



MINISTRY OF TRANSPORTATION

Environmental Guide for Built Heritage and Cultural Heritage Landscapes

Version: February 2007

MINISTRY OF TRANSPORTATION

Environmental Guide for Built Heritage and Cultural Heritage Landscapes

Part of the Environmental Standards and Practices

ISSUED BY:

PROVINCIAL AND ENVIRONMENTAL PLANNING OFFICE
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Comments and Suggestions

The Ministry of Transportation welcomes comments and suggestions on ways to improve the document with the objective of providing a practical and pragmatic approach to environmental management in the Province of Ontario. MTO anticipates that changes will be warranted to clarify, improve and incorporate new information. The format of the document is designed to accommodate such changes. Such revisions and amendments will be incorporated in later editions of this document. MTO will not formally respond to unsolicited comments submitted in response to the document.

Ce document hautement spécialisé n'est disponible qu'en anglais en vertu du règlement 411/97, qui en exempte l'application de la Loi sur les services en français. Pour obtenir de l'aide en français, veuillez communiquer avec le ministère des Transports, Bureau des services en français au: 905-704-2045 ou 905-704-2046.

VERSION HISTORY

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1 INTRODUCTION

The need for the identification, evaluation, management and conservation of Ontario's cultural heritage is acknowledged as an essential component of environmental assessment in Ontario. The Environmental Guide for Built Heritage and Cultural Heritage Landscapes (the Guide) provides guidance on how this is to be considered in transportation projects.

1.1 Purpose of this Document

This document provides technical guidance for assessing and preserving built heritage and cultural heritage landscape resources and mitigating impacts from transportation projects during MTO's design and construction process.

1.2 Objectives of this Document

This document will provide information to:

- improve the understanding of MTO and its agents of built heritage and cultural heritage landscape issues within the context of MTO's transportation planning, and highway design and construction process;
- provide detailed technical information regarding the assessment and management of built heritage and cultural heritage landscapes;
- ensure easy access to and consistent consideration of techniques across all MTO regions of the province;
- provide a "road map" to relevant MTO and Regulatory Agency documents; and
- ensure that MTO regulatory concerns are addressed in a consistent and comprehensive manner.

1.3 The Audience for this Document

This Guide is intended to assist Cultural Heritage Specialists and Environmental Planners by:

- providing a common understanding of issues;
- facilitating communication with each other and the public;
- clarifying the requirements and expectation of assessment and management of cultural resources; and
- clarifying the timing of assessment and management activities within MTO's design and construction process.

1.4 Related MTO Documents

This Guide is both procedural and technical in nature and makes reference to a number of other MTO documents:

Environmental Protection Requirements for Transportation Planning and Highway Design, Construction, Operation and Maintenance

Environmental Protection Requirements (EPRs) are a list of statements, organized by environmental factors. The EPRs are a synthesis and interpretation of statutes and their supporting regulations and formal government policies applicable to environmental aspects of transportation planning, and highway design, construction, operation and maintenance activities.

Class Environmental Assessment for Provincial Transportation Facilities, 2000

The *Environmental Assessment Act* (EA Act) provides for the preparation of Class Environmental Assessments (Class EA). MTO's Class EA is an approved planning document that defines groups of projects and activities and the environmental assessment (EA) processes, which MTO commits to following for each of these undertakings.

Environmental Reference for Highway Design

The *Environmental Reference for Highway Design* (ERD) addresses requirements for consultants undertaking MTO projects including the scope of work, staff qualifications, scheduling and documentation requirements for each environmental specialty area (Section 3.7 outlines the technical, documentation and qualification requirements for built heritage and cultural heritage landscapes).

Environmental Standards and Practices User Guide

Environmental Standards and Practices User Guide (*User Guide*) contains a brief overview of typical potential environmental impacts associated with MTO projects for each environmental factor, provides design considerations in managing those impacts and lists applicable technical documents (like this Guide). As such, the *User Guide* is a roadmap to relevant MTO environmental standards and practices.

Environmental Reference for Contract Preparation

The *Environmental Reference for Contract Preparation* (ERCP) contains a brief overview of potential environmental impacts associated with highway construction and all relevant Ontario Provincial Standard Specification (OPS), MTO Special Provisions (SP) and other contract documentation that may be used as part of a construction contract to mitigate those impacts.

Ontario Heritage Bridge Guideline for Provincially-Owned Bridges

In 2007, MTO released a guideline for provincially-owned heritage bridges. This is the sole guideline for bridge assessments for provincially-owned bridges and replaces the MCL's *Ontario Heritage Bridge Guideline* (see sub-section 2.1.1)¹.

Previous MTO Cultural Heritage Documents:

This Guide supersedes MTO's *Environmental Reference Book 4B: Historical Resources* (1989).

¹ At the time of writing, the Ontario Heritage Bridge Guideline for Provincially-Owned Bridges had not been released.

2 POLICY FRAMEWORK AND REFERENCE DOCUMENTS

The *Ontario Heritage Act*, as amended in 2006 is the provincial statute governing Cultural Heritage. In addition, the Ministry of Culture (MCL) and MTO have prepared the following guidelines to provide policy direction:

- *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (MCL, October 1992)²;
- *Guidelines on the Man-Made Heritage Component of Environmental Assessments* (MCL, 1980)¹;
- *Ontario Heritage Tool Kit* (MCL, 2006);
- *Mandatory Standards and Guidelines for Provincial Heritage Properties, under Part III, 1 of the OHA* (MCL, 2005);
- *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges* (MTO and MCL, 2007)³; and
- *Heritage Bridges Identification and Assessment Guide Ontario 1945 – 1965* (MCL, 2005).

From these policy documents, five (5) Environmental Protection Requirements were developed. To summarize, unless approved through the EA process no removal or demolition shall occur of cultural heritage resources that are:

- recognized, designated or protected by the *Ontario Heritage Act, Part IV or V*
- recognized or protected by:
 - the Ontario Heritage Trust formally known as the Ontario Heritage Foundation shall keep a register of “any other properties that in the opinion of the Minister are of cultural heritage interest”
 - the Canadian Register of Historic Places
 - the National Historic Sites and Monuments Board
 - the Federal Heritage Building Review Office (FHBRO) and/or
 - listed on municipal heritage inventories or registers;
- of heritage value and are considered to be important in defining the overall character of an area, but which are not designated, listed or recognized by government.

Furthermore, the character-defining elements of built heritage resources and cultural heritage landscapes shall be conserved, and the isolation of built heritage resources and cultural heritage landscapes shall be avoided.

² The new MCL Standards and Guidelines will supersede these guidelines and will provide direction to the provincial ministries and agencies, including MTO, on how to manage and conserve their heritage resources.

³ When released by MTO, the 2007 version will supersede the 1991 version of the Ontario Heritage Bridge Guide. Until that time, the 1991 version by MCL/MTO should be followed.

The fifth EPR discusses qualifications of the Cultural Heritage Specialist. See MTO *Environmental Reference for Highway Design – Section 3.7: Built Heritage and Cultural Heritage Landscapes* for qualification requirements for the Cultural Heritage Specialist.

2.1 Working within the Policy Framework

MCL describes built heritage resources, cultural heritage landscapes and archaeological resources as cultural heritage resources. The accepted federal and provincial practice is a rolling age of forty (40) years for the preliminary identification of cultural heritage resources that may be of heritage value.

The application of this preliminary age criterion does not imply however, that all built heritage resources or cultural heritage landscapes that are over forty (40) years old are worthy of the same levels of protection or preservation. Conversely there may be built heritage resources and cultural heritage landscapes less than forty (40) years old that have potential heritage value, often associated with their design qualities. The analysis throughout the study process addresses that part of the *Environmental Assessment Act*, subsection 1(c), which defines “*environment*” to include:

“...cultural conditions that influence the life of humans or a community”;

as well as,

“any building, structure, machine or other device or thing made by humans”.

The *Guidelines on the Man-Made Heritage Component of Environmental Assessments* state:

“When speaking of man-made heritage we are concerned with works of man and the effects of his activities in the environment rather than with moveable human artifacts or those environments that are natural and completely undisturbed by man.”

The guidelines presently available from MCL will be superseded by the release of Standards and Guidelines which will “set out the criteria and the process for the identification of (provincially owned) properties... that have cultural heritage value or interest” and “set standards for the protection, maintenance, use and disposal of (provincially owned) properties”. The guidelines state that one may distinguish broadly between two basic ways of visually experiencing cultural heritage resources in the environment, that is, as cultural heritage landscapes and as built heritage resources. Cultural heritage landscapes are a geographical area perceived as a collection of individual person-made built heritage resources set into a whole such as historical settlements, farm complexes, waterscapes, roadscares, railways, etc. They emphasize the interrelationship of people and the natural environment and convey information about the processes and activities that have shaped a community. Built heritage resources are individual, person-made or modified, parts of a cultural heritage landscape such as buildings or structures of various types, cemeteries, planting and landscaping structures, etc.

The MCL Guidelines describe the attributes necessary for the identification and evaluation of any discrete aggregation of person-made resources or cultural heritage landscapes and the attributes necessary for the identification and evaluation of these resources. Aggregations of individual built heritage resources usually form areas of homogenous character such as a rural area, a village, and a streetscape, etc. Heritage attributes, in relation to a property, and to buildings and structures on the real property are defined in the *Ontario Heritage Act* (OHA) as *the attributes of the property, buildings and structures that contribute to their cultural value or interest*.

MTO's *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges* is designed to encourage the conservation of heritage road bridges throughout Ontario by establishing a process for the identification and evaluation and outlining options to be considered when planning for alteration and improvements to road bridges. This guideline is to be used by engineers, planners and cultural heritage consultants responsible for provincial road projects as well as Municipal Heritage Committees and other heritage stakeholders concerned with the conservation of provincially-owned heritage bridges.

MCL maintains the Ontario Heritage Bridge List. The List provides a systematic process of identification of significant heritage bridges so their heritage value is acknowledged and evaluated as part of the process required by the Environmental Assessment Act *before proposed undertakings may affect the structure*. Once a bridge has been identified as having provincial significance it is entered into the Ontario Heritage Bridge List. Although MCL's listing of a heritage road bridge is a serious statement of a bridge's heritage status, it does not confer **statutory protection** to a bridge. The primary objective of the List is to guide planning decisions. Statutory protection is provided through municipal **designation** under the *Ontario Heritage Act*.

For further information on the process for listing heritage bridges refer to the Ministry of Transportation and Ministry of Culture document *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges* (2007) and the *Heritage Bridges Identification and Assessment Guide Ontario 1945 – 1965* (MCL, 2005).

3 OVERVIEW OF MTO'S CULTURAL HERITAGE ASSESSMENT AND MANAGEMENT PROCESS

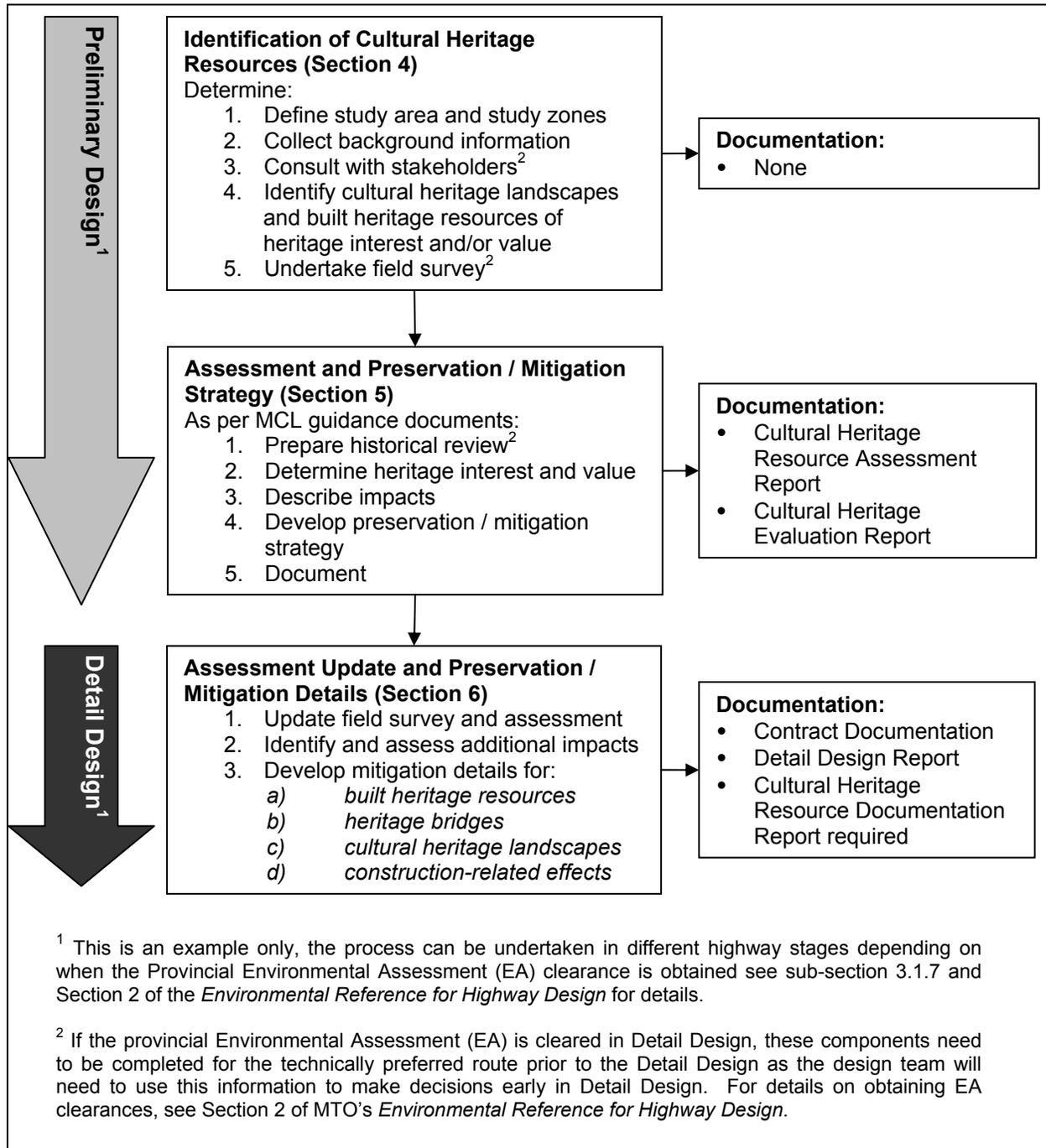
Improvements to or development of transportation facilities may potentially affect built heritage resources and cultural heritage landscapes through:

- the displacement of resources by removal or demolition and/or disruption by isolation; or
- disruption of resources by the introduction of physical, visual, audible or atmospheric elements that are not in keeping with the character and setting of the cultural heritage resources.

The MCL and MTO guidance documents discussed in Section 2 provide the technical aspects to cultural heritage resource assessment and mitigation management⁴. The remaining sections of this Guide will discuss the application of these techniques (i.e., MTO's cultural heritage assessment and management process) within MTO's design and construction process (see Figure 3.1).

⁴ The new MCL Standards and Guidelines will supersede these guidelines and will provide direction to the provincial ministries and agencies, including MTO, on how to manage and conserve their heritage resources.

Figure 3.1 Process for Undertaking Built Heritage and Cultural Heritage Landscape Assessment and Preservation / Mitigation within the Highway Design and Construction Process



4 IDENTIFICATION OF CULTURAL HERITAGE RESOURCES

The six (6) steps for the identification of built heritage and cultural heritage resources are:

1. define study area and study zones;
2. collect background information;
3. consult with stakeholders;
4. identify cultural heritage landscapes and built heritage resources of heritage interest and/or value;
5. undertake field survey; and
6. document.

An explanation of each step is provided in the following sub-sections.

4.1 Define Study Area and Study Zones

The study area is defined in the *Environmental Reference for Highway Design – Section 3.7: Built Heritage and Cultural Heritage Landscapes*. In summary, it is defined as all lands to be affected adversely either through displacement and/or disruption by the proposed highway design and construction within the existing and proposed highway Right-of-Way (ROW) and the off-route zones adjacent or abutting the existing ROW. In practice, the Study Area has three zones:

1. A ROW study zone comprises lands to be cleared and developed for the proposed highway right-of-way. Built heritage resources are displaced (through loss or removal). Cultural heritage landscapes are displaced (through loss) or disrupted through the introduction of new highway related resources.
2. A 25-metre study zone is located immediately beside the ROW and has potential for associated land clearance. The effects for built heritage resources are displacement (loss or removal), or disruption through isolation of built heritage resources retained adjacent to a new highway when visually set apart from the former setting and the introduction of physical, visual, audible or atmospheric elements not in keeping with the character or setting. The effects to cultural heritage landscapes are displacement (loss), or disruption through the isolation of cultural heritage landscapes retained adjacent to a new highway when visually set apart from the former settings and the introduction of physical, visual, audible or atmospheric elements not in keeping with the character or setting.
3. A 25 to 250-metre study zone further off the ROW comprising an area where land clearance is unlikely to occur, however, where impacts to built heritage resources and cultural heritage landscapes may be experienced. The effects for built heritage resources and cultural heritage landscapes is disruption through isolation when visually set apart from the former setting and the introduction of physical, visual, audible or atmospheric elements not in keeping the character or setting.

4.2 Collect Background Information

Existing background information is compiled and reviewed to identify major historical themes and activities associated with the lands located within the study zones and surrounding area. Information should be obtained from appropriate primary and secondary sources such as:

- any previous planning or Environmental Assessment Reports, recommendations and approvals;
- other relevant reports on previous heritage investigations of the study area;
- existing heritage information from:
 - Ministry of Culture (MCL)
 - municipal heritage committees
 - municipal planning departments and,
 - archives, libraries and heritage organizations;
- topographical and historical mapping; and
- published reports.

4.3 Consult with Stakeholders

Stakeholders must be consulted early in the cultural heritage assessment process. If a built heritage resource or cultural heritage landscape is identified within the study area, the heritage consultant should contact all relevant external agencies such as, but not limited to:

- municipal heritage committees;
- regions or resource-specific agencies, such as conservation authorities;
- other local heritage organizations; and
- local municipalities.

4.4 Identify Cultural Heritage Landscapes and Built Heritage Resources of Heritage Interest and/or Value

From the historical review information, data collection and consultation with stakeholders built heritage resources and cultural heritage landscapes can be identified and flagged prior to the field survey.

4.5 Undertake Field Survey

Confirmation and identification of built heritage resources and principal cultural heritage landscape resources affected by potential design and construction activities through a “roadside” survey.

The survey should be conducted to identify built heritage and cultural heritage landscape resources of forty (40) years of age or older within the Study Area⁵. Built heritage and cultural heritage landscape resources of less than 40 years in age, but considered to be of heritage interest due to associated architectural, cultural and environmental values should also be identified.

The field survey shall comprise the following steps:

1. Identify and map built heritage resources and cultural heritage landscape resources located within and adjacent to the area of investigation through field survey work.
2. Photograph each cultural heritage resource from the roadside and map the location and view-direction of each photograph.
3. Complete the Cultural Heritage Resource Forms (see Appendix A of this Guide) for each resource. For heritage bridges, use the Heritage Bridge Survey Form from MTO’s *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges*.

4.6 Document

No formal documentation is developed for the identification of cultural heritage resources. On some projects, the Cultural Heritage Specialists will provide to the project team a list including photographs of identified resources to assist in the Preliminary Design process.

⁵ “Study Area” is defined in Section 3.7: *Built Heritage and Cultural Heritage Resources* of MTO’s *Environmental Reference for Highway Design*

5 ASSESSMENT AND PRESERVATION / MITIGATION STRATEGY

The five (5) steps for the assessment of built heritage and cultural heritage landscape resources are:

1. prepare historical review;
2. determine heritage interest and value;
3. describe impacts;
4. develop preservation / mitigation strategy; and
5. document.

An explanation of each step is provided in the following sub-sections.

5.1 Prepare Historical Review

Prepare a historical review of the study area using primary and secondary records, historical atlas textual descriptions and mapping, topographic mapping and available archival aerial photography.

5.2 Determine Heritage Interest and Value

The Cultural Heritage Specialist will determine whether or not the resources are of character defining or character-contributing significance following the requirements in the MCL guidelines listed in Section 2. The Cultural Heritage Specialist will base the determination on a review of the background data, as confirmed through field survey, and agency consultation. Character defining resources should be evaluated for the jurisdictional level of significance, i.e., federal, provincial, regional, local or other community of interest.

Other information to be considered in determining significance includes:

- buildings, structures or cultural heritage landscapes of heritage value that are protected, including properties designated by municipalities under Part IV and V of the *Ontario Heritage Act* (R.S.O. 1990, c.O. 18), Ontario Heritage Trust formally known as the Ontario Heritage Foundation easements, and municipal easement properties;
- provincially-owned or leased heritage properties protected by the ORC/MCL heritage protocol agreement;
- buildings, structures, or sites and areas/cultural heritage landscapes listed on municipal inventories as potential sites/areas for designation;
- buildings, structures or cultural heritage landscapes of recognized provincial significance identified with Provincial historical plaques erected by the *Ontario Heritage Trust*;
- heritage bridges included on the Ontario Heritage Bridge List;

- buildings, structures or cultural heritage landscapes of recognized federal significance (e.g., National Register, FHBRO and the National Historic and Monuments Board, Canadian Register of Historic Places);
- all cemeteries (including any that are unmarked); and
- heritage resources identified as part of the MTO EA process.

Where no significance is attributed to a resource by any level of government, advisory committee or local historical organization, a professional opinion on heritage significance and sensitivities will be required. This can be expected in unorganized municipalities and in some rural areas. The professional opinion will be guided by the *Ontario Heritage Act* criteria for the evaluation of local, regional or provincial significance (see below) and a stand alone Cultural Heritage Evaluation Report will be prepared for the evaluation of the resource as required.

The *Ontario Heritage Act* criteria for determining cultural heritage significance and sensitivities with respect to provincial transportation projects are as follows (reproduced from the Environmental Protection Requirement⁶: HER-6 and HER-7 respectively):

- A) A property may be designated under Section 29 of the *Ontario Heritage Act* if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest:
1. The property has design value or physical value because it:
 - (a) is a rare, unique, representative or early example of a style, type, expression, material or construction method;
 - (b) displays a high degree of craftsmanship or artistic merit; or
 - (c) demonstrates a high degree of technical or scientific achievement.
 2. The property has historical value or associative value because it:
 - (a) has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community;
 - (b) yields, or has the potential to yield, information that contributes to an understanding of a community or culture; or
 - (c) demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
 3. The property has contextual value because it is:
 - (a) important in defining, maintaining or supporting the character of an area;
 - (b) physically, functionally, visually or historically linked to its surroundings; or,
 - (c) a landmark.

⁶ For the exact wording of the Environmental Protection Requirements, see MTO's *Environmental Protection Requirements for Transportation Planning and Highway Design, Construction, Operation and Maintenance*.

- B) A property may be designated under section 34.5 of the *Ontario Heritage Act* if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest, or of provincial significance:
1. The property represents or demonstrates a theme or pattern in Ontario's history.
 2. The property yields, or has the potential to yield, information that contributes to an understanding of Ontario's history.
 3. The property demonstrates an uncommon, rare or unique aspect of Ontario's cultural heritage.
 4. The property is of aesthetic, visual or contextual importance to the province.
 5. The property demonstrates a high degree of excellence or creative, technical or scientific achievement at a provincial level in a given period.
 6. The property has a strong or special association with the entire province or with a community that is found in more than one part of the province. The association exists for historic, social, or cultural reasons or because of traditional use.
 7. The property has a strong or special association with the life or work of a person, group or organization of importance to the province or with an event of importance to the province.
 8. The property is located in unorganized territory and the Minister determines that there is a provincial interest in the protection of the property.

The above does not apply to provincially-owned properties which are governed by Part III.1 of the *Ontario Heritage Act*.

A Cultural Heritage Evaluation Report will be prepared as a stand-alone document if a highway bridge or culvert has not been assessed under MTO's *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges*.

5.3 Describe Impacts

The potential impacts of transportation design alternatives and alternative methods of construction to cultural heritage landscapes and built heritage resources will be described based on the following:

- significance of direct and indirect impacts including but not limited to:
 - disruption
 - displacement
 - isolation
 - encroachment
 - the introduction of physical visual, audible or atmospheric elements that are not in keeping with the character and setting of the cultural heritage resources;

- overall affect on:
 - any built heritage resources or cultural heritage landscapes protected, listed, or identified as part of the EA process;
 - buildings or "standing" sites of architectural and/or historical significance including properties designated by municipalities under the Ontario Heritage Act (R.S.O. 1990), or sites listed on municipal inventories as potential sites for designation;
 - buildings or "standing" sites of recognized federal significance or of provincial significance identified with Provincial Historical Plaques erected by the Ontario Heritage Trust;
 - Ontario Heritage Trust easement properties;
 - heritage bridges and those included on the Ontario Heritage Bridge List;
 - Buildings or "standing" sites of architectural and/or historical significance recognized federal significance (e.g., National Register, FHBRO and the National Historic and Monuments Board);
 - cemeteries (including any that are unmarked);
 - areas of historical 19th and 20th century settlement (i.e., former and present towns, villages, hamlets) encroached upon or abutted; and
 - historical cultural heritage landscapes (e.g., farmscapes and roadscape).

5.4 Develop Preservation / Mitigation Strategy

As the transportation project design progresses, cultural heritage landscapes and built heritage resources can be affected by investigations (such as borehole drilling) and/or otherwise be removed, altered or demolished. It may be necessary to protect cultural heritage landscapes⁷ and to protect and/or stabilize (until subsequent intervention) built heritage resources subsequent to final preservation/mitigation. Therefore, prior to the implementation of appropriate mitigation actions:

1. no removal, alteration or demolition of built heritage resources should occur;
2. no destructive investigation procedures should be carried out in or near built heritage resources;
3. no removal or changing of cultural heritage landscape resources; should occur; and
4. no land-disturbing or vegetation-disturbing activities should be carried out in or near cultural heritage landscapes.

The protection requirements for cultural heritage landscape and built heritage resources (including stabilization) should be included in the Cultural Heritage Resource Assessment Report.

⁷ Includes all cultural heritage landscapes identified during documentation of the affected area as being of heritage value, including those not designated, listed or recognized by government but considered to be important in defining the overall character of the affected area.

A preservation / mitigation strategy is developed for those resources, which may be affected either through direct or indirect impacts.

As detailed in the Environmental Protection Requirements, preservation of cultural heritage resources in their original location is the primary measure to be considered in the development of the preservation / mitigation strategy. To avoid the resource (or minimize encroachment) the location and/or footprint of design feature(s) may be altered. However, safety requirements, other design considerations and potential impacts to other environmental resources can severely restrict where the ability to change the location and/or footprint of design features.

Approaches to preservation / mitigation are shown in Figures 5.1 and 5.2 for built heritage resources, and cultural heritage landscapes respectively. Details on the strategies are provided in Section 6; sub-section references are included in the figures. The technical requirements for cultural heritage resource mitigation are in the MCL Guidelines listed in Section 2.

For listed heritage bridges or culverts, the *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges* prescribes a specific mitigation process, see Section 4.1 - Conservation Options.

Figure 5.1 Approaches for Built Heritage Resources Preservation / Mitigation Strategy

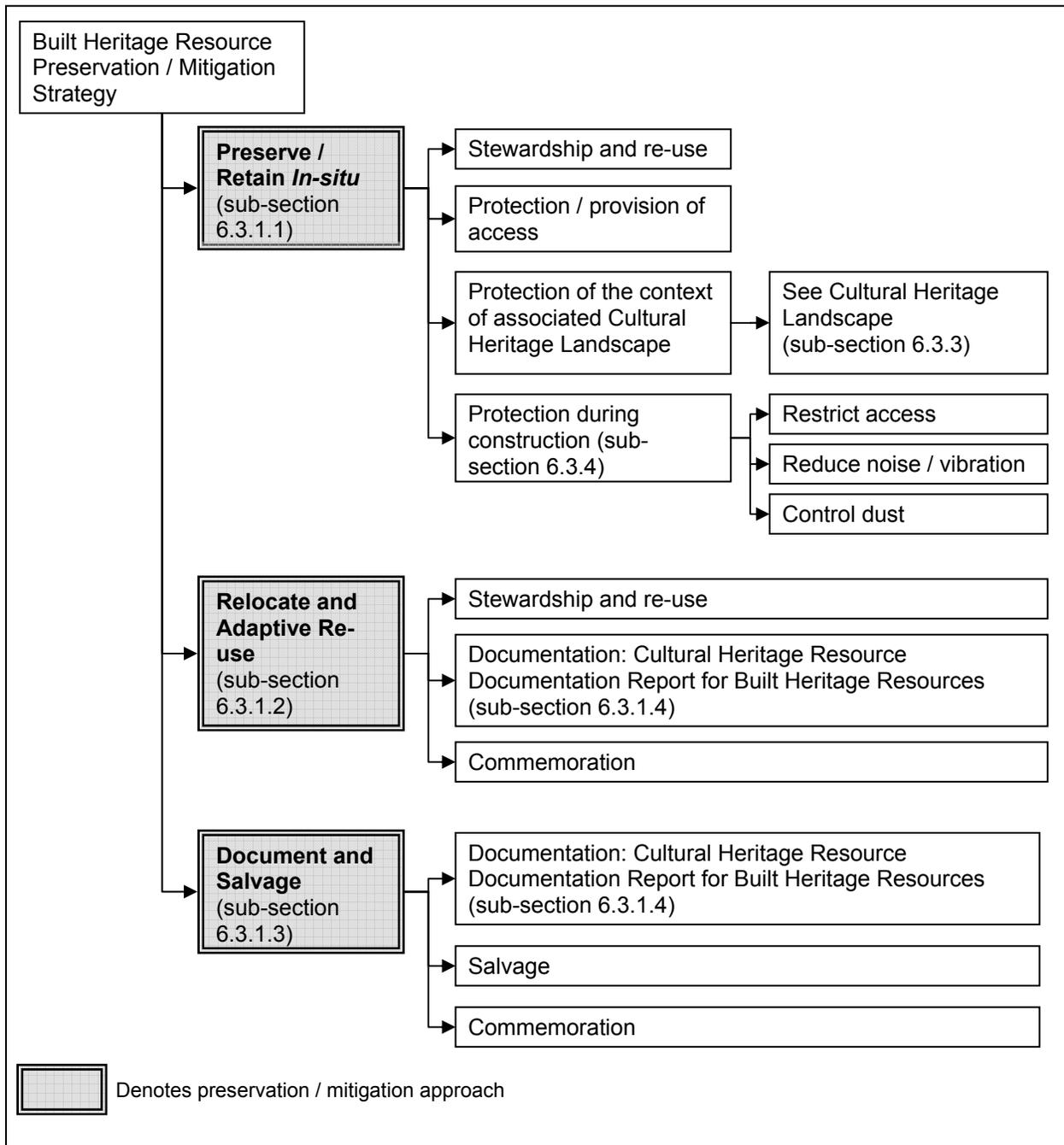
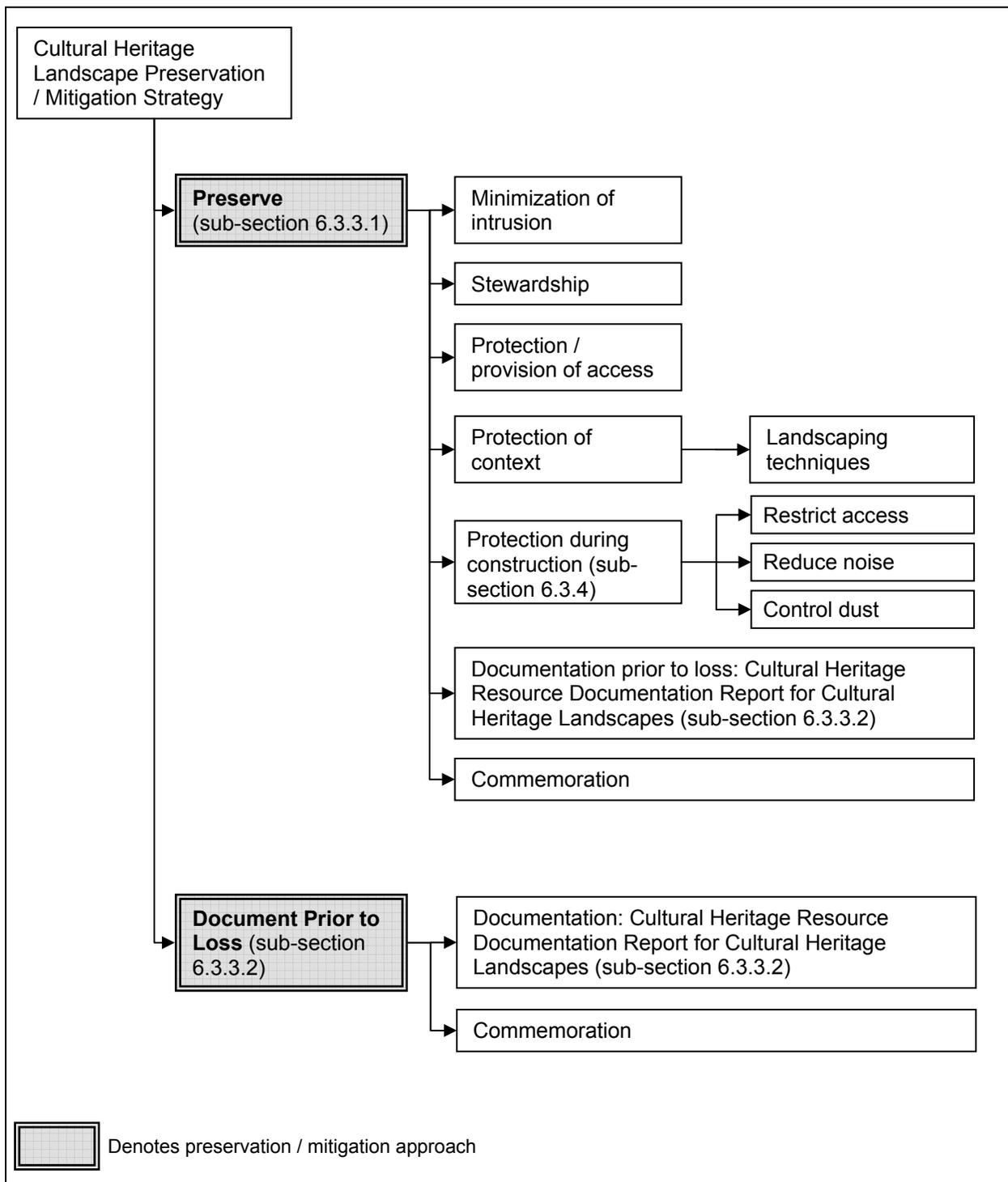


Figure 5.2 Approaches for Cultural Heritage Landscapes Preservation / Mitigation Strategy



5.5 Document

The assessment of built heritage and cultural heritage landscape resources and the development of preservation / mitigation strategies are documented in the following:

- a Cultural Heritage Resource Assessment Report; and
- a Cultural Heritage Evaluation Report.

5.5.1 Cultural Heritage Resource Assessment Report

The field investigation, identification of cultural heritage resources of interest or value, identification of potential impacts and mitigation measures will be contained in a *Cultural Heritage Resource Assessment Report*. Upon Ministry approval, this report will be filed with MCL and the municipality.

A *Cultural Heritage Resource Assessment Report* should include the following sections:

- executive summary;
- introduction (purpose of assignment);
- a study area location plan;
- summary of the history of the study area;
- a description of the affected resources and their heritage interest or value;
- a description of the potential impacts and sensitivities;
- recommendation of preservation/mitigation strategies during subsequent stages;
- historical mapping, aerial photographs and graphic material as needed to illustrate changes in the study area; and
- Cultural Heritage Research Forms.

Any historical information collected or readily available at this stage and digital photographs of the cultural heritage resource should be presented on the Cultural Heritage Resource Form that is included in Appendix A.

5.5.2 Cultural Heritage Evaluation Report

A stand-alone Cultural Heritage Evaluation Report will be prepared as required upon the recommendations of the Cultural Heritage Resource Assessment Report. The Cultural Heritage Evaluation Report will include:

- a general description of the history of the study area as well as a detailed historical summary of property ownership and building(s) development;
- a description of the cultural heritage landscape;
- a description of the built heritage resource, both exterior and interior for a building and if an engineering work, its structural design and materials;

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- representative photographs of the exterior (front, back and side views) of a building or structure, character-defining architectural details and interior spaces and details if access available;
- representative photographs of the elevations and structural details of a bridge or engineering work;
- a cultural heritage resource evaluation guided by the *Ontario Heritage Act* criteria, a description of the heritage attributes and a heritage evaluation scoring sheet;
- a summary of the heritage attributes;
- historical mapping, photographs; and
- a location plan.

MTO will direct the distribution of the documentation reports to recommended libraries or archives.

For a Heritage Bridge, the Cultural Heritage Evaluation Report will be as per Appendix A of the *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges*.

MTO will direct the distribution of the documentation reports to recommended libraries or archives.

6 ASSESSMENT UPDATE AND PRESERVATION / MITIGATION DETAILS

As the details of the transportation project design are finalized, the details of the final preservation / mitigation strategy (Section 5) can be developed for the Detail Design stage. The assessment of cultural heritage resources may first need to be updated from earlier reports. These two activities are typically done during the Detail Design stage in the following steps:

1. update field survey and assessment
2. identify and assess additional impacts
3. develop mitigation details for:
 - a. built heritage resources;
 - b. heritage bridges and culverts;
 - c. cultural heritage landscapes; and
 - d. construction-related effects.

6.1 Update Field Survey and Assessment

The first step is a review of the assessment, evaluation, and preservation/mitigation strategy contained in the Cultural Heritage Resource Assessment Report. If there has been a delay in the undertaking from the initial assessment or an initial assessment was not completed, field investigations may be needed to update an existing inventory of cultural heritage resources. Also, further field investigations may be needed to identify any built heritage resources and cultural heritage landscapes newly affected by design alternatives considered in the Detail Design stage. Detailed on-site investigation may be carried out in order to determine the type of mitigative actions (e.g. avoidance or documentation) that need to be undertaken.

An updated field survey will be undertaken where the field data from previous studies is more than five years old. A roadside survey should be undertaken to:

- confirm cultural heritage resources;
- identify any additional resources; and
- confirm the relevance of the mitigation strategy.

There may be an opportunity to combine the Update Field Survey with the fieldwork undertaken for the Cultural Heritage Resource Documentation Report (see below).

6.2 Identify and Assess Additional Impacts

Design alternatives evaluated and selected during the Detail Design stage may affect built heritage and cultural heritage landscapes. If not completed during Preliminary Design, the impacts of design alternatives would need to be assessed. These design alternatives may include:

- the location of environmental and geotechnical investigations including temporary access;
- the removal of culverts, fences, vegetation (such as treelines, woodlots and hedgerows), etc.;
- the transportation design including horizontal and vertical alignments, grading (slope flattening, cuts and fills), type of interchanges and intersections, etc.;
- the drainage and bridge design;
- completion activities such as landscaping;
- the design of support services such as location and siting of infrastructure stations, staging, temporary access and detours, waste storage, and surplus materials and soil management sites; and
- the proposed transportation construction within the existing and proposed transportation ROW including the location of:
 - access roads;
 - detours;
 - staging and storage areas;
 - areas of other works and activities associated with the construction, operation and maintenance of the transportation facility; and
 - adjacent lands that require mitigation measures within the ROW.

6.3 Develop Mitigation Details

In Section 5, the development of a mitigation strategy was introduced. As the details of the transportation project design are finalized, the details of the mitigation measures can be developed. This is typically done during the Detail Design stage. It is at this stage that the transportation project design details are developed enough to decide if the built heritage resource can be retained *in-situ* or cultural heritage landscape in their entirety.

6.3.1 Built Heritage Resources

From Figure 5.1, the preservation / mitigation approaches include:

- preserve / retain *in-situ*;
- relocate and adaptive re-use; and
- document and salvage.

For the technical requirements for cultural heritage resource mitigation see the MCL Guidelines listed in Section 2.

6.3.1.1 Preserve / Retain *In-situ*

To preserve / retain built heritage resources *in-situ*, the details of the following need to be specified in order to ensure the short-term and long term protection of the resource.

Stewardship and Re-use

A plan for stewardship and re-use is developed that lays out the actions required and the roles and responsibilities of stakeholders so as to retain a resource *in-situ* while making minimal or no change to its heritage value. As such, the plan should include:

- a Statement of Cultural Heritage Value or Interest outlining significant heritage attributes;
- methods of protection during construction;
- security measures;
- a Conservation Plan: the rehabilitation / conservation actions required to meet building code standards while protecting the attributes;
- a re-use or marketing plan for sale to a private owner; and
- maintenance standards.

The plan for stewardship and re-use forms part of the in Detail Design Report and is filed with the MTO regional office.

A plan for stewardship and re-use can only be developed for resources owned by the Province. For resources not owned by the province, but identified as being of heritage significance by a municipality, a plan for conservation maybe required to detail protection from and mitigation for impacts associated with the adjacent transportation ROW.

Protection / Provision of Access

Access to built heritage resource can be changed by transportation projects. As such, access should be reviewed and/or modified to ensure that appropriate entrances and approaches are maintained.

Protection of the Context of Associated Cultural Heritage Landscape

For details see Cultural Heritage Landscapes, sub-section 6.3.3

Protection during Construction

For details see sub-section 6.3.4

6.3.1.2 Relocate and Adaptive Re-use

A plan for relocation and adaptive re-use is developed that lays out the actions required and the roles and responsibilities of stakeholders in order to relocate and re-use the resource while making limited to minimal changes to its heritage character. The plan can include:

- a Statement of Cultural Heritage Value or Interest outlining character-defining heritage attributes;
- a Conservation Manual: the rehabilitation / conservation actions required to meet building code standards while protecting the character-defining heritage attributes;
- a re-use or marketing plan for sale to a private owner; and
- a determination of final ownership of property.

The plan should also include a description of measures to:

- prepare the property for land transfer and removal through sale or tender;
- have the resource relocated prior to construction; and
- address logistical issues associated with moving a built heritage resource: such as route selection to avoid height and weight restrictions.

The plan for relocation and adaptive re-use is typically included in the Detail Design Report and filed with the MTO regional office.

Stewardship and Re-use Plan

See sub-section 6.3.1.1: Preserve/Retain *In-situ*.

Documentation

Based on significance of a structure, it may be appropriate to prepare a Cultural Heritage Resource Documentation Report for the resource. The decision to prepare this report must be made sufficiently in advance to allow the work to occur prior to relocation of the resource. Details on documentation requirements are provided in sub-section 6.3.1.4: Cultural Heritage Resource Documentation Report for Built Heritage Resources.

Commemoration

Based on the importance of a structure, it may be appropriate to commemorate the cultural heritage resource with a plaque or other appropriate signage.

6.3.1.3 Document and Salvage

Documentation

Prior to demolition, a decision must be made with respect to documenting the resource. The decision should be based on significance and site conditions of a structure. See sub-section 6.3.1.4 for details on the Cultural Heritage Resource Documentation Report for Built Heritage Resources.

Salvage

If appropriate, a plan for salvage is developed that can include, but is not limited to, the following:

- a list of materials to salvage such as:
 - historic windows, doors and door trim;
 - interior baseboards;
 - timber floor joists and beams;
 - fireplace mantels;
 - exterior stone masonry including stone sills, window and door lintels; and
 - heavy timber framing, exterior barn board and wood flooring of agricultural buildings.
- specifications with instructions for the labelling, storage and reassembly of material;
- a requirement for expertise in cultural heritage resource removal; and
- the ultimate destination of salvaged materials.

The plan for salvage is typically included in the Cultural Heritage Documentation Report, which is part of the Detail Design Report, and filed with the MTO regional office.

Commemoration

Based on the importance of a structure, it may be appropriate to commemorate the cultural heritage resource with a plaque or other appropriate signage.

6.3.1.4 Cultural Heritage Resource Documentation Report for Built Heritage Resources

Where the resource is to be relocated or demolished, the Cultural Heritage Specialist should develop a full historical site research, photographic and map recording and documentation of the resource to be displaced or disrupted (see the MCL Guidelines listed in Section 2).

Photographs and a written report will document most resources; however, some resources may need to be documented with measured drawings.

Photographic Cultural Heritage Documentation Reports for built heritage resources should include:

- a general description of the history of the study area as well as a detailed historical summary of property ownership and building(s) development; if resource is a bridge or engineering work, a detailed historical summary of its construction and its relationship to the development of the study area;
- a description of the resource, both exterior and interior for a building and if a bridge or engineering work, its structural design and materials;
- overall dimensional measurements of the exterior of a building or structure;
- overall dimensional measurements for principal rooms (all floors) in the interior and other character-defining details to aid in the building description;
- the measurement of structural members and connections to confirm the original engineering drawings, if available, for a bridge or other engineering work;
- representative photographs of the exterior (front, back and side views) of a building or structure;
- representative photographs of the elevations and structural details of a bridge or engineering work;
- detail photography of character-defining architectural resources or elements on the exterior and interior of a building;
- detail photography of structural members and design details of a bridge or engineering work;
- photographic key plans of the exterior and interior of the building, not to scale;
- photographic key plan for bridges and other engineering works; and
- a site plan.

Photo-documentation of the built heritage resource's exterior and interior and bridge or engineering work will be completed with digital photography and supplemented with 35-mm film (colour and/or black and white) if requested. All documentary photographs in the report should be a minimum of 3-in. by 5-in. in size with descriptive captions.

If it is requested that built heritage resources are required to be documented with measured drawings, the report will include the above requirements for photographic documentation as well as provide a full set of floor plans, elevations (exterior) and sections with dimensions, or a combination thereof, as needed. If original drawings for bridges and engineering works are not available, a full set of drawings with plan, elevations and details with dimensions should be prepared, or a combination thereof, as needed. Imperial measurement units, as per the original construction, should be used. All drawings in the report should be of a size as to be clearly legible.

The Cultural Heritage Resource Documentation Report should be filed with:

- the MTO Regional Office; and

- an appropriate local archive or library, or the Archives of Ontario.

6.3.2 Heritage Bridges

The *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges* is the primary reference for developing preservation / mitigation details for heritage bridges. The following information has been provided to supplement that document.

6.3.2.1 Retention of Existing Bridge

For retained heritage bridges, any specific details around retaining the bridge are included in the contract documents.

6.3.2.2 Incorporation

For incorporation of heritage bridges elements, specific details, such as the following, should be included in the contract documentation:

- a requirement for expertise in cultural resource removal with a specialized knowledge in bridge construction;
- specifications with instructions for the labelling, storage and reassembly of elements; and
- a requirement to have photographic documentation of the re-assembly and have it filed with the construction record.

6.3.2.3 Documentation

Prior to deconstruction or demolition, a heritage bridge must be documented if it is deemed to be significant as per the *Ontario Heritage Bridge Guideline for Provincially-Owned Bridges*). The documentation (Heritage Bridge Conservation Manual) should include the collection and preservation of documents describing the resource, including photographs, historical records, etc.

6.3.3 Cultural Heritage Landscapes

From Figure 5.2, the preservation / mitigation approaches include:

- preserve / minimize intrusion: to minimize changes in context; and
- document: prior to disruption, dislocation displacement, isolation or encroachment.

For the technical requirements for cultural heritage resource mitigation see the MCL Guidelines listed in Section 2.

6.3.3.1 Preserve

To ensure the short and long term protection of the heritage resources, the details of the following need to be specified:

Minimization of Intrusion

As discussed in sub-section 5.4: *Develop Preservation / Mitigation Strategy*, it may be possible to modify the location and/or footprint of design feature(s) to minimize the intrusion into cultural heritage landscape resources. Typically, location decisions are made during the Preliminary Design stage and are part of the preservation / mitigation strategy. However, as discussed in sub-section 6.2: *Identify and Assess Additional Impacts*, design changes or alternatives evaluated and selected during the Detail Design stage may affect cultural heritage landscapes. Therefore, it may be possible to modify the footprint of design feature(s) to minimize the intrusion into cultural heritage landscape resources. Again, safety requirements, other design considerations and potential impacts to other environmental resources can severely restrict the ability to modify the footprint of design features.

Stewardship

A plan for stewardship (similar to that for Built Heritage Resources: sub-section 6.3.1.1 *Preserve/Retain In-situ*) may be developed for a cultural heritage landscape. While not common, a stewardship plan may be appropriate where a transportation project causes large disturbances to the cultural heritage landscape (such as by crossing at mid-concession, or separation of farm complex built heritage resources through fence lines and other features).

Protection / Provision of Access

Access to the resource can be changed by transportation projects. As such, access should be reviewed and/or modified to ensure that appropriate entrances and approaches are maintained.

Protection of Context

Landscape techniques can be used to reduce potential visual, air (dust) and noise impacts from the transportation facility. These include trees, shrubs and/or berms. Mitigation details should be developed with the assistance of appropriate specialists (Landscape Architect, Noise Specialist, etc.).

Protection during Construction

For details see Section 6.3.4: Construction-Related Effects.

Documentation

Prior to disruption, displacement, isolation or encroachment, it may be appropriate to document the resource (see subsection 6.3.3.3). The need to document the resource

should be based on the significance of the cultural heritage landscape and the extent of disruption, displacement, isolation and/or encroachment. The decision to document must be made sufficiently in advance to allow appropriate documentation prior to disruption, displacement, isolation or encroachment.

Commemoration

Based on the importance of a cultural heritage landscape, it may be appropriate to commemorate the cultural heritage resource with a plaque or other appropriate signage.

6.3.3.2 Document Prior to Loss

Prior to the disruption, displacement, isolation or encroachment of a significant cultural heritage resource, it is appropriate to document the resource in a Cultural Heritage Resource Documentation Report for Cultural Heritage Landscapes (see subsection 6.3.3.3). The need to document the resource should be based on the significance of the cultural heritage landscape. The decision to document must be made sufficiently in advance to allow appropriate documentation prior to disruption, displacement, isolation or encroachment.

Commemoration

Based on the importance of a cultural heritage landscape, it may be appropriate to commemorate the cultural heritage resource with a plaque or other appropriate signage.

6.3.3.3 Cultural Heritage Resource Documentation Report for Cultural Heritage Landscapes

For the Cultural Heritage Resource Documentation Report for Cultural Heritage Landscapes, the Cultural Heritage Specialist should develop a detailed historical description of the site and its development, photographic and map recording and documentation of the resource to be displaced or disrupted (see the MCL Guidelines listed in Section 2).

Cultural Heritage Landscape Documentation Reports for character-defining cultural heritage landscapes should include the following sections:

- a physical description of the existing landscape and the former landscape;
- representative photographs of the site and its associated built heritage resources;
- photographic key plan, not to scale;
- recent aerial photography, historical aerial photography and available topographic mapping, existing and historical mapping as available; and
- a site plan of the landscape showing all built heritage resources and any other character-defining elements, as needed, to graphically illustrate the site.

Photo-documentation of the landscape will be completed with digital photography and supplemented with 35-mm film (colour and/or black and white) if requested. All

photographs in the report should be a minimum of 3-in. by 5-in. in size with descriptive captions.

The Cultural Heritage Resource Documentation Report should be filed with:

- the MTO Regional Office; and
- an appropriate local archive or library, or the Archives of Ontario.

6.3.4 Construction-Related Effects

Construction activities have the potential to adversely affect cultural heritage resources. Adverse effects from construction-related activities can include:

- damage to built heritage resources, trees and other vegetation;
- increased noise;
- reduced air quality; and
- vibration.

The contract documentation must contain all necessary direction to the Contractor to protect cultural heritage resources.

MTO's *Environmental Reference for Contract Preparation* provides a description of the existing MTO standard contract documentation:

- Section 2: General Environmental and Incident Management contains the standards for protection of Environmentally Sensitive Areas such as Built Heritage and the Cultural Heritage Landscapes.
- Section 6: Noise Control and Mitigation
- Section 7: Dust Control

Any additional directions to the Contractor will need to be provided in a non-standard Special Provision. See Section 1 of the *Environmental Reference for Contract Preparation* for details.

APPENDIX A: Heritage Record Forms for Built Heritage and Cultural Heritage Landscapes

See Separate File



MINISTRY OF TRANSPORTATION

APPENDIX A: CULTURAL RESOURCE RECORD FORMS FOR BUILT HERITAGE AND CULTURAL HERITAGE LANDSCAPES

Environmental Guide for Built Heritage and Cultural Heritage Landscapes

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VERSION HISTORY

VERSION #	DATE	DESCRIPTION OF MAJOR CHANGE