

**CULTURAL HERITAGE REPORT:  
EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT**

**LAKESHORE TRANSPORTATION STUDIES  
LAKESHORE BUS RAPID TRANSIT (BRT) STUDY**

**CITY OF MISSISSAUGA  
REGION OF PEEL, ONTARIO**

**FINAL REPORT**

Prepared for:

**HDR**  
100 York Boulevard, Suite 300  
Richmond Hill, ON L4B 1J8

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**EXECUTIVE SUMMARY**

ASI was contracted by HDR, on behalf of the City of Mississauga, to conduct a Cultural Heritage Report for the Lakeshore Transportation Studies: Lakeshore Bus Rapid Transit (BRT) Study. This is part of a larger Lakeshore Transportation Studies in the City of Mississauga. The Lakeshore BRT Study project study area (hereafter called the study area) consists of Lakeshore Road East and the intersections along the roadway from Etobicoke Creek to approximately 50 m southwest of West Avenue and is generally bound by a mixture of residential, commercial, and industrial properties.

The purpose of this report is to present an inventory of known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures. This report follows guidelines presented in the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI's) guidance document: *Sample Tables and Language for "Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment" and Environmental Project Reports (EPR) under Transit Project Assessment Process (TPAP) for Proponents and their Consultants* (Ministry of Tourism, Culture and Sport 2019).

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with a rural land use history dating back to the early nineteenth century that developed quickly during the early twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are seven previously identified BHRs and CHLs within the study area. An additional two potential BHRs were identified during background research and field review. Based on the type of resources and their physical location, some of these individual resources were combined into a larger CHL, resulting in six BHRs and one CHL identified within the study area.

Based on the results of the assessment, the following recommendations have been developed:

1. Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified BHRs and CHLs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified BHRs and CHLs, et.



2. All of the identified BHRs and the CHL will potentially be effected by short-term disruption resulting from construction activities (i.e. introduction of construction related physical, visual, noise-related, and atmospheric elements). To mitigate short-term disruption to identified BHRs and the CHL resulting from construction activities, the following measures are recommended:
  - a. Staging areas should be selected so that they are non-invasive and avoid heritage attributes; and
  - b. Post-construction landscape treatments carried out to restore pre-construction conditions.
3. Indirect impacts to identified BHRs and the CHL within 50 m of the proposed limited of impact are possible due to construction activities which may result in limited and temporary adverse vibration impacts to five known and potential BHRs and one known CHL: 1239 Lakeshore Road East (BHR 1), 999 Lakeshore Road East (BHR 3), 940 First Street (BHR 4), 811 Lakeshore Road East (BHR 5), 1352 Lakeshore Road East (BHR 6), and the Arsenal Lands (CHL 1 containing 1352, 1300, and 1300A Lakeshore Road East).). To ensure that identified BHRs and the CHL are not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that any features on these properties be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include these properties in the condition assessment of structures within the vibration zone of influence for this project. Further, the Contractor must make a commitment to repair any damages caused by vibrations.
4. Should future work require an expansion of the study area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.
5. A summary of additional cultural heritage studies required during Detailed Design to address direct or indirect adverse impacts are identified below.
6. This report should be submitted to the City of Mississauga and the MHSTCI for review and comment, and any other local heritage stakeholders that may have an interest in this project. The final report should be submitted to the City of Mississauga for their records.

### ***Required Cultural Heritage Studies Following TPAP***

The following is a summary of additional cultural heritage studies recommended by this Cultural Heritage Report that are required following the TPAP.



**Required Cultural Heritage Studies Following TPAP**

Feature ID	Location/Name	Required Assessment or Next Steps
BHR 2	Corner of Lakeshore Road East and Hydro Road	The plaque should be removed prior to construction for safe-keeping and returned to the same general location once work has been completed. Consultation with heritage staff or appropriate municipal department should be undertaken during detail design to determine an appropriate storage and relocation strategy.
BHR 6	1352 Lakeshore Road East	A Heritage Impact Assessment (HIA) will be undertaken by a qualified person as early as possible in the detailed design phase following the TPAP. It will be developed in consultation with, and submitted for review to, MHSTCI and the municipal heritage planner and/or municipal heritage committee and Indigenous communities, as appropriate. The HIA will discuss the alternatives considered and recommend the alternative to minimize or mitigate adverse effects on the property and the HIA should follow the <i>City of Mississauga Heritage Impact Statement Terms of Reference (2012)</i> .
CHL 1	Arsenal Lands CHL	A HIA will be undertaken by a qualified person as early as possible in the detailed design phase following the TPAP. It will be developed in consultation with, and submitted for review to, MHSTCI and the municipal heritage planner and/or municipal heritage committee and Indigenous communities, as appropriate. The HIA will discuss the alternatives considered and recommend the alternative to minimize or mitigate adverse effects on the property and the HIA should follow the <i>City of Mississauga Heritage Impact Statement Terms of Reference (2012)</i> .

## PROJECT PERSONNEL

<i>Senior Project Manager:</i>	Lindsay Graves, MA, CAHP Senior Cultural Heritage Specialist   Assistant Manager - Cultural Heritage Division
<i>Project Coordinator:</i>	Katrina Thach, Hon. BA Associate Archaeologist   Project Coordinator - Environmental Assessment Division
<i>Project Manager:</i>	John Sleath, MA Cultural Heritage Specialist   Project Manager - Cultural Heritage Division
<i>Field Review:</i>	Kirstyn Allam, BA (Hon), Advanced Diploma in Applied Museum Studies Cultural Heritage Technician   Technical Writer and Researcher - Cultural Heritage Division
<i>Report Production:</i>	Kirstyn Allam
<i>Graphics Production:</i>	Carolyn Nettleton, BA Archaeologist   GIS Technician – Operations Division  Peter Bikoulis, PhD Archaeologist   GIS Technician – Operations Division  Robin Latour, BA, MPhil Archaeologist   Geomatics Specialist - Operations Division
<i>Report Reviewer(s):</i>	Lindsay Graves  John Sleath



## QUALIFIED PERSONS INVOLVED IN THE PROJECT

*Lindsay Graves, MA, CAHP*

*Senior Cultural Heritage Specialist | Assistant Manager - Cultural Heritage Division*

The Senior Project Manager for this Cultural Heritage Report is **Lindsay Graves** (MA, Heritage Conservation), Senior Cultural Heritage Specialist and the Environmental Assessment Coordinator for the Cultural Heritage Division at ASI. She was responsible for: overall project scoping and approach; development and confirmation of technical findings and study recommendations; application of relevant standards, guidelines and regulations; and implementation of quality control procedures. Lindsay is academically trained in the fields of heritage conservation, cultural anthropology, archaeology, and collections management and has over 15 years of experience in the field of cultural heritage resource management. This work has focused on the assessment, evaluation, and protection of above ground cultural heritage resources. Lindsay has extensive experience undertaking archival research, heritage survey work, heritage evaluation and heritage impact assessment. She has also contributed to cultural heritage landscape studies and heritage conservation plans, led heritage commemoration and interpretive programs, and worked collaboratively with multidisciplinary teams to sensitively plan interventions at historic sites/places. In addition, she is a leader in the completion of heritage studies required to fulfill Class EA processes and has served as Project Manager for over 100 heritage assessments during her time at ASI. Lindsay is a member of the Canadian Association of Heritage Professionals.

*John Sleath, MA*

*Cultural Heritage Specialist | Project Manager - Cultural Heritage Division*

The Project Manager for this Cultural Heritage Report is **John Sleath** (MA), who is a Cultural Heritage Specialist and Project Manager within the Cultural Heritage Division with ASI. He was responsible for the day-to-day management activities, including scoping of research activities and site surveys and drafting of study findings and recommendations. John has worked in a variety of contexts within the field of cultural heritage resource management for the past 13 years, as an archaeologist and as a cultural heritage professional. In 2015 John began working in the Cultural Heritage Division researching and preparing a multitude of cultural heritage assessment reports and for which he was responsible for a variety of tasks including: completing archival research, investigating built heritage and cultural heritage landscapes, report preparation, historical map regression, and municipal consultation. Since 2018 John has been a project manager responsible for a variety of tasks required for successful project completion. This work has allowed John to engage with stakeholders from the public and private sector, as well as representatives from local municipal planning departments and museums. John has conducted heritage assessments across Ontario, with a focus on transit and rail corridor infrastructure including bridges and culverts.



*Kirstyn Allam, BA (Hon), Advanced Diploma in Applied Museum Studies  
Cultural Heritage Technician | Technical Writer and Researcher - Cultural Heritage Division*

The Cultural Heritage Technician for this project is **Kirstyn Allam** (BA (Hon), Advanced Diploma in Applied Museum Studies), who is a Cultural Heritage Technician and Technical Writer and Researcher within the Cultural Heritage Division with ASI. She was responsible for preparing and contributing to research and technical reporting. Kirstyn Allam's education and experience in cultural heritage, historical research, archaeology, and collections management has provided her with a deep knowledge and strong understanding of the issues facing the cultural heritage industry and best practices in the field. Kirstyn has experience in heritage conservation principles and practices in cultural resource management, including three years experience as a member of the Heritage Whitby Advisory Committee. Kirstyn also has experience being involved with Stage 1-4 archaeological excavations in the Province of Ontario.



## GLOSSARY

Term	Definition
Adjacent	“contiguous properties as well as properties that are separated from a heritage property by narrow strip of land used as a public or private road, highway, street, lane, trail, right-of-way, walkway, green space, park, and/or easement or as otherwise defined in the municipal official plan” (Ministry of Tourism, Culture and Sport 2010).
Built Heritage Resource (BHR)	“...a building, structure, monument, installation or any manufactured remnant that contributes to a property’s cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the <i>Ontario Heritage Act</i> , or that may be included on local, provincial, federal and/or international registers” (Government of Ontario 2020a:41).
Cultural Heritage Landscape (CHL)	“...a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the <i>Ontario Heritage Act</i> , or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms” (Government of Ontario 2020a:42).
Cultural Heritage Value or Interest (CHVI)	“A property is evaluated for its CHVI on the basis of direct evidence that supports the determination of CHVI and the level of significance. This includes the assessment of the integrity of a property, the strength of its physical features or attributes and its historic context. Determination of its level of significance is related to the ability of the property to meet at least one of the criteria of O. Reg. 9/06 or O. Reg. 10/06” (Ministry of Tourism, Culture and Sport 2014:13).
Known Built Heritage Resources and Cultural Heritage Landscapes	A known built heritage resource or cultural heritage landscape is a property that has recognized cultural heritage value or interest. This can include a property previously evaluated and determined to have cultural heritage value or interest or listed on a Municipal Heritage Register, designated under Part IV or V of the <i>Ontario Heritage Act</i> , or protected by a heritage agreement, covenant or easement, protected by the <i>Heritage Railway Stations Protection Act</i> or the <i>Heritage Lighthouse Protection Act</i> , identified as a Federal Heritage Building, or located within a UNESCO World Heritage Site (Ministry of Tourism, Culture and Sport 2016).
Potential Built Heritage Resources and Cultural Heritage Landscapes	A potential built heritage resource or cultural heritage landscape is a property that has the potential for cultural heritage value or interest and is identified based on research, the MHSTCI screening checklist Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage



	Landscapes (2016), and professional expertise. This can include, but is not limited to, properties/project area that contain a parcel of land that is the subject of a commemorative or interpretive plaque, is adjacent to a known burial site and/or cemetery, is in a Canadian Heritage River Watershed, or contains buildings or structures that are 40 or more years old (Ministry of Tourism, Culture and Sport 2016).
Significant	With regard to built heritage resources and cultural heritage landscapes, significant means “resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the <i>Ontario Heritage Act</i> . While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation” (Government of Ontario 2020a:51).
Vibration Zone of Influence	Area within a 50 m buffer of construction-related activities in which there is potential to affect an identified built heritage resource or cultural heritage landscape. A 50 m buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature and direction provided from the MHSTCI (Wiss 1981; Rainer 1982; Ellis 1987; Crispino and D’Apuzzo 2001; Carman et al. 2012). This buffer accommodates the additional threat from collisions with heavy machinery or subsidence (Randl 2001).

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## **1.0 INTRODUCTION**

### **1.1 Report Purpose**

ASI was contracted by HDR, on behalf of the City of Mississauga, to conduct a Cultural Heritage Report for the Lakeshore Transportation Studies: Lakeshore Bus Rapid Transit (BRT) Study. The purpose of this report is to present an inventory of known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures.

### **1.2 Project Overview**

The City of Mississauga developed the *Our Future Mississauga Strategic Plan (2009a)* with a key pillar being the development of a transit-oriented City and the *Lakeshore Road Transportation Master Plan and Implementation Strategy (2019)* continued to build upon this vision. This study will continue the vision developed through the *Lakeshore Road Transportation Master Plan and Implementation Strategy (2019)* to recognize and accommodate the infrastructure and transportation needs of the corridor while protecting the established and proposed residential communities within the study area.

This report includes the Lakeshore BRT Study which is part of the larger Lakeshore Transportation Studies. The Lakeshore BRT Study project study area (hereafter called the study area) consists of the Lakeshore Road East and the intersections along the roadway from Etobicoke Creek to approximately 50 m southwest of West Avenue and is generally bound by a mixture of residential, commercial, and industrial properties.

### **1.3 Description of Study Area**

This Cultural Heritage Report will focus on the project study area with an additional 50 m buffer (Figure 1). Generally, this includes properties adjacent to the study area and those within a 50 m buffer that may be subject to potential vibration impacts. This project study area has been defined as inclusive of those lands that may contain BHRs or CHLs that may be subject to direct or indirect impacts as a result of the proposed undertaking. Properties within the study area are located in the City of Mississauga.





Figure 1: Location of the study area

Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (CC-BY-SA)

## 2.0 METHODOLOGY

### 2.1 Regulatory Requirements

Although the *Ontario Heritage Act* is the main piece of legislation that determine policies, priorities and programs for the conservation of Ontario’s heritage, many other provincial acts, regulations and policies governing land use planning and resource development support heritage conservation including:

- The *Planning Act* (Ministry of Municipal Affairs and Housing 1990), which states that “conservation of features of significant architectural, cultural, historical, archaeological or scientific interest” (cultural heritage resources) is a “matter of provincial interest”. The *Provincial Policy Statement* (Government of Ontario 2020a), issued under the *Planning Act*, links heritage conservation to long-term economic prosperity and requires municipalities and the Crown to conserve significant cultural heritage resources.
- The *Environmental Assessment Act* (Ministry of the Environment 1990), which defines “environment” to include cultural conditions that influence the life of humans or a community. Cultural heritage resources, which includes archaeological resources, built heritage resources and cultural heritage landscapes, are important components of those cultural conditions.

Under the Transit Project Assessment Process (TPAP), the proponent is required to consider whether its proposed transit project could have potential negative impact on the environment. Under the process an objection can be submitted to the Ministry of the Environment, Conservation and Parks (MECP) about a matter of provincial importance that relates to the natural environment or has cultural heritage value or interest. The MECP expects a transit project proponent to make reasonable efforts to avoid, prevent, mitigate or protect matters of provincial importance.

The MECP's *Guide to Environmental Assessment Requirements for Transit Projects (Transit Guide)* (Ministry of the Environment, Conservation and Parks 2020) provides guidance to proponents undertaking the TPAP on how to meet the requirements of *Ontario Regulation 231/08* under the *Environmental Assessment Act* (Ministry of the Environment 1990). The Transit Guide encourages proponents to obtain information and input from appropriate government agency technical representatives before starting the TPAP to assist in meeting the timelines specified in the regulation, including the submission of a draft EPR for review and comment prior to issuing a Notice of Commencement.

Among the pre-planning activities outlined in Section 4.1 of the Transit Guide, a proponent is advised to conduct studies to:

- identify existing baseline environmental conditions;
- identify project-specific location or alignment (including construction staging, land requirements); and,
- identify expected environmental impacts and proposed measures to mitigate potential negative impacts.

The Ministry of Tourism, Culture and Sport (now administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)) prepared guidance on the preparation of Cultural Heritage Reports within the TPAP process (2019). This guidance is applicable to the current undertaking. The 2019 MHSTCI guidance states that the study will:

1. Identify existing baseline cultural heritage conditions within the study area. The consultants preparing the Cultural Heritage Report will need to define a study area and explain their rationale. MHSTCI recommends that the study area for the report include, at minimum, the project footprint and adjacent properties. Alternatively, the study area may include the project footprint and a study zone that is located immediately beside the footprint and extends a certain distance. The report will include a historical summary of the development of the study area and will identify all known or potential built heritage resources and cultural heritage landscapes in the study area. MHSTCI (2016) has developed screening criteria that may assist with this exercise: *Criteria for Evaluating for Potential Built Heritage Resources and Cultural Heritage Landscapes*.
2. Identify preliminary potential project-specific impacts on the known and potential built heritage resources and cultural heritage landscapes that have been identified. The report should include a description of the anticipated impact to each known or potential built heritage resource or cultural heritage landscape that has been identified.
3. Propose and recommend measures to avoid or mitigate potential negative impacts to known or potential BHRs and CHLs. The proposed mitigation measures are to inform the next steps of project planning and design.



Where a known or potential BHR or CHL is anticipated to be subject to adverse direct or indirect impacts, and where it has not yet been evaluated for cultural heritage value or interest (CHVI), completion of a Cultural Heritage Evaluation Report (CHER) is required to fully understand its CHVI and level of significance. If an adverse direct impact is identified, a CHER will be recommended for that BHR or CHL and it must be completed during the TPAP. If an adverse indirect impact is identified, a CHER will be recommended to be completed for that property during detailed design.

If a BHR or CHL is found to be of CHVI, then a Heritage Impact Assessment (HIA) will be required. The HIA will be undertaken by a qualified person as early as possible in the detailed design phase following the TPAP, and developed in consultation with, and submitted for review to, MHSTCI and interested parties including the municipal heritage planner and/or municipal heritage committee and Indigenous communities, as appropriate. The HIA will discuss the alternatives considered and recommend the preferred alternative to minimize or mitigate adverse effects on the property.

While some CHL are contained within individual property boundaries, others span across multiple properties. For certain CHLs, it will be more appropriate for the CHER and HIA to include multiple properties, in order to reflect the extent of that CHL in its entirety.

## 2.2 Municipal/Regional Heritage Policies

The study area is located within the City of Mississauga, in the Region of Peel. Policies relating to BHRs and CHLs were reviewed from the following sources:

- *City of Mississauga Official Plan (2020)*
- *Peel Region Official Plan (Office Consolidation 2018)*
- *Lakeshore Road Transportation Master Plan and Implementation Strategy (City of Mississauga and HDR 2019)*
- *Inspiration Lakeview Master Plan (City of Mississauga 2014)*
- *Our Future Mississauga Strategic Plan (City of Mississauga 2009a)*
- *2019 Culture Master Plan (City of Mississauga 2019)*
- *The Living City Policies for Planning and Development in the Watersheds of the Toronto and Region Conservation Authority (Toronto and Region Conservation Authority 2014)*
- *A Place to Grow: Growth Plan for the Greater Golden Horseshoe (Government of Ontario 2020b)*
- *Greenbelt Plan (Government of Ontario 2017)*

## 2.3 Identification of Built Heritage Resources and Cultural Heritage Landscapes

This Cultural Heritage Report follows guidelines presented in the *MTCS Sample Tables and Language for "Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment" and Environmental Project Reports (EPR) under Transit Project Assessment Process (TPAP) for Proponents and their Consultants (2019)*. The objective of this report is to present an inventory of known and potential BHRs and CHLs, and to provide a preliminary understanding of known and potential BHRs and CHLs located within areas anticipated to be directly or indirectly impacted by the proposed project.



In the course of the cultural heritage assessment, all potentially affected BHRs and CHLs are subject to inventory. Generally, when conducting an identification of BHRs and CHLs within a study area, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of BHRs and CHLs in a geographic area: background research and desktop data collection; field review; and identification.

Background historical research, which includes consultation of primary and secondary source research and historical mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the presence of sensitive heritage areas that correspond to nineteenth and twentieth-century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as retaining cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

A field review is then undertaken to confirm the location and condition of previously identified BHRs and CHLs. The field review is also used to identify properties that have not been previously identified on federal, provincial, or municipal databases or through other appropriate agency data sources.

During the cultural heritage assessment, a property is identified as a potential BHR or CHL based on research, the MHSTCI screening tool *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (Ministry of Heritage, Tourism and Sport 2016, now administered by the Ministry of Heritage, Sport, Tourism and Culture Industries), and professional expertise. In addition, use of a 40-year-old benchmark is a guiding principle when conducting a preliminary identification of BHRs and CHLs. While identification of a resource that is 40 years old or older does not confer outright heritage significance this benchmark provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from having cultural heritage value or interest.

## **2.4 Background Information Review**

To make an identification of previously identified known or potential BHRs and CHLs within the study area, the following resources were consulted as part of this Cultural Heritage Report.

### **2.4.1 Review of Existing Heritage Inventories**

A number of resources were consulted in order to identify previously identified BHRs and CHLs within the study area. These resources, reviewed on 10, 11, and 14 June, 2021, include:

- The *Heritage Register for Mississauga* (City of Mississauga 2018);
- *Cultural Landscape Inventory* (The Landplan Collaborative Ltd. et al. 2005);
- The *Ontario Heritage Act Register* (Ontario Heritage Trust n.d.);





- The *Places of Worship Inventory* (Ontario Heritage Trust n.d.);
- The inventory of Ontario Heritage Trust easements (Ontario Heritage Trust n.d.);
- The Ontario Heritage Trust's *An Inventory of Provincial Plaques Across Ontario*: a PDF of Ontario Heritage Trust Plaques and their locations (Ontario Heritage Trust 2018);
- Inventory of known cemeteries/burial sites in the Ontario Genealogical Society's online databases (Ontario Genealogical Society n.d.);
- Canada's Historic Places website: available online, the searchable register provides information on historic places recognized for their heritage value at the local, provincial, territorial, and national levels (Parks Canada n.d.);
- Directory of Federal Heritage Designations: a searchable on-line database that identifies National Historic Sites, National Historic Events, National Historic People, Heritage Railway Stations, Federal Heritage Buildings, and Heritage Lighthouses (Parks Canada n.d.);
- Canadian Heritage River System: a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage (Canadian Heritage Rivers Board and Technical Planning Committee n.d.); and,
- United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites (UNESCO World Heritage Centre n.d.).

#### **2.4.2 Review of Previous Heritage Reporting**

Additional cultural heritage studies undertaken within parts of the study area were also reviewed. These include:

- *2019 Culture Master Plan* (City of Mississauga 2019)
- *Technical Memorandum Cultural Resource Survey for the Lakeshore Road Transportation Master Plan (TMP) in the City of Mississauga* (Golder Associates Ltd. 2019)
- *Heritage Impact Assessment of the Property at 800 Hydro Road and of the Vicinity, Mississauga* (Dilse 2020)
- *Long Branch Outdoor Rifle Range 1300 Lakeshore Road East Cultural Heritage Assessment* (City of Mississauga Culture Division 2013)
- *A Physical, Historical and Contextual Assessment of 1239 Lakeshore Rd. E. Mississauga, Ontario* (Collins 2019)
- *Addition to the Heritage Inventory - Robert Speck House, 940 First Street, Ward 1* (City of Mississauga Community Services 2002)
- *Additions to the Heritage Inventory* (City of Mississauga Community Services 1999)



### 2.4.3 Stakeholder Data Collection

The following individuals, groups, and/or organizations were contacted to gather information on known and potential BHRs and CHLs, active and inactive cemeteries, and areas of identified Indigenous interest within the study area:

- Paula Wubbenhorst, Senior Heritage Coordinator, City of Mississauga (email communication 18 and 23 June, 17 September 2021). Email correspondence confirmed the location of the previously identified BHRs and CHLs within the study area. Municipal consultation also confirmed that the Lakeview Generation Plant has been demolished. Staff also provided a listing report for 940 First Street, a report for 1239 Lakeshore Road East, and a 1999 report on additions to the *Heritage Register*. Comments received on the draft report by email on 17 September 2021 also noted the location of three Vimy Oak trees, saplings grown from acorns collected in Vimy, France, on the property at 1352 Lakeshore Road East.
- The MHSTCI (email communication 18 and 22 June 2021). Email correspondence confirmed that there are no additional previously identified heritage resources or concerns regarding the study area. The MHSTCI also provided information regarding the ministry's advice for TPAP proponents.
- The Ontario Heritage Trust (email communication 18 and 23 June 2021). A response indicated that there are no conservation easements or Trust-owned properties within the study area.

### 2.5 Preliminary Impact Assessment Methodology

To assess the preliminary impacts of the proposed infrastructure improvements on identified BHRs and CHLs in the study area, identified resources were considered against a range of possible impacts as outlined by the MHSTCI (2019). Impacts may be positive or negative, direct or indirect, and may affect the property's potential cultural heritage value or interest. Additional factors such as the scale or severity of the impact, whether any changes are temporary or permanent, and if the alterations are reversible or irreversible, should be considered.

The MHSTCI (2019:10) states that "a direct adverse impact would have a permanent and irreversible negative affect on the cultural heritage value or interest of a property or result in the loss of a heritage attribute on all or part of the property".

Examples of such impacts include, but are not limited to:

- removal or demolition of all or part of any heritage attribute
- removal or demolition of any building or structure on the property whether or not it contributes to the cultural heritage value or interest of the property (i.e. non-contributing buildings)
- any land disturbance, such as a change in grade and/or drainage patterns that may adversely affect the property, including archaeological resources
- alterations to the property in a manner that is not sympathetic, or is incompatible, with cultural heritage value or interest of the property. This may include necessary alterations,



- such as new systems or materials to address health and safety requirements, energy-saving upgrades, building performance upgrades, security upgrades or servicing needs
- alterations for access requirements or limitations to address such factors as accessibility, emergency egress, public access, security
  - introduction of new elements that diminish the integrity of the property, such as a new building, structure or addition, parking expansion or addition, access or circulation roads, landscape features changing the character of the property through removal or planting of trees or other natural features, such as a garden, or that may result in the obstruction of significant views or vistas within, from, or of built and natural features
  - change in use for the property that could result in permanent, irreversible damage or negates the property's cultural heritage value or interest
  - continuation or intensification of a use of the property without conservation of heritage attributes

The MHSTCI (2019:10) states that “an indirect adverse impact would be the result of an activity on or near the property that may adversely affect its cultural heritage value or interest and/or heritage attributes”.

Examples of such impacts include, but are not limited to:

- shadows that alter the appearance of a heritage attribute or change the visibility of an associated natural feature or plantings, such as a tree row, hedge or garden
- isolation of a heritage attribute from its surrounding environment, context or a significant relationship
- vibration damage to a structure due to construction or activities on or adjacent to the property<sup>1</sup>
- alteration or obstruction of a significant view of or from the property from a key vantage point

The MHSTCI (2019:11) states that “positive impacts are those that may positively affect a property by conserving or enhancing its cultural heritage value or interest and/or heritage attributes”.

Examples of such impacts include, but are not limited to:

- changes or alterations that are consistent with accepted conservation principles, such as those articulated in MHSTCI's Eight Guiding Principles in the Conservation of Historic Properties, Heritage Conservation Principles for Land Use Planning, Parks Canada's Standards and Guidelines for the Conservation of Historic Places in Canada

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<sup>1</sup> Indirect impacts from construction-related vibration have the potential to negatively affect BHRs or CHLs depending on the type of construction methods and machinery selected for the project and proximity and composition of the identified resources. Potential vibration impacts are defined as having potential to affect an identified BHR or CHL where work is taking place within 50 m of features on the property. A 50 m buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature and direction provided from the MHSTCI (Wiss 1981; Rainer 1982; Ellis 1987; Crispino and D'Apuzzo 2001; Carman et al. 2012). This buffer accommodates any additional or potential threat from collisions with heavy machinery or subsidence (Randl 2001).



- adaptive re-use of a property – alteration of a heritage property to fit new uses or circumstances of the of property in a manner that retains its cultural heritage value of interest
- public interpretation or commemoration of the heritage property

Where any identified above-ground BHRs and CHLs may be affected by direct or indirect impacts, appropriate mitigation measures were developed. Mitigation is the process of minimizing or avoiding anticipated negative impacts to BHRs and CHLs. This may include, but is not limited to, such actions as avoidance, monitoring, protection, relocation, completing a CHER, a HIA, and documentation report, or employing suitable measures such as landscaping, buffering, or other forms of mitigation, where appropriate.

Where properties will be directly affected, the Cultural Heritage Report will recommend a CHER to be completed during the TPAP or during detailed design phase. A CHER should be undertaken in reference to specific municipal/regional Terms of Reference for undertaking a CHER, as applicable. If sufficient detail can be provided within the Cultural Heritage Report to identify and mitigate potential impacts, a CHER may not be necessary. CHERs will also not be required for previously evaluated properties where the heritage attributes have already been identified.

### **3.0 SUMMARY OF HISTORICAL DEVELOPMENT WITHIN THE STUDY AREA**

This section provides a brief summary of historical research. A review of available primary and secondary source material was undertaken to produce a contextual overview of the study area, including a general description of physiography, Indigenous land use, and Euro-Canadian settlement.

#### **3.1 Physiography**

The study area is situated within the Iroquois Plain physiographic region of southern Ontario which is a lowland region bordering Lake Ontario. This region is characteristically flat, and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of 300 km. The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements. The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building material, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman and Putnam 1984).

Between Hamilton and Toronto, along the north edge of the Iroquois plain physiographic region the ancient Lake Iroquois shoreline creates a distinct bluff of varying rocks and shales commonly known as the escarpment. The land between the ancient shoreline and the modern shoreline, which was the former bed of Lake Iroquois, is comprised of sandy soil in the Clarkson area as well as neighbouring communities from Aldershot to Humber Bay. These sandy soils were preferred over the adjoining areas which have clay and combined with being protected from frost because of the proximity to Lake Ontario and having good road and railway facilities, this two mile width of land became important for horticulture. The season was shorter in this area than on the south side of Lake Ontario which



distinguished the crops grown which included apples, pears, bush fruits, strawberries and vegetables (Chapman and Putnam 1984).

After almost 100 years of farming, the physiography of this area supported its impressive and quick change to residential, commercial and industrial uses, replacing the more than 15,000 acres of farms that existed in 1941 so that by the 1980s the whole of the Iroquois plain between Hamilton and Toronto was built up. The gravels were used for construction, the sand plains are excellent housing sites and the flat lake plain with bedrock is good for industrial uses which were established south of the study area. This can be seen in the area of Clarkson which was once highly agricultural and is now residential, commercial, and industrial in use (Chapman and Putnam 1984).

### **3.2 Summary of Early Indigenous History in Southern Ontario**

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years ago, or 11,000 Before the Common Era (B.C.E.) (Ferris 2013).<sup>2</sup> During the Paleo period (c. 11,000 B.C.E. to 9,000 B.C.E.), groups tended to be small, nomadic, and non-stratified. The population relied on hunting, fishing, and gathering for sustenance, though their lives went far beyond subsistence strategies to include cultural practices including but not limited to art and astronomy. Fluted points, beaked scrapers, and graters are among the most important artifacts to have been found at various sites throughout southern Ontario, and particularly along the shorelines of former glacial lakes. Given the low regional population levels at this time, evidence concerning Paleo-Indian period groups is very limited (Ellis and Deller 1990).

Moving into the Archaic period (c. 9,000 B.C.E. to 1,000 B.C.E.), many of the same roles and responsibilities continued as they had for millennia, with groups generally remaining small, nomadic, and non-hierarchical. The seasons dictated the size of groups (with a general tendency to congregate in the spring/summer and disperse in the fall/winter), as well as their various sustenance activities, including fishing, foraging, trapping, and food storage and preparation. There were extensive trade networks which involved the exchange of both raw materials and finished objects such as polished or ground stone tools, beads, and notched or stemmed projectile points. Furthermore, mortuary ceremonialism was evident, meaning that there were burial practices and traditions associated with a group member's death (Ellis and Deller 1990; Ellis et al. 2009).

The Woodland period (c. 1,000 B.C.E. to 1650 C.E.) saw several trends and aspects of life remain consistent with previous generations. Among the more notable changes, however, was the introduction of pottery, the establishment of larger occupations and territorial settlements, incipient horticulture, more stratified societies, and more elaborate burials. Later in this period, settlement patterns, foods, and the socio-political system continued to change. A major shift to agriculture occurred in some regions, and the ability to grow vegetables and legumes such as corn, beans, and squash ensured long-term settlement occupation and less dependence upon hunting and fishing. This development contributed to population growth as well as the emergence of permanent villages and special purpose

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<sup>2</sup> While many types of information can inform the precontact settlement of Ontario, such as oral traditions and histories, this summary provides information drawn from archaeological research conducted in southern Ontario over the last century.



sites supporting those villages. Furthermore, the socio-political system shifted from one which was strongly kinship based to one that involved tribal differentiation as well as political alliances across and between regions (Ellis and Deller 1990; Williamson 1990; Dodd et al. 1990; Birch and Williamson 2013).

The arrival of European trade goods in the sixteenth century, Europeans themselves in the seventeenth century, and increasing settlement efforts in the eighteenth century all significantly impacted traditional ways of life in Southern Ontario. Over time, war and disease contributed to death, dispersion, and displacement of many Indigenous peoples across the region. The Euro-Canadian population grew in both numbers and power through the eighteenth and nineteenth centuries and treaties between colonial administrators and First Nations representatives began to be negotiated.

The study area is within Treaty 13a, signed on August 2, 1805 by the Mississaugas and the British Crown in Port Credit at the Government Inn. A provisional agreement was reached with the Crown on August 2, 1805, in which the Mississaugas ceded 70,784 acres of land bounded by the Toronto Purchase of 1787 in the east, the Brant Tract in the west, and a northern boundary that ran six miles back from the shoreline of Lake Ontario. The Mississaugas also reserved the sole right of fishing at the Credit River and were to retain a one-mile strip of land on each of its banks, which became the Credit Indian Reserve. On September 5, 1806, the signing of Treaty 14 confirmed the Head of the Lake Purchase between the Mississaugas of the Credit and the Crown (Mississauga of the New Credit First Nation 2001; Mississaugas of the Credit First Nation 2017).

### **3.3 Historical Euro-Canadian Township Survey and Settlement**

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Indigenous trails, both along the lakeshore and adjacent to various creeks and rivers (ASI 2006). Early European settlements occupied similar locations as Indigenous settlements as they were generally accessible by trail or water routes and would have been in locations with good soil and suitable topography to ensure adequate drainage.

Historically, the study area is located in the former Toronto Township, County of Peel in part of Lots 4 – 10, Concession II south of Dundas Street (SDS); Lots 4 – 10, Concession III SDS; and, in the former Etobicoke Township, County of York, in part of Lot 11, Broken Front.

#### **3.3.1 Toronto Township and the City of Mississauga**

The City of Mississauga is comprised of the historical communities of Clarkson, Cooksville, Dixie, Erindale, Lakeview, Lorne Park, Malton, Meadowvale Village, Port Credit and Streetsville, which formed part of the Township of Toronto.

The Township of Toronto was originally surveyed in 1806 and 1807 by Samuel Wilmot, the Deputy Surveyor of Upper Canada. The first settler in this Township was Colonel Thomas Ingersoll. Philip Cody



was an early settler who opened an in Sydenham, later known as Fonthill and then as Dixie. The whole population of the Township in 1808 consisted of seven families, scattered along Dundas Street. The number of inhabitants gradually increased until the War of 1812 broke out, which gave considerable check to its progress. When the war was over, the Township's growth revived. The Credit River and numerous creeks provided for the establishment of saw and grist mills. Communities began to emerge, usually along the river or at crossroads along Dundas Street, which developed into the villages of Clarkson, Cooksville, Dixie, Erindale, Malton, Meadowvale Village, Port Credit and Streetsville, as well as the hamlet of Lakeview and numerous other settlements which later disappeared. In 1821 the township's population was 803. By 1851 over 7,500 people lived in the township and more than 36,000 acres were being farmed to produce barley, wheat, oats, vegetables and fruit. Small industries were located throughout the township, manufacturing products ranging from hosiery to ploughshares (ASI 2020).

During the second half of the nineteenth century, railways were built and the markets shifted. Water-powered industries in the rural areas could no longer compete with those in larger centres which were run by electricity. By 1901 the township's population had dropped considerably to 4,690. The economy did not recover until the 1950s, when new industries moved into the township and spurred massive growth. When the Township of Toronto became the Town of Mississauga in 1968, it had a population of 107,000 and covered 70,598 acres. It grew very quickly and the rural township transformed into an urban area, with over 1,200 industries locating in Mississauga by the 1970s. In 1974 the towns of Port Credit, Streetsville and Mississauga were amalgamated to become the City of Mississauga (Mika and Mika 1981).

The southeastern corner of Toronto Township appears to have become known as Lakeview in the 1920s (Hicks 2005a). During the nineteenth century it was farmland. Early settlers included the Caven, Duck, Lynd and Ogden families. The paving of Lakeshore Road in 1915 and the proximity to the GTR made Lakeview an attractive place for Toronto commuters to live. During World War II, Lakeview became an important centre for the production of small arms for Allied forces. In 1962, Ontario's largest electric generating station was completed just east of Lakeshore Road and Cawthra Road. It closed in 2005 (Heritage Mississauga n.d.).

### **3.3.2 Etobicoke Township**

The land which comprises the former Township of Etobicoke was alienated by the British from the Mississauga Nation by provisional treaty number 13, known as the "Toronto Purchase," dated at the Bay of Quinte on September 23, 1787. Due to certain irregularities contained in the original document, this purchase was confirmed by a second treaty dated August 1, 1805. Between 1784 and 1792, this part of Southern Ontario formed a part of the judicial District of Montreal in the Province of Quebec.

The first township survey was undertaken by Alexander Aitken in 1788. Abraham Iredell continued the survey work in 1795. Additional surveys of the township were made in 1798, by William Hambly, and by Samuel Wilmot in the winter of 1811. The reserve at the mouth of the Humber was surveyed by H.J. Castle in January 1838, and the road allowances were resurveyed in 1857.



The first “legal” settlers did not occupy their lands until the early years of the nineteenth century. “Settlement was delayed until a boundary dispute involving the Mississauga Indian reserve...was resolved.” Many of the early land grants along the township “front” were assigned to disbanded soldiers from the Queen’s Rangers. This was due to the fact that the Upper Canadian government wished to settle seasoned veterans in the township. These men would serve as a buffer, and would be called upon to defend the provincial capital from any possible armed invasion from the west (Mika and Mika 1977; Winearls 1991; Armstrong 1985).

The Township was named using a European corruption of a Mississauga word, *Wah-do-bekaung*., The etymology for this word was provided by Augustus Jones, an early provincial surveyor, as “the place where the alders grow.” The name was also sometimes spelled as “Atobicoake” and “Ytobicoke.” Some old maps rendered it as “Toby Cook,” which raised speculation about the possibility that the township honoured an early settler who bore this name (Gardiner 1899; Rayburn 1997). Mimico is said to have been derived from another Mississauga word, *Omimeca*, signifying “place of wild pigeons.” It was said that large flocks of migratory passenger pigeons used to feed in the fields along the Mimico Creek (Currell 1967; Heyes 1974; Mika and Mika 1981).

The township comprised part of the East Riding of York in the Home District which, between 1792 and 1800, was administered from Niagara. Following the abolition of the Districts in 1849, the Home District was succeeded in 1850, by the United Counties of York, Peel and Ontario. Ontario and Peel were elevated to separate county status in 1851-52 (Canada 1891; Armstrong 1985; Jonasson 2006). In 1805, it was noted that the Humber River flowed through this township, which contained the government sawmills. The Humber was an important carrying place trail. It was observed that “the tract between the Tobicoake and the head of the lake is frequented only by wandering tribes of Missassagues” (Boulton 1805). The river was also described by nineteenth century writers as being particularly rich in salmon (Smith 1851). In 1846, Etobicoke was described as “a well settled township,” with good land. The soil near the lake was sandy and timbered mainly in pine, but the quality of the land improved further back where the forests contained principally hardwood. The Humber was described as an “excellent mill stream.” The township then contained five grist mills and nine saw mills. The value of realty within the township increased dramatically during the second quarter of the nineteenth century (Smith 1846; Smith 1851).

### **3.3.3 Lakeshore Road**

The study area follows Lakeshore Road from Etobicoke Creek to East Avenue. The roadway is a continuation of an Indigenous route which followed the shore of Lake Ontario from Toronto to Niagara. Euro-Canadian development of the roadway began in 1804 after a council decision to construct a road between the Humber and the Credit Rivers in 1798. When the road opened it was originally known as “Lake Shore Road” The road was later extended to Burlington Bay prior to 1820. In 1820, the route was improved with new bridges across the rivers and creeks and the roadway was corduroyed. Over time, the upkeep and maintenance of Lakeshore Road went between private and government control. With the introduction of the automobile, there was a greater need for better roadways. The Ontario Department of Highways was created in 1913 and an Act passed to establish better roads and highways throughout Ontario. The following year, Lakeshore Road became the first in Canada to be designated a





cement highway. In 1944, the road became known as Lakeshore Road, referred to as east and west from Hurontario Street. Over time the road has been widened and repaved (Hicks 2005b).

### 3.4 Review of Historical Mapping

The 1859 *Map of the County of Peel* (Tremaine 1859), and the 1877 *Illustrated Historical Atlas of the County of Peel* (Walker and Miles 1877), were examined to determine the presence of historical features within the study area during the nineteenth century (Figure 2 and Figure 3). Historically, the study area is located in part of Lots 4 – 10, Concession II SDS; Lots 4 – 10, Concession III SDS in the former Toronto Township, County of Peel; and in part of Lot 11, Broken Front in the former Etobicoke Township, County of York,

It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases. For instance, they were often financed by subscription limiting the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases. The use of historical map sources to reconstruct or predict the location of former features within the modern landscape generally begins by using common reference points between the various sources. The historical maps are geo-referenced to provide the most accurate determination of the location of any property on a modern map. The results of this exercise can often be imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including differences of scale and resolution, and distortions introduced by reproduction of the sources.

The 1859 *Map of the County of Peel* (Figure 2) depicts Lakeshore Road as an historically-surveyed roadway with the same orientation as depicted in later mapping and observed during field review. Dixie Road is noted in the eastern half of the study area intersecting Lakeshore Road, and the Etobicoke Creek is depicted in the eastern limit of the study area. The study area vicinity is demonstrated to be in a sparsely-settled rural agricultural context, with five farmhouses fronting on Lakeshore Road depicted within the study area. The Hamilton & Toronto Railway is illustrated to the north of the study area with a parallel orientation to Lakeshore Road. The 1877 *Illustrated Historical Atlas of the County of Peel* (Figure 3) depicts the study area in a similar context, with a similar number of farmhouses within the study area, and similar alignments of roadways, the railway, and the Etobicoke Creek.

In addition to nineteenth-century mapping, historical topographic mapping and aerial photographs from the twentieth century were examined. This report presents maps and aerial photographs from 1909, 1954, 1974, and 1994 (Figure 4 to Figure 7).

The 1909 topographical map (Figure 4) reveals that few changes occurred to the study area vicinity in the early twentieth century. Lakeshore Road is still within a rural setting, however there are some additional residences noted throughout the study area. A golf and country club is illustrated at the northeast, and rifle ranges and other structures are noted south of the study area. Lakeshore Road also features a radial rail line along its length, and the rail line and roadway diverge slightly in the east portion of the study area at Etobicoke Creek, where both are carried over the creek by a series of bridges. The 1954 aerial photograph (Figure 5) demonstrates that the northern side of entire length of the study area experienced considerable residential development in the early twentieth century, while the majority of the area south of Lakeshore Road was developed into a military complex with rifle ranges evident. A large structure and parking lots labelled 'Shep' in the southeast portion of the study area indicate that



the area was also subject to development. 'Shep', also known as, SHEP, was the Soldier's Housing Emergency Premises. Shep was created in 1946 after soldiers were discharged from the army and needed places to live after being evicted from army housing and was dismantled in 1957 (Hicks 2005b). The 1974 topographical map (Figure 6) and the 1994 NTS (Figure 7) map both depict the study area in a similar context, indicating that few changes to the study area vicinity occurred in the late twentieth century. The northern portion of the study area is in a residential context, and the southern portion is an industrial area with a generating station, sewage disposal site, and filtration plant in the location of the former military complex. The shopping centre on the southeast is still depicted, and Marie Curtis Park is illustrated on the east adjacent to Etobicoke Creek.

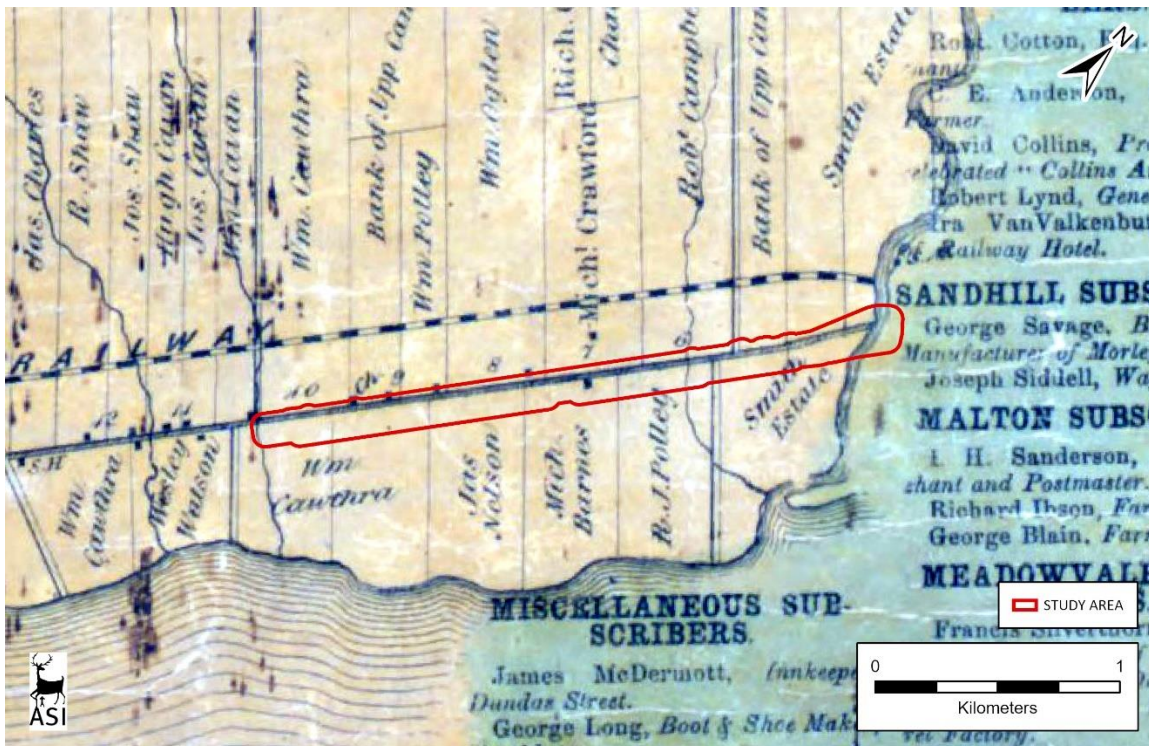


Figure 2: The study area overlaid on the 1859 Tremaine's Map of the County of Peel

Base Map: (Tremaine 1859)

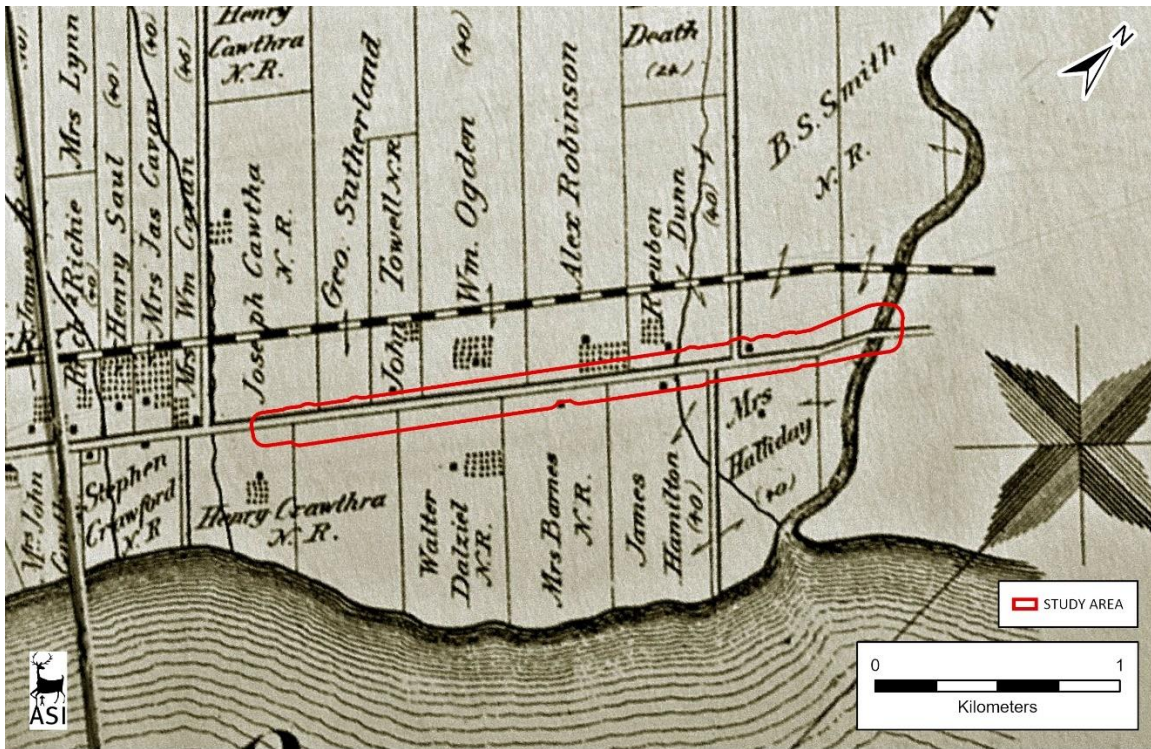


Figure 3: The study area overlaid on the 1877 *Historical Atlas of the County of Peel*  
Base Map: (Walker and Miles 1877)

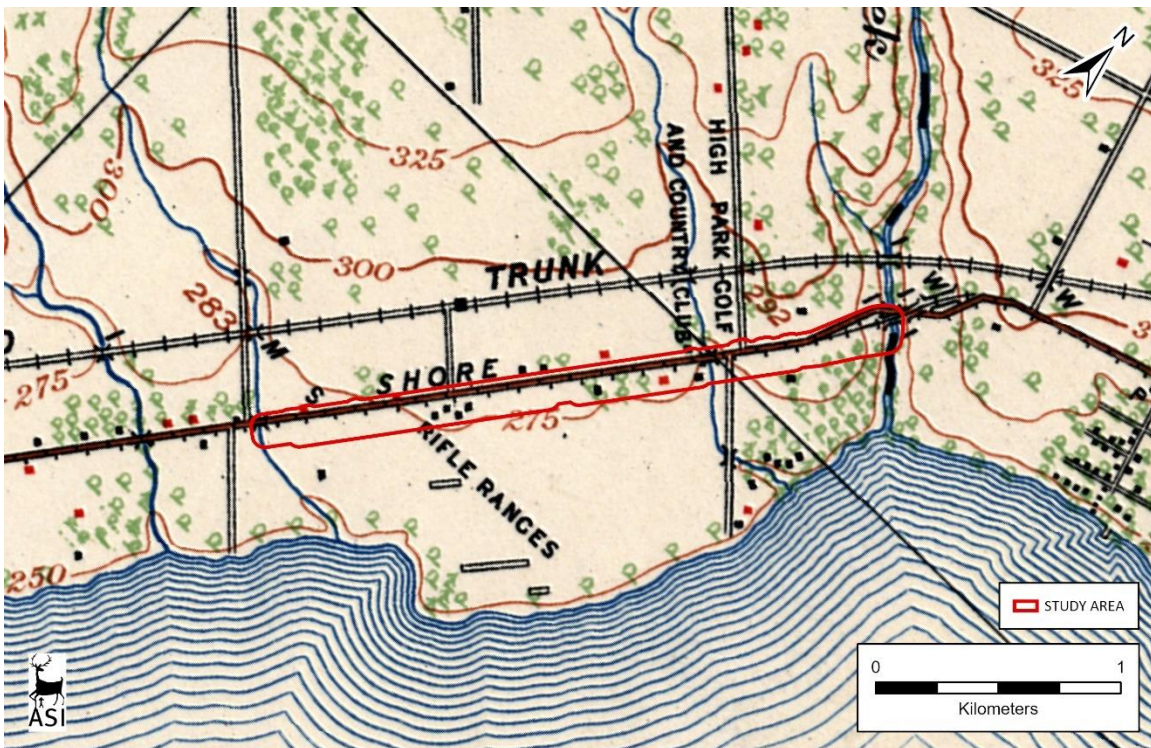


Figure 4: The study area overlaid on the 1909 topographic map of Brampton  
Base Map: Brampton Sheet No. 35 (Department of Militia and Defence 1909)



Figure 5: The study area overlaid on the 1954 aerial photograph of Mississauga  
Base Map: Plate 435.793 (Hunting Survey Corporation Limited 1954)

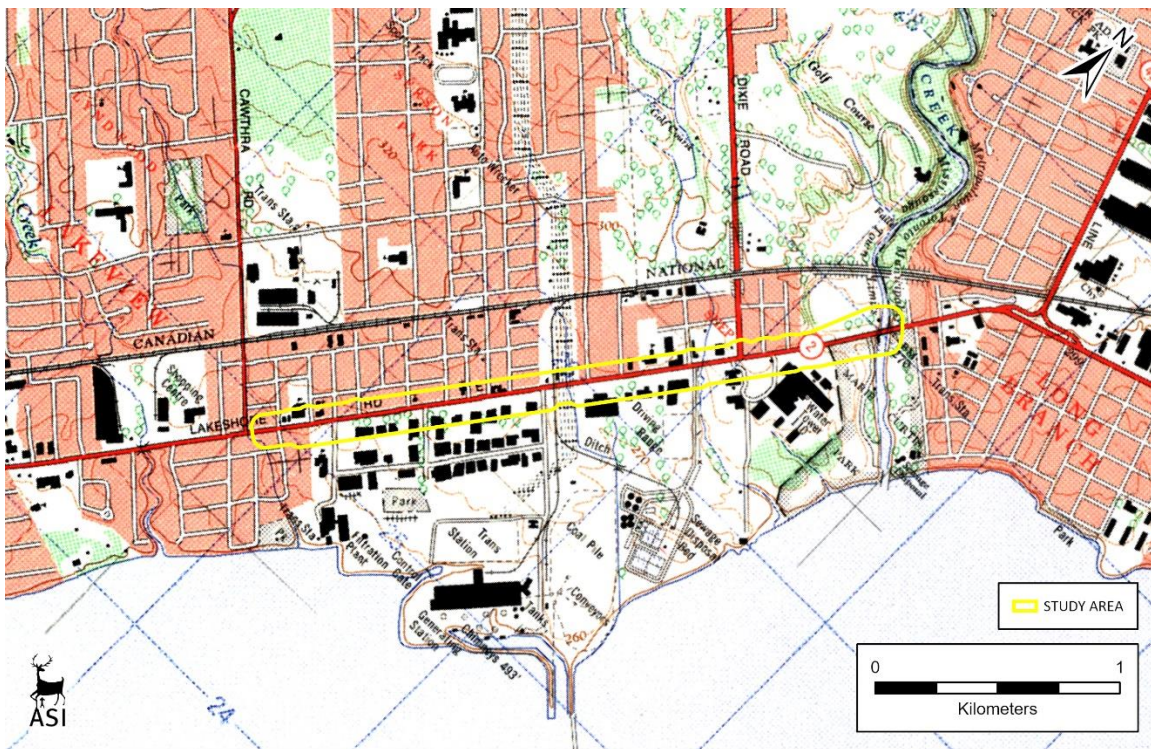


Figure 6: The study area overlaid on the 1974 topographic map of Port Credit  
Base Map: Port Credit Sheet 30M/12a (Department of Energy, Mines and Resources 1974)

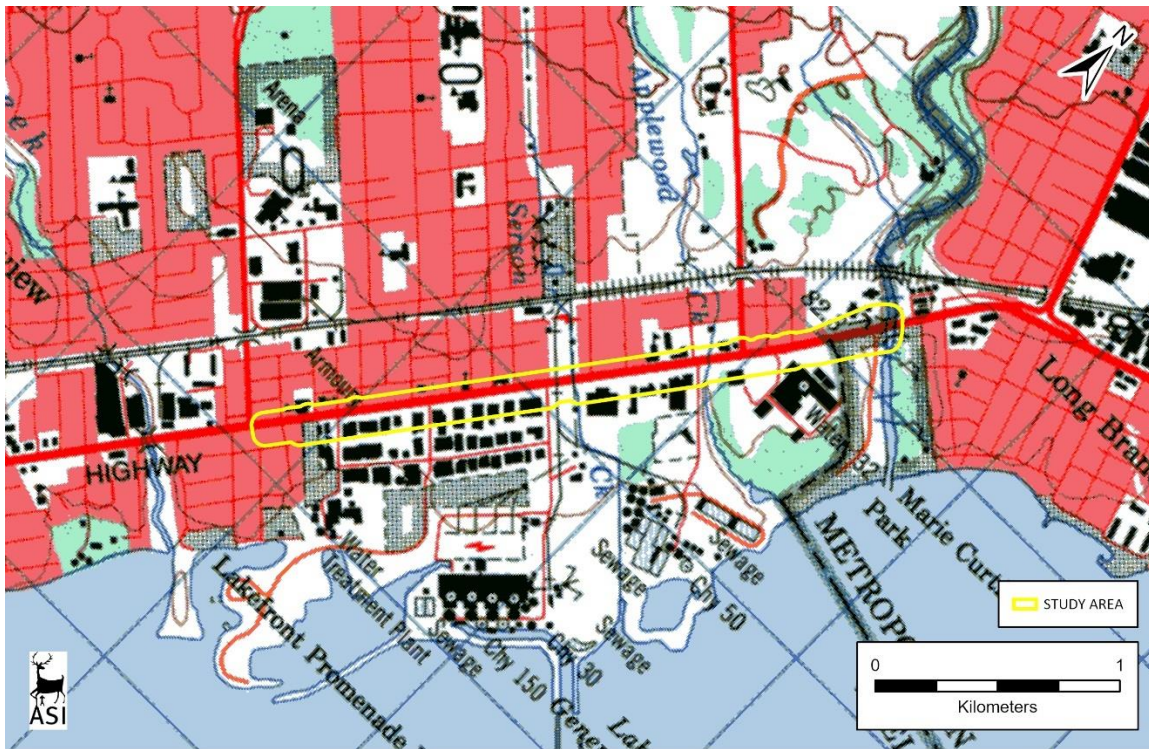


Figure 7: The study area overlaid on the 1994 NTS map of Brampton  
Base Map: Brampton Sheet 30M/12(Department of Energy, Mines and Resources 1994)

#### 4.0 EXISTING CONDITIONS

##### 4.1 Description of Field Review

A field review of the study area was undertaken by Kirstyn Allam of ASI, on 17 June 2021 to document the existing conditions of the study area from existing rights-of-way. The existing conditions of the study area are described below and captured in Plate 1 to Plate 12.

The study area is in the City of Mississauga and is focused on Lakeshore Road East from Etobicoke Creek to approximately 50 m southwest of West Avenue in advance of proposed infrastructure and transportation needs of the corridor. The study area is located in a developed context and is generally bound by a mixture of residential, commercial, and industrial properties.

The northern portion of the study area begins at Lakeshore Road East and Etobicoke Creek and continues along Lakeshore Road East for approximately 2.5 km to approximately 50 m southwest of West Avenue. Lakeshore Road East is an arterial roadway and is oriented in a general northeast-southwest alignment. Lakeshore Road East is paved and features four lanes of northeast-bound and southwest-bound vehicular traffic. Lakeshore Road East is lined with many residential properties on the north side, with some commercial properties interspersed along the study area. To the south of Lakeshore Road East is mainly industrial and commercial properties, along with Marie Curtis Park south of the study area. The Waterfront Trail also follows Lakeshore Road East for much of the study area.

Lakeshore Road East features sidewalks along both sides and generally narrow boulevards with concrete curbs.

Other arterial road intersecting the study area include: Dixie Road, Haig Boulevard, Ogden Avenue, Alexandra Avenue, Hydro Road, and Lakefront Promenade, which are all similarly paved and oriented in a general northwest-southeast alignment. Smaller residential roads intersect the study area and West Avenue at the western end of the study area are also paved with similar alignments.

Etobicoke Creek intersects with the northeastern portion of the study area. The creek flows in a general northwest-southeast alignment and a bridge carries Lakeshore Road East over the creek.

Applewood Creek intersects with the study area south of Dixie Road. The creek flows in a general northwest-southeast alignment and a culvert carries the creek under Lakeshore Road East.

Serson Creek intersects with the southwestern portion of the study area. The creek flows in a general northwest-southeast alignment and a culvert carries the creek under Lakeshore Road East.

*A Municipal Heritage Bridges Cultural Heritage and Archaeological Resources Assessment Checklist (Municipal Engineers Association 2014) was applied to the bridge and culverts and it was found that they do not have potential cultural heritage value or interest.*



Plate 1: The northern portion of the study area, looking southwest along Lakeshore Road East.



Plate 2: Looking south to the bridge crossing Etobicoke Creek.



Plate 3: View northwest at the Dixie Road and Lakeshore Road East intersection.



Plate 4: Looking southeast to industrial and commercial properties south of Lakeshore Road East.



Plate 5: Looking northeast along the Waterfront Trail south of Lakeshore Road East.





Plate 6: View north- northeast to commercial properties east of the Lakeshore Road East and Haig Boulevard intersection.



Plate 7: Looking northeast along Lakeshore Road East at Ogden Avenue.



Plate 8: View northwest to the residential Ogden Avenue.



Plate 9: Lakeshore Road East, looking southwest, commercial properties north of the roadway.



Plate 10: View northeast to the Lakeshore Road East and Lakefront Promenade intersection.



Plate 11: View northwest at the T-intersection of Lakeshore Road East and Westmount Avenue.





Plate 12: The Lakeshore Road East and East Avenue intersection, looking northeast.



#### 4.2 Identification of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes



Based on the results of the background research and field review, six BHRs and one CHL were identified within the study area. Of these seven known and potential BHRs and CHL, three properties are designated under Part IV of the OHA, one landscape is identified in the *Cultural Landscape Inventory* (The Landplan Collaborative Ltd. et al. 2005), two properties are listed in the *Heritage Register for Mississauga* (City of Mississauga 2018), and one property features an Ontario Heritage Trust plaque. There are two potential BHRs, one identified in *A Heritage Tour – Lakeview* (Heritage Mississauga 2020) and one identified during background research and field review. Based on the type of resources, their physical location, architectural style and/or function, some of these individual resources were combined into a larger CHL, resulting in a total of six BHRs and one CHL identified within the study area. A detailed inventory of known and potential BHRs and CHL within the study area is presented in Table 1. See Figure 8 to Figure 11 for mapping showing the location of identified BHRs and CHLs.

The Lakeview Generation Plant is included in the *Cultural Landscape Inventory* (The Landplan Collaborative Ltd. et al. 2005), however, municipal consultation and field survey confirmed that the CHL is no longer extant and therefore is not included in this assessment.

Table 1: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Study Area

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 1	School	1239 Lakeshore Road East	Known BHR – Listed in the <i>Heritage Register for Mississauga</i>	The school is located northwest of Lakeshore Road East, northeast of Orchard Road. The known heritage attributes include the two-and-a-half storey redbrick school building, constructed in 1923. The former Lakeview Park Public School initially opened as a four-room schoolhouse and was subsequently enlarged in 1954 and 1963. In 2001 the school was closed, and the building sold in 2016 for use as a private school (Heritage Mississauga 2020). The 1954 aerial photograph (Figure 5) depicts a building in the vicinity of the school.	 <p data-bbox="1954 955 2797 979">Plate 13: View north-northwest towards the school at 1239 Lakeshore Road East.</p>
BHR 2	Plaque	Corner of Lakeshore Road East and Hydro Road	Known BHR – Commemorative Feature	The plaque is located at the southeast corner of Lakeshore Road East and Hydro Road. The known heritage attribute includes the Ontario Heritage Trust plaque in recognition of Canada’s First Aerodrome. The 1954 aerial photograph (Figure 5) depicts the area of the former aerodrome, south of Lakeshore Road East.	 <p data-bbox="1954 1651 2797 1705">Plate 14: View southeast towards the plaque at the corner of Lakeshore Road East and Hydro Road.</p>



Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 3	Church	999 Lakeshore Road East	Potential BHR – Identified during background research and field review	The church is located at the northwest corner of Lakeshore Road East and Edgeleigh Avenue. The potential heritage attributes include the St. Joseph Syriac Catholic Church (the former St. Nicholas Anglican Church) constructed in 1938 of multi-coloured stones (Hicks 2005b). The 1954 aerial photograph (Figure 5) depicts a large building in the location of the extant church.	 <p data-bbox="1954 919 2666 943">Plate 15: View north towards the church at 999 Lakeshore Road East.</p>
BHR 4	Residence	940 First Street	Known BHR - Listed in the <i>Heritage Register for Mississauga</i>	The residence is located on the south side of First Street, roughly equidistant from Meredith Avenue and Alexandra Avenue. The known heritage attributes include the one-and-a-half storey bungalow associated with Robert Speck, a local business owner and first mayor of the City of Mississauga (City of Mississauga Community Services 2002). The 1954 aerial photograph (Figure 5) depicts the area surrounding the residence as developed.	 <p data-bbox="1954 1608 2607 1632">Plate 16: View south towards the residence at 940 First Street.</p>

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 5	Former Radial Substation	811 Lakeshore Road East	Potential BHR – Identified in <i>A Heritage Tour - Lakeview</i>	<p>The former radial substation is located at the northwest corner of Lakeshore Road East and East Avenue. The potential heritage attributes include the single-storey rectangular building constructed as part of the Toronto &amp; York Radial Railway. It is believed to have been constructed between 1906 and 1923 to contain an electric dynamo which was built to boost the voltage for the electric radial car (Heritage Mississauga 2020). The 1954 aerial photograph (Figure 5) depicts the area surrounding the former radial substation as developed.</p>	 <p>Plate 17: View northeast towards the former radial substation at 811 Lakeshore Road East.</p>
BHR 6	Former Military Industrial Complex	1352 Lakeshore Road East	Known BHR – Designated under Part IV of the OHA (By-law # 0258-2009).	<p>The Small Arms Building at 1352 Lakeshore Road East is a building within the Arsenal Lands (CHL 1) that is individually designated under the OHA. The same designation by-law also identifies the Water Tower, another heritage attributes of the Arsenal Lands (CHL 1).</p> <p>A small stand of three Vimy Oak trees, which were grown from acorns collected in Vimy, France, are also located on this property, adjacent to the road right-of-way (City of Mississauga email communication 17 September 2021).</p> <p>The Statement of Cultural Heritage Value or Interest from the designation by-law (By-law # 0258-2009) and list of heritage attributes includes:</p> <p><b>Statement of Cultural Heritage Value or Interest:</b>                      The Small Arms Limited: Building and Water Tower have direct associations with the federal government, World War II, the corresponding Canadian war industry and the World War II influx of working women. The water tower also has direct associations with World War I rifle training. The property yields information that contributes to an understanding of the World War home front and is associated with the development of Lakeview. The Small Arms Building has direct associations with Allward and Gouinlock Architects.</p>	 <p>Plate 18: View south towards the Small Arms Limited Building.</p>

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
				<p>The Small Arms Limited Building and Water Tower define, maintain and support the character of the area, both the industrial character and the community of Lakeview itself. The water tower is a landmark.</p> <p>The Small Arms Limited Building displays a high degree of craftsmanship and artistic merit. The water tower is rare in Mississauga.</p> <p><b>Description of Heritage Attributes</b></p> <p>Key attributes that reflect the Small Arms Limited Building and Water Tower's historical/associative value:</p> <ul style="list-style-type: none"> <li>• the Modern and Modern Classical elements of the building, consistent with the World War II period</li> <li>• the shape and form of the water tower, consistent with the World War I period</li> <li>• the location of the: structures in Lakeview, on former rifle training grounds and near rifle range remnants, including baffles, concrete backstop, indoor rifle range and parade square, at 1300 Lakeshore Road East</li> <li>• the building's economic materials and construction methods</li> <li>• the two skylights; within a flat roof, and expansive wraparound glazing, of the rear portion of the building, which allow for an abundance of natural light required for work therein</li> </ul> <p>Key attributes that reflect the Small Arms Limited Building and Water Tower's contextual value:</p> <ul style="list-style-type: none"> <li>• their location in Lakeview</li> <li>• their location on the south side of Lakeshore Road, site of the former Long Branch Rifle Ranges, and alongside other industrial buildings</li> <li>• the height and distinctive shape and form of the water tower</li> <li>• the water tower's 'visibility from the surrounding area; including both Lakeview and Long Branch</li> <li>• the row of deciduous trees along the west side of the building, which are suggested in historical aerial photography</li> <li>• the generous setback and open space which allows for full visibility of the building from Lakeshore Road West</li> <li>• the woodlot to the rear of the property, which is suggested in historical photography</li> </ul> <p>Key attributes that reflect the Small Arms Limited Building's physical/design value:</p> <ul style="list-style-type: none"> <li>• the overall shape and form of the entire structure</li> <li>• the rectilinear shape and form of the component parts</li> <li>• the projecting pavilions of the front component</li> <li>• the flat roofs</li> </ul>	



Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
				<ul style="list-style-type: none"> <li>• the two skylights of the rear component and their shape and form</li> <li>• the chimney, its shape, form, with setback upper portion, concrete trim, and placement in the "bridge" section that connects the front and rear components</li> <li>• the steel fascia and steel framed windows</li> <li>• the rectilinear shape and form of the windows</li> <li>• the sash windows on the front component</li> <li>• the wraparound full glazing that comprises the upper three quarters of the rear component, and its continuous concrete sill</li> <li>• the multiple window panes in each window - 12 panes on the front component and 25 panes on the rear component (except where there are doors) - and their consistent shape and form</li> <li>• the light fixtures on the exterior of the rear component</li> <li>• the common bond brick sheathing with sixth course headers</li> <li>• the symmetrical arrangement of the façade</li> <li>• the entryway with mortared stone pilasters and concrete slab canopy</li> <li>• the single simple light fixtures that hangs from the main door canopy</li> <li>• the shape and form of the entryway with a tall transom window</li> <li>• the concrete banding-that connects the windows and extends slightly beyond them</li> <li>• the concrete lintels and sills that extend slightly beyond the windows</li> <li>• the concrete mortared jambs that flank the window over the main entrance</li> <li>• the concrete slab foundation</li> <li>• the Modern font of the building address</li> </ul> <p>For additional information, please see the by-law available via this <a href="#">link</a>.</p>	

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHL 1	Industrial	Arsenal Lands CHL	<p>Known CHL – Identified in the 2005 <i>Cultural Landscape Inventory</i></p> <p>Features:                      1300 Lakeshore Road East, Designated under Part IV of the OHA (By-law # 0144-2017)</p> <p>1300A Lakeshore Road East, Designated under Part IV of the OHA (By-law # 0170-2012)</p> <p>1352 Lakeshore Road East, Designated under Part IV of the OHA (By-law # 0258-2009) (See BHR 6)</p>	<p>The Arsenal Lands are located south of Lakeshore Road East, west of Etobicoke Creek to Fergus Avenue. The known heritage attributes include the Small Arms Limited Building and the water tower; and their historical/associative value, their design value, and their contextual value within the City of Mississauga and the war effort (City of Mississauga 2009b). The 1954 aerial photograph (Figure 5) depicts the Small Arms Limited Building and the water tower. A small stand of three Vimy Oak trees, which were grown from acorns collected in Vimy, France, are located on 1352 Lakeshore Road East, adjacent to Lakeshore Road East (City of Mississauga email communication 17 September 2021).</p> <p>The Outdoor Firing Range (1300 Lakeshore Road) and the Long Branch Indoor Rifle Range (1300A Lakeshore Road) are located south of Lakeshore Road East and west of Dixie Road. The known heritage attributes include the wooden baffles and concrete backstop associated with the Outdoor Firing Range and the Long Branch Indoor Firing Range building. The 1909 topographic map (Figure 4) depicts rifle ranges south of Lakeshore Road East.</p> <p>The City of Mississauga’s <i>Cultural Landscape Inventory</i> describes the Arsenal Lands (L-IND-3) as follows:</p> <p>In World War I, Canada’s first aerodrome and flying school was established on the Arsenal Lands by the Curtis Aeroplane Company (later supplanted by Malton/Pearson). Between 1917 and 1919, the area was used as a training centre for the Cadet Wing of the Royal Flying Corps. In World War II, the Canadian Small Arms School, a rifle range, and a munitions plant operated by Small Arms Limited occupied the Arsenal Lands. The water tower, perimeter fence, administrative building, rifle range and semi-subterranean rifle range in the form of a concrete bunker are the last visible remnants of the former uses of this site. Hydro One and the Police Cadet Training School presently occupy the administrative building, and the semi-subterranean rifle range is still used by a private gun club. Now primarily a park and open space, the Arsenal Lands are associated with both the natural environment and with significant historical developments (The Landplan Collaborative Ltd. et al. 2005).</p> <p>Within this CHL, the following three individual properties are protected under the OHA:</p>	 <p>Plate 19: View southwest to the water tower.</p>  <p>Plate 20: Aerial view of 1300 and 1300A Lakeshore Road East (Courtesy of Google Earth). Red arrow indicates the location of the Outdoor Firing Range, and the blue arrow indicates the location of the Indoor Firing Range.</p>

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
				<ul style="list-style-type: none"> <li>- 1352 Lakeshore Road East, designated under Part IV of the OHA (By-law # 0258-2009). For additional information, please see the by-law available via this <a href="#">link</a>.</li> <li>- 1300 Lakeshore Road East, designated under Part IV of the OHA (By-law # 0144-2017). For additional information, please see the by-law available via this <a href="#">link</a>.</li> <li>- 1300A Lakeshore Road East, designated under Part IV of the OHA (By-law # 0170-2012). For additional information, please see the by-law available via this <a href="#">link</a>.</li> </ul>	

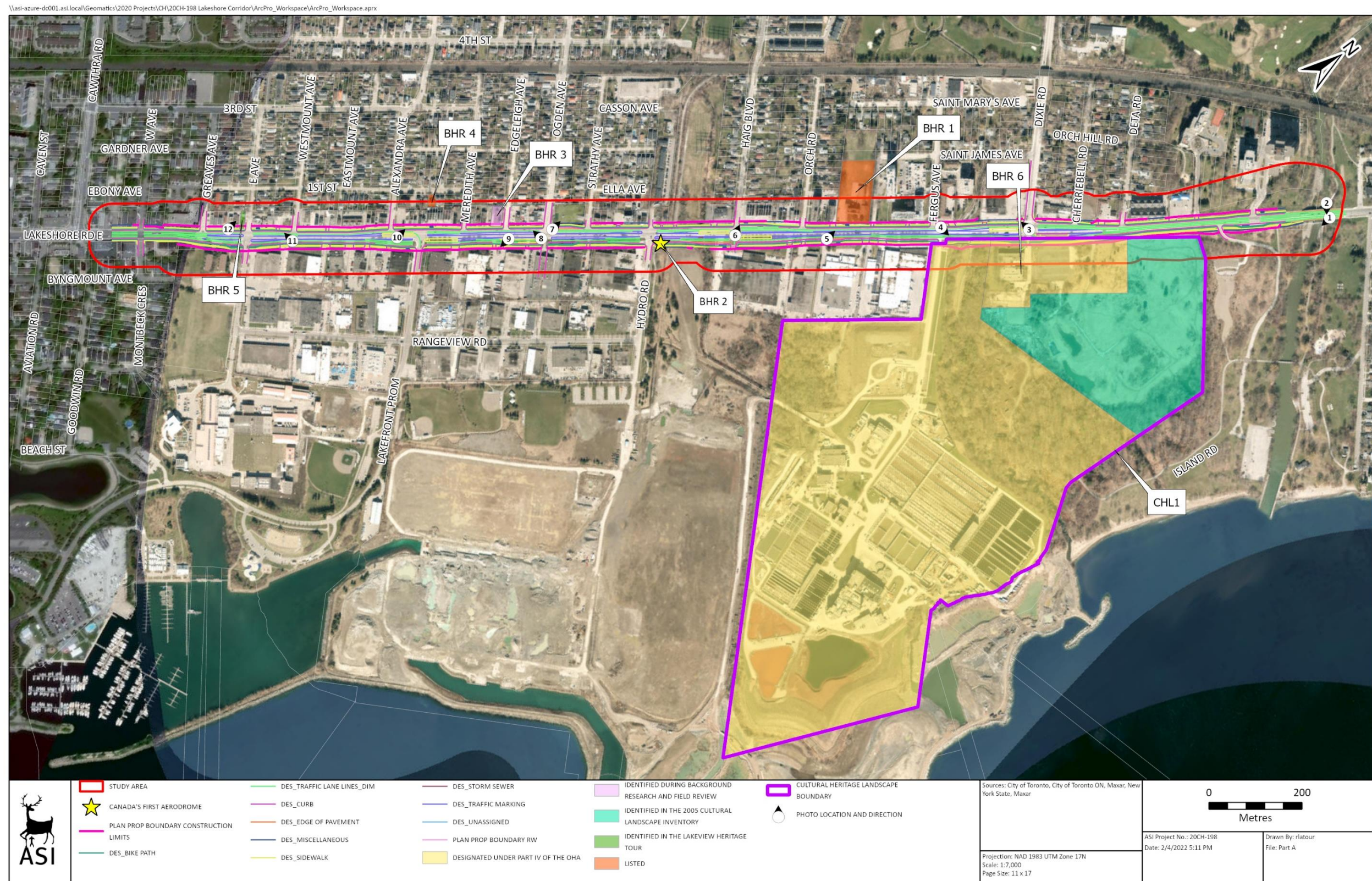


Figure 8: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Overview Sheet)

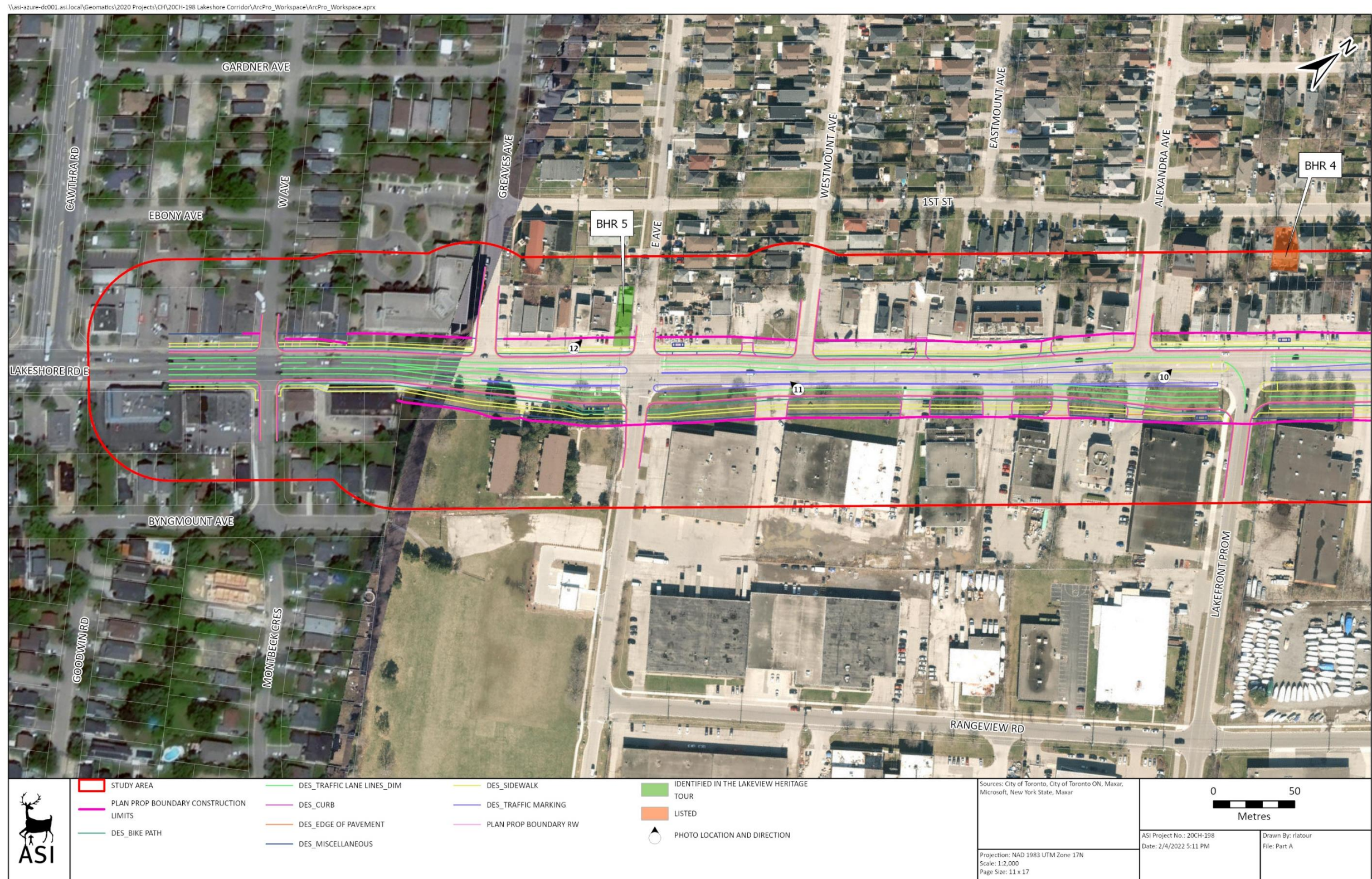


Figure 9: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Sheet 1)

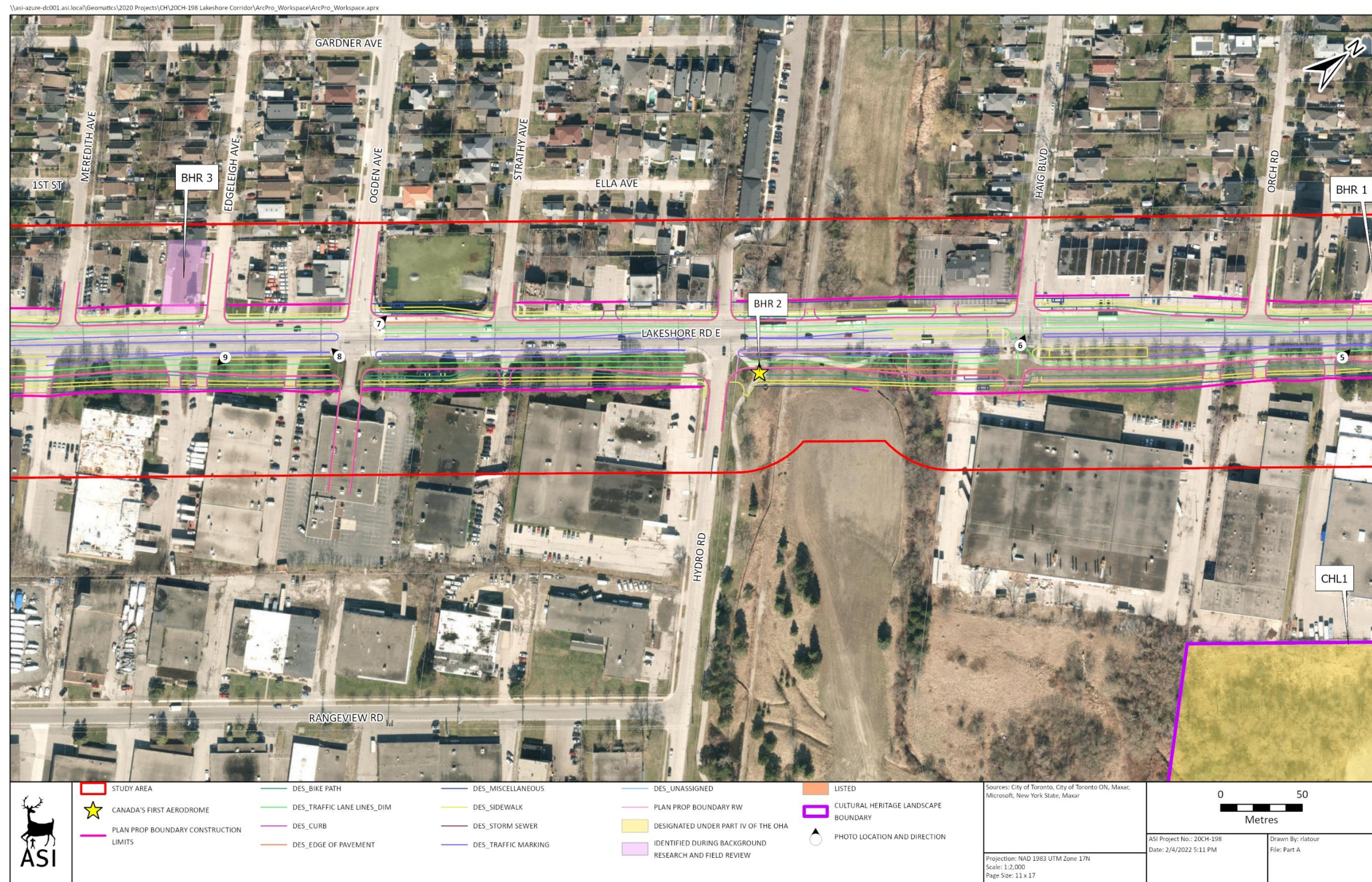


Figure 10: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Sheet 2)

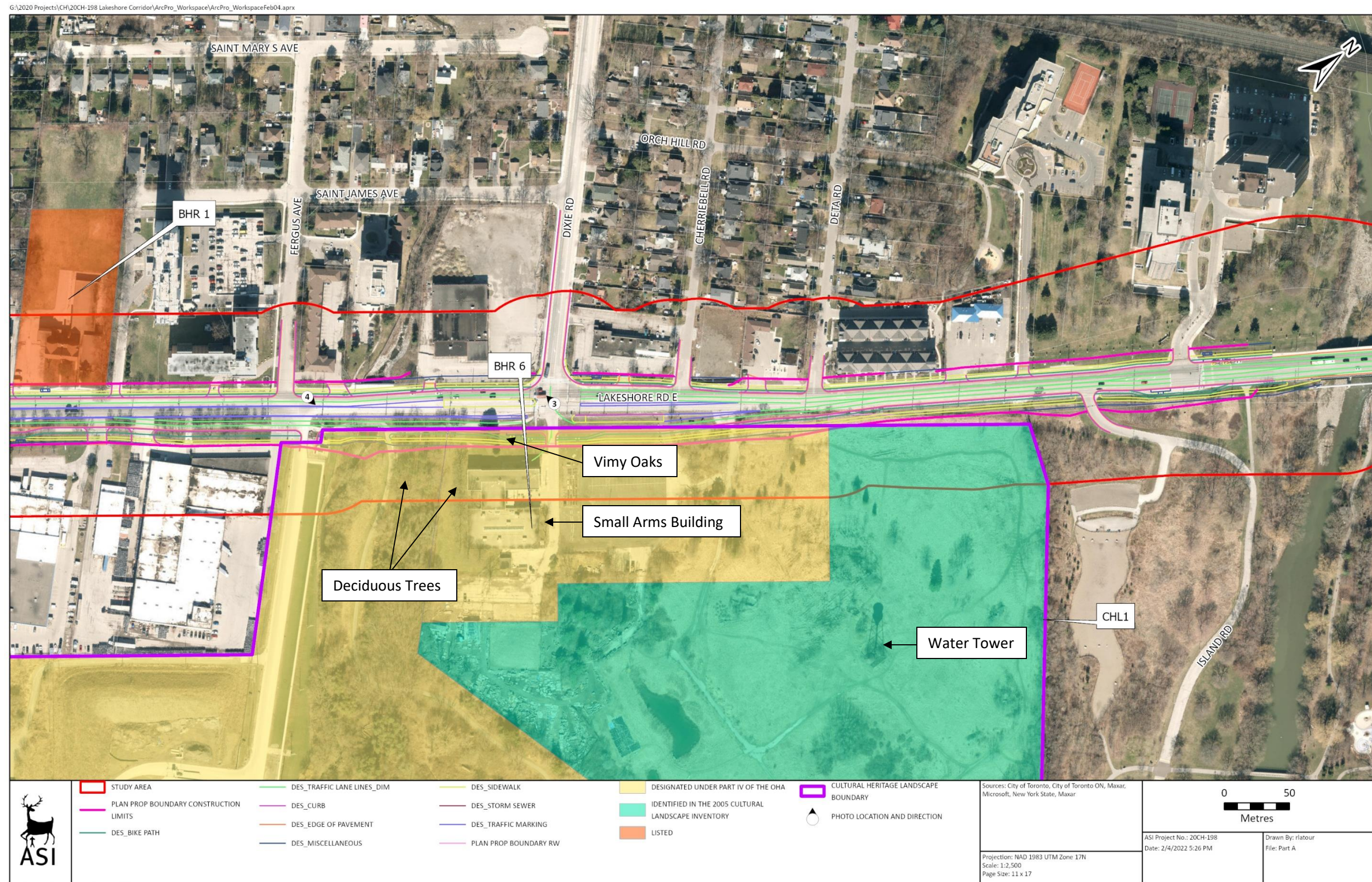


Figure 11: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Sheet 3)

## **5.0 PRELIMINARY IMPACT ASSESSMENT**

### **5.1 Description of Proposed Undertaking**

The study area involves the evolving infrastructure and transportation needs of the Lakeshore Road corridor. The proposed undertaking for the study area involves two km of BRT infrastructure along Lakeshore Road East from Etobicoke Creek to West Avenue and includes two km of median running BRT with three BRT stops along with cycle tracks, sidewalks, and associated streetscape. Mapping of the proposed alignment and the study area showing photographic plate locations and the locations of the identified BHRs and the CHL is provided in Figure 8 to Figure 11 in Section 4.2.

### **5.2 Analysis of Potential Impacts**

Table 2 outlines the potential impacts on all identified BHRs and CHLs within the study area.





Table 2: Analysis of Potential Impacts

Feature ID	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
BHR 1	1239 Lakeshore Road East	Known BHR – Listed in the Heritage Register for Mississauga	<p>Proposed limits of impact along the north side of Lakeshore Road East will result in approximately 1 m encroachment on to the property due to proposed grading limits. This encroachment will directly impact a portion of the front lawn, fence, pathway, and parking lot. It will avoid the mature trees located in the front yard of the school. The scale of the proposed bus shelter south of BHR 1 is not expected to visually impact views to or from this BHR or adversely impact the setting. The impacts will not result in direct adverse impacts to the known heritage attributes or to the setting given that there is an extant bus shelter in a similar location to the south of this BHR and this property is already located on an existing thoroughfare with bus transportation and sidewalks already in place. Accordingly, the resulting visual conditions will be similar to existing conditions.</p> <p>Direct impacts to the property are anticipated due to encroachment. However, no direct adverse impacts to the CHVI of the property or heritage attributes are anticipated due to encroachment or the proposed bus shelter.</p> <p>Indirect impacts to this property are possible due to construction activities in proximity to the BHR which may result in limited and temporary adverse vibration impacts.</p>	<p><b>Direct Impacts:</b>                      To ensure this property is not adversely impacted due to short-term encroachment resulting from construction activities (i.e. introduction of construction related physical, visual, noise-related, and atmospheric elements), the following measures are recommended:                      Staging areas should be selected so that they are non-invasive and avoid heritage attributes; and                      Post-construction landscape treatments carried out to restore pre-construction conditions</p> <p><b>Indirect impacts:</b>                      To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that the structure(s) on this property will be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include this property in the condition assessment of structures within the vibration zone of influence for this project.</p>
BHR 2	Corner of Lakeshore Road East and Hydro Road	Known BHR – Commemorative Feature	<p>The proposed limits of impact will encroach upon this property due to reconfiguration of the roadway and sidewalk to the northeast of the Lakeshore Road East and Hydro Road intersection. The proposed work will result in direct impacts to the plaque at this location through its removal.</p> <p>No indirect impacts were identified.</p>	<p><b>Direct Impact:</b>                      If reconfiguration of the roadway and sidewalk will require removal of this commemorative feature, the plaque should be removed prior to construction for safe-keeping, and returned to the same general location once work has been completed. Consultation with heritage staff or other appropriate staff at the municipality should be undertaken to determine an appropriate storage and relocation strategy for the plaque commemorative feature.</p>
BHR 3	999 Lakeshore Road East	Potential BHR – Identified during background research and field review	<p>Proposed limits of impact along the north side of Lakeshore Road East will result in approximately 5 m encroachment on to the grass lawn and parking lot due to proposed grading limits. The impacts will not result in direct adverse impacts to potential heritage attributes or to the setting given that this property is already located on an existing thoroughfare with bus transportation and sidewalks already in place. Accordingly, the resulting visual conditions will be similar to existing conditions.</p> <p>Direct impacts to the property are anticipated due to encroachment. However, no direct adverse impacts to the CHVI of the property or heritage attributes are anticipated due to encroachment. Indirect impacts to this property are possible due to construction activities in proximity to the BHR which may result in limited and temporary adverse vibration impacts.</p>	<p><b>Direct Impacts:</b>                      To ensure this property is not adversely impacted due to short-term encroachment resulting from construction activities (i.e. introduction of construction related physical, visual, noise-related, and atmospheric elements), the following measures are recommended:                      Staging areas should be selected so that they are non-invasive and avoid heritage attributes; and                      Post-construction landscape treatments carried out to restore pre-construction conditions</p> <p><b>Indirect impacts:</b>                      To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that the structure(s) on this property will be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include this property in the condition assessment of structures within the vibration zone of influence for this project.</p>
BHR 4	940 First Street	Known BHR - Listed in the Heritage Register for Mississauga	<p>Proposed limits of impact will not result in encroachment on to this property.</p> <p>No direct impacts to this property are anticipated.</p> <p>Indirect impacts to this property are possible due to construction activities in proximity to property which may result in limited and temporary adverse vibration impacts.</p>	<p><b>Indirect impacts:</b>                      To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that the structure(s) on this property will be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include this property in the condition assessment of structures within the vibration zone of influence for this project.</p>



Feature ID	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
BHR 5	811 Lakeshore Road East	Potential BHR – Identified in A Heritage Tour - Lakeview	<p>Proposed limits of impact along the north side of Lakeshore Road East will result in approximately 5 m encroachment on to the parking lot due to proposed grading limits. The impacts will not result in negative adverse impacts to potential heritage attributes or to the setting given that this property is already located on an existing thoroughfare with bus transportation and sidewalks already in place. Accordingly, the resulting visual conditions will be similar to existing conditions.</p> <p>Direct impacts to the property are anticipated due to encroachment. However, no direct adverse impacts to the CHVI of the property or heritage attributes are anticipated due to encroachment.</p> <p>Indirect impacts to this property are possible due to construction activities in proximity to the BHR which may result in limited and temporary adverse vibration impacts.</p>	<p><b>Direct Impacts:</b>                      To ensure this property is not adversely impacted due to short-term encroachment resulting from construction activities (i.e. introduction of construction related physical, visual, noise-related, and atmospheric elements), the following measures are recommended:                      Staging areas should be selected so that they are non-invasive and avoid heritage attributes; and Post-construction landscape treatments carried out to restore pre-construction conditions</p> <p><b>Indirect impacts:</b>                      To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that the structure(s) on this property will be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include this property in the condition assessment of structures within the vibration zone of influence for this project.</p>
BHR 6	1352 Lakeshore Road East	Known BHR - Designated under Part IV of the OHA (By-law # 0258-2009)	<p>Proposed limits of impact along the south side of Lakeshore Road East will result in approximately 13.5 m encroachment on to this property due to grading, property acquisition, and relocation of the sidewalk further on to this property. The proposed limits of impact will result in significant encroachment onto the frontage of the Small Arms Building property at 1352 Lakeshore Road East, which is a designated property under Part IV of the OHA. The proposed grading will also impact the stand of Vimy oak trees north of the Small Arms Building, the grass lawn, driveway, and parking lot. Further, the generous setback from Lakeshore Road East and row of deciduous trees to the west of the building, both noted as a heritage attribute in Table 1, is anticipated to be directly and adversely impacted through encroachment.</p> <p>Direct impacts to this known BHR are anticipated through significant encroachment on to this property and the removal of the Vimy oak trees and other deciduous trees on this property.</p> <p>Indirect impacts to this property are possible due to construction activities in proximity to the BHR which may result in limited and temporary adverse vibration impacts.</p>	<p><b>Direct impacts:</b>                      Preferred Option: Avoid removal of the Vimy oak trees to the north and row of deciduous trees to west of structure, and avoid encroachment on to this property.                      Alternative Option: Should it be determined that there is no other technically feasible option other than to remove the trees and to significantly encroach on to this property, an HIA will be undertaken by a qualified person as early as possible in the detailed design phase following the TPAP. It will be developed in consultation with, and submitted for review to, MHSTCI and interested parties including the municipal heritage planner and/or municipal heritage committee and Indigenous communities, as appropriate. A heritage permit may be required and further consultation with heritage staff at the municipality is recommended.</p> <p>If tree removal is determined to be required, consideration should be given to retaining a qualified arborist to advise on the feasibility of transplanting the Vimy oaks and retaining cuttings of the deciduous trees for propagation and replanting on site following construction.</p> <p><b>Indirect impacts:</b>                      To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that the structure(s) on this property will be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include this property in the condition assessment of structures within the vibration zone of influence for this project.</p>

Feature ID	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHL 1	Arsenal Lands CHL	<p>Known CHL – Identified in the 2005 Cultural Landscape Inventory</p> <p>Features:                      1300 Lakeshore Road East, Designated under Part IV of the OHA (By-law # 0144-2017)</p> <p>1300A Lakeshore Road East, Designated under Part IV of the OHA (By-law # 0170-2012)</p> <p>1352 Lakeshore Road East, Designated under Part IV of the OHA (By-law # 0258-2009)</p>	<p>Proposed limits of impact along the south side of Lakeshore Road East will result in up to 23 m encroachment on to this CHL (which includes 1300 and 1300A Lakeshore Road, both designated properties under Part IV of the OHA) due to grading, property acquisition, relocation of the sidewalk further on to this property, and the removal of a perimeter fence that is noted as a heritage attribute in the Cultural Landscape Inventory. Significant property acquisition and significant encroachment on to a designated heritage property will typically trigger the heritage permit process.</p> <p>The proposed limits of impact will result in significant encroachment (approximately 13.5 m) onto the frontage of the Small Arms Building property at 1352 Lakeshore Road East, which is a designated property under Part IV of the OHA. The proposed grading will also impact the stand of Vimy oak trees north of the Small Arms Building, a row of deciduous trees to the west of the building, the grass lawn, driveway, and parking lot. Further, the generous setback from Lakeshore Road East, noted as a heritage attribute in Table 1, is anticipated to be reduced through encroachment.</p> <p>No adverse direct or indirect impacts to 1300 and 1300A Lakeshore Road East (Indoor and Outdoor Rifle Ranges) are anticipated.</p> <p>Direct impacts to this known CHL are anticipated through significant encroachment on to this property and the removal of the perimeter fence associated with the Arsenal Lands Cultural Heritage Landscape, Vimy oak trees, and other deciduous trees.</p> <p>Indirect impacts to this property are possible due to construction activities in proximity to the CHL which may result in limited and temporary adverse vibration impacts.</p>	<p>Direct impacts:                      Preferred Option: Avoid removal of the Vimy oak trees and deciduous trees on 1352 Lakeshore Road East, and avoid significant encroachment on to this property. Avoid removal of perimeter fence and avoid significant encroachment on 1300 and 1300A Lakeshore Road East.                      Alternative Option: Should it be determined that there is no other technically feasible option other than to remove the trees and perimeter fence and to significantly encroach on to this property, an HIA will be undertaken by a qualified person as early as possible in the detailed design phase following the TPAP. It will be developed in consultation with, and submitted for review to, MHSTCI and interested parties including the municipal heritage planner and/or municipal heritage committee and Indigenous communities, as appropriate. A heritage permit may be required and further consultation with heritage staff at the municipality is recommended. If tree removal is determined to be required, consideration should be given to retaining a qualified arborist to advise on the feasibility of transplanting the Vimy oaks and retaining cuttings of the deciduous trees for propagation and replanting on site following construction. The perimeter fence within CHL 1 should be replaced following construction.</p> <p>Indirect impacts:                      To ensure this property is not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that the structure(s) on this property will be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include this property in the condition assessment of structures within the vibration zone of influence for this project.</p>

Direct impacts to two identified BHRs and one CHL are anticipated as a result of the proposed undertaking. BHR 2 (Corner of Lakeshore Road East and Hydro Road), BHR 6 (Small Arms Building at 1352 Lakeshore Road East), and CHL 1 (Arsenal Lands CHL, including 1352 Lakeshore Road East, 1300 Lakeshore Road East and 1300A Lakeshore Road East) are anticipated to be directly impacted by the proposed alignment.

Direct impacts to BHR 2 (Corner of Lakeshore Road East and Hydro Road) are anticipated to involve the removal of the plaque at this location due to the proposed reconfiguration of the roadway and sidewalk. If reconfiguration of the roadway and sidewalk will require removal of this commemorative feature, the plaque should be removed prior to construction for safe-keeping, and returned to the same general location once work has been completed. Consultation with heritage staff or other appropriate staff should be undertaken to determine an appropriate storage and relocation strategy for this commemorative feature.

Direct impacts to BHR 6 (Small Arms Building at 1352 Lakeshore Road East) are anticipated to involve significant encroachment on to the property due to grading, property acquisitions, and relocation of the sidewalks. The proposed grading will also impact the stand of Vimy oak trees north of the Small Arms Building, the grass lawn, driveway, and parking lot. Further, the generous setback from Lakeshore Road East and row of deciduous trees to the west of the building, both noted as a heritage attributes in Table 1, are anticipated to be directly and adversely impacted encroachment. As there are direct impacts anticipated to BHR 6 (Small Arms Building at 1352 Lakeshore Road East) which is a designated property under Part IV of the OHA and within CHL 1, a resource-specific HIA is required in fulfillment of TPAP obligations under *Ontario Regulation 231/08* and as per the *City of Mississauga Official Plan* clause 7.4.1.10. The HIA should follow the *City of Mississauga Heritage Impact Statement Terms of Reference* (2012).

Direct impacts to CHL 1 (Arsenal Lands CHL) are anticipated to involve encroachment on to the property due to grading, property acquisitions, relocation of the sidewalks and the removal of a perimeter fence that is noted as a heritage attribute in the *Cultural Landscape Inventory*. The proposed limits of impact will result in significant encroachment onto the frontage of the Small Arms Building property at 1352 Lakeshore Road East, 1300 Lakeshore Road East, and 1300A Lakeshore Road East (each individually designated properties under Part IV of the OHA), contained within this CHL. The proposed grading will also impact the stand of Vimy oak trees north of the Small Arms Building, a row of deciduous trees to the west of the building, the grass lawn, driveway, and parking lot. Further, the generous setback from Lakeshore Road East, noted as a heritage attribute in Table 1, is anticipated to be reduced through encroachment. As there are direct impacts anticipated to CHL 1 (Arsenal Lands CHL), which is identified in the *Cultural Landscape Inventory* (2005) and to the individually designated properties under Part IV of the OHA within the CHL, a resource-specific HIA is required in fulfillment of TPAP obligations under *Ontario Regulation 231/08* and as per the *City of Mississauga Official Plan* clause 7.4.1.10. The HIA should follow the *City of Mississauga Heritage Impact Statement Terms of Reference* (2012).

Where feasible, the proposed alignment should be designed to avoid indirect impacts to these BHRs and CHL. To ensure the structures on these properties are not adversely impacted, construction and staging in the Lakeshore Road East right-of-way should be suitably planned to avoid all impacts to these properties. Suitable mitigation measures could include the establishment of no-go zones with fencing and issuing instructions to construction crews to avoid the BHRs and CHL.



Vibration impacts during construction activities may affect BHR 1, BHR 3 - BHR 6, and CHL 1 as a result of their location in close proximity to the proposed alignment. To ensure the structures on the properties at 1239 Lakeshore Road East (BHR 1), 999 Lakeshore Road East (BHR 3), 940 First Street (BHR 4), 811 Lakeshore Road East (BHR 5), 1352 Lakeshore road East (BHR 6) and the Arsenal Lands (CHL 1) containing 1352, 1300, and 1300A Lakeshore Road East are not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that the structures on these properties will be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include these properties in the condition assessment of structures within the vibration zone of influence for this project.

## 6.0 SUMMARY OF COMMUNITY DATA COLLECTION

Community data collection was undertaken to gather information on known and potential BHRs and CHLs within the study area, and to collect any other data related to known or potential CHVI in the study area. The results of this community data collection can be found in Section 2.4.3.

Additional engagement with the community was undertaken in September 2021 through submission of the draft *Cultural Heritage Report – Existing Conditions* (ASI 2021) to relevant municipal heritage staff. Feedback and comments were received from the City of Mississauga in September 2021, and were used to refine the findings and report. Further, the report was submitted to the MHSTCI in December 2021. The MHSTCI provided comment on January 14 2022, which has been reviewed and incorporated into this report as appropriate.

This Cultural Heritage Report will be made available for public review following the TPAP Notice of Completion in accordance with *Ontario Regulation 231/08*. Consultation with the public regarding the cultural heritage component of the Lakeshore BRT Study has been undertaken during a Public Information Centre (PIC)/community meeting. The first community meeting for the three projects which make up the Lakeshore Transportation Studies was held virtually on 28 September 2021. A virtual open house was also available on-demand from 2 September through 30 September 2021.

## 7.0 RESULTS AND MITIGATION RECOMMENDATIONS

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with a rural land use history dating back to the early nineteenth century that developed quickly during the early-twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are seven previously identified BHRs and CHLs within the study area. An additional two potential BHRs were identified during background research and field review. Based on the type of resources and their physical location, some of these individual resources were combined into a larger CHL, resulting in six BHRs and one CHL identified within the study area.



## 7.1 Key Findings

- A total of five known BHRs and one known CHL was identified within the study area. An additional two potential BHRs were identified within the study area.
- The six BHRs and one CHL identified in the study area include:
  - Three properties designated under Part IV of the OHA (BHR 6 and three properties within CHL 1);
  - One landscape identified in the *Cultural Landscape Inventory* (CHL 1);
  - Two properties listed in the *Heritage Register for Mississauga* (BHR 1, BHR 4); and,
  - One property with an Ontario Heritage Trust plaque (BHR 2);
  - One property identified in *A Heritage Tour - Lakeview* (BHR 5); and,
  - One property identified during background research and field review (BHR 3).
- Identified BHRs and CHL are historically, architecturally, and contextually associated with land use patterns in the City of Mississauga and more specifically representative of the early settlement along Lakeshore Road East, a nineteenth-century roadway.

## 7.2 Results of Preliminary Impact Assessment

- The proposed alignment is anticipated to result in direct impacts to two BHRs and one CHL: BHR 2 (Corner of Lakeshore Road East and Hydro Road), BHR 6 (1352 Lakeshore Road East), and CHL 1 (Arsenal Lands CHL, including 1352 Lakeshore Road East, 1300 Lakeshore Road East and 1300A Lakeshore Road East).
- Potential vibration impacts as a result of the proposed alignment is anticipated to result in indirect impacts to five known and potential BHRs and one known CHL: 1239 Lakeshore Road East (BHR 1), 999 Lakeshore Road East (BHR 3), 940 First Street (BHR 4), 811 Lakeshore Road East (BHR 5), 1352 Lakeshore Road East (BHR 6) and the Arsenal Lands (CHL 1 containing 1352, 1300, and 1300A Lakeshore Road East).

## 7.3 Recommendations

Based on the results of the assessment, the following recommendations have been developed:

1. Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified BHRs and CHLs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified BHRs and CHLs, et.
2. All of the identified BHRs and the CHL will potentially be effected by short-term disruption resulting from construction activities (i.e. introduction of construction related physical, visual, noise-related, and atmospheric elements). To mitigate short-term disruption to



- identified BHRs and the CHL resulting from construction activities, the following measures are recommended:
- a. Staging areas should be selected so that they are non-invasive and avoid heritage attributes; and
  - b. Post-construction landscape treatments carried out to restore pre-construction conditions.
3. Indirect impacts to identified BHRs and the CHL within 50 m of the proposed limited of impact are possible due to construction activities which may result in limited and temporary adverse vibration impacts to five known and potential BHRs and one known CHL: 1239 Lakeshore Road East (BHR 1), 999 Lakeshore Road East (BHR 3), 940 First Street (BHR 4), 811 Lakeshore Road East (BHR 5), 1352 Lakeshore Road East (BHR 6), and the Arsenal Lands (CHL 1 containing 1352, 1300, and 1300A Lakeshore Road East). To ensure that identified BHRs and the CHL are not adversely impacted during construction, baseline vibration monitoring should be undertaken in advance of construction. Should this advance monitoring assessment conclude that any features on these properties be subject to vibration impacts: (1) plan construction activities to avoid adverse vibration impacts; and where potential adverse vibration impacts cannot be avoided (2) a qualified engineer should include these properties in the condition assessment of structures within the vibration zone of influence for this project. Further, the Contractor must make a commitment to repair any damages caused by vibrations.
  4. Should future work require an expansion of the study area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.
  5. A summary of additional cultural heritage studies required during Detailed Design to address direct or indirect adverse impacts are identified in Section 7.3.1.
  6. The report should be submitted to the City of Mississauga and the MHSTCI for review and comment, and any other local heritage stakeholders that may have an interest in this project. The final report should be submitted to the City of Mississauga for their records.

### 7.3.1 Required Cultural Heritage Studies Following TPAP

The following is a summary of additional cultural heritage studies recommended by this Cultural Heritage Report that are required following TPAP (see Table 3).

Table 3: Required Cultural Heritage Studies Following TPAP

Feature ID	Location/Name	Required Assessment or Next Steps
BHR 2	Corner of Lakeshore Road East and Hydro Road	The plaque should be removed prior to construction for safe-keeping, and returned to the same general location once work has been completed. Consultation with heritage staff or appropriate municipal department should be undertaken during detail design to determine an appropriate storage and relocation strategy.



Feature ID	Location/Name	Required Assessment or Next Steps
BHR 6	1352 Lakeshore Road East	A Heritage Impact Assessment (HIA) will be undertaken by a qualified person as early as possible in the detailed design phase following the TPAP. It will be developed in consultation with, and submitted for review to, MHSTCI and the municipal heritage planner and/or municipal heritage committee and Indigenous communities, as appropriate. The HIA will discuss the alternatives considered and recommend the alternative to minimize or mitigate adverse effects on the property and the HIA should follow the <i>City of Mississauga Heritage Impact Statement Terms of Reference (2012)</i> .
CHL 1	Arsenal Lands CHL	An HIA will be undertaken by a qualified person as early as possible in the detailed design phase following the TPAP. It will be developed in consultation with, and submitted for review to, MHSTCI and the municipal heritage planner and/or municipal heritage committee and Indigenous communities, as appropriate. The HIA will discuss the alternatives considered and recommend the alternative to minimize or mitigate adverse effects on the property and the HIA should follow the <i>City of Mississauga Heritage Impact Statement Terms of Reference (2012)</i> .



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