earliest construction arriving in the southern portion of town in 1853 (Mika and Mika 1983:642). The beginning of construction for the CP Rail officially began in 1881, although it was not until the following year that significant progress had been made. As part of an agreement of Confederation in 1867, the eastern provinces were to be linked together via a rail system. Manitoba and British Columbia followed suit in 1870 and 1871, respectively. Completion of the CP Rail main line took place in 1885, uniting the provinces from east to west (Canadian Pacific n.d.). The CP Rail line that runs through the City of Oshawa intersects Thornton Road and the study area.

2.2.2.7 Historical Map Review

Tremaine's 1860 map of *County of Ontario, Canada West* was reviewed as part of this assessment (Tremaine 1860). This map shows the study area prior to the construction of the CP Rail (Figure 4 and Figure 5) but notes that the study area was located in proximity to historical features (i.e., farmsteads) and historical transportation routes (i.e., Thornton Road). Land tenure details, as illustrated on the 1860 map, are summarized below in Table 2.2.

Table 2.2: Landowner Information for the Study Area from 1860

Township	Lot	Concession	Parcel	Landowner	Features
East Whitby	16	Broken Front	Northern Half	John Strickland	Farmhouse north of GTR line and schoolhouse in northeast corner of lot, both adjacent to study area
	15	Broken Front	Northern Half	D. Hinkson	No features illustrated
	17	1	Part of southern half	T. Pierson	No features illustrated
			Part of southern half	J. Pierson	No features illustrated
			Part of southern half	James Pierson	No features illustrated
			Part of northern half	J. Strickland	Farmhouse
	16	1	Southwestern quarter	James Pierson	No features illustrated



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Township	Lot	Concession	Parcel	Landowner	Features
			Northwestern quarter	S. Martin	Farmhouse at north end of lot
			Southeastern quarter	Andrew Annis	No features illustrated
			Northeastern quarter	William Highland	No structures illustrated
	15	1	Northern half	William Bartlett J.P	Farmhouse at north end of lot
			Southern half	Andrew Annis	No features indicated
	14	1	Northern half	William Annis	Farmhouse at north end of lot
			Southern half	Levi Annis	Farmhouse at south end of lot
	13	1	Southern half	J. Annis	No features indicated
	12	1	Southern half	T.N. Gibbs	No features indicated
	11	1	Most	Mrs. McGrigor	Village of Oshawa on northeast part of lot; Oshawa Creek
	10	1	Southern half	D. Dalleu	No features indicated
			Part of northern half	R. Rigley	No features indicated
	9	1	Northern half	Dr. William Magill	No features indicated
			Southeastern $\frac{3}{4}$	John Ritson	No features indicated
			Southwestern quarter	D. Dalleu	No features indicated
	8	1	Southern half	John Ritson	No features indicated
	7	1	Northern half	John Wilson	No features indicated
	6	1	Southern half	L. Drew	Farmhouse
	5	1	Southern half	A.M. Fairwell	No features indicated
	4	1	Southern half	Abraham Farewell	Harmony Creek, bridge over creek
	3	1	Northern quarter of south half	J.N Mathersell	No features indicated
			Southern quarter of south half	A. Farewell	Farewell Creek
	2	1	Southern half	R. Robinson	Farmhouse, road



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Township	Lot	Concession	Parcel	Landowner	Features
	3	Broken Front	Northern half	A.K Farewell	Bisected by Grand Trunk Railway
	2	Broken Front	Northern half	Estate of the Late R. Woon	Bisected by Grand Trunk Railway
	1	Broken Front	Northern half	Estate of the Late R. Woon	No features indicated
			Northern half	William Hall	No features indicated
			Southern half	Samuel Hall	Bisected by Grand Trunk Railway
Darlington	35	1	Southwestern quarter	C, Wade	Bisected by Grand Trunk Railway
			Southeastern quarter	Thomas Willson	Bisected by Grand Trunk Railway
	34	1	All but southwestern corner	Thomas Wordon	Farmhouse at north part of lot
			Southwestern corner	Charles Wade	No features indicated
	33	1	Southern portion	Alex Davidson	No features indicated
	32	1	Southern portion	Jesse Trull	No features indicated
	31	1	Southern half	William Oke	Farmhouse north of study area
	30	1	Southwestern quarter	John Sweet	Schoolhouse south of study area
			Middle portion of southern half	Estate of the Late Donald Cameron	No features indicated
			Eastern portion	William Annis	Farmhouse south of study area
	29	1	Southeastern corner	John Pickel	No features indicated
			Northern half	William Annis	No features indicated
		Broken Front	Northern half	Richard Osborne	Tooley Creek
	28	1	Southern half	Len Annis	No features indicated
	27	1	Southern half	Henry Pearce	No features indicated



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Township	Lot	Concession	Parcel	Landowner	Features
		Broken Front	Northern half	Henry Pearce	No features indicated
	26	1	Southern half	Henry Pearce	No features indicated
		Broken Front	Northern half	J.C. Trull J.P.	Grand Trunk Railway crosses north end
	25	Broken Front	Northern half	J.C. Trull J.P.	Farmhouse located north of study area; property bisected by Grand Trunk Railway
			Southern half	Robert Beith	Farmhouse located south of study area; Grand Trunk Railway crosses north end
	24	Broken Front	Northern half	Jane Burk	Two farmhouses; Grand Trunk Railway crosses north end
			Northern half	I.B. Burk	Farmhouse; Grand Trunk Railway crosses north end
	23	Broken Front	Northern half	None shown	Grand Trunk Railway crosses north end
			Northern half	William Vancamp	Bisected by Grand Trunk
		1	Southern half	Daniel Leavens	Farmhouse near north end of property; Darlington Creek
	22	1	Southern half	William Rundle	Darlington Creek
		Broken Front	Northern half	William Vancamp	Bisected by Grand Trunk
	21	1	Southern half	Leo Winteridge	Schoolhouse within study area; tributary of Darlington Creek
	20	1	Southern half	J.R. Hall	Farmhouse at north part of property two tributaries of Darlington Creek
	19	1	Southern half	Edward G. Powell	Farmhouse at south end of property; tributary of Darlington Creek
			Northern half	Andrew & Leo Power	Farmhouse at north end; tributary of Darlington Creek
	18	1	Southern half	Richard Foley	Farmhouse at south end; tributary of Darlington Creek



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Township	Lot	Concession	Parcel	Landowner	Features
	17	1		E.G. Power	Tributary of Darlington Creek
			Part western half	Mrs. Elizabeth Jones	No features indicated
			Part eastern half	Mrs. Anna Norton	No features indicated
	16	1	Western half	Jacob Stevens	Farmhouse at north end of property
			Eastern half	Ransom Stevens	Farmhouse at north end of property
	15	1	Entire lot	Estate of William Munson	No features indicated
	14	1	Southern half	James S. Bates	Farmhouse southeast of study area
			Northern half	Mrs. Elizabeth Bates	No features indicated

The 1877 *Illustrated Historical Atlas of County of Ontario* (Miles & Co. 1877) was also reviewed. This map also shows the study area prior the construction of the CP Rail (Figure 6 and Figure 7). By 1877, the Town of Whitby had increased in size and was encroaching upon the study area. The 1877 map of the Township of Whitby indicates that the study area continued to be located in proximity to historical features (i.e., farmsteads) and historical transportation routes (i.e., the GTR and municipal roadways). Land tenure related directly to the study area, as illustrated on the 1877 map, is summarized below in Table 2.3.

Table 2.3: Landowner Information for the Study Area from 1877

Township	Lot	Concession	Parcel	Landowner	Features
East Whitby	17	1	South quarter of north half	J. Strickland	Farmhouse, Corbett Creek
			North half of north half	W.C. Martin	Corbett Creek
			Middle quarter of north half	F.G. Martin	Farmhouse
			North quarter of south half	J. Pierson	No features indicated
	16	1	Southwestern quarter	J. Pierson	Farmhouse along edge of study area



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Township	Lot	Concession	Parcel	Landowner	Features
			Southeastern quarter	A, Annis	No features indicated
			Northeastern quarter	Mrs. Hyland	Farmhouse at north end of lot
			Northern half	F.G. Martin	Farmhouse at north end of lot
	15	1	Northern half	W. Teal	Farmhouse at north end of lot; Goodman Creek
			Southern half	A. Annis	No features indicated
			Northeastern corner of south half	W. Annis	Goodman Creek
	14	1	Northwestern quarter	W. Annis	Farmhouse
			Northeastern quarter	E. Annis	Farmhouse
			South half	A. Annis	Farmhouse at south end of lot
	13	1	Northern half	D. Conant	Two farmhouses at north end of lot
			Southern half	J. Annis	Farmhouse south of study area
	12-7	1	All lots	N/A	City of Oshawa
	6	1	South 2/3 of northern half	J. Drew	Farmhouse at east side of lot
			North half of southern half	L. Drew	Farmhouse within study area
	5	1	Middle 1/3	A.L. Farwell (sic)	Farmhouse within study area; Harmony Creek
			Southern 1/3	A.M Farwell (sic)	Farmhouse south of study area
	4	1	Central portion	A.R. Farwell (sic)	Farmhouse north of study area
			Southern portion	H. Taplin	Farmhouse south of study area
	3	1	Southern half	J. Mothersill	Farmhouse north of study area; Farewell Creek
	2	1	Southern 1/3	R. Robinson	Farmhouse at north end of property
		Broken Front	Northern half	Pascoe Brothers	No features indicated



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Township	Lot	Concession	Parcel	Landowner	Features
	1	Broken Front	Northern half of north half	Pascoe Brothers	Farmhouse in northeastern part of property
			Middle quarter of north half	Mrs. W. Hall	Farmhouse
Darlington	35	1	Southwestern quarter	Chas Wade	Farmhouse within study area
			South half of southeastern quarter	W. Wilson	Farmhouse south of study area
	34	1	Southern half	Chas Wade	No features indicated
	33	1	Southern 1/3	J. Trull	Farmhouse within study area; Robinson Creek
	32	1	Southern half	J. Trull	Farmhouse within study area; Robinson Creek
	31	1	Southern half	Rich Oke	Farmhouse north of study area
			Southern half	Rich Oke	Farmhouse north of study area
	30	1	Southwestern quarter	Seymour A. Sweet	Schoolhouse within study area
			Southern end	J. Pickel	Farmhouse within study area
	29	1	Broken Front	Rich Osborne	Two farmhouses within study area
			Northern half	L. Annis	Farmhouse within study area
	28	1	Southern half	Chas Annis	Tooley Creek
	27	1	Southern half	Henry Pearce	Farmhouse within study area
		Broken Front	Northern half	Henry Pearce	Bisected by Grand Trunk Railway
	26	Broken Front	Entire lot	C. Trull	Bisected by Grand Trunk Railway
	25	Broken Front	All but northwestern corner	H & R Beiln	Two farmhouses south of study area; bisected by Grand Trunk Railway
			Northwestern corner	C. Trull	Farmhouse north of study area; bisected by Grand Trunk Railway



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Township	Lot	Concession	Parcel	Landowner	Features
	24	Broken Front	West and south parts	Robert Everson	Two farmhouses south of study area; bisected by Grand Trunk Railway
			Northeast part	Jas Worden	Farmhouse north of study area; bisected by Grand Trunk Railway
	23	Broken Front	Northwestern quarter	Jas Worden	Bisected by Grand Trunk Railway
			Northeastern corner	Thomas Van Camp	Bisected by Grand Trunk Railway
	22	Broken Front	Northern portion	Thomas Van Camp	Farmhouse, Bisected by Grand Trunk Railway
		1	Southern half	William Rundle	Darlington Creek
	21	1	Southwestern corner	J. Moore	House and likely shoe makers shop (Moore listed as shoemaker in 1871 census (Library and Archives Canada 1871))
			Southern half	George Witherage	Schoolhouse and farmhouse, both within study area; Darlington Creek
		Broken Front	Northern half	Mrs. William Butte	Farmhouse south of study area; bisected by Grand Trunk Railway; Darlington Creek
	20	1	Southern half	O.R. Hall	Farmhouse at north end of property; tributary of Darlington Creek
				E.G. Power	Farmhouse at south end of property; tributary of Darlington Creek
	19	1	Northern half	E.G. Power	Farmhouse south of study area; tributary of Darlington Creek
	18	1	Southern 1/3	Walter Foley	Farmhouse south of study area; tributary of Darlington Creek
			North portion of southern half	E.G. Power	Tributary of Darlington Creek



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Township	Lot	Concession	Parcel	Landowner	Features
	17	1	Western 2/3	William Sandercock	Farmhouse north of study area
			Central east half	William Warden	Farmhouse north of study area
	16	1	Southwestern quarter	Jacob Stevens	No features indicated
			Southeastern quarter	Ransom Stevens	Farmhouse within study area
			Northern half	Mrs. D Stevens	Farmhouse north of study area
	15	1	Northern half	David Towns	Two farmhouses within study area
			Southern half	T. Brodie Jr.	Farmhouse south of study area
	14	1	Southern half	William H. Williams	Farmhouse southeast of study area
			Northern half	Mrs. Nancy B(??)	Two farmhouses northeast of study area, one schoolhouse within study area

In discussing 18th and 19th century historical mapping it must be remembered that many historical county atlases were produced primarily to identify factories, offices, residences, and landholdings of subscribers and were funded by subscription fees. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100). As such, structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

Further, review of historical mapping has inherent accuracy difficulties due to potential error in georeferencing. Georeferencing is conducted by assigning spatial coordinates to fixed locations and using these points to spatially reference the remainder of the map. Due to changes in “fixed” locations over time (e.g., road intersections, road alignments, water courses, etc.), errors/difficulties of scale and the relative idealism of the historical cartography, historical maps may not translate accurately into real space points. This may provide obvious inconsistencies during the historical map review.



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2.2.2.8 St. Wolodymyr and St. Olha Ukrainian Cemetery

Portions of the study area overlap the St. Wolodymyr and St. Olha Ukrainian Cemetery, which is located on Prestonvale Rd, in Lot 34, Concession 1, former Darlington Township, former County of Durham, now Municipality of Clarington, Regional Municipality of Durham, Ontario. The St. Wolodymyr and St. Olha Ukrainian Cemetery was established in 1969 (M. Labaj, personal communication 2021). As such, the portions of the property currently being used for burial purposes are clearly defined, eliminating the potential for extramural burials. Recommendations for the portions of the St. Wolodymyr and St. Olha Ukrainian Cemetery that fall within the study area can be found in Section 4.0 and Figure 8. Correspondence from the Parish of St. George the Matyr and the Bereavement Authority of Ontario regarding the St. Wolodymyr and St. Olha Ukrainian Cemetery can be found in the Supplementary Documentation. The Parish of St. George declined to provide mapping of the cemetery's property boundaries but confirmed that there are no burials present within Section 1 of the cemetery (see Supplementary Documentation).

2.2.2.9 Trull Cemetery

The Trull Cemetery is located approximately 69 metres from the study area, along Baseline Rd and within Lot 31, Concession 1, former Darlington Township, former County of Durham, now Municipality of Clarington, Regional Municipality of Durham, Ontario.

The Trull family were one of the first families to settle in the former Darlington townships, having moved to the area from the United States in 1794. The most prominent figure within the Trull family was Lydia Trull, a trained doctor who would travel on horseback to visit her patients. Lydia Trull is said to have died of old age and Trulls Road named after the family (Dolstra 2015).

The cemetery's current boundary has remained constant since 1948 (ONLand 2023:243, 245-246).

2.2.2.10 Summary

As illustrated above, the historical context of the Stage 1 study area for the Project includes numerous examples of Indigenous and early Euro-Canadian resources. In particular, the late 19th century mapping depicts numerous residential, commercial, and industrial structures adjacent to the study area. The majority of the study area has been subject to European-style agricultural practices for over 100 years, having been densely populated by Euro-Canadian farmers by the late 19th century.



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2.3 Archaeological Context

2.3.1 The Natural Environment

The study area is situated within the “Iroquois Plain” physiographic region (Chapman and Putnam 1984:190-196).

The lowland bordering Lake Ontario, when the last Glacier was receding but still occupied the St. Lawrence Valley, was inundated with by a body of water known as Lake Iroquois which emptied eastward at Rome, New York State. Its old shorelines, including cliffs, bars, beaches, and boulder pavements are easily identifiable features.... The Iroquois plain extends around the western part of Lake Ontario, from the Niagara River to the Trent River..., its width varying from a few hundred meters to about eight miles.

(Chapman and Putnam, 1984:190)

Numerous water sources can be found within close proximity to the study area, the largest being Lake Ontario, located directly south of the Project. Other water sources include; Goodman Creek, Oshawa Creek, Farewell Creek, Harmony Creek, McLaughlin Bay, Robinson Creek, Tooley Creek, Darlington Creek, West Side Creek, Soper Creek, and Bowmanville Creek.

Two main soil types predominate the study area, Darlington loam and Whitby loam. Darlington loam is classified as being a dark grey-brown loam with smooth deposits, good drainage with undulating to rolling hills, ideal for general agricultural purposes (Webber and Morwick 1946). Whitby loam is described as varying from loam to silt loam in texture, with few stones and boulder inclusions. Gentle sloping topography is associated with Whitby loam but imperfect drainage limits the production of crops. The Whitby loam soils are more suited to use as pastureland, hay production and spring grain (Olding and Wicklund 1949).

2.3.2 Pre-contact Indigenous Resources

This portion of southwestern Ontario has been occupied by Indigenous peoples since the retreat of the Wisconsin glacier approximately 11,000 years ago. Much of what is understood about the lifeways of Indigenous peoples is derived from archaeological evidence and ethnographic analogy. In Ontario, Indigenous culture prior to the period of contact with European peoples has been distinguished into cultural periods based on observed changes in material culture. These cultural periods are largely based in observed changes in formal lithic tools, and separated into the Early Paleo, Late Paleo, Early Archaic, Middle Archaic, and Late Archaic periods. Following the advent of



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ceramic technology in the Indigenous archaeological record, cultural periods are separated into the Early Woodland, Middle Woodland, and Late Woodland periods, based primarily on observed changes in formal ceramic decoration. It should be noted that these cultural periods do not necessarily represent specific cultural identities but are a useful paradigm for understanding changes in Indigenous culture through time. The current understanding of Indigenous archaeological culture is summarized in Table 2.4, based on Ellis and Ferris (1990). The provided time periods are based on the “Common Era” calendar notation system, i.e., Before Common Era (BCE) and Common Era (CE).

Table 2.4: Generalized Cultural Chronology Related to the Study Area

Period	Characteristics	Time Period	Comments
Early Paleo	Fluted Projectiles	9000 – 8400 BCE	Spruce parkland, caribou hunters
Late Paleo	Hi-Lo Projectiles	8400 – 8000 BCE	Smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 – 6000 BCE	Slow population growth
Middle Archaic	Brewerton-like Points	6000 – 2500 BCE	Environment similar to present
Late Archaic	Narrow Point	2500 – 1800 BCE	Increasing site size
	Broad Point	1800 – 1500 BCE	Large chipped lithic tools
	Small Point	1500 – 1100 BCE	Introduction of bow hunting
Terminal Archaic	Hind Points	1100 – 950 BCE	Emergence of true cemeteries
Early Woodland	Meadowood Points	950 – 400 BCE	Introduction of pottery
Middle Woodland	Dentate / Pseudo-Scallop Pottery	400 BCE – 550 Common Era (CE)	Increased sedentism
	Princess Point	550 – 900 CE	Introduction of corn
Late Woodland	Early Late Woodland Pottery	900 – 1300 CE	Emergence of agricultural villages
	Middle Late Woodland Pottery	1300 – 1400 CE	Long longhouses (100 m +)
	Late Late Woodland Pottery	1400 – 1650 CE	Tribal warfare and displacement



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Between 9000 and 8000 BCE, Indigenous populations were sustained by hunting, fishing, and foraging and lived a relatively mobile existence across an extensive geographic territory. Despite these wide territories, social ties were maintained between groups. One method in particular was through gift exchange, evident through exotic lithic material documented on many sites (Ellis 2013:35-40).

By approximately 8000 BCE, evidence exists and becomes more common for the production of ground-stone tools such as axes, chisels and adzes. These tools themselves are believed to be indicative specifically of woodworking. This evidence can be extended to indicate an increase in craft production and arguably craft specialization. This latter statement is also supported by evidence dating to approximately 7000 BCE of ornately carved stone objects which would be laborious to produce and have explicit aesthetic qualities (Ellis 2013:41). This is indirectly indicative of changes in social organization which permitted individuals to devote time and effort to craft specialization. Since 8000 BCE, the Great Lakes basin experienced a low-water phase, with shorelines significantly below modern lake levels (Stewart 2013: Figure 1.1.C). It is presumed that the majority of human settlements would have been focused along these former shorelines. At approximately 6500 BCE the climate had warmed considerably since the recession of the glaciers and the environment had grown more similar to the present day. By approximately 4500 BCE, evidence exists from southern Ontario for the utilization of native copper (naturally occurring pure copper metal) (Ellis 2013:42). The known origin of this material along the north shore of Lake Superior indicates the existence of extensive exchange networks across the Great Lakes basin.

At approximately 3500 BCE, the isostatic rebound of the North American plate following the melt of the Laurentide glacier had reached a point which significantly affected the watershed of the Great Lakes basin. Prior to this, the Upper Great Lakes had drained down the Ottawa Valley via the French and Mattawa river valleys. Following this shift in the watershed, the drainage course of the Great Lakes basin had changed to its present course. This also prompted a significant increase in water-level to approximately modern levels (with a brief high-water period); this change in water levels is believed to have occurred catastrophically (Stewart 2013:28-30). This change in geography coincides with the earliest evidence for cemeteries (Ellis 2013:46). By 2500 BCE, the earliest evidence exists for the construction of fishing weirs (Ellis *et al.* 1990: Figure 4.1). Construction of these weirs would have required a large amount of communal labour and are indicative of the continued development of social organization and communal identity. The large-scale procurement of food at a single location also has significant implications for permanence of settlement within the landscape. This period is also marked by further population increase and by 1500 BCE evidence exists for substantial permanent structures (Ellis 2013:45-46).



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By approximately 950 BCE, the earliest evidence exists for populations using ceramics. Populations are understood to have continued to seasonally exploit natural resources. This advent of ceramic technology correlated, however, with the intensive exploitation of seed foods such as goosefoot and knotweed as well as mast such as nuts (Williamson 2013:48). The use of ceramics implies changes in the social organization of food storage as well as in the cooking of food and changes in diet. Fish also continued to be an important facet of the economy at this time. Evidence continues to exist for the expansion of social organization (including hierarchy), group identity, ceremonialism (particularly in burial), interregional exchange throughout the Great Lakes basin and beyond, and craft production (Williamson 2013:48-54).

By approximately 550 CE, evidence emerges for the introduction of maize into southern Ontario. This crop would have initially only supplemented the Indigenous diet and economy (Birch and Williamson 2013:13-14). Maize-based agriculture gradually became more important to societies and by approximately 900 CE permanent communities emerge which are primarily focused on agriculture and the storage of crops, with satellite locations oriented toward the procurement of other resources such as hunting, fishing, and foraging.

This archaeologically defined culture, known as the Late Woodland in southern Ontario, is often divided into three temporal components; Early, Middle and Late Woodland. Sites associated with the Early Late Woodland period indicate that there was a continuation of similar subsistence practices and settlement patterns as the Middle Woodland. Villages tended to be small, with small longhouse dwellings that housed either nuclear or, with increasingly, extended families. Smaller camps and hamlets associated with villages served as temporary bases from which wild plant and game resources were acquired. Horticulture appears to have been for the most part a supplement to wild foods, rather than a staple.

The Middle Late Woodland period marks the point at which a fully developed horticultural system emerged, and at which point cultivars became the staple food source. By approximately 1250 CE, evidence exists for the common cultivation of the historical Indigenous cultigens, such as maize, beans, squash, sunflower, and tobacco. In this period villages become much larger than in the Early Late Woodland period, and longhouses also become much larger, housing multiple, though related, nuclear families. For those Indigenous peoples who began practicing cultivation, food production through horticulture resulted in the abandonment of seasonal mobility that had characterized Indigenous life for millennia. Hunting, fishing, and gathering of wild food activities continued to occur at satellite camps. However, for the most part, most Iroquoian people inhabited large, sometimes fortified villages throughout southern Ontario.



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During the Late Late Woodland period longhouses became smaller again, although villages became even larger. A number of Huron village sites have been discovered in the region that contain material culture associated with both Huron and St. Lawrence Iroquoians, suggesting that St. Lawrence Iroquoians who had abandoned their home territory along the north shore of the St. Lawrence River and found refuge in the Trent Valley and Kawartha Lakes area. The villages were abandoned in the 16th century and the region was used as a buffer between the Huron and the Five Nations Iroquois.

The Late Late Woodland period in the Trent River system and along the north shore of Lake Ontario is marked by the emergence of the Huron-Wendat people, one of several discrete groups that emerge out of the Middle Late Woodland period. Pre-contact Huron villages have been documented in clusters along the north shore of Lake Ontario from just west of Toronto to Bellville, and north up through the Kawartha Lakes region. The Huron were similar to other Iroquoian societies in many ways, including material culture, semi-permanent settlement practices, and a tendency toward agricultural mixed with hunting and gathering subsistence strategy (Ramsden 1990). Huron settlements include large villages of several longhouses and camps for specialized extractive activities such as hunting and fishing, although there is discussion that these camps may actually be ancestral Mississauga sites (J. Kapyrka, personal communication, 2019). During the Late Late Woodland period, Huron settlements along the north shore of Lake Ontario begin to move through the Humber River, Don River, Duffins Creek/Rouge River and Trent River systems and eventually coalesce into what is now Simcoe County and the area traditionally identified as “Huronian” (Birch 2015).

2.3.3 Registered Archaeological Sites and Surveys

In Canada, archaeological sites are registered within the Borden system, a national grid system designed by Charles Borden in 1952 (Borden 1952). The grid covers the entire surface area of Canada and is divided into major units containing an area that is two degrees in latitude by four degrees in longitude. Major units are designated by upper case letters. Each major unit is subdivided into 288 basic unit areas, each containing an area of 10 minutes in latitude by 10 minutes in longitude. The width of basic units reduces as one moves north due to the curvature of the earth. In southern Ontario, each basic unit measures approximately 13.5 kilometres east-west by 18.5 kilometres north-south. In northern Ontario, adjacent to Hudson Bay, each basic unit measures approximately 10.2 kilometres east-west by 18.5 kilometres north-south. Basic units are designated by lower case letters. Individual sites are assigned a unique, sequential number as they are registered. These sequential numbers are issued by the MCM who maintain the *Ontario Archaeological Sites Database*. The study area under review is within Borden Blocks: AIGr and AIGq.



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Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990b). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

An examination of the *Ontario Archaeological Sites Database* has shown that there are 50 archaeological sites registered within a one kilometre radius of the study area (Government of Ontario 2022a). Table 2.5 provides a summary of the registered archaeological sites.

Table 2.5: Registered Archaeological Sites within One Kilometre of the Study Area

Borden #	Site Name	Site Type	Cultural Affiliation
AlGq-10	Tabb 2	N/A	Indigenous
AlGq-100	Location 1	Homestead	Euro-Canadian
AlGq-101	Location 2	Homestead	Euro-Canadian
AlGq-102	Location 4	Homestead	Euro-Canadian
AlGq-108	Stevens	Scatter	Euro-Canadian
AlGq-110	N/A	N/A	Indigenous, Archaic
AlGq-126	GTR	N/A	Euro-Canadian
AlGq-153	AlGq-153	Scatter	Indigenous, Early/Late Archaic
AlGq-157	East H27-P	Homestead	Euro-Canadian
AlGq-163	Sandercock	N/A	Indigenous, Middle Woodland
AlGq-17	Osbourne	N/A	Indigenous, Archaic
AlGq-170	N/A	Homestead	Euro-Canadian
AlGq-174	Harmony Schoolhouse	School	Euro-Canadian
AlGq-18	Robertson	N/A	Indigenous, Woodland
AlGq-183	N/A	Campsite	Indigenous
AlGq-186	N/A	Findspot	Indigenous
AlGq-19	Schlact	N/A	Indigenous, Late Archaic
AlGq-20	Kowal	N/A	Indigenous
AlGq-21	Clarence Farwell	Findspot	Indigenous



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Borden #	Site Name	Site Type	Cultural Affiliation
AlGq-22	Elgin Farwell	N/A	Indigenous, Archaic
AlGq-25	Harold Stevens 1	N/A	Indigenous; Paleo-Indian
AlGq-26	Sam Brown	N/A	Indigenous
AlGq-29	Scott	N/A	Indigenous
AlGq-31	Courtice	N/A	Indigenous
AlGq-39	Robinson	N/A	Indigenous; Archaic
AlGq-49	Harold Stevens 2	N/A	Indigenous
AlGq-50	Harold Stevens 3	N/A	Indigenous
AlGq-51	N/A	N/A	Indigenous
AlGq-59	Robinson Hollow	Findspot	Indigenous; Lake Woodland
AlGq-60	Robinson Ridge	Hamlet	Indigenous; Late Woodland
AlGq-63	Sid Worden	Scatter	Indigenous
AlGq-65	Bowmanville School	Scatter	Indigenous
AlGq-66	N/A	Findspot	Indigenous
AlGq-69	Osborne	Homestead	Euro-Canadian
AlGq-73	Clarington 1	Campsite	Indigenous; Early Woodland
AlGq-74	Camp 30 H1	Campsite	Euro-Canadian
AlGq-8	Pickering	N/A	Indigenous; Late Woodland
AlGq-89	N/A	N/A	not recorded
AlGq-9	Tabb	N/A	Indigenous
AlGq-96	Casey Trull (East H6)	Farmstead	Euro-Canadian
AlGr-104	Slade	Homestead	Euro-Canadian
AlGr-12	Glenway 1	Findspot	Indigenous
AlGr-13	Glenway 2	Findspot	Indigenous
AlGr-159	Camp X	N/A	Euro-Canadian
AlGr-228	Farwell Site	Homestead	Euro-Canadian
AlGr-8	General Motors	N/A	Indigenous; Woodland
NDFS-0082	N/A	N/A	Indigenous
NDFS-0075	N/A	N/A	Indigenous
NDFS-0074	N/A	N/A	Indigenous



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Borden #	Site Name	Site Type	Cultural Affiliation
NDFS-0083	N/A	N/A	Indigenous

Four of these archaeological sites are located within the study area (the Osbourne site [AlGq-17], the Robertson site [AlGq-18], the Elgin Farwell site [AlGq-22], and the Bates site [AlGq-170]). These sites are discussed in further detail below.

The Osbourne site (AlGq-17) (see Supplementary Documentation) consists of a single findspot of an unidentified projectile point reported by the property owner in 1978. The artifact's precise location is unknown, and the site has not been subject to formal archaeological investigation (Government of Ontario 2022a).

The Robertson site (AlGq-18) (see Supplementary Documentation) consists of pieces of pottery and projectile points reported by the property owner in 1978. The artifacts were reportedly found while gardening, however, their precise location is unknown. This site has not been subject to formal archaeological investigation (Government of Ontario 2022a).

The Elgin Farwell site (AlGq-22) (see Supplementary Documentation) was reported in 1978 and consists of a collection of artifacts collected by the landowner from their ploughed agricultural field. The site's precise location is unknown. This site has not been subject to formal archaeological investigation (Government of Ontario 2022a).

The Bates site (AlGq-170) (see Supplementary Documentation) is a mid-19th century Euro-Canadian homestead site. The site has been subject to Stage 3 archaeological assessment (ASI 2016) and recommended for further Stage 4 mitigation of development impacts (ASI 2016, Government of Ontario 2022a). This site is located outside of the current construction footprint.

In addition to the above, an examination of the *Ontario Public Register of Archaeological Reports* (Government of Ontario 2022b) has identified 32 archaeological assessments which document work within 50 metres of the study area. A summary of previous archaeological assessments is presented in Table 2.6.



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Table 2.6: Archaeological Assessments within 50 metres of the Study Area

Company	Report	Project Information Form (PIF) Number	Year
Archaeological Services Inc.	<i>Stage 1 Archaeological Assessment, 407 East Environmental Assessment</i>	P163-022-2007	2007
Timmins Martelle Heritage Consultants Inc	<i>Stage 1 and 2 A.A GO Transit - Lakeshore East Corridor Oshawa to Bowmanville Rail Service Expansion Environmental Assessment, Whitby and Darlington Townships, Ontario County and Durham County</i>	P064-313-2009	2009
URS Canada Inc	<i>Stage 1 Archaeological Assessment Highway 401/Holt Road Interchange Preliminary Design and Detail Design, Class Environmental Assessment Study Municipality of Clarington, Region of Durham</i>	P123-072-2012	2012a
URS Canada Inc.	<i>Stage 2 Archaeological Assessment Highway 401/Holt Road Interchange Preliminary Design, Detail Design and Class Environmental Assessment Study Municipality of Clarington, Regional Municipality of Durham G.W.P. 2101-08-00</i>	P123-090-2012	2012b
Archaeological Services Inc.	<i>Stage 3 archaeological assessment of the Eleazer Norton Site (AIGq-157), Highway 407, East Lot 26, Broken Front Concession, Township of Darlington, Former Durham County, Town of Clarington, Regional Municipality of Durham, Ontario</i>	P223-0095 2014	2014
Northeastern Archaeological Associates Ltd.	<i>Stage 3 Archaeological Assessment of the Sandercock Site AIGq-163, Maple Grover Subdivision Project, Part Lot 17, Concession 1, Municipality of Clarington, Regional Municipality of Durham, Ontario.</i>	P025-0472-2014	2014
Scarlett Janusas Archaeology Inc.	<i>Stage 4 Archaeological Assessment AIGq-157 Highway 407 East Extension, Phase 2 Lot 25, Broken Front Concession, Former Township of Darlington, Municipality of Clarington, Regional Municipality of Durham, Original Report.</i>	P027-0272-2015	2015
Archaeological Services Inc.	<i>Stage 1 and 2 Archaeological Assessment of Proposed Development of P.I.N. 26931-0003. Part Lot 14, Concession 1, Township of Darlington, County of Durham, Now in the Town of Bowmanville, Regional Municipality of Durham</i>	P046-0090-2015	2015a



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Company	Report	Project Information Form (PIF) Number	Year
Archaeological Services Inc.	<i>Stage 2 Property Assessment Highway 407 East Owner's Engineer Assignment, Phase One and Phase Two (407 ETR to Hwy 35/115) City of Pickering, Town of Whitby, City of Oshawa, and Municipality of Clarington (Former Townships of Pickering, Whitby, & East Whitby in County of Ontario; Former Townships of Darlington, and Clarke in County of Durham), Regional Municipality of Durham, Ontario</i>	P046-068-2013	2015b
Archaeological Services Inc.	<i>Stage 2 Property Assessment Highway 407 East Owner's Engineer Assignment, Phase Two (East of Harmony Road to Hwy 35/115) City of Oshawa, and Municipality of Clarington (Former Township of East Whitby in County of Ontario; Former Townships of Darlington and Clarke in County of Durham), Regional Municipality of Durham, Ontario</i>	P046-0086-2014	2015c
This Land Archaeology Inc.	<i>Report on the Stage 1 and 2 Archaeological Assessment of Urban Towns of Bowmanville, located on Part of Lot 16, Concession 1, Community of Bowmanville, Municipality of Clarington, Regional Municipality of Durham, Historic County of Durham, Geographic Township of Darlington, Ontario.</i>	P379-0065-2015	2015
The Archaeologists Inc.	<i>Stage 1 & 2 Archaeological Assessment for 446 Simcoe Street South, Part of Lots C-46, C-48, and All of Lots C-44, C-45, C-57 and C-61, Registered Plan 335, Sheet 22, Part of Lot 11, Concession 1, Geographic Township of Whitby East, City of Oshawa</i>	P052-0732-2016	2016a
The Archaeologists Inc.	<i>Stage 1 Background Study for Part of Lot 16, Concession 1, (Geographic Township of East Whitby, Ontario County), City of Oshawa, Regional Municipality of Durham</i>	P052-0669-2016	2016b
Archaeological Services Inc.	<i>Stage 3 Archaeological Assessment of the Bates Site (AIGq-170) Proposed Development of P.I.N 26931-0003 Part Lot 14, Concession 1, Geographic Township of Darlington, now in the Town of Bowmanville, Regional Municipality of Durham.</i>	P125-0196-2016	2016
Archaeological Services Inc.	<i>Stage 1-2 Archaeological Assessment of 2033 Baseline Road, Part of Lot 23, Broken Front Concession, Geographic Township of Darlington, Durham County, Municipality of Clarington, Regional Municipality of Durham</i>	P449-0136-2017	2017



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Company	Report	Project Information Form (PIF) Number	Year
Stantec	<i>Bowmanville Corridor Expansion Project (Thornton- CP Grade Separation): Stage 1 Archaeological Assessment Expansion Project Part of Lots 16 and 17, Concession 1, Geographic Township of Whitby, former Ontario County, now City of Oshawa, Regional Municipality of Durham, Ontario</i>	P362-0191-2017	2017
Archeoworks Inc.	<i>Stage 1-2 Archaeological Assessment for the Proposed Residential Development of Part of Lots 755 to 826, 827 to 832, 858, Part of Eighteenth Avenue, Part of Nineteenth Avenue, Registered Plan 97, and Parts 5, 6, and 7, Registered Plan 40R-23416, Part of Lots 23 and 24, Broken Front Concession, Geographic Township of Darlington, Former County of Durham, Now in the Municipality of Clarington, Regional Municipality of Durham, Ontario.</i>	P029-0916-2017	2017
This Land Archaeology Inc.	<i>Stage 1-2 Archaeological Assessment on Part of Lot 16, Concession 1, Community of Bowmanville, Municipality of Clarington, Regional Municipality of Durham, Historic County of Durham, Geographic Township of Darlington, Ontario</i>	P379-0130-2017	2017
Archaeological Services Inc.	<i>Stage 1 Archaeological Assessment of 2021 Baseline Road west, Part of Lot 23, Broken Front Concession, Geographic Township of Darlington, Durham County, Municipality of Clarington, Municipality of Durham.</i>	P449-0215-2018	2018
York North Archaeological Services Inc.	<i>Stage 1 & 2 Archaeological Assessment of Part Lot 30, Concession 1, Geographic Township of Darlington, Now the Municipality of Clarington, Regional Municipality of Durham, ON.</i>	P156-0279-2018	2018
Earthworks Archaeological Services Inc.	<i>Stage 1 & 2 Archaeological Assessment 64 Albany Street and 426 Front Street Lots 11 and 12 and Part of Lots 10 and 13 Registered Plan 41 Part of Lot 10, Concession 1 Geographic Township of Whitby City of Oshawa Regional Municipality of Durham</i>	P321-0048-2019	2019
Archaeological Assessment Limited	<i>The Stage 1-2 Archaeological Assessment of 480, 484 and 506 Ritson Road South, Part of Lot 9, Concession 1, Geographic Township of East Whitby, City of Oshawa, Regional Municipality of Durham</i>	P013-1242-2019	2019
This Land Archaeology Inc.	<i>Report on the Stage 1-2 Archaeological Assessment on Part of Lot 6, Concession 1, Municipal Address of 570 Shakespeare Avenue, City of Oshawa, Geographic Township of Whitby, Regional Municipality of Durham, Ontario</i>	P059-0932-2020	2021



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Archaeological Services Inc. (ASI) was retained to complete a Stage 1 archaeological assessment for the 407 East Completion Environmental Assessment. The Stage 1 was conducted under Project Information Form number P163-022-2007, issued to Peter Carruthers by the MCM. The Stage 1 assessment identified areas of archaeological potential within the current study area and recommended Stage 2 assessment (ASI 2007).

In 2009, Timmins Martelle Heritage Consultants (TMHC) were retained to conduct a Stage 1 and 2 assessment for the GO Transit - Lakeshore East Corridor Oshawa to Bowmanville Rail Service Expansion Environmental Assessment, Whitby and Darlington Townships, Ontario County and Durham County. The assessment was conducted under Project Information Form number P064-313-2009, issued to Holly Martelle by the MCM. The Stage 2 resulted in the recovery of archaeological resources with further cultural heritage value or interest and the Farwell Site (AIGr-228) recommended for Stage 3 assessment (THMC 2009a). This report assessed parts of the current study area.

URS Canada Inc. (URS) was retained in 2012 to conduct a Stage 1 archaeological assessment of the Highway 401/Holt Road Interchange in the Municipality of Clarington, Region of Durham, Ontario. The Project was conducted under Project Information Form number P123-072-2012, issued to Glenn Kearsley by the MCM. The Stage 1 archaeological assessment indicated that these lands retained archaeological potential and recommended Stage 2 assessment prior to any impacts (URS 2012a). This assessment did not comment on the archaeological potential of the current study area.

URS was retained in 2012 to conduct the Stage 2 archaeological assessment of the Highway 401/Holt Road Interchange in the Municipality of Clarington, Region of Durham, Ontario. The assessment was conducted under Project Information Form number P123-090-2012, issued to Glenn Kearsley by the MCM. The Stage 2 assessment did not result in the recovery of any archaeological material and recommended that no further archaeological assessments were required for the property (URS 2012b). This assessment did not survey lands within the current study area.

ASI conducted a Stage 2 archaeological assessment for the Highway 407 East Owner's Engineer Assignment, Phase One and Phase Two (407 ETR to Hwy 35/115) in the City of Pickering, Town of Whitby, City of Oshawa, and Municipality of Clarington (Former Townships of Pickering, Whitby, & East Whitby in County of Ontario; Former Townships of Darlington, and Clarke in County of Durham), Regional Municipality of Durham, Ontario. The assessment was conducted under Project Information Form number P046-068-2013, issued to Andrew Clish by the MCM. The Stage 2 covered approximately 889 hectares and identified 24 archaeological sites recommended for further assessment. The Stage 2 also identified 12 sites that did not meet the MCM criteria for



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Stage 3 (ASI 2015b). This assessment included the survey of some lands within the current study area.

ASI conducted a Stage 2 archaeological assessment for the Highway 407 East Owner's Engineer Assignment, Phase Two (East of Harmony Road to Hwy 35/115) in the City of Oshawa, and Municipality of Clarington (Former Township of East Whitby in County of Ontario; Former Townships of Darlington, and Clarke in County of Durham), Regional Municipality of Durham, Ontario. The assessment was conducted under Project Information Form number P046-0086-2014, issued to Andrew Clish by the MCM. The Stage 2 survey was conducted by a combination of test-pit survey and pedestrian survey (ASI 2015c). This assessment included the survey of some lands within the current study area.

In 2014, ASI was contracted to complete the Stage 3 archaeological assessment of the Eleazer Norton Site (AlGq-157), Highway 407, East lot 26, Broken Front Concession, Township of Darlington, Former Durham County, Town of Clarington, Regional Municipality of Durham, Ontario. The assessment was conducted under Project Information Form number P223-0095-2014, issued to Sara Cherubin by the MCM. The results of the Stage 3 assessment indicated that the Eleazer Norton site (AlGq-157) retained further cultural heritage interest and value and thus was recommended for Stage 4 (ASI 2014a). Part of this Stage 3 assessment occurred within the current study area and was subject to subsequent Stage 4 mitigation of development impacts.

Scarlett Janusas Archaeology Inc. (SJA) was retained in 2015 to complete the Stage 4 archaeological assessment of the AlGq-157, Highway 407, East Lot 26, Broken Front Concession, Township of Darlington, Former Durham County, Town of Clarington, Regional Municipality of Durham, Ontario. The assessment was conducted under Project Information Form number P027-0272-2015, issued to Scarlett Janusas by the MCM. The Stage 4 archaeological assessment mitigated the remaining cultural heritage value or interest, and no further archaeological work has been recommended (SJA 2015). Part of the Stage 4 mitigation occurred within the current study area. The Stage 4 mitigation determined that the site consisted of a diffuse scatter of artifacts and no further archaeological work was recommended for this site.

NAA conducted the Stage 3 archaeological assessment of the Sandercock site (AlGq-163) in 2014. The assessment was completed under Project Information Form P025-0472-2014 issued to Laurie Jackson by the MCM. The stage 3 archaeological assessment did not recover any additional archaeological material and thus was not recommended for further work (NAA2014b).



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In 2015, ASI was retained to complete the Stage 1-2 archaeological assessment of the proposed development of P.I.N. 26931-0003, Part Lot 14, Concession 1, Township of Darlington, County of Durham, now in the Town of Bowmanville. Regional Municipality of Durham. The assessment was conducted under Project Information Form P046-0090-2015, issued to Andrew Clish by the MCM. One historic period site was identified during the Stage 2 survey. Site H1 (AIGq-170) has further cultural heritage value or interest and was recommended for Stage 3. The remainder of the property was considered clear of archaeological potential (ASI 2015b). This archaeological assessment surveyed lands within the current study area.

This Land Archaeology Inc. (TLA) was retained in 2015 to complete a Stage 1-2 archaeological assessment of the Urban Towns of Bowmanville, located on part of lot 16, Concession 1, Community of Bowmanville, Municipality of Clarington, Regional Municipality of Durham, historic County of Durham, Geographic Township of Darlington, Ontario. The assessment was conducted under Project Information Form P379-0065-2015, issued to Thomas Irvin by the MCM. The assessment did not result in the recovery of any archaeological material, and thus no further work was recommended (TLA 2015). This assessment surveyed lands within the current study area.

The Archaeologists Inc. (TAI) conducted a Stage 1-2 archaeological assessment in 2016 of 446 Simcoe Street South, Part of Lots C-46, C-48, and All of Lots C-44, C-45, C-57 and C-61, Registered Plan 335, Sheet 22, Part of Lot 11, Concession 1, Geographic Township of Whitby East, City of Oshawa. The assessment was completed under Project Information form number P052-0732-2016, issued to Keith Powers by the MCM. The Stage 1-2 assessment did not result in the recovery of any archaeological material and no further work was recommended for the study area (TAI 2016a). This assessment included the survey of some lands within the current study area.

TAI was retained in 2016 to complete a Stage 1 archaeological assessment for part of Lot 16, Concession 1, Geographic Township of East Whitby, Ontario County, City of Oshawa, Regional Municipality of Durham. The assessment was completed under Project Information Form number P052-0669-2016, issued to Keith Powers by the MCM. The Stage 1 determined that the majority of the study area retained archaeological potential and Stage 2 assessment was recommended prior to any impacts (TAI 2016b). This assessment included some lands within the current study area.



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ASI was contracted in 2016 to conduct a Stage 3 archaeological assessment of the Bates Site (AIGq-170), in Part Lot 14, Concession 1, Geographic township of Darlington, now in the Town of Bowmanville, Regional Municipality of Durham. The assessment was conducted under Project Information Form number P125-0196-2016, issued to Eva MacDonald by the MCM. The results of the assessment indicated that the Bates Site (AIGq-170) required Stage 4 archaeological mitigation of impacts (ASI 2016a). A portion of this assessment occurred within the current study area. This assessment is located outside of the current construction footprint.

In 2017, ASI was contracted to complete a Stage 1-2 archaeological assessment of 2033 Baseline Road, part of Lot 23, Broken Front Concession, Geographic Township of Darlington, Durham County, Municipality of Clarington, Regional Municipality of Durham. The assessment was conducted under the Project Information Form number P449-0136-2017, issued to Robb Bhardwaj by the MCM. No archaeological resources were recovered during the course of the Stage 1-2 archaeological assessment and the property was not recommended for further assessment (ASI 2017). This assessment included the survey of some lands within the current study area.

In 2017, Stantec was contracted to complete a Stage 1 archaeological assessment for the Bowmanville Corridor Expansion Project (Thornton- CP Grade Separation): Stage 1 Archaeological Assessment Expansion Project Part of Lots 16 and 17, Concession 1, Geographic Township of Whitby, former Ontario County, now City of Oshawa, Regional Municipality of Durham, Ontario. The assessment was completed under Project Information form number P362-0191-2017, issued to Peter Popkin by the MCM. The Stage 1 determined that much of the study area retained no to low archaeological potential due to modern disturbances and previously assessed areas. Remaining portions of the study area retained potential and were recommended for Stage 2 assessment (Stantec 2017). This assessment included some lands within the current study area.

Archeoworks was retained in 2017 to complete a Stage 1-2 archaeological assessment for the proposed residential development of Part of Lots 755 to 826, 827 to 832, 858, Part of Eighteenth Avenue, Part of Nineteenth Avenue, Registered Plan 97, and Parts 5, 6, and 7, Registered Plan 40R-23416 Part of Lots 23 and 24, Broken Front Concession, Geographic Township of Darlington, Former County of Durham, now in the Municipality of Clarington, Regional Municipality of Durham, Ontario. The assessment was conducted under Project Information Form P029-0916-2017, issued to Kim Slocki by the MCM. No archaeological resources were recovered during the Stage 2 archaeological assessment and no further work was recommended (Archeoworks 2017). This assessment included the survey of some lands within the current study area.



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TLA was retained in 2017 to conduct a Stage 1-2 archaeological assessment for the lands located at part of Lot 16, Concession 1, Community of Bowmanville, Municipality of Clarington, Regional Municipality of Durham, Historic County of Durham, Geographic township of Darlington, Ontario. The assessment was conducted under Project Information Form P379-0130-2017, issued to Thomas Irvin by the MCM. No archaeological artifacts were recovered during the assessment and no further work was recommended for the property (TLA 2017a). This assessment included the survey of some lands within the current study area.

ASI was retained in 2018 to conduct a Stage 1 archaeological assessment of 2021 Baseline Road West, part of Lot 23, Broken Front Concession, Geographic Township of Darlington, Durham County, Municipality of Clarington, Regional Municipality of Durham. The assessment was conducted under the Project Information Form number P449-0215-2018, issued to Robb Bhardwaj by the MCM. The assessment confirmed that the property had been subject to previous disturbance, removing any archaeological potential was not recommended for further assessment (ASI 2018). This assessment included some lands within the current study area.

In 2018, York North Archaeological Services Inc (YNAS) was retained to undertake a Stage 1-2 archaeological assessment of part of Lot 30, Concession 1, Geographic Township of Darlington, now the Municipality of Clarington, Regional Municipality of Durham, ON. The Stage 1-2 assessment was conducted under Project Information form number P156-0279-2018, issued to Pat Dibb by the MCM. The Stage 1-2 archaeological assessment resulted in the recovery of seven chert flakes, which did not meet the MCM standards for Stage 3 work. The woodlot portion of the study area did not undergo Stage 2 test pitting and was recommended for further work (YNAS 2018). This assessment included the survey of some lands within the current study area.

Earthworks Archaeological Services Inc. (EAS Inc) conducted a Stage 1-2 archaeological assessment in 2019 of Stage 1 & 2 Archaeological Assessment 64 Albany Street and 426 Front Street Lots 11 and 12 and Part of Lots 10 and 13 Registered Plan 41 Part of Lot 10, Concession 1 Geographic Township of Whitby, City of Oshawa Regional Municipality of Durham. The assessment was completed under Project Information Form number P321-0048-2019, issued to Shane McCartney by the MCM. The Stage 1-2 archaeological assessment did not recover any archaeological material and no further work was recommended for the study area (EAS Inc 2019). This assessment surveyed some lands within the current study area.



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In 2019, Archaeological Assessments Limited (A.A. Ltd) conducted a Stage 1-2 archaeological assessment of 480, 484, and 506 Ritson Road South, Part of Lot 9, Concession 1, Geographic Township of East Whitby, City of Oshawa, Regional Municipality of Durham. The Stage 1-2 archaeological assessment was completed under Project Information Form number P013-1242-2019, issued to Rick Sutton by the MCM. The Stage 1-2 assessment did not recover any archaeological material and no further archaeological assessments were recommended for the study area (A.A. Ltd 2019). This assessment surveyed some lands within the current study area.

TLA (2021) completed a Stage 1-2 archaeological assessment of 570 Shakespeare Avenue in the City of Oshawa on behalf of Cedar City Shakespeare Avenue Inc. under the project direction of William D. Finlayson (Project Information Form Number P059-0932-2020). The Stage 2 archaeological survey was conducted by test-pit survey at five metre intervals. This assessment recommended no further work. This assessment surveyed some lands within the current study area.

2.4 Existing Conditions

The Stage 1 archaeological assessment of the study area was conducted over two days May 14, 2021 and May 17, 2021 under PIF P1148-0004-2021 issued to Heather Kerr, MA by the MCM. The study area for the Project comprises approximately 483.4 hectares of various Lots and Concessions, former Township of East Whitby, former County of Ontario, now City of Oshawa, and former Darlington Township, former County of Durham, now Municipality of Clarington; Regional Municipality of Durham, Ontario. Broadly, much of the study area consists of agricultural field, manicured lawn, scrubland, forest, as well as disturbance associated with roadways, sidewalks, the railway corridor, below grade utilities, extensive landscaping, and extant structures. The study area also includes the St. Wolodymyr and St. Olha Ukrainian Cemetery.



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Field Methods
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3.0 Field Methods

The Stage 1 archaeological assessment of the study area was conducted on May 14, 2021 and May 17, 2021 under PIF number P1148-0004-2021 issued to Heather Kerr, MA, of Stantec by the MCM. The study area comprises approximately 483.4 hectares and consists primarily of primarily of agricultural field, manicured lawn, scrubland, forest, as well as disturbance associated with roadways, sidewalks, the railway corridor, below grade utilities, extensive landscaping, and extant structures.

Prior to the start of the Stage 1 archaeological assessment, Metrolinx provided AutoCAD files which defined the study area. These files were then geo-referenced by Stantec's Geographic Information Services (GIS) team and a digital file (i.e., a shape file) was created of the Project's study area. The digital file was uploaded to handheld devices for use in the field.

During the Stage 1 survey, field, weather, and lighting conditions were suitable for the identification of archaeological resources. At no time was the archaeological assessment conducted when the field, weather, or lighting conditions were detrimental to the recovery of archaeological material (Table 3.1). Photographic documentation in Section 8.1 of this report confirms that portions of the property met the requirements for a Stage 2 archaeological assessment, as per the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Section 7.8.6 Standard 1a.; Government of Ontario 2011). Figures 1-8 provide an illustration of the Stage 1 assessment methods, as well as photograph locations and directions.

Table 3.1: Weather and Field Conditions

Date	Field Director	Activity	Weather
May 14, 2021	Heather Kerr (P1148)	Property Inspection	Sunny, hot
May 17, 2021	Heather Kerr (P1148)	Property Inspection	Sunny, hot

The Stage 1 archaeological assessment, involving background research and a property inspection, resulted in the determination that approximately 45.62% of the study area retains low to no archaeological potential due to previous extensive disturbance from buried utilities, municipally constructed drains, asphalt and gravel roadways, a railway corridor, and extant structures (Photos 1 to 14, 16, 21 to 34, 38, 44 to 50, 52, 53, 59, 60, 62 to 73, 76 to 83, 85 to 93, 95, 98 to 101, 103, and 104).

Other portions of the study area, approximately 0.05% were identified as being steeply sloped slope (Photos 36 to 38, 82, and 88), while 0.08% of the study area was identified as being low and permanently wetlands (Photo 71, Figure 8.2).



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Field Methods
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Background research also demonstrated that approximately 11.49% of the study area, has been subject to previous archaeological assessment and not recommended for further study.

Portions of the study area, approximately 0.31%, fall within the boundaries of the St. Wolodymyr and St. Olha Ukrainian Cemetery, which was established in 1969 (Photo 75 & Figure 8.6).

The Stage 1 research and property inspection identified that the remainder of the study area, approximately 42.76%, is composed of active agricultural fields, scrub land, forested areas and manicured lawns (including the St. Wolodymyr and St. Olha Ukrainian Cemetery) (Photos 35, 37, 39, 40 to 46, 51, 52, 59, 61, 72, 74, 79, 84 to 86, 88, 89, 95 to 99 and 101 to 104) or possess outstanding recommendations for further work.

Photographs of features indicating archaeological potential, as well as areas of low to no archaeological potential, have been documented in Section 7.0 of this report.



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Analysis and Conclusions
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4.0 Analysis and Conclusions

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Stantec applied archaeological potential criteria commonly used by the MCM (Government of Ontario 2011) to determine areas of archaeological potential within the study area. These variables include proximity to registered archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic variability of the area. However, it is worth noting that extensive land disturbance can eradicate archaeological potential (Government of Ontario 2011).

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to water is one of the most commonly used variables for predictive modeling of archaeological site locations. Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential.

As discussed above, distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect site location and type to varying degrees. The MCM categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, creeks.
- Secondary water sources: intermittent streams and creeks, springs, marshes and swamps.
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes.
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.



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As stated in Section 1.3.1, numerous primary water sources run near, or through the study area including Goodman Creek, Oshawa Creek, Farewell Creek, Harmony Creek, McLaughlin Bay, Robinson Creek, Tooley Creek, Darlington Creek, West Side Creek, Soper Creek, and Bowmanville Creek. Further examination of the study area's natural environment identified soil conditions suitable for Indigenous and Euro-Canadian agriculture and areas of elevated topography.

An examination of the *Ontario Archaeological Sites Database* identified 50 registered archaeological sites within one kilometre of the study area, including 35 pre-contact sites, 14 Euro-Canadian sites and one of indeterminate cultural affiliation.

Archaeological potential can also be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990c) or property that local histories or informants have identified with possible historical events, activities, or occupations. Historical mapping demonstrates that the study area follows the early road structure, and that numerous farmsteads, historical railways, early residential structures, churches, and industrial structures are adjacent to or within the study area. Much of the established road and agricultural settlement from the early 19th century is still visible today.

When the above criteria are applied the study area would be considered to demonstrate characteristics that identify archaeological potential. However, the property visit indicated that approximately 45.62% of the property has been subject to extensive and intensive ground disturbance, including construction of roadways, railway corridor, landscaping, extant structure, and a large numbers of buried utility infrastructure components that have removed archaeological potential (Figures 8.1-8.10). Additionally, approximately 0.05% of the study areas was identified as having steep slope and another 0.08% was identified as being low and permanently wet lands. These areas retain low to no potential for the recovery of archaeological resources.

The Robertson site (AIGq-18) is located outside of the project footprint (see Supplementary Documentation). This site has not been subject to formal archaeological investigation and its precise location is unknown. The recorded location of the site (Government of Ontario 2022a) has subsequently been extensively disturbed by the construction of a manufacturing facility. This site is therefore recommended as requiring no further archaeological assessment.

Background research also demonstrated that approximately 11.49% of the study area, has been subject to previous archaeological assessment and not recommended for further study.



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Approximately 0.31% of the study area falls within the boundaries of the St. Wolodymyr and St. Olha Ukrainian Cemetery. The St. Wolodymyr and St. Olha Ukrainian Cemetery property retains archaeological potential for archaeological resources not related to the cemetery.

Stantec received confirmation that the southern and eastern property boundary of the St. Wolodymyr and St. Olha Ukrainian Cemetery is as per the cemetery's registration with the Bereavement Authority of Ontario (see Supplementary Documentation). This, as well as the cemetery's relative age (established in 1969), indicates low potential for extramural burials beyond the cemetery's legal limits and therefore further Stage 3 cemetery investigation is not recommended beyond the cemetery's property boundary. Parts of the cemetery contain burials however the St. Wolodymyr and St. Olha Ukrainian Cemetery confirmed that there are no burials within Section 1 of the cemetery (see Supplementary Documentation).

The remaining 42.45% of the study area, comprising active agricultural fields, scrub land, forested areas and manicured lawns, retains potential for the identification and documentation of archaeological resources. Thus, in accordance with Section 1.3 and Section 7.7.4 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), Stage 2 archaeological assessment is required for any portion of the Project's anticipated construction which impacts an area of archaeological potential.

The Osbourne site (AIGq-17) is located outside of the project footprint (see Supplementary Documentation) but within the study area. This site has not been subject to formal archaeological investigation and its precise location is unknown. Therefore, the site location requires Stage 2 archaeological assessment to locate the site.

The Elgin Farwell site (AIGq-22) is located outside of the project footprint (see Supplementary Documentation) but within the study area. This site has not been subject to formal archaeological investigation and its precise location is unknown. Therefore, the site location requires Stage 2 archaeological assessment to locate the site.

The Bates site (AIGq-170) is located outside of the project footprint (see Supplementary Documentation) but within the study area. No construction impacts to the Bates site (AIGq-170) are anticipated as part of this project, based on the current construction design. This site has outstanding recommendations for Stage 4 archaeological mitigation of development impacts.



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Recommendations
April 5, 2023

5.0 Recommendations

5.1 Recommendations

The Stage 1 archaeological assessment, involving background research and a property inspection, resulting in the determination that approximately 45.62% of the study area retains low to no archaeological potential as it includes extensive disturbance from buried utilities, municipally constructed drains, asphalt and gravel roadway, a railway corridor, and extant structures. In accordance with Section 1.3.2 and Section 7.7.4 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), further archaeological assessment is not required for any portion of the Project's anticipated construction which impacts an area of low to no archaeological potential (See Figure 8.1-8.10).

The recorded location of the Robertson site (AIGq-18) is recorded based on a landowner account only and has not been documented through formal archaeological investigation. The recorded location of the site has subsequently been extensively disturbed by the construction of a manufacturing facility. In accordance with Section 1.1, Standard 1 and Section 7.5.8. Standard 4 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **further archaeological assessment is not recommended (see Supplementary Documentation).**

Other portions of the study area, approximately 0.05%, retain low to no potential due to steep slope, while 0.08% of the study area was identified as low and wet, thus retaining low to no potential. In accordance with Section 2.1, Standard 2a-b of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **further archaeological assessment is not recommended for any portion of the Project's anticipated construction which impacts an area of low to no archaeological potential (see Figures 8.1-8.10).**

Background research also demonstrated that, approximately 11.49% of the study area, has been subject to previous archaeological assessment and not recommended for further study. In accordance with Section 1.1, Standard 1 and Section 7.5.8. Standard 4 of the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), **further archaeological assessment is not recommended for any portion of the Project's anticipated construction which impacts area previously assessed and not recommended for further archaeological work (see Figures 8.1-8.10).**



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Recommendations
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Approximately 0.31% of the study area fall within the boundaries of the St. Wolodymyr and St. Olha Ukrainian Cemetery which was established in 1969. **The St. Wolodymyr and St. Olha Ukrainian Cemetery property retains archaeological potential for archaeological resources not related to the cemetery and Stage 2 archaeological assessment is recommended (see Figure 8.6).** Test-pit survey within the St. Wolodymyr and St. Olha Ukrainian Cemetery property should avoid directly impacting known burials. A Cemetery Investigation Authorization issued by the Bereavement Authority of Ontario is required in advance of invasive archaeological fieldwork within the cemetery property.

Parts of the St. Wolodymyr and St. Olha Ukrainian Cemetery contain burials and cemetery investigation is recommended prior to construction impacts in these areas (see Figure 8.6). Cemetery investigation should only be completed after all required Stage 2 archaeological survey (and any subsequently recommended Stages of archaeological assessment) has been completed. Cemetery investigation should be conducted by the removal of the topsoil by mechanical means (Gradall or backhoe equipped with a smooth bucket) under the observation of a licensed archaeologist to expose potential grave shafts within the subsoil. A minimum buffer of at least 10 metres of subsoil free of burial features should be established beyond exposed burial shafts, where allowed by the study area's extent.

The remaining portion of the study area, approximately 42.45%, retains potential for the identification and documentation of archaeological resources.

The Osbourne site (AIGq-17) and the Elgin Farwell site (AIGq-22) have not been subject to formal archaeological investigation and their precise locations are unknown. Thus, in accordance with Section 1.3 and Section 7.7.4 of the MCM's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), **Stage 2 archaeological assessment is recommended to identify the locations of these sites prior to construction impacts of the recorded sites' locations (see Supplementary Documentation).**

The Bates site (AIGq-170) is located outside of the current construction footprint. No construction impacts to the Bates site (AIGq-170) are anticipated as part of this project, based on the current construction design. The Bates site (AIGq-170) has been previously recommended for Stage 4 archaeological mitigation. Based on a review of the Ontario Public Register of Archaeological Reports, this work has not yet been completed. Thus, in accordance with Section 3.4 and Section 7.7.4 of the MCM's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), **Stage 4 archaeological mitigation of the Bates site (AIGq-170) is recommended prior to construction impacts of the recorded site's location (see Supplementary**



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Recommendations
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Documentation). The Stage 4 recommendations made for the Bates site (AIGq-170) by ASI (2016a) are reproduced here (ASI 2016a:17):

“The recommended Stage 4 protocol is the hand-excavation of additional one-metre square units around high-yielding deposits, starting with Stage 3 units 475N-190E, 480N-190E, and 485N-185E, until yields drop to 200 artifacts per square, in order to salvage excavate the midden. A mechanical excavator with a smooth bucket should be used to remove the 70-120 cm thick stratum of landscape fill to expose the deposit under the direction of a licensed archaeologist. Following the block excavation, additional one-metre square units must be hand-excavated at least 2 metres beyond the potential nineteenth-century cultural features to fully expose them. The mitigation would continue with the removal of the remaining soil fills by mechanical means (Gradall or backhoe equipped with a smooth bucket) to expose other potential features within the subsoil. The stripped area must be buffered by at least 10 metres of subsoil free of features. The exposed subsoil should then be cleaned by shovel (“shovel shine”) or trowel and the resulting subsoil surface examined for cultural features. Afterward, full hand-excavation and documentation of all features should follow.”

In accordance with Section 1.3 and Section 7.7.4 of the MCM’s 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), **Stage 2 archaeological assessment is recommended for any portion of the Project’s anticipated construction which impacts an area of archaeological potential (see Figures 8.1-8.10).**



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Advice on Compliance with Legislation
April 5, 2023

6.0 Advice on Compliance with Legislation

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 O.18 (Government of Ontario 1990c). 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 study area of a development proposal have been addressed to the satisfaction of the MCM, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* (Government of Ontario 1990c) 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 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* (Government of Ontario 1990c).

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* (Government of Ontario 1990c). 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* (Government of Ontario 1990c).

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (Government of Ontario 2002), 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 Government and Consumer Services is also immediately notified.

Archaeological sites recommended for further archaeological fieldwork remain subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990c) and may not be altered, or have artifacts removed, except by a person holding an archaeological license.



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Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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8.0 Images



Photo 1: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing South/Southwest



Photo 2: View of study area, showing disturbance (landscaping, roadway), facing East



Photo 3: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing West



Photo 4: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing South



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 5: View of study area, showing disturbance (landscaping, below grade utilities, roadway) facing South.

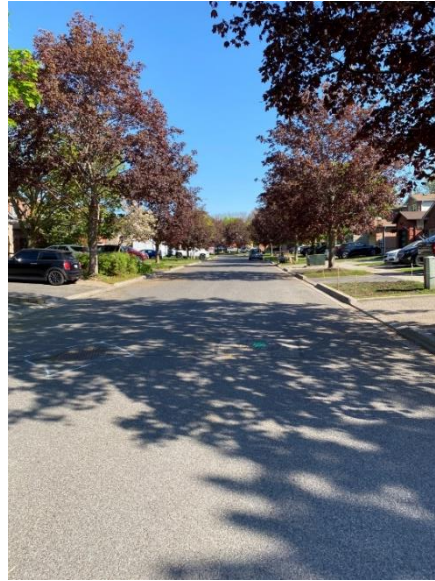


Photo 6: View of study area, showing disturbance (landscaping, below grade utilities, roadway) facing North.



Photo 7: View of study area, showing disturbance (landscaping, below grade utilities, roadway) facing North.



Photo 8: View of study area, showing disturbance (landscaping, below grade utilities, roadway) facing West.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 9: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing East.



Photo 10: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing South.



Photo 12: View of study area, showing disturbance (landscaping, roadway), facing East.



Photo 12: View of study area, showing disturbance (landscaping, roadway), facing East.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Photo 13: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing West.



Photo 14: Image of sewer grate, demonstrating below grade utilities, facing down.



Photo 15: View of rail corridor within study area, facing West.

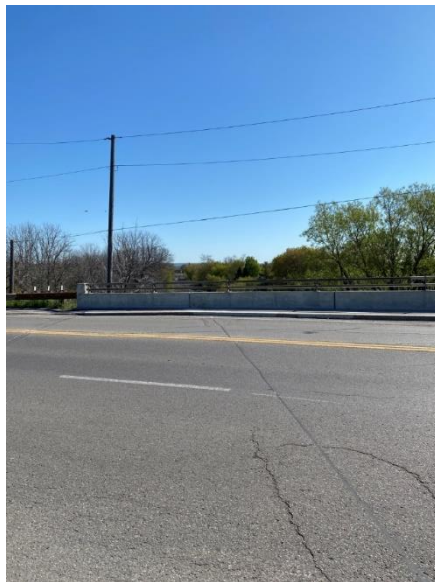


Photo 16: View of study area, showing disturbance (roadway), facing East.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 17: Image showing disturbance (paved road) and scrubland, facing North.



Photo 18: Image showing scrubland, facing North



Photo 19: Image showing scrubland, facing North.



Photo 20: Image showing scrubland, facing North.



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Photo 21: View of study area, showing disturbance (landscaping, below grade utilities, sidewalk, roadway), facing East.



Photo 22: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing North.



Photo 23: View of study area, showing disturbance (landscaping, below grade utilities, sidewalk), facing South.



Photo 24: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing East.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 25: View of study area, showing disturbance (landscaping, roadway, below grade utilities), facing South.



Photo 26: View of study area, showing disturbance (landscaping, roadway), facing South.



Photo 27: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing North.



Photo 28: View of study area, showing disturbance (landscaping, below grade utilities, roadway) facing Northwest.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Photo 29: Image of below grade utilities, facing West.



Photo 30: View of study area, showing disturbance (landscaping, roadway), facing West.



Photo 31: View of study area, showing disturbance from landscaping, facing North.



Photo 32: View of study area, showing disturbance (landscaping, below grade utilities), facing South.



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Photo 33: View of study area, showing disturbance (landscaping, below grade utilities, roadway), facing South.



Photo 34: View of study area, showing disturbance (landscaping, sidewalk), facing North.



Photo 35: View of study area, showing manicured lawn, facing South



Photo 36: View of study area showing steep slope, facing South.



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Photo 37: View of study area, showing steep slope and manicured lawn, facing North.



Photo 38: View of study area, showing steep slope and disturbance (roadway, rail corridor), facing East.



Photo 39: View of study area, showing manicured lawn, facing West.

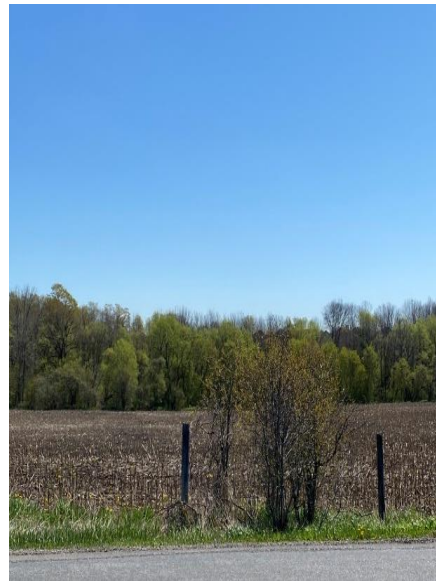


Photo 40: View of study area, showing agricultural field, facing East.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 41: View of study area, showing disturbance (rail corridor), scrubland, and agricultural fields, facing West.



Photo 42: View of Study area, showing disturbance (rail corridor) and scrubland, facing South.



Photo 43: View of study area, showing agricultural fields, facing East.



Photo 44: View of study area, showing disturbance (roadway) and agricultural fields, facing South.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Photo 45: View of study area, showing disturbance (roadway), scrubland, and agricultural field, facing West.



Photo 46: View of study area, showing scrubland and disturbance (rail corridor, roadway), facing East.



Photo 47: View of study area, showing disturbance (rail corridor, utilities, roadway), facing South.



Photo 48: View of Study area, showing disturbance (rail corridor, roadway), facing East.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 49: View of study area showing disturbance (rail corridor, roadway, utilities), facing south.



Photo 50: View of study area showing disturbance (rail corridor), facing West.



Photo 51: View of study area, showing scrubland, facing East.



Photo 52: View of study area, showing disturbance (roadway) and manicured lawn, facing South.



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Photo 53: View of study area, showing disturbance (roadway and utilities), facing South.



Photo 54: View of study area, showing scrubland, facing East.



Photo 55: View of study area, showing scrubland, facing North.



Photo 56: View of study area, showing disturbance (utilities) and scrubland, facing West.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 57: Image of below grade utilities, facing down.

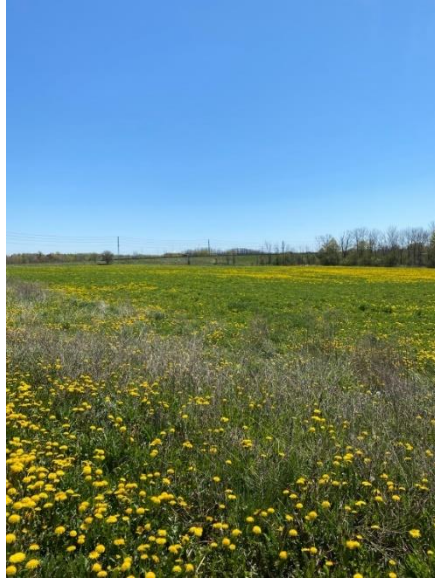


Photo 58: view of study area, showing agricultural field, facing South.



Photo 59: View of study area, showing disturbance (roadway) and agricultural field, facing East.

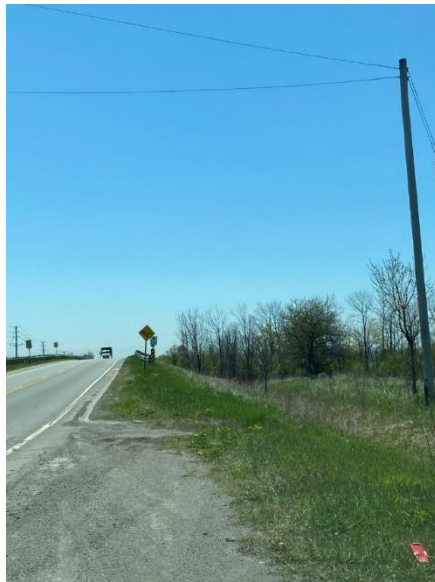


Photo 60: View of study area, showing disturbance (roadway, utilities), facing South.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Photo 61: View of study area, showing agricultural field, facing East.



Photo 62: View of study area, showing disturbance (roadway, utilities), facing South.



Photo 63: View of study area, showing disturbance (roadway, utilities), facing North.



Photo 64: View of study area, showing disturbance (roadway, utilities), facing South.



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Images

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Photo 65: View of study area, showing disturbance (landscaping, roadway, utilities), facing East.



Photo 66: View of study area, showing disturbance (roadway, landscaping, utilities), facing West.



Photo 67: View of study area, showing disturbance (roadway), facing East.



Photo 68: View of study area, showing disturbance (roadway, utilities), facing North.



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Photo 69: View of study area, showing disturbance (roadway, utilities), facing North.



Photo 70: Image of study area, showing disturbance (roadway, utilities), facing North.



Photo 71: View of study area, showing disturbance (roadway) and low/wet area, facing North.



Photo 72: View of the study area, showing disturbance (roadway) and agricultural field in background, facing East.



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Images

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Photo 73: View of study area, showing disturbance (roadway, utilities), facing Southwest.



Photo 74: View of study area, showing agricultural field, facing East.



Photo 75: View of study area, showing the edge of St. Wolodymyr and St. Olha Ukrainian Cemetery, facing South.

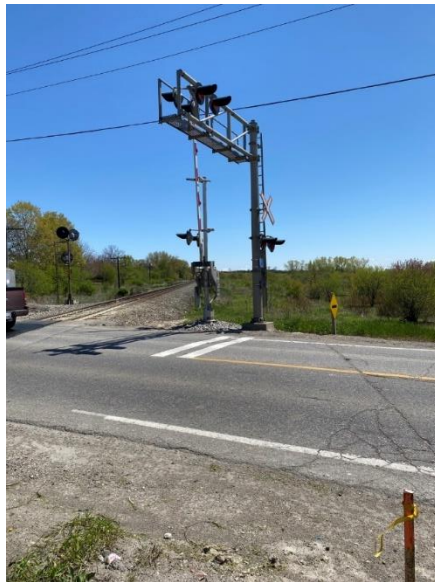


Image 76: View of study area, showing disturbance (utilities, roadway, rail corridor), facing South.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Images

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Photo 77: View of study area, showing disturbance (roadway, sidewalk, utilities) and scrubland, facing Northwest.



Photo 78: View of study area, showing disturbance (railway, utilities, roadway), facing South.



Photo 79: View of study area, showing disturbance (roadway) and scrubland, facing South.



Photo 80: View of study area, showing disturbance (railway), facing Northeast.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Photo 81: View of study area, showing disturbance (rail corridor, roadway), facing North.



Photo 82: View of study area, showing disturbance (railway in background), steep slope and scrubland, facing East.



Photo 83: View of study area, showing disturbance (railway) and manicured lawn, facing North.



Photo 84: View of study area, showing manicured lawn, facing East.



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Photo 85: View of study area, showing manicured lawn and disturbance (roadway, utilities), facing West.



Photo 86: View of study area, showing disturbance (roadway, utilities) and manicured lawn, facing West.



Photo 87: View of study area, showing disturbance (railway), facing North.



Photo 88: View of study area, showing disturbance (sidewalk), steep slope, and manicured lawn, facing West.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Photo 89: View of study area, showing disturbance (roadway) and manicured lawn, facing East.



Photo 90: View of study area, showing disturbance (roadway, utilities, sidewalk), facing South.



Photo 91: View of study area, showing disturbance (roadway, utilities, sidewalk), facing North.

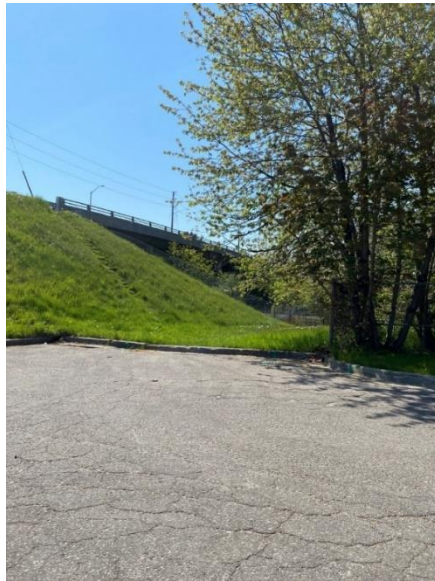


Photo 92: View of study area, showing disturbance (roadway, railway), facing South.



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Photo 93: View of study area, showing disturbance (roadway, sidewalk), facing West.



Photo 94: View of study area, showing disturbance (sidewalk) and manicured lawn, facing South.



Photo 95: View of study area, showing disturbance (sidewalk, parking lot), and manicured lawn, facing North.



Photo 96: View of study area, showing manicured lawn, facing Southwest.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

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Photo 97: View of study area, showing manicured lawn, facing North.

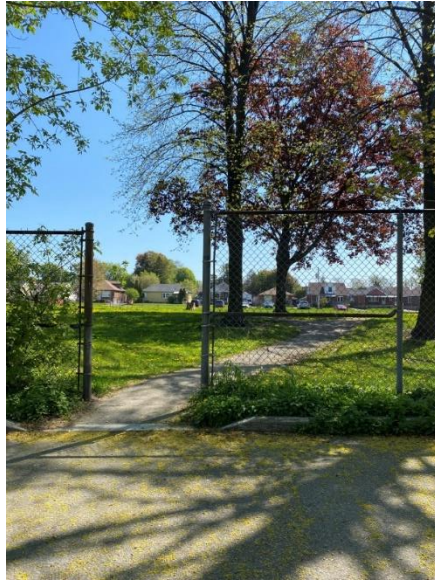


Photo 98: View of study area, showing disturbance (sidewalk), and manicured lawn, facing East.



Photo 99: View of study area, showing disturbance (utilities, sidewalk) and manicured lawn, facing North.



Photo 100: View of study area, showing disturbance (sidewalk, utilities), facing South.



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Photo 101: View of study area, showing disturbance (railway) and manicured lawn, facing North.



Photo 102: View of study area, showing manicured lawn, facing Southwest.



Photo 103: View of study area, showing disturbance (roadway, pavement) and scrubland, facing North.



Photo 104: View of study area, showing disturbance (pavement) and scrubland, facing West.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

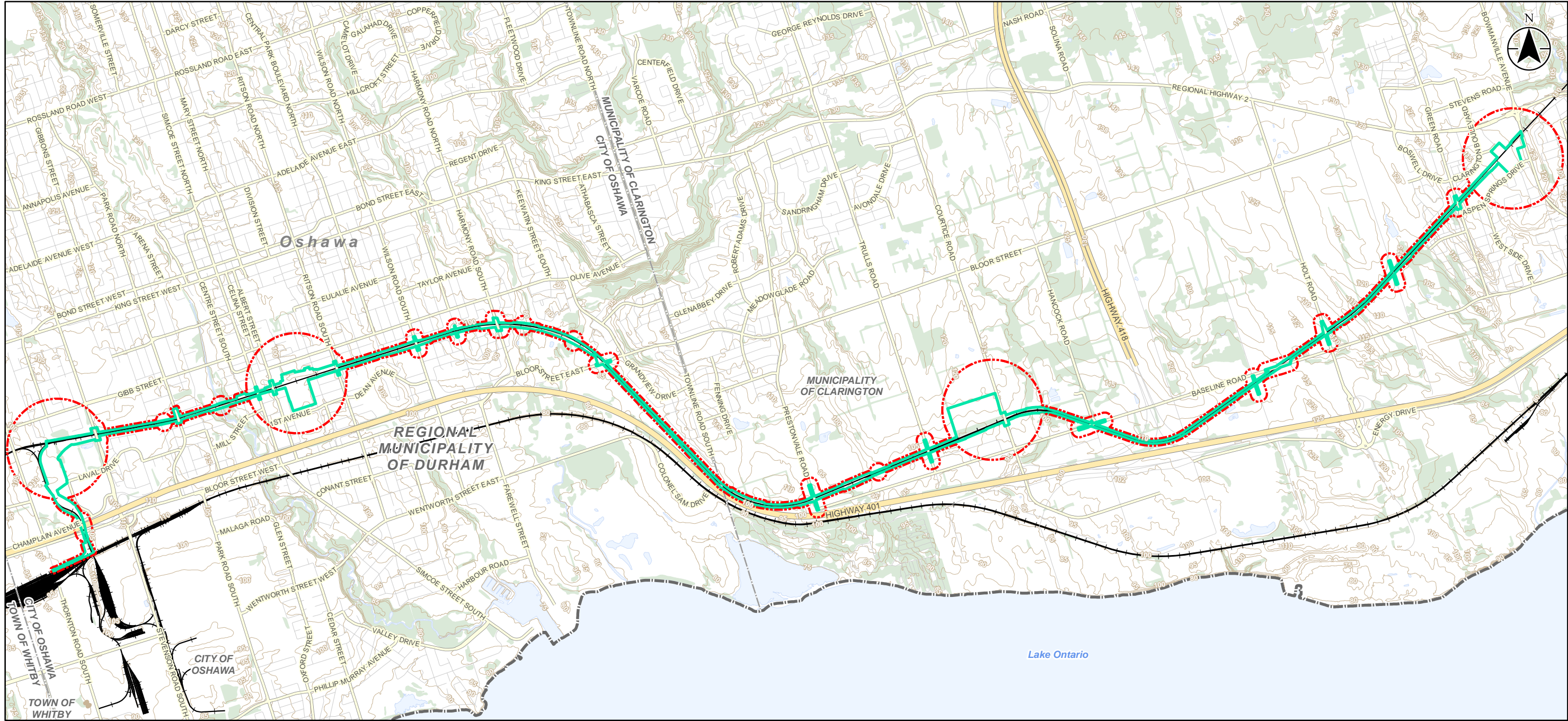
Maps

April 5, 2023

9.0 Maps

General maps of the study area will follow on succeeding pages. Maps identifying exact archaeological site locations do not form part of this public report; they may be found in the Supplementary Documentation.



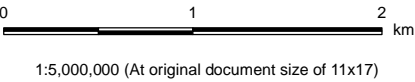


Notes
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Legend

- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepnts)
- Project Footprint
- Expressway / Highway
- Major Road
- Minor Road

- Existing Railway
- Topographic Contour (m AMSL)
- Waterbody
- Wooded Area
- Municipal Boundary, Upper
- Municipal Boundary, Lower

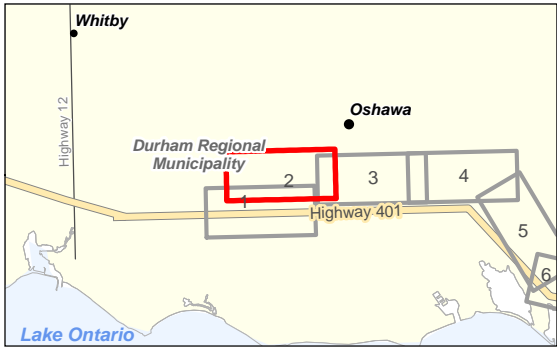
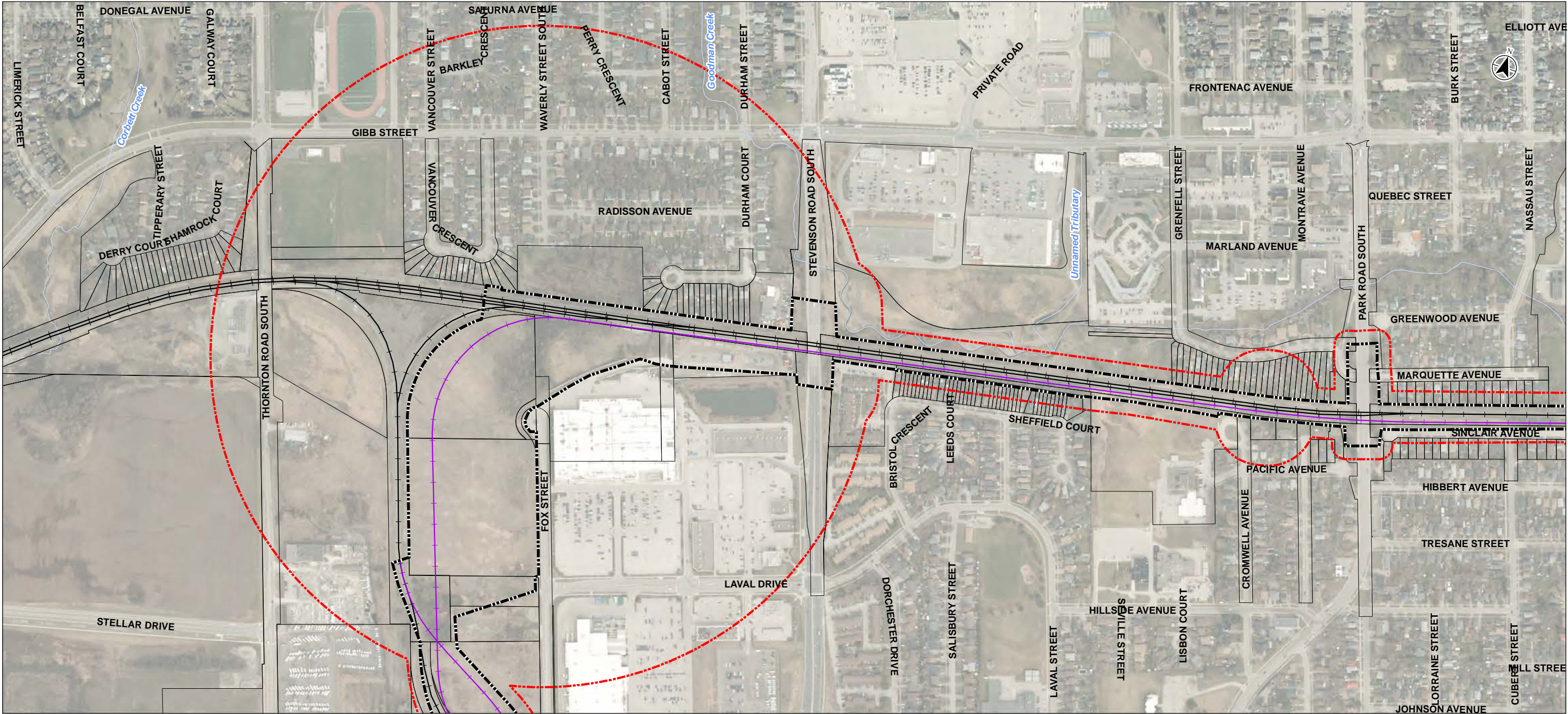


Project Location
Region Municipality of Durham
165011019
Prepared by BCC on 2/28/2023

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
1
Title
Location of the Project

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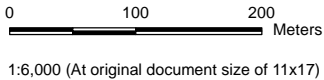


Notes

1. Coordinate System: NAD 1983 CSRS MTM 10
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Legend

- Existing Railway
- Proposed Corridor (2021)
- Watercourse
- Project Footprint
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary



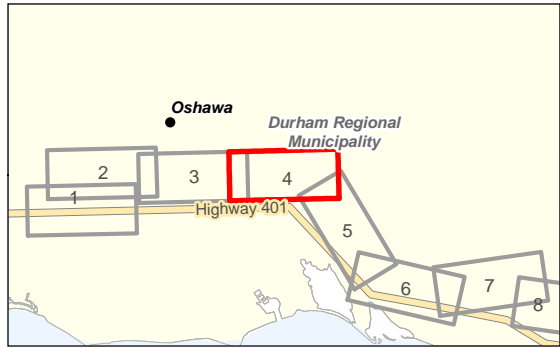
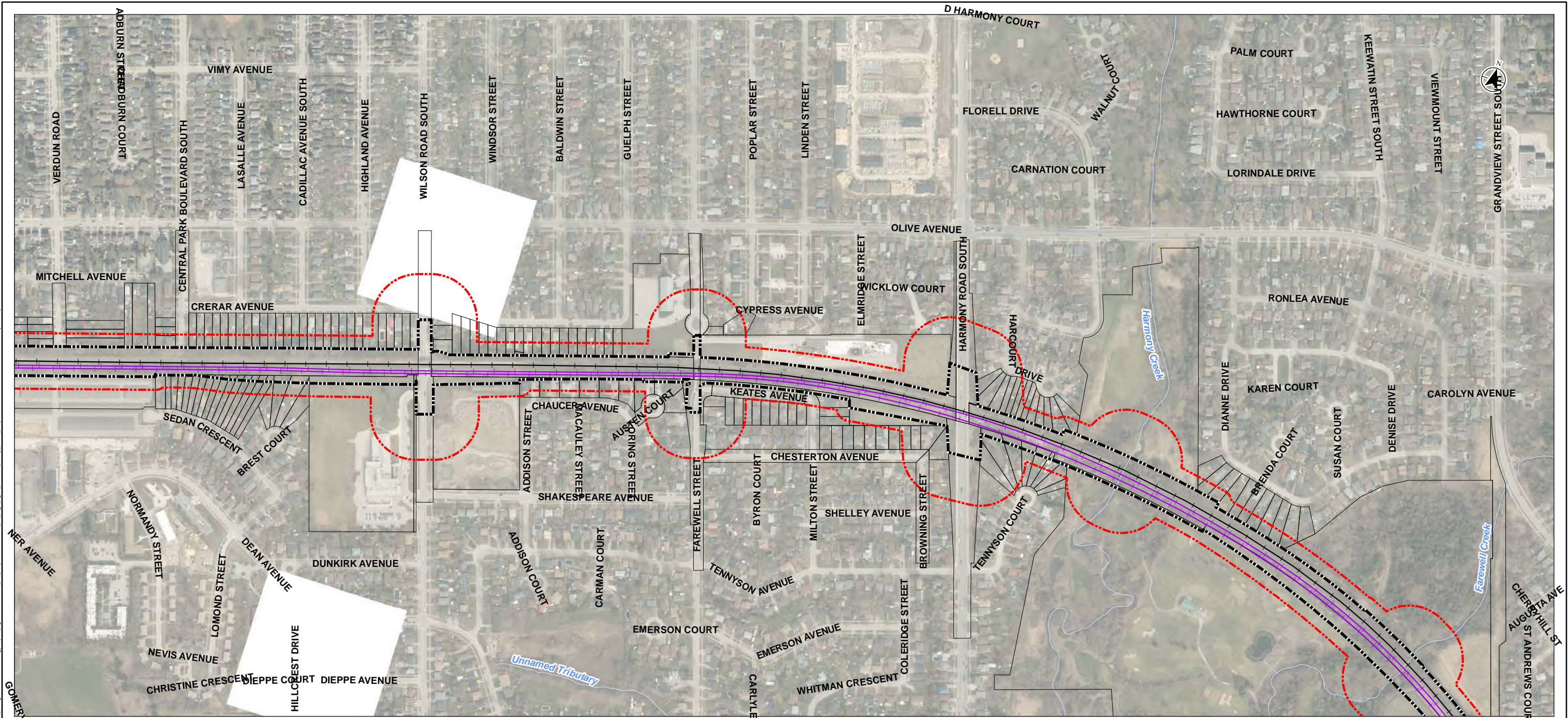
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Region of Durham
165011019 REVA
Prepared by SVD on 2023-02-27
Technical Review by ABC on yyyy-mm-dd
Independent Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
2.2
Title
Detailed Location of Study Area

Disclaimer: This figure has been prepared based on information provided by others as cited under the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result.

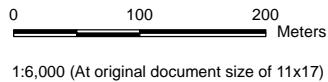
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Revised: 2023-02-27 By: bowper



- Legend
- Existing Railway
 - Proposed Corridor (2021)
 - Watercourse
 - Project Footprint
 - Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
 - Property Boundary

- Notes
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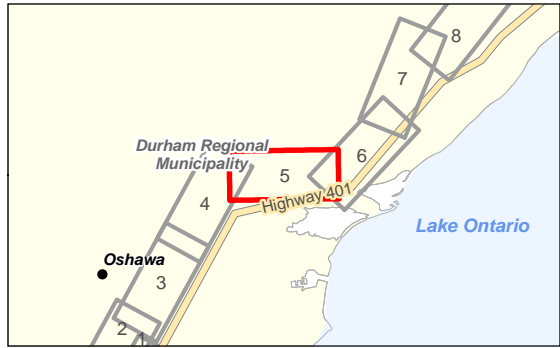
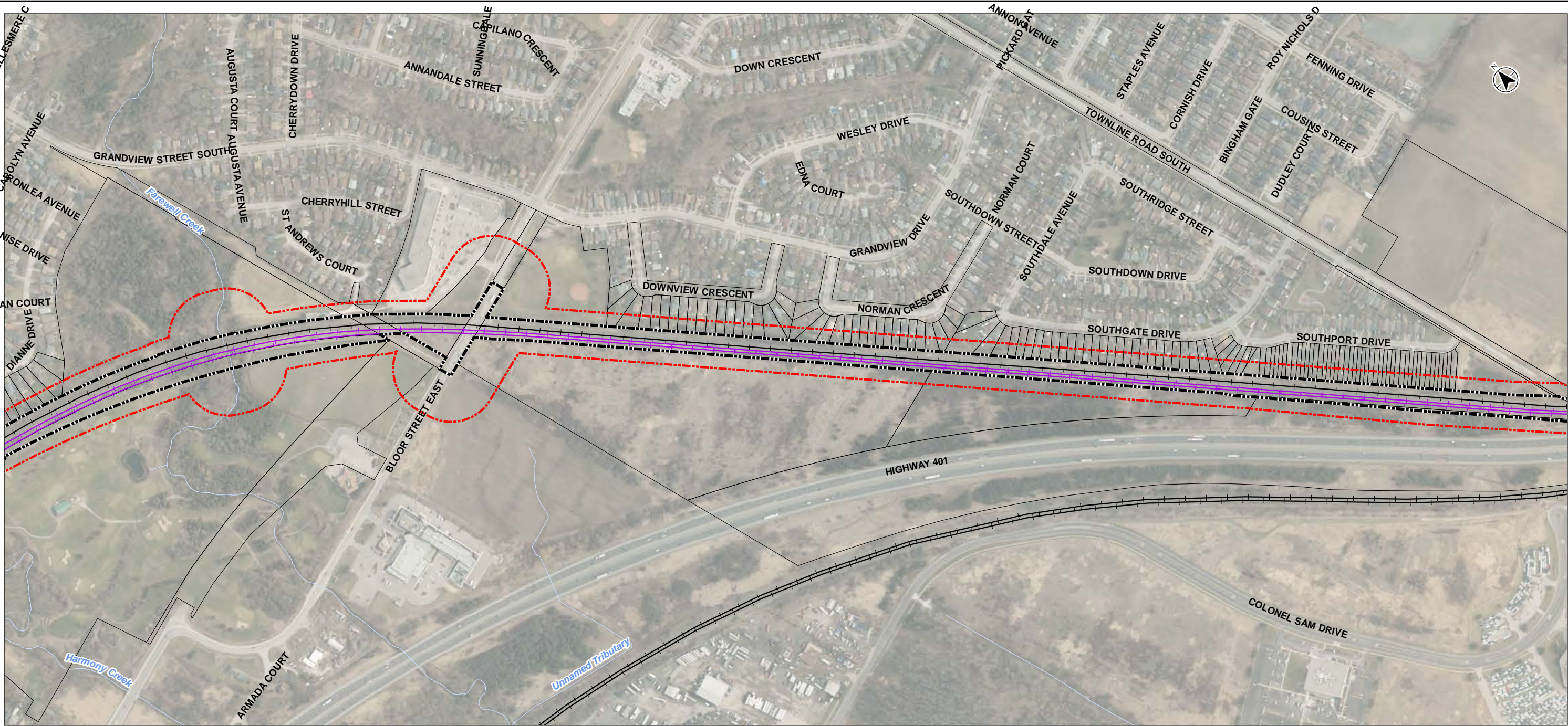


Project Location
Region of Durham
165011019 REVA
Prepared by SVD on 2023-02-27
Technical Review by ABC on yyyy-mm-dd
Independent Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
2.4
Title
Detailed Location of Study Area

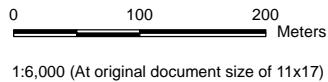
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Revised: 2023-02-27 By: bowper



- Legend**
- Existing Railway
 - Proposed Corridor (2021)
 - Watercourse
 - Project Footprint
 - Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
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- Notes**
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Project Location
Region of Durham
165011019 REVA
Prepared by SVD on 2023-02-27
Technical Review by ABC on yyyy-mm-dd
Independent Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

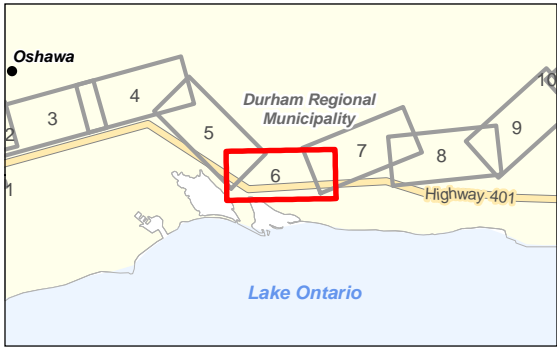
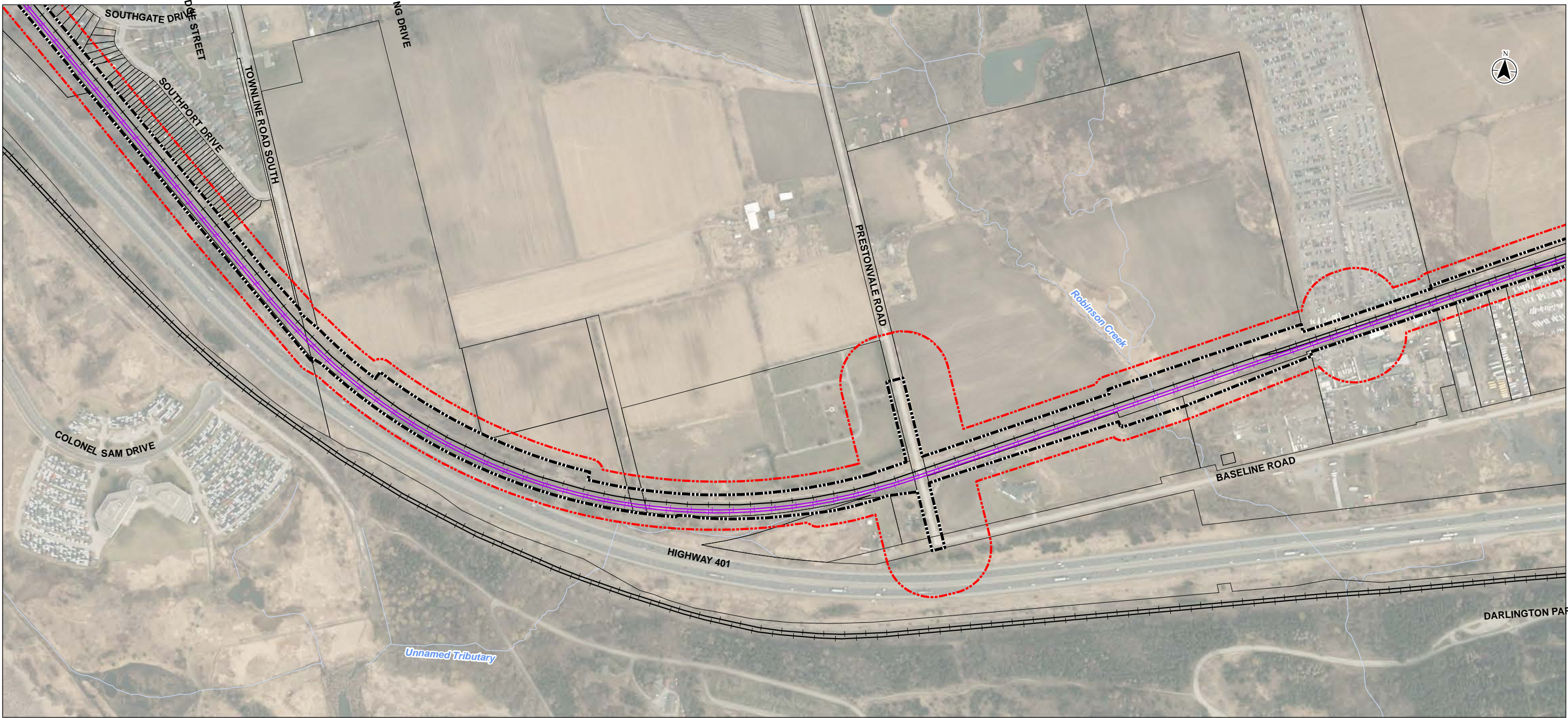
Figure No.

2.5

Title

Detailed Location of Study Area

\\ao215-rplsa01\work_group\0165011019 - Bowmanville\02_Amendments\Assignment\11_data\figs_cad\figs\mxd\archaeology\report_figures\20210824_S1_Report\165011019_aa_fig1_fig02_detailed_study_areas_mapbook.mxd Revised: 2023-02-27 By: bowyer



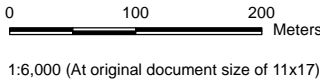
Legend

- Existing Railway
- Proposed Corridor (2021)
- Watercourse
- Project Footprint
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary

Notes

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Project Location
Region of Durham
165011019 REVA
Prepared by SVD on 2023-02-27
Technical Review by ABC on yyyy-mm-dd
Independent Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

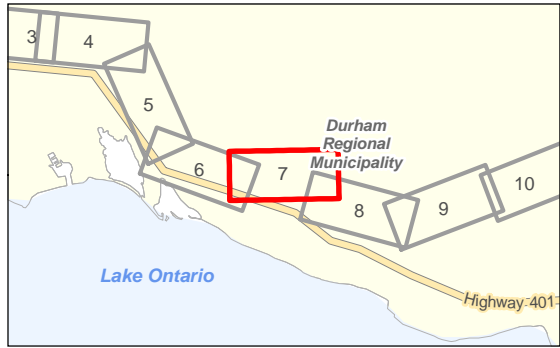
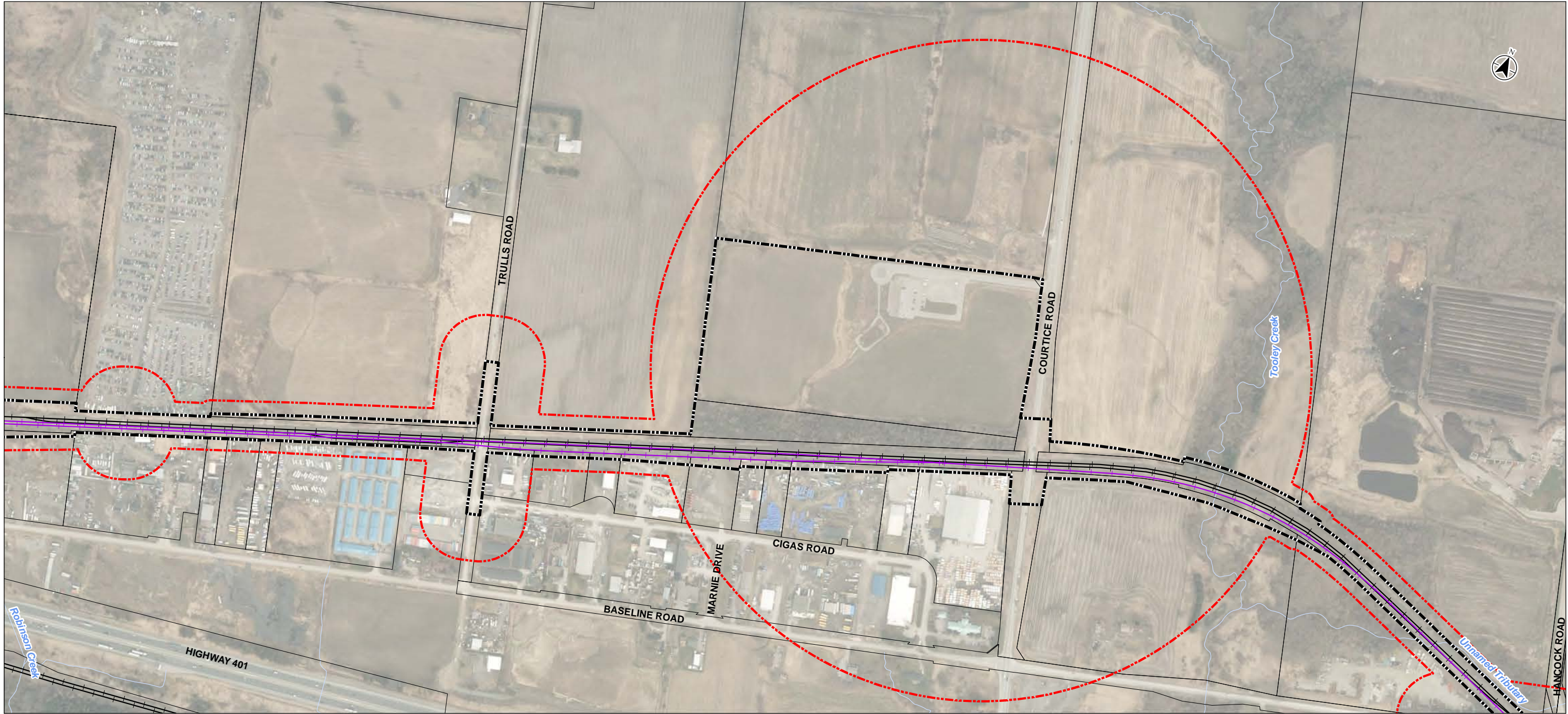
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2.6

Title

Detailed Location of Study Area

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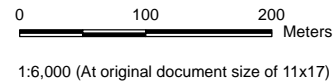
Legend

- Existing Railway
- Proposed Corridor (2021)
- Watercourse
- Project Footprint
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary

Notes

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Project Location
Region Municipality
of Durham

165011019 REVA
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Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

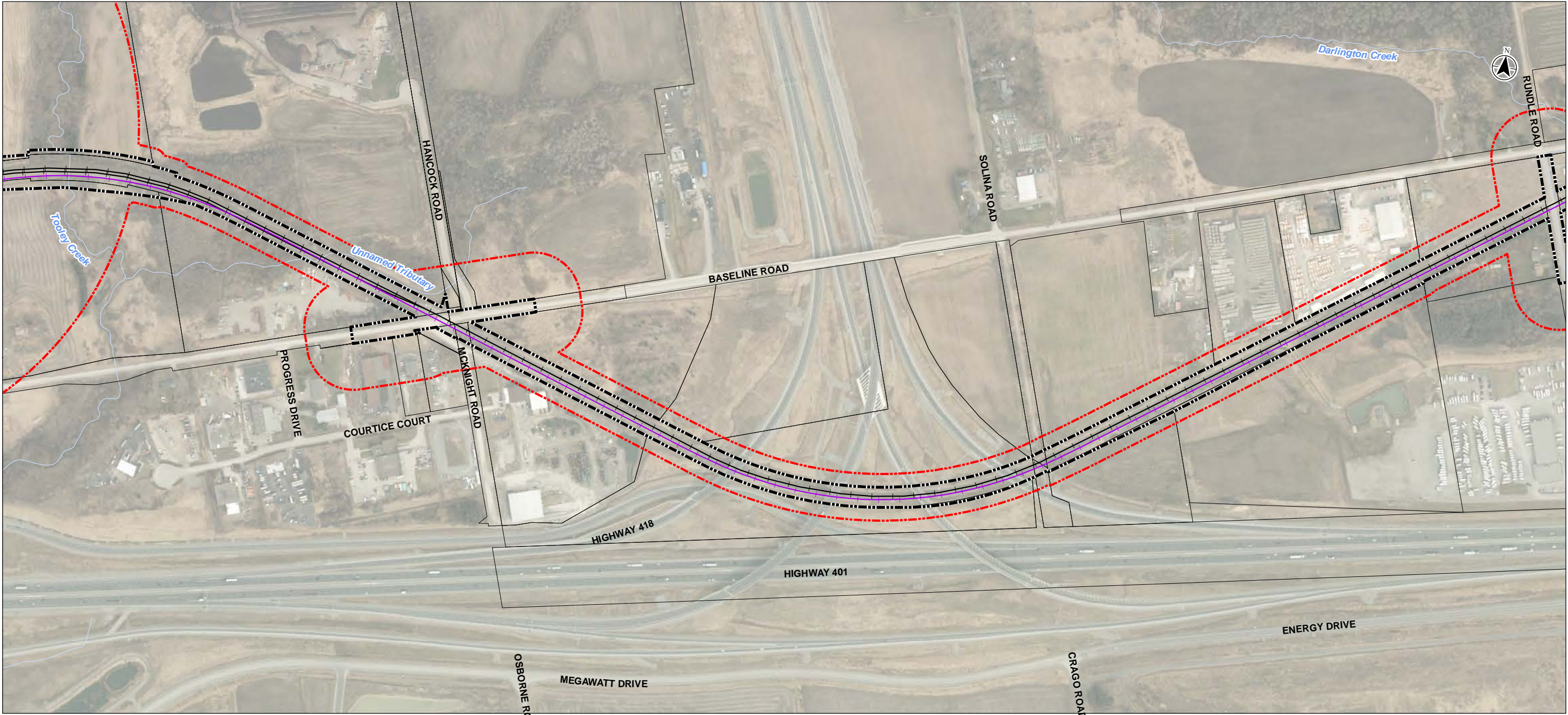
Figure No.

2.7

Title

Detailed Location of Study Area

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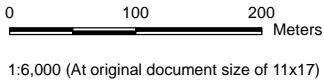
Legend

- Existing Railway
- Proposed Corridor (2021)
- Watercourse
- Project Footprint
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary

Notes

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Project Location
Region of Durham
165011019 REVA
Prepared by SVD on 2023-02-27
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Independent Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

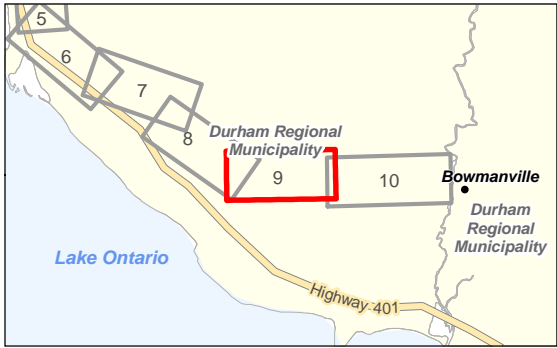
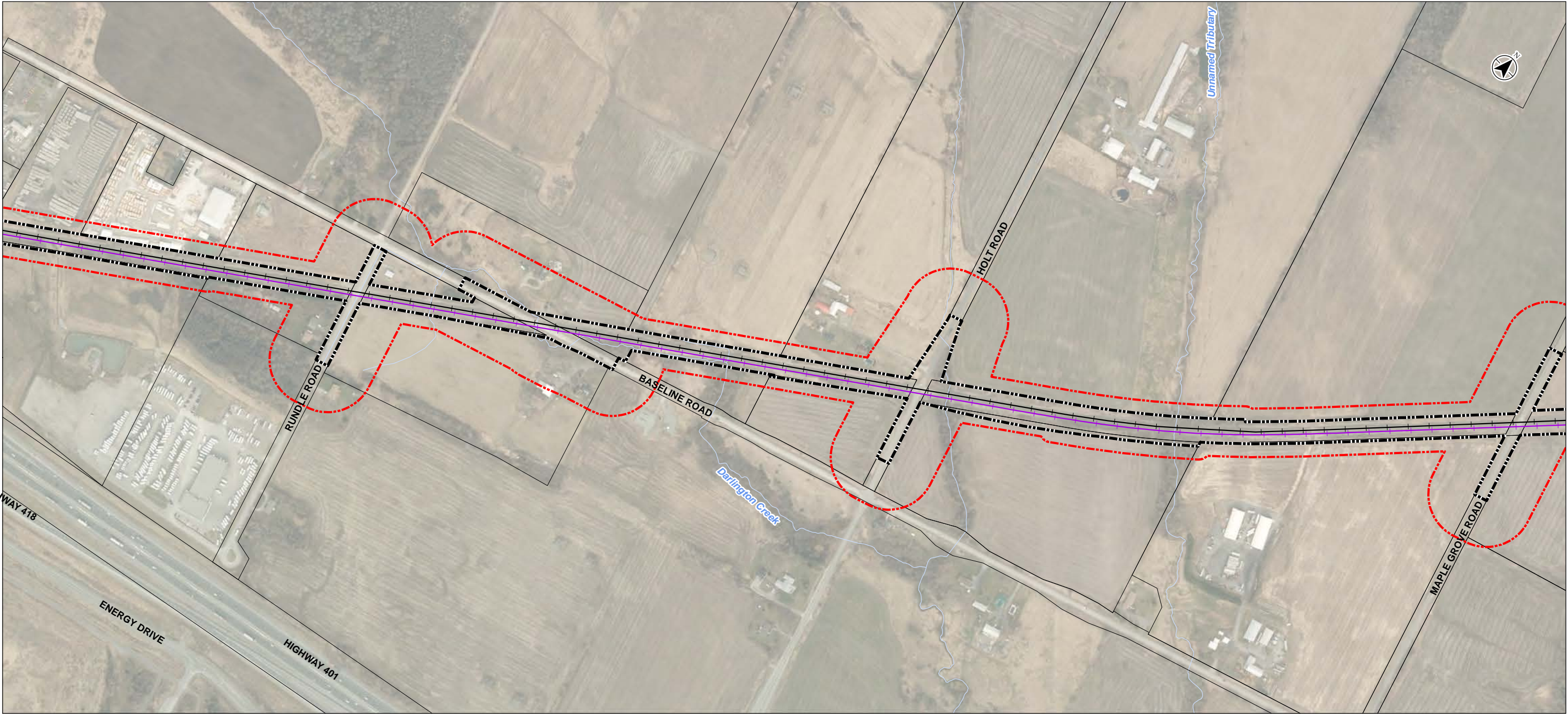
Figure No.

2.8

Title

Detailed Location of Study Area

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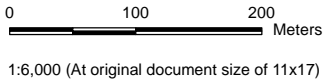


- Legend**
- Existing Railway
 - Proposed Corridor (2021)
 - Watercourse
 - Project Footprint
 - Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
 - Property Boundary

Notes

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Project Location
Region Municipality
of Durham

165011019 REVA
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Independent Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

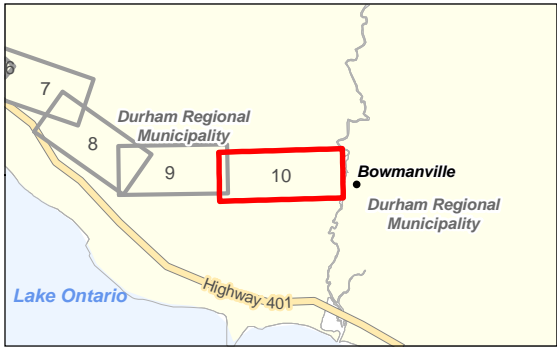
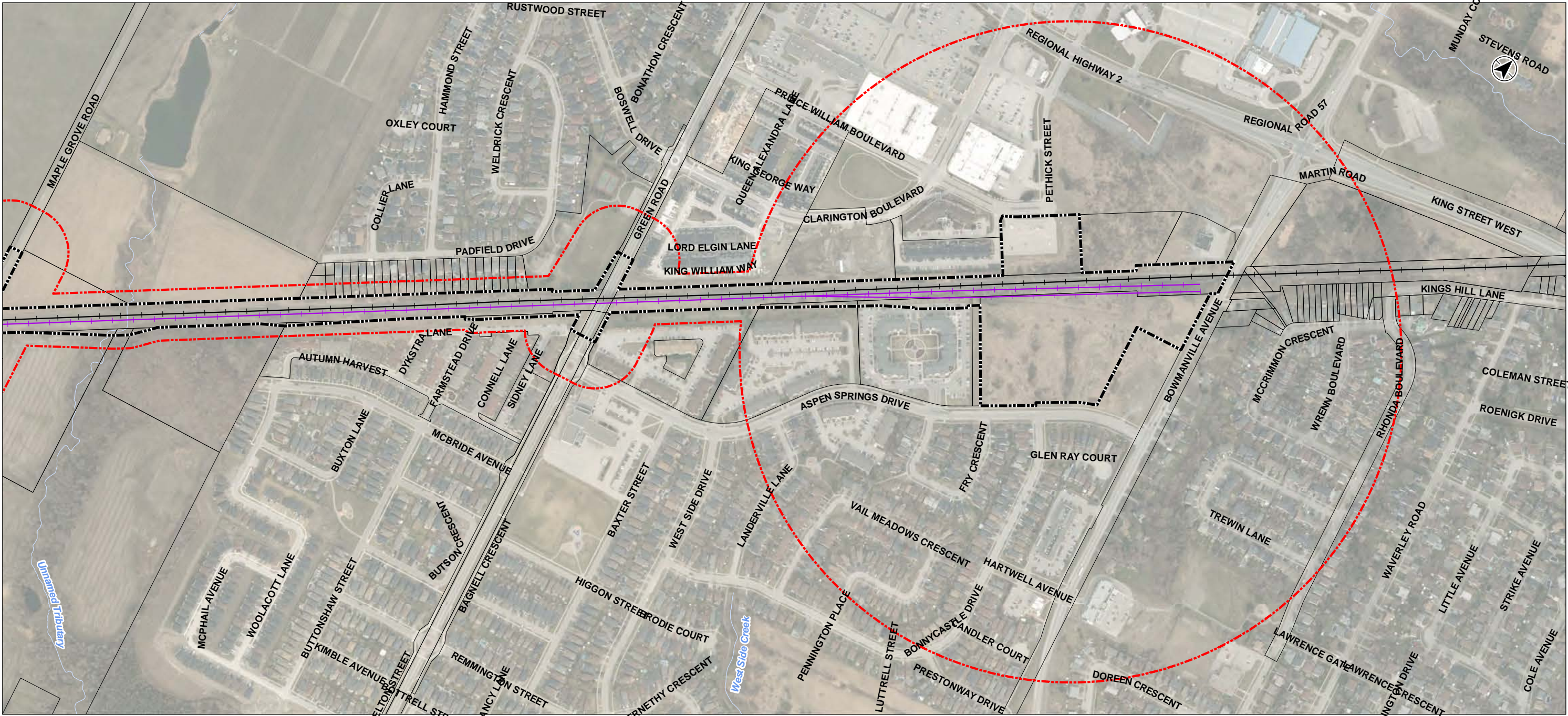
Figure No.

2.9

Title

Detailed Location of Study Area

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Legend

- Existing Railway
- Proposed Corridor (2021)
- Watercourse
- Project Footprint
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary

0 100 200 Meters
1:6,000 (At original document size of 11x17)



Project Location
Region of Durham
165011019 REVA
Prepared by SVD on 2023-02-27
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Independent Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

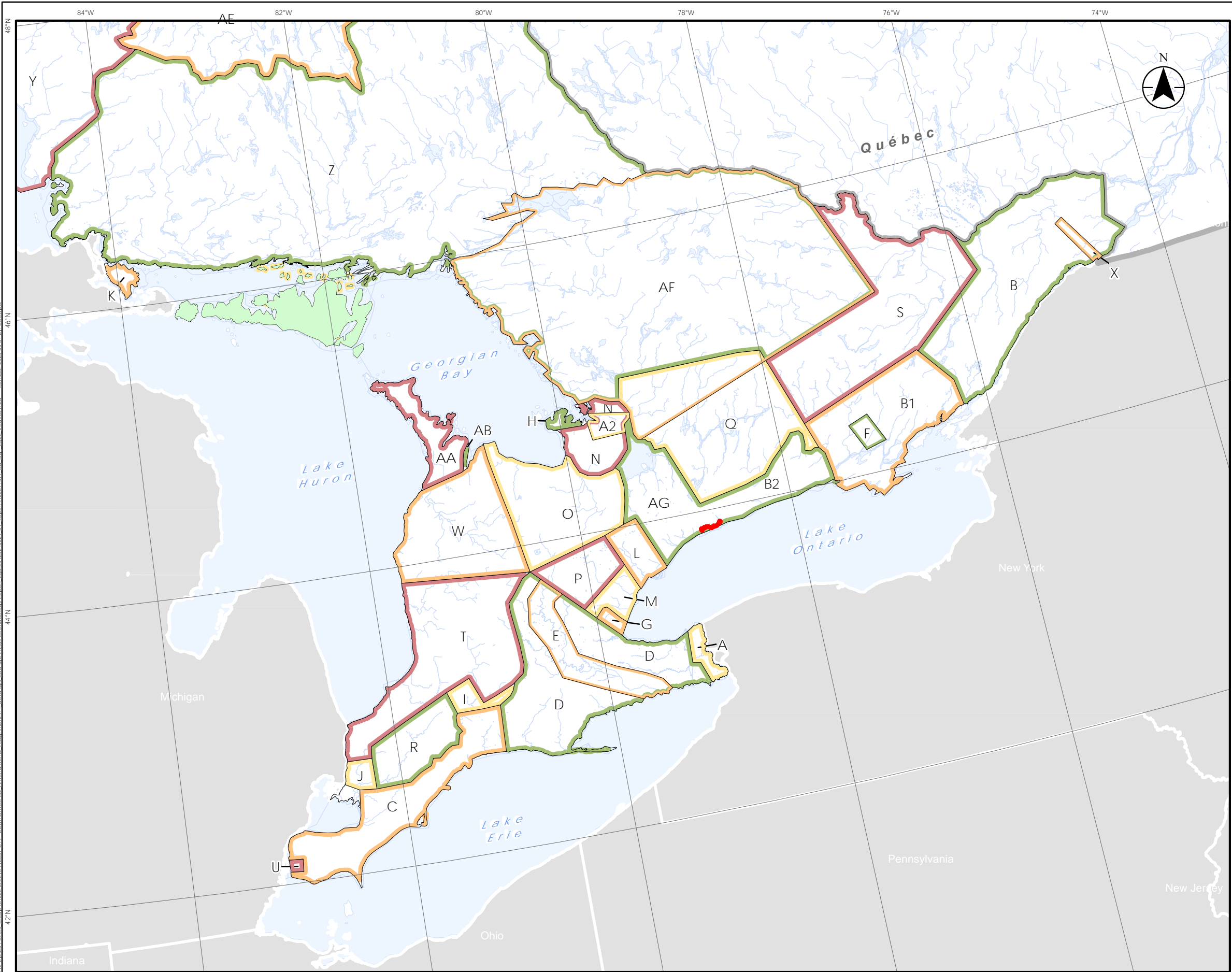
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2.10

Title

Detailed Location of Study Area

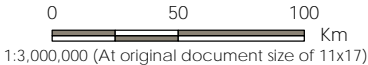
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Legend

- Study Area
- Waterbody

- A** Treaty No. 381, May 9th, 1781 (Mississauga and Chippewa)
- AA** Treaty No. 72, October 30th, 1854 (Chippewa)
- AB** Treaty No. 82, February 9th, 1857 (Chippewa)
- AE** Treaty No. 9, James Bay 1905, 1906 (Ojibway and Cree)
- AF** Williams Treaty, October 31st and November 15th, 1923 (Chippewa and Mississauga)
- AG** Williams Treaty, October 31st, 1923 (Chippewa)
- A2** John Collins' Purchase, 1785 (Chippewa)
- B** Crawford's Purchase, October 9th, 1783 (Algonquin and Iroquois)
- B1** Crawford's Purchase, October 9th, 1783 (Mississauga)
- B2** Crawford's Purchase, 1783, 1787, 1788 (Mississauga)
- C** Treaty No. 2, May 19th, 1790 (Odawa, Chippewa, Pottawatomi, and Huron)
- D** Treaty No. 3, December 2nd, 1792 (Mississauga)
- E** Haldimand Tract: from the Crown to the Mohawk, 1793
- F** Tyendinaga: from the Crown to the Mohawk, 1793
- G** Treaty No. 3 3/4: from the Crown to Joseph Brant, October 24th, 1795
- H** Treaty No. 5, May 22nd, 1798 (Chippewa)
- I** Treaty No. 6, September 7th, 1796 (Chippewa)
- J** Treaty No. 7, September 7th, 1796 (Chippewa)
- K** Treaty No. 11, June 30th, 1798 (Chippewa)
- L** Treaty No. 13, August 1st, 1805
- M** Treaty No. 13A, August 2nd, 1805
- N** Treaty No. 16, November 18th, 1815 (Chippewa)
- O** Treaty No. 18, October 17th, 1818 (Chippewa)
- P** Treaty No. 19, October 28th 1818 (Chippewa)
- Q** Treaty No. 20, November 5th, 1818 (Chippewa)
- R** Treaty No. 21, March 9th, 1819 (Chippewa)
- S** Treaty No. 27, May 31st, 1819 (Mississauga)
- T** Treaty No. 27½, April 25th, 1825 (Ojibwa and
- U** Treaty No. 35, August 13th, 1833 (Wyandot or
- V** Treaty No. 45, August 9th, 1836 (Chippewa and Odawa, "For All Indians To Reside Thereon")
- W** Treaty No. 45½, August 9th, 1836
- X** Treaty No. 57, June 1st, 1847 (Iroquois of St. Regis)
- Y** Treaty No. 60, Robinson, Superior, September 7th, 1850 (Ojibwa)
- Z** Treaty No. 61, Robinson, Huron, September 9th, 1850 (Ojibwa)



- Notes
1. Coordinate System: NAD 1983 Statistics Canada Lambert
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.
 3. Treaty boundaries adapted from Morris 1943 (1964 reprint). For cartographic representation only.

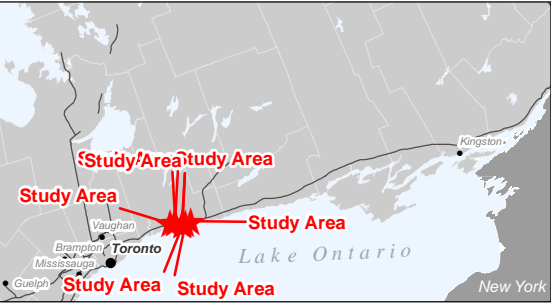
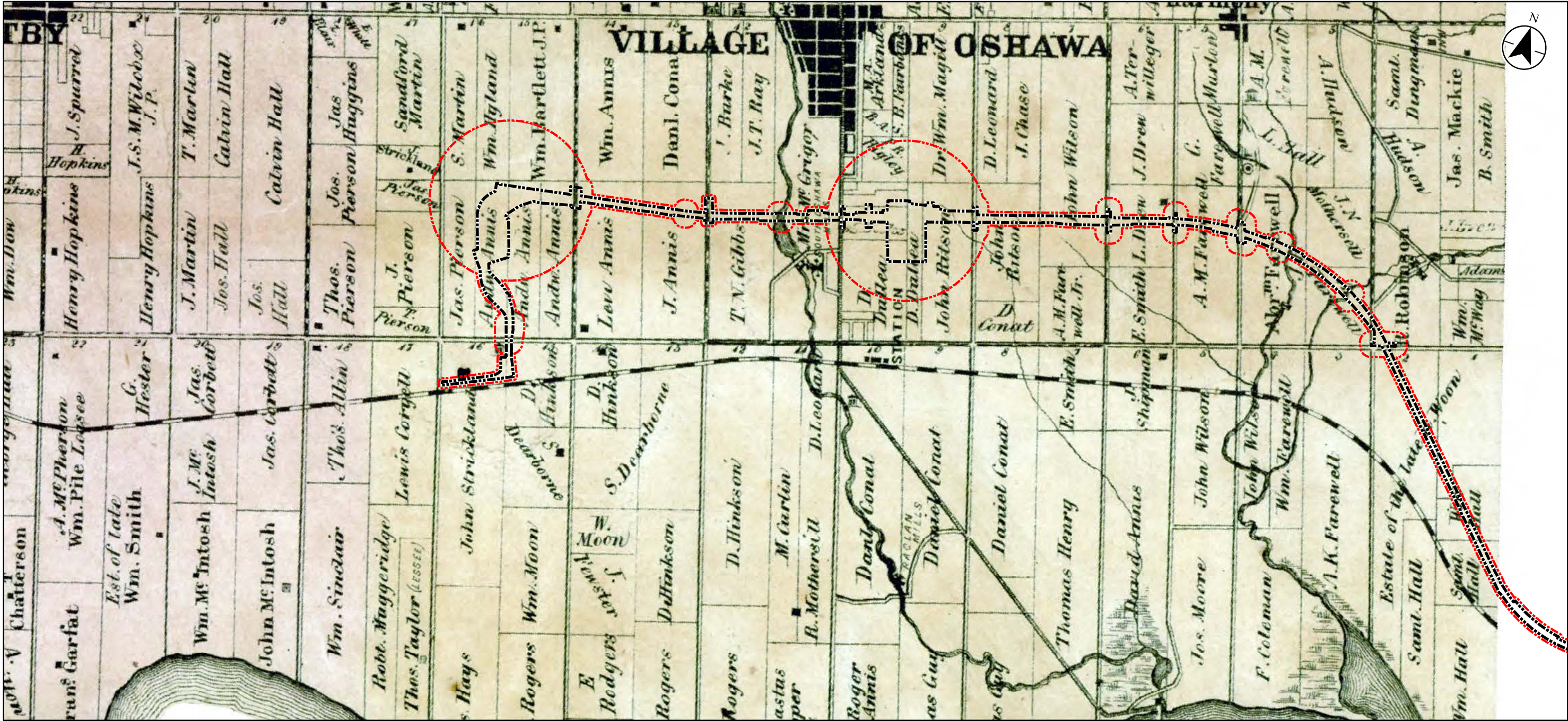
Project Location 165011019 REVA
Ontario Prepared by BC

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT



Figure No.
3

Title
Treaties and Purchases (Adapted from
Morris 1943)

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Notes
1. Coordinate System: NAD 1983 CSRS MTM 10
2. Reference: Tremaine, George C. 1861. Historical County Map of Ontario County. Toronto: Tremaine

- Legend
-  Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
 -  Project Footprint

NOT TO SCALE

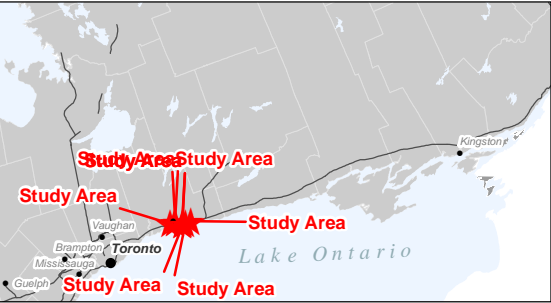
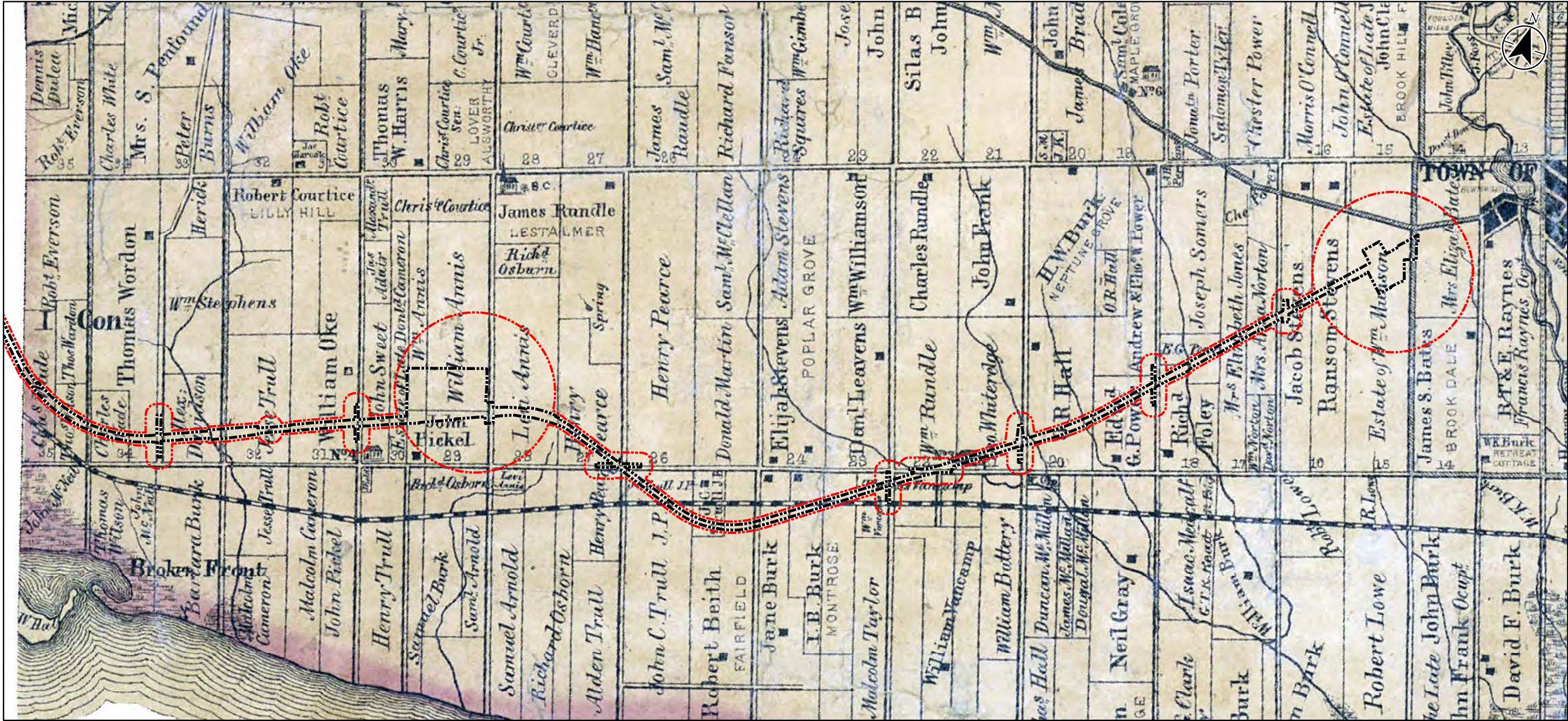


Project Location
Region of Municipality of Durham
165011019
Prepared by BCC on 3/1/2023



Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
4
Title
Portion of the 1860 Map of Ontario County

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Revised: 2023-03-01 By: bccwper



Notes
1. Coordinate System: NAD 1983 CSRS MTM 10
2. Reference: Tremaine, George C. 1861. Historical County Map of Durham County. Toronto: Tremaine

Legend
 Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepnts)
 Project Footprint

NOT TO SCALE



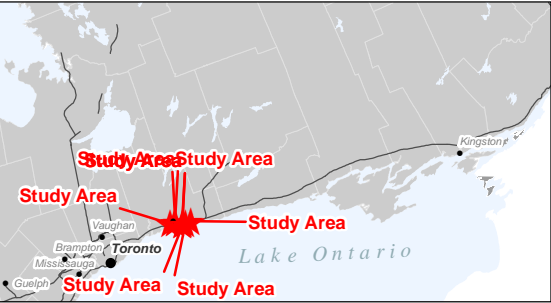
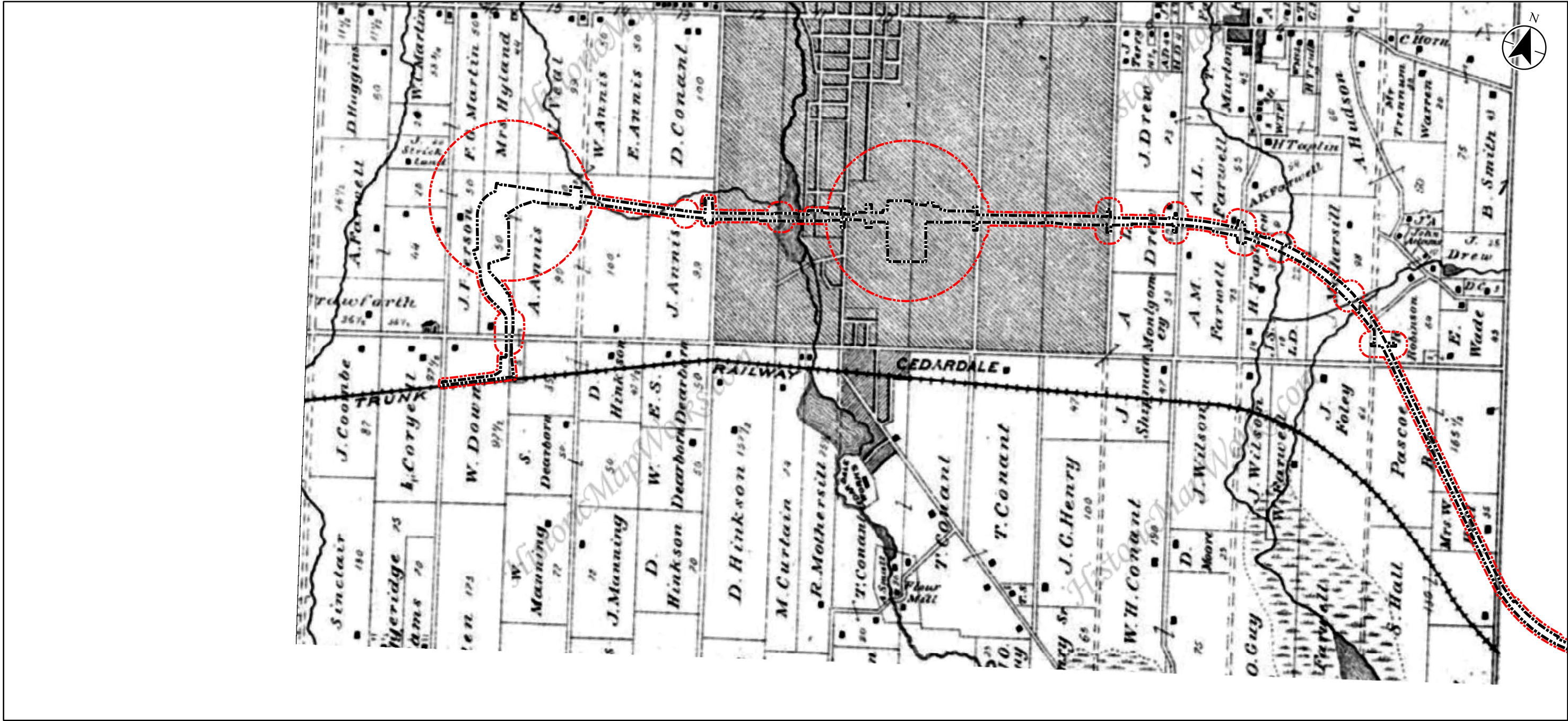
Project Location
Region of Durham
165011019
Prepared by BCC on 3/1/2023

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
5
Title
Portion of the 1861 Map of Durham County

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Notes
1. Coordinate System: NAD 1983 CSRS MTM 10
2. Reference: Beers, J.H. 1877. Illustrated Historical Atlas of the County of Ontario, Ont. Toronto: J.H. Beers & Co.

Legend

Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepnts)

Project Footprint

NOT TO SCALE



Project Location
Region of Durham
165011019
Prepared by BCC on 3/1/2023

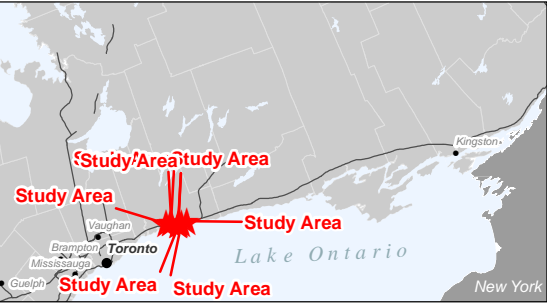
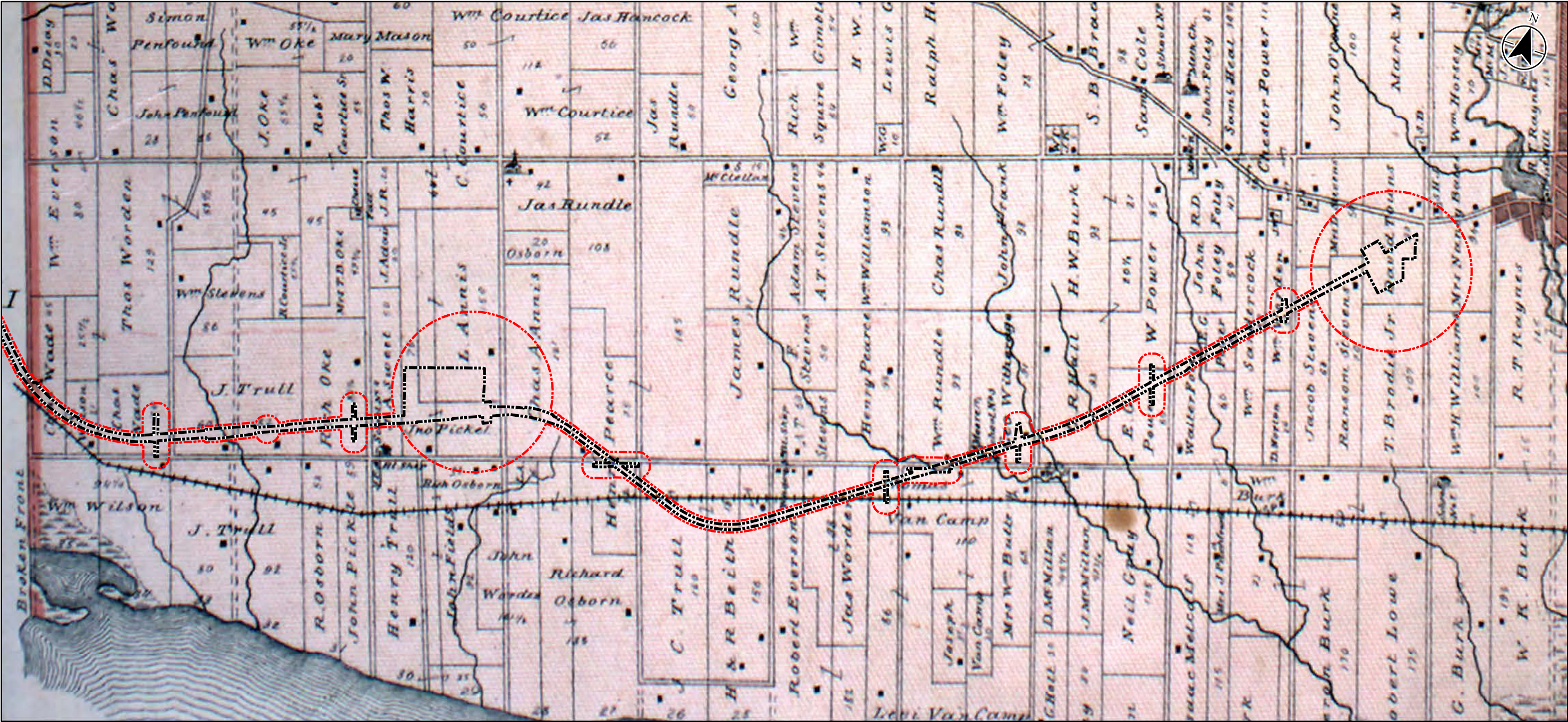
Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
6
Title

Portion of the 1877 Map of the Township of East Whitby

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Notes
1. Coordinate System: NAD 1983 CSRS MTM 10
2. Reference: Belden, H. 1878. Illustrated Historical Atlas of the Counties of Northumberland and Durham, Ont. Toronto: H. Belden & Co.

- Legend
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepnts)
 - Project Footprint

NOT TO SCALE



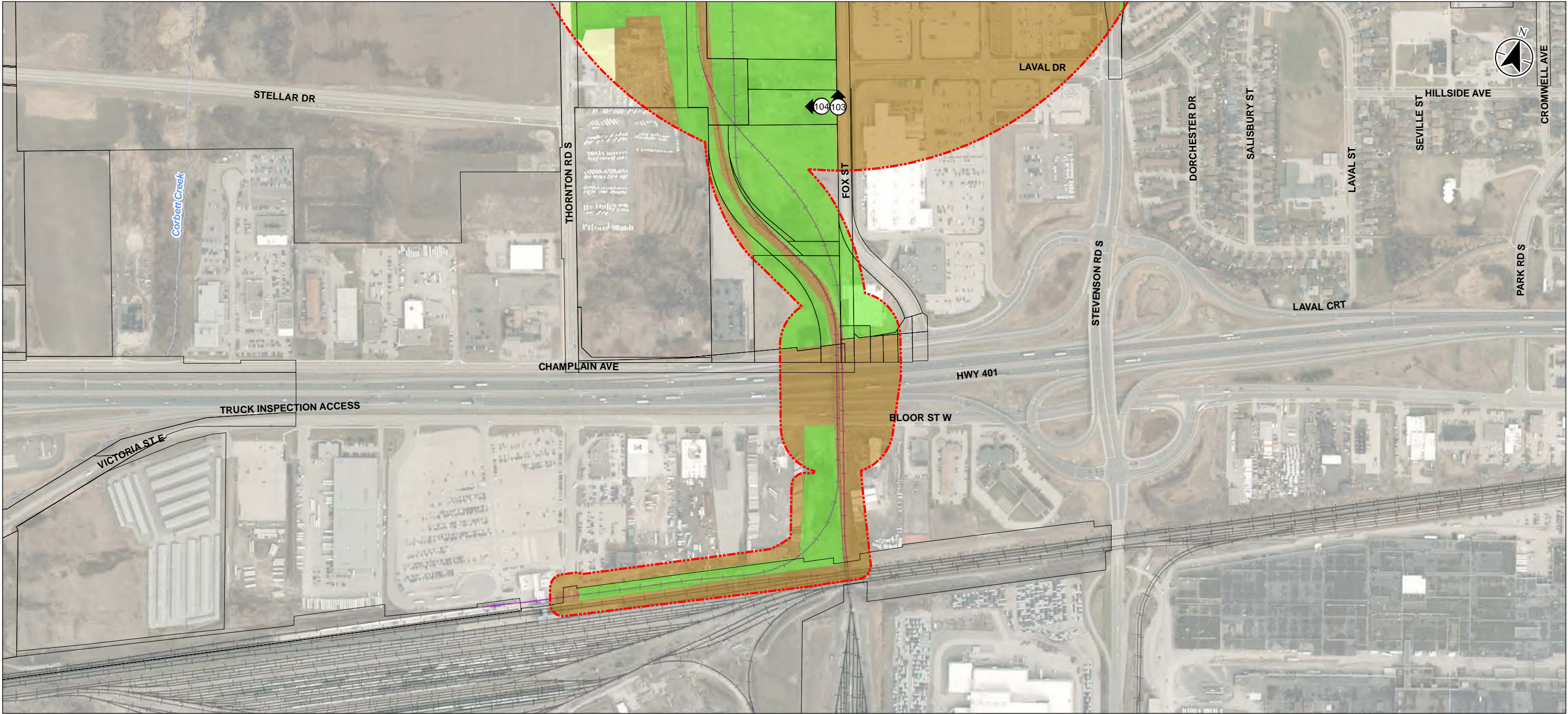
Project Location
Region of Durham Municipality
165011019
Prepared by BCC on 3/1/2023

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
7
Title
Portion of the 1878 Map of Darlington Township

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Revised: 2023-03-01 By: bowmper



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Legend

- Existing Railway
- Proposed Corridor (2021)
- Watercourse
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary
- Report Photograph and Direction

Stage 2 Archaeological

- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
- Test Pit Survey, 5 m Intervals
- Previously Assessed, No Further Work Recommended (TMHC 2009a)
- Previously Assessed, No Further Work Recommended (Stantec 2017)

0 100 200 Meters

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Project Location
Region of Durham
165011019 REVA
Prepared by SVD on 2023-03-01
Technical Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

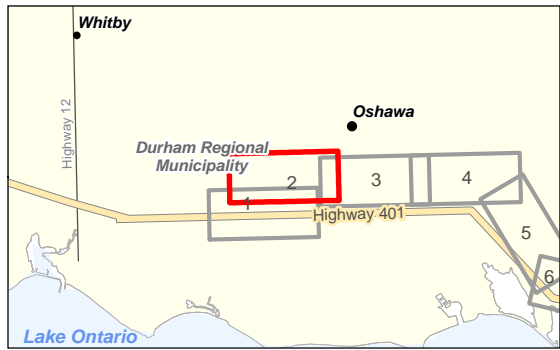
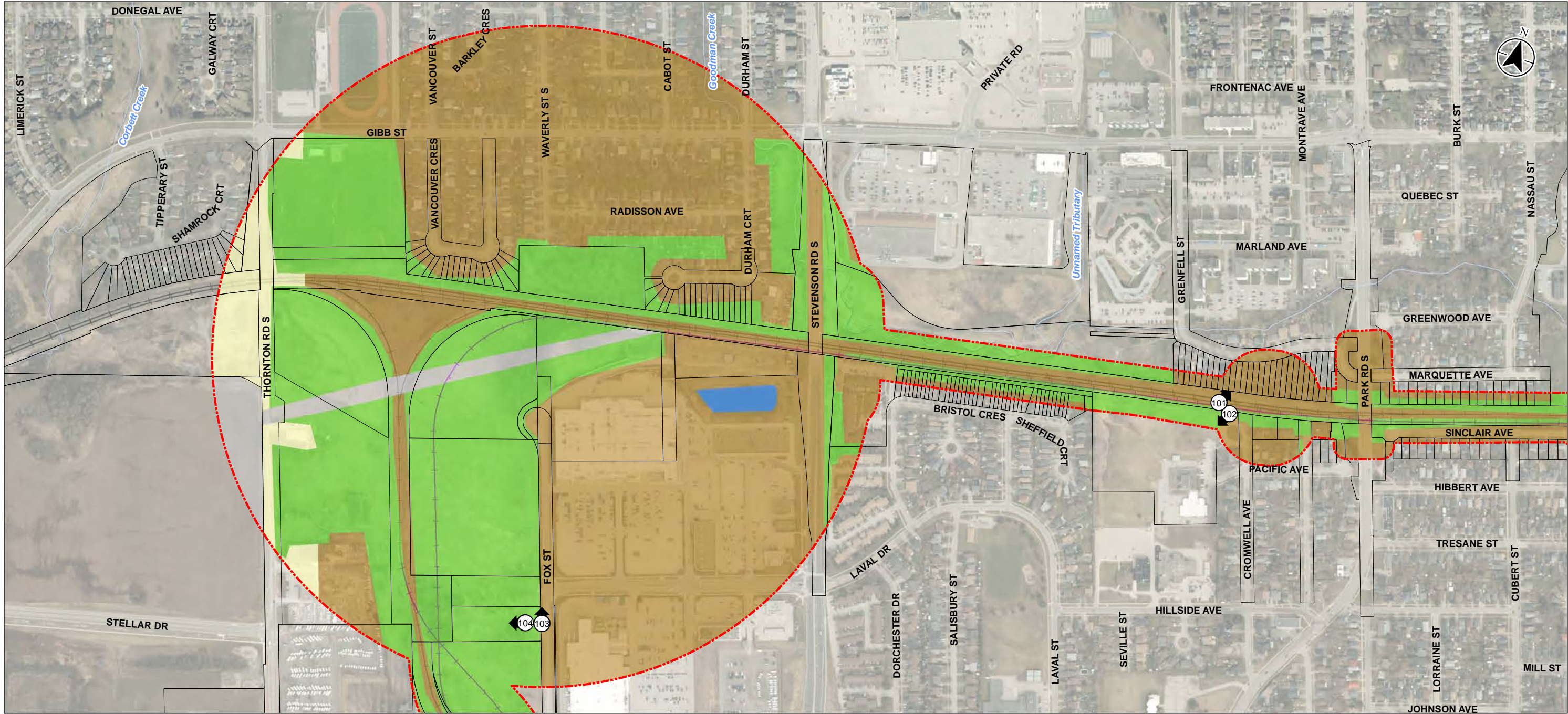
8.1

Title

Stage 1 Results and Recommendations

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- Legend**
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 - Watercourse
 - Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
 - Property Boundary
 - Report Photograph and Direction

- Stage 2 Archaeological**
- Low and Permanently Wet Area, Low to No Archaeological Potential - No Further Archaeological Work Required
 - Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
 - Test Pit Survey, 5 m Intervals
 - Previously Assessed, No Further Work Recommended (TMHC 2009a)
 - Previously Assessed, No Further Work Recommended (Stantec 2017)

0 100 200 Meters

1:6,000 (At original document size of 11x17)



Project Location
Region of Durham
165011019 REVA
Prepared by SVD on 2023-03-01
Technical Review by ABC on yyyy-mm-dd

Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

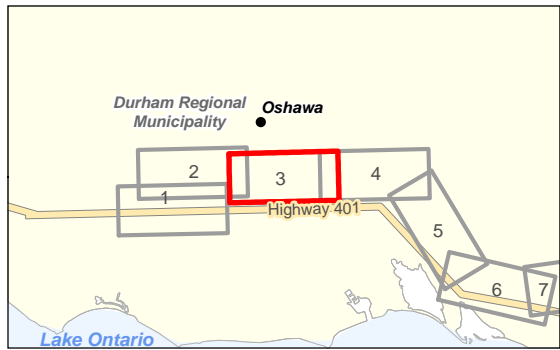
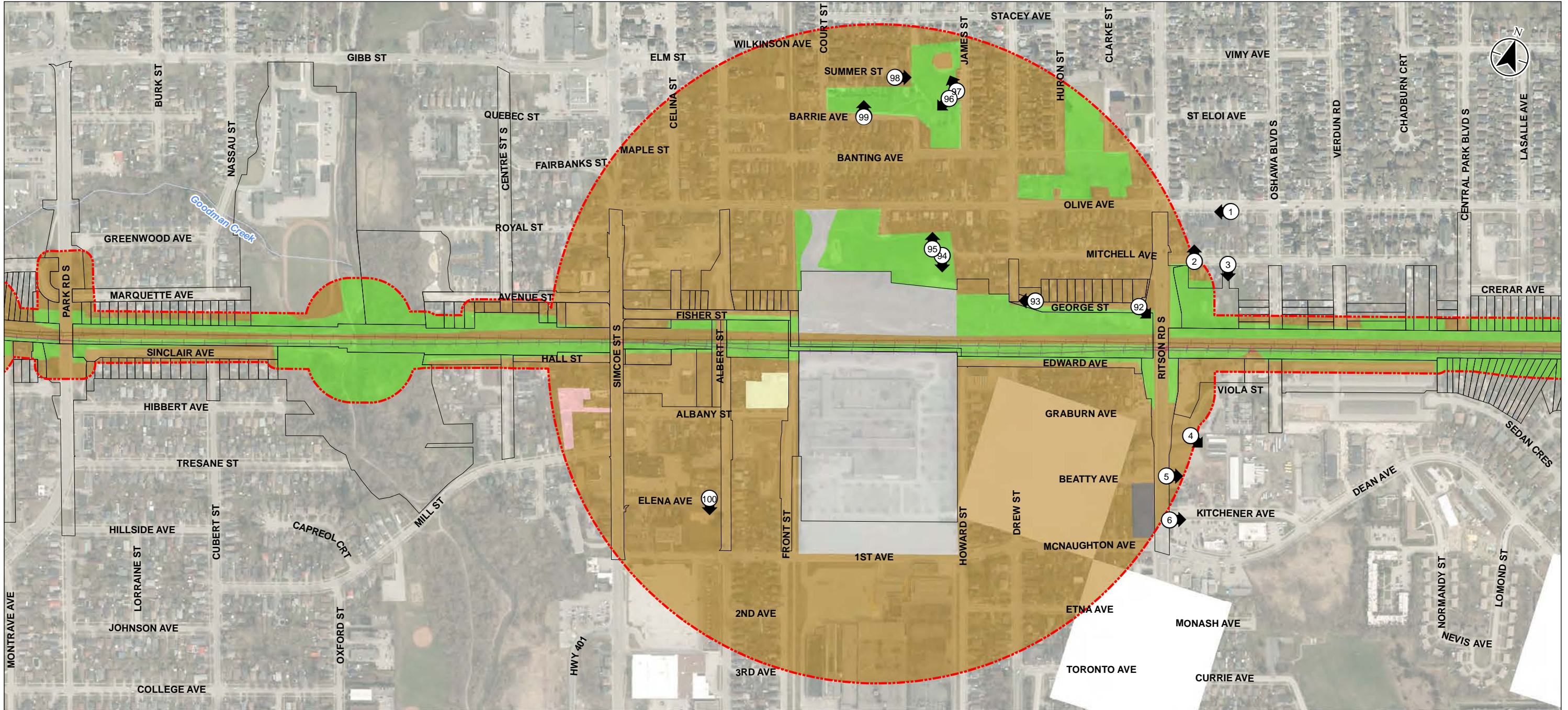
8.2

Title

Stage 1 Results and Recommendations

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Legend

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- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary
- Report Photograph and Direction

Stage 2 Archaeological

- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
- Test Pit Survey, 5 m Intervals
- Previously Assessed, No Further Work Recommended (TMHC 2009a)
- Previously Assessed, No further Work Recommended (A.A. Ltd. 2019)
- Previously Assessed, No further Work Recommended (EAS Inc. 2019)
- Previously Assessed, No further Work Recommended (TAI 2016a)

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Project Location
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of Durham

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METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

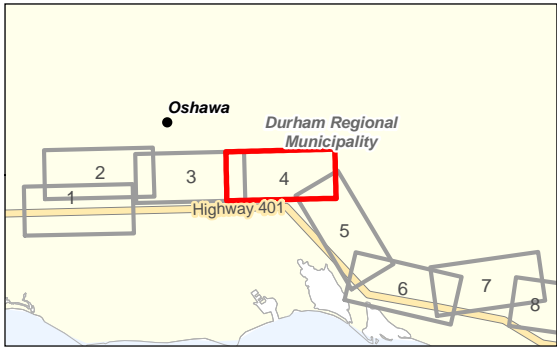
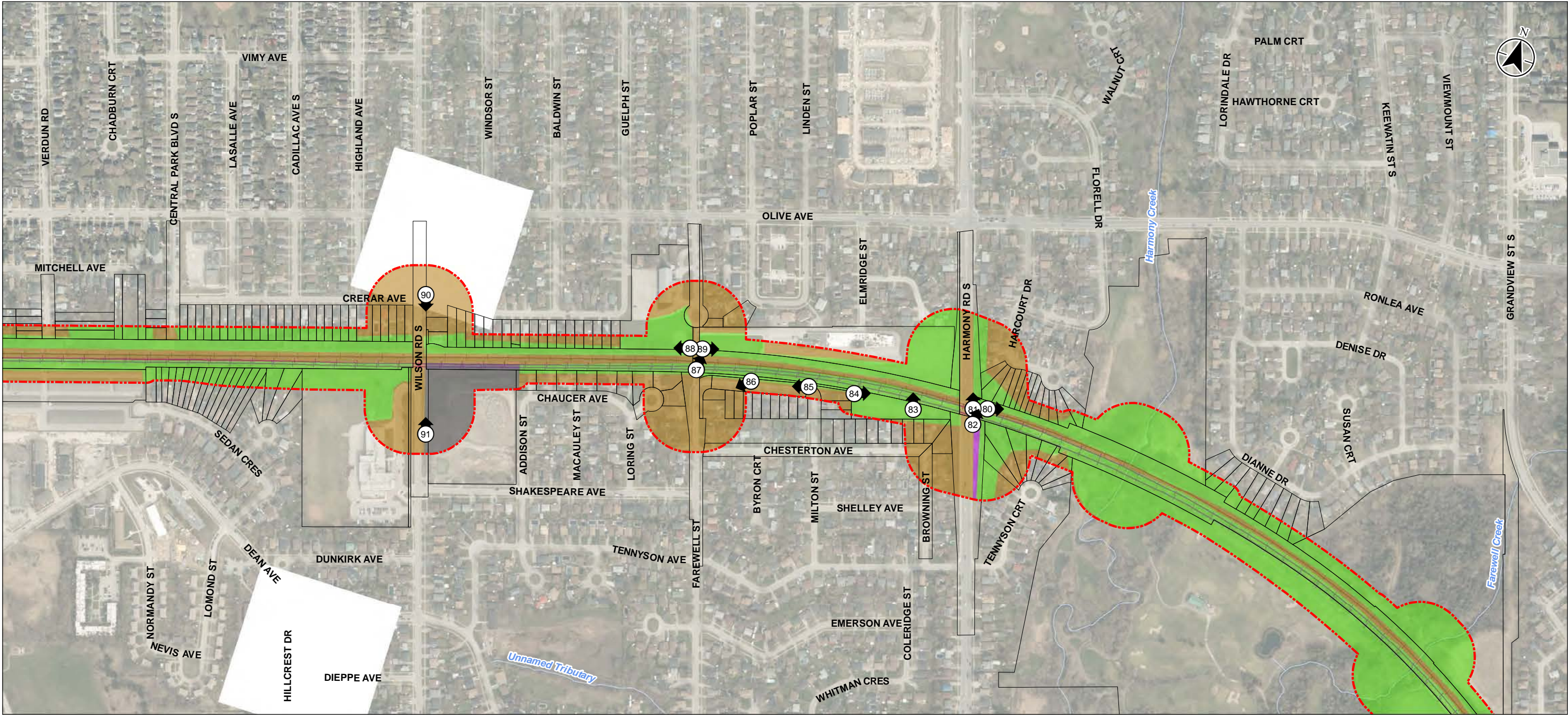
8.3

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- Legend**
- Existing Railway
 - Proposed Corridor (2021)
 - Watercourse
 - Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
 - Property Boundary
 - Report Photograph and Direction

- Stage 2 Archaeological**
- Area of Steep Slope, Low to No Archaeological Potential - No Further Archaeological Work Required
 - Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
 - Test Pit Survey, 5 m Intervals
 - Previously Assessed, No Further Work Recommended (TLA 2021)

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Project Location
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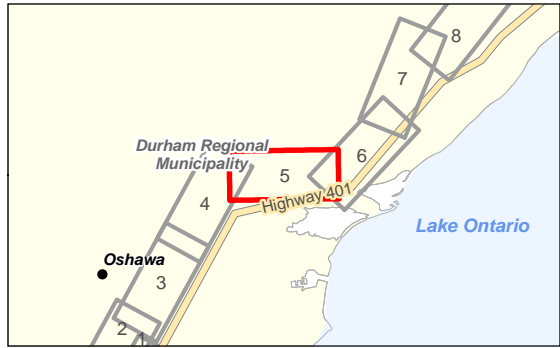
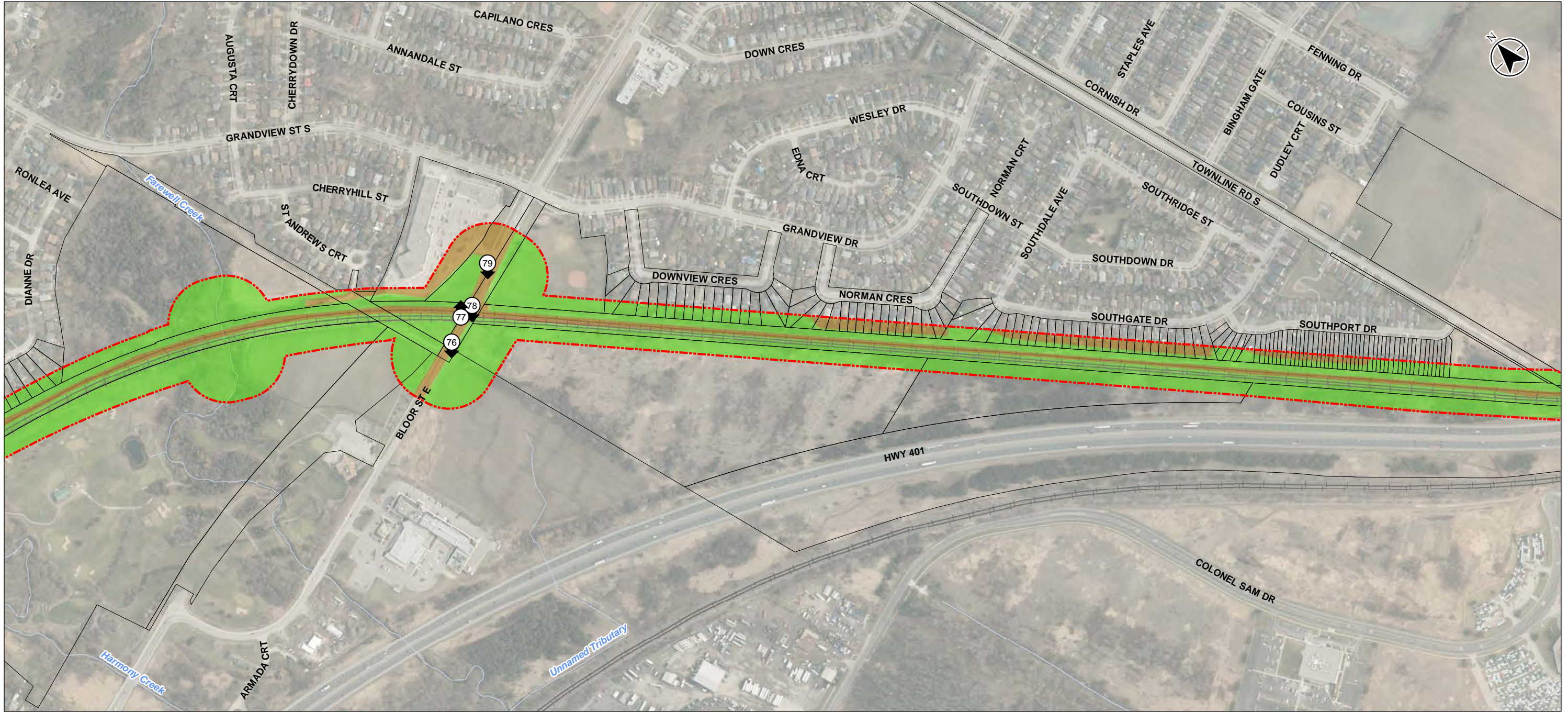
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SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.
8.4

Title
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Legend

- Existing Railway
- Proposed Corridor (2021)
- Watercourse
- Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
- Property Boundary
- Report Photograph and Direction

Stage 2 Archaeological

- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
- Test Pit Survey, 5 m Intervals



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SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

8.5

Title

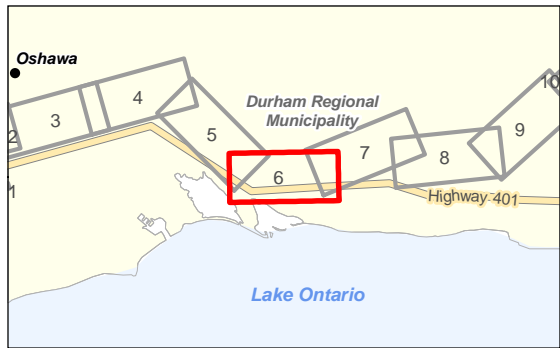
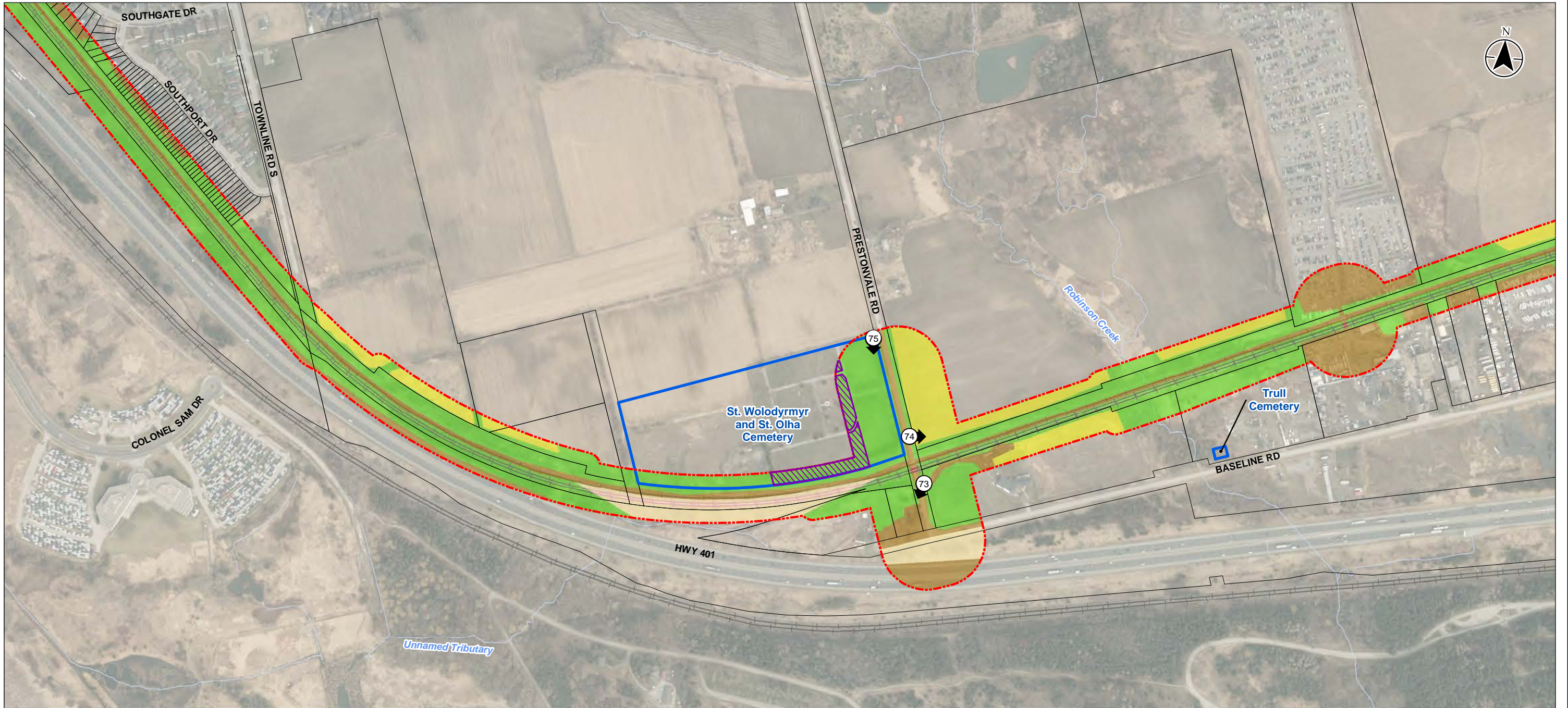
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- Legend**
- Existing Railway
 - Proposed Corridor (2021)
 - Watercourse
 - Stage 1 Archaeology Assessment Study Area (20 m Buffer Rail Alignment, 70 m Buffer New Crossings/Bridges, and 500 m Buffer New Station Centrepoints)
 - Cemetery Property Boundary
 - Property Boundary
 - Report Photograph and Direction

- Stage 2 Archaeological**
- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
 - Pedestrian Survey, 5 m Intervals
 - Test Pit Survey, 5 m Intervals
 - Previously Assessed, No Further Work Recommended (ASI 2015c)
 - Cemetery Investigation Required

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METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

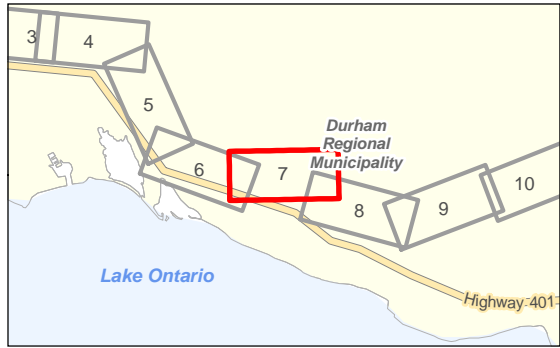
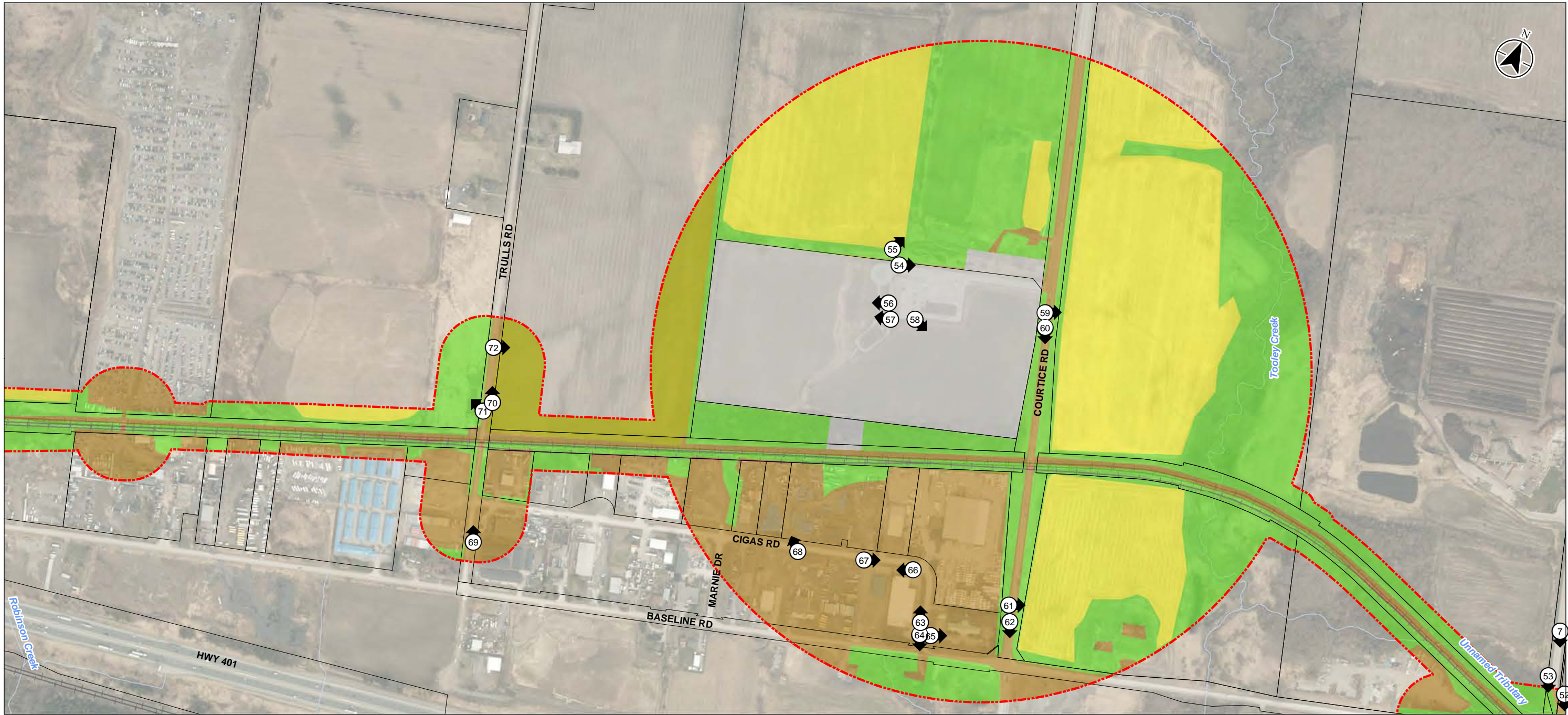
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 - Property Boundary
 - Report Photograph and Direction

- Stage 2 Archaeological**
- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
 - Pedestrian Survey, 5 m Intervals
 - Test Pit Survey, 5 m Intervals
 - Previously Assessed, No Further Work Recommended (TMHC 2009a)
 - Previously Assessed, No Further Work Recommended (ASI 2015b)
 - Previously Assessed, No Further Work Recommended (YNAS 2018)

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METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

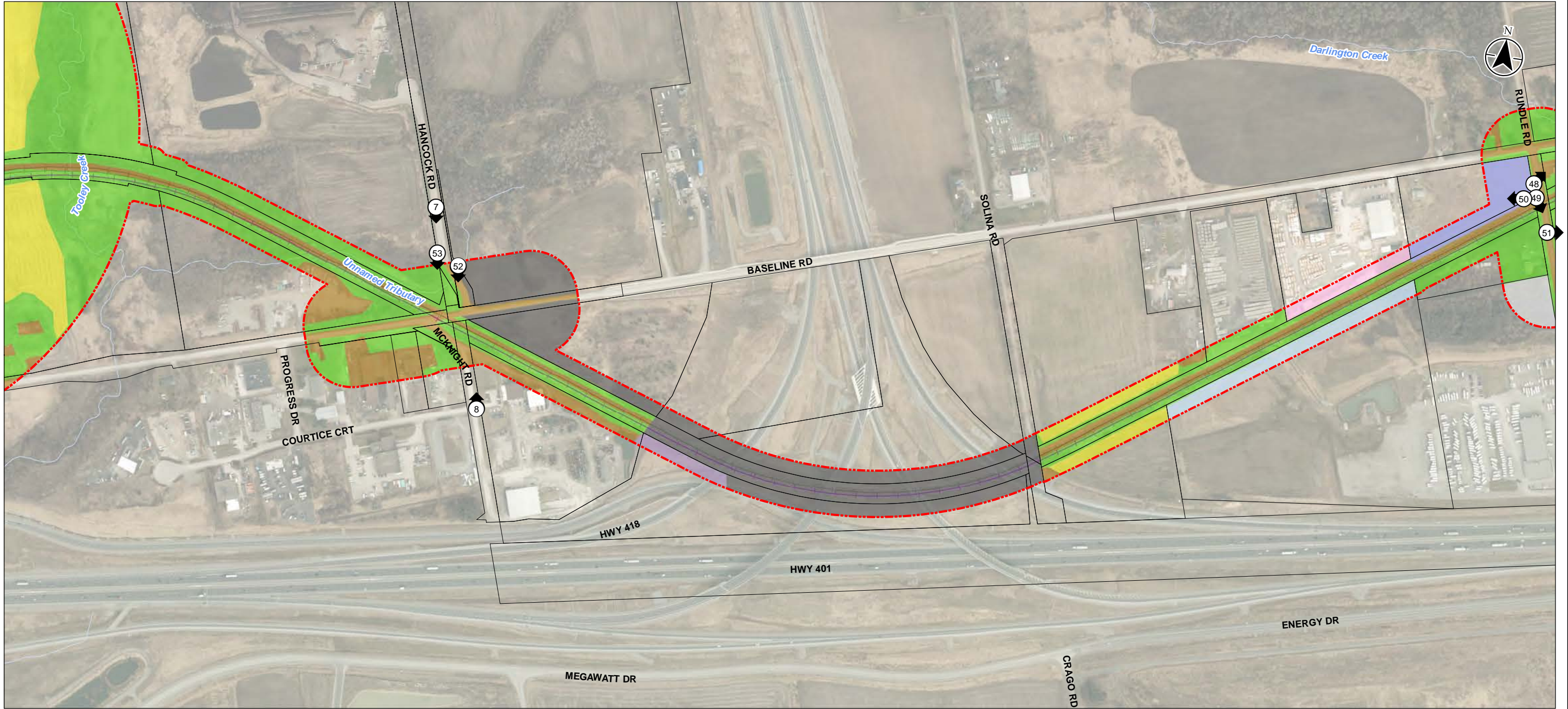
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- Stage 2 Archaeological**
- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
 - Pedestrian Survey, 5 m Intervals
 - Test Pit Survey, 5 m Intervals
 - Previously Assessed, No Further Work Recommended (ASI 2017)
 - Previously Assessed, No Further Work Recommended (ASI 2015c)
 - Previously Assessed, No Further Work (Archeoworks 2017)

- Previously Assessed, No Further Work Recommended (ASI 2018)
- Previously Assessed, No Further Work Required (Archeoworks 2017)
- Previously Assessed, No Further Work Recommended (ASI 2015b)

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Client/Project
METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

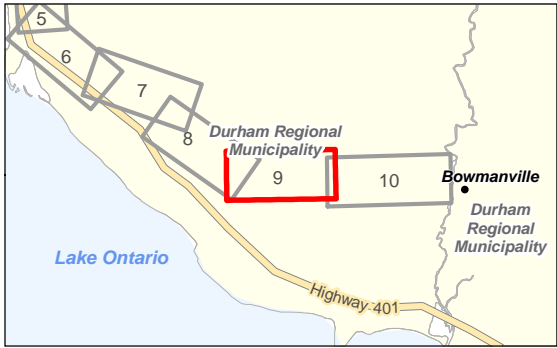
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Legend

- Existing Railway
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Stage 2 Archaeological

- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
- Pedestrian Survey, 5 m Intervals
- Test Pit Survey, 5 m Intervals
- Previously Assessed, No Further Work Recommended (ASI 2017)
- Previously Assessed, No Further Work (Archeoworks 2017)
- Previously Assessed, No Further Work Recommended (ASI 2018)

Previously Assessed, No Further Work Required (Archeoworks 2017)

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165011019 REVA
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Technical Review by ABC on yyyy-mm-dd

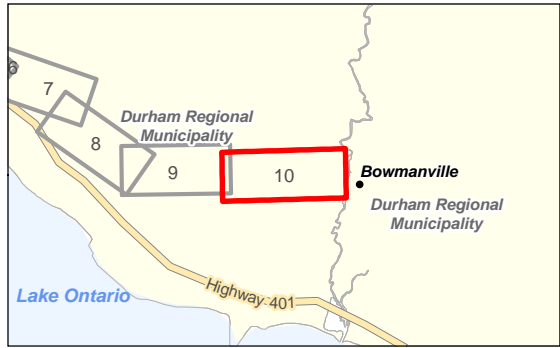
Client/Project: METROLINX, OSHAWA TO BOWMANVILLE RAIL SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.: 8.9

Title: Stage 1 Results and Recommendations

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Legend

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- Property Boundary
- Report Photograph and Direction

Stage 2 Archaeological

- Area of Steep Slope, Low to No Archaeological Potential - No Further Archaeological Work Required
- Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
- Pedestrian Survey, 5 m Intervals
- Test Pit Survey, 5 m Intervals
- Previously Assessed, No Further Work Recommended (TMHC 2009a)
- Previously Assessed, Further Work Required (ASI 2015a)

- Previously Assessed, No Further Work Recommended (TLA 2017a)
- Previously Assessed, No Further Work Required (TLA 2015)

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METROLINX, OSHAWA TO BOWMANVILLE RAIL
SERVICE EXTENSION PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Figure No.

8.10

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Stage 1 Results and Recommendations

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Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Closure
April 5, 2023

10.0 Closure

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential archaeological resources associated with the identified property.


All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. The conclusions are based on the conditions encountered by Stantec at the time the work was performed. Due to the nature of archaeological assessment, which consists of systematic sampling, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire property.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities, or claims, howsoever arising, from third party use of this report. We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Quality Review _____
 Digitally signed by
Colin Varley
Date: 2023.04.05
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(signature)

Colin Varley – Senior Associate, Senior Archaeologist

Independent Review _____
 Dickson, Parker
2023.04.06
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(signature)

Parker Dickson – Senior Associate, Senior Archaeologist



Appendices



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Appendix A Oral Histories
April 5, 2023

Appendix A Oral Histories

The oral histories presented below were provided by Curve Lake First Nation and the Huron-Wendat Nation. These oral histories are provided verbatim as they were provided to Stantec and do not necessarily reflect the views of other Indigenous communities and Nations or the licensed consultant archaeologist.

A.1 Michi Saagiig (from Curve Lake First Nation)

The following was prepared by Gitiga Migizi, a respected Elder and Knowledge Keeper of the Michi Saagiig Nation.

“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, travelling 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-Indian periods. They are the original inhabitants of southern Ontario, and they are still here today.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Appendix A Oral Histories April 5, 2023

“The traditional territories of the Michi Saagiig span from Gananoque in the east, all along the north shore of Lake Ontario, 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.



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Appendix A Oral Histories
April 5, 2023

“The onset of colonial settlement and missionary involvement severely disrupted the original relationships between these Indigenous nations. Disease and warfare had a devastating impact upon 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.”

“Often times, 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



Addendum to Oshawa to Bowmanville Rail Service Extension Project: Stage 1 Archaeological Assessment

Appendix A Oral Histories April 5, 2023

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.”

A.2 Huron-Wendat Nation

“As an ancient people, traditionally, the Huron-Wendat, a great Iroquoian civilization of farmers and fishermen-hunter-gatherers representing between 30,000 and 40,000 individuals, traveled widely across 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.

“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 1497 on-reserve members and 2390 off-reserve members for a total of 3900 members of the Huron-Wendat Nation.

“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 Nionwentsio, 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.”

